ACTUARIAL STANDARDS BOARD

Actuarial Standard
of Practice
No. 20

Discounting of Property/Casualty Claim Estimates

Developed by the
Task Force to Revise ASOP No. 20 of the
Casualty Committee of the
Actuarial Standards Board

Adopted by the
Actuarial Standards Board
June 2023

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APPENDIXES

June 2023

TO: Members of Actuarial Organizations Governed by the Standards of the Actuarial Standards Board and Other Persons Interested in Discounting of Property/Casualty Claim Estimates

FROM: Actuarial Standards Board (ASB)

SUBJ: Actuarial Standard of Practice (ASOP) No. 20

This document contains ASOP No. 20, *Discounting of Property/Casualty Claim Estimates*.

History of the Standard

ASOP No. 20, *Discounting of Property and Casualty Loss and Loss Adjustment Expense Reserves,* was originally adopted by the ASB in April 1992. In 2011, ASOP No. 20 was revised to reflect current terminology and practice and to provide more consistency with the language in ASOP No. 43, *Property/Casualty Unpaid Claim Estimates*. The 2011 revision removed guidance on risk margins.

This revision addresses potential scope gaps with other ASOPs, reflects the interaction between this standard and ASOP No. 53, *Estimating Future Costs for Prospective Property/Casualty Risk Transfer and Risk Retention*, and addresses changes in actuarial practice in the area of estimating the future costs of prospective risk transfer or risk retention for loss accrual determinations, premium setting, and ratemaking assignments.

This revision also addresses the issue of discount rates provided by others (e.g., requested by the principal or provided by investment managers or finance departments), because the discount rate is a material assumption in developing a discounted claim estimate. In some circumstances when providing actuarial services, the actuary did not comment on the reasonableness of the discount rate(s) but rather stated that the discount rate was outside the scope of the actuarial services.

Exposure Draft

The exposure draft was issued in June 2022 with a comment deadline of September 30, 2022. Five comment letters were received and considered in making changes that are reflected in this standard.

Notable Changes from the Exposure Draft

Notable changes from the exposure draft are summarized below. Notable changes do not include additional changes made to improve readability, clarity, or consistency.

1. Sections 1.2 and 2.1 were modified to allow the actuary to consider the loss and loss adjustment expense elements separately in a claim estimate.

2. Section 2.4 was revised to make the definition consistent with ASOP No. 30, *Treatment of Profit and Contingency Provisions and the Cost of Capital in Property/Casualty Insurance Ratemaking*.

3. Section 2.6 was revised to reflect that present value can be related to any future cash flow.

4. Section 2.8 was modified to clarify that a risk margin may apply to a claim estimate or discounted claim estimate.

5. Section 3.3.1 was modified to clarify that payment pattern assumptions should be unbiased prior to the application of risk margins.

6. In section 3.4.1.3, guidance was added related to the reasonableness of discount rates selected by another party. The related disclosure was modified in section 4.1(g).

Notable Changes from the Existing ASOP

A cumulative summary of notable changes from the existing standard is below. Notable changes do not include additional changes made to improve readability, clarity, or consistency.

1. In section 1.2, the scope of the standard was expanded to include the discounting of future claim estimates for prospective risk transfer or risk retention, as addressed by ASOP No. 53, *Estimating Future Costs for Prospective Property/Casualty Risk Transfer and Risk Retention*.

2. Sections 1.2 and 2.1 were modified to allow the actuary to consider the loss and loss adjustment expense elements separately in a claim estimate.

3. In section 2, definitions were added for the following terms: claim estimate, coverage, discounted claim estimate, insurance risk, risk retention, and risk transfer.

4. In section 2.8, the definition of risk margin was revised.

5. Section 3.3.1 was modified to clarify that payment pattern assumptions should be unbiased prior to the application of risk margins.

6. In section 3.4, guidance related to discount rate selection and appropriateness was added. Specifically, guidance was added related to the materiality and reasonableness of discount rates selected by another party in section 3.4.1.3, and the related disclosure was modified in section 4.1(g).

7. In section 3.5, guidance on risk margins has been reintroduced to the standard, revised, and expanded.

8. Guidance on reliance has been added in sections 3.8, 3.9, 3.10, and 3.11.

9. Guidance on documentation has been updated and expanded in section 3.12.

10. Disclosure requirements were added in section 4, mostly to address expanded guidance throughout section 3.

The ASB thanks everyone who took the time to contribute comments and suggestions on the exposure draft.

The ASB voted in June 2023 to adopt this standard.

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.

ACTUARIAL STANDARD OF PRACTICE NO. 20

DISCOUNTING OF PROPERTY/CASUALTY CLAIM ESTIMATES

STANDARD OF PRACTICE

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

1.1 Purpose—This actuarial standard of practice (ASOP or standard) provides guidance to actuaries when performing actuarial services with respect to discounting **claim estimates** for property/casualty **coverages** to a **present value**.

1.2 Scope—This standard applies to actuaries when performing actuarial services that involve the discounting of **claim estimates** for property/casualty **coverages** to a **present value**. **Claim estimates** include unpaid **claim estimates** and future **claim estimates**. Unpaid **claim estimates** represent an estimate of the obligation for future loss and loss adjustment expense payments resulting from claims due to past events. Future **claim estimates** represent an estimate of loss and loss adjustment expenses associated with prospective property/casualty **risk transfer** or **risk retention**.

This standard applies to actuaries when estimating **discounted claim estimates** for all classes of entities, including self-insureds, insurance companies, reinsurers, and governmental entities. This standard applies to actuaries when estimating discounted gross amounts before recoverables (such as deductibles, ceded reinsurance, and salvage and subrogation), discounted amounts after such recoverables, and discounted amounts of such recoverables.

If the actuary's actuarial services involve reviewing **discounted claim estimates** developed by another party, the actuary should follow the guidance in section 3 to the extent practicable.

When determining the unpaid **claim estimates**, the actuary should refer to ASOP No. 43, *Property/Casualty Unpaid Claim Estimates*. When determining the future **claim estimates** associated with prospective **risk transfer** or **risk retention**, the actuary should refer to ASOP No. 53, *Estimating Future Costs for Prospective Property/Casualty Risk Transfer and Risk Retention*.

This standard does not address whether the actuary should use **discounted claim estimates** in a specific circumstance.

This standard does not address whether the actuary should include a **risk margin** in a specific circumstance.

This standard does not apply to actuaries when estimating items that may be a function of **discounted claim estimates** or claim outcomes, including but not limited to loss-based taxes, contingent commissions, and retrospectively rated premiums.

This standard applies to actuaries when providing actuarial services with respect to health benefits associated with state or federal workers' compensation statutes and liability policies. This standard does not apply to actuaries when performing actuarial services with respect to unpaid claims under a "health benefit plan" covered by ASOP No. 5, *Incurred Health and Disability Claims*, ASOP No. 6, *Measuring Retiree Group Benefits Obligations and Determining Retiree Group Benefits Program Periodic Costs or Actuarially Determined Contributions*, or included as "health and disability liabilities" under ASOP No. 42, *Health and Disability Actuarial Assets and Liabilities Other Than Liabilities for Incurred Claims*.

If the actuary determines that the guidance in this standard conflicts with ASOP No. 7, *Analysis of Life, Health, or Property/Casualty Insurer Cash Flows*, this ASOP governs.

If the actuary determines that the guidance in this ASOP conflicts with a cross-practice ASOP (applies to all practice areas), this ASOP governs.

If a conflict exists between this standard and applicable law (statutes, regulations, and other legally binding authority), the actuary should comply with applicable law. If the actuary departs from the guidance set forth in this standard in order to comply with applicable law 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 is effective for any actuarial work product covered by this standard's scope issued on or after December 1, 2023.

Section 2. Definitions

The terms below are defined for use in this actuarial standard of practice and appear in bold throughout the standard. The actuary should also refer to ASOP No. 1, *Introductory Actuarial Standard of Practice*, for definitions and discussions of common terms, which do not appear in bold in this standard.

2.1 Claim Estimate—An estimate on an undiscounted basis of the obligation for future loss and loss adjustment expenses resulting from claims due to past events or an estimate of loss and loss adjustment expenses associated with prospective property/casualty **risk transfer** or **risk retention**. **Claim estimates** may include elements, such as case reserves, developed by individuals other than actuaries.

2.2 Coverage—The terms and conditions of a plan or contract, or the requirements of applicable law, that create an obligation to pay benefits, expenses, or claims associated with contingent events.

2.3 Discounted Claim Estimate—The actuary's estimate of the **present value** of the **claim estimate**.

2.4 Insurance Risk—The extent to which the amount or timing of actual insurance cash flows is likely to differ from expected insurance cash flows.

2.5 Investment Risk—The extent to which the amount or timing of actual investment cash flows may differ from what is expected.

2.6 Present Value—The value on a given date of a future payment or series of future payments, discounted to reflect the time value of money.

2.7 Risk-Free Interest Rate—The theoretical rate of return of an investment with zero risk with respect to payment timing and amount.

2.8 Risk Margin—A provision for uncertainty in a **claim estimate** or a **discounted claim estimate**. A **risk margin** may be implicit or explicit.

2.9 Risk Retention—A risk-management and risk-control strategy for the assessment, management, or financing of retained risk associated with the specific **coverage**. Examples of **risk retention** include individual and group self-insurance and large deductible programs.

2.10 Risk Transfer—A risk-management and risk-control strategy, involving legally binding agreements, that shifts responsibility from one party to another or indemnifies one party by another party for the financial obligations associated with the **coverage**. Examples of **risk transfer** include insurance, reinsurance, captive insurance, and loss portfolio transfers.

Section 3. Analysis of Issues and Recommended Practices

3.1 Intended Purpose—The actuary should identify the intended purpose of the **discounted claim estimate**, including the date to which the **claim estimate** will be discounted. The actuary should select methods and assumptions in the discounting process that are appropriate for the intended purpose.

3.2 Significance of Methods, Models, and Assumptions—When selecting methods, models, and assumptions to develop the **discounted claim estimate**, the actuary should take into account the relative impact of various methods, models, and assumptions on the **discounted claim estimate** versus the **claim estimate**. For example, a development factor at an advanced maturity (such as a "tail factor") has less impact on a discounted estimate than on an undiscounted estimate. Conversely, a change in the timing of loss payments may have a greater impact on a discounted estimate than on an undiscounted estimate.

3.3 Payment Timing—The actuary should use reasonable assumptions regarding the timing of future payments to derive a **discounted claim estimate**. Assumptions may be implicit or explicit and may involve interpreting past data or projecting future trends.

The actuary should take into account the sensitivity of the **discounted claim estimate** to the timing of future payments and may use a range of payment pattern assumptions.

3.3.1 Unbiased Assumptions—The actuary should use payment pattern assumptions that the actuary expects to have no material bias to underestimation or overestimation of the discounted estimate, prior to consideration of any **risk margins**.

3.3.2 Consistency of Assumptions—The actuary should use assumptions in estimating the timing of payments that are consistent with the assumptions used in developing the **claim estimate**, when the assumptions are available.

3.3.3 Consistency of Estimates—The actuary should use cumulative payments for discounting that are consistent with the **claim estimate**, even if the **claim estimate** has not been derived by techniques based on payment data.

3.3.4 Consistency with Expected Future Conditions—The actuary should determine estimates of the timing of payments that are consistent with conditions expected to prevail during the future payment period. These estimates may reflect past data or projections of future trends in payment timing. If conditions are expected to be different from those prevailing during the historical evaluation period, the actuary should make appropriate adjustments to the payment patterns.

3.3.5 Data—The actuary should refer to ASOP No. 23, *Data Quality*, with respect to selection of data to be used in developing the payment pattern, relying on data supplied by others, reviewing data, and using data.

3.3.6 Recoverables—The actuary should take into account the timing and amount of expected recoverables (for example, deductibles, ceded reinsurance, and salvage and subrogation) to the extent appropriate.

3.3.7 Unpaid or Future Claim Components—The actuary should take into account components that may have a material effect on the timing and amount of future payments, such as **coverage**, accident period, and claim adjustment expense.

3.4 Discount Rates—The actual should use reasonable discount rates to derive **discounted claim estimates**. A discount rate may be a single rate or a series of rates, such as a yield curve. A range of discount rates may be reasonable.

3.4.1 Selection of Discount Rates—The actuary should select discount rates that are appropriate for the intended purpose. When selecting discount rates, the actuary should consider using one or more of the following approaches:

3.4.1.1 Risk-Free Approach—This approach utilizes **risk-free interest rates**. **Risk-free interest rates** can be approximated by rates of investment return available on fixed-income assets having low **investment risk** and timing characteristics comparable to the selected payment timing pattern.

3.4.1.2 Portfolio Approach—The selected discount rates in this approach are based on the anticipated return from a selected portfolio of assets. The portfolio of assets may reflect the actual assets supporting the **claim estimates** to be discounted. Alternatively, the portfolio of assets may represent a notional portfolio that the actuary deems to be appropriate based on the characteristics of the notional assets in relation to the **claim estimates** to be discounted.

When determining the appropriateness of a portfolio rate of return as the basis for the selected discount rate, the actuary should refer to ASOP No. 7 for guidance on issues and considerations associated with asset characteristics. The actuary should take into account, to the extent appropriate, the relationships between the book value and market value of assets, between the anticipated portfolio rates of return and market rates of return, and between the maturities of the assets and the estimated timing of future payments.

Portfolio rates of return should be net of investment expenses.

3.4.1.3 Discount Rates Selected by Another Party—When using discount rates selected by another party, the actuary should assess the discount rates for reasonableness.

3.4.1.4 Other Approaches—Other approaches may be appropriate based on the purpose of the assignment or other circumstances.

3.4.2 Consideration of Economic Conditions—When selecting the discount rate assumption, the actuary should take into account economic factors over the expected payment period including, but not limited to, inflation, inflation risk, and macroeconomic conditions. The actuary should consider reflecting short-term versus long-term returns when selecting the discount rate, recognizing that long-term returns are generally more uncertain than short-term returns. The actuary should consider adjusting the discount rate(s) to reflect the uncertainty in future economic conditions.

3.5 Risk Margins—The actuary should consider including **risk margins** in a **discounted claim estimate**. Discounting a reasonable undiscounted estimate may result in an inadequate discounted estimate, unless appropriate **risk margins** are included.

3.5.1 Considerations in Determining the Amount of Risk Margin—When determining the amount of **risk margin**, the actuary should take into account the increase in uncertainty associated with the discounting calculation due to uncertainties in claim payment timing and discount rate selection. The actuary should also take into account the decrease in the implicit **risk margin** due to discounting.

3.5.2 Implicit and Explicit Risk Margins—The actuary may introduce implicit **risk margins** through the selection of the **claim estimate**, the payment pattern, or the discount rate. The actuary may include explicit **risk margins** as an absolute amount (for example, stated percentile of distribution, a fixed amount, or stated percentage load above expected) or through an explicit adjustment to the selected discount rate(s). The resulting adjusted discount rate may also include an implicit **risk margin** contemplating **investment risk** or **insurance risk**.

3.5.3 Applicable Law and Accounting Standards—The actuary should take into account whether applicable law and accounting standards impose constraints on the use of **risk margins**.

3.6 Significant Limitations—The actuary should identify any significant limitations that constrained the actuary's **discounted claim estimate** analysis if, in the actuary's professional judgment, there is a significant risk that a more in-depth analysis would produce a materially different result.

3.7 Changes in Methods, Models, and Assumptions—When the **discounted claim estimate** is an update of a previous estimate, the actuary should identify changes in methods, models, or assumptions that the actuary believes to have a material impact on the **discounted claim estimate** and the reasons for such changes to the extent known by the actuary. This standard does not require the actuary to measure or quantify the impact of such changes.

3.8 Reliance on Methods, Models, or Assumptions Selected by Another Party—When relying on methods, models, or assumptions selected by another party, the actuary should refer to ASOP Nos. 41 and 56, *Modeling*, for guidance.

3.9 Reliance on Others for Data, Projections, and Supporting Analysis—The actuary may rely on data, projections, and supporting analysis supplied by others. When practicable, the actuary should review the data, projections, and supporting analysis for reasonableness and consistency. For further guidance, the actuary should refer to ASOP Nos. 23 and 41.

3.10 Reliance on Another Actuary—The actuary may rely on another actuary who has developed the **claim estimate**, estimated payout pattern(s), the discount rate(s), or the **risk margin**(s). However, the relying actuary should be reasonably satisfied that the other actuary is qualified to perform the actuarial service(s), the actuarial service was performed in accordance with applicable ASOPs, and the actuarial service performed is appropriate for the project's objective.

3.11 Reliance on Expertise of Others—An actuary may rely on the expertise of others (including actuaries not performing actuarial services) in the fields of knowledge used in the development of the **claim estimate**, estimated payout pattern(s), discount rate(s), or the **risk margin**(s). In determining the appropriate level of such reliance, the actuary should take into account the following:

a. whether the individual or individuals upon whom the actuary is relying has expertise in the applicable field; and

b. the extent to which the development of the **claim estimate**, estimated payout pattern(s), discount rate(s), or the **risk margin**(s) has been reviewed or opined on by others with expertise in the applicable field, including commonly known significant differences of opinion among others with expertise concerning aspects of the development of the above items that could be material to the actuary's use of them.

3.12 Documentation—The actuary should prepare and retain documentation to support compliance with the requirements of section 3 and the disclosure requirements of section 4. The actuary should prepare such documentation in a form such that another actuary qualified in the same practice area could assess the reasonableness of the actuary's work. The degree of such documentation should be based on the professional judgment of the actuary and may vary with the complexity and purpose of the actuarial services. In addition, the actuary should refer to ASOP No. 41 for guidance related to the retention of file material other than that which is to be disclosed under section 4.

Section 4. Communications and Disclosures

4.1 Required Disclosures in an Actuarial Report—When issuing an actuarial report to which this standard applies, the actuary should take into account the intended purpose or use of the **discounted claim estimate** and refer to ASOP Nos. 7, 23, 41, and 56.

In addition, the actuary should disclose the following in such actuarial reports, if applicable:

a. the **claim estimate**, the associated **discounted claim estimate**, and the intended purpose of the **discounted claim estimate**, including the date to which the **claim estimate** is discounted (see section 3.1);

b. material differences, if any, between the methods, models, and assumptions underlying the **claim estimate** and the **discounted claim estimate** (see section 3.2);

c. the payment timing assumptions and the basis for those assumptions (see section 3.3);

d. specific significant risks and uncertainties, if any, with regard to actual timing of future payments (see section 3.3);

e. the discount rate assumptions and the basis for those assumptions (see section 3.4);

f. the basis of the range of estimates, if the actuary provides a range (see section 3.4);

g. when the discount rate was selected by another party, the party that provided the discount rate, the reasonableness of the discount rate, and the basis for the determination of reasonableness (see section 3.4.1.3);

h. whether the **discounted claim estimate** includes a **risk margin**, and the basis for any explicit **risk margin** (see section 3.5);

i. any significant limitations that constrained the actuary's **discounted claim estimate** analysis (see section 3.6);

j. changes in methods, models, or assumptions that the actuary believes to have a material impact on the **discounted claim estimate** and the reasons for such changes to the extent known by the actuary, if the **discounted claim estimate** is an update of a previous estimate (see section 3.7);

k. the extent of any reliance on assumptions or methods selected by another party (see section 3.8);

l. the extent of any reliance on others for data, projections, and supporting analysis (see section 3.9);

m. the extent of any reliance on another actuary (see section 3.10); and

n. the extent of any reliance on expertise of others (see section 3.11).

4.2 <u>Additional Disclosures in an Actuarial Report</u>—The actuary also should include disclosures in accordance with ASOP No. 41 in an actuarial report for the following circumstances:

a. if any material assumption or method was prescribed by applicable law or accounting standards;

b. 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. if in the actuary's professional judgment, the actuary has deviated materially from the guidance of this standard.

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

Appendix 1

Background and Current Practices

Note: This appendix is provided for informational purposes and is not part of the standard of practice.

Background

In 1992, the Actuarial Standards Board (ASB) issued ASOP No. 20, *Discounting of Property and Casualty Loss and Loss Adjustment Expense Reserves*. Prior to that, there was no standard of practice concerning discounting of property and casualty loss and loss adjustment expense reserves. Since the issuance of ASOP No. 20, the ASB has issued ASOP No. 36, *Statements of Actuarial Opinion Regarding Property/Casualty Loss and Loss Adjustment Expense Reserves,* and ASOP No. 43, *Property/Casualty Unpaid Claim Estimates*. The 2012 revision of ASOP No. 20 provided more consistency with the language in these two ASOPs and updated guidance for the increased use of discounting related to fair value calculations.

In 2017, the ASB issued ASOP No. 53, *Estimating Future Costs for Prospective Property/ Casualty Risk Transfer and Risk Retention.* ASOP No. 53 provides guidance for actuaries engaged in loss accrual determinations, premium setting, and ratemaking assignments. The introduction of ASOP No. 53 highlighted the need to extend the guidance of ASOP No. 20 to these types of actuarial work products in a manner similar to the relationship between ASOP No. 20 and ASOP No. 43. In practice, a wide variety of loss reserving and loss funding or ratemaking assignments are performed concurrently using the same data and similar methods and assumptions. In the context of ratemaking, this standard may provide guidance on the discounting of the loss and loss adjustment expense components.

One challenge related to discounting is that the appropriateness of discounting varies greatly depending on the line(s) of insurance coverage, the type of risk financing or risk retention mechanism, the applicable financial reporting and accounting standards, and even the intended use of the work product (for example, insurance company valuation versus statutory loss reserving). As a result, the use of discounting is inexorably tied to the context of the assignment. Traditionally, for admitted U.S. property and casualty insurance companies, unpaid claim estimates have not been discounted except in certain narrowly defined circumstances. However, in a wide and growing variety of other circumstances discounting is commonplace. In 1986, the U.S. Congress passed legislation prescribing discounting procedures for income-tax purposes. In the past, most state insurance departments prohibited discounting; some departments have permitted discounting for some lines of business. While the National Association of Insurance Commissioners (NAIC) has consistently been opposed to discounting except in certain specific circumstances, other regulators have moved to requiring discounting. The various applicable accounting standards organizations have taken a similarly divergent set of positions in their standards.

Historically, the issue of reserve discounting has been closely related to the issue of risk margins. Undiscounted reserves are often considered to contain a needed implicit risk margin in the difference between undiscounted reserves and discounted reserves. If discounted reserves were incorporated into financial statements, many would argue that an explicit risk margin would become necessary. Suggestions for the treatment of that risk margin include treatment as a liability item, a segregated surplus item, or an off-balance-sheet item.

Unpaid claim estimate discounting calculations are commonly performed in conjunction with valuations of insurance companies for purposes such as acquisitions or mergers, commutations, transfers of portfolios of unpaid claims, or other reinsurance transactions. In these instances and for other reasons, actuaries are being asked to determine or evaluate discounted unpaid claim estimates more frequently.

Current Practices

Actuaries are guided by ASOP No. 20, *Discounting of Property/Casualty Claim Estimates*. Other ASOPs issued by the ASB pertaining to discounting of unpaid loss and loss adjustment expense estimates include ASOP No. 7, *Analysis of Life, Health, or Property/Casualty Insurer Cash Flows*; ASOP No. 23, *Data Quality*; ASOP No. 36; ASOP No. 41, *Actuarial Communications*; ASOP No. 43; and ASOP No. 53. In addition, disclosures related to discounting are required by the NAIC, and guidance may be forthcoming as part of new International Financial Reporting Standards that are currently under development.

Numerous educational papers relevant to the topic of discounting and risk loads, including those published by the Casualty Actuarial Society, are in the public domain. While these may provide useful educational information to practicing actuaries, they are not actuarial standards of practice and are not binding.

Appendix 2

Comments on the Exposure Draft and Responses

The exposure draft of the proposed revision of ASOP No. 20, *Discounting of Property/Casualty Claim Estimates*, was issued in June 2022 with a comment deadline of September 30, 2022. Five comment letters were received, some of which were submitted on behalf of multiple commentators, such as by firms or committees. For purposes of this appendix, the term "commentator" may refer to more than one person associated with a particular comment letter. The ASOP No. 20 Task Force and the Casualty Committee of the Actuarial Standards Board (ASB) carefully considered all comments received, and the ASB reviewed (and modified, where appropriate) the changes proposed by the ASOP No. 20 Task Force and the Casualty Committee.

Summarized below are the significant issues and questions contained in the comment letters and the responses. Minor wording or punctuation changes that are suggested but not significant are not reflected in the appendix, although they may have been adopted.

The term "reviewers" in appendix 2 includes the ASOP No. 20 Task Force, the Casualty Committee, and the ASB. The section numbers and titles used in appendix 2 refer to those in the exposure draft, which are then cross referenced with those in the final standard.

GENERAL COMMENTS	
Comment	One commentator proposed an alternative way of discounting using specific asset cash flows.
Response	The reviewers note that section 3.4.1.4 allows for the use of alternative reasonable methods for selecting the discount rate and made no change.
Comment	One commentator suggested being careful about not implying actuarial authority to add risk margins where that authority does not exist.
Response	The reviewers agree and note that section 1.2 states, "This standard does not address whether the actuary should include a risk margin in a specific circumstance." The reviewers added section 3.5.3 to clarify this issue.
SECTION 1. PURPOSE, SCOPE, CROSS REFERENCES, AND EFFECTIVE DATE	
Section 1.2, Scope	
Comment	Two commentators suggested clarifying that the proposed ASOP would also apply when an actuary is discounting figures that are not claim estimates or expanding the definition of "claim estimates" to include other loss estimates.
Response	The reviewers modified sections 1.2 and 2.1 to clarify this issue.

