ACTUARIAL STANDARDS BOARD

• EXPOSURE DRAFT •

Proposed Revision of
Actuarial Standard
of Practice
No. 35

Selection of Demographic and Other Noneconomic Assumptions for Measuring Pension Obligations

Comment Deadline:
July 31, 2018

Developed by the
Pension Committee of the
Actuarial Standards Board

Approved for Exposure by the
Actuarial Standards Board
March 2018

EXPOSURE DRAFT—March 2018

T A B L E O F C O N T E N T S

<u>EXPOSURE DRAFT—March 2018</u>

March 2018

TO: Members of Actuarial Organizations Governed by the Standards of Practice of the Actuarial Standards Board and Other Persons Interested in the Selection of Demographic and Other Noneconomic Assumptions for Measuring Pension Obligations

FROM: Actuarial Standards Board (ASB)

SUBJ: Proposed Revision of Actuarial Standard of Practice (ASOP) No. 35

This document contains an exposure draft of a proposed revision of ASOP No. 35, *Selection of Demographic and Other Noneconomic Assumptions for Measuring Pension Obligations*. Please review this exposure draft and give the ASB the benefit of your comments and suggestions. Each written comment letter or email received by the comment deadline will receive appropriate consideration by the drafting committee and 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 embed your comments in the exposure draft and 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. Also, please indicate in the body of the e-mail if your comments are being submitted on your own behalf or on behalf of a company or organization.

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

ASOP No. 35 Revision
Actuarial Standards Board
1850 M Street, NW, Suite 300
Washington, DC 20036

The ASB posts all signed comments received by the comment deadline to its website to encourage transparency and dialogue. Anonymous comments will not be considered by the ASB nor posted to the website. Comments will be posted in the order that they are received. All posted comments will be available to the general public on the ASB website. 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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For more information on the exposure process, please see the ASB Procedures Manual.

Deadline for receipt of comments in the ASB office: **July 31, 2018**

Background

The ASB provides guidance for measuring pension and retiree group benefit obligations through the series of ASOPs listed below.

1. ASOP No. 4, *Measuring Pension Obligations and Determining Pension Plan Costs or Contributions*;

2. ASOP No. 6, *Measuring Retiree Group Benefits Obligations and Determining Retiree Group Benefits Program Periodic Costs or Actuarially Determined Contributions*;

3. ASOP No. 27, *Selection of Economic Assumptions for Measuring Pension Obligations*;

4. ASOP No. 35, *Selection of Demographic and Other Noneconomic Assumptions for Measuring Pension Obligations*;

5. ASOP No. 44, *Selection and Use of Asset Valuation Methods for Pension Valuations*; and

6. ASOP No. 51, *Assessment and Disclosure of Risk Associated with Measuring Pension Obligations and Determining Pension Plan Contributions*.

The last revision of this standard was issued in September 2014.

In response to specific requests for changes in the Actuarial Standards of Practice and other activity related to public pension plans, in July 2014 the ASB issued a Request for Comments on the topic of ASOPs and Public Pension Plan Funding and Accounting. Over 50 comment letters were received covering a wide variety of potential ASB actions. In December 2014, the ASB formed the Pension Task Force and charged it with reviewing these comments and other relevant reports and input to develop recommendations for ASB next steps. In July 2015, the ASB held a public hearing on the proposed actuarial standards of practice applicable to actuarial work regarding public plans. The Pension Task Force provided its report to the ASB in February 2016. The report included suggestions for changes to the ASOPs that would apply to all areas of pension practice. In June 2016, the ASB directed its Pension Committee to draft appropriate modifications to the actuarial standards of practice, in accordance with ASB procedures, to implement the suggestions of the Pension Task Force. The changes in this exposure draft, and in exposure drafts of ASOP No. 4 and ASOP No. 27 issued together with this exposure draft, modify the standards to implement the Pension Task Force suggestions.

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Notable Changes from the Existing ASOP

Notable changes from the existing version of ASOP No. 35 adopted September 2014 include the following:

1. Section 3.4, Phase-In of Changes in Assumptions, was added to provide guidance regarding the phase-in of assumptions.

2. Section 3.5.3, Mortality, was expanded to provide additional guidance regarding the selection of mortality assumptions.

