

**CPP Financing and the Impact of a Larger Fund  
Presentation to the 2<sup>nd</sup> CLC National Pension Conference  
Office of the Chief Actuary, Office of the Superintendent of Financial Institutions  
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Thank you for inviting me here today to talk about the Canada Pension Plan (CPP) financing. I consider myself privileged to have been invited by the Canadian Labour Congress for a meeting held in Winnipeg since both this organization and this city were deeply involved in the national consultations on the CPP in 1996.

**The mandate of the Office of the Chief Actuary (OCA) *(Slide 3)***

Let me start by a few words about the organization to which I belong. To accomplish its mission of protecting depositors, policyholders and pension plan members, OSFI administers a regulatory framework that contributes to the public's confidence in the financial system. My office, which operates independently but within OSFI, has different responsibilities. Our key role is to provide actuarial services to the Government of Canada and provincial governments, which are Canada Pension Plan (CPP) stakeholders. While I report to the Superintendent of Financial Institutions, I am solely responsible for the content and actuarial opinions reflected in reports prepared by our office.

**Funding of the Canadian retirement income security system *(Slide 4)***

To look at the impact of the current financing approach of the CPP adopted by the provincial and federal governments in 1998, it is necessary to analyse the manner in which each level of the retirement income security system is funded in Canada. The Old Age Security (OAS) Program is financed on a pay-as-you-go basis, which means that there is no fund. The Canada Pension Plan, which is similar to the Quebec Pension Plan, is financed through contributions paid in equal parts by the employer and employees. The contribution rate of 9.9% in 2004 and thereafter will provide a capitalization level equal to approximately 25% of the Plan's liability within about 15 years. Lastly, private pension plans and RRSPs are fully funded, which means that each generation pays for its own benefits. Given these three main sources of income for citizens over 65 years of age, it is reasonable to say that the Canadian system is funded at 40% to 45% of future liabilities. A diversified funding approach allows Canada's retirement income system to be less vulnerable to changes in economic and demographic conditions than systems in countries that use a single funding approach. In addition, the Canadian approach based on a mix of public and private pensions is an effective way to provide for retirement income needs, according to international organizations.

**Canadian Aging (Slide 5)** Based on the most recent actuarial reports of the CPP and the OAS, this chart shows the evolution of Canada's total population and of the so-called working age population, that is the population between 20 and 64 years. It is projected that Canada's population will continue to grow but at a slower pace than in the past. While the average annual growth rate of the working age population surpassed that of the total population in the past 40 years ending in 2000, it is likely that the inverse phenomenon will occur in the future. By itself, the relative stagnation of the working age population will put pressure on the labour market. Lastly, it is forecasted that the growth in the population after 2025 will be due solely to net migration.

**(Slide 6)** The aging of the Canadian population can be shown both by the increase in persons over 65 and also in those over 80 years. An increase of 150% for persons 65 and over and of 275% for persons 80 and older is expected over the next 50 years. This means that there will be close to 10 million people over the age of 65 in 2050.

**(Slide 7)** Whenever we talk about the aging of the population, we have to analyse the evolution in life expectancy or the future reduction in mortality rates. Crucial questions like "How long can we live?" and "Can we live to be 100?" need to be asked. Some scientists estimate that humanity, as we know it, began about 130,000 years ago. From then until 1900, life expectancy remained relatively unchanged at about 49 years. Suddenly, in the space of a single century, we experienced an increase in life expectancy of about 30 years bringing hope that we will live even longer. Some analysts believe that future gains will be less because we are approaching certain limits where mortality rates by age are already low. **(Slide 8)** The following graph shows the probability of surviving for the cohort of women born in 1921, in 1996 and in 2050. A notable difference in the curves is the proportion of people living at 65 years. While there were only around 60% of the people living in the 1921 cohort, this percentage climbs to 90% for the 1996 cohort and to 95% for the 2050 cohort. Despite a major increase in life expectancy at birth, the age at death did not increase significantly. Few people live to be 110 years. A recent news headline stated that 70% of women are expected to die between 77 and 96. When we remove the 15% of the people in a cohort at the two extremities, that is, those who die prematurely and those who are the strongest, we get a better assessment of the costs associated with financing retirement.

**Future Labour shortage, likely or unlikely? (Slide 9)** The next chart presents a demographic indicator of the expected labour shortage. It shows the ratio between people aged 60 to 64 years (those who reduce their hours of work or who are leaving the workforce) and those aged 20 to 24 years (those who are entering the workforce). While the ratio was below 50% until the end of the 80s, it rose to 60% by the year 2000. This means that for every 6 people who leave, 10 people enter the workforce. Supply exceeds demand, expressed in economic terms. It is expected that this ratio will

equal 1 around 2015. Moreover, as early as 2025, it is predicted that for every 13 people who leave, only 10 people will enter the workforce. Note as well the rapid growth in this ratio. The trend is the same for the United States, our main trading partner, although less pronounced.