SECTION 2. DEFINITIONS	
Section 2.4, Insurance Risk	
Comment Response	One commentator was concerned that the current language excluded reinsurance premiums paid to others, unless one treats such premiums as an expense. The reviewers modified the language.
Comment Response	One commentator recommended changing “level” to “amount.” The reviewers agree and made the change in sections 2.4 and 2.5.
Section 2.6, Present Value	
Comment Response	One commentator suggested removing the word “claim.” The reviewers agree and deleted “claim.”
Section 2.8, Risk Margin	
Comment Response	Two commentators suggested adding “or a discounted claim estimate” at the end of the first sentence. The reviewers agree and made the change.
Comment Response	One commentator said this definition conflicts with section 3.5. The reviewers added “or a discounted claim estimate” to incorporate risk margins in all contexts.
Section 2.10, Risk Transfer	
Comment Response	One commentator suggested using a word other than “strategy.” The reviewers believe the language is appropriate, note that the language is consistent with ASOP No. 53, *Estimating Future Costs for Prospective Property/ Casualty Risk Transfer and Risk Retention*, and made no change.
SECTION 3. ANALYSIS OF ISSUES AND RECOMMENDED PRACTICES	
Section 3.2, Significance of Methods, Models, and Assumptions	
Comment Response	Two commentators expressed concern regarding situations where the claim estimate was developed by someone other than the actuary. The reviewers modified the language in section 2.1 and 3.2 to clarify.
Section 3.3, Payment Timing	
Comment Response	One commentator proposed expanded language based on section 3.6.2 of ASOP No. 43, *Property/Casualty Unpaid Claim Estimates*. The reviewers agree, believe the language improves consistency with ASOP Nos. 43 and 53, and made the change.
Section 3.3.1, Unbiased Assumptions	
Comment Response	One commentator expressed concern about implicit risk margins in the payment pattern resulting in biased assumptions. The reviewers clarified the language to address this concern.

Comment Response	One commentator asked whether the section should be limited to unbiased estimators. The reviewers believe the guidance is appropriate and made no change.
Section 3.3.2, Consistency of Assumptions	
Comment Response	One commentator suggested adding language to address situations when documentation for the undiscounted value is not available. The reviewers modified the language.
Section 3.3.3, Consistency of Estimates	
Comment Response	One commentator said "cumulative payments" was unclear. The reviewers believe the language is clear and made no change.
Section 3.4.1, Selection of Discount Rates	
Comment Response	One commentator suggested adding "to the extent consistent with the intended purpose and use" to the first sentence. The reviewers believe sections 3.1 and 3.4.1 sufficiently address the commentator's concern and made no change in response to this comment.
Comment Response	One commentator suggested clarifying that the actuary needs to first know what is allowed and appropriate for the intended use and the context (e.g., the accounting standards, the nature of the assignment) and to then select the discount rate within those parameters. The reviewers believe section (d) (now section 3.4.1.4) allows for other approaches and made no change in response to this comment.
Section 3.4.2, Consideration of Economic Conditions	
Comment Response	One commentator suggested adding language to clarify that the whole payment period should be considered. The reviewers agree and made the change.
Comment Response	One commentator suggested adding more guidance on adjusting discount rates. The reviewers believe the guidance is sufficient and made no change.
Section 3.5, Risk Margins	
Comment Response	One commentator suggested reconciling the description and use of risk margins in this ASOP with the description and use of risk margins in ASOP No. 43. The reviewers note that section 2.8 defines risk margin as "A provision for uncertainty in a claim estimate or a discounted claim estimate. A risk margin may be implicit or explicit" and reconciles with the references to risk margins in ASOP No. 43.
Comment Response	Several commentators expressed concern about when discounting would be appropriate within the context of applicable law and accounting standards. The reviewers note that section 1.2 makes it clear that the standard does not require discounting or the introduction of a risk margin. The reviewers moved applicable law and accounting standards to section 3.5.3 for clarity.

Comment Response	One commentator suggested adding the language "to reduce the risk that the discounted estimate will become inadequate." The reviewers note that section 3.5 states, "Discounting a reasonable undiscounted estimate may result in an inadequate discounted estimate, unless appropriate risk margins are included." As a result, the reviewers made no change.
Comment Response	One commentator suggested more detail in the discussion of considerations for risk margins. The reviewers believe the level of detail is appropriate and made no change.
Section 3.5(b), Implicit and Explicit Risk Margins (now section 3.5.2)	
Comment Response	One commentator suggested avoiding the use of "may" in this section. The reviewers believe the language is appropriate and made no change.
Comment Response	One commentator proposed alternative language related to implicit and explicit risk margins. The reviewers believe the language is clear and made no change.
Section 3.7, Changes in Methods, Models, and Assumptions	
Comment Response	One commentator suggested clarifying that the intent is for the actuary to disclose changes in methods, models, or assumptions that the actuary believes to have a material impact on the discounted claim estimate, when comparing one discounted claim estimate to another (which may reflect different evaluation dates, valuation dates, present value dates, and so on). The reviewers believe the language is clear, aligns with other standards including ASOP No. 43, and made no change.
APPENDIX 1, BACKGROUND AND CURRENT PRACTICES	
Comment Response	One commentator requested the addition of "commutations" in the background section. The reviewers agree and made the change.

ACTUARIAL STANDARDS BOARD

Actuarial Standard
of Practice
No. 21

Revised Edition

Responding to or Assisting Auditors or Examiners in Connection with Financial Audits, Financial Reviews, and Financial Examinations

Developed by the
Task Force to Revise ASOP No. 21 of the
General Committee of the
Actuarial Standards Board

Adopted by the
Actuarial Standards Board
September 2016

Doc. No. 183

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September 2016

TO: Members of Actuarial Organizations Governed by the Standards of Practice of the Actuarial Standards Board and Other Persons Interested in Responding to or Assisting Auditors or Examiners in Connection with Financial Audits, Financial Reviews, and Financial Examinations

FROM: Actuarial Standards Board (ASB)

SUBJ: Actuarial Standard of Practice (ASOP) No. 21

This document contains the final version of a revision of ASOP No. 21, now titled *Responding to or Assisting Auditors or Examiners in Connection with Financial Audits, Financial Reviews, and Financial Examinations*.

Background

In 2002, the ASB decided that a revision of ASOP No. 21, whose predecessor was originally adopted in 1974 and was revised and published in 1993, was necessary because accounting and financial reporting had become increasingly complex since the original standard was issued and because audit issues had received increased attention in recent years. As a result, the version preceding this revision was adopted in 2004.

In 2014, the ASB decided that another revision of ASOP No. 21 was necessary. Financial audits, financial reviews, and financial examinations had evolved significantly since 2004. The prior version of ASOP No. 21 did not address the actuary's responsibility with respect to process and controls in the Sarbanes-Oxley environment, and was adopted before the National Association of Insurance Commissioners promulgated the Model Audit Rule. Furthermore, audits, reviews, and examinations are increasingly conducted on a risk-focused basis and this contributed to the need for a revision to ASOP No. 21.

Accordingly, in 2014, the ASB created a task force, under the direction of the General Committee, to consider revisions to this standard. An exposure draft was released in September 2015 with a comment deadline of December 31, 2015. Nineteen comment letters were received and considered in making changes that were reflected in this final revised standard. For a summary of the substantive issues contained in the comment letters on the exposure draft, please see appendix 2.

The General Committee would like to thank former committee members Jeremy J. Brown, Charles F. Cook, John C. Lloyd, Cande J. Olsen, and Lance J. Weiss for their contribution to the development of this ASOP.

The ASB voted in September 2016 to adopt this standard.

ASOP No. 21—Doc. No. 183

ACTUARIAL STANDARD OF PRACTICE NO. 21

RESPONDING TO OR ASSISTING AUDITORS OR EXAMINERS IN CONNECTION WITH FINANCIAL AUDITS, FINANCIAL REVIEWS, AND FINANCIAL EXAMINATIONS

STANDARD OF PRACTICE

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 while responding to or assisting **auditors** or **examiners** in connection with a **financial audit**, **financial review**, or **financial examination**.

1.2 Scope—This standard applies to actuaries when performing actuarial services as a **responding actuary** or as a **reviewing actuary** in connection with a **financial audit** or **financial review** in accordance with **generally accepted auditing standards** or a **financial examination** for the purpose of oversight of the financial condition of an **entity**. This standard does not apply to actuaries when providing services in connection with filings such as rate filings, tax returns, or the schedules of actuarial information filed with the Form 5500. For example, this standard does not apply to Schedules SB or MB attached to the Form 5500 but would apply to the plan audit. The standard does not apply to actuaries providing services in connection with the audit, review, or examination of **contract performance**. This standard applies to actuaries working as part of an internal audit function only to the extent that the actuary directly assists an **auditor** or **examiner**.

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 in connection with a **financial audit**, **financial review**, or **financial examination** for fiscal periods beginning on or after December 15, 2016.

Section 2. Definitions

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

2.1 Auditor—The external firm or professional engaged to conduct a **financial audit** or **financial review** in accordance with **generally accepted auditing standards** for the purpose of issuing an opinion on a **financial statement**.

2.2 Contract Performance—The fulfillment of an **entity's** obligations required by a contract, for example, compliance under the provisions of a reinsurance contract or under a contract that includes a retrospective rate adjustment or experience refund.

2.3 Entity—An institution, company, corporation, partnership, government agency, university, employee benefit plan, or other organization that may be subject to a **financial audit**, **financial review,** or **financial examination**, as well as the individuals who are authorized to act on behalf of the organization.

2.4 Examiner—An employee of or contractor to state or federal regulators performing a **financial examination** on behalf of a governmental agency responsible for oversight of the financial condition of the **entity**.

2.5 Financial Audit—An evaluation of **financial statements** or internal controls over financial reporting by an **auditor**, conducted under **generally accepted auditing standards**, with a view to expressing an opinion on whether the **financial statements** are presented fairly in all material respects within the applicable financial reporting framework or on the effectiveness of the **entity's** internal controls over financial reporting.

2.6 Financial Examination—An evaluation of an **entity's** financial condition by an **examiner**. It will generally include a review of the **financial statement** and will often include a review of financial strength, corporate governance, or management oversight.

2.7 Financial Review—An evaluation, by performing limited procedures, of **financial statements** or internal controls over financial reporting by an **auditor**, conducted under **generally accepted auditing standards**. The evaluation supports an **auditor's** opinion on whether any material modifications should be made to the **financial statements** or to the **entity's** internal controls over financial reporting. A **financial review** is often performed on interim **financial statements**. For this standard, a financial review does not include a review conducted for any other purpose, such as in support of a potential M&A or IPO transaction.

2.8 Financial Statements—Reports on the financial position and the financial activities of an **entity**, prepared in accordance with accounting requirements prescribed or permitted by insurance regulators or accounting standards.

2.9 Generally Accepted Auditing Standards—Sets of standards promulgated by various standards-setting bodies by which audits or reviews are performed and against which the quality of audits or reviews may be judged.

2.10 Responding Actuary—An actuary who is authorized by the **entity** to respond to the **auditor** or **examiner** on behalf of the **entity** being audited, reviewed, or examined with respect to specified elements of the **entity's financial audit**, **financial review**, or **financial examination** that are based on actuarial considerations. Any given **financial audit**, **financial review**, or **financial examination** may involve one or more **responding actuaries**.

2.11 Reviewing Actuary—An actuary designated by the **auditor** or **examiner** to assist with the **financial audit**, **financial review**, or **financial examination** with respect to specified elements of the **financial audit**, **financial review**, or **financial examination** that are based on actuarial considerations. Any given **financial audit**, **financial review**, or **financial examination** may involve one or more **reviewing actuaries**.

Section 3. Analysis of Issues and Recommended Practices

3.1 Scope and Planning for a Financial Audit, Financial Review, or Financial Examination—The **reviewing actuary** should, to the extent practicable, review the scope and assist with the planning associated with actuarial work on a **financial audit**, **financial review**, or **financial examination**.

3.1.1 Understanding the Scope—The **reviewing actuary** should understand the relevant aspects of the scope of the **financial audit**, **financial review**, **or financial examination** as well as the **auditor's** or **examiner's** expectations regarding the nature, extent, and timing of the **reviewing actuary's** procedures, including how the results will be communicated.

3.1.2 Informing the Responding Actuary—The **reviewing actuary** should, to the extent practicable, inform the **responding actuary** about the scope and timing of the actuarial procedures and describe the type of information to be requested by the **reviewing actuary**.

3.2 Discussion between Responding Actuary and Entity—The **responding actuary** should consider discussing the nature, format, and timing of the **responding actuary**’s responses with the **entity** subject to the **financial audit**, **financial review**, or **financial examination**.

3.3 Relationship with the Entity Whose Financial Statement is Being Audited, Reviewed, or Examined—The **reviewing actuary** should disclose to the **auditor** or **examiner** any relationships with the **entity** whose **financial statement** is being audited, reviewed, or examined, or any relationship with the **entity**’s affiliates.

3.4 Communication from Responding Actuary—The **responding actuary** should be appropriately responsive to requests from the **auditor** or **examiner**, including the **reviewing actuary**, within the scope of the **financial audit**, **financial review**, or **financial examination**. The **responding actuary** may involve other individuals in responding to the **auditor** or **examiner**.

3.5 Requests for Information—The **reviewing actuary** and the **responding actuary** should cooperate in the compilation of the information needed by the **reviewing actuary** in order to perform the actuarial procedures. The **responding actuary** should also cooperate in the compilation of information requested by the **auditor** or **examiner** in order to perform the **financial audit**, **financial review**, or **financial examination**.

3.5.1 Information Request Communication—The **reviewing actuary** should communicate, preferably in writing, what information is requested by the **reviewing actuary** in order to perform the actuarial procedures. To the extent practicable, the **reviewing actuary** should communicate with the **entity** about the time frame within which the information is requested and work with the **entity** if there are conflicts or time frames that cannot be met. The **reviewing actuary** should consider whether the information requested is within the scope of the **financial audit**, **financial review**, or **financial examination**.

3.5.2 Responding to Requests for Information—In responding to requests for information, the **responding actuary** should consider the following:

a. the extent to which the information requested is readily available;

b. if the information requested is not readily available, what other information is available or reasonably can be produced that can meet the **auditor’s** or **examiner’s** needs; and

c. whether the information requested is within the scope of the **financial audit**, **financial review**, or **financial examination**.

To the extent practicable, the **responding actuary** should work with the **auditor** or **examiner** if there are conflicts or time frames that cannot be met.

3.5.3 Disagreement on Provision or Use of Information—In the event of disagreement between the **responding actuary** or the **entity** being audited, reviewed, or examined and the **reviewing actuary** regarding the information requested, the **reviewing actuary** should discuss the issue with the **auditor** or **examiner** and the **entity**.

3.5.4 Data, Assumptions, Methods, Models, and Controls—The **responding actuary** should be prepared to discuss with the **auditor** or **examiner**, including the **reviewing actuary**, the following items underlying those elements of the **financial statement** or other elements within the scope of the **financial audit**, **financial review**, or **financial examination** for which the actuary is the **responding actuary**:

a. the data used;

b. the methods and assumptions used and judgments applied, and the rationale for those methods, assumptions, and judgments;

c. the source of any methods and assumptions not set by the **responding actuary**;

d. the models used;

e. the design and effectiveness of controls around the process, procedures, and models;

f. any significant risks to the **entity** considered by the **responding actuary**; and

g. the reasoning to support results and conclusions.

3.5.5 Changing Conditions—The **responding actuary** should be prepared to discuss with the **auditor** or **examiner** circumstances that, in the actuary's professional judgment, had or may have a significant effect on the preparation of those elements of the **financial statement** or other elements within the scope of the **financial audit**, **financial review**, or **financial examination** that are based on actuarial considerations. Examples of such circumstances may include the following:

a. changes in the operating environment;

b. trends in experience;

c. product or plan changes and changes in product mix or demographic mix;

d. changes in the **entity's** policies or procedures, or in valuation bases; and

e. compliance with relevant new or revised accounting rules, laws and regulations, or other government promulgations.

3.5.6 Confidentiality—The **reviewing actuary** and the **responding actuary** should be aware that a **financial audit**, **financial review**, or **financial examination** may give rise to the exchange of confidential information. Such confidential information shall be handled consistent with Precept 9 of the Code of Professional Conduct.

3.6 Documentation—The **reviewing actuary** and the **responding actuary** may produce independent documentation appropriate for their respective teams or principals.

3.6.1 Documentation of Findings by Reviewing Actuary—The **reviewing actuary** should document findings from the actuarial procedures. The **reviewing actuary's** documentation should include the following:

a. evidence that the **reviewing actuary's** procedures have been planned and coordinated with the **auditor** or **examiner**;

b. a summary description of the items subject to the **reviewing actuary's** actuarial audit, review, or examination procedures;

c. a summary description of the procedures followed by the **reviewing actuary**; and

d. a summary description of the results of the review, providing conclusions or findings.

3.6.2 Documentation by Responding Actuary—The **responding actuary** should consider documenting information provided to the **auditor** or **examiner**.

Section 4. Communications and Disclosures

4.1 Communication and Disclosure—Both the **reviewing actuary** and the **responding actuary** should comply with ASOP No. 41, *Actuarial Communications*. The **reviewing**

actuary and the **responding actuary** should include the following, as applicable, in their actuarial communications:

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.

Appendix 1

Background and Current Practices

Note: The following appendix is provided for informational purposes, but is not part of the standard of practice.

Background

Financial Reporting Recommendation 2, *Relations with the Auditor,* was adopted in 1974 by the American Academy of Actuaries and revised in 1983. Recommendation 2 was limited in its application to audits in connection with financial statements of stock life insurance companies prepared in accordance with generally accepted accounting principles (GAAP). In 1993, Financial Reporting Recommendation 2 was replaced by ASOP No. 21, *The Actuary's Responsibility to the Auditor*, which expanded the scope of the existing standard to apply to any actuary who acts for any organization in the preparation or in the review of a financial statement or report that is expected to be audited by a public accounting firm retained by that organization. Financial Reporting Recommendation 3, *Actuarial Report and Statement of Actuarial Opinion for Stock Life Insurance Company Financial Statements Prepared in Accordance with GAAP,* also adopted in 1974 and revised in 1983, was withdrawn in 1993 because the Actuarial Standards Board (ASB) determined that it was no longer needed.

In 2002, the ASB decided that a revision of ASOP No. 21 was necessary because accounting and financial reporting had become increasingly complex since the original standard was issued and because audit issues had received increased attention in recent years. As a result, the version preceding this revision was adopted by the ASB in 2004.

Further expansion of the breadth of audits, reviews, and examinations of financial statements to include risk-focused components led the ASB to decide in 2014 that another revision of ASOP No. 21 was appropriate. Not only has the breadth changed but Sarbanes-Oxley and the Model Audit Rule have become part of the landscape for audits, reviews, and examinations.

The format has been revised to be consistent with the current format adopted by the ASB and reflects the adoption of other standards since ASOP No. 21 was last revised.

Current Practices

Actuaries routinely work with auditors and examiners when financial statements are being audited, reviewed, or examined. Financial statements generally include the statement of financial position (balance sheet), statement of comprehensive income, reconciliation of capital or surplus, statement of cash flows, and accompanying notes.

During the process of revising ASOP No. 21, some additional considerations arose that may provide helpful additional information, as discussed below.

An external auditor is an outside firm engaged and paid by the entity subject to the audit. Internal auditors are employed by the organizations they audit and are employed to give objective assurance to the organization that employs them in accordance with that entity's standards.

A number of organizations have developed sets of principles that represent generally accepted auditing standards and are intended to be encompassed in the definition of the phrase as used in this standard. In the United States, the final authority for the standards for public companies is the Public Companies Accounting Oversight Board (PCAOB), which in turn is subject to the oversight of the Securities and Exchange Commission (SEC). The standards setting body for other U.S. companies is the Auditing Standards Board, a division of the American Institute of Certified Public Accountants (AICPA). The Generally Accepted Government Auditing Standards, also known as the Yellow Book, is for use by auditors of government entities, entities that receive government awards, and other audit organizations performing Yellow Book audits. The International Federation of Accountants (IFA), through the International Auditing and Assurance Standards Board (IAASB), sets the International Standards on Auditing (ISA). There are potentially other standards in various worldwide territories.

Appendix 2

Comments on the Exposure Draft and Responses

The exposure draft of this revision of ASOP No. 21, *Responding to or Assisting Auditors or Examiners in Connection with Financial Audits, Financial Reviews, and Financial Examinations,* was issued in September 2015 with a comment deadline of December 31, 2015. Nineteen comment letters were received, some of which were submitted on behalf of multiple commentators, such as by firms or committees. For purposes of this appendix, the term "commentator" may refer to more than one person associated with a particular comment letter. The Task Force carefully considered all comments received, and the General Committee and ASB reviewed (and modified, where appropriate) the proposed changes.

Summarized below are the significant issues and questions contained in the comment letters and the responses to each.

The term "reviewers" includes the Task Force, General Committee, and the ASB. Unless otherwise noted, the section numbers and titles used below refer to those in the exposure draft.

TRANSMITTAL MEMORANDUM	
Question 1: Is the scope limitation to financial audits, financial reviews, and financial examinations clear and appropriate?	
Several commentators felt that the scope limitation to financial audits, financial reviews, and financial examinations was clear and appropriate.	
Comment Response	One commentator asked whether the ASOP was intended to cover financial reviews performed in M&A or IPO situations. The reviewers note that these financial reviews are not included in the financial reviews defined in this standard and added clarifying language in the definition of financial review.
Comment Response	One commentator stated that the scope limitation that precludes application of the ASOP to rate filings, tax returns, and other items involving actuarial considerations might not be appropriate. The reviewers believe this limitation is appropriate and made no change.
Comment Response	One commentator suggested adding the words "agreed-upon procedures" in conjunction with performing financial audits or financial reviews. The reviewers disagree that this ASOP should cover a more limited "agreed-upon procedures" engagement and made no change.
Comment Response	One commentator suggested adding wording in the transmittal letter to explain what elements are not necessary or appropriate for non-financial audits. The reviewers note that this ASOP does not apply to non-financial audits, reviews, or examinations and, therefore, does not provide guidance in those situations. Therefore, no change was made.

Question 2: Does the proposed revision appropriately reflect the changes in financial audits, financial reviews, and financial examinations that have occurred since the current version of ASOP No. 21 was adopted in September 2004?	
Several commentators felt that the proposed revision appropriately reflected the changes in financial audits, financial reviews, and financial examinations that have occurred since the current version of ASOP No. 21 was adopted in September 2004.	
Comment Response	One commentator suggested more direct guidance to align with the Public Company Accounting Oversight Board's (PCAOB's) Staff Audit Practice Alerts (SAPAs). The reviewers note that while the SAPAs may apply to actuaries providing services in the audit of public companies, they may not apply to other actuarial practice areas and services covered by the ASOP and, therefore, may not be universally appropriate for inclusion in the ASOP. Therefore, no change was made.
Comment Response	One commentator suggested using a term different from "generally accepted auditing standards" and also including examinations and other assurance engagements in whatever term was used. The reviewers note that the term "generally accepted auditing standards" is purposefully not capitalized in the standard and can refer to a variety of auditing standards. Financial examinations are specifically defined separately as being "performed by an examiner." Therefore, no change was made.
Comment Response	One commentator noted that the ASOP does not contain the word "risk" even though the revision is intended to look toward more risk focused exams. The reviewers agree and added section 3.5.4(f) to explicitly incorporate risk.
Question 3: Does the proposed revision accurately describe the responsibilities of the reviewing actuary and the responding actuary?	
Several commentators felt the proposed revision accurately described the responsibilities of the reviewing actuary and the responding actuary.	
Comment Response	One commentator suggested additional stronger language that directs the reviewing actuary to limit the information request only to the information required to review the work of the responding actuary. The reviewers believe that the guidance regarding request for information is appropriate and recognize that there can be differences of opinion about whether the information requested is required to review the responding actuary's work. Section 3.5.3 addresses what steps the reviewing actuary should take if a disagreement arises. Therefore, no change was made.
Comment Response	One commentator suggested adding wording stating that the entity provides specific written authorization for the responding actuary to act in the capacity of responding actuary. The reviewers note that an ASOP cannot require an entity to do anything, whether in writing or not, but have changed the definition of responding actuary to note that the responding actuary is "authorized by the entity to respond."
Comment Response	One commentator suggested requiring the responding actuary to have sufficient qualifications to perform the work and to be involved in actuarial communications. The reviewers note that an actuary must follow the Code of Professional Conduct (Code) in all areas and Precept 2 in particular addresses qualifications. Therefore, the reviewers made no change.

