Presentation by Chief Actuary, Jean-Claude Ménard
Office of the Chief Actuary (OCA)
Office of the Superintendent of Financial Institutions Canada (OSFI)
at the
International Social Security Association (ISSA) International
Research Conference: Pillar integration, basic protection and
replacement rates in four modern multi pillar pension systems – case
of Canada

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Good afternoon. Thank you for inviting me to talk to you today. By way of introduction, I am Jean-Claude Ménard, Chief Actuary of the Canada Pension Plan, the Old Age Security Program and federal public sector pension plans in Canada. I am also the chairman of the ISSA Technical Commission on Financial, Actuarial and Statistical Studies.

Pillar integration, basic protection, replacement rates and replacement rate sensitivity in four modern multi-pillar pension systems *(Slide 2)*
Today, I would like to present the results for Canada of the joint four countries project on pillar integration, basic protection, replacement rates and their sensitivity. This project was initiated by Denmark in 2013 and covers retirement income systems in Canada, Denmark, the Netherlands and Sweden. The 2014 Melbourne Mercer Global Pension Index ranked these four countries' systems as some of the best, with Denmark and the Netherlands topping the list.

The synthesis report on this project is expected to be released in 2015.

An efficient multi pillar retirement system addresses: *(Slide 3)*
In general, the three pillars of multi-pillar pension systems are committed to financial as well as social sustainability. The first pillar is a fundamental prerequisite for poverty alleviation and the provision of a basic pension income floor. Supplementary public and private pensions provided by the second and third pillars are crucially important to pension adequacy and to the provision of acceptable replacement rates for vast middle and high-income groups.

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[1] Remarks to be accompanied by slide presentation, which can be found at the following link: http://www.osfi-bsif.gc.ca/Eng/oca-bac/sp-ds/Pages/jcm20141104_slides.aspx

Each pillar of the Canadian Retirement Income System has a specific objective (Slide 4)
At retirement, most Canadians will receive an income from one or more of the three tiers of our system: Old Age Security program (OAS), Canada/Quebec Pension Plans (C/QPP) and voluntary retirement savings.

The first two pillars replace currently about 40% of pre-retirement earnings for full-career individuals with earnings at the average level.

The diversification of the Canadian system through its mix of public and private pensions and different financing approaches mitigates the multitude of risks to which the system and individuals' retirement incomes are exposed. As stated in the editorial of the Organization of Economic Cooperation and Development's Pension at a Glance 2011 publication: "Taking the long view, a diversified pension system – mixing public and private provision, and pay-as-you-go and pre-funding as sources of finances – is not only the most realistic prospect but the best policy".

Income from all 3 pillars is necessary to guarantee Canadian seniors decent lives in retirement (Slide 5)
This slide illustrates the importance of various sources of income to Canadian seniors.

Even if the basic OAS income serves as a foundation of the Canadian retirement income system, it is not sufficient on its own to lift any seniors over the threshold of 35% of the average wage. The addition of the C/QPP pension reduces the percentage of low-income seniors by 40% from 100% to 60%.

The addition of the private pension income reduces further the percentage of low-income seniors by 25% from 60% to 35%. Finally, after all other types of income, such as investment and work, are taken into account the addition of the income-tested Guaranteed Income Supplement (GIS) benefits reduces the share of low-income seniors from 25% to 13%.

The taxation is important for poverty reduction (Slide 6)
The numbers shown on the previous slide are before taxes. The Canadian income tax system is based on progressive tax rates. In addition, it provides low-income seniors with a number of non-refundable and refundable tax credits. As a result, if taxes are factored in, percentage of vulnerable seniors decreases significantly.

Targeting and redistributive features of the first two pillars *(Slide 7)*
Multi pillar systems usually have built-in features aimed at mitigating life events as well as life-long insufficient earnings and/or savings.

The income-tested part of the OAS programs (the GIS benefit represented by green area) is aimed at seniors with low income that is the result of life-long insufficient earnings and/or savings. Its amount is not affected by the universal flat OAS benefit (orange area), but is reduced by 50 cents per each additional dollar of income. The major contributor to this reduction is income from <u>mandatory</u> second pillar schemes – the CPP and the QPP (dark blue area). Thus, the presence of CPP indirectly controls public pension expenditures.

The redistributive/targeting provisions of CPP (the second pillar) are aimed at lessening negative impacts of life events by excluding years of low earnings from the calculation of benefits.

Projection model for four countries *(Slide 8)*
The working group of the four countries involved developed a common framework that enables a comparative analysis of four pension systems. In particular, the group has agreed on the modelling approach and on the main economic assumptions. These assumptions could be found in the Appendix.

In the model individuals enter labour force at age 25 in 2014 and work till the country's specific retirement age. Three levels of income were considered, as well as careers impacted by life events such as maternities, unemployment and part-time work.