3. Section 3.8, Reviewing Assumptions, was expanded to provide additional guidance regarding reviewing assumptions.

4. Section 4.1.2, Rationale for Assumptions, was clarified regarding the disclosure requirement for the rationale of assumptions.

Request for Comments

The ASB appreciates comments on all areas of this proposed standard.

The ASB voted in March 2018 to approve this exposure draft.

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.

<u>EXPOSURE DRAFT—March 2018</u>

PROPOSED REVISION OF ACTUARIAL STANDARD OF PRACTICE NO. 35

SELECTION OF DEMOGRAPHIC AND OTHER NONECONOMIC ASSUMPTIONS FOR MEASURING PENSION OBLIGATIONS

STANDARD OF PRACTICE

<u>Section 1. Purpose, Scope, Cross References, and Effective Date</u>

1.1 <u>Purpose</u>—This actuarial standard of practice (ASOP or standard) does the following:

a. provides guidance to actuaries when performing actuarial services that include selecting (including giving advice on selecting) demographic and other noneconomic assumptions for measuring obligations under defined benefit pension plans;

b. supplements the guidance in Actuarial Standard of Practice (ASOP) No. 4, *Measuring Pension Obligations and Determining Pension Plan Costs or Contributions*, that relates to the selection and use of demographic and other noneconomic assumptions;

c. supplements the guidance in ASOP No. 6, *Measuring Retiree Group Benefits Obligations and Determining Retiree Group Benefits Program Periodic Costs or Actuarially Determined Contributions*, that relates to the selection and use of demographic and other noneconomic assumptions; and

d. supplements the guidance in ASOP No. 34, *Actuarial Practice Concerning Retirement Plan Benefits in Domestic Relations Actions*, that relates to the selection and use of economic assumptions.

1.2 <u>Scope</u>—This standard applies to actuaries when performing actuarial services that include selecting demographic and all other assumptions not covered by ASOP No. 27, *Selection of Economic Assumptions for Measuring Pension Obligations*, to measure obligations under any defined benefit pension plan that is not a social insurance program as described in section 1.2, Scope, of ASOP No. 32, *Social Insurance* (unless ASOPs on social insurance explicitly call for application of this standard). Measurements of defined benefit pension plan obligations include calculations such as funding valuations or other assignment of plan costs to time periods, liability measurements or other actuarial present value calculations, and cash flow projections or other estimates of the magnitude of future plan obligations. Measurements of pension obligations do not generally include individual benefit calculations, individual benefit statement estimates, or nondiscrimination testing.

If the actuary determines that the guidance in this standard conflicts with ASOP Nos. 4 or 6, ASOP Nos. 4 or 6 will govern.

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. If a conflict exists between this standard and applicable law, the actuary should comply with applicable law.

The standard also applies whenever the actuary has an obligation to assess the reasonableness of a **demographic assumption** that the actuary has not selected.

Throughout this standard, any reference to selecting demographic and other noneconomic assumptions also includes giving advice on selecting demographic and other noneconomic assumptions. For instance, the actuary may provide advice on selecting demographic and noneconomic assumptions under US GAAP or Governmental Accounting Standards even though another party is ultimately responsible for selecting these assumptions. This standard applies to the actuarial advice given in such situations, within the constraints imposed by the relevant accounting standards.

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 twelve months after the issuance of this standard.

Section 2. Definitions

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

2.1 Assumption Format—The form in which a particular **demographic assumption** will be used or expressed. In some cases, the assumption will take the form of a table where the probability of the occurrence of a given event depends on parameters such as gender, age, service, or calendar year. In other cases, the assumption may be a point estimate, implying 100% probability of occurrence of a given event at the stated point. An example of a point estimate assumption is an assumption that 100% of the population will retire at age 62. The **assumption format** may include different tables or point estimates for different segments of the covered population.

2.2 Assumption Universe—For each **demographic assumption**, a universe consisting of the possible options that the actuary might reasonably use for the specific assumption. For example, an **assumption universe** for a mortality assumption might reasonably include relevant published or proprietary mortality tables and possible adjustments, such as projections of mortality improvement. For some pension plans, an **assumption universe** for a specific assumption might reasonably include a table or factors developed specifically for that plan.