Comment Response	One commentator suggested that it be made clearer that the ASOP applies to the reviewing actuary even if there is no responding actuary. The reviewers believe that there is nothing in the ASOP that would lead a reviewing actuary to believe that the ASOP did not apply if there was no responding actuary. However, changes were made in certain sections to note that the reviewing actuary may be communicating directly with the entity.
GENERAL COMMENTS	
Comment Response	One commentator believed that there should be more specific mention of Own Risk and Solvency Assessment (ORSA). The reviewers disagree because ORSA is only one component to a financial examination and is applicable only to insurance companies. Therefore, no change was made.
Comment Response	One commentator suggested that the order of audit, review, and examination be changed to audit, examination, and review, that is, in the order of the definitions. The reviewers note that the definitions in ASOPs are listed in alphabetical order, so that the ordering does not imply any relationships among the various definitions. Therefore, the reviewers made no change.
Comment Response	One commentator suggested a number of changes or additions to several sections that would add specific reference to a number of other ASOPs or require that the responding actuary state that various items followed various standards. The reviewers disagree with adding the references and made no change.
Comment Response	One commentator suggested that the exposure draft indicates that the responding actuary plays a role in determining the scope of an examination. The reviewers believe that the responding actuary's role is appropriately described and made no change.
Comment Response	One commentator suggested that input from a broader group of potential commentators should be sought, and specifically mentioned financial statement preparers, auditors, and examiners. The reviewers note that the ASB does proactively seek input from a broad range of potential commentators including those listed by the commentator, and it is up to those parties to respond.
Comment Response	One commentator suggested integrating guidance from a 2014 Request for Comment document entitled "ASOPs and Pension Plan Funding and Accounting." The reviewers disagree because the suggested document and comments submitted in response to it relate to a Request for Comment and do not provide guidance and, in addition, relate specifically to the pension practice while the standard applies to all practice areas.
Comment Response	One commentator questioned how ASOP No. 21 relates to Precept 13 of the Code and violations of the Code, and asked what a reviewing actuary should do if the reviewing actuary believes that the responding actuary has violated the Code. The reviewers note the Code applies to actuaries acting in a professional actuarial capacity. If a reviewing actuary believes that a responding actuary has violated the Code, the reviewing actuary should be guided by the Code.

Comment	One commentator questioned whether the ASOP should formalize the interaction between the responding and reviewing actuaries where a prior examination exposed issues.
Response	The reviewers believe that the ASOP provides appropriate guidance and does not need to specify what occurs between responding and reviewing actuaries regarding prior examination issues. Therefore, no change was made.
Comment	One commentator asked what the obligation of the responding actuary is when someone other than the responding actuary (e.g., the principal) has set the assumptions, whether the assumptions are reasonable or not reasonable.
Response	The reviewers believe that the guidance in section 3.5.4 is sufficient for this circumstance and note that disclosure is also addressed in ASOP No. 41, *Actuarial Communications*. Therefore, no change was made.
Comment	One commentator suggested adding wording based on several Academy financial reporting committees' comments on the PCAOB's Staff Consultation Paper regarding the auditor's use of specialists.
Response	The reviewers believe that the suggested additional wording is too prescriptive. Therefore, no change was made.
Comment	One commentator suggested that the ASOP address the situation where a consulting actuary who was acting as a reviewing actuary uses confidential information to later gain a contract or employment with the entity that was audited or examined.
Response	The reviewers believe that the hypothetical situation posed by the commentator is addressed by reference to the Code and, therefore, made no change.
SECTION 1. PURPOSE, SCOPE, CROSS REFERENCES, AND EFFECTIVE DATE	
Section 1.2, Scope	
Comment	One commentator suggested changing the wording in the last sentence of the first paragraph from "is working to support" to "directly assists" the auditor or examiner.
Response	The reviewers agree with the wording change as the new wording may be more consistent with the terminology used by the auditor or examiner, and made the change.
Comment	One commentator suggested adding an example of one type of assistance that the internal auditor actuary might provide.
Response	The reviewers do not agree with adding the example, because the example given is limited in application. Therefore, no example was added.
Comment	One commentator recommended that the scope be clarified by adding a statement to the effect that the standard applies to a plan audit required to be attached to the Form 5500.
Response	The reviewers agree and added some clarifying language in section 1.2.

SECTION 2. DEFINITIONS	
Section 2.1, Auditor	
Comment	One commentator proposed deleting the word "external" before the definition of "auditor" and suggested adding the word "qualified" in front of "professional."
Response	The reviewers disagree with both suggestions. "External" is purposefully inserted in the revised definition because the application of the ASOP to actuaries who are employed in an internal audit function is limited, as described in section 1.2. The suggestion to add the word "qualified" before "professional" is not followed because it is assumed that actuaries who are providing services in an audit, review, or examination are qualified to do so in accordance with the Code. Therefore, no changes were made.
Section 2.2, Contract Performance	
Comment	One commentator suggested that the definition could be improved by adding "or experience refund" at the end of the definition as another example of contract performance.
Response	The reviewers agree that this additional example could add clarity for some practice areas and added the phrase.
Section 2.5, Financial Audit	
Comment	One commentator suggested that the term financial audit be defined to include both financial audits and financial reviews.
Response	The reviewers disagree because financial audits and financial reviews are different and this difference is important to auditors and appears in accounting literature. However, the reviewers modified the definition of financial review to clarify the differences.
Section 2.7, Financial Review	
Comment	One commentator suggested revising the definition of financial review to organize it in a similar way to the definition of financial audit but also to be clearer about the differences between a financial audit and financial review.
Response	The reviewers agree that a financial audit is similar to a financial review but also has some distinctly different characteristics that are important in the accounting profession. Therefore, the reviewers changed the wording to try to clarify the differences while also paralleling the structure of the financial audit definition.
Comment	One commentator suggested changing the word "company's" in front of "internal controls" to "entity's."
Response	The reviewers agree and made the change.
Section 2.10, Responding Actuary	
Comment	One commentator suggested that the definition would be improved by adding the phrase "either internal or external to the entity" to the definition of "responding actuary."
Response	The reviewers note that the definition states that the responding actuary is acting "on behalf of the entity…," which covers actuaries who are internal or external to the entity. Therefore, the reviewers made no change.
Comment	One commentator suggested a change in the definition to read "the responding actuary is the actuary whose principal is the entity being audited, reviewed, or examined."
Response	The reviewers disagree and made no change.

Comment Response	One commentator suggested that because there may in actual circumstances be no responding actuary, the standard should either give a respondent who is not an actuary direction and include that respondent as being covered by the standard, or alternatively or additionally, say that there should always be a responding actuary. The reviewers disagree with both suggestions. First, ASOPs can only apply to actuaries even if non-actuaries are performing actuarial-type work. Similarly, the ASB cannot require an entity to employ or involve an actuary to perform actuarial-type work. Therefore, the reviewers made no change.
Section 2.11, Reviewing Actuary	
Comment Response	One commentator suggested that the definition of reviewing actuary be "the actuary whose principal is the auditor or examiner." The reviewers disagree with the change in wording, since the suggested change could erroneously indicate that any actuary whose principal is the auditor or examiner would be a reviewing actuary. Therefore, the reviewers made no change.
SECTION 3. ANALYSIS OF ISSUES AND RECOMMENDED PRACTICES	
Section 3.1, Scope and Planning for a Financial Audit, Financial Review, or Financial Examination	
Comment Response	One commentator suggested adding the words "and materiality" to the scope. The reviewers disagree, noting that ASOP No. 1, *Introductory Actuarial Standard of Practice*, provides that the guidance in ASOPs need not be applied to immaterial items, and made no change.
Section 3.1.1, Understanding the Scope	
Comment Response	One commentator suggested that an additional section be added to section 3.1.1, which addresses planning. Suggested additional wording is "The reviewing actuary should plan actuarial procedures consistent with the scope of the financial audit, financial review, or financial examination. These procedures should be provided to and discussed with the auditor or examiner prior to performing the procedures." The reviewers disagree with this suggestion because it fails to recognize that the reviewing actuary is not always involved or able to be involved in planning the audit, review, or examination. The current wording states "the reviewing actuary should, to the extent practicable, … assist with the planning…." Therefore, no change was made.
Section 3.1.2, Informing the Responding Actuary	
Comment Response	One commentator said that the section wording should suggest that the communication be in writing. The reviewers disagree with the suggestion. This section recognizes that it is not always practicable for the reviewing actuary to inform the responding actuary about the scope and timing. The reviewers do not feel it is appropriate to expand the communication requirements and, therefore, made no change.
Comment Response	Several commentators suggested that wording be added to specifically address that there may be no direct communication between the reviewing and responding actuaries. The reviewers disagree and believe that the wording "to the extent practicable" appropriately recognizes that there may be no direct communication between the reviewing and responding actuaries. Therefore, no change was made.
Section 3.2, Discussion between Responding Actuary and Entity	
Comment Response	One commentator suggested clarification on the relationship of the responding actuary to the entity. The reviewers disagree that any clarification is needed and believe that the definition of responding actuary is clear. Therefore, no change was made.

Comment Response	One commentator said that this section was vague and did not understand when the responding actuary would not discuss responses with the entity. The reviewers disagree that any change is needed. The wording reflects that there may be a number of reasons that the responding actuary is not able to discuss responses directly with the entity, and therefore, allows for flexibility. Therefore, no change was made.
Section 3.3, Relationship with the Entity Whose Financial Statement is Being Audited, Reviewed, or Examined	
Comment Response	Several commentators suggested that the disclosure of relationships should apply to the responding actuary as well as the reviewing actuary. The reviewers disagree with adding responding actuary to the relationship disclosure because the responding actuary always has a relationship to the entity (i.e. employment). Therefore, no change was made.
Comment Response	One commentator suggested adding “or its affiliates” after “entity.” The reviewers agree and changed the wording.
Section 3.4, Communication from Responding Actuary	
Comment Response	One commentator suggested (re)inserting the word “reasonable” in front of “requests,” as in the corresponding section 3.1 of the current ASOP No. 21. The reviewers note that section 3.4 directs the responding actuary to be “appropriately responsive” and, therefore, made no change.
Comment Response	One commentator suggested that clarification is needed on the issue of the responding actuary involving other individuals in responding to the auditor or examiner, and notes that the issue seems to be control of the work product or communication. The reviewers disagree that clarification is needed and, therefore, made no change.
Section 3.5, Requests for Information	
Comment Response	One commentator suggested that this section refer to ASOP No. 41. The reviewers disagree and note that ASOP No. 41 applies to actuarial communications of the results of a work product, while section 3.5 is discussing communications among the reviewing actuary, the auditor or examiner, and the responding actuary that are necessary for the performance of actuarial procedures, not for communicating the results of a work product. Therefore, no change was made.
Comment Response	One commentator suggested replacing “needed by the reviewing actuary…” to “needed by the auditor or examiner team….” The reviewers agree that the information may be requested by the auditor or examiner in addition to or instead of the reviewing actuary and added a second sentence noting that the “responding actuary should also cooperate in the compilation of information requested by the auditor or examiner….”
Comment Response	One commentator suggested adding the sentence “Information requests may be made to the responding actuary by the auditor or examiner, including the reviewing actuary.” The reviewers agree that the responding actuary may be responding to the auditor or examiner and added a second sentence to section 3.5 as noted above.

Section 3.5.1, Information Request Communication	
Comment Response	One commentator suggested that information requested should include the level of granularity of information requested. The reviewers disagree that this specificity needs to be added and made no change.
Comment Response	Several commentators suggested substituting “the entity” for “the responding actuary” where “the responding actuary” appears in section 3.5.1, or other additions to wording that would accomplish the same result as this suggested change. The reviewers agree with the suggestion and made the change.
Comment Response	One commentator provided a rewrite of section 3.5.1, which listed substantial detail on what should be included in the request for information. The reviewers note that the basic ideas in the suggested rewrite were already in the exposure draft. However, the suggested wording is very prescriptive and may not work in all situations and for all practice areas, and for both audits and examinations. The reviewers believe the current guidance is appropriate and made no change.
Section 3.5.2, Responding to Requests for Information	
Comment Response	One commentator posed a hypothetical situation regarding the need or requirement that the responding actuary disclose information that is new and not directly part of the information requested by the auditor or examiner, and asked that this situation be addressed somewhere in the ASOP. The reviewers do not believe that all potential situations can be addressed in the ASOP but refer the commentator to the first sentence of section 3.5 and the Code regarding cooperation. Therefore, no change was made.
Comment Response	One commentator noted that the term “requester” was used and suggested it be replaced with “auditor or examiner.” The reviewers agree and changed the term “requester” to “auditor or examiner.”
Comment Response	One commentator provided a rewrite of section 3.5.2, which listed substantial detail on what should be included in the response to requests for information. The reviewers note that the basic ideas in the suggested wording are in the exposure draft. However, the suggested wording is very prescriptive and may not work in all situations and for all practice areas, and for both audits and examinations. The reviewers believe the current guidance is appropriate and made no change.
Comment Response	One commentator suggested clarifying that the responding actuary can only respond to the reviewing actuary’s or auditor’s or examiner’s requests for information to the extent that the entity has authorized the actuary to respond. The reviewers modified the definition of responding actuary in section 2.10 to make clearer that the responding actuary is authorized to respond.

Comment Response	One commentator objected to section 3.5.2(c), which states that the responding actuary should consider "whether the information requested is within the scope of the financial audit, financial review, or financial examination." The commentator indicated that it is outside of the responding actuary's area of expertise to know whether the information requested is within the scope of the audit, review, or examination. The reviewers believe the guidance is appropriate and refer the commentator to section 3.5.3 for guidance in situations where there is a disagreement on the provision or use of information. Therefore, the reviewers made no change.
Section 3.5.3, Disagreement on Provision or Use of Information	
Comment Response	One commentator suggested clarifying that there might be no opportunity for direct communication between the responding actuary and reviewing actuary. The reviewers made some changes to the wording to clarify guidance.
Comment Response	One commentator suggested either deletion or expansion of this section. The argument for deletion is that the Code applies and the section does not add information or guidance. The argument for expansion is that there needs to be more specific direction about what happens in the event that information the reviewing actuary believes needs to be provided is not provided. The reviewers disagree and believe the level of guidance given is appropriate. Therefore, no change was made.
Section 3.5.4, Data, Assumptions, Methods, Models and Controls	
Comment Response	One commentator suggested that wording be added indicating that it is preferable for the responding actuary to respond in writing to requests for information. The reviewers disagree and believe that "responding in writing" is too vague (i.e. what constitutes a "writing" that is universally applicable) to be useful and may not apply to all practice areas and in all situations. Therefore, the reviewers made no change.
Comment Response	One commentator suggested additional wording in subsections (h), (i), and (j) as follows: h. adjustment to values calculated outside of actuarial models; i. background information to assist the reviewing actuary to fairly assess the reliability of the audited value e.g. the level of uncertainty in management estimates, model quality, and other qualitative factors; and j. model validations. The reviewers disagree with the additional wording suggestions, believing the current wording is appropriately broad and encompasses the additional specific suggestions. Therefore, no change was made.
Comment Response	One commentator suggested that the standard should require the responding actuary to prepare a set of work papers that "support the balance sheet." Further, the commentator suggested that the standard require the entity to identify the responding actuary at the beginning of the audit/exam and that this person should prepare the initial package, that is, the set of work papers to support the audit/exam. The reviewers disagree with the first suggestion as being too prescriptive and not applicable to all situations and practice areas. The reviewers disagree with the second suggestion because it directs the entity to do something, which is outside the purview of an ASOP. Therefore, no change was made.

Comment Response	One commentator suggested either eliminating section (d), which referred to the source of methods and assumptions not set by the responding actuary, or just eliminating the phrase "not set by the responding actuary." The reviewers disagree with both suggestions and made no change. The reviewers believe that Section 3.5.4(c) in this final ASOP is important to address the methods and assumptions not set by the responding actuary.
Comment Response	One commentator suggested adding language that requires the information provided by the responding actuary to be complete enough that the reviewing actuary can "sample-test" the appropriateness of assumptions, methodology, or accuracy of calculations. The reviewers disagree because the additional language is overly prescriptive and does not apply to all practice areas. Therefore, no change was made.
Comment Response	Several commentators suggested that an item be added saying that the responding actuary should be prepared to discuss perceived or significant risks to the business. The reviewers agree with the idea of adding an item of risk to the list and added "f. any significant risks to the entity considered by the responding actuary."
Comment Response	One commentator suggested that the phrase "and changes in methods used" be added to section (c). The reviewers combined sections (c) and (b), and believe that the guidance regarding "being prepared to discuss…the rationale for those methods…" includes discussion of changes in methods.
Section 3.5.5, Changing Conditions	
Comment Response	One commentator suggested adding the following wording after sections (a) through (e) as follows: f. inherent and residual risk assessments; g. design and effectiveness of financial controls; h. the existence and potential resolution of any material weaknesses, significant deficiencies, or high risk deficiencies. The reviewers believe that the suggestions made are more appropriate to section 3.5.4, and added an additional item discussing risk as section (f) and added the phrase "design and effectiveness of" before "controls" in section (e).
Comment Response	One commentator suggested removing "statutory" because the point applies to all valuation bases. The reviewers note that "statutory" refers to any valuation basis set by statute, but removed it as the word is not essential.
Comment Response	One commentator suggested changing the phrase "significant effect" to one that refers to an impact over a materiality limit. The reviewers disagree and note that the language refers to circumstances that, "in the actuary's judgment," had or may have a significant effect. Therefore, no change was made.
Comment Response	One commentator suggested that the wording under 3.5.5(e) on compliance with relevant new or revised accounting rules or laws should include Actuarial Guidelines developed by the National Association of Insurance Commissioners. The reviewers disagree and note that Actuarial Guidelines fit into the category of government promulgations. Therefore, no change was made.

Comment Response	One commentator agreed that the responding actuary should be prepared to discuss circumstances that had a significant effect on the preparation of the information being audited, reviewed, or examined but did not agree with the wording "…or may have a significant effect…" as the commentator felt this required discussion of future scenarios of events. The reviewers believe that the guidance is appropriate and made no change.
Section 3.5.6, Confidentiality	
Comment Response	Several commentators suggested reinserting language from the current ASOP that says "any information received by the reviewing actuary should be considered confidential…unless otherwise indicated by the entity." In order to avoid any confusion, the guidance was changed to refer directly to Precept 9 of the Code.
Comment Response	One commentator asked that more be said about "may give rise to the exchange of confidential information" but made no specific suggestion. The reviewers disagree that additional explanation is needed and made no change.
Section 3.6, Documentation	
Comment Response	Two commentators asked why the reviewing actuary should document but the responding actuary should only consider documenting. The reviewers do not believe any change is needed because the act of reviewing is part of the work product of the reviewing actuary, but the act of responding is not necessarily part of the work product of the responding actuary. The responding actuary may only be providing supporting information for preexisting work. Therefore, the reviewers believe the documentation requirements should be different. Therefore, no change was made.
Section 3.6.1, Documentation of Findings by Reviewing Actuary	
Comment Response	One commentator suggested adding wording to indicate that it is the responsibility of the responding actuary to comment on any report received from the reviewing actuary as described in 3.6.1(d). The reviewers disagree with the suggested change and note that in many instances, the findings of a reviewing actuary are not provided to the responding actuary. The reviewers believe that putting requirements on the responding actuary to respond to the reviewing actuary's report is not appropriate. Therefore, no change was made.
Comment Response	One commentator suggested adding guidance on standards that reviewing actuaries need to meet to be qualified to perform or assist in an audit or examination. The reviewers do not believe that guidance on qualifications is appropriate in this standard and refer the commentator to the U.S. Qualification Standards. Therefore, no change was made.
Comment Response	One commentator suggested that the reviewing actuary should comment on whether the responding actuary is following the professional standards of practice. The reviewers disagree with this suggestion and note that actuaries should always be following actuarial standards of practice. Therefore, no change was made.
Comment Response	One commentator suggested that the reviewing actuary should comment specifically on what items are not reviewed. The reviewers disagree with this suggestion as being too open-ended and practically impossible to meet. Therefore, no change was made.

Section 3.6.2, Documentation by Responding Actuary	
Comment Response	One commentator suggested that the term "requester" be changed. The reviewers agree and changed the term "requester" to "auditor or examiner."
SECTION 4. COMMUNICATIONS AND DISCLOSURES	
Section 4.1, Communication and Disclosure	
Comment Response	One commentator suggested changing "when communicating information and findings" to "when communicating actuarial opinions and actuarial findings" to agree with ASOP No. 41. The reviewers have simplified this sentence in section 4.1 and it now simply indicates that "Both the reviewing actuary and the responding actuary should comply with ASOP No. 41, *Actuarial Communications*."

ACTUARIAL STANDARDS BOARD

Actuarial Standard
of Practice
No. 22

Revised Edition

Statements of Actuarial Opinion Based on Asset Adequacy Analysis for Life Insurance, Annuity, or Health Insurance Reserves and Other Liabilities

Developed by the
Task Force to Revise ASOP No. 22 of the
Life Committee of the
Actuarial Standards Board

Adopted by the
Actuarial Standards Board
September 2021

Doc. No. 203

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APPENDIXES

<u>ASOP No. 22—Doc. No. 203</u>

September 2021

TO: Members of Actuarial Organizations Governed by the Standards of Practice of the Actuarial Standards Board and Other Persons Interested in Statements of Actuarial Opinion Based on Asset Adequacy Analysis for Life Insurance, Annuity, or Health Insurance Reserves and Other Liabilities

FROM: Actuarial Standards Board (ASB)

SUBJ: Proposed Revision of Actuarial Standard of Practice (ASOP) No. 22, *Statements of Actuarial Opinion Based on Asset Adequacy Analysis for Life Insurance, Annuity, or Health Insurance Reserves and Other Liabilities*

This document contains a revision of ASOP No. 22, now titled *Statements of Actuarial Opinion Based on Asset Adequacy Analysis for Life Insurance, Annuity, or Health Insurance Reserves and Other Liabilities*.

<u>History of the Standard</u>

In 1993, the ASB adopted ASOP No. 22, *Statutory Statements of Opinion Based on Asset Adequacy Analysis by Appointed Actuaries for Life or Health Insurers*, which replaced Financial Reporting Recommendation No. 7, *Statement of Actuarial Opinion for Life Insurance Company Statutory Annual Statements*, and No. 11, *Statement of Actuarial Opinion for Interest-Indexed Universal Life Insurance Contracts*, as guidance for opinions under section 8 of the model Actuarial Opinion Memorandum Regulation (1991).

Prior to the adoption, there had been discussions about whether ASOP No. 22 should cover opinions under both section 7 and section 8 of the model regulation. The ASB decided to limit ASOP No. 22 to cover opinions required under only section 8 and adopted Actuarial Compliance Guideline (ACG) No. 4, *Statutory Statements of Opinion Not Including an Asset Adequacy Analysis by Appointed Actuaries for Life or Health Insurers*, in October 1993 to provide guidance on opinions required under section 7. At the time of this revision to ASOP No. 22, ACG No. 4 continues to be relevant for actuaries working for companies that receive an exemption from asset adequacy analysis.

In the late 1990s and early 2000s, the ASB reviewed all standards of practice related to cash flow testing. Portions of ASOP No. 14, *When to Do Cash Flow Testing for Life and Health Insurance Companies*, were incorporated into ASOP No. 7, *Analysis of Life, Health, or Property/Casualty Insurer Cash Flows*, and ASOP No. 22. In 2001, the ASB adopted the revised ASOP No. 7 and ASOP No. 22 and repealed ASOP No. 14.

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In December 2012, the National Association of Insurance Commissioners (NAIC) initially adopted the *Valuation Manual*, which sets forth the minimum reserve and related requirements for jurisdictions where the *Standard Valuation Law*, as amended by the NAIC in 2009, has been enacted. The *Valuation Manual* took effect on January 1, 2017, pursuant to section 11 of the *Standard Valuation Law*. Requirements for the annual actuarial opinion and memorandum pursuant to section 3 of the *Standard Valuation Law* are provided in "VM-30, Actuarial Opinion and Memorandum Requirements." In December 2017, the NAIC also adopted Actuarial Guideline LI, *The Application of Asset Adequacy Testing to Long-Term Care Insurance Reserves*, which provides uniform guidance and clarification of requirements for asset adequacy testing for long-term care insurance.

In response to these NAIC activities, the ASB decided to revise this ASOP.

First Exposure Draft

The first exposure draft was approved by the ASB in December 2018 with a comment deadline of June 1, 2019. Fourteen comment letters were received and considered in making changes that are reflected in the second exposure draft.

Second Exposure Draft

The second exposure draft was approved by the ASB in March 2020 with a comment deadline of November 30, 2020. Eight comment letters were received and considered in making changes that are reflected in this standard.

For a summary of issues contained in these comment letters, please see appendix 2.

Notable Changes from the Second Exposure Draft

Notable changes made from the second exposure draft to the final standard are summarized below. Additional changes were made to improve readability, clarity, or consistency.

1. Modified the definition of subsequent events in section 2.11.

2. Added references to ASOP Nos. 23, 25, and 56 in sections 3.1.2.1, 3.1.12, and 4.1, as appropriate.

3. Modified the discount rates language in section 3.1.2.3.

4. Added item (e) on reflecting in-force management actions in asset adequacy testing in section 3.1.7.

5. Added a disclosure for discount rates in section 4.1(h).

Notable Changes from the Existing ASOP

A cumulative high-level summary of the notable changes from the existing ASOP are summarized below.

1. Changed the purpose, scope, and title from applying to actuaries when providing a statement of actuarial opinion for life and health insurers to applying to actuaries when providing a statement of actuarial opinion relating to asset adequacy analysis of life insurance, annuity, or health insurance reserves and other liabilities.

2. Added sections to provide guidance on the following:

    - trends in assumptions (section 3.1.2.1);
    - assumption margins (section 3.1.2.2);
    - discount rates (section 3.1.2.3);
    - sensitivity testing (section 3.1.2.4);
    - reinsurance ceded (section 3.1.3);
    - the use of cash flows from other financial calculations (section 3.1.5);
    - separate account assets (section 3.1.6); and
    - changes in methods, models, or assumptions (section 3.1.10).

