



ACTUARIAL STANDARDS BOARD

● EXPOSURE DRAFT ●

**Proposed
Actuarial Standard
of Practice**

**Assessment and Disclosure of Risk
Associated with Measuring Pension Obligations and Determining
Pension Plan Contributions**

**Comment Deadline:
May 29, 2015**

**Developed by the
Pension Committee of the
Actuarial Standards Board**

**Approved for Exposure by the
Actuarial Standards Board
December 2014**

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December 2014

TO: Members of Actuarial Organizations Governed by the Standards of Practice of the Actuarial Standards Board and Other Persons Interested in the Assessment and Disclosure of Risk Associated with Measuring Pension Obligations and Determining Pension Plan Contributions

FROM: Actuarial Standards Board (ASB)

SUBJ: Proposed Actuarial Standard of Practice (ASOP), *Assessment and Disclosure of Risk Associated with Measuring Pension Obligations and Determining Pension Plan Contributions*

This document is an exposure draft of a proposed ASOP, *Assessment and Disclosure of Risk Associated with Measuring Pension Obligations and Determining Pension Plan Contributions*.

Please review this exposure draft and give the ASB the benefit of your comments and suggestions. Each written response and each response sent by e-mail to the address below will be acknowledged, and all responses will receive appropriate consideration by the drafting committee in preparing the final document for approval by the ASB.

The ASB accepts comments by either electronic or conventional mail. The preferred form is e-mail, as it eases the task of grouping comments by section. However, please feel free to use either form. If you wish to use e-mail, please send a message to **comments@actuary.org**. You may include your comments either in the body of the message or as an attachment prepared in any commonly used word processing format. **Please do not password protect any attachments. If the attachment is in the form of a PDF, please do not “copy protect” the PDF.** Include the phrase “ASB COMMENTS” in the subject line of your message. Please note: Any message not containing this exact phrase in the subject line will be deleted by our system’s spam filter.

If you wish to use conventional mail, please send comments to the following address:

Assessment and Disclosure of Risk
Actuarial Standards Board
1850 M Street, NW, Suite 300
Washington, DC 20036

The ASB posts all signed comments received to its website to encourage transparency and dialogue. Unsigned or anonymous comments will not be considered by the ASB nor posted to the website. The comments will not be edited, amended, or truncated in any way. Comments will be posted in the order that they are received. Comments will be removed when final action on a proposed standard is taken. The ASB website is a public website, and all comments will be available to the general public. The ASB disclaims any responsibility for the content of the comments, which are solely the responsibility of those who submit them.

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Deadline for receipt of responses in the ASB office: **May 29, 2015**

Background

The Pension Committee has been reviewing all of the pension-related standards and has been working on potential guidance regarding the assessment, disclosure, and management of pension risk as part of the larger review project. The Pension Committee believes that a new standard should be considered, with such standard to provide guidance on the assessment and disclosure of pension risk. Section 3.16 of the recently revised version of ASOP No. 4, *Measuring Pension Obligations and Determining Pension Plan Costs or Contributions*, provides guidance to an actuary whose assignment includes an analysis of the potential range of future pension obligations, costs, contributions or funded status. Section 4.1(r) of the revised standard requires disclosure that future pension measurements may differ significantly from current measurements, possibly resulting from a number of factors. This section also requires the actuary to provide results of the analysis of the potential range of future pension obligations, etc. if the scope of the actuary's assignment included such analysis, or a statement indicating that because of the limited scope of the assignment, such an analysis was not performed.

Section 3.4.1 of ASOP No. 41, *Actuarial Communications*, indicates that “the actuary should consider what cautions regarding uncertainty or risk in any results should be included in the actuarial report.” Section 3.3.2 of the recently revised ASOP No. 4 says, “In conjunction with the related guidance in ASOP No. 41, the actuary should consider the uncertainty or risk inherent in the measurement assumptions and methods and how the actuary's measurement treats such uncertainty or risk.”

The Pension Committee believes that additional guidance that expands on section 3.4.1 of ASOP No. 41 and section 3.3.2 of the revised ASOP No. 4 would be helpful. Additionally, the Pension Committee believes that providing additional disclosures will help the intended users of the actuarial findings to have a better understanding of risks inherent in the measurements of pension obligations and actuarially determined pension plan contributions. Given the significance of the new guidance, the Pension Committee feels that such guidance should come in the form of a new standard of practice that adds to the requirements set forth in existing standards.