Evolution of net replacement rates from the OAS and the CPP over the next 40 years *(Slide 9)*
Since the third pillar savings in Canada are voluntary and quite fragmented, we first consider the two pillars model: the OAS and the CPP. The blue bars show the net replacement rates from the first two pillars in 2014. Today, the low-income individuals are well protected. However, net replacement rates decline with income due to, first, the income-tested nature of the GIS, and, second, to the fact that the CPP covers only earnings up to the average wage.

In 40 years (red bars), net replacement rates decrease due to the lower growth in the first pillar benefits compared to wages. For example, for the low-income person, the net replacement rate decreases from 82% to 64%.

In the absence of additional savings, one of the ways to increase post-retirement income is to work longer. With the postponement of retirement to age 70 both CPP pension and basic OAS benefit are actuarially adjusted upwards (42% for the CPP and 22% for the OAS). However, GIS benefits are not actuarially adjusted. The net replacement rates increase (green bars), and for middle and higher income individuals this increase fully mitigates the lagging indexation of the OAS.

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Gross income composition shows the increasing importance of the CPP income *(Slide 10)*
This slide presents the gross pension income composition under the two pillars model. It illustrates that the importance of the CPP pension is growing over time.

The chart also illustrates why the postponement of retirement to age 70 doesn't benefit low-income individuals to the same extent as those with middle and higher income. The reason is that the actuarial increase in the CPP and OAS benefits is partially clawed back through the reduction in GIS benefit.

The redistributive nature of the first two pillars translates into a levelling of income after retirement *(Slide 11)*
The redistributive nature of the first two pillars can be illustrated by comparing relative income levels before and after retirement. This slide shows the relative net income position of low and higher income earners compared to a middle income earner. In the last working year, the low-income individual's net income is 56% of the net income of the middle income earner (a reduction of 44%). Due to the basic income protection provided by the OAS, the loss of net income after retirement is only 16%. The pre-retirement net income of the higher income individual is 140% of the net income of the middle-income earner (a 40% increase). However, due to the limit on earnings covered by the CPP, both middle and higher income individuals have the same retirement pension.

Targeting features of the OAS and the CPP protect Canadians from impacts of life events *(Slide 12)*

This slide demonstrates the effectiveness of mitigating features of the OAS and the CPP. For example, for the maternity scenario, the overall working life income is 76% of the income of a full-time full career individual. However, due to the child-rearing drop-out, this translates into the retirement income loss of at most 6%.

For the permanent part-time career the main mitigation factor is the income-tested supplement.

Meaningful comparison of Canada with other three countries is possible only if the 3rd pillar in Canada is taken into account *(Slide 13)*
The importance of the retirement income from the third pillar distinguishes Canada from the other three countries participating in the project. In Denmark, the Netherlands and Sweden third pillar pensions play a marginal role, since occupational first and/or second pillar plans are the main source of the work-related retirement income.

This slide shows replacement rates for four countries with Canadian figures including DC pensions based on 6% contribution rate. The replacement rates for middle-income earner are similar in Canada, Denmark and Sweden, and much higher in the Netherlands (exceeding 100%).

Lower and higher growth scenarios produce counterintuitive results … *(Slide 14)*

Retirement income systems are affected by variations in economic conditions. Two alternative economic scenarios characterized as low and high growth are considered. Under the low growth scenario, it is assumed that there is no difference between wage growth and inflation, and financial markets perform worse than under the base scenario. Under the high growth scenario, real wage increase and rates of return on assets are higher.

The left chart shows the two pillars model. Under the low growth, somewhat surprisingly, the replacement rates increase (red bars). This is explained by the fact that in such economic environment the first pillar pensions will maintain their importance. Under the high growth, more vulnerable seniors are not compensated by the robust economic growth for the erosion of the OAS benefits (green bars at the left chart).

In the three pillars system (right chart), the replacement rates for low income individuals are higher under both low and high growth scenarios compared to the base economic scenario. It means that during bad times, the system protects low-income seniors with the cost to the taxpayers moderated by the existence of personal savings. When times are good, the three pillars system allows low-income individuals to share the benefits of the economic growth.

…due to the interplay of the relative size of Pillar 1 benefits and the average salary *(Slide 15)*
In a three pillars model, the interplay of the relative size of the OAS benefits and the average salary, and the rate of growth in DC account values define the dynamics of the change in the replacement rates.

To find a balance between adequacy and affordability, mandatory and voluntary, public and private, is a non-trivial task *(Slide 16)*
To conclude, it is a non-trivial task to find a balance between adequacy and affordability, mandatory and voluntary, public and private pension delivery models. In Canada the first two pillars are successful in providing basic retirement protection. Moreover, the first two pillars mitigate to a considerable extent the impact of life events on retirement income. The role of the third pillar is to provide adequate retirement income and diversify the sources of retirement income.

Thank you. I will be pleased to answer any questions you might have. Please stay tuned for a presentation of final and comprehensive results of this project for all four countries in Budapest in fall 2015 during the 18th ISSA Conference of Social Security Actuaries and Statisticians.