2.3 Demographic Assumptions—Demographic and all other noneconomic assumptions (i.e., those assumptions not covered in ASOP No. 27), unless explicitly stated otherwise.

2.4 Measurement Date—The date as of which the value of the pension obligation is determined.

2.5 Measurement Period—The period subsequent to the **measurement date** during which a particular **demographic assumption** will apply in a given measurement.

2.6 Prescribed Assumption or Method Set by Another Party—A specific assumption or method that is selected by another party, to the extent that law, regulation, or accounting standards give the other party responsibility for selecting such an assumption or method. For this purpose, an assumption or method selected by a governmental entity for a plan that such governmental entity or a political subdivision of that entity directly or indirectly sponsors is a **prescribed assumption or method set by another party**.

2.7 Prescribed Assumption or Method Set by Law—A specific assumption or method that is mandated or that is selected from a specified range or set of assumptions or methods that is deemed to be acceptable by applicable law (statutes, regulations, and other legally binding authority). For this purpose, an assumption or method selected by a governmental entity for a plan that such governmental entity or a political subdivision of that entity directly or indirectly sponsors is not a **prescribed assumption or method set by law**.

Section 3. Analysis of Issues and Recommended Practices

3.1 Overview—The actuary should use professional judgment to estimate possible future outcomes based on past experience and future expectations and select assumptions based upon application of that professional judgment. The actuary should select reasonable **demographic assumptions** in light of the particular characteristics of the defined benefit plan that is the subject of the measurement. For any given measurement, the actuary will typically be able to identify two or more reasonable assumptions for the same contingency.

3.2 Demographic Assumption Selection Process—The actuary should follow the process below for selecting **demographic assumptions**, as applicable. The actuary need not follow this complete process at each **measurement date** for each assumption if, in the actuary's professional judgment, previously selected assumptions continue to be reasonable (see section 3.8).

3.2.1 Identify the Types of Assumptions—The actuary should identify the types of **demographic assumptions** to use for a specific measurement. In doing so, the actuary should determine the following:

a. the purpose and nature of the measurement;

b. the plan provisions or benefits and factors that will affect the timing and value of any potential benefit payments;

c. the characteristics of the obligation to be measured (such as **measurement period**, pattern of plan payments over time, open or closed group, and volatility);

d. the contingencies that give rise to benefits or result in loss of benefits;

e. the significance of each assumption; and

f. the characteristics of the covered group.

The types of **demographic assumptions** used to measure pension obligations may include retirement, termination of employment, mortality and mortality improvement, disability and disability recovery, election of optional forms of benefits, and other assumptions such as administrative expenses; household composition; marriage, divorce, and remarriage; open group assumptions; hours of service; transfers; and assumptions regarding missing or incomplete data.

Not every contingency requires a separate assumption. For example, for a plan that is expected to provide benefits of equal value to employees who voluntarily terminate employment or become disabled, retire, or die, the actuary may use an assumption that reflects some or all of the above contingencies in combination rather than selecting a separate assumption for each.

3.2.2 Consider the Relevant Assumption Universe—The actuary should be familiar with the **assumption universe** relevant to each type of assumption identified in section 3.2.1. This may include tables or factors particular to the given plan as well as general tables, factors, and modifications to the tables that are available to actuaries. Sources of information relevant to **demographic assumptions** may include the following:

a. experience studies or published tables based on experience under uninsured plans and annuity contracts, or based on any other populations considered representative of the group at hand;

b. relevant plan or plan sponsor experience, which may include analyses of gains or losses by source;

c. studies or reports of the effects of plan design, specific events (for example, shutdown), economic conditions, or sponsor characteristics on the **demographic assumption** under consideration;

d. studies or reports of general trends relevant to the type of **demographic assumption** in question (for example, mortality improvement in the United States); and

e. relevant information from the plan sponsor or other sources about future expectations.