Because of the timing of the release of this exposure draft, the draft does not reflect responses to the ASB's Request for Comments regarding ASOPs and Public Pension Plan Funding and Accounting. Those responses will be considered for future guidance in this or other pension-related standards.

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Request for Comments

The ASB would appreciate comments on all areas of this proposed standard and draws the reader's attention, in particular, to the following questions:

1. The discussion draft that preceded this proposed ASOP indicated that a risk assessment should be performed for substantially all pension assignments. The exposure draft has limited the assessment to funding valuations, as defined in section 2.1. Do you believe this limitation is appropriate? Why or why not? If not, what other types of valuations should include risk assessments?
2. Does the language in the exposure draft provide sufficient guidance to actuaries performing risk assessment work? If not, what additional guidance should be provided?
3. Is the language in the exposure draft sufficiently flexible to allow for new developments in this area of actuarial practice?
4. Do you agree that the guidance in section 3.3 regarding assumptions used for the assessment of risk should include moderately adverse but plausible outcomes? If not, what guidance would you propose?
5. As discussed in section 3.5, for a funding valuation of a plan, the actuary should perform a risk assessment, which may be quantitative, qualitative, or both. Should the guidance require the actuary to use professional judgment in choosing which type of assessment (quantitative, qualitative, or both) to use? For example, if an actuary believes a quantitative assessment should be performed, do you believe providing a qualitative assessment instead of a quantitative assessment should be considered appropriate actuarial practice?
6. Plan maturity measures have been included as a potential disclosure item to assist intended users in understanding the risks associated with the plan. Are there additional measures that may be disclosed that are significant to understanding the risks of the plan? If yes, what measures would you recommend as a disclosure item?
7. Do you agree with the use of a threshold for requiring mandatory quantitative assessment that is based on the actuary's professional judgment? If not, what threshold do you believe should be used?
8. Do you believe that the term "large plan" in section 3.7 is sufficiently clear that an actuary will be able to apply it in practice? If not, what clarification would you suggest? Are there other characteristics that should be specified in determining "large plan"?

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9. Is every five years an appropriate period for performing a mandatory quantitative assessment for a “large plan” in the absence of significant changes, as described in section 3.7?

The Pension Committee thanks former committee members Gordon C. Enderle and A. Donald Morgan, IV for their assistance with drafting this exposure draft.

The ASB reviewed the draft at the December 2014 meeting and approved its exposure.

Pension Committee of the ASB

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The Actuarial Standards Board (ASB) sets standards for appropriate actuarial practice in the United States through the development and promulgation of Actuarial Standards of Practice (ASOPs). These ASOPs describe the procedures an actuary should follow when performing actuarial services and identify what the actuary should disclose when communicating the results of those services.

**ASSESSMENT AND DISCLOSURE OF RISK
ASSOCIATED WITH MEASURING PENSION OBLIGATIONS
AND DETERMINING PENSION PLAN CONTRIBUTIONS**

Section 1. Purpose, Scope, Cross References, and Effective Date

- 1.1 **Purpose**—This actuarial standard of practice (ASOP) provides guidance to actuaries when performing actuarial services with respect to measuring obligations under a pension plan and calculating actuarially determined contributions for such plans, with regard to the assessment and disclosure of the **risks** inherent in those measurements and determinations. Throughout this standard, the terms “plan” and “pension plan” refer to a defined benefit pension plan.

Other actuarial standards of practice address measuring pension obligations, calculating plan costs or contributions, selecting actuarial assumptions for measuring pension obligations, and selecting and using asset valuation methods for pension valuations.

- 1.2 **Scope**—This standard applies to actuaries when performing a **funding valuation** of a pension plan. This standard is not applicable to actuarial services performed in connection with other post-employment benefits, such as medical benefits.

This standard does not apply to actuaries performing **funding valuations** for social insurance programs as described in section 1.2, Scope, of ASOP No. 32, *Social Insurance* (unless an ASOP on social insurance explicitly calls for application of this standard).

In some circumstances, the actuary’s assignment might include advising the plan sponsor on the management or reduction of **risk**; this standard does not provide guidance on such **risk** management.

If the actuary departs from the guidance set forth in this standard in order to comply with applicable law (statutes, regulations, and other legally binding authority), or for any other reason the actuary deems appropriate, the actuary should refer to section 4.

- 1.3 **Cross References**—When this standard refers to the provisions of other documents, the reference includes the referenced documents as they may be amended or restated in the future, and any successor to them, by whatever name called. If any amended or restated document differs materially from the originally referenced document, the actuary should consider the guidance in this standard to the extent it is applicable and appropriate.