3. Significantly revised the management action section (section 3.1.7).

4. Strengthened documentation requirements (section 3.4).

5. Modified disclosure items (section 4).

The ASB is currently converting Actuarial Compliance Guideline (ACG) No. 4, *Statutory Statements of Opinion Not Including an Asset Adequacy Analysis by Appointed Actuaries for Life and Health Insurers,* into an ASOP. ACG No. 4 will remain in effect until the ASOP is adopted to continue providing guidance to actuaries issuing opinions not including an asset adequacy analysis.

The ASB wishes to thank everyone who took the time to contribute comments and suggestions to the exposure drafts, and in particular offers special thanks to John MacBain and Martin Snow, previous members of the ASOP No. 22 Task Force who contributed to earlier drafts.

The ASB voted in September 2021 to adopt this standard.

ASOP No. 22—Doc. No. 203

Task Force to Revise ASOP No. 22

Laura A. Hanson, Chairperson

Bryan N. Amburn	Linda M. Lankowski
Thomas A. Campbell	Leslie M. Jones
Laurel A. Kastrup	

Life Committee of the ASB

Linda M. Lankowski, Chairperson

Janice A. Duff	Gabriel Schiminovich
Lisa S. Kuklinski	Jeremy Starr
Donna C. Megregian	

Actuarial Standards Board

Darrell D. Knapp, Chairperson

Elizabeth K. Brill	Cande J. Olsen
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Kevin M. Dyke	Judy K. Stromback
David E. Neve	Patrick B. Woods

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.

ACTUARIAL STANDARD OF PRACTICE NO. 22

STATEMENTS OF ACTUARIAL OPINION BASED ON ASSET ADEQUACY ANALYSIS OF LIFE INSURANCE, ANNUITY, OR HEALTH INSURANCE RESERVES AND OTHER LIABILITIES

STANDARD OF PRACTICE

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

1.1 Purpose—This actuarial standard of practice (ASOP or standard) provides guidance to actuaries when performing actuarial services with respect to providing a statement of actuarial opinion relating to **asset adequacy analysis** of life insurance, annuity, or health insurance reserves and other **liabilities**, pursuant to applicable law (statutes, regulations, and other legally binding authority).

1.2 Scope—This standard applies to actuaries when performing actuarial services with respect to providing a statement of actuarial opinion based on **asset adequacy analysis** of life insurance, annuity, or health insurance reserves and other **liabilities**, under the following circumstances:

a. the statement of actuarial opinion is prepared to comply with applicable law based on the model *Standard Valuation Law* and VM-30 of the NAIC *Valuation Manual*; or

b. the statement of actuarial opinion is prepared for an insurance company to comply with other applicable law.

If the statement of actuarial opinion encompasses health insurance **liabilities**, ASOP No. 28, *Statements of Actuarial Opinion Regarding Health Insurance Assets and Liabilities*, may also apply. If the statement of actuarial opinion includes reinsurance, ASOP No. 11, *Treatment of Reinsurance or Similar Risk Transfer Programs Involving Life Insurance, Annuities, or Health Benefit Plans in Financial Reports*, may also apply.

If the actuary departs from the guidance set forth in this standard in order to comply with applicable law, 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.

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 is effective for all statements of actuarial opinion covered by the scope of this ASOP issued on or after June 1, 2022.

Section 2. Definitions

The definitions below are defined for use in this actuarial standard of practice and appear in bold throughout the ASOP.

2.1 Asset—Any resource that can generate revenue **cash flows** or reduce disbursement **cash flows**.

2.2 Asset Adequacy Analysis—An analysis of the adequacy of reserves and other **liabilities** being tested, in light of the **assets** supporting such reserves and other **liabilities**, as specified in the statement of actuarial opinion.

2.3 Cash Flow—Any receipt, disbursement, or transfer of cash or **asset** equivalents; includes policy **cash flows** and **cash flows** that are not policy related, such as **cash flows** from **assets**, corporate expenses, and litigation costs.

2.4 Cash Flow Risk—The risk that the amount or timing of **cash flows** will differ from expectations or assumptions.

2.5 Cash Flow Testing—The projection and comparison of the timing and amount of **cash flows** under one or more **scenarios** in order to evaluate **cash flow risks**.

2.6 Gross Premium Reserve—The actuarial present value of future benefits, expenses, and related amounts less the actuarial present value of future gross premiums and related amounts.

2.7 Gross Premium Reserve Test—The comparison of the **gross premium reserve** computed under one or more **scenarios** to the financial statement reserves and other **liabilities**.

2.8 Liability—Any commitment by, or requirement of, an insurer that can reduce revenue **cash flows** or generate disbursement **cash flows**.

2.9 Moderately Adverse Conditions—Conditions that include one or more unfavorable, but not extreme, events that have a reasonable probability of occurring during the testing period.

2.10 Scenario—A set of economic and other assumptions used in **asset adequacy analysis**.

2.11 Subsequent Events—Material events that occur after the valuation date and before the date the statement of actuarial opinion is signed.

Section 3. Analysis of Issues and Recommended Practices

3.1 Asset Adequacy Analysis—When performing an **asset adequacy analysis**, the actuary should choose a block of **assets** such that the statement value of those **assets** is no greater than the statement value of the reserves and other **liabilities** being tested. The actuary should determine whether additional **assets** are needed to support the reserves and other **liabilities** being tested under **moderately adverse conditions**. If the actuary determines that additional **assets** are needed, then the actuary should establish an additional reserve equal to the statement value of those additional **assets** and test that the total **assets**, including the additional **assets**, are adequate to support the reserves and other **liabilities** under **moderately adverse conditions**.

The actuary should use professional judgment in choosing **assets** that are appropriate for the analysis method and are not used to support reserves and other **liabilities** other than those being tested by the actuary. The actuary should take into account the types and associated risks of the **assets** and **liabilities** in the **asset adequacy analysis**.

3.1.1 Analysis Methods—The actuary should use professional judgment in choosing an appropriate analysis method. The actuary may use a single method of analysis for all reserves and other **liabilities** or a number of different methods of analyses for each of several blocks of business.

The actuary should consider using **cash flow testing** and should refer to ASOP No. 7, *Analysis of Life, Health, or Property/Casualty Insurer Cash Flows*. **Cash flow testing** is generally appropriate where **cash flows** vary under different economic **scenarios**.

The actuary may consider using analysis methods other than **cash flow testing** to evaluate the adequacy of the **assets** to support the reserves and other **liabilities** being tested. The following are examples of other analysis methods:

a. Gross Premium Reserve Test—A **gross premium reserve test** may be appropriate when the testing would emphasize the sensitivity of **cash flows** arising from **liabilities** under **moderately adverse conditions**. For example, this type of method may be appropriate for term insurance backed by noncallable bonds.

b. Demonstration of Conservatism—A demonstration of conservatism may be appropriate when the degree of conservatism in the reserves and other **liabilities** is so great that the **cash flows** are covered under **moderately adverse conditions**. For example, this type of method may be appropriate for a block of accidental death and dismemberment insurance if that block is reserved using conservative interest rates and mortality/morbidity tables.

c. Demonstration of Immaterial Variation—A demonstration that the risks are not subject to material variation may be appropriate when the **cash flow**

risks have been limited by product design and the investment strategy. For example, this type of method may be appropriate for a non-life contingent payout annuity backed by a **cash flow** matched **asset** portfolio.

d. Risk Theory Techniques—Analysis using risk theory techniques may be appropriate when the risks inherent in products with short-duration **liabilities** are supported by short-duration **assets**. Such techniques can be used to measure **cash flows** for risks that are subject to large fluctuations that arise infrequently since the **cash flows** arising from **liabilities** can rarely be matched to the **cash flows** arising from **assets** under **moderately adverse conditions**. For example, this method may be appropriate for risks involving a small number of large individual claims over a short period, such as catastrophe or stop loss coverage.

e. Loss Ratio Methods—Loss ratio methods may be appropriate when the **cash flows** are of short duration. Under these methods, morbidity or mortality costs may be tested under **moderately adverse conditions**. For example, these methods may be appropriate for certain short-term disability coverages.

3.1.2 Assumptions—The actuary should choose assumptions that are appropriate for the analysis.

3.1.2.1 Trends—The actuary should consider reflecting anticipated trends in the assumptions. When determining the level of trend to apply, if any, the actuary should take into account the following:

a. whether different trends should be used for different types of business. For example, mortality improvement may be different between life and annuity products;

b. the source and credibility of the data from which the assumptions are derived (for further guidance, the actuary should refer to ASOP No. 23, *Data Quality*, and ASOP No. 25, *Credibility Procedures*). For example, different trends may be appropriate when using company experience vs. industry studies; and

c. the impact of trends on **cash flows**. For example, the effect of future economic conditions on policyholder elections.

3.1.2.2 Margins—The actuary should consider including margins in assumptions to reflect adverse deviation. When determining the level of assumption margins, if any, the actuary should take into account the following:

a. the level of uncertainty for the assumption, including sparsity of data;

b. the degree of adverse deviation covered by the margin;

c. whether the margins vary over time;

d. whether individual margins or aggregate margins are used in the analysis;

e. the interaction between assumptions, including the overall impact of margins; and

f. the possibility that more than one adverse condition could occur at one time.

3.1.2.3 Discount Rates—When using an analysis method that requires the use of discount rates, the actuary should choose discount rates that are consistent with the yield on **assets** chosen for the analysis, any investment strategy used in the analysis, and the testing horizon used in the analysis.

3.1.2.4 Sensitivity Testing of Assumptions—In setting assumptions and assumption margins, the actuary should consider performing sensitivity testing of how variations in an assumption or combinations of assumptions affect the **asset adequacy analysis** results.

3.1.3 Reinsurance Ceded—The actuary should consider reflecting reinsurance ceded **cash flows** in the **asset adequacy analysis** regardless of whether the analysis is performed for a direct writing company or a reinsurer. In deciding whether and how to reflect the reinsurance ceded **cash flows**, the actuary should solicit information from management regarding the extent of reinsurance, the associated **cash flows**, their collectability, any disputes with reinsurers, and practices regarding provisions for reinsurance ceded. The actuary's consideration of reinsurance ceded does not imply an opinion on the financial condition of any reinsurer.

3.1.4 Aggregation During Testing—When performing an **asset adequacy analysis**, the actuary may aggregate reserves and other **liabilities** for multiple blocks of business if the **assets** or **cash flows** from the blocks are available to support the reserves and other **liabilities** of the aggregated blocks of business. When performing this aggregation, the actuary should not use **assets** or **cash flows** from one block of business to discharge the reserves and other **liabilities** of another block of business if those **assets** or **cash flows** cannot be used for that purpose.

3.1.5 Use of Cash Flows from Other Financial Calculations—If the actuary uses **cash flows** from other financial calculations (for example, principle-based reserve or capital models) in the **asset adequacy analysis**, the actuary should take into account any differences between the **cash flows** in the financial calculations and the **asset adequacy analysis** due to items such as the following:

a. starting **assets**;

b. assumptions, including margins;

c. sensitivities;

d. any interim shortfalls in accumulated **cash flows**;

e. any requirements for the aggregation of results that are specified by applicable law;

f. distribution of surplus; and

g. taxes.

If the actuary uses **cash flows** from other financial calculations, the actuary should confirm that the assumptions underlying these **cash flows** are appropriate for an **asset adequacy analysis** under **moderately adverse conditions**.

3.1.6 Separate Account Assets—When separate account business is included in the analysis, the actuary may include separate account **assets** in excess of separate account reserves and other **liabilities**. This treatment would result in fewer general account **assets** being used in the analysis than if the separate account business had been excluded.

The actuary should determine whether it is appropriate to use **cash flows** from separate account **assets** to support reserves and other **liabilities** that are not associated with the separate account. When making the determination, the actuary should take into account any legal restrictions, such as separate account **assets** that are not chargeable with **liabilities** arising out of any other business under state law.

3.1.7 Management Action—When reflecting in-force management actions in the **asset adequacy analysis**, the actuary should take into account the following:

a. the insurer's capacity and intent to take such actions;

b. the insurer's documented procedures and historical practice;

c. the policy provisions;

d. whether other assumptions, such as policyholder behavior assumptions, are reasonable in light of the actions;

e. whether there are impediments to the implementation timeline, such as the need to obtain regulatory approval or process limitations; and

f. whether the actions are reasonable and comply with applicable law.

The actuary should consider quantifying the impacts of these actions as part of the analysis.

3.1.8 Use of Data or Analyses Predating the Valuation Date—If appropriate, the actuary may use data or analyses predating the valuation date. When using data or analyses prior to the valuation date, the actuary should take into account the reasonableness of such prior period data, studies, analyses, or methods; whether key assumptions are still appropriate; and whether any material events have occurred prior to the valuation date that would invalidate the **asset adequacy analysis** on which the statement of actuarial opinion is based.

Examples of data or analyses an actuary may use include:

a. data taken from a time that predates the valuation date, such as data from September 30 to support a December 31 valuation;

b. an **asset adequacy analysis** performed prior to the valuation date;

c. an analysis performed at the time of policy issue; and

d. prior analysis of a closed block of business.

3.1.9 Testing Horizon—The actuary should perform an **asset adequacy analysis** over a period that extends to a point at which, in the actuary's professional judgment, the use of a longer period would not materially affect the results of the analysis.

3.1.10 Changes in Methods, Models, or Assumptions—If the methods, models, or assumptions differ from those in the prior statement of actuarial opinion, the actuary should consider quantifying the impacts of these changes.

The use of new methods, models, or assumptions for new **liability** segments (for example, a new line of business or product) or new **asset** amounts is not a change within the meaning of this section.

3.1.11 Completeness—When performing the **asset adequacy analysis**, the actuary should take into account anticipated material **cash flows** such as renewal premiums, guaranteed and nonguaranteed benefits and charges, expenses, and taxes. In determining the **assets** supporting the tested reserves and other **liabilities**, the actuary should take into account any **asset** segmentation system used by the company.

The actuary should confirm that the total amount of any reserves and other **liabilities** reported as “not analyzed” is immaterial.

3.1.12 Reliance on Others for Data, Projections, and Supporting Analysis—The actuary may rely on data, projections, and supporting analysis supplied by others. When practicable, the actuary should review the data, projections, and supporting analysis for reasonableness and consistency. For further guidance, the actuary should refer to ASOP No. 23, ASOP No. 41, *Actuarial Communications*, and ASOP No. 56, *Modeling*. The actuary should disclose the extent of any such reliance.

3.1.13 Subsequent Events—The actuary should make a reasonable effort to be informed about **subsequent events**.

3.2 Forming an Opinion with Respect to Asset Adequacy Analysis—When forming an opinion with respect to **asset adequacy analysis**, the actuary should follow the guidance below.

3.2.1 Reasonableness of Results—The actuary should review the modeled future economic and experience conditions and test results for reasonableness.

3.2.2 Adequacy of Reserves and Other Liabilities—The actuary should determine whether the reserves and other **liabilities** being tested are adequate under **moderately adverse conditions**, in light of the **assets** supporting such reserves and other **liabilities**. The actuary should recognize that holding reserves or other **liabilities** so great as to withstand any conceivable circumstance, no matter how adverse, may imply an excessive level of reserves or other **liabilities**.

3.2.3 Analysis of Scenario Results—If the supporting **assets** are insufficient to meet the reserves and other **liabilities** under a **scenario**, the actuary should consider whether further analysis is required. However, this situation does not necessarily mandate additional reserves or other **liabilities**. Further analysis may indicate that current reserves and other **liabilities** are adequate. For example, if a large number of **scenarios** were run, the failure of a small percentage of them may not indicate the need for additional reserves or other **liabilities**.

3.2.4 Aggregation of Results—If business segments are modeled separately, the actuary may consider offsetting deficiencies in one business segment with sufficiencies in another business segment for the purposes of reporting and documenting the results of testing. When considering aggregation of results to offset deficiencies, the actuary should take into account the type and timing of **cash flows**, the related **cash flow risks**, and the comparability of elements of the analysis such as analysis methods, **scenarios**, discount rates, and sensitivity of assumptions.

3.2.5 Results from Prior Years—The actuary should consider analyzing the results over time and reconciling the results from prior years.

3.2.6 Opinions of Other Actuaries—When more than one actuary contributes to the **asset adequacy analysis**, the opining actuary should form an overall opinion without claiming reliance on the opinions of other actuaries.

3.2.7 Deficiencies—The actuary should be aware of any deficiencies or limitations in the data, analyses, assumptions, or related information used in the **asset adequacy analysis**.

3.3 Statement of Actuarial Opinion Based on Asset Adequacy Analysis—The actuary should follow the form, content, and recommended language of the statement of actuarial opinion, as specified by applicable law. The actuary should identify the intended purpose of the statement of actuarial opinion. The actuary should include a statement on the adequacy of reserves and other **liabilities** based on an **asset adequacy analysis**, the details of which are contained in the supporting memorandum.

3.4 Documentation—The actuary should prepare and retain documentation to support compliance with the requirements of section 3 and the disclosure requirements of section 4. The actuary should prepare such documentation in a form such that another actuary qualified in the same practice area could assess the reasonableness of the actuary's work. The degree of such documentation should be based on the professional judgment of the actuary and may vary with the complexity and purpose of the actuarial services. In addition, the actuary should refer to ASOP No. 41 for guidance related to the retention of file material other than that which is to be disclosed under section 4.

Section 4. Communications and Disclosures

4.1 Required Disclosures in an Actuarial Report—When issuing an actuarial report to which this standard applies, including statements of actuarial opinion, regulatory asset adequacy issues summaries (RAAISs), and supporting memoranda, the actuary should refer to ASOP Nos. 7, 11, 23, 25, 28, 41, and 56, as applicable. In addition, the actuary should disclose the following, whether or not required by applicable law:

a. the intended purpose of the statement of actuarial opinion and a statement on the adequacy of reserves and other **liabilities** based on an **asset adequacy analysis** (see section 3.3);

b. whether additional reserves have been established due to the **asset adequacy analysis** (see section 3.1);

c. the **assets** chosen, the methodology used for their selection, and their appropriateness for the analysis method (see section 3.1);

d. the **asset adequacy analysis** methods chosen, and the information and analysis used to support the determination that the method is appropriate for the reserves and other **liabilities** being tested (see section 3.1.1);

e. the material risks analyzed, any sensitivity tests performed on those risks, and the results of those tests, when relevant (see sections 3.1 and 3.1.2.4);

f. the assumptions chosen and any trends reflected in the assumptions (see sections 3.1 and 3.1.2);

g. the margins chosen, even if the actuary concludes that a margin is not necessary (see section 3.1.2.2);

h. any discount rates used (section 3.1.2.3);

i. whether and how reinsurance ceded **cash flows** were reflected in the **asset adequacy analysis** (see section 3.1.3);

j. whether any aggregation was done, either during testing or during analysis of results (see sections 3.1.4 and 3.2.4);

k. the use of **cash flows** from other financial calculations in the **asset adequacy analysis** (see section 3.1.5);

l. the use of **assets**, reserves and other **liabilities**, and **cash flows** from the separate account in the **asset adequacy analysis** (see section 3.1.6);

m. any management actions reflected in the **asset adequacy analysis** (see section 3.1.7);

n. the use of any prior period data, studies, financial analyses, and methods; whether such use is still appropriate; and whether any material events have occurred prior to the valuation date that would invalidate the **asset adequacy analysis** on which the statement of actuarial opinion is based (see section 3.1.8);

o. the testing horizon used in the **asset adequacy analysis** (see section 3.1.9);

p. any material changes in the methods, models, or assumptions from those used in the prior statement of actuarial opinion or if the models, assumptions, or methods used in the prior statement of actuarial opinion are unknown (see section 3.1.10);

q. the basis of any judgment that the total amount of any reserves and other **liabilities** reported as “not analyzed” is immaterial (see section 3.1.11);

r. the extent of any reliance on the data, projections, or supporting analysis of others (see section 3.1.12);

s. any **subsequent events** of which the actuary is aware (see section 3.1.13);

t. the criteria used to form an opinion about the adequacy of reserves or other **liabilities** (see section 3.2.2); and

u. any deficiencies or limitations in the data, analyses, assumptions, or related information used in the **asset adequacy analysis** (see section 3.2.7).

4.2 Additional Disclosures in an Actuarial Report—The actuary should also include disclosures in accordance with ASOP No. 41 in an actuarial report for the following circumstances:

a. if any material assumption or method was prescribed by applicable law;

b. 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. if in the actuary’s professional judgment, the actuary has deviated materially from the guidance of this ASOP.

Appendix 1

Background and Current Practices

Note: This appendix is provided for informational purposes and is not part of the standard of practice.

Background

In 1975, the National Association of Insurance Commissioners (NAIC) began requiring that a statement of actuarial opinion on reserves and related actuarial items be included in the annual statement filed by life and health insurance companies. In response to this requirement, the American Academy of Actuaries promulgated Financial Reporting Recommendation No. 7, *Statement of Actuarial Opinion for Life Insurance Company Statutory Annual Statements,* setting forth the actuary's professional responsibilities in providing such an opinion.

The form and content of this actuarial opinion, as specified in the instructions to the annual statement, dealt specifically with reserves and did not explicitly address the adequacy of the assets supporting these reserves and other liabilities to meet the obligations of the company. Although not explicitly required to do so by the opinion or by existing professional standards, some actuaries began to analyze the adequacy of assets in forming their opinions. In addition, when the state of New York adopted the 1980 amendments to the *Standard Valuation Law*, it established an optional valuation basis for annuities, permitting lower reserves provided that an asset adequacy analysis supported the actuarial opinion with respect to such reserves.

The type of asset adequacy analysis most widely used by actuaries is multi-scenario cash flow testing. To guide actuaries choosing to use this technique, the Actuarial Standards Board (ASB) adopted ASOP No. 7, then titled *Performing Cash Flow Testing for Insurers,* in October 1988. In addition, in July 1990, the ASB adopted ASOP No. 14, *When to Do Cash Flow Testing for Life and Health Insurance Companies,* to provide guidance in determining whether to do cash flow testing in forming a professional opinion or recommendation.

In December 1990, the NAIC amended the *Standard Valuation Law*, and, in June 1991, the NAIC adopted the *Actuarial Opinion and Memorandum Regulation (AOMR)*. These actions had the effect of moving the requirement for the statement of actuarial opinion from the annual statement instructions into the model law itself and provided detailed instructions for the form and content of the opinion and the newly required supporting memorandum. The most significant changes made by the NAIC in the 1991 *AOMR* were that companies were required to name an appointed actuary, and, for companies subject to section 8 of the *AOMR*, statements of actuarial opinion on reserve and other liability adequacy were required to be based on an asset adequacy analysis described in the supporting memorandum. The asset adequacy analysis required by the regulation must conform to the standards of practice promulgated by the ASB.

For companies subject to section 7, the 1991 *AOMR* required an actuarial opinion that the reserves and related actuarial items have been calculated in accordance with the *Standard*

Valuation Law and supporting regulations. Section 7 of the 1991 AOMR did not require an opinion on reserve adequacy.

The ASB adopted Actuarial Compliance Guideline (ACG) No. 4, *Statutory Statements of Opinion Not Including an Asset Adequacy Analysis by Appointed Actuaries for Life and Health Insurers*, in 1993 to provide guidance for section 7 opinions.

In 1993, the ASB also adopted ASOP No. 22, *Statutory Statements of Opinion Based on Asset Adequacy Analysis by Appointed Actuaries for Life or Health Insurers*, which replaced Financial Reporting Recommendation Nos. 7 and 11 as guidance for section 8 opinions.

In the late 1990s and early 2000s, the ASB reviewed all standards of practice related to cash flow testing. Portions of ASOP No. 14 were incorporated into ASOP Nos. 7 and 22. In 2001, the ASB adopted the revised ASOP Nos. 7 and 22 and repealed ASOP No. 14.

Starting in 2001, the model *AOMR* adopted by the NAIC required all actuarial opinions to be based on asset adequacy analysis.

In addition to the *AOMR*, actuarial opinions are required under the NAIC's *Synthetic Guaranteed Investment Contracts Model Regulation* and under the NAIC's *Separate Accounts Funding Guaranteed Minimum Benefits under Group Contracts Model Regulation*.

In 2012, the NAIC initially adopted the *Valuation Manual*, which sets forth the minimum reserve and related requirements for jurisdictions where the *Standard Valuation Law*, as amended by the NAIC in 2009, has been enacted. The *Valuation Manual* took effect on January 1, 2017, pursuant to section 11 of the *Standard Valuation Law*. Requirements for the annual actuarial opinion and memorandum pursuant to section 3 of the *Standard Valuation Law* are provided in "VM-30: Actuarial Opinion and Memorandum Requirements." In December 2017, the NAIC adopted Actuarial Guideline LI, *The Application of Asset Adequacy Testing to Long-Term Care Insurance Reserves*, which provides uniform guidance and clarification of requirements for asset adequacy testing for long-term care insurance.

In response to these NAIC activities, the ASB decided to revise this ASOP.

Current Practices

Statements of actuarial opinion on reserves and related items have been provided since 1975, and practice regarding the basic elements of the opinion is well established. With respect to opinions based on asset adequacy analysis, current practice continues to evolve.

Actuaries who perform asset adequacy analysis use professional judgment in choosing the appropriate methods, testing periods, modeling techniques, levels of aggregation, etc. The actuary forms an opinion based on the results of the asset adequacy analysis results and any additional analyses needed to render that opinion. The actuarial memorandum discloses the details of the asset adequacy analysis and the basis for the actuary's opinion. Additional documentation may be prepared by the actuary as appropriate to support the actuarial memorandum.

