



**Reference:**

**STRICTLY PRIVATE AND CONFIDENTIAL**

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255 Albert Street  
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Canada

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Dear Jean-Claude

**Review of the peer review of the 25<sup>th</sup> Actuarial Report on the CPP**

The Office of the Chief Actuary (OCA) commissioned an external peer review of its 25<sup>th</sup> Actuarial Report on the Canada Pension Plan as at 31 December 2009 (AR25). In April 2010 the OCA asked the Government Actuary's Department (GAD) of the United Kingdom to advise on the selection of the independent Canadian actuaries who would perform the peer review and to provide an opinion on the work done by these peer reviewers.

To fulfil the first part of this request, GAD received the eight applications directly from the individuals wishing to be appointed as peer reviewers and assessed their résumés using weighted selection criteria. These criteria included the level of experience of the applicants in social insurance, pensions and investment policy, as well as the applicants' qualifications and status within the Canadian Institute of Actuaries. In August 2010 GAD provided the Chief Actuary with a schedule setting out the results of our assessment, with a ranking of the eight candidates. The Chief Actuary successfully entered into an agreement with the three highest ranking candidates to undertake the peer review.

We now provide below our comments and opinion on the work done by the peer reviewers in order to fulfil the second part of what the OCA asked GAD to do.

**Scope of our review**

We have carried out a review of the "Review of the Twenty-Fifth Actuarial Report on the Canada Pension Plan" ("the Peer Review") dated 16 March 2011 prepared by Dr Douglas Andrews, Dr Robert Brown and Mr Warren McGillivray. The Peer Review is of the AR25 which was prepared by the OCA and signed by the Chief Actuary, Jean-Claude Ménard and two of his senior colleagues, Michel Montambeault and Michel Millette.

The terms of reference for the Peer Review were:

*"The Canadian peer reviewers will review the work of the Chief Actuary in completing the 25<sup>th</sup> Actuarial Report on the Canada Pension Plan as at 31 December 2009 and, following the*

*review, provide a report to the Chief Actuary and the Government Actuary's Department (GAD). The GAD will then provide its opinion of the peer review to the Chief Actuary.*

*The review report should contain opinions on the following questions:*

- 1) Is the professional experience of the Chief Actuary and his staff who worked on the report adequate for carrying out the work required?*
- 2) Has the work been completed in compliance with the relevant professional standards of practice and statutory requirements?*
- 3) Did the Chief Actuary have access to the information required to perform the valuation, and were relevant tests and analysis on the data completed as might be expected?*
- 4) Were the actuarial methods and assumptions used in completing the report reasonable?*
- 5) Does the 25<sup>th</sup> Report fairly communicate the results of the work performed by the Chief Actuary and his staff?*
- 6) Does the 24<sup>th</sup> Report supplementing the 23<sup>rd</sup> CPP Report in respect of Bill C-51 use appropriate assumptions and fairly communicate the changes from the estimates contained in the 23<sup>rd</sup> CPP Report?*

*In providing opinions on the questions listed above, the reviewers will also provide such recommendations as the peer reviewers deem appropriate with respect to future actuarial reports on the Canada Pension Plan prepared by the Office of the Chief Actuary."*

It was not part of the remit of GAD's work to comment on possible additions or amendments to the terms of reference.

GAD was not requested to carry out an independent review of the AR25. That was the role of the three peer reviewers. Similarly GAD was not asked to carry out an independent review of the opinions of the peer reviewers. We are not, therefore, in a position to agree or disagree with the opinions that the reviewers set out.

## **Summary of the Peer Review**

The Peer Review includes the following sections:

- > Executive summary
- > Introduction
- > Professional experience
- > Professional and statutory requirements
- > Data
- > Methodology
- > Assumptions
- > Communication of results
- > Actuarial Report 24 (AR24): The impact of Bill C-51
- > Other issues and recommendations

The Peer Review covered all of the items listed in the terms of reference. The three peer reviewers reached agreement on all of the opinions and recommendations set out in the Peer Review. The peer reviewers were able to answer in the affirmative all six of the questions listed in the terms of reference.

The executive summary complimented the Chief Actuary and his staff on the way that the AR25 was carried out and offered 15 recommendations which they considered would enhance future actuarial reports. These opinions and recommendations are explained in detail in the body of the Peer Review report.