3.2.3 Consider Assumption Formats—The actuary should select an appropriate format for each **demographic assumption**. Factors that affect format specification may include the following:

a. the degree to which the **assumption format** may affect the results;

b. the availability of tables, data, or information relevant to the assumption being selected;

c. the degree to which the **assumption format** has the potential to model anticipated plan experience;

d. the size of the covered population; and

e. the degree to which a parameter (such as gender, age, service, or calendar year) is anticipated to affect experience.

In many situations it is appropriate for the format to include assumptions for different segments of the covered population. For example, it may be appropriate to have different mortality tables for males and females or different turnover tables for salaried and hourly employees.

3.2.4 Select the Specific Assumptions—The actuary should select each **demographic assumption** from the appropriate **assumption universe**. In all cases, the actuary should determine the significance of each assumption selected, which may include the consequences of experience deviating significantly from the selected assumption. The actuary should take into account factors specific to the measurement when selecting assumptions. Examples of such factors are as follows:

a. the purpose and nature of the measurement. For example, a cash flow projection may require more refined assumptions than a liability measure;

b. any features of the plan design or change in the plan design that may influence the assumption. For example, the introduction of an early retirement subsidy could influence the plan's incidence of retirement; under these circumstances, in order to measure the incremental cost associated with this change, the retirement assumption for the proposed plan provision may differ from the retirement assumption for the current provision;

c. appropriate experience from the specific plan and other relevant sources; and

d. relevant factors known to the actuary that may affect future experience, such as the economic conditions of the area or industry, availability of alternative employment, or the human resources policy or practices of the employer.

Specific experience of the covered group or other groups with similar characteristics may be useful in forming a judgment about future expectations. However, the actuary should not give undue weight to experience that is not sufficiently credible. The actuary should refer to ASOP No. 25, *Credibility Procedures*, for additional guidance.

In addition, the actuary should not give undue weight to experience that is not relevant. For example, if recent rates of termination and retirement were largely attributable to a one-time workforce reduction, it may be unreasonable to assume that such rates will continue over the **measurement period**.

3.2.5 Select a Reasonable Assumption—The actuary should select a reasonable **demographic assumption** for each **demographic assumption** selected by the actuary. For this purpose, an assumption is reasonable if it has the following characteristics:

a. it is appropriate for the purpose of the measurement;

b. it reflects the actuary's professional judgment;

c. it takes into account historical and current demographic data that is relevant as of the **measurement date**;

d. it reflects the actuary's estimate of future experience, the actuary's observation of the estimates inherent in market data (if any), or a combination thereof; and

e. it has no significant bias (i.e., it is not significantly optimistic or pessimistic), except when provisions for adverse deviation or plan provisions that are difficult to measure are included (as discussed in section 3.10.1) and disclosed under section 4.1.1 or when alternative assumptions are used for the assessment of risk, in accordance with ASOP No. 51, *Assessment and Disclosure of Risk Associated with Measuring Pension Obligations and Determining Pension Plan Contributions*.

3.3 Range of Reasonable Assumptions—The actuary should recognize the uncertain nature of the items for which assumptions are selected and, as a result, may consider several different assumptions reasonable for a given measurement. The actuary should also recognize that different actuaries will apply different professional judgment and may choose different reasonable assumptions. As a result, a range of reasonable assumptions may develop, both for an individual actuary and across actuarial practice.

3.4 Phase-In of Changes in Assumptions—If a **demographic assumption** selected by the actuary is being phased-in over a period that includes multiple **measurement dates**, the actuary should select a reasonable **demographic assumption** at each **measurement date**.

3.5 Specific Considerations—When performing the assumption selection process described in section 3.2, the actuary should be aware of specific considerations that may apply to the selection of individual assumptions, as discussed below.

3.5.1 Retirement—The actuary should take into account factors that may affect rates of retirement, such as the following:

a. employer-specific or job-related factors such as occupation, employment policies, work environment, unionization, hazardous conditions, and location of employment;

b. the plan design, where specific incentives may influence when participants retire;

c. the design of, and date of anticipated payment from, social insurance programs (for example, Social Security or Medicare); and

d. the availability of other employer-sponsored postretirement benefit programs (for example, postretirement health coverage or savings plan).

