Pillar integration, basic protection and replacement rates in four modern multi pillar pension systems – case of Canada

Jean-Claude Ménard, Chief Actuary, Office of the Chief Actuary, Canada, Chairman TC ACT
Pillar integration, basic protection, replacement rates and replacement rate sensitivity in 4 modern multi pillar pension systems

- Joint project of Canada, Denmark, Netherlands and Sweden

- Working teams:
  - Canada: Jean-Claude Ménard, Assia Billig (Office of the Superintendent of Financial Institutions)
  - Denmark: Ole Beier Sørensen, Kristian K. Grøsvik, Michael Jørgensen, Jelena Radic (ATP)
  - Netherlands: Marcel Lever, Ryanne Cox, Jan Bonekamp (CPB Netherlands Bureau for Economic Policy Analysis)
  - Sweden: Ole Settergren, Bengt Norrby (Swedish Pension Agency)

- Synthesis report is expected to be released in 2015
An efficient multi pillar retirement system addresses:

- **Financial sustainability**
  - Proper retirement saving and labour force participation incentives - *Pillars 2 and 3*
  - Reasonable economic cost of public pensions (e.g. % of GDP) – *Pillar 1*
  - Diversification of funding approaches - *Pillars 1, 2 and 3*
  - Diversification of sources of retirement income - *Pillars 1, 2 and 3*

- **Social sustainability**
  - Reduction of poverty among seniors - *Pillar 1 and 2*
  - Reduction of income inequalities - *Pillar 1 and 2*
  - Maintenance of standard of living at retirement – *Pillar 3*
Each pillar of the Canadian Retirement Income System has a specific objective

- 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)
    - Guaranteed Income Supplement (GIS) is an income-tested component of the OAS Program
  
  - 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)

- First two pillars replace currently about 40% of pre-retirement earnings for an individual with average level of earnings.
Income from all 3 pillars is necessary to guarantee Canadian seniors decent lives in retirement

Decomposing poverty protection for Canadian seniors aged 65 +

Percentage of seniors with equivalised household income **before taxes** below 35% of the average wage (2011)

<table>
<thead>
<tr>
<th>Category</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Above age 65 (no income)</td>
<td>100%</td>
</tr>
<tr>
<td>Basic OAS Income (universal Pillar 1)</td>
<td>100%</td>
</tr>
<tr>
<td>+ C/QPP Income (Pillar 2)</td>
<td>60%</td>
</tr>
<tr>
<td>+ Private Pension Income (Pillar 3)</td>
<td>35%</td>
</tr>
<tr>
<td>+ Investment Income</td>
<td>31%</td>
</tr>
<tr>
<td>+ Work Income</td>
<td>27%</td>
</tr>
<tr>
<td>+ Other Income</td>
<td>25%</td>
</tr>
<tr>
<td>+ GIS (Income-tested Pillar 1)</td>
<td>13%</td>
</tr>
</tbody>
</table>
The taxation is important for poverty reduction
Targeting and redistributive features of the first two pillars

- OAS Program – provides safety net
  - Income–tested Guaranteed Income Supplement

- Canada Pension Plan – mitigates impacts of life events
  - Drop-out provisions: low earnings, child-rearing, disability and post age 65

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Projection model for four countries

The working group agreed on model’s specifications and assumptions

Entry into labour force at age 25 in 2014, retirement at legislated ages

Three levels of income while working: 50%, 100% and 150% of average wage

Career profiles
- Full career full-time (reference scenario)
- Two maternities combined with part-time work
- Permanent part-time work (50%)
- Five years of unemployment
Evolution of net replacement rates from the OAS and the CPP over the next 40 years

- Net replacement rates generated by the first two pillars decline over the next 40 years
  - Mainly due to the indexation of the OAS with inflation vs. wage
  - Low income individuals are affected the most
- Postponing retirement to age 70 helps middle and higher income individuals
Gross income composition shows the increasing importance of the CPP income

