



Position of strength: The post-turmoil financial sustainability of the Canada Pension Plan - Why the CPP can weather the storm

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Office of the Chief Actuary, Office of the Superintendent of Financial Institutions

Good afternoon/morning. Thank you for inviting me here to today to talk about the financing of the Canada Pension Plan in the context of the recent economic and financial turmoil.

Canadian Retirement Income Security System: Not all eggs in the same Basket! *(Slide 2)*

I will start with a brief description of Canadian retirement income system. At retirement, most Canadians will receive an income from one or more of the following pension schemes. 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 (CPP), which is similar to the Québec Pension Plan, is financed through contributions paid in equal parts by the employer and employees. The contribution rate of 9.9% in 2009 and thereafter will provide Plan assets equal to approximately 25% of the Plan’s liability in about 15 years. Finally, our retirement system allows employers and individuals to participate in occupational private pension plans and Registered Retirement Savings Plans, which are intended to be fully funded. Given these three main sources of income, it is reasonable to say that the Canadian system is expected to be funded at about 40% of future liabilities. A diversified funding approach allows Canada’s retirement income system to be less vulnerable to changes in economic, market and demographic conditions than systems in countries that use a single funding approach. In addition, according to international organizations, the Canadian approach based on a mix of public and private pensions is an effective way to provide for retirement income needs.

Considerations in financing public pensions *(Slide 3)*

There are different ways to finance a social security scheme. The financing method chosen will depend on the given financing objectives which may include stabilizing and/or minimizing the contribution rate or stabilizing the funding level in accordance with specific funding rules. Preservation of benefits, though important, is not the sole objective considered in maintaining a scheme’s long-term financial sustainability.

The contribution rate for a social security scheme will be affected by demographic and economic factors. Although the contribution rate is subject to change, a stable rate is generally considered desirable for several reasons.



First, a stable contribution rate reinforces the link between contributions and benefits. A stable rate also distributes costs more equally across generations, especially in the context of an aging population. In addition, modifying the contribution rate to recognize the long-term implications of plan amendments promotes fiscal discipline and governance. Lastly, maintaining a stable contribution rate promotes greater public confidence in the scheme.

CPP, a partially funded pension plan (Slide 4)

Although the financing methodology could always be changed or reworked altogether, the objective of prefunding the Plan should remain paramount. By stabilizing the asset/expenditure and funding ratios over time, the steady-state methodology helps to ensure that the CPP is affordable and sustainable for current and future generations of Canadians. Moreover, steady-state funding of the CPP, which is a form of partial funding, complements the funding approaches of the other components of the Canadian retirement income system.

CPP Assets should be equal to 25% of liabilities to stabilize the contribution rate (Slide 5)

The Asset/Expenditure ratio is an important measure of the Plan's funding status – it is the ratio of assets at the end of one year to the expenditures of the next year.

From 2000 to 2019, the net cash flows of the Plan, that is contributions less expenditures, have been and will continue to be positive, resulting in a rapid increase in the Plan's Asset/Expenditure ratio and funding status. These net cash flows are invested by the CPP Investment Board with a view to maximizing the rate of return without undue risk and further increasing the level of pre-funding of the Plan.

This graph demonstrates that with a minimum contribution rate of 9.82%, the Asset/Expenditure ratio is fairly stable at around 5.5. The minimum contribution rate, which is the lowest rate sufficient to sustain the Plan without further increase, is calculated by the Chief Actuary. The graph also demonstrates that with a minimum contribution rate below the legislated contribution rate, the Asset/Expenditure ratio will continue to improve over time and will result in a higher funding status.

What is the impact of a particular demographic situation on partial funding rate? (assuming South Korea's Current Demography) (Slide 6)

The next slide shows how the demographic situation could impact the funding status of the CPP and how the Asset/Expenditure ratio would evolve using South Korea's current demography. This involves changing the total fertility rate to 1.3 births per woman and the net migration rate to 0%. Under the current legislated contribution rate of 9.9%, the Plan's assets would be depleted around 2048. A minimum contribution rate of 11.3% would be required to sustain the Plan. The Asset/Expenditure ratio is less stable than under the current CPP environment and the pay-as-you-go rate never stabilizes over the projection period reaching 17.5% in 2075.