3.5.2 Termination of Employment—The actuary should take into account factors that may affect rates of termination of employment, such as the following:

a. employer-specific or job-related factors such as occupation, employment policies, work environment, unionization, hazardous conditions, and location of employment; and

b. plan provisions, such as early retirement benefits, vesting schedule, or payout options.

3.5.3 Mortality—The actuary should consider the following in the selection of mortality assumptions:

a. the use of recently published and generally available mortality tables;

b. the use of different assumptions before and after retirement (for example, in some small plan cases a reasonable model for mortality may be to assume no mortality before retirement);

c. the use of a different assumption for disabled lives, which in turn may depend on the plan's definition of disability and how it is administered; and

d. the use of different assumptions for different participant subgroups and beneficiaries.

3.5.4 Mortality Improvement—The actuary should reflect the effect of mortality improvement both before and after the **measurement date**. With regard to mortality improvement, the actuary should do the following:

a. adjust mortality rates to reflect an assumption as to mortality improvement before the **measurement date**. For example, if the actuary starts with a published mortality table, the mortality rates may need to be adjusted to reflect mortality improvement from the effective date of the table to the **measurement date**. Such an adjustment is not necessary if, in the actuary's professional judgment, the published mortality table reflects expected mortality rates as of the **measurement date**. This assumption should be disclosed in accordance with section 4.1.1, even if the actuary concludes that such an adjustment is not necessary.

b. include an assumption as to expected mortality improvement after the **measurement date**. This assumption should be disclosed in accordance with section 4.1.1, even if the actuary concludes that an assumption of zero future improvement is reasonable as described in section 3.2.5. Note that 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.

3.5.5 Disability and Disability Recovery—The actuary should take into account factors that may affect rates of disability and disability recovery, such as the following:

a. the plan's definition of disability (for example, whether the disabled person is eligible for Social Security benefits); and

b. the potential for recovery. For example, if the plan requires continued disability monitoring and if the plan's definition of disability is very liberal, an assumption for rates of recovery may be appropriate. Alternatively, the probability of recovery may be reflected by assuming a lower incidence of disability than the actuary might otherwise assume.

3.5.6 Election of Optional Form of Benefit—The actuary should take into account factors that may affect rates of electing an optional form of benefit, such as the following:

a. the benefit forms and benefit commencement dates available under the plan being valued;

b. the historical or expected experience of elections under the plan being valued and similar plans; and

c. the degree to which particular benefit forms may be subsidized.

3.5.7 Administrative Expenses Charged to the Plan—The actuary should take into account expenses such as investment advisory, investment management, or insurance advisory services to the extent that the costs of these services are not reflected in the investment return assumption; premiums paid to the Pension Benefit Guaranty Corporation (PBGC); accounting and auditing services; actuarial services; plan administration services; legal services; and trustee services. Formats for this assumption may include a dollar amount, a specific percentage of assets, a specific (and explicitly disclosed) reduction in the investment return assumption, or a percentage of benefit obligation or normal cost.

3.6 Other Demographic Assumptions—The actuary should follow the general selection process outlined in section 3.2 when selecting other assumptions relevant to the measurement. Such assumptions may include the following:

3.6.1 Household Composition—Household composition may affect the payment of benefits, the amount of benefits, or other **demographic assumptions**. For example, some plans provide annuity death benefits to surviving children under a stated age. In that case, an assumption as to the number and ages of the potential beneficiaries may be needed.

3.6.2 Marriage, Divorce, and Remarriage—Marriage, divorce, or remarriage may affect the payment of benefits, the amount or type of benefits, or the continuation of benefit payments. An assumption regarding beneficiary ages may also be necessary.

3.6.3 Open Group—Certain assumptions, such as the number and characteristics of new entrants, are applicable in open-group measurements.

3.6.4 Hours of Service—Assumptions for hours of service are generally plan- or industry-specific. Separate assumptions may also be needed for such purposes as benefit accrual and total employer plan contributions.

3.6.5 Transfers and Return to Employment—The assumptions for transfers or return to employment are generally plan- or industry-specific. Transfers and return to employment may be one-time events or may be continual if employees are required or permitted to move among groups that are covered by the same or different plans.

