Canada Pension Plan: Journey from 1997 to 2016

Presentation to the SOA Annual Meeting & Exhibit Session: Future of Social Security (US & Canada)

Jean-Claude Ménard, Chief Actuary, OCA, OSFI

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Office of the Chief Actuary

• The OCA is an independent unit within Office of the Superintendent of Financial Institutions (OSFI).
  • The Chief Actuary reports to the Superintendent;
  • however, the accountability framework of the OCA makes it clear that the Chief Actuary is solely responsible for content and actuarial opinions in reports prepared by the OCA.

• Mandate: conduct **statutory** actuarial valuations on the
  • Canada Pension Plan (CPP) – **19M members**
  • Old Age Security Program (OAS) - **5M beneficiaries**
  • Federal public sector pension and insurance plans – **0.8M members**
  • Canada Student Loans Program – **0.5M loans**
  • Employment Insurance Program – **17M workers**
Canadian Retirement Income System is based on a diversified approach to savings

• Canadian retirement system is a three-tiered system with mixed funding approaches
  
  • Old Age Security Program – a universal basic pension/supplement aimed at poverty reduction (PAYG)
  
  • Canada / Québec Pension Plan – mandatory earnings-related DB plans aimed at providing basic retirement income (partially funded)
  
  • Occupational Pension Plans and tax-favoured individual savings – voluntary schemes aimed at providing adequate retirement income (fully funded)
  
• Today, first two pillars replace about 40% of pre-retirement earnings for an individual with average level of earnings

  Canadian retirement income system is well recognized in the world for its capacity to adapt rapidly to changing conditions.
Canada Pension Plan is jointly governed by federal, provincial and territorial ministers of finance

- CPP and QPP are earnings-related defined benefit plans providing indexed retirement, disability and survivor benefits to all working Canadians
  - Came into effect in 1966
  - Transitional provisions helped to reduce poverty but created intergenerational transfer
  - CPP contributions are paid in equal part by employer and employees at the combined rate of 9.9% applied to earnings equivalent to Canadian average wage
  - Provide retirement replacement rate of 25% of wage-indexed career average earnings.
1980s: CPP started to show signs of weakness and younger generations were losing confidence in the CPP

**1997: Amendments**

- Increasing contribution rates from 5.6% in 1996 to 9.9% in 2003
- Slowing the future growth of benefits
- Major changes in the financing approach
  - Moving from PAYGO to partial funding approach called steady-state funding
    - The goal of the steady-state funding is to stabilize asset to expenditures ratio over time, therefore, to calculate a steady-state contribution rate
  - Introducing full funding for new or improved benefits
- Creating the Canada Pension Plan Investment Board (CPPIB) to invest assets on the markets.
27th CPP Actuarial Report: the Plan is expected to be able to meet its obligations over the long term

• The minimum contribution rate to sustain the Plan is **9.79%** of contributory earnings for the year 2019 and thereafter

• **Under the 9.9% legislated contribution rate:**
  • contributions are projected to be more than sufficient to cover the expenditures over the period 2016 to 2020
  • Total assets are expected to grow from $285 billion at the end of 2015 to $476 billion by the end of 2025
  • In 2050, contributions and investment income are projected to represent 67% and 33% of total revenues, respectively.

CPPIB’s sole focus is investing the assets of the CPP

Investment objective: to achieve a maximum rate of return without undue risk of loss having regard to the factors that may affect the funding of the CPP.

23.1% Real Assets
47.1% $149.1 Billion in Private Assets
11.8% Five-Year Annualized Rate of Return (net nominal)
55.4% Public and Private Equities

Source: CPPIB 2017 Annual Report

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2016: Enhancing adequacy of benefits while respecting intergenerational equity

- Decline in coverage by employer-sponsored pension plans (especially in private sector)
- Changing labour market – increased employment mobility
- 2008-2009 financial crisis
- **One in four families approaching retirement—1.1 million families—are at risk of not saving enough**

**Stewards of the CPP agreed on expansion parameters:** modest, gradual and “fully-funded”
Federal and provincial Ministers of Finance reached in June 2016 a historic agreement on the CPP expansion.

