Educational Note Supplement

Guidance for Assumptions for Hypothetical Wind-Up and Solvency Valuations Update – Effective March 31, 2011

Document 211061

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Memorandum

To: All Pension Actuaries

From: Gavin Benjamin, Chair
Committee on Pension Plan Financial Reporting

Date: June 7, 2011

Subject: **Educational Note Supplement: Guidance for Assumptions for Hypothetical Wind-Up and Solvency Valuations Update – Effective March 31, 2011**

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The most recent guidance from the Committee on Pension Plan Financial Reporting (PPFRC) regarding assumptions for hypothetical wind-up and solvency valuations was provided in an educational note dated May 10, 2011, which was based on a review of data collected in early 2011. The review concluded that for valuations with effective dates on and after December 31, 2010, an appropriate discount rate for estimating the cost of purchasing a non-indexed group annuity would be determined as the unadjusted yield on Government of Canada (GoC) long-term bonds (CANSIM V39062) increased arithmetically by 100 bps, in conjunction with the UP94@2020 mortality table. This guidance applies to both immediate and deferred pensions and also applies regardless of the overall size of a group annuity purchase.

Methodology

The May 10, 2011 guidance as to estimated purchase costs for non-indexed group annuities was partially based on quotes provided by six insurance companies on illustrative group annuities using pricing conditions as at December 31, 2010, and supplemented by data on actual group annuity purchases during the fourth quarter of 2010 and early 2011 provided by certain actuarial consulting firms.

Analysis

In an effort to continue to monitor group annuity pricing, the PPFRC obtained illustrative quotes on a similar basis to those obtained at December 31, 2010, but based on pricing conditions as at March 31, 2011. In addition, the PPFRC obtained limited data on the pricing of actual group annuity purchases in the first quarter and early second quarter of 2011 from certain actuarial consulting firms.

The illustrative non-indexed quotations at December 31, 2010 and March 31, 2011 may be summarized as follows:

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AVERAGE OF THE THREE MOST COMPETITIVE QUOTES (USING UP94 GENERATIONAL MORTALITY TABLES)				
	Large Purchase		**Small Purchase**	
	31/12/2010	**31/03/2011**	**31/12/2010**	**31/03/2011**
Retirees • Discount rate • Spread over CANSIM V39062	4.33% + 0.85%	4.43% +0.73%	4.15% +0.67%	4.48% +0.78%
Deferred vesteds • Discount rate • Spread over CANSIM V39062	4.39% + 0.91%	4.50% + 0.80%	4.06% +0.58%	4.48% + 0.78%

Note that the discount rates in the above table have been determined using the UP94 mortality table with generational projection using improvement Scale AA rather than the UP94@2020 mortality table used in the May 10, 2011 educational note. This change has been made to be consistent with the mortality table used to determine commuted values under section 3500 of the Standards of Practice – Practice-specific Standards for Pension Plans effective February 1, 2011. The change in the underlying mortality table results in discount rates that are about six basis points (bps) higher for the retirees and about 16 bps higher for the deferred vesteds in the illustrative quotes.

If considered in isolation, the illustrative quotes suggest that an appropriate discount rate for estimating the cost of purchasing non-indexed group annuities be determined as the unadjusted yield on GoC long-term bonds (CANSIM V39062) increased arithmetically by 70 to 80 bps, in conjunction with the UP94 mortality table with generational projection. The pricing information for the *actual* group annuity purchases for non-indexed pensions in the first quarter and early second quarter of 2011 that was available to the PPFRC produced an average spread which was in the range of 60 to 70 bps above the prevailing unadjusted yield on GoC long-term bonds (CANSIM V39062). These spreads are significantly lower than the average spread on actual group annuity purchases for immediate pensions in the fourth quarter of 2010 of 104 bps, based on the UP94@2020 mortality table. Overall, the PPFRC concluded that, effective March 31, 2011, a revision to the guidance contained in the May 10, 2011 educational note is appropriate and this revised guidance would give some weight to both the illustrative and actual purchase data collected.

Both the illustrative quotes and the data on actual group annuity purchases do not show significant differences in pricing between large and small annuities and between immediate and deferred annuities.

The guidance below for both non-indexed and indexed pensions is based on the UP94 mortality table with generational projection.

Guidance for Non-Indexed Pensions

Based on the analysis described above, the PPFRC has concluded that, for valuations with effective dates on and after March 31, 2011, an appropriate discount rate for estimating the cost of purchasing a non-indexed group annuity would be determined as the unadjusted yield on GoC long-term bonds (CANSIM series V39062) increased arithmetically by 70 bps, in conjunction with the UP94 mortality table with generational projection. This guidance applies to both immediate and deferred pensions and also applies regardless of the overall size of a group annuity purchase.

The revised guidance on spreads applies to valuations with effective dates on and after March 31, 2011 up to December 30, 2011, pending any further guidance or other evidence of change in annuity pricing.

Example

As at March 31, 2011, the unadjusted CANSIM V39062 rate was 3.70%. This rate would form the basis for developing an appropriate underlying discount rate for valuations of non-indexed group annuities with effective dates of March 31, 2011. Prior to rounding, an applicable underlying discount rate would then be determined as 3.70% + 0.70% = 4.40%.

Guidance for Indexed Pensions

The data regarding the pricing of annuities indexed to the Consumer Price Index (CPI) continue to be extremely limited. None of the data obtained regarding actual annuity purchases during the first quarter and early second quarter of 2011 pertain to indexed annuities. The contributing insurers did provide illustrative quote data for the sample purchases on a CPI indexed basis. However, similar to previous periods, the illustrative quotes are either qualified to the effect that the insurer would not actually transact on that basis and/or the premiums quoted for the most part are substantially higher than would be suggested by prior educational notes.

Despite the significant limitations with data, the PPTRC has concluded that it would be appropriate to update the mortality table used to estimate the cost of purchasing indexed annuities to be consistent with the mortality table used to estimate the cost of purchasing non-indexed annuities.

Accordingly, an appropriate proxy for estimating the cost of purchasing a group annuity where pensions are fully indexed to the rate of change in the CPI is the unadjusted yield on GoC real return long-term bonds (CANSIM V39057) in conjunction with the UP94 mortality table with generational projection. As at March 31, 2011, the unadjusted CANSIM V39057 rate was 1.15%.

In situations where pensions are partially indexed, indexed to a measure other than the CPI or contain a deferred component, the actuary would make appropriate provisions for such situations consistent with the guidance provided in the May 10, 2011 educational note and other relevant educational notes.

Rounding

Each actuary would use discretion in determining whether to round discount rates for the non-indexed or indexed pensions, as applicable, to the nearest multiple of five, 10 or 25 basis points. Consistency in the application of such rounding would be followed.

Validity of May 2011 Educational Note

With the exception of the revisions to the guidance contained in this memo, actuaries would continue to reference the May 10, 2011 educational note for guidance with respect to the selection of assumptions for hypothetical wind-up and solvency valuations with effective dates between December 31, 2010 and December 30, 2011.