ASOP No. 22—Doc. No. 203

Appendix 2

Comments on the Second Exposure Draft and Responses

The second exposure draft of this ASOP, *Statements of Actuarial Opinion Based on Asset Adequacy Analysis for Life Insurance, Annuity, or Health Insurance Reserves and Other Liabilities*, was approved in March 2020 with a comment deadline of November 30, 2020. Eight comment letters were received, some of which were submitted on behalf of multiple commentators, such as by firms or committees. For purposes of this appendix, the term "commentator" may refer to more than one person associated with a particular comment letter. The ASOP No. 22 Task Force and Life Committee carefully considered all comments received, and the ASB reviewed (and modified, where appropriate) the changes proposed.

Summarized below are the significant issues and questions contained in the comment letters and responses. Minor wording or punctuation changes that were suggested but not significant are not reflected in the appendix, although they may have been adopted.

The term "reviewers" in appendix 2 includes the ASOP No. 22 Task Force, the ASB Life Committee, and the ASB. Also, unless otherwise noted, the section numbers and titles used in appendix 2 refer to those in the second exposure draft.

GENERAL COMMENTS	
Comment	One commentator suggested replacing the phrase "reserves and other liabilities" with "liabilities."
Response	The reviewers disagree and made no change.
SECTION 2. DEFINITIONS	
Section 2.1, Asset	
Comment	One commentator believed the definition of assets was vague and proposed rewording the definition of assets to align with the definition under statutory accounting principles.
Response	The reviewers disagree and made no change.
Section 2.3, Cash Flow	
Comment	One commentator said "or other assets" was unclear and suggested clarifying the phrase.
Response	The reviewers agree and clarified the language.
Section 2.4, Cash Flow Risk	
Comment	One reviewer suggested replacing the phrase "expectations or assumptions" with either "expectations" or "assumptions" because they have the same meaning.
Response	The reviewers disagree and made no change.
Section 2.5, Cash Flow Testing	
Comment	One commentator suggested that the use of the term "cash flow risk" should be singular throughout the ASOP.
Response	The reviewers disagree and made no change.

Section 2.10, Scenario	
Comment Response	One commentator suggested replacing "economic and other assumptions" with "assumptions." The reviewers disagree and made no change.
Section 2.11, Subsequent Events	
Comment Response	One commentator suggested removing the word "material" from the definition of subsequent events. The reviewers disagree and made no change in response to this comment.
Comment Response	Two commentators suggested using the date the statement of actuarial opinion is signed rather than the date the statement of actuarial opinion is filed. The reviewers agree and made the change.
SECTION 3. ANALYSIS OF ISSUES AND RECOMMENDED PRACTICES	
Section 3.1, Asset Adequacy Analysis	
Comment Response	One commentator suggested adding a list of specific asset risks to be considered. The reviewers believe the guidance is appropriate and therefore made no change in response to this comment.
Comment Response	One commentator suggested clarifying that asset adequacy reserves established in prior years should be excluded when performing asset adequacy analysis. The reviewers believe the guidance is appropriate and therefore made no change in response to this comment.
Comment Response	One commentator suggested modifying the language to remove the implication that asset adequacy analysis is a guarantee. The reviewers agree and modified the language.
Section 3.1.1, Analysis Methods	
Comment Response	One commentator proposed additional disclosure when liability cash flows have a material dependency on the asset cash flows and cash flow testing is not used. The reviewers believe the guidance covers these issues at the appropriate level of detail and made no change in response to this comment.
Comment Response	Several commentators suggested wording to clarify when cash flow testing would be appropriate. The reviewers agree and clarified the language.
Comment Response	One commentator suggested specifying that the methods given in the examples should only be considered when cash flow testing is not warranted, and not as alternatives in general. The reviewers believe the guidance is appropriate and note that section 3.1.1 states "The actuary should use professional judgment in choosing an appropriate analysis method." The reviewers made no change in response to this comment.
Section 3.1.1(a), Gross Premium Reserve Test	
Comment Response	One commentator suggested additional language to clarify when GPV would not be appropriate. The reviewers believe the guidance is appropriate and made no change in response to this comment.

Section 3.1.1(c), Demonstration of Immaterial Variation	
Comment	Two commentators suggested additional language for the example.
Response	The reviewers agree and updated the language.
Section 3.1.1(e), Loss Ratio Methods	
Comment	One commentator suggested adding a definition for “Loss Ratio Method.”
Response	The reviewers disagree and made no change in response to this comment.
Section 3.1.2.1, Trends	
Comment	One commentator suggested adding a reference to ASOP No. 25, *Credibility Procedures*, and adding more detail regarding the impact of the source and credibility of data when setting assumption trends.
Response	The reviewers added references to ASOP No. 23, *Data Quality*, and ASOP No. 25.
Section 3.1.2.1(c)	
Comment	One commentator noted that the consideration of trends should not be dependent on the results of the analysis.
Response	The reviewers agree and modified the language.
Section 3.1.2.2, Margins	
Comment	One commentator suggested that the actuary should document the rationale for excluding margin in an assumption.
Response	The reviewers note that this is covered in sections 3.4 and 4.1(g) and made no change.
Comment	One commentator suggested adding a provision for the actuary to consider the overall impact of margins included in the analysis when determining the level of assumption margin.
Response	The reviewers agree and modified the language accordingly.
Section 3.1.2.2(g)	
Comment	One commentator suggested replacing “the impact of any prescribed margin on the overall analysis” with “whether the margin is prescribed.”
Response	The reviewers removed the reference to prescribed margins in response to another comment.
Section 3.1.2.3, Discount Rates	
Comment	Two commentators suggested that the discount rate should also reflect reinvestment rates.
Response	The reviewers agree and modified the language accordingly.
Comment	One commentator suggested modifying the language so it applies to all analysis methods.
Response	The reviewers agree and modified the language accordingly.
Comment	One commentator suggested adding detailed guidance for choosing a discount rate when cash-flow testing is used.
Response	The reviewers disagree and made no change in response to this comment.
Section 3.1.3, Reinsurance Ceded	

Comment Response	One commentator suggested adding more detail for direct written business. The reviewers disagree and made no change.
Section 3.1.4, Aggregation During Testing	
Comment Response	One commentator suggested adding language related to AG 51 limitations on aggregation. The reviewers believe this is already addressed in section 3.2.4 and ASOP No. 1, *Introductory Actuarial Standard of Practice,* and made no change.
Section 3.1.5, Use of Cash Flows from Other Financial Calculations	
Comment Response	One commentator questioned whether cash flows from one scenario-based calculation would be used in another scenario-based calculation. The reviewers believe the guidance is appropriate and made no change in response to this comment.
Comment Response	One commentator suggested deleting “under moderately adverse conditions” because the phrase is not necessary. The reviewers disagree and made no change in response to this comment.
Section 3.1.6, Separate Account Assets	
Comment Response	One commentator suggested providing a definition of “insulated.” The reviewers clarified the language.
Section 3.1.7, Management Action	
Comment Response	One commentator suggested replacing the word “changes” with “actions” in the last sentence. The reviewers agree and made the change.
Comment Response	Two commentators suggested adding a consideration reflecting obstacles to the implementation of management actions, such as regulatory approval. The reviewers agree and added new section 3.1.7(e).
Comment Response	One commentator suggested changing the wording from “consider quantifying” to “quantify” the impacts of these changes as part of the analysis. The reviewers disagree and made no change in response to this comment.
Comment Response	Two commentators observed that there was an inconsistency between 3.1.7 and 4.1(l). The reviewers agree and made a change to 4.1(l) (now section 4.1[m]).
Section 3.1.8, Use of Data or Analyses Predating the Valuation Date	
Comment Response	One commentator suggested replacing “opinion” with “statement of actuarial opinion” in sections 3.1.8, 3.1.10, 4.1(m), and 4.1(o) (now sections 4.1[n] and 4.1[o], respectively). The reviewers agree and made the changes.
Section 3.1.10, Changes in Methods, Models, or Assumptions	
Comment Response	Two commentators suggested removing “Similarly, when the analysis is based on the periodic updating of experience data, factors, or weights, such periodic updating is not a change within the meaning of this section.” The reviewers agree and removed the language.

Section 3.1.11, Completeness	
Comment Response	One commentator suggested replacing “not analyzed” with “that has not been subject to asset adequacy analysis.” The reviewers disagree and made no change in response to this comment.
Comment Response	One commentator suggested adding more detail and examples to describe anticipated material cash flows. The reviewers believe the guidance covers these issues at the appropriate level of detail and therefore made no change in response to this comment.
Comment Response	One commentator suggested clarification regarding how the ASOP reconciles with language in the Actuarial Opinion and Memorandum Regulation (Section 5.E.1), which requires that “the statement of actuarial opinion shall apply to all in force business on the statement date….” The reviewers believe that the interpretation of regulations is beyond the scope of the standard and therefore made no change in response to this comment.
Section 3.1.13, Subsequent Events	
Comment Response	One commentator suggested that additional guidance was needed related to the disclosure of subsequent events. The reviewers believe that this issue is addressed in section 4.1(r) (now section 4.1[s]) of this ASOP, as well as in ASOP No. 41, *Actuarial Communications*, and therefore made no change.
Section 3.2.6, Opinions of Other Actuaries	
Comment Response	One commentator suggested adding the word “only” to claiming reliance on the opinions of other actuaries. The reviewers disagree and made no change.
Section 3.4, Documentation	
Comment Response	One commentator suggested deleting “or could assume the assignment if necessary.” The reviewers agree and made the change.
SECTION 4. COMMUNICATIONS AND DISCLOSURES	
4.1, Required Disclosures in an Actuarial Report	
Comment Response	One commentator noted that the disclosures in section 4.1 do not need to be repeated in each document. The reviewers agree and clarified the language.

ACTUARIAL STANDARDS BOARD

Actuarial Standard
of Practice
No. 23

Revised Edition

Data Quality

Developed by the
Data Quality Task Force of the
General Committee of the
Actuarial Standards Board

Adopted by the
Actuarial Standards Board
December 2016

Doc. No. 185

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

ASOP No. 23—Doc. No. 185

December 2016

TO: Members of Actuarial Organizations Governed by the Standards of Practice of the Actuarial Standards Board and Other Persons Interested in Data Quality

FROM: Actuarial Standards Board (ASB)

SUBJ: Actuarial Standard of Practice (ASOP) No. 23

This document contains the final version of a revision of ASOP No. 23, *Data Quality*.

Background

The ASB originally adopted ASOP No. 23, *Data Quality*, in 1993. That ASOP was prepared by the Data Quality Task Force of the Specialty Committee of the ASB. The ASB revised ASOP No. 23 in 2004 to be consistent with the then-current ASOP format, to reflect then-current, generally accepted practice with respect to data quality, and to provide guidance concerning other information relevant to the use of data. ASOP No. 23 was further updated for deviation language, effective May 1, 2011.

In 2014, the ASB concluded that this ASOP should be revised to update language to keep pace with practice changes (for example, increasing use of non-traditional data sources for predictive models, and legislatively mandated data submissions). This revision is the result of that review.

Exposure Draft

The exposure draft was released in November 2015 with a comment deadline of February 29, 2016. Twenty-two comment letters were received. The task force considered all comments received and made appropriate changes where needed. For a summary of the substantive issues contained in the comment letters on the exposure draft and the responses, please see appendix 2.

Key Changes

No significant changes have been made, but the wording has been clarified in a number of sections, including the following:

1. Section 1.2 (Scope) has been modified to clarify that if an actuary prepares data, or is responsible for the preparation of data, that the actuary believes will be used by other actuaries in providing actuarial services, the actuary should apply the relevant portions of this standard as though the actuary were planning to use the data, taking into account the preparing actuary's understanding of the assignment for which the data will be used.

2. The defined term "comprehensive" has been replaced with the defined term "sufficient" (with the same definition), because that term fits more naturally with the definition.

3. The definition of "data" has been changed to clarify that it includes information derived mathematically from data.

4. Section 3.2(b)(3) has been revised to clarify that, in selecting data, the actuary should consider whether the data are reasonable given external data and information only to the extent the external data and information are relevant, readily available, and known to the actuary.

5. Section 3.3 has been modified to clarify that if an actuary performs a review of data, the actuary should consider comparing the current data to data used in the prior analysis, if similar work has been previously performed for the same or recent periods, but only if such consistency can reasonably be expected.

6. Section 3.4(c) has been modified to indicate that, rather than adjusting data to compensate for data deficiencies, an actuary may adjust the results of the analysis (for example, by increasing the range of reasonable estimates).

7. Section 3.4(e) has been modified to clarify that an actuary may, with the consent of the principal, complete any parts of an assignment for which the actuary determines the data are suitable, even though the data may be inadequate to complete the full assignment.

8. Section 3.7 has been added to remind actuaries that confidential information should be handled consistent with Precept 9 of the *Code of Professional Conduct.*

The General Committee would like to thank former committee members Jeremy J. Brown, Charles F. Cook, John C. Lloyd, Cande J. Olsen, and Lance J. Weiss for their contribution to the development of this ASOP.

The ASB voted in December 2016 to adopt this standard.

The ASB establishes and improves standards of actuarial practice. These ASOPs identify what the actuary should consider, document, and disclose when performing an actuarial assignment. The ASB's goal is to set standards for appropriate practice for the U.S.

ASOP No. 23—Doc. No. 185

ACTUARIAL STANDARD OF PRACTICE NO. 23

DATA QUALITY

STANDARD OF PRACTICE

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

1.1 Purpose—The purpose of this actuarial standard of practice (ASOP) is to provide guidance to the actuary when performing actuarial services involving **data.**

1.2 Scope—This ASOP provides guidance to actuaries when selecting **data**, performing a **review** of **data**, using **data**, or relying on **data** supplied by others, in performing actuarial services. The ASOP also applies to actuaries who are selecting or preparing **data,** or are responsible for the selection or preparation of **data,** that the actuary believes will be used by other actuaries in performing actuarial services, or when making appropriate disclosures with regard to **data** quality. Other actuarial standards of practice may contain additional considerations related to **data** quality that are applicable to particular areas of practice or types of actuarial assignment.

If an actuary prepares **data**, or is responsible for the preparation of **data**, to be used by other actuaries in performing actuarial services, the actuary should apply the relevant portions of this standard as though the actuary were planning to use the **data**, taking into account the preparing actuary's understanding of the assignment for which the **data** will be used.

This standard does not apply to the generation of a wholly hypothetical **data** set.

This standard does not require the actuary to perform an **audit** of the **data**.

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 for which **data** were provided to or developed by the actuary on or after April 30, 2017.

Section 2. Definitions

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

2.1 Appropriate Data—**Data** suitable for the intended purpose of an analysis and relevant to the system or process being analyzed.

2.2 Audit—A formal and systematic examination of **data** for the purpose of testing its accuracy and completeness.

2.3 Data—Numerical, census, or classification information, or information derived mathematically from such items, but not general or qualitative information. Assumptions are not **data**, but **data** are commonly used in the development of actuarial assumptions.

2.4 Data Element—An item of information, such as date of birth or risk classification.

2.5 Review—An examination of the obvious characteristics of **data** to determine if such **data** appear reasonable and consistent for purposes of the assignment. A **review** is not as detailed as an **audit** of **data**.

2.6 Sufficient—Containing enough **data elements** or records for the analysis.

Section 3. Analysis of Issues and Recommended Practices

3.1 Overview—**Appropriate data** that are accurate and complete may not be available. The actuary should use available **data** that, in the actuary’s professional judgment, allow the actuary to perform the desired analysis. However, if significant **data** limitations are known to the actuary, the actuary should disclose those limitations and their implications in accordance with section 4.1(b). The following sections discuss such considerations in more detail.

3.2 Selection of Data—In undertaking an analysis, the actuary should determine what **data** to use. The actuary should take into account the scope of the assignment and the intended use of the analysis being performed to determine the nature of the **data** needed and the number of alternative **data** sets or **data** sources, if any, to be considered. The actuary should do the following:

a. consider the **data elements** that are desired and possible alternative **data elements**; and

b. select the **data** for the analysis with consideration of the following:

   1. whether the **data** constitute **appropriate data**, including whether the **data** are sufficiently current;

   2. whether the **data** are reasonable with particular attention to internal consistency;

   3. whether the **data** are reasonable given relevant external information that is readily available and known to the actuary;

   4. the degree to which the **data** are **sufficient**;

   5. any known significant limitations of the **data**;

   6. the availability of additional or alternative **data** and the benefit to be gained from such additional or alternative **data**, balanced against how practical it is to collect and compile such additional or alternative **data**; and

   7. sampling methods, if used to collect the **data**.

3.3 Review of Data—A **review** of **data** may not always reveal defects. Nevertheless, the actuary should perform a **review**, unless, in the actuary's professional judgment, such **review** is not necessary or not practical. In exercising such professional judgment, the actuary should take into account the purpose and nature of the assignment, any relevant constraints, and the extent of any known checking, verification, or **audit** of the **data** that has already been performed.

If, in the actuary's professional judgment, it is not appropriate to perform a **review** of the **data**, the actuary should disclose that the actuary has not performed such a **review**, the reason the actuary has not performed such a **review**, and any resulting limitations on the use of the actuarial work product, in accordance with section 4.1(c).

If the actuary performs a **review**, the actuary should do the following:

a. make a reasonable effort to determine the definition of each **data element** used in the analysis; and

b. make a reasonable effort to identify **data** values that are questionable or relationships that are significantly inconsistent. If the actuary believes questionable or inconsistent **data** values could have a significant effect on the analysis, the actuary should consider taking further steps, when practical, to improve the quality of the **data**. The actuary should disclose in summary form any unresolved questionable **data** values that the actuary believes could have a significant effect on the analysis, in accordance with section 4.1(d). The actuary also should disclose any significant steps the actuary has taken to improve the **data**, in accordance with section 4.1(e).

If the actuary performs a **review**, the actuary should also consider comparing current **data** with the **data** used in the prior analysis for consistency, if similar work has been previously performed for the same or recent periods and if such consistency can reasonably be expected. If the actuary does not have the prior **data**, the actuary should consider requesting the prior **data**.

3.4 Use of Data—Because **appropriate data** that are accurate and complete may not be available, the actuary should make a professional judgment about which of the following are applicable:

a. the **data** are of acceptable quality to perform the analysis;

b. the **data** require enhancement before the analysis can be performed, and it is practical to obtain additional or corrected **data** that will allow the analysis to be performed;

c. judgmental adjustments or assumptions can be applied to the **data** that allow the actuary to perform the analysis. Any judgmental adjustments to **data** or assumptions should be disclosed in accordance with section 4.1(f). If the actuary judges that the use of the **data**, even with adjustments and assumptions applied, may cause the results to be highly uncertain or contain a significant bias, the actuary may choose to complete the assignment but should disclose the potential existence of the uncertainty or bias, and, if reasonably determinable, the nature and potential magnitude of such uncertainty or bias, in accordance with section 4.1(g). Alternatively, the actuary may compensate for the **data** deficiencies by adjusting the results, such as by increasing the range of reasonable estimates, and disclose the adjustments, in accordance with section 4.1(f);

d. if the actuary believes that the **data** are likely to contain significant defects, the actuary should determine, if practical, the nature and extent of any checking, verification, or **audit** of the **data** that has been performed. Then, if, in the actuary's professional judgment, a more extensive **review** is needed, the actuary should arrange for such a **review** prior to completing the assignment; or

e. if, in the actuary's professional judgment, the **data** are so inadequate that the **data** cannot be used to satisfy the purpose of the assignment, then the actuary should 1) obtain different **data**, 2) complete, with the consent of the principal, any parts of the assignment for which the actuary determines the **data** are suitable, or 3) decline to complete the assignment. However, if the actuary is required by a regulator or other governmental authority to use **data** that the actuary considers unsuitable for use in the actuary's analysis, the actuary may use the **data** subject to the disclosure requirements of section 4.

3.5 Reliance on Data Supplied by Others—In most situations, the **data** are provided to the actuary by others. The accuracy and completeness of **data** supplied by others are the responsibility of those who supply the **data**. The actuary may rely on **data** supplied by others, subject to the guidance in sections 3.3 and 3.4. The actuary should disclose reliance on **data** supplied by others in an appropriate actuarial communication, in accordance with section 4.1(h).

3.6 Reliance on Other Information Relevant to the Use of Data—In many situations, the actuary is provided with other information relevant to the appropriate use of **data**, such as contract provisions, plan documents, and reinsurance treaties. The validity and completeness of such information are the responsibility of those who supply such information. The actuary may rely on such information supplied by others, unless it is or becomes apparent to the actuary in the course of the assignment that the information is unsuitable for use in the actuary's analysis. The actuary should disclose reliance on such information supplied by others in an appropriate actuarial communication, in accordance with section 4.1(h).

If the actuary believes the information is unsuitable, or inconsistencies between the information and the **data** suggest that the information may be unsuitable, the actuary should make a professional judgment about whether to use the information. The actuary should consider disclosing when such relevant information that has been provided is not used.

If the information suggests that the **data** may be unsuitable, the actuary should make a professional judgment about whether to use the **data** based on the considerations described in sections 3.4 and 3.5.

3.7 Confidentiality—The actuary should be aware that **data** may contain confidential information. Such confidential information should be handled consistent with Precept 9 of the *Code of Professional Conduct*.

3.8 Limitation of the Actuary's Responsibility—The actuary is not required to do any of the following:

a. determine whether **data** or other information supplied by others are falsified or intentionally misleading;

b. compile additional **data** solely for the purpose of searching for questionable or inconsistent **data**; or

c. perform an **audit** of the **data**.

Section 4. Communications and Disclosures

4.1 Communication and Disclosure—Any actuarial communication prepared to communicate the results of work subject to this standard should comply with the requirements of ASOP No. 41, *Actuarial Communications*. An actuarial communication can comply with some or all of the specific requirements of this section by making reference to information contained in other actuarial communications available to the intended users (as defined in ASOP No. 41), such as an annual actuarial valuation report. Such communication should contain the following disclosures when relevant and material:

a. the source(s) of the **data**;

b. any limitations on the use of the actuarial work product due to uncertainty about the quality of the **data** or other information relevant to the use of the **data**, as discussed in section 3.1;

c. whether the actuary performed a **review** of the **data** and, if not, the reason for not reviewing the **data** and any resulting limitations on the use of the actuarial work product, as discussed in section 3.3;

d. in summary form, unresolved concerns the actuary may have about questionable **data** values that are relevant to the use of the **data** and could have a significant effect on the actuarial work product, as discussed in section 3.3(b);

e. in summary form, discussions of any significant steps the actuary has taken to improve the **data** due to identifying questionable **data** values or relationships, as discussed in section 3.3(b);

f. in summary form, significant judgmental adjustments or assumptions that the actuary applied to the **data** or to the results, or are known by the actuary to have been applied to the **data**, to allow the actuary to perform the analysis, as discussed in section 3.4(c);

g. the existence of results that are highly uncertain or have a potentially significant bias of which the actuary is aware due to the quality of the **data** or other information relevant to the use of the **data**, and the nature and potential magnitude of such uncertainty or bias, if they can be reasonably determined, as discussed in section 3.4(c);

h. the extent of the actuary's reliance on **data** and other information relevant to the use of the **data** supplied by others, as discussed in sections 3.5 and 3.6;

i. 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);

j. 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

k. 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.

Appendix 1

Background and Current Practices

Note: The following appendix is provided for informational purposes, but is not part of the standard of practice.

Background

An actuarial analysis is based upon an analysis of data, along with practical knowledge of the area of practice and training in actuarial theory, which together enable the actuary to perform and interpret the results of calculations. Throughout the analytic process, data play an important role. The accuracy and validity of the actuarial analysis are dependent on, among other things, the quality of the data used. Hence, an actuarial standard of practice concerning data quality is appropriate.

Data frequently contain errors, are not complete, and are not precisely appropriate for the intended analysis. Actuaries deal with these limitations, the majority of which are non-critical. However, actuaries are often called upon to perform actuarial services in situations where data limitations may be critical. Actuaries use professional judgment when determining whether and how to refine data or make modifications within the analysis.

Current Practices

Actuaries use informed judgment to determine what kinds of data are appropriate for a particular analysis. It is important that the data used are relevant to the system or process being analyzed.

Data have played an increasingly important role in actuarial practice in recent years. In addition to the traditional uses of data that have been in place for many years, actuaries and their principals have been using broader sources of data more recently to support improved business decisions. This has included more sophisticated data analytics to improve functions such as claims processes, underwriting, pricing, loss control, distribution management, and customer service. In addition, there has been expansion of use of sophisticated models for a wide range of purposes, and those models are heavily reliant on the data inputs. Because of their analytical skills, actuaries have been deeply involved in these advancements, including assessing the quality and sufficiency of data for use in various applications.

Persons or organizations responsible for generating, collecting, or publishing data may apply different standards of quality assurance, ranging from straightforward compilation of figures to extensive verification. Actuaries, in turn, deal with the question of the quality of data underlying their work products in a variety of ways and with varying levels of review or checking.

Actuaries are called upon to provide analyses for a broad range of audiences, from limited distribution within an organization to public exposure.

Important aspects of data use include documentation and disclosure of 1) the sources of data, 2) review of data, 3) significant biases resulting from data, 4) adjustments or corrections made to the data, and 5) the extent of reliance on data supplied by others. Typically, actuaries do not audit data.