If there is no political agreement, CPP Self-Sustaining Default Provisions apply
(Slide 7)

The self-sustaining provisions of the Canada Pension Plan are a mean to safeguard the Plan in the case where the Chief Actuary calculates a minimum contribution rate that is above the legislated contribution rate of 9.9% AND provincial and federal finance ministers cannot reach an agreement on the solution to restore the long-term sustainability of the Plan. This design provides the Plan with a safety net without diminishing politicians' responsibility for the Plan's future.

The self-sustaining provision provides the way to increase automatically the contribution rate and, in addition, freezes the benefits. The combination of these two measures allows for cost sharing between contributors and beneficiaries. The degree of this cost sharing depends on the magnitude of the increase in the steady-state rate; namely, the greater the increase, the greater the proportion of the costs that is borne by contributors.

Is Partial Funding method still appropriate for the CPP in the context of the recent turmoil? *(Slide 8)*

The global financial turmoil has touched countries in all continents. Several countries have entered the recession. The funded status of pension plans as well as fully or partially funded social security schemes have seriously deteriorated. The average pension funds real return for OECD countries for 2008 was calculated to be -23% (weighed average skewed toward US results). Social securities schemes are further affected as unemployment rises and, as a result, revenues from contributions to these schemes suffer.

In this environment it is important to reconfirm that the partial funding approach is the optimal financing approach for the Canada Pension Plan. For the rest of this presentation my goal is to demonstrate that under the steady-state funding method the CPP is better positioned to withstand the current economic and investment fluctuations than under pay-as-you-go and full funding financing approaches. To achieve this we have replicated the sensitivity tests included in our last actuarial report as of the end of year 2006. It is important to note that these tests are not designed to simulate the actual investment and economic experience, and to predict any future. The goal is rather to provide extreme scenarios that could illustrate the robustness of the steady-state financing.

The actuarial report illustrates the uncertainty of results through sensitivity tests
(Slide 9)

All financial estimates are driven by assumptions and as such include a significant degree of uncertainty. To address this, the triennial actuarial report includes a chapter showing the financial impact on the CPP of various short-term and long-term sensitivity tests. We have combined the economic sensitivity test and financial sensitivity test labelled respectively "Economic half-cycle" and "Financial Market Volatility" in our last actuarial report. The economic scenario simulates the 1981 to 1983 recession in Canada and assumes an economic slowdown followed by partial recovery thereafter.

With respect to financial sensitivity test, we have assumed that we would have negative 10% return on equities over two years. The probability of such returns was estimated at 6% based on past volatility of financial markets, that is Canadian bonds, Canadian equities and foreign equities, over the past 69 years. Finally, for this exercise we have assumed that the CPP is fully funded as of December 31, 2006.

Once again, I would like to emphasize that this scenario is not based on actual experience and furthermore is not making any attempts to predict future financial results.

Partial funding achieves contribution rate stability especially under extreme conditions (Slide 10)

It could be seen that under pay-as-you-go financing, the contribution rate will increase by 0.6% in the short-term and then will gradually return to the best-estimate level in 30 years. Only the economic sensitivity test contributes to the increase in the pay-as-you-go rate, since there is no asset. Under the full funding, the contribution rate increases by whopping 3.3% for the next 15 years as a result of the financial sensitivity test. It should be noted that the amortization period of 15 years was chosen since it is legislated in Canada for occupational defined benefit pension plans.

At the same time, under steady-state funding approach the increase in contributions is only 0.3% over next 75 years. In this case both economic and financial sensitivity tests contribute to the rate increase, but the impact is mitigated by the nature of the financing method.

Despite the global recession and major decline in financial markets, the Canada Pension Plan can weather the storm (Slide 11)

The presented analysis clearly demonstrated that the partial funding approach for the CPP is optimal in terms of withstanding the economic and financial fluctuations. This approach provides successful hedging to both economic and investment risks. Moreover, the lower relative increase in contribution rate under partial funding method as well as self-sustainable provisions of the CPP also help to mitigate the political risk and the risk of plan restructuring.

In these uncertain times it is necessary to continue to monitor the financial health of social security systems. In Canada, the next CPP actuarial report is due at the end of year 2009, and it will take into account the current economic environment as well as the long-term demographic outlook.