**Global aging (Slide 10)** When analysing global aging, it is important to identify the indicators of aging. We need to look at three elements: the extent of aging, the speed of aging, and the change in the active population. As an indicator of the speed of aging, the next chart shows the number of years expected to pass for the population aged 65 and over to move from 12% to 24% of the total population. Japan will experience this shift very quickly, in just 25 years. The absence of the United States should be mentioned since, according to their projections, it will never achieve the 24% threshold, at least not between now and 2050. We can say with relative certainty that the United States is the industrialized nation that will be least affected by the aging of its population.

**(Slide 11)** This chart shows the evolution of the working age population of some industrialized countries. The U.S. and Canada are the only countries that could experience an increase in the working age population. Based on the belief that a shrinking and aging population may bring economic decline, GDP growth could slow significantly in Japan and Continental Europe. If the rates of labour force participation among older populations do not rise over time, every developed country could face shrinking labour markets that could significantly constrain their potential for economic growth. **(Slide 12)** Although the 2001 OECD study has recognized the solid performance of the current Canadian model in terms of reducing poverty, preserving people's standard of living during transition from the labour market to retirement and maintaining the balance of income between men and women, Canada will not escape the aging of its own population, especially between 2010 and 2025 where the population aged 65 and over is projected to increase by 3% annually.

**Old Age Security Financing (Slide 13)** How do we position ourselves for the future aging of the Canadian population knowing that the cost of the Public Pension Plans (OAS/ CPP/ QPP) is expected to increase from the current 5% of the GDP in 2003 to 7% in 2030? Canada has shown the largest budgetary improvements of any of the other G-7 countries over the past decade. Balancing the budget and taking steps to put the debt as a proportion of gross domestic product on a downward track are effective ways to ensure sustainable financing of Old Age Security funded from the government's Consolidated Revenue Fund.

**Canada Pension Plan Financing (Slide 14)** When it was introduced in 1966, the CPP was designed as a pay-as-you-go plan, with a small reserve. This meant that the

benefits for one generation would be paid largely from the contributions of later generations. Continuing to finance the Plan on a pay-as-you-go basis would have meant imposing a heavy financial burden on Canadians in the workforce after 2020, which was deemed unacceptable by the federal and provincial governments. Following extensive consultations across Canada in 1996, governments agreed on these principles: fairness, affordability, sustainability, investing in the best interest of members and more funding ([www.cpp-rpc.ca/principals/principe.html](http://www.cpp-rpc.ca/principals/principe.html)).

**(Slide 15)** During these consultations, the Canadian Labour Congress (CLC) mentioned that the CPP should remain a public pension plan. Speaking about the difficulty of comparing the value of the CPP to private pension plans, Bob Baldwin, from your organization, stated there is nothing that the CPP can be legitimately compared to because there is nothing else like it: “Coverage is universal; vesting is instant and portability complete within Canada; limited periods of time can be spent outside the labour force with no loss in benefits; benefits are wage indexed prior to retirement and price indexed thereafter ... and, retirement benefits provide a predetermined percentage of working earnings.” During the consultation held in Winnipeg, sixteen submissions were presented with a wide range of views. Amongst them the Social Planning Council of Winnipeg, favoured fuller funding and ‘steady-state’ contribution rates in order to secure the Plan. On the other hand, the Winnipeg Chamber of Commerce held the view that de-indexation should be considered before contribution rates are raised.

**(Slide 16)** Therefore, in 1997, the provincial and federal government agreed to change the funding approach of the Plan to a hybrid of pay-as-you-go and full funding, called steady-state funding. Moving to a full-funding approach would have created unfairness across generations. During the transition, contributors of some generations would have paid higher contributions than others – they would have had to pay for the benefits of current retirees while simultaneously saving for their own retirement. A pure pay-as-you-go approach would also have been unfair, as it would have meant a sharp increase in the contribution rate over the coming decades. As a result of the consultation, the contributions were increased, the benefits were decreased on a long-term basis and the CPP Investment Board was created to invest the funds not required by the CPP to pay current benefits.

**(Slide 17)** Steady state funding requires that the contribution rate be set no lower than the lowest rate expected to ensure the long-term financial stability of the Plan without recourse to further rate increases. Therefore, under steady-state funding, the contribution rate was scheduled to increase to 9.9% in 2003, and to remain at this level thereafter.