Appendix 2

Comments on the Exposure Draft and Responses

The exposure draft of this revision of ASOP No. 23, *Data Quality,* was issued in November 2015 with a comment deadline of February 29, 2016. Twenty-two comment letters were received, some of which were submitted on behalf of multiple commentators, such as by firms or committees. For purposes of this appendix, the term "commentator" may refer to more than one person associated with a particular comment letter. The Task Force carefully considered all comments received, and the General Committee and ASB reviewed (and modified, where appropriate) the proposed changes.

Summarized below are the significant issues and questions contained in the comment letters and the responses to each.

The term "reviewers" includes the Task Force, General Committee, and the ASB. Unless otherwise noted, the section numbers and titles used below refer to those in the exposure draft.

TRANSMITTAL MEMORANDUM	
Question 1: Does this proposed revision provide appropriate guidance for an actuary preparing data for another actuary's use (for example, legislatively-mandated data submissions)?	
Comment	Most commentators who addressed the question felt the proposed revision provided appropriate guidance.
Comment Response	One commentator believed the ASOP should address the duty of care owed and the alignment of data with the data request. The reviewers believe these topics are adequately covered in the *Code of Professional* Conduct, and in sections 1.2 and 3.2 of this ASOP, and made no change.
Comment Response	Several commentators believed the ASOP should clarify whether it applies to an actuary preparing data for use by another actuary working in the same firm. The reviewers note that section 1.2 indicates that the standard applies when an actuary "prepares data or is responsible for the preparation of data to be used by other actuaries in performing actuarial services," and provides no exception for actuaries working within the same firm, and made no change.
Question 2: Does this proposed revision provide appropriate guidance for working with nontraditional data sources (for example, predictive models)?	
Comment	Most commentators who addressed the question felt the proposed revision provided appropriate guidance.
Comment Response	One commentator suggested clarifying the extent to which derived data are included under this ASOP. The reviewers agree that some derived data is subject to this ASOP and clarified the definition of "data."

Question 3: Considering the guidance in section 3.6, which discusses the quality of other information relevant to data, is the title of the standard "Data Quality" appropriate?	
Comment	Most commentators who addressed the question felt that the standard was appropriately titled.
GENERAL COMMENTS	
Comment Response	Several commentators questioned the intent behind the replacement of the word "material" in the existing ASOP with the word "significant" in the revision. Where a change was made from "material" to "significant", the reviewers believe that the use of the word "significant" is appropriate and consistent with its definition in ASOP No. 1, *Introductory Actuarial Standard of Practice*.
SECTION 1. PURPOSE, SCOPE, CROSS REFERENCES, AND EFFECTIVE DATE	
Section 1.1, Purpose	
Comment Response	One commentator suggested that this section be clarified to indicate that it applies to the performance of any of the activities described. The reviewers agree and modified the language.
Comment Response	Several commentators suggested that section 1.1(e) be clarified to apply only to situations in which an actuary is performing an actuarial service by preparing data for use by other actuaries in an actuarial work product. The reviewers disagree with the suggested change. Sections 1.1 and 1.2 have been reorganized and reworded to be clearer, and section 1.2 now provides that "If an actuary prepares data, or is responsible for the preparation of data, to be used by other actuaries in performing actuarial services, the actuary should apply the relevant portions of this standard as though the actuary were planning to use the data, taking into account the preparing actuary's understanding of the assignment for which the data will be used."
Comment Response	One commentator believed items (a)-(e) are not clear and would benefit from additional definitions or examples. Sections 1.1 and 1.2 have been reorganized and reworded to be clearer. The reviewers do not believe examples are needed.
Section 1.2, Scope	
Comment Response	One commentator suggested that the ASOP should apply to actuaries who assume responsibility for preparing data as well as to those who prepare the data. The reviewers agree and modified the language.
Comment Response	One commentator suggested that the term "wholly hypothetical data set" needed to be defined or better described. The reviewers believe the term is clear and made no change.
Comment Response	One commentator suggested deleting the sentence "This standard does not require the actuary to perform an audit of the data" because it is duplicative with section 3.8. The reviewers believe this sentence is helpful in understanding the scope and made no change.

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SECTION 2. DEFINITIONS	
Comment Response	One commentator suggested adding definitions for “reliable data” and “authoritative data,” and retaining the definition of “practical” from the existing ASOP. The reviewers disagree with adding the definitions and note that the term “practical” is defined in ASOP No. 1. Therefore, the reviewers made no change.
Comment Response	One commentator requested that a definition for “information” be added. The reviewers believe the term is used with its general meaning and does not require a definition. Therefore, the reviewers made no change.
Section 2.2, Audit	
Comment Response	Two commentators suggested that the definition specify that an audit of data should only be performed by a professional auditor. The reviewers note that the term “audit” has a specific definition in the ASOP that does not correspond with the term under U.S. GAAP and other accounting standards, and therefore made no change.
Section 2.3, Comprehensive (now section 2.6, Sufficient)	
Comment Response	Two commentators stated that the terms “comprehensive” and “complete” were not sufficiently distinguished from one another. The reviewers agree and changed “comprehensive” to “sufficient.”
Section 2.4, Data (now section 2.3)	
Comment Response	Two commentators felt that “qualitative information” should be included rather than excluded from the definition of “data.” The reviewers disagree and made no change.
Section 2.6, Review (now section 2.5)	
Comment Response	Two commentators suggested that the definition of “review” be expanded to include both formal and informal examinations of data, and that it be clarified that a review is not as detailed as an audit. The reviewers agree and removed the word “informal” from the definition, and added language to indicate that a review is not as detailed as an audit.
Comment Response	One commentator suggested that the meaning of the phrase “obvious characteristics” was not clear. The reviewers disagree and made no change.
SECTION 3. ANALYSIS OF ISSUES AND RECOMMENDED PRACTICES	
Comment Response	One commentator suggested adding a provision mandating compliance with applicable data confidentiality laws and regulations. The reviewers agree and added new section 3.7, Confidentiality, to address this comment.
Section 3.1, Overview	
Comment Response	Two commentators suggested that the standard address availability of data (e.g., proprietary data) in terms of practicality and the reasonableness of the effort required to obtain it. The reviewers clarified the language in section 3.2(b)(6).

Section 3.2, Selection of Data	
Comment Response	One commentator requested that the phrase “sampling methods” be defined. The reviewers believe the meaning of the term is clear and made no change.
Comment Response	One commentator suggested that the word “desired” be replaced with “necessary for the scope of the assignment” because the commentator felt that “desired” seemed too vague and implied subjective preference rather than professional judgement. Another commentator suggested replacing “desired” with “needed” to distinguish between “the most desirable elements” and others that might be suitable. The reviewers believe that identifying data elements as “necessary” or “needed” for the assignment would be inconsistent with the guidance in section 3.2(a) that the actuary should consider “possible alternative data elements”, and made no change.
Comment Response	One commentator suggested replacing the first occurrence of “should consider” with “should determine” and the second occurrence with “should take into account.” The reviewers agree with the suggested wording changes and made the changes.
Comment Response	One commentator suggested that the meaning of “external consistency” in section 3.2(b) be clarified. The reviewers agree, removed the reference to “external consistency” from section 3.2(b), and added section 3.2(b)(3) to clarify.
Section 3.3, Review of Data	
Comment Response	One commentator suggested replacing the word “reason” with “justification” because the commentator believed that the word “justification” indicated a higher level of professionalism was involved in providing a justification. The reviewers believe that the word “reason” appropriately describes the intended disclosure and therefore made no change.
Comment Response	One commentator suggested that the standard allow “reasonableness” of the data to be established by reference to the results of using the data, rather than through a review of the data. The reviewers believe that the data should be evaluated for reasonableness, rather than only requiring that the results be reasonable, and made no change.
Comment Response	One commentator felt the actuary should be required to request prior data for similar work performed in earlier periods and perform a comparison. Another commentator felt an actuary should be required to perform a comparison with prior data if it is readily available, while other commentators felt the standard should not require a comparison with prior data where it is not relevant. The reviewers believe that consistency with prior data need only be considered when such consistency can reasonably be expected and changed the wording of section 3.3. The reviewers also note that section 3.3 indicates that the actuary should consider “comparing current data with the data used in the prior analysis for consistency,” and “should consider requesting the prior data,” but do not believe that the standard should be more prescriptive.
Comment Response	Two commentators felt that data provided by highly credible sources should not require a review. The reviewers believe this is appropriately covered by the current language in section 3.3, and made no change.

Comment Response	One commentator asked whether impracticality was legitimate grounds for not performing a review. The reviewers believe that this is appropriately covered in section 3.3, including required disclosure in such situations, and made no change.
Comment Response	One commentator indicated that the last paragraph in this section is redundant and could be deleted. The reviewers disagree and made no change.
Comment Response	One commentator suggested that the standard refer to “external control totals.” The reviewers believe that level of specificity is unnecessary and made no change.
Comment Response	One commentator suggested that several instances of “should consider” are inconsistent with ASOP No. 1. The reviewers agree and modified the language.
Comment Response	One commentator suggested that this section also refer to the selection of data (not just to the preparation of data). The reviewers modified the language by deleting the reference to “preparation of data.”
Comment Response	One commentator felt that the review of the data should be performed by someone other than the actuary who selected or prepared the data. The reviewers do not believe that the guidance should prohibit the actuary who prepares the data from also reviewing the data, and made no change.
Comment Response	One commentator suggested that the actuary performing the data review must assess whether data are adequate for the purpose of the assignment. The reviewers believe the modified language in section 3.2 addresses this issue.
Comment Response	One commentator suggested clarifying section 3.3(b) by inserting “taking” before “further steps” (to read “the actuary should consider taking further steps, when practical, to improve the quality of the data”) and “the actuary has” between “steps” and “taken” (to read “The actuary also should disclose any significant steps the actuary has taken to improve the data”). The reviewers agree and modified the language.
Comment Response	One commentator suggested clarifying the responsibilities of the actuary who does not know what steps have been taken to improve the quality of the data. The reviewers note that sections 4.1(e) and 4.1(f) only require the actuary to disclose steps taken that the actuary knows about, and made no change.
Comment Response	One commentator felt that this section states that the actuary should review the data in determining whether a review is needed, which seems circular. The reviewers disagree that the section was circular, but modified the language to clarify.
Section 3.4, Use of Data	
Comment Response	One commentator suggested that the standard allow for the adjustment of results, rather than the adjustment of data, to compensate for deficiencies in the data. The reviewers agree and added a sentence to section 3.4(c).

Comment Response	Two commentators suggested that completion of part of an assignment be permitted where the data were suitable for that portion of the assignment. The reviewers agree and modified the language in section 3.4(e).
Section 3.5, Reliance on Data Supplied by Others	
Comment Response	One commentator felt the standard should encourage positive assurance, and discourage negative assurance and blind reliance. The reviewers believe that the reference in this section to the requirements in sections 3.3 and 3.4 addresses this concern, and made no change.
Section 3.6, Reliance on Other Information Relevant to the Use of Data	
Comment Response	One commentator requested that the term “unsuitable” be defined and that the actuary be required to disclose mandated use of unsuitable data. The reviewers believe the meaning of the term “unsuitable” is clear. The reviewers agree that the actuary should be required to disclose mandated use of unsuitable data, and removed the language from section 3.5 and added it to section 3.4(e) to address this concern.
Comment Response	One commentator asked if contract provisions, plan documents, reinsurance treaties, etc. should be included in “data” rather than in the separate category of information. The reviewers believe the definition of data is appropriate as stated and made no change.
Comment Response	One commentator suggested that this section is redundant and could be deleted. The reviewers disagree and made no change.
Section 3.7 (now section 3.8), Limitations of the Actuary’s Responsibility	
Comment Response	One commentator suggested that the nature and extent of the “additional data compilations” referred to here be clarified. The reviewers agree and clarified the language in section 3.8(b).
Section 3.8, Documentation	
Comment Response	Several commentators questioned the need for this section and its consistency with other parts of this standard. The reviewers agree and deleted this section.
SECTION 4. COMMUNICATIONS AND DISCLOSURES	
Section 4.1, Communication and Disclosure	
Comment Response	One commentator suggested requiring disclosure of “specific outlier data points or data elements whose exclusion (inclusion) could result in materially different conclusions.” The reviewers disagree that this level of specificity is needed and made no change.
Comment Response	One commentator suggested changing section 4.1(b) to require disclosure of “the nature of the data review performed by the actuary” and to require disclosure of all adjustments to data, not just the significant ones. The reviewers disagree and made no change.
Comment Response	One commentator suggested changing section 4.1(d) to clarify the meaning of “in summary form.” The reviewers do not believe that additional specificity is needed and made no change.

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Comment Response	One commentator suggested changing “significant effect” to “impact” in section 4.1(f). The reviewers disagree and made no change in what is now section 4.1(d).
Comment Response	Two commentators suggested that the disclosure items need not be included in every actuarial communication. Another commentator requested clarification regarding what “issuing communications” means, and where disclosures in sections 3.3, 3.4, and 3.5 should be made. One commentator suggested incorporating the distinction between actuarial communications and actuarial report under ASOP No. 41, and clarifying which parts of ASOP No. 41 apply to each. The reviewers modified the beginning of this section to indicate that “An actuarial communication can comply with some or all of the specific requirements of this section by making reference to information contained in other actuarial communications available to the intended users.”, consistent with ASOP No. 41, *Actuarial Communications*. The reviewers do not believe additional explanation of the requirements of ASOP No. 41 should be added to this standard.
Comment Response	Several commentators suggested the sections that are now 4.1(i)-(k) are redundant with ASOP No. 41 and could be deleted. The reviewers note that the disclosure language in (i)-(k) is standard in all ASOPs and made no change.
Comment Response	One commentator suggested making this section consistent with section 3.3 by restoring the previously deleted wording “and any resulting limitations on the use of the actuarial work product.” The reviewers agree and made the change in what is now section 4.1(c).
Comment Response	One commentator questioned why “material” was changed to “significant” in some sections of 4.1 but not in (i), (j) and (k). The reviewers note that the disclosure language in (i)-(k) is standard in all ASOPs and made no change.
Comment Response	One commentator requested clarification regarding gathering data not related to actuarial services or communications, and another asked whether it was intended that this section apply ASOP No. 41 requirements even where an actuarial opinion is not the end product. The reviewers revised section 1.2 to clarify that the standard applies only when data is to be used in performing actuarial services to address this issue.

ACTUARIAL STANDARDS BOARD

Actuarial Standard
of Practice
No. 24

Compliance with the NAIC Life Insurance Illustrations Model Regulation

Revised Edition

Developed by the
Task Force to Revise ASOP No. 24 of the
Life Committee of the
Actuarial Standards Board

Adopted by the
Actuarial Standards Board
December 2016

Doc. No. 184

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

APPENDIXES

December 2016

TO: Members of Actuarial Organizations Governed by the Standards of Practice of the Actuarial Standards Board and Other Persons Interested in Compliance with the NAIC Life Insurance Illustrations Model Regulation

FROM: Actuarial Standards Board (ASB)

SUBJ: Actuarial Standard of Practice (ASOP) No. 24

This document contains the final version of a revision of ASOP No. 24, *Compliance with the NAIC Life Insurance Illustrations Model Regulation*.

Background

The ASB adopted ASOP No. 24, *Compliance with the NAIC Life Illustrations Model Regulation*, in 1995. Since the promulgation of the original standard, life insurance product innovation has continued. In 2007, ASOP No. 24 was revised to be consistent with the current ASOP format and to update and reflect current, appropriate actuarial practices with respect to illustrations prepared in compliance with the *Life Insurance Illustrations Model Regulation* (*Model*). In 2015, the National Association of Insurance Commissioners released Actuarial Guideline 49 (AG 49) to clarify certain requirements of the *Model* related to policies with index-based interest credits and further amended AG 49 in September 2016. The ASOP was revised to reflect the changes effected through AG 49, to clarify certain guidance, and to be consistent with the current style and format used for ASOPs.

Exposure Draft

An exposure draft of this revision was issued in July 2016 with a comment deadline of September 30, 2016. Five comment letters were received and considered in making changes that were reflected in this final revised standard. For a summary of the issues contained in the exposure draft comment letters and the responses, see appendix 2.

There were no significant changes from the exposure draft.

The ASB thanks everyone who took time to contribute comments and suggestions on the exposure draft.

The ASB voted in December 2016 to adopt this standard.

ASOP No. 24—Doc. No. 184

Task Force to Revise ASOP No. 24

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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.

ACTUARIAL STANDARD OF PRACTICE NO. 24

COMPLIANCE WITH THE NAIC LIFE INSURANCE ILLUSTRATIONS MODEL REGULATION

STANDARD OF PRACTICE

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

1.1 Purpose—This actuarial standard of practice (ASOP) provides guidance to actuaries when performing professional services pursuant to applicable law based on the National Association of Insurance Commissioners (NAIC) *Life Insurance Illustrations Model Regulation* (*Model*) and related NAIC actuarial guidelines or when performing professional services with respect to illustrations represented to be in accordance with the *Model*.

1.2 Scope—This standard applies to actuaries when performing professional services to provide or support an actuarial certification pursuant to an applicable law based on the *Model*. The *Model* applies to illustrations, both for proposals and in-force policies, as described in the *Model*, for group and individual life insurance other than variable life insurance. The *Model* does not apply to individual and group annuity contracts, credit life insurance, and life insurance policies with no illustrated death benefits on any individual exceeding $10,000. NAIC Actuarial Guideline 49 (AG 49) is related to the *Model* and applies to certain life insurance policies that are subject to the *Model* and that provide interest credits linked to an external index or indices.

This standard applies to actuaries when performing professional services with respect to illustrations in the absence of applicable regulations if the illustrations are to be represented as being in accordance with the *Model*.

This standard does not apply to actuaries when performing professional services with respect to the determination of **nonguaranteed elements** payable. Determination of these items, as well as illustrations not included in the scope of this ASOP, are covered by ASOP No. 2, *Nonguaranteed Charges or Benefits for Life Insurance Policies and Annuity Contracts*, or ASOP No. 15, *Dividends for Individual Participating Life Insurance, Annuities, and Disability Insurance*.

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 is effective for actuarial services performed on or after April 30, 2017.

Section 2. Definitions

The terms below are defined for use in this actuarial standard of practice. Definitions 2.2, 2.3, 2.6, 2.7, and 2.8 are intended to conform to those in the *Model*.

2.1 Actual Experience—Historical results and trends in those results.

2.2 Currently Payable Scale—A scale of **nonguaranteed elements** in effect for a policy form as of the preparation date of the illustration or declared to become effective within the next 95 days.

2.3 Disciplined Current Scale—A scale of **nonguaranteed elements**, certified annually by the **illustration actuary**, constituting a limit on illustrations currently being illustrated by an insurer that is reasonably based on actual recent historical experience and that satisfies the requirements set forth in the *Model*.

2.4 Experience Factor—A value or set of values that represents the **actual experience** of a policy form. Examples of **experience factors** include rates of mortality, expense, investment income, termination, and taxes.

2.5 Experience Factor Class—A group of policies for which **nonguaranteed elements** are determined by using common numerical values of a particular **experience factor**.

2.6 Illustrated Scale—A scale of **nonguaranteed elements** currently being illustrated that is not more favorable to the policyholder than the lesser of the **disciplined current scale** or the **currently payable scale**.

2.7 Illustration Actuary—An actuary who is appointed in accordance with the requirements set forth in the *Model*.

2.8 Nonguaranteed Element—Any element within an insurance policy that affects policy costs or values that is not guaranteed or not determined at issue. A **nonguaranteed element** may provide a more favorable value to the policyholder than that guaranteed at the time of issue of the policy. Examples of **nonguaranteed elements** include policy dividends, excess interest credits, mortality charges, expense charges, indeterminate premiums, and participation rates and maximum rates of return for indexed life insurance products.

2.9 Nonguaranteed Element Framework—The structure by which the insurer determines **nonguaranteed elements**. This includes the assignment of policies to **experience factor classes**, the method of allocating income and costs, and the structure of the formulas or other methods of using **experience factors**. For participating policies this would be the dividend framework defined in ASOP No. 15. For life policies within the scope of ASOP No. 2, the **nonguaranteed element framework** would include the concepts of policy class, determination policy, and anticipated **experience factors**.

Section 3. Analysis of Issues and Recommended Practices

3.1 Regulatory Requirements—The *Model* contains detailed instructions, technical requirements, and prohibitions regarding many aspects of illustrations. Actuaries providing professional services within the scope of this standard should be familiar with the *Model*, AG 49, any applicable state law based on the *Model* (including state variations), and this standard.

3.2 Appointment as Illustration Actuary—Before accepting an appointment as an **illustration actuary**, the actuary should determine that he or she meets the qualifications described in the *Qualification Standards for Actuaries Issuing Statements of Actuarial Opinion in the United States*. The appointment should be in writing and should describe the scope of the **illustration actuary's** responsibilities and establish the effective date. Acceptance of or withdrawal from the position should also be in writing.

3.3 Illustrated Scale Requirements—The actuary should ensure that the **illustrated scale** meets the requirements imposed by the *Model* as follows.

3.3.1 Currently Payable Scale—The **illustrated scale** must not be more favorable to the policyholder than the **currently payable scale** at any duration.

3.3.2 Disciplined Current Scale—The **illustrated scale** must be no more favorable to the policyholder than the **disciplined current scale** at any duration.

3.3.3 Interest Credited Rate—For policies with interest credits linked to an external index or indices, the interest credited rate for the **illustrated scale** for each indexed account shall be limited in accordance with AG 49.

3.4 Developing the Disciplined Current Scale—The actuary should consider the following when developing the **disciplined current scale**:

3.4.1 Assumptions Underlying the Disciplined Current Scale—The actuary should use experience as analyzed within the insurer's **nonguaranteed element framework** when setting **experience factors** underlying the **disciplined current scale**. To the extent **actual experience** is determinable, available, and credible, the actuary should use **actual experience** when setting **experience factors** underlying the

disciplined current scale. When such suitable data are lacking, **experience factors** should be derived in a reasonable and appropriate manner from **actual experience** of other similar classes of business. Similar classes may be found within the same company, may be found in other companies, or may be from other sources, in that order of preference. When determining the extent to which **actual experience** is credible, the actuary should refer to ASOP No. 25, *Credibility Procedures*. As required by the *Model*, the **experience factors** underlying the **disciplined current scale** may not include any projected trends of improvement nor any assumed improvements in experience beyond the effective date of the **illustrated scale**, except as provided in section 3.8.

The actuary should consider the following when setting assumptions:

a. Investment Return—The **experience factor** used for investment income (the investment return factor) underlying the **disciplined current scale** should be reasonably based on recent actual investment experience, net of default costs, of the assets supporting the policy block.

   If interest credits are linked to an external index or indices, then the investment return factor is sensitive to business or economic cycles. In such cases, the actuary should consider an appropriate time frame commensurate with such cycles and the characteristics of the underlying index or indices in determining recent **actual experience**. When determining the investment return factor for policies within the scope of AG 49, actuaries should comply with limitations imposed on the assumed earned interest rate underlying the **disciplined current scale**.

   The actuary should have a reasonable basis for allocating investment income to policies, whether using the portfolio, segmentation, investment generation, or any other method. The actuary should develop the investment return factors using the same method that is used to allocate investment income to policies. The investment return factors may be net of investment expenses or, alternatively, investment expenses may be treated separately as expenses.

   The actuary should use procedures that have a reasonable theoretical basis for determining the investment return factors. In determining the investment return factors, the actuary should reflect the insurer's actual practice for **nonguaranteed elements** with respect to realized and unrealized capital gains and losses, investment hedges, policy loans, and other investment items.

b. Mortality—The actuary should base the mortality **experience factors** on the insurer's mortality experience, if credible, adjusted for risk class. In setting mortality **experience factors**, the actuary should consider credible variations by age, gender, duration, marketing method, plan, size of policy,

policy provisions, risk class, and other items (or a combination thereof) consistent with the insurer's structure of mortality **experience factor classes**. To the extent that the insurer's **actual experience** is not sufficiently credible, the actuary should consider using other credible industry mortality experience, appropriately modified to reflect the insurer's underwriting practices. If no credible industry mortality experience is available, the actuary should use professional judgment in modifying other sources of information (for example, general population mortality tables) in order to obtain the mortality assumption.

c. Persistency—The actuary should base the premium continuation and policy persistency rates on the insurer's **actual experience**, if credible, for this or similar policy forms. The actuary should consider credible variations by age, gender, duration, marketing method, plan, size of policy, policy provisions, risk class, and other items (or a combination thereof) consistent with the insurer's structure of persistency **experience factor classes**. To the extent that the insurer's recent experience is not credible, the actuary should consider using other credible industry experience such as that from LIMRA, appropriately modified to reflect the actuary's professional judgment regarding differences between the policy form and the basis for the industry experience.

d. Direct Sales Expenses—The actuary should reflect agent commissions, overrides, and other direct compensation determined by formula or incurred as a consequence of sales in a manner consistent with new business activities that generate the cost and are excluded from the expense factors given in sections (e)(1), (2), and (3) below.

e. All Other Expenses—As described in the *Model*, the actuary should consider whether the minimum expenses to be used in the calculation of the **disciplined current scale** for all policy forms during the certification year are based on sections (1), (2), or (3) below and are subject to the criteria that follow them:

   1. Fully Allocated—Unit expenses reflecting total expenses recently incurred by the insurer when applied to both in force or newly issued policies are considered fully allocated. Some expenses are direct in that they can be specifically related to a particular policy form. Other expenses, such as general overhead costs, are indirect. The actuary should charge direct expenses to the groups of policies generating the related costs. Indirect expenses should be fully allocated using reasonable principles of expense allocation. Nonrecurring costs, such as systems development costs, may be spread over a reasonable number of years (for example, system lifetime) in determining the allocable expenses for a particular year.