The Working Income Tax Benefit is increased to help offset CPP contributions for eligible low-income workers.

Year’s Maximum Pensionable Earnings (YMPE) approximate the Canadian average wage and are equal to CAD$55,300 in 2017.

Source: Bill C-26: An Act to amend the Canada Pension Plan, the Canada Pension Plan Investment Board Act and the Income Tax Act received Royal Assent on December 15, 2016.
Additional CPP strengthens link between contributions and benefits

- Each year of contributing to the enhanced CPP will allow workers to accrue partial additional benefits
  - Full enhanced CPP benefits will be available after 40 years of making contributions.
  - Partial benefits will be available sooner and will be based on years of contributions.

No past service liability is created and current young workers benefit the most from the expansion.
The financing objective of Additional CPP

To have **constant** contribution rates that result in projected contributions and investment income that are **sufficient** to fully pay the projected expenditures of the Additional CPP **over the long term**.
How financing objectives could be translated into equations?

**Condition 1: Sufficiency**

The open group assets exceed open group liabilities

At inception: Assets ($674 B) minus Liabilities ($634 B) = CAD $40 billion;
Assets/Liabilities = 106%

**Condition 2: Stability**

Assets to expenditure ratio is stabilized over the long term to avoid increase in contributions

<table>
<thead>
<tr>
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<th>Legislated rate</th>
<th>Minimum rate</th>
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<tbody>
<tr>
<td>First additional</td>
<td>2.0%</td>
<td>1.93%</td>
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<tr>
<td>Second additional</td>
<td>8.0%</td>
<td>7.72%</td>
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Investment income is the main source of revenue for the additional CPP

- Under 2%/8% contribution rates, contributions are projected to exceed benefits up to the year 2058.
  - This will result in the accumulation of sizable assets
- The major source of financing: Contributions for the Base CPP, and investment income for the expansion.
Additional CPP will be more sensitive to investment returns

<table>
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<tr>
<th>Assumed Assets Allocation</th>
<th>Additional CPP</th>
<th>Base CPP</th>
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<tbody>
<tr>
<td></td>
<td>Fixed Income: 50%</td>
<td>Fixed Income: 32.5%</td>
</tr>
<tr>
<td></td>
<td>Equities: 50%</td>
<td>Equities: 67.5%</td>
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<td>Volatility: 9.2%</td>
<td>Volatility: 11.4%</td>
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Average real rate of return 2019-2093 (net of expenses)
- Additional CPP: 3.55%
- Base CPP: 3.98%

The decrease in the best-estimate rate of return of 1%:
- 30% increase in the minimum additional contribution rates
- 8% increase in the minimum contribution rate for the base CPP.
Insufficient rates provisions of the current CPP serve as a safety net in case of political impasse

- Insufficient rates provisions of the Base CPP are activated in the case
  - its sustainability is jeopardised and
  - its stewards (federal and provincial Ministers of Finance) do not agree on measures aimed at restoring the CPP sustainability

- For the Additional CPP, if additional contribution rates fall outside prescribed ranges:
  - As for the Base CPP, the first priority is given to the recommendations of Ministers
  - Prescribed ranges and actions with respect to the benefits and contributions will be defined in regulations.
Conclusions

• The 1997 amendments to the CPP restored the financial sustainability of the Plan so it continues to provide retirement income to Canadians.

• The 2016 expansion aimed at enhancing the adequacy of benefits while respecting intergenerational sustainability.

• Strong governance, political dialogue and sound actuarial analysis are three pillars needed to maintain financial sustainability and to ensure the adequacy of benefits.
THANK YOU!
Appendix
Evolution of CPP mortality projections over 15 years - males

No future improvements: the average expected age at death of a male aged 65 in 2015 is 84.7
Evolution of CPP mortality projections over 15 years - females

No future improvements: the average expected age at death of a female aged 65 in 2015 is 87.3
Income Replacement Rate of Public Pension Plans (Canada and United States, 2017)
Income Replacement Rate of Public Pension Plans: Assuming Additional CPP is Mature in 2017 (Canada and United States, 2017)