- 1.4 **Effective Date**—This standard will be effective for any actuarial work product with a measurement date on or after four months after adoption by the Actuarial Standards Board (ASB).

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Section 2. Definitions

The terms below are defined for use in this actuarial standard of practice.

- 2.1 Funding Valuation—A periodic measurement of pension obligations performed by the actuary that the plan sponsor may use to determine plan contributions or the benefit levels supportable by specified contribution levels.
- 2.2 Risk—The potential of future deviation of actual results from expectations derived from actuarial assumptions.
- 2.3 Scenario Test—A process for assessing the impact of one possible event, or several simultaneously or sequentially occurring possible events, on a plan’s financial position.
- 2.4 Sensitivity Test—A process for assessing the impact of a change in an actuarial assumption on an actuarial measurement.
- 2.5 Stochastic Modeling—A process for estimating distributions of potential outcomes by allowing for random variations in one or more inputs over time.
- 2.6 Stress Test—A process for measuring the impact of adverse changes in one or relatively few factors affecting a plan’s financial condition.

Section 3. Analysis of Issues and Recommended Practices

- 3.1 Overview—Measuring pension obligations and calculating actuarially determined contributions require the use of assumptions regarding future economic and demographic experience. In most instances, the result of the measurement or calculation is disclosed as a single value at a single point in time. However, a user of the measurement may not understand the effects of future experience differing from the assumptions used in the **funding valuation** or the potential volatility of future measurements resulting from such differences.

When performing an assignment covered by this standard, the actuary should include an assessment of the **risks** identified by the actuary in section 3.2. This standard provides guidance on conducting such assessments, as well as on related communications and disclosures.

Guidance regarding methods and assumptions for measuring and determining pension costs, contributions, obligations, and funded status is provided in ASOP No. 4, *Measuring Pension Obligations and Determining Pension Plan Costs or Contributions*; ASOP No. 27, *Selection of Economic Assumptions for Measuring Pension Obligations*;

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ASOP No. 35, *Selection of Demographic and Other Noneconomic Assumptions for Measuring Pension Obligations*; and ASOP No. 44, *Selection and Use of Asset Valuation Methods for Pension Valuations*. In the event of a conflict between the guidance provided in this ASOP and the ASOPs listed above, this ASOP would govern.

- 3.2 Risks to be Assessed—The actuary should identify **risks** that may have a material effect on the plan’s financial condition, which may include but are not limited to the following:
- a. investment **risk** (i.e., the **risk** that investment returns will be different than expected);
 - b. asset/liability mismatch **risk** (i.e., the **risk** that changes in asset values are not matched by changes in the value of liabilities);
 - c. interest rate **risk** (i.e., the **risk** that interest rates will be different than expected);
 - d. longevity **risk** (i.e., the **risk** that mortality experience will be different than expected); and
 - e. other significant **risks** (i.e., any other **risks** that the actuary considers to have a potentially material effect on the plan’s financial condition).

This standard does not require the actuary to evaluate the ability of the plan sponsor or other contributing entity to make contributions to the plan when due. In addition, the actuary is not expected to provide investment advice.

- 3.3 Assumptions for Assessment of Risk—In order to assess **risks** identified in section 3.2, the actuary may need to model possible future experience by employing assumptions that differ from the assumptions used to determine expected results. Assumptions used for assessment of **risk** should reflect moderately adverse but plausible outcomes.

The assumptions used for assessment of **risk** may be based on economic and demographic data and analyses. This information is available from a variety of sources, including representatives of the plan sponsor and administrator, investment advisors, demographers, economists, and other professionals. The actuary may benefit from becoming familiar with a range of views on the factors underlying each assumption. Views of experts or principals may be considered but the selection of assumptions for the assessment of **risk** should reflect the actuary’s professional judgment.

- 3.4 Methods for Assessment of Risk—The actuary should use professional judgment in selecting the appropriate methods for assessing each **risk** identified in section 3.2. Methods may include, but are not limited to, **stress tests**, **scenario tests**, **sensitivity tests**, and **stochastic modeling**.

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The actuary should take into account the degree to which the methods and models reflect the nature, scale, and complexity of the plan. In using professional judgment, the actuary may take into account practical considerations such as usefulness, reliability, timeliness, and cost efficiency.

- 3.5 Assessment of Risk—For a **funding valuation** of a plan, the actuary should perform a **risk** assessment, which may be quantitative, qualitative, or both. If the actuary performs a quantitative analysis, the actuary should illustrate the resulting potential deviations in significant actuarial measurements (for example, the actuarially determined contribution, the actuarial accrued liability, or the funding ratio).