2. Marginally Allocated—Marginally allocated expenses are unit expenses calculated in a manner similar to fully allocated unit expenses except that indirect expenses, such as corporate overhead and general advertising, are not allocated to the policy forms.

3. Generally Recognized Expense Table (GRET)—GRET unit expenses are obtained from an industry expense study based on fully allocated expenses representing a significant portion of insurance companies and approved for use by the NAIC or by the commissioner.

If no GRET is approved and available, the *Model* requires the use of fully allocated expenses. If a GRET is approved and available, the *Model* allows the use of either a GRET or fully allocated expenses. The *Model* permits the use of marginally allocated expenses only to the extent that they generate aggregate expenses that are at least as large as those generated by a GRET.

The actuary should make the comparison and choice of expense factor bases in the aggregate for all policy forms. The actuary should use the same unit expense basis for all policy forms tested. For example, the actuary should not use marginal expenses for one policy form and fully allocated expenses for another policy form. Once the actuary selects the unit expense basis, the actuary should use that basis for the entire certification year. When calculating unit expenses, the actuary should select average policy size and volume of sales assumptions that are appropriate for the policy form.

f. Taxes—The actuary should reflect all cash flows arising from applicable taxes. Income taxes should be recognized in accordance with their impact by duration in the development of the **disciplined current scale**. Non-income taxes that are classified as investment taxes may be treated as a deduction from the investment return or may be treated separately. Other categories of taxes, such as premium taxes or employment taxes, may be handled separately or included in the category of all other expenses, as outlined in section 3.4.1(e) above.

Details of taxation vary widely, depending on the application of law and regulation in various jurisdictions. The actuary should consider the insurer's actual practices for allocating taxes for **nonguaranteed elements** in determining the tax **experience factor**.

g. Changes in Methodology—When an insurer changes its methodology in determining **nonguaranteed elements** (for example, changing from portfolio rate methodology to a new money rate methodology or adding a new underwriting class), the actuary should appropriately modify assumptions underlying the **disciplined current scale** to reflect the new methodology.

h. Other Lines of Business—If other lines of business are considered investments of the illustrated block of business, the actuary should consider whether cash flows originating in such lines are recognized in the assumptions underlying the **disciplined current scale**. In deciding whether and how to reflect these cash flows, the actuary should consider the time horizon of the investment/investor relationship and the insurer's actual practice for reflecting these cash flows in determining **nonguaranteed elements**.

3.4.2 Relationship of Actual Experience to Disciplined Current Scale—The actuary should select assumptions underlying an insurer's **disciplined current scale** that logically and reasonably relate to **actual experience** as reflected within the insurer's **nonguaranteed element framework**. The actuary should reflect changes in experience once changes have been determined to be significant and ongoing.

Actual experience may exhibit improvements from year to year. As required by the *Model*, such trends in improvement may not be assumed to continue into the future beyond the effective date of the **disciplined current scale** underlying the illustration.

If trends indicate that significant and continuing deterioration in an **experience factor** has occurred or, in the actuary's professional judgment, is likely to occur between the date of the experience study and the effective date of the **disciplined current scale** underlying the illustration, the actuary should recognize such deterioration in determining the assumptions to be used.

When an insurer introduces a change in underwriting practice (for example, adding a new underwriting class) that is not expected to change the insured population, the actuary should divide the **actual experience** into the new underwriting classes in such a way that **actual experience** is reproduced in the aggregate.

3.5 Requirements for Self-Support—The *Model* requires every policy form illustrated by an insurer to be self-supporting according to the assumptions underlying the insurer's **disciplined current scale**. This requirement applies to the illustration of policies in force for less than one year.

The *Model* requires the following self-support test. At every illustrated point in time starting with the fifteenth policy anniversary (with the twentieth policy anniversary for second-or-later-to-die policies), the accumulated value of all policy cash flows, when using experience assumptions underlying the **disciplined current scale**, should be equal to or greater than the illustrated policyholder value, i.e., the cash surrender values and any other illustrated benefit amounts available at the policyholder's election. When policies expire according to their terms prior to 15 years (20 years for second-or-later-to-die policies), the **illustrated scale** should be self-supporting at the point of expiration.

Each illustration reflects underwriting classification, as well as certain factors that are subject to policyholder choice. The underwriting classification includes factors such as age, gender, and risk class. Policyholder choices reflected in the preparation of an illustration include, but are not limited to, the size of policy, premium payment pattern, dividend option, coverage riders, and policy loans.

When performing the self-support test for a policy form, the actuary may test the underwriting classification and policyholder choice factors in aggregate if, in the actuary's professional judgment and subject to the limitations of AG 49, such combinations would be appropriate. If testing is done in the aggregate, the actuary should select assumptions for the distribution between underwriting classes and policyholder choices that are based on **actual experience**, if available, recognizing possible shifts in distribution toward any portions of the business that do not meet the self-support test in their own right.

When performing the self-support test on policy forms with 1) interest credits linked to an external index or indices and 2) more than one available indexed account, actuaries must comply with the limitations on aggregation of indexed accounts imposed by AG 49, if applicable.

3.6 Requirements to Prevent Lapse-Supported Illustrations—The *Model* prohibits illustration of **nonguaranteed elements** in policies that are deemed to be lapse-supported and establishes a lapse-support test to demonstrate compliance with this requirement. The lapse-support test requires that the policy form in question be self-supporting under the same assumptions and with the same level of aggregation as described in section 3.5, changing only the persistency assumption. The modified persistency rate assumption will use the persistency rates underlying the **disciplined current scale** for the first five policy years and 100% policy persistency thereafter. In performing the lapse-support test for a policy form, the actuary should assume that benefits that are conditional only upon policy continuation will be provided to all policies in force at the end of year five and surviving to the date of such benefits. For policy forms that provide benefits that are conditional upon certain premium payment patterns, the actuary should consider whether all policies in force to the end of year five will qualify for such benefits.

As stated in the *Model*, policy forms that can never develop nonforfeiture values, such as certain term coverages, are exempt from the lapse-support test. The *Model* requires that these policy forms pass the self-support requirement.

3.7 Illustrations on Policies In Force One Year or More—The **illustration actuary** is required to annually certify that the **disciplined current scale**, for both new business and in force illustrations, complies with the *Model* and this standard. The *Model* requires that the **illustrated scale** be no more favorable to the policyholder than the lesser of the **currently payable scale** and the **disciplined current scale**. The **disciplined current scale**, for a policy in force one year or more, continues to be in compliance with the *Model* and this standard, if any of the following apply:

a. the **currently payable scale** has not been changed since the last certification and the **illustration actuary** determines that experience since the last certification does not warrant changes in the **disciplined current scale** that would make it significantly less favorable to the policyholder; or

b. the **currently payable scale** has been changed since the development of the **disciplined current scale** most recently certified only to the extent that changes are reasonably consistent with changes in experience assumptions underlying the **disciplined current scale**; or

c. the **currently payable scale** has been made less favorable to the policyholder since the last certification and the change is more than the change in the current experience would dictate.

If none of the conditions in (a), (b), or (c) above is met, the **illustration actuary** should (1) review the **experience factors** underlying the **disciplined current scale** and revise as necessary, and (2) develop a new **disciplined current scale** for this policy form.

In the context of in-force illustrations for policies receiving distributions of accumulated surplus or prior gains (including those resulting from the formation of a closed block), the actuary should consider including these distributions both in the **disciplined current scale** and in the **illustrated scale**, only to the extent that (1) such distributions are currently being paid to the policyholders by the insurer, and (2) the insurer has indicated its intent and ability to continue to do so for the foreseeable future. Such accumulated surplus or prior gains may be used in conducting the tests for self-support and lapse-support.

3.8 <u>Changes in Practice</u>—An insurer may introduce certain changes in the way it conducts its business, which may have significant positive or negative effects on future experience. If the action has already occurred, but not enough time has elapsed for it to be reflected in the insurer's **actual experience**, it may nevertheless be reflected in the assumptions underlying the **disciplined current scale**. The actuary should consider recognizing any changes, such as the following, to the extent known to the actuary:

a. a change in underwriting standards, such as introducing preferred risk, guaranteed issue, or simplified underwriting;

b. a change in commission levels;

c. a reduction in staff;

d. a change in investment policies, such as changes in hedging activities and changes in asset class allocations; and

e. new or revised reinsurance agreements.

In order to be reflected in the **disciplined current scale**, such changes should have already been made and not simply be planned for in the future.

3.9 Reliance on Data or Other Information Supplied by Others—When relying on data or other information supplied by others, the actuary should refer to ASOP No. 23, *Data Quality*, for guidance.

3.10 Documentation—The documentation that supports the actuarial certification described in section 4.1 with respect to the construction of the **disciplined current scale**, maintained in conformance with ASOP No. 41, *Actuarial Communications*, should include the following:

a. description of, and rationale for, the investment income, mortality, persistency, expense, tax, and other assumptions;

b. description of, and rationale for, any other calculation methods and assumptions used to carry out the tests and demonstrations described herein; and

c. demonstration that the self-support and lapse-support tests have been met.

Section 4. Communications and Disclosures

4.1 Certification—The *Model*[1] requires the **illustration actuary** to certify annually that the **illustrated scale** and the **disciplined current scale** are in compliance both with the requirements as set forth in the *Model* and with the requirements set forth in this ASOP. Certifications should also be made for newly introduced forms before a new policy form is illustrated.[2]

The certification should disclose the following:

a. for business issued in the last five years and within the scope of the certification, whether or not the **currently payable scale** has been reduced since the last certification for reasons unrelated to experience changes;[3]

b. the choice of expense assumptions as discussed in section 3.4.1(e);[4]

c. any inconsistencies between the illustrated **nonguaranteed elements** for new policies and similar in-force policies;[5] and

[1] As stated in *Model* sections 11.B, C(5)-(6), and D(1)(a).
[2] As stated in *Model* section 11.D(1)(b).
[3] As stated in *Model* section 11.C(5).
[4] As stated in *Model* section 11.C(6).

d. any inconsistencies between the illustrated **nonguaranteed elements** for new and in-force policies and the **nonguaranteed element** amounts actually paid, credited, or charged to the same or similar forms.[6]

As required by the *Model*,[7] if an **illustration actuary** is unable to certify the **illustrated scale** for any policy form the insurer intends to use, the actuary should notify the board of directors of the insurer and the commissioner promptly of his or her inability to certify.

4.2 Notice of Error in Certification—As required by the *Model*,[8] if an error in a previous certification is discovered, the **illustration actuary** (or successor **illustration actuary**) shall promptly notify the board of directors of the insurer and the commissioner.

The certification should be considered in error if the certification would not have been issued or would have been materially altered had the error not been made. The certification should not be considered to be in error solely because of data that become available, or information concerning events that occurred, subsequent to the certification date.

4.3 Disclosures—The actuary should include the following, as applicable, in the certification:

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.

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[5] As stated in *Model* section 11.C(5).
[6] See note 5 above.
[7] As stated in *Model* section 11.E.
[8] As stated in *Model* section 11.D(2).

Appendix 1

Background and Current Practices

Note: This appendix is provided for informational purposes but is not part of the standard of practice.

Background

Sales illustrations have been of concern to regulators for over a century, going back at least to the Armstrong Commission (1905-1906). Developments prior to 1995 involving insurance products, illustration technology, and the volatility of financial markets led to heightened concern and to the adoption of the NAIC *Life Insurance Illustrations Model Regulation* (*Model*).

Actuaries have been involved in the process of establishing scales of dividends and other nonguaranteed elements to be illustrated by insurance companies for decades. Until the 1980s, nonguaranteed elements were essentially synonymous with participating dividends, and the sources of scales of illustrated dividends were tables prepared by the respective insurance companies. Since that time, there has been a proliferation of policies with nonguaranteed elements other than dividends. Improving technology has also made possible the development of software that enables insurance agents to produce sales illustrations based on a variety of assumptions, potentially with little or no direct involvement on the part of the insurer. The *Model* assigns major responsibilities regarding compliance to an actuary who is appointed by the insurer.

Illustrations generally have three primary uses:

1. to show the buyer the mechanics of the policy, i.e., how a particular financial design or concept works, and how policy values or premium payments may change over time;

2. to compare the cost or performance of different policies; and

3. to show how the policy fits into the policyholder's financial plan.

A sales illustration simply shows the performance of one particular scale of nonguaranteed elements into the future. Actual nonguaranteed elements will almost certainly vary from those illustrated. Different policies will experience different variances from illustrated values.

Current Practices

Since the promulgation of the original standard in 1995, product innovation has continued as pricing structures have been refined, secondary guarantees have been developed, an increasing variety of equity-indexed and other indexed life insurance products have been developed, and additional new underwriting classes have been added. Until the release of Actuarial Guideline 49 (AG 49), it had been common practice to illustrate these new products pursuant to the *Model* and this standard as it existed. With the introduction of AG 49, illustrations of contracts providing interest credits linked to an external index or indices will be subject to AG 49 and this updated standard.

Varying degrees of flexibility are provided by insurers to their agents in customizing sales illustrations, depending somewhat on whether the producers are brokers or career agents. Generally, the tools that insurers provide allow flexibility with respect to column selection and formats, variations on nonguaranteed elements, and different premium patterns. Along with this flexibility may be the requirement that the buyer also be given a ledger illustration in an insurer-approved format.

Appendix 2

Comments on Exposure Draft and Responses

The exposure draft of this revised ASOP, *Compliance with the NAIC Life Insurance Illustrations Model Regulation*, was issued in June 2016 with a comment deadline of September 30, 2016. Five comment letters were received, some of which were submitted on behalf of multiple commentators, such as by firms or committees. For purposes of this appendix, the term "commentator" may refer to more than one person associated with a particular comment letter. The Task Force to Revise ASOP No. 24 carefully considered all comments received, reviewed the exposure draft, and proposed changes. The Life Committee and the ASB reviewed the proposed changes and made modifications where appropriate.

Summarized below are the significant issues and questions contained in the comment letters and responses.

The term "reviewers" in appendix 2 includes the Task Force to Revise ASOP No. 24, the Life Committee, and the ASB. Also, unless otherwise noted, the section numbers and titles used in appendix 2 refer to those in the exposure draft.

SECTION 3. ANALYSIS OF ISSUES AND RECOMMENDED PRACTICES	
Section 3.4.1(c), Assumptions Underlying the Disciplined Current Scale	
Comment	One commentator said that the Life Insurance Marketing and Research Association is now LIMRA.
Response	The reviewers agree and made this change.
Section 3.4.2, Relationship of Actual Experience to Disciplined Current Scale	
Comment	One commentator inquired if the removal of the word "promptly" reflected a change in guidance relative to how quickly changes in experience should be reflected when determined to be significant and ongoing.
Response	The reviewers believe that the guidance is substantially unchanged, and therefore made no change.
Section 3.5, Requirements for Self-Support	
Comment	One commentator noted that if more than one Benchmark Index Account is used for an illustrated policy, under the latest adopted version of AG 49 each set of index accounts corresponding to each Benchmark Index Account must independently pass the self-support and lapse-support tests, whereas the exposure draft indicates that testing in the aggregate would be permissible.
Response	The reviewers agree and modified this section to reflect the comment.

Section 3.6, Requirements to Prevent Lapse-Supported Illustrations	
Comment	One commentator recommended including a drafting note with respect to the wording change to ensure that practitioners understand that the change was made to clarify rather than to reflect a change in guidance.
Response	The reviewers believe that the wording changes clarify the guidance with respect to the lapse-support test and therefore made no change in response to this comment.
Comment	One commentator posed specific questions related to the application of the lapse-support test, one involving the use of experience beyond the fifth policy year when testing previously issued policy forms, and a second involving the impact of reinsurance on the lapse-support and self-support tests.
Response	The reviewers believe that the current language covers these issues at the appropriate level of detail and therefore made no change in response to this comment. This comment has been referred to the Academy's Life Illustration Work Group for possible inclusion in a practice note.
Comment	One commentator suggested clarifying the application of the lapse-support test to flexible premium policy forms that are not funded to keep the policy in force for its full term.
Response	The reviewers believe that the current language covers these issues at the appropriate level of detail and therefore made no change in response to this comment. This comment has been referred to the Academy's Life Illustration Work Group for possible inclusion in a practice note.
Section 3.8, Changes in Practice	
Comment	One commentator suggested changing section 3.8 to clarify how the last sentence is associated with the rest of that section.
Response	The reviewers agree and revised this section.

ACTUARIAL STANDARDS BOARD

Actuarial Standard of
Practice No. 25

Credibility Procedures

Revised Edition

Developed by the
Credibility Task Force of the
General Committee of the
Actuarial Standards Board

Adopted by the
Actuarial Standards Board
December 2013

Doc. No. 174

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

December 2013

TO: Members of Actuarial Organizations Governed by the Standards of Practice of the Actuarial Standards Board and Other Persons Interested in Credibility Procedures

FROM: Actuarial Standards Board (ASB)

SUBJ: Actuarial Standard of Practice (ASOP) No. 25

This document is the final version of a revision of ASOP No. 25 now titled, *Credibility Procedures*.

Background

The original standard, adopted in 1996, was a product of the Health Committee and the Casualty Committee of the ASB. The scope of the standard was limited to accident and health, group term life, and property/casualty coverages.

In 2011, the ASB asked the Life Committee to consider whether the scope of ASOP No. 25 should be expanded to incorporate additional practice areas. The Life Committee agreed that the scope of the ASOP could be expanded. The Board asked that a multi-discipline task force be formed under the direction of the General Committee to begin drafting an exposure draft. A task force was then created that included actuaries from the life, health, pension, and property/casualty practice areas.

First Exposure Draft

The first exposure draft of this revised ASOP was issued in September 2012 with a comment deadline of December 31, 2012. The Credibility Task Force carefully considered the 20 comment letters received and made changes to the language in several sections in response. The most significant change from the first exposure draft was the revision of section 1.2, Scope, to clarify in what situations the standard applies. In addition, the purpose and use of credibility procedures was clarified, in particular regarding the continued need for professional judgment.

Second Exposure Draft

The second exposure draft of this ASOP was issued in June 2013, with a comment deadline of September 30, 2013. Nine comment letters were received. The Task Force carefully considered all comments received and made clarifying changes to the language in several sections. For a summary of the substantive issues contained in the second exposure draft comment letters and the task force’s responses, please see appendix 2. In addition, the task force made a clarifying change to the wording of the scope section to keep it appropriately focused. There were no major changes from the second exposure draft.

The ASB thanks everyone who took the time to contribute comments on the exposure drafts.

The ASB voted in December 2013 to adopt this standard.

Credibility Task Force

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Kevin S. Binder	Steven C. Erickson
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Actuarial Standards Board

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The ASB establishes and improves standards of actuarial practice. These ASOPs identify what the actuary should consider, document, and disclose when performing an actuarial assignment. The ASB's goal is to set standards for appropriate practice for the U.S.

ACTUARIAL STANDARD OF PRACTICE NO. 25

CREDIBILITY PROCEDURES

STANDARD OF PRACTICE

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

1.1 Purpose—The purpose of this actuarial standard of practice (ASOP) is to provide guidance to actuaries when performing professional services with respect to selecting or developing **credibility procedures** and the application of those procedures to sets of data.

1.2 Scope—This standard applies to actuaries when performing actuarial services involving **credibility procedures** in the following situations:

a. when the actuary is required by applicable law (statutes, regulations, and other legally binding authority) to evaluate **credibility**;

b. when the actuary chooses to evaluate the **credibility** of **subject experience**, or states in any related actuarial communication that **credibility** has been evaluated in accordance with this ASOP;

c. when the actuary is blending **subject experience** with other experience; or

d. when the actuary represents the data being used as statistically or mathematically credible.

If the actuary determines that the guidance in this standard conflicts with ASOP No. 35, *Selection of Demographic and Other Noneconomic Assumptions for Measuring Pension Obligations*, ASOP No. 35 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.

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 professional services with respect to **credibility procedures** performed on or after May 1, 2014.

Section 2. Definitions

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

2.1 Credibility—A measure of the predictive value in a given application that the actuary attaches to a particular set of data (*predictive* is used here in the statistical sense and not in the sense of predicting the future).

2.2 Credibility Procedure—A process that involves the following:

a. the evaluation of **subject experience** for potential use in setting assumptions without reference to other data; or

b. the identification of **relevant experience** and the selection and implementation of a method for blending the **relevant experience** with the **subject experience**.

2.3 Full Credibility—The level at which the **subject experience** is assigned full predictive value, often based on a selected confidence interval.

2.4 Relevant Experience—Sets of data, that include data other than the **subject experience**, that, in the actuary's judgment, are predictive of the parameter under study (including but not limited to loss ratios, claims, mortality, payment patterns, persistency, or expenses). **Relevant experience** may include **subject experience** as a subset.

2.5 Risk Characteristics—Measurable or observable factors or characteristics that are used to assign each risk to one of the risk classes of a **risk classification system**.

2.6 Risk Classification System—A system used to assign risks to groups based upon the expected cost or benefit of the coverage or services provided.

2.7 Subject Experience—A specific set of data drawn from the experience under consideration for the purpose of predicting the parameter under study.

Section 3. Analysis of Issues and Recommended Practices

3.1 Purpose and Use of Credibility Procedures—**Credibility procedures** covered by this standard are used for two purposes: 1) to evaluate **subject experience** for potential use in setting assumptions without reference to other data; and 2) to improve the estimate of the parameter under study. **Credibility procedures** may be used for tasks such as pricing, ratemaking, prospective experience rating, and reserving.

3.2 Selection or Development of Credibility Procedure—The actuary should use an appropriate **credibility procedure** when determining if the **subject experience** has **full credibility** or when blending the **subject experience** with the **relevant experience**. The procedure selected or developed may be different for different practice areas and applications. Additional review may be necessary to satisfy applicable law.

In selecting or developing a **credibility procedure**, the actuary should consider the following criteria:

a. whether the procedure is expected to produce reasonable results;

b. whether the procedure is appropriate for the intended use and purpose; and

c. whether the procedure is practical to implement when taking into consideration both the cost and benefit of employing a procedure.

The actuary should apply **credibility procedures** that appropriately consider the characteristics of both the **subject experience** and the **relevant experience**. The actuary should consider the predictive value of more recent experience as compared to experience from earlier time periods.

3.3 Selection of Relevant Experience—The actuary should exercise professional judgment and use care in selecting and using **relevant experience**. Such **relevant experience** should have characteristics similar to the **subject experience**. Characteristics to consider include items such as demographics, coverages, frequency, severity, or other determinable **risk characteristics** that the actuary expects to be similar to the **subject experience**. If the proposed **relevant experience** does not meet and cannot be adjusted to meet such criteria, it should not be used.

The actuary should consider the extent to which **subject experience** is included **in relevant experience**. If **subject experience** is a material part of **relevant experience**, the actuary should use professional judgment in deciding whether and how to use that **relevant experience**.

In some instances, no **relevant experience** is available to the actuary. In this situation, the actuary should use professional judgment, considering available **subject experience**, in setting an estimate of the parameter under study.

3.4 Professional Judgment—The actuary should use professional judgment when selecting, developing, or using a **credibility procedure**. The use of **credibility procedures** is not always a precise mathematical process. For example, in some situations, an acceptable procedure for blending the **subject experience** with the **relevant experience** may be based on the actuary assigning full, partial, or zero **credibility** to the **subject experience** without using a rigorous mathematical model.

3.5 Homogeneity of Data—In carrying out **credibility procedures**, the actuary should consider the homogeneity of both the **subject experience** and the **relevant experience**. Within each set of experience, there may be segments that are not representative of the experience set as a whole. The predictive value can sometimes be enhanced by separate treatment of these segments. The actuary should also consider the balance between the homogeneity of the data and the size of the data set.

Section 4. Communications and Disclosures

4.1 Disclosure—Whenever appropriate in the actuary's professional judgment, the actuary should disclose the **credibility procedures** used and any material changes from prior **credibility procedures**. The actuary should also include the following, as applicable, in an actuarial communication:

a. the disclosure in ASOP No. 41, *Actuarial Communications*, 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.

Appendix 1

Background

Note: This appendix is provided for informational purposes and is not part of the standard of practice.

Historical Development

The concept of credibility has been a fundamental part of actuarial practice since the beginning of the profession. Applications of credibility procedures have recognized the traditional concerns regarding the proper balance between responsiveness and stability. Early discussions of credibility tended to focus on estimating mean claim frequency using classical and empirical credibility procedures. The earliest recorded paper on this subject was, "How Extensive a Payroll Exposure Is Necessary to Give a Dependable Pure Premium," by Albert H. Mowbray (see Volume I of the *Proceedings of the Casualty Actuarial and Statistical Society* published by the Casualty Actuarial Society in 1914). Later writers have developed formulas for the credibility of claim severity and for the credibility of total losses including Bayesian credibility procedures. Credibility concepts have also been used in other actuarial work.

Current Practices

A variety of approaches are used in credibility procedures. In some cases, the approach is based on judgment; in other cases, mathematical models are used. Some selected mathematical credibility procedures are discussed below.

Classical Credibility Procedures

Classical credibility procedures make assumptions as to the form of the underlying probability distribution. From this probability distribution function, the appropriate number of claims, amount of premium, or other measure of volume is calculated such that the probability that the subject loss experience is within a specified percentage (r) of the expected value is equal to a specified parameter (p). This measure of volume is the full credibility standard.