3.6.6 Missing or Incomplete Data—The data provided may be incomplete due to missing elements such as birth dates or hire dates. Accordingly, assumptions for missing or incomplete data may be necessary if the actuary has determined, in accordance with ASOP No. 23, *Data Quality*, that the overall data are of sufficient quality to complete the assignment. Data actually supplied may be relevant in making such assumptions. For example, it may be appropriate to assume a missing birth date is equal to the average birth date for other participants who have complete data and who have the same service credits as the participant whose date of birth is missing.

3.7 Consistency among Demographic Assumptions Selected by the Actuary for a Particular Measurement—With respect to any particular measurement, the actuary should select **demographic assumptions** that are consistent with the other assumptions selected by the actuary, including economic assumptions, unless an assumption considered individually is not material (see section 3.10.2). For example, if an employer's business is in decline and the effect of that decline is reflected in the turnover assumption, it should also be reflected in the retirement assumption, and it may also be appropriate to reflect the decline in the compensation increase assumption.

In addition, the actuary should review the assumptions for consistency with **demographic assumptions** used for measurements of different benefit plans covering the same covered group, if that information is available to the actuary. To the extent the actuary determines that inconsistencies exist, the actuary should determine whether those inconsistencies are reasonable and make adjustments where appropriate.

3.8 Reviewing Assumptions—At each **measurement date**, the actuary should determine whether the assumptions selected by the actuary continue to be reasonable. In making this determination, the actuary should consider reviewing recent gain and loss analyses, and should consider performing or updating an experience study. The actuary also should consider changes in relevant factors known to the actuary that may affect future experience. The actuary is not required to do a complete experience study at each **measurement date**. However, if the actuary determines that one or more of the previously selected assumptions are no longer reasonable, the actuary should select reasonable new assumptions as appropriate. The actuary should refer to ASOP No. 4 for guidance regarding gain and loss analyses.

3.9 Assumptions Not Selected by the Actuary—The actuary should use the guidance set forth in this standard whenever the actuary has an obligation to assess the reasonableness of an assumption that the actuary has not selected. The actuary's obligations with respect to assumptions that the actuary has not selected are governed by section 4.2 of this ASOP and by ASOP Nos. 4, 6, and 41, *Actuarial Communications*, as applicable, which address assumptions and methods that the actuary has not selected.

3.10 Other Considerations—The actuary should address the following considerations when applicable:

3.10.1 Adverse Deviation or Plan Provisions That Are Difficult to Measure—Depending on the purpose of the measurement, the actuary may determine that it is appropriate to adjust the **demographic assumptions** to provide for considerations such as adverse deviation or plan provisions that are difficult to measure, as discussed in ASOP No. 4. Any such adjustment made should be disclosed in accordance with section 4.1.1.

3.10.2 Materiality—The actuary should take into account the balance between refined **demographic assumptions** and materiality. The actuary is not required to use a particular type of **demographic assumption** or to select a more refined **demographic assumption** when in the actuary's professional judgment such use or selection is not expected to produce materially different results.

3.10.3 Cost of Using Refined Assumptions—The actuary should take into account the balance between refined **demographic assumptions** and the cost of using refined **demographic assumptions**. For example, actuaries working with small plans may prefer to emphasize the results of general research to comply with this standard. However, they are not precluded from using relevant plan-specific facts.

3.10.4 Combined Effect of Assumptions—The actuary should select assumptions (both **demographic assumptions** selected in accordance with this standard and economic assumptions selected in accordance with ASOP No. 27) such that the combined effect of the assumptions has no significant bias (i.e., it is not significantly optimistic or pessimistic) except when provisions for adverse deviation are included. For example, the actuary may have decided not to make any assumption with regard to four different types of future events, each of which alone is immaterial. However, the effect of omitting assumptions for all four types of future events may be a material understatement or overstatement of the measurement results. In these circumstances, the assumptions should be revised.

3.10.5 Changes in Circumstances—The actuary should select **demographic assumptions** that reflect the actuary's knowledge as of the **measurement date**.

However, the actuary may learn of an event occurring after the **measurement date** (for example, plan termination or death of the principal owner), that would have changed the actuary's selection of a **demographic assumption**. If appropriate, the actuary may reflect this change as of the **measurement date**.