<table>
<thead>
<tr>
<th>Year</th>
<th>Low income</th>
<th>Middle and higher income</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>GIS Share</td>
<td>Basic OAS Share</td>
</tr>
<tr>
<td>2014</td>
<td>34%</td>
<td>31%</td>
</tr>
<tr>
<td>2014</td>
<td>37%</td>
<td>34%</td>
</tr>
<tr>
<td>2056</td>
<td>46%</td>
<td>73%</td>
</tr>
<tr>
<td>2056</td>
<td>20%</td>
<td>27%</td>
</tr>
<tr>
<td>2059</td>
<td>7%</td>
<td>27%</td>
</tr>
<tr>
<td>2059</td>
<td>29%</td>
<td>35%</td>
</tr>
</tbody>
</table>

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The redistributive nature of the first two pillars translates into a levelling of income after retirement.
Targeting features of the OAS and the CPP protect Canadians from impacts of life events

Projections in 2056, age 67, retirement “67/65”
Meaningful comparison of Canada with other three countries is possible only if the 3rd pillar in Canada is taken into account.

Net Replacement rate of full-time full career worker (age 25 in 2014)

Assumed retirement age:
- Canada: 67 (OAS), 65 (CPP)
- Denmark: 73
- Netherlands: 71
- Sweden: 69
Lower and higher growth scenarios produce counterintuitive results …

- **Low growth**: wage growth and inflation are the same, poorer financial markets performance
  - Net replacement rates are higher (only CPP and OAS) (*left chart*)
  - Slightly lower net replacement rates with the 3rd pillar for middle and higher incomes (*right chart*)

- **High growth**, real wage increase and rates of return on assets are higher.
  - Lower net replacement rates (only CPP and OAS) (*left chart*)
  - Higher net replacement rates with the 3rd pillar (*right chart*)

**Net replacement rates under alternative economic scenarios**
...due to the interplay of the relative size of Pillar 1 benefits and the average salary
To find a balance between adequacy and affordability, mandatory and voluntary, public and private, is a non-trivial task

- The CPP and QPP in combination with the OAS have been successful in reducing poverty amongst seniors by providing basic retirement income.

- The third pillar pensions play an important role in providing adequate retirement income to Canadian seniors.

- The combination of targeting and redistributive measures of the OAS the CPP mitigates to a considerable extent the impacts of variant careers on retirement income.

- Canadian retirement income system is diversified and is well recognized in the world for its capacity to adapt rapidly to changing conditions.
Q&A
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Appendix
Working Group Modelling Assumptions

Main Economic Assumptions

<table>
<thead>
<tr>
<th>Scenario</th>
<th>Inflation</th>
<th>Wage growth</th>
<th>Fixed income return</th>
<th>Equity return</th>
<th>Money Market Return</th>
</tr>
</thead>
<tbody>
<tr>
<td>Base economic scenario</td>
<td>2.0%</td>
<td>3.0%</td>
<td>4.0%</td>
<td>7.0%</td>
<td>2.0%</td>
</tr>
<tr>
<td>Low growth scenario</td>
<td>1.0%</td>
<td>1.0%</td>
<td>2.0%</td>
<td>4.0%</td>
<td>1.0%</td>
</tr>
<tr>
<td>High growth scenario</td>
<td>2.0%</td>
<td>4.0%</td>
<td>6.0%</td>
<td>9.0%</td>
<td>3.0%</td>
</tr>
</tbody>
</table>

- Contribution rate for DC Scenario: employer 3%, employees 3%
- Asset allocation for DC scenario: 50% fixed income, 50% equities.
- Investment expenses: 0.5%

Life Expectancies for Canada, with improvements after the year shown (as per the 26th CPP Actuarial Report)

<table>
<thead>
<tr>
<th>AGE</th>
<th>2014 Male</th>
<th>2014 Female</th>
<th>2056 Male</th>
<th>2056 Female</th>
</tr>
</thead>
<tbody>
<tr>
<td>65</td>
<td>21.0</td>
<td>23.4</td>
<td>23.3</td>
<td>25.6</td>
</tr>
<tr>
<td>67</td>
<td>19.3</td>
<td>21.6</td>
<td>21.6</td>
<td>23.7</td>
</tr>
<tr>
<td>70</td>
<td>16.8</td>
<td>19.0</td>
<td>19.0</td>
<td>21.0</td>
</tr>
</tbody>
</table>