**(Slide 18)** The steady-state funding is expected to generate contributions between 2004 and 2020 that exceed the benefits paid out every year during this period. Funds not

required to pay benefits are transferred to the CPP Investment Board for investment. As a result, Plan assets will cover an increasing number of years of expenditures over this period as shown in the following graph (more than five years after 2020). Over time, this will create a large enough reserve to help pay the growing costs that are expected as more and more baby boomers begin to collect their retirement pension. CPP assets are projected to represent 15% of the GDP by 2020.

**(Slide 19)** If the legislated contribution rate is higher than the calculated steady-state rate, the funding status of the plan will increase over time. The higher this rate is set above the steady-state rate, the faster the plan will become more funded. At the time of the reforms, the steady-state rate was determined to be 9.9%. Under the last actuarial report, it now stands at 9.8%.

**(Slide 20)** This leads me to the other side of the coin. What could happen if, in future actuarial reports, the calculated steady-state contribution rate is higher than 9.9%? The default provisions in the *Canada Pension Plan Act* may result in adjustments being made to the contribution rate and, perhaps, benefits in payment if the federal and provincial governments reach no agreement in response to the actuarial determination of the steady-state contribution rate. If the new steady-state rate is 10.1%, one half of the excess of the new steady-state rate over the 9.9%, that is 0.1%, will apply to an increase in the contribution rate and the other half will apply to non-indexation of benefits in payment in order to keep the steady-state rate at 10.0%. In other words, the contributors and the beneficiaries would equally support the additional cost shown in the actuarial report.

### **Impact of a larger fund (Slide 21)**

How big is big when we look at the projected evolution of the CPP assets? In relative terms compared to GDP, the CPP assets will represent a bigger share of the whole economy compared to today's standards. However, the CPP assets would remain relatively small compared to the liabilities. Does it make sense to pay more to increase the CPP assets if, as some analysts argued, a financial market meltdown could result due to demographic changes? Over the past five years, there has been an impressive number of studies and research published on the impact of aging on financial markets. Robert England has recently written a book called *Global Aging and Financial Markets – Hard Landings Ahead?* Baby boomers will continue to be in their prime saving years throughout this decade. A rising trend around the globe toward pre-funding retirement benefits is also a factor driving up total investment in equities. Maureen Culhane, from Goldman and Sachs, states that holdings of international equities from pension funds are expected to rise. **(Slide 22)** The outlook for capital markets becomes less certain as baby boomers retire as it is shown by the following graphs. The dissavers could

outnumber the savers in 2025 for US, in 2023 for Canada and as soon as 2005 for Japan. The question remains open to what extent expected demand for funds after 2020 will counter the downward pressure on pension assets from aging populations in developed countries.

**(Slide 23)** The Americans Schieber & Shoven found that the real value of total assets in private sector defined benefits plans would peak in 2024 with consequent negative effects on U.S. equity values. Abel, from Wharton School, found that baby boomers will dampen stock prices. Finally, four countries were analysed in a study released by Merrill Lynch in 2000, named “Demographics and Funded Pension System”. After 2010, the number of people who retire will increase dramatically and net cash flow into the systems will start to decrease. It is likely that pension funds in the future will hold fewer equities and more fixed income products in their portfolios. The Netherlands, United Kingdom, United States and Japan were chosen because they are amongst the nations with the largest pension assets in the world.

**(Slide 24)** How should we position ourselves in light of the aging of the world and Canadian population? From a current ratio of 5 people of working age to every person over 65 years, Canada is moving to a ratio of 2.3 in 2050. The comparison of this same indicator on a global scale shows a similar aging, in that the ratio shifts from 7 to slightly below 4. For the purpose of illustration, I have added the ratios of so-called “young” countries, that is, the countries of Asia and Latin America including Mexico. The ratio falls from 10 to slightly less than 4. Financial analysts who associate a young labour force with strong economic growth will certainly be interested in looking at these regions to improve future performance. During the 2005-2025 period, the populations of Asian and Latin American countries are still much younger than that of Canada, thereby offering a potential for greater economic growth.

### **Future challenges**

**(Slide 25)** The Canadian retirement income system is in very good shape compared to other countries when we consider that future liabilities for the system as a whole are or would be funded at about 40% to 45%. However the anticipated aging will be more pronounced in Canada than in the U.S. Contrary to the other industrialized countries, Canada should not undergo a decline in its working population thanks in particular to future immigration. Lastly, the anticipated aging of the Canadian labour force and the labour shortage that may result will be one of the biggest challenges in the years ahead.

Thank you.