3.10.6 Views of Experts—Demographic data and analyses are available from a variety of sources, including representatives of the plan sponsor and administrator, demographers, economists, and other professionals. When the actuary is responsible for selecting or giving advice on selecting **demographic assumptions** within the scope of this standard, the actuary may incorporate the views of experts, but the selection or advice should reflect the actuary's professional judgment.

Section 4. Communications and Disclosures

4.1 Communications—Any actuarial report prepared to communicate the results of work subject to this standard should contain the following disclosures with respect to **demographic assumptions**:

4.1.1 Assumptions Used—The actuary should describe each significant **demographic assumption** used in the measurement and whether the assumption represents an estimate of future experience, the actuary's observation of the estimates inherent in market data, or a combination thereof. Sufficient detail should be shown to permit another qualified actuary to assess the level and pattern of each assumption (for example, by supplying the name of a published decrement table or by showing turnover rates at every fifth age for an unpublished age-based table).

The disclosure of the mortality assumption should contain sufficient detail to permit another qualified actuary to understand any adjustment to reflect mortality improvement from the effective date of the table to the **measurement date** and the provision made for future mortality improvement. If the actuary assumes zero mortality improvement after the **measurement date**, the actuary should state that no provision was made for future mortality improvement.

The description should also include a disclosure of any explicit adjustment made in accordance with section 3.10.1 for adverse deviation or plan provisions that are difficult to measure as discussed in ASOP No. 4.

4.1.2 Rationale for Assumptions—For each **demographic assumption** that has a significant effect on the measurement and that the actuary has selected, or that has been selected by another party (other than **prescribed assumptions or methods**

set by law) and that the actuary determines to be reasonable, the actuary should disclose the information and analysis used to support the actuary's determination that the assumption is reasonable. This disclosure may be brief but should be pertinent to the plan's circumstances. For example, the actuary may disclose any specific approaches used, sources of external advice, and how past experience and future expectations were considered in determining the assumption to be reasonable. If applicable, the actuary should disclose the time period of relevant plan or plan sponsor experience that was last analyzed, including the date of any experience study used in the selection process.

If the mortality assumption is based on mortality tables that substantially predate more recently published relevant and generally available pension mortality tables and the actuary determines that the assumption is reasonable, the actuary should disclose the justification for the use of such tables.

4.1.3 Changes in Assumptions—The actuary should disclose any changes in the significant **demographic assumptions** from those previously used for the same type of measurement. The general effects of the changes should be disclosed in words or by numerical data, as appropriate. For situations in which both the **demographic assumptions** and economic assumptions have changed from those previously used for the same type of measurement, the actuary may disclose the general effects of the changes separately or combined, as appropriate.

For each assumption that is neither a **prescribed assumption or method set by another party** nor a **prescribed assumption or method set by law**, the actuary should include an explanation of the information and analysis that led to the change.

The disclosure may be brief but should be pertinent to the plan's circumstances. The disclosure may reference any actuarial experience study performed, including the date of the experience study report.

4.1.4 Changes in Circumstances—The actuary should refer to ASOP No. 41 for communication and disclosure requirements regarding changes in circumstances known to the actuary that occur after the **measurement date** and that would affect **demographic assumptions** selected as of the **measurement date**.

4.2 Disclosure about Assumptions Not Selected by the Actuary—The actuary's communication should state the source of any assumption that the actuary has not selected.

With respect to assumptions that the actuary has not selected, other than **prescribed assumptions or methods set by law**, the actuary's communication should identify the following, if applicable:

a. any such assumption that significantly conflicts with what, in the actuary's professional judgment, is reasonable for the purpose of the measurement (section 3.9); or

b. any such assumption that the actuary is unable to assess for reasonableness for the purpose of the measurement (section 3.9).

4.3 Additional Disclosures—The actuary should also include the following, as applicable, in an actuarial communication:

a. 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 set by a party other than the actuary; and

b. 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.

4.4 Confidential Information—Nothing in this standard is intended to require the actuary to disclose confidential information (as defined in the *Code of Professional Conduct* [Code]). Any confidential information shall be handled in a manner consistent with Precept 9 of the Code.