The peer reviewers commented that many of the assumptions used by the Chief Actuary are not open to accurate prediction and that in some cases they may have taken a different view to that taken by the Chief Actuary. However, in all cases they stated that they were satisfied that the assumptions both individually and taken in aggregate fell within acceptable ranges. They noted that the assumptions in aggregate were, however, towards the low-cost side of what they considered to be a reasonable range. In the peer review on the 23<sup>rd</sup> Actuarial Report, the peer reviewers considered that the assumptions, in aggregate, were towards the high-cost side of what they considered to be a reasonable range.

### **GAD's opinion on the peer reviewers' work and report**

GAD considers that the terms of reference of the Peer Review are sufficient to enable the peer reviewers to address all of the relevant issues they need to in order to perform an in depth review of the actuarial work underlying the AR25 and the contents of the AR25 itself.

There was nothing in the Peer Review that gave us any cause for concern or indicated that the peer reviewers had not carried out a sufficiently thorough job. We consider that the opinions of the peer reviewers adequately cover all the main issues and that it was reasonable, based on the contents of their report, for them to answer in the affirmative all six of the questions listed in the terms of reference.

We have some comments on the peer reviewers' report which arose from our review.

- i) In a number of places, e.g. at the bottom of page 2 within the executive summary, the peer reviewers stated that 'Readers of AR25 should look at the sensitivity tests to understand the range of possible outcomes'. We expect that most of the readers of the Peer Review will understand that the ranges given are not meant to imply that results outside of these ranges are not possible. However, it is possible that a lay person reading the report could take away this impression. As such, it might be useful for future peer reviewers to use clearer wording.
- ii) It would have been helpful if, throughout the Peer Review, there was a clearer distinction between discussion of the best-estimate assumptions and discussion of the assumptions used in the sensitivity tests.
- iii) In 6.2.1 the reference to the UN's population projections was not clear as no source was given. For example, the 1.85 total fertility rate assumption in 2045 is the UN's current (2008 revision) long term assumption on its medium variant projection; it uses higher and lower assumptions in its high and low variant projections.
- iv) In 6.2.5 the peer reviewers stated that they were satisfied that there was no need for the Chief Actuary to provide sensitivity tests on rates of retirement for the purpose of AR25 as the new early and late retirement factors are intended to be actuarially fair. However, the peer reviewers also noted at the top of page 52 that AR24 presents 'the wide range of the results of the sensitivity tests in spite of the actuarial equivalence of the adjustment factors'. It would have been helpful if the peer reviewers had reconciled or provided further explanation as to these two seemingly opposing opinions.
- v) In their opinion on the retirement rate assumptions, on page 40, the peer reviewers stated that "from table 19 of AR24, we infer that assuming later retirement ages would result in a higher minimum contribution rate." It would have been helpful if a more detailed explanation had been given for this comment.
- vi) In section 6.3.4 the peer reviewers stated that 'the assumed ultimate asset mix is a little more heavily weighted to fixed income investments than what we would expect.' It would have been useful if the peer reviewers had given an indication of what their expectation was and the basis of their expectation. It would also have been useful if they had given an indication of whether the 'little more' would have made a material difference to any of the results.

- vii) In section 6.3.4 the peer reviewers recommended the 'CPPIB and the OCA to jointly estimate the range of the ultimate portfolio'. They could have explained better why a joint estimate would be required. However, we have not seen the investment management agreement or any documents setting out the investment strategy for the CPP and so we are not aware how much scope there is for projecting different asset mixes. This recommendation could perhaps have been linked to the later comment in the same section which refers to the risk tolerance of the CPPIB. This risk tolerance is likely to be a significant factor in determining the future asset mix.
- viii) The peer reviewers' opinion on the real rate of return, on page 46, i.e. that it is on the high side of a reasonable range did not seem to be very strongly supported by the contents of section 6.3.4. They seem to be saying that the assumed proportion in equities is too low in the long-term and the ERP is also on the low side, both of which would seem to suggest that OCA's assumption for the real rate of return would be on the low side.

We have not carried out an independent assessment of the 15 recommendations made by the peer reviewers and therefore do not specifically agree or disagree with any of them. Generally, the nature and scope of the recommendations made by the reviewers appear to be reasonable.

I hope that you find these comments helpful. Please contact me if you would like to discuss them further.

Yours sincerely



**Dr Dermot Grenham FIA**

Chief Actuary, Social Security, Demography and Overseas Pensions