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AMERICAN ACADEMY *of* ACTUARIES

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December 28, 2010

Ms. Carol Sears  
Chairperson  
Actuarial Board for Counseling and Discipline  
1850 M Street, N.W., Suite 300  
Washington, D.C. 20036

Subject: Request for guidance on the use of certain actuarial assumptions and practices in the valuation of defined benefit pension plans

Dear Ms. Sears:

I am writing on behalf of the American Academy of Actuaries<sup>1</sup> Pension Practice Council. This letter is a request for formal guidance from the Actuarial Board for Counseling and Discipline (ABCD) on the use of certain actuarial assumptions and practices in the valuation of defined benefit pension plans.

Per Actuarial Standard of Practice No. 41 (ASOP 41) Section 3.3.3, an actuary should provide sufficient disclosure in an actuarial valuation report about the methods and assumptions used so that another qualified actuary in the same practice area can evaluate the reasonableness of the actuary's work as presented.

We believe that the inability of valuation software to appropriately model the contingencies of a pension plan is never justification for an actuary to produce inferior valuation work. However, despite the best efforts of actuaries and valuation software providers, there will always be circumstances when an actuary may need to use alternative means to value a less common technique, assumption, or benefit plan provision that cannot be handled otherwise due to limitations in the valuation software or other practical considerations. In these circumstances, section 3.17 of ASOP 4 permits the actuary to use approximations and estimates to indirectly arrive at a reasonable valuation result. We request guidance from the ABCD that such approximations and estimates may be considered reasonable actuarial practice if the adjustments to the valuation are reasonable under the actuarial standards of practice and, consistent with ASOP 41 and ASOP 4 Sections 3.17 and 4.1(o)<sup>2</sup>, the actuary includes the following disclosures in the actuarial valuation report:

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<sup>1</sup> The American Academy of Actuaries is a professional association with over 17,000 members, whose mission is to assist public policymakers by providing leadership, objective expertise, and actuarial advice on risk and financial security issues. The Academy also sets qualification, practice, and professionalism standards for actuaries in the United States.

<sup>2</sup> These section references are to ASOP 4, as revised September 2007, effective for any actuarial valuation with a measurement date on or after March 15, 2008. For measurement dates prior to March 15, 2008, reference ASOP 4, October 1993 section 6.4.

1. A description of any alternative valuation approaches to directly modeling any material contingencies in the valuation, in sufficient detail so that another actuary could evaluate the reasonableness of the valuation results based on the information provided;
2. A description of any plan provisions either being valued by some alternative approach or not being valued at all, if the valuation of that benefit provision has or could have a material effect on the valuation results;
3. A description of any actuarial assumptions being used that have been adjusted from the actuary's best estimate for those assumptions in order to accommodate the alternative approach; and
4. If, in the actuary's professional judgment, the adjustments could result in a significant margin of error relative to the results if a more rigorous valuation approach had been used, a statement to this effect.

**Specifically, we request the ABCD's guidance and agreement that the actuarial practices described in the following hypothetical situations may be considered reasonable.** We recognize that these are examples only for purposes of discussion and are not intended to place any limits on current practice nor are they meant to imply any new standard of practice; the reasonableness of other situations or variations would be separately evaluated based on the particular facts and circumstances.

In all cases, we assume that the actuary makes all disclosures required by the ASOPs relevant to the particular case.

1. The actuary uses a turnover assumption that reflects only non-vested turnover and either of the following conditions are satisfied:
  - a. Consistent with ASOP 35 Section 3.3.1 (last paragraph)<sup>3</sup>, the use of a termination of employment assumption for vested employees would not affect the results of the calculation (e.g., in the calculation of the present value of accrued benefits for a vested active employee if the value of the benefits payable for future terminations and other types of decrements are all actuarially equivalent or in the calculation of projected annual benefit payments if the date payments commence is the same for terminations and other types of decrements); or
  - b. Consistent with ASOP 35 Section 3.3.5(a), the small size of the pension plan population does not justify the use of a turnover assumption for longer-service members.

Furthermore, the use of no turnover assumption at all may be reasonable if the small size of the pension plan population does not justify the use of any turnover assumption.

2. The valuation does not include a cost element for pre-retirement death benefits and any of the following conditions are satisfied:

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<sup>3</sup> ASOP 35 was revised September 2007 effective for any valuation with a measurement date on or after March 15, 2008 and effective September 2010 for any valuation with a measurement date on or after June 30, 2011. Throughout this letter, unless specified otherwise, references to specific sections of ASOP 35 apply to the original December 1999 version and to both revised versions where the content of those specific sections has not changed due to the revisions.