When communicating the results of the assessment, the actuary should include commentary the extent of which is commensurate with the actuary's view of the significance of each assessed **risk** in relation to the plan.

The actuary may rely on a separate report that the actuary has not produced, if that report contains a **risk** assessment that, in the actuary's professional judgment, is consistent with what the actuary would have produced for the given **risk**.

- 3.6 Plan Maturity Measures—In addition to the requirements of section 3.5, for a **funding valuation** of a plan, the actuary should calculate and disclose plan maturity measures that the actuary believes are significant to understanding the **risks** associated with the plan. Examples of these plan maturity measures include the following:

- a. the ratio of market value of assets to payroll;
- b. the ratio of retired life liability to active life liability;
- c. the ratio of net cash flow to market value of assets; and
- d. the ratio of benefit payments to contributions.

- 3.7 Quantitative Assessment of Risk for Large Plans—In addition to the requirements of section 3.5, for a **funding valuation** of a large plan, the actuary should perform a quantitative **risk** assessment. In performing this assessment, the actuary should illustrate, over at least a 10-year period beyond the measurement date, potential deviations in significant actuarial measurements that are the results of the **funding valuation** and that are dependent upon the **risks** that are being assessed.

This **risk** assessment should be performed at least once every five years. If, in the actuary's professional judgment, significant changes have occurred since the last assessment was performed that would make the results of that assessment inappropriate, the actuary should perform a new quantitative **risk** assessment.

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When communicating the results of the assessment, the actuary should include commentary the extent of which is commensurate with the actuary's view of the significance of each assessed **risk** in relation to the plan.

Whether a plan shall be considered to be a large plan for purposes of this section shall be based on the actuary's professional judgment. The actuary should take into account the following factors in determining whether a plan is a large plan for purposes of this section:

- a. the number of plan participants;
- b. the size of the plan's assets;
- c. the size of plan's actuarial accrued liabilities; and
- d. any other factor that, in the actuary's professional judgment, is relevant to the determination.

The actuary may rely on a separate report that the actuary has not produced, if that report contains a **risk** assessment that, in the actuary's professional judgment, is consistent with what the actuary would have produced for the given **risk**.

Section 4. Communications and Disclosures

- 4.1 Disclosures—In addition to any relevant disclosures required under ASOP Nos. 4, 23, *Data Quality*, 27, 35, 41, *Actuarial Communications*, and 44, actuarial communications covered by this standard should include commentary the extent of which is commensurate with the actuary's view of the significance of each assessed **risk** in relation to the plan.

To the extent the actuary's disclosure in relation to each **risk** assessed includes a quantitative analysis, the actuary should disclose the methods and assumptions used in the quantitative analysis.

The actuary should disclose the values of any plan maturity measures calculated under section 3.6. The actuary also should provide commentary to help the intended user understand the significance of the plan maturity measure when assessing **risk**. Examples of these plan maturity measures and related commentary could include the following:

- a. if the actuary discloses the ratio of market value of assets to payroll, the actuary could describe the significance of this ratio with respect to contribution volatility;

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- b. if the actuary discloses the ratio of retired life liability to active life liability, the actuary could describe the significance of this ratio with respect to the plan's asset/liability mismatch;
- c. if the actuary discloses the ratio of net cash flow to market value of assets, the actuary could describe how negative cash flow may amplify investment **risk**; or
- d. if the actuary discloses the ratio of benefit payments to contributions, where contribution rates are fixed, the actuary could describe the dependence upon stable investment returns to continue to provide benefits.

An actuarial communication can comply with some or all of the specific requirements of this standard by making reference to information contained in other actuarial communications available to the intended audience (as defined in ASOP No. 41).

4.2 Deviation from Guidance in the Standard—If the actuary departs from the guidance set forth in this standard, the actuary should include the following where applicable:

- a. the disclosure in ASOP No. 41, section 4.2, if any material assumption or method was prescribed by applicable law (statutes, regulations, and other legally binding authority);
- b. the disclosure in ASOP No. 41, section 4.3., if the actuary states reliance on other sources and thereby disclaims responsibility for any material assumption or method selected by a party other than the actuary; and
- c. the disclosure in ASOP No. 41, section 4.4, if, in the actuary's professional judgment, the actuary has otherwise deviated materially from the guidance of this ASOP.

4.3 Confidential Information—Nothing in this standard is intended to require the actuary to disclose confidential information.