One such approach that assumes that claims follow a Normal distribution is Limited Fluctuation Credibility. In this approach, partial credibility assigned to the subject experience is based on the square root of the ratio of actual claims to the full credibility standard.

Empirical Credibility Procedures

Empirical credibility procedures measure the statistical relationships of the subject experience to its mean and to comparable experience of prior experience periods, without reference to the underlying distribution.

Bayesian Credibility Procedures

Bayesian analysis procedures merge prior distributions representing the statistical information of the relevant experience with the statistical information of the subject experience to produce posterior distributions that reflect both. Bayesian credibility procedures provide a least squares approximation to the mean of the *a posteriori* distribution that would result from a Bayesian analysis.

One example of the application of Bayesian credibility is Greatest Accuracy Credibility, which is also referred to as linear Bayesian credibility or Bühlmann credibility. In Greatest Accuracy Credibility, partial credibility is assigned to the subject experience using formulas of the form $n/(n+k)$, where n is the volume of subject experience and k is a parameter that may be derived from variances in the subject and relevant experience.

Emerging Practice Involving Statistical Models

More recent advancements in the application of credibility theory incorporate credibility estimation into generalized linear models or other multivariate modeling techniques. The most typical forms of these models are often referred to in literature as generalized linear mixed models, hierarchical models, and mixed-effects models. In such models, credibility can be estimated based on the statistical significance of parameter estimates, model performance on a holdout data set, or the consistency of either of these measures over time.

Credibility Bases

The most commonly used bases for determining credibility are numbers or amounts of claims, losses, premiums, and exposures.

Credibility Procedures for Ratemaking/Pricing

The sample size used for full credibility sometimes is based on the variance of an assumed underlying probability distribution. If using an assumed frequency distribution, the actuary usually adjusts the required sample size to recognize variation in claim size or other factors.

Credibility Procedures for Prospective Experience Rating

Prospective experience rating formulas assign credibility to actual experience of a single risk or a group of risks (the subject experience). In some instances, the subject experience may be subdivided into different components, for example, primary and excess losses, with different credibility levels appropriate for each piece.

More Information

Expanded discussion of the use of credibility procedures by actuaries setting assumptions can be found in various publications of the American Academy of Actuaries, the Society of Actuaries, the Casualty Actuarial Society, and other similar actuarial professional organizations.

Appendix 2

Comments on the Second Exposure Draft and Responses

The second exposure draft of ASOP No. 25, *Credibility Procedures*, was issued in June 2013 with a comment deadline of September 30, 2013. Nine comment letters were received, some of which were submitted on behalf of multiple commentators, such as by firms or committees. For purposes of this appendix, the term "commentator" may refer to more than one person associated with a particular comment letter. The Credibility Task Force and the General Committee of the Actuarial Standards Board carefully considered all comments received, and the General Committee and ASB reviewed (and modified, where appropriate) the changes proposed by the Task Force.

Summarized below are the significant issues and questions contained in the comment letters and the responses.

The term "reviewers" in appendix 2 includes the Task Force, General Committee, and the ASB. Also, unless otherwise noted, the section numbers and titles used in appendix 2 refer to those in the exposure draft.

GENERAL COMMENTS	
Comment	One commentator stated that the ASOP does not discuss instances when applicable law requires the actuary to depart from the guidance of the ASOP.
Response	The reviewers made no change and refer the commentator to the last paragraph of section 1.2 and section 4.1(a) as well as ASOP No. 41, *Actuarial Communications*.
Comment	One commentator suggested that the ASOP should contain more specific discussion on how to consider different data sources, how to assign predictive value and reliance, and other guidance.
Response	The reviewers made no change and note ASOPs are intended to give general guidance rather than specific "how to" instructions.
Comment	One commentator suggested that wording be added to require a disclosure when the credibility of data has not been evaluated.
Response	The reviewers made no change, as they believe this would broaden the ASOP to mean that actuaries always need to consider the use of credibility procedures when the intent of section 1.2 is to limit the applicability of the ASOP to certain situations. Note: ASOP No. 23, *Data Quality*, provides guidance on selection of data.

SECTION 2. DEFINITIONS	
Section 2.3, Full Credibility	
Comment Response	One commentator suggested specifying that "[a]t full credibility, the relevant experience is assigned no predictive value beyond what is already provided by subject experience." The reviewers believe section 2.3 is sufficiently clear and made no change.
Comment Response	One commentator suggested that there should be a requirement that when the term "fully credible" is used, it should "be appropriately modified by describing the error tolerance and confidence level which was used to test for full credibility." The reviewers believe the definition is sufficiently clear and made no change.
Section 2.4, Relevant Experience	
Comment Response	One commentator suggested defining the phrase "parameter under study." The reviewers do not believe it is necessary to define this term.
Section 2.5, Risk Characteristics	
Comment Response	One commentator suggested changes to the definition. The reviewers believe that the definition is appropriate and also consistent with ASOP No. 12, *Risk Classification*, section 2.8, and, therefore, made no change.
Section 2.6, Risk Classification System	
Comment Response	Two commentators suggested changes to the definition. The reviewers note that the definition is appropriate and also consistent with ASOP No. 12, section 2.10 and, therefore, made no change.
SECTION 3. ANALYSIS OF ISSUES AND RECOMMENDED PRACTICES	
Section 3.1, Purpose and Use of Credibility Procedures	
Comment Response	One commentator suggested adding more guidance about the use of subject and relevant experience. The reviewers believe that section 3.3 provides appropriate guidance.
Comment Response	Two commentators point out that "valuation" is a life insurance term and suggest adding "reserving" to the list. The reviewers note that the list is not intended to be all inclusive, but note that "reserving" is likely to be correctly interpreted by all. Therefore, the reviewers are replacing the word valuation with reserving.
Comment Response	One commentator suggested substituting a new term for "expected value" in section 3.1, since the term is undefined and unused in the definition section. The reviewers agree and replaced the term with wording that is consistent with wording used in the definition section.

Section 3.2, Selection of Credibility Procedure	
Comment	One commentator suggests replacing “when blending” with “when blending or grading.” Another commentator suggests moving to “when combining.”
Response	The reviewers disagree and made no change as they believe that grading is the result of blending with factors that vary by duration.
Comment	One commentator believes the wording should be expanded to address predictive modeling.
Response	The reviewers disagree and made no change. The reviewers note that this standard addresses traditional credibility theory. While predictive modeling is addressed in the appendix, it is not explicitly referenced in the standard. To the extent traditional credibility theory per the scope of this standard is used as part of predictive modeling analysis, it is up to the actuary to determine if such work is covered by the standard.
Comment	One commentator suggests a cross reference to section 4.1(a) in regards to when methodology is prescribed by law.
Response	The reviewers note that the scope section includes a reference to section 4 for the case where methodology is prescribed by law, and made no change.
Comment	One commentator suggests moving “the actuary should consider the predictive value of more recent experience” to section 3.3.
Response	The reviewers made no change and note that this guidance applies to both subject experience and relevant experience.
Comment	One commentator suggested adding a sentence describing possible alternatives to credibility procedures, which may include statistical modeling approaches.
Response	The reviewers made no change and note that descriptions of various approaches are in appendix 1.
Section 3.3, Selection of Relevant Experience	
Comment	One commentator suggests adding underwriting to the list of considerations.
Response	The reviewers believe that underwriting is implicitly included in the category of “other determinable risk characteristics” and made no change.
Comment	One commentator questions how predictive modeling fits into the discussion.
Response	The reviewers note that predictive modeling is not explicitly addressed by this standard. However, to the extent credibility procedures within the scope of this standard are used as part of predictive modeling, the standard applies.
Comment	One commentator suggests that relevant experience be required to be fully credible.
Response	The reviewers disagree and note that fully credible experience does not always exist.
Comment	Many commentators addressed the appropriateness of the second paragraph in section 3.3.
Response	The reviewers believe that the consideration is an important one, but have removed specific guidance other than to note that professional judgment is called for.

Comment Response	One commentator suggested defining the word "material," which appeared in front of the phrase "part of relevant experience." The term "materiality" is discussed in ASOP No. 1, section 2.6, and therefore the term was not added to the definitions section in this standard.
Comment Response	One commentator suggested that wording should be added to "direct the actuary to assess the degree to which the relevant experience is predictive." The reviewers disagree and made no change, and refer the commentator to section 3.4.
Section 3.4, Professional Judgment	
Comment Response	One commentator suggests removing the reference to zero credibility here and from the standard entirely. The reviewers disagree and note that the scope statement specifically includes certain cases of zero credibility.
Section 3.5, Homogeneity of Data	
Comment Response	One commentator suggests that additional wording be added to address the balance between the size of the data set and the homogeneity of the data. The reviewers agree and made the change.
APPENDIX 1	
Comment Response	One commentator objected to the use of the phrase "greatest accuracy credibility," suggesting that it was not appropriate language and may sound grandiose to statisticians. The reviewers made no change to the terminology "greatest accuracy credibility" as this is the primary name given to the credibility approach that is also referred to as the Bühlmann approach (in multiple sections of the American Academy of Actuaries' July 2008 Credibility Practice Note).
Comment Response	One commentator recommended changing the title "Emerging Practice Involving Generalized Linear Models" to "Emerging Practice Involving Statistical Models." The reviewers agree and made the change.

ACTUARIAL STANDARDS BOARD

Actuarial Standard
of Practice
No. 26

Compliance with Statutory and Regulatory Requirements for the Actuarial Certification of Small Employer Health Benefit Plans

Developed by the
Health Committee of the
Actuarial Standards Board

Adopted by the
Actuarial Standards Board
October 1996
Updated for Deviation Language Effective May 1, 2011

(Doc. No. 144)

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

November 1996

TO: Members of Actuarial Organizations Governed by the Standards of Practice of the Actuarial Standards Board and Other Persons Interested in Compliance with Statutory and Regulatory Requirements for the Actuarial Certification of Small Employer Health Benefit Plans

FROM: Actuarial Standards Board (ASB)

SUBJ: Actuarial Standard of Practice No. 26

This booklet contains the final version of Actuarial Standard of Practice (ASOP) No. 26, *Compliance with Statutory and Regulatory Requirements for the Actuarial Certification of Small Employer Health Benefit Plans*.

Background

Recently, statutes and regulations have been enacted by a majority of states that have imposed various constraints on carriers for small employer health benefit plans. These statutes and regulations often require an actuarial certification that a small employer carrier is in compliance with the statutory or regulatory constraints. This is a new area of practice for actuaries; therefore, this actuarial standard of practice has been developed to provide guidance for actuaries preparing such certifications.

The first draft of this standard was exposed for review in October 1995, with a comment deadline of March 29, 1996. Thirty-five letters of comment were received. Additionally, the Health Committee of the ASB, as the drafting committee of this standard, presented a workshop on the proposed standard at a Society of Actuaries meeting in June 1996. The committee took very seriously its responsibility to review all of the comments it received regarding the exposure draft. Most of the comments exhibited a great deal of thought, and many of the suggestions made were incorporated into the final standard. However, no substantive positions taken in the exposure draft were changed. The committee believes that the final standard—like that of the exposure draft—correctly reflects the ASB's mission to provide guidance relating to the actuarial certifications of compliance required by state laws and regulations. (For a detailed discussion of the issues raised in the comment letters, and the committee's responses to such, please see appendix 2. Note in particular the discussion on p. 11 regarding the fact that this standard imposes a higher documentation requirement than those required by some states.)

Format Changes

A number of format changes have also been made since publication of the exposure draft. The ASB voted in May 1996 to change the format of all future actuarial standards of practice. Thus, sections 3 and 4 now form an appendix titled, Background and Current Practices. (Appendix 1 of this standard contains sections 3 and 4 of the exposure draft.) Further, sections 5 and 6 of the exposure draft have now been renumbered as sections 3 and 4. The "new" sections 3 and 4, along with sections 1 and 2, now form the actual standard of practice. The heading *Preamble*, which used to apply to the first four sections of the standard, has been deleted. The board made these format changes to help the reader distinguish between a standard's substantive requirements and language intended for general information.

The Health Committee thanks everyone who provided input during the exposure process. The comments were helpful in making revisions. The ASB voted in October 1996 to adopt the final standard.

ACTUARIAL STANDARD OF PRACTICE NO. 26

COMPLIANCE WITH STATUTORY AND REGULATORY REQUIREMENTS FOR THE ACTUARIAL CERTIFICATION OF SMALL EMPLOYER HEALTH BENEFIT PLANS

STANDARD OF PRACTICE

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

1.1 Purpose—Many states require the filing of an actuarial certification of compliance stating that the rating methods and other actuarial practices applicable to carriers for small employer health benefit plans comply with relevant statutes, regulations, or other mandatory requirements set forth in any applicable, generally distributed interpretative materials. (Hereafter, the phrase *regulatory requirements* will refer to such statutes, regulations, and/or applicable, generally distributed interpretative materials.) The purpose of this actuarial standard of practice is to guide the preparer of a certification of compliance by identifying the issues to be addressed and the required documentation regarding relevant regulatory requirements.

1.2 Scope—This standard applies to actuarial certifications of compliance prescribed by regulatory requirements that a carrier's rating methods and other actuarial practices applicable to small employer health benefit plans comply with statutory and regulatory rating constraints. Since specific regulatory requirements for such certifications vary between jurisdictions, the actuary must satisfy the specific regulatory requirements of a jurisdiction in preparing the certification.

This standard applies to rating methods and other actuarial practices only and does not apply to other market conduct activities (e.g., marketing, enrollment and billing procedures, and renewal notices) that may be covered under regulatory requirements.

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 all certifications rendered on or after January 1, 1997, regardless of the time period covered.

Section 2. Definitions

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

2.1 Actuarial Soundness—Small employer health benefit plan premium rates are actuarially sound if, for business in the state for which the certification is being prepared and for the period covered by the certification, projected premiums in the aggregate, including expected reinsurance cash flows, governmental risk adjustment cash flows, and investment income, are adequate to provide for all expected costs, including health benefits, health benefit settlement expenses, marketing and administrative expenses, and the cost of capital.

For either a retrospective or a prospective certification, the determination of actuarial soundness is based on information available at the time the premium rates were established.

2.2 Carrier—Any entity subject to state regulation that offers health benefit plan coverage for sale. *Carrier* includes an insurance company, a prepaid hospital or medical service plan, a fraternal benefit society, a health maintenance organization, and any other entity offering for sale a plan of health insurance or health benefits.

2.3 Cost of Capital—The rate of return that capital could earn in an alternative investment of equivalent risk. The source of the capital may be internal or external.

2.4 Health Benefit Plan—Any hospital or medical policy or certificate; medical expense insurance; or subscriber contract or contract of insurance provided by a prepaid hospital, medical service plan, or health maintenance organization.

2.5 Small Employer—Any person, firm, corporation, partnership, or organization that employs a number of eligible employees within a statutorily specified range that has an upper bound and that satisfies any other statutorily defined criteria.

2.6 Subsequent Events—Subsequent events are events (1) that have occurred since the end of the certification period and before the date of the certification, (2) that could materially affect current or future certifications rendered, and (3) about which the actuary has knowledge.

Section 3. Analysis of Issues and Recommended Compliance

3.1 Introduction—The purpose of the actuarial certification of compliance is to satisfy applicable regulatory requirements. This certification should be appropriate to the circumstances. The actuary should review the applicable regulatory requirements, which generally contain a statement of purpose that the actuary should keep in mind when preparing the certification of compliance. The actuary should also consider any other mandatory requirements set forth in any applicable, generally distributed interpretive materials issued by regulators in support of the applicable regulatory requirements, and should satisfy those requirements when preparing the certification.

3.2 Testing of Rates for Compliance with Rating Constraints—The actuary should ensure that sufficient testing has been done so that he or she is reasonably satisfied that there are no material violations of the rating constraints. Such testing should be detailed enough to assure that an appropriate range of health benefit plan designs and demographic characteristics has been tested.

3.3 Analysis of Rates for Actuarial Soundness—If required, the actuary should perform sufficient analysis so that he or she is reasonably satisfied the rates are actuarially sound. For a *retrospective* certification of actuarial soundness, the certification relates to the premium rates in effect during the time period to which the certification applies, and the determination of actuarial soundness should be based on information that was reasonably available at the point in time when the premium rates were established. For a *prospective* certification of actuarial soundness, the certification relates to the premium rates developed for the time period to which the certification applies.

3.4 Documentation of Compliance—Documentation should be available to support the actuarial certification, and should include the items listed in sections 3.4.1–3.4.3 below, if applicable. The state will define what documentation should be submitted, if any.

3.4.1 Rating Methods and Underwriting Practices—Materials that have been reviewed in order to certify compliance with requirements for rating methods and new business and renewal underwriting practices, such as the following:

a. a description of the carrier's rating methods and new business and renewal underwriting practices; this should include any exceptions or variations that may be used for the business or any subset of the business for which rates are determined;

b. when actuarial soundness is being certified, experience, reinsurance, pooling considerations, and other relevant data used in the analysis of the business for which rating practices are being certified;

c. the health benefit plan contracts and certificates;

d. the sales brochures and other materials for each health benefit plan;

e. the rating manual;

f. formulas for calculating any group's rate from the rating manual, including both new business rates and renewal rates;

g. a sufficient sample of test calculations of the rating formulas to verify that the rates actually being charged are in accordance with the rating manuals;

h. a description of any material changes to previously reviewed health benefit plan contracts and certificates that were not mandated by regulatory requirements;

i. information concerning any policy fees, administrative charges, or application charges that may apply to any group in any class of business, regardless of whether such fees or charges are remitted to the carrier; and

j. any other information prescribed by the regulatory requirements.

3.4.2 Demonstration of Compliance with Rating Constraints—A written demonstration supporting the actuarial certification that the rates are in compliance with applicable regulatory requirements. The demonstration should include an explanation as to how items such as classes of business, average rates, rating bands, and rate increases comply with statutory and regulatory rating constraints.

3.4.3 Demonstration of Compliance with Actuarial Soundness—If a certification of actuarial soundness is required, a written demonstration supporting the determination, including documentation of underlying assumptions.

3.5 Time Period Covered by Certification—The actuary's certification that the rates are in compliance should apply to the time period specified by applicable regulatory requirements. In the absence of any specification in such regulatory requirements, the actuary should generally certify to the prior calendar year. In any event, the actuary should explicitly state the time period to which the certification applies.

3.6 Qualified or Limited Opinions—If the actuary is aware that any rating methods or other practices are not in compliance with applicable regulatory requirements, such noncompliance should be reported in a qualified opinion. If the regulatory requirement requires a certification of actuarial soundness and the actuary does not believe the rates are actuarially sound, even though they are in compliance with the regulatory requirements, this should be noted in a qualified opinion. If the actuary is not able to certify some of the items required in the regulatory requirement, this should be noted in a limited opinion.

Section 4. Communications and Disclosures

4.1 Content of Certification—The content of the certification should include, as a minimum, the following:

a. certification whether all practices, as required by regulatory requirement to be included in the certification, are in compliance;

b. a listing of practices that are covered in the certification;

c. identification of the time period covered by the certification;

d. changes in rating methods and other practices that have occurred during the time period covered by the certification and that affect compliance;

e. a description of any subsequent events;

f. where a qualified certification is given, any actions that are being taken to bring the carrier into compliance; and

g. where a limited certification is given, any sections of the regulatory requirements regarding certification that are not addressed.

4.2 Additional Required Disclosure—If the actuary is unable to certify actuarial soundness based on sections 2.1 and 3.3 of this standard, but certifies actuarial soundness based on regulatory requirements at variance with those sections, the actuary should so state in the certification. The actuary should also include the following, as applicable, in an actuarial communication:

a. the disclosure in ASOP No. 41, *Actuarial Communications*, 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.

Appendix 1

Background and Current Practices

Note: This appendix is provided for informational purposes, but is not part of the standard of practice.

Background

In 1990, the National Association of Insurance Commissioners (NAIC) adopted a model act relating to small employer health insurance availability titled, *Premium Rates and Renewability Coverage for Health Insurance Sold to Small Employer Groups*. Since that time, two additional model acts have been adopted: *Small Employer Health Insurance Availability (Allocation with or without an Opt-out)*, and *Small Employer Health Insurance Availability (Prospective Reinsurance with or without an Opt-out)*; as well as a model regulation, *Model Regulation to Implement the Small Employer Health Insurance Model Act (Prospective Reinsurance with or without an Opt-out)*.

Recently, statutes and regulations enacted by a majority of states, often adopting some sections of the NAIC model regulations, have imposed statutory and regulatory constraints on carriers for small employer health benefit plans. These constraints may vary substantially from the NAIC model regulations, but generally have a similar intent. In particular, many of these statutes and regulations focus on narrowing the differences between premium rates charged to individual small employers with similar plan designs and case characteristics. The stated goals of these regulations often include the broad pooling of risks, the avoidance of extreme rate differences (which have occurred under certain tier and durational rating methods), and the expansion of access to health insurance coverage.

Current Practices

As noted above, applicable regulatory requirements vary considerably as to the extent of rating constraints imposed, as well as the specific language describing such constraints. In most situations, few, if any, restrictions exist as to the number and design of health benefit plans that can be offered in the marketplace. The current variety of state statutes and regulations renders it extremely difficult to provide precise rules for determining compliance. These conditions necessitate that the actuary apply a great deal of judgment in completing the certification of compliance.

Appendix 2

Comments on the Exposure Draft and Committee Responses

The first draft of this standard was exposed for review in October 1995, with a comment deadline of March 29, 1996. Thirty-five letters of comment were received. Additionally, the Health Committee of the ASB presented a workshop on the proposed standard at a Society of Actuaries meeting in June 1996 at Colorado Springs, which was attended by thirty-seven individuals (most responded positively to the proposed standard's text). Summarized below are the significant issues raised and questions contained in the comment letters, printed in lightface. The committee’s responses to those issues appear in **boldface**.

Note also that, as mentioned in the transmittal memorandum to this standard of practice, the ASB adopted on May 1, 1996, a new format for all actuarial standards of practice. (See p. v for a detailed explanation of such changes.) Thus, the section numbers below refer to section numbers in the exposure draft, unless otherwise noted (some section numbers have remained the same).

<u>General Observations</u>

The nature of the comment letters reflected the divergence of opinion on the subject of the standard. Many respondents commented that they thought the standard represented a reasonable effort to assist the actuary in preparing the certification of compliance. Others thought that, given the “actuarially unsound” nature of the rating constraints prescribed by state law, it is impossible to produce a reasonable standard. Some respondents requested that the standard make clearer that it is simply a *guide* to compliance and does not represent a validation of the rating constraints. A few respondents suggested that the standard be expanded to go beyond certifications and include other aspects of rating and financial solvency. Others requested that the standard address issues unique to individual states. It was also suggested that the title be changed to more accurately reflect the nature of the standard.

Promulgation of this standard does not imply either approval or disapproval of the nature of prescribed laws in various states. The purpose of the standard is to provide the actuary with guidance regarding certifications of compliance with prescribed laws. In the event the actuary believes the rating constraints prescribed by law are “actuarially unsound,” the standard allows the actuary to issue a qualified opinion regarding actuarial soundness (if necessary), while certifying compliance with other aspects of the law as necessary (see section 3.6). The scope of the standard has not been expanded to go beyond actuarial rating practices or other aspects of rating and financial solvency. Further, due to the variance in state laws, as well as the dynamic nature of these laws, it would not be appropriate nor realistic to address within the standard the compliance requirements for each state. The title of the standard was not changed. The ASB felt that the nature of the standard is adequately detailed in the purpose and scope sections (see sections 1.1 and 1.2).

Transmittal Memorandum Questions

In the transmittal memorandum to the exposure draft of this standard, the committee posed four questions to practitioners to keep in mind while reading the text. The questions are reprinted in full below:

1. Some regulations require an actuary to certify that market conduct activities, which are often non-actuarial in nature, are in compliance with the regulations. The proposed standard does not address these non-actuarial activities. Is this an appropriate approach?

2. Many regulations do not make specific provision for limited or qualified opinions. This standard provides that the actuary may issue such limited or qualified opinions. Is this approach satisfactory?

3. Sections 5.4 and 6.1 define minimum requirements for the documentation and content of certifications, respectively. Given the varying nature of statutes and regulations in effect, are the requirements in this proposed standard either too restrictive or not comprehensive enough?

4. Section 2.1 provides a definition of *actuarial soundness* for purposes of this standard. Is this definition satisfactory for the purposes of preparing a certification in those states requiring a certification of actuarial soundness?

Comments on the four issues listed above, and the committee responses to such, follow.

Transmittal Memorandum Issue #1: Non-Actuarial Matters—Several respondents commented on whether the standard should be expanded to address non-actuarial items. The responses ranged across the full spectrum of options. Some respondents thought it would be inappropriate for non-actuarial issues to be addressed in an actuarial standard of practice. Others thought it was a weakness for the standard not to give detailed guidance regarding all matters relative to which the actuary is certifying. One respondent pointed out that there is not necessarily a clear distinction between actuarial and non-actuarial topics, and he suggested that the standard should address all issues that could be interpreted to be actuarial in nature. Some respondents suggested that some general guidance would be helpful relative to non-actuarial matters, such as enlisting an officer of the company to certify those items that are beyond the scope of the actuary's expertise. **The committee continues to believe that it is not appropriate for this actuarial standard of practice to set standards for any non-actuarial activities related to actuarial certification of compliance with statutes or regulations (hereafter referred to as *regulatory requirements*) for small employer health benefit plans. Thus, the standard does not