- a. A mortality assumption is used although no pre-retirement death cost is included because, consistent with ASOP 35 Section 3.3.1(e), the cost of the pre-retirement death benefit is not material;
  - b. Consistent with ASOP 35 Section 3.5.3(a), no pre-retirement mortality assumption is used in the valuation because the small size of the pension plan population does not justify the use of such an assumption;
  - c. Consistent with ASOP 35 Section 3.3.1 (last paragraph), the pre-retirement death benefit is actuarially equivalent to the benefit payable under some other decrement(s) (e.g., turnover) or approximately so and the experience related to mortality and the other decrement(s) are combined into a single table of assumptions; or
  - d. The cost of the pre-retirement death benefit is charged to the participant and only employer costs are being measured in the valuation.
3. The actuary uses a 100 percent probability of retirement at a single assumed retirement age rather than a series of retirement probabilities and ages and any of the following conditions are satisfied:
- a. Benefits payable at retirement ages other than the one assumed are not subsidized relative to the assumed retirement age and the funding period is not extended unreasonably (e.g., a single, assumed retirement age that is approximately the average age at retirement, weighted by liability size, would likely satisfy this condition);
  - b. Consistent with ASOP 35 Section 3.3.5(a), there is a reasonable expectation that the single, assumed retirement age will be selected by all or almost all of the plan members, weighted by liability size (e.g., use of the owner's expected retirement age in a two-person plan consisting of a long-service owner and a short-service administrative assistant would likely satisfy this condition); or
  - c. Actual plan experience indicates that a material number of retirements do not occur at other retirement ages (e.g., a plan with benefits significantly more subsidized at one potential retirement age and nearly all plan participants are aware of that subsidy and actually retire at that age).

Of course, if the valuation is a special purpose valuation, other considerations may apply, such as:

- i. If the valuation is being conducted to identify the cost of adding or changing a subsidized retirement benefit, consistent with ASOP 35 Section 3.3.4(b), consideration should be given as to whether the retirement age assumption used to value the benefits after the change should be modified to reasonably reflect the change in expected retirement experience; and
- ii. If the valuation is being used to estimate expected annual benefit payments for one or more future years, the assumption should not be expected to materially affect those estimates for each individual year.

The use of 100 percent probability of retirement on a single, future date may also be reasonable if, for example, a plant closing is expected on that future date.

4. The actuary assumes that every participant will elect retirement under the normal form and both of the following conditions are satisfied:

- a. Consistent with ASOP 35 Sections 3.3.3(a) and 3.5.5(c), no optional form of payment is materially subsidized relative to the other available options (including QJSA supplements for benefits at the \$415 limit) or, consistent with ASOP 35 Section 3.3.1(e), any subsidized option is available only to a small group of participants such that the effect of ignoring the subsidy is immaterial; and
  - b. Consistent with ASOP 35 Section 3.3.4(a), the valuation is not being used to estimate expected annual benefit payments for one or more years or use of the assumption is not expected to materially affect those estimates for each individual year.
5. The actuary uses only an age-based, aggregate turnover assumption rather than one that is select and ultimate based on service (or age and service) and any of the following conditions are satisfied:
  - a. There are insufficient data to justify the select period because the pension plan population is small;
  - b. Credible pension plan experience demonstrates that the use of a select period is not justified or, consistent with ASOP 35 Section 3.10.1, is immaterial; or
  - c. The pension plan has been closed to new entrants for a number of years so that a select period is not necessary.
6. As acknowledged in ASOP 6 Section 3.12, performing (and documenting) representative individual test case checking is not the only way an actuary may comply with the Precept 1 responsibility to act with “skill and care.” For example, an actuary may have sufficiently tested the valuation program for a plan in the past and have an established valuation process such that review of the results in the aggregate provides a more effective means for testing reasonableness.
7. The actuary uses a static mortality table assumption and any of the following conditions are satisfied:
  - a. Consistent with ASOP 35 Section 3.8, use of the static mortality table is required by law or regulation for the purpose of the specific actuarial valuation;
  - b. Consistent with ASOP 35 Section 3.3.3(a) and (c), the static mortality table includes a projection of mortality improvements to a future year and the results of the valuation on that basis are expected to be reasonably representative of the future experience of the plan;
  - c. Consistent with ASOP 35 Section 3.10.2, the small size of the pension plan population does not justify the use of a mortality assumption that varies by year;
  - d. Consistent with ASOP 35 Section 3.5.3, certain characteristics of the plan population make it difficult to predict the magnitude, if any, of future mortality improvements (e.g., when a significant portion of the pension plan population works in a hazardous occupation);
  - e. The plan’s benefits are primarily paid in a lump sum form or the death benefit is actuarially equivalent to the benefit payable under some other decrement(s) (e.g., turnover) such that the effect of mortality improvements would not be material; or
  - f. Consistent with ASOP 35, the use of a static mortality table is appropriate for the purpose of the valuation.

We note that under ASOP 35 Section 3.5.3, revised September 2010 and effective for valuations with a measurement date on or after June 30, 2011, the assumption for mortality improvement must be disclosed, even if the actuary concludes that an assumption of zero

future improvement is reasonable. Further, the existence of uncertainty about the occurrence or magnitude of future mortality improvement does not by itself mean that an assumption of zero future improvement is a reasonable assumption.

The above examples are not intended to be an exhaustive list of the situations where the use of these assumptions and practices may be reasonable. Furthermore, consistent with ASOP 35 Sections 3.1 and 3.3.5(b), the use of these assumptions in other situations may be reasonable if the assumption is not anticipated to produce significant cumulative actuarial gains and losses over the measurement period.

We thank you for your considerations of these matters, and would be happy to meet with you to discuss any of them further. If you have any specific questions or would like more information, please contact Jessica Thomas, the Academy's pension policy analyst, at 202-785-7868 or [thomas@actuary.org](mailto:thomas@actuary.org).

Sincerely,

A handwritten signature in black ink that reads "Ethan E. Kra". The signature is written in a cursive style with a large initial "E" and "K".

Ethan E. Kra, FSA, MAAA, EA  
Vice President, Pension Practice Council  
American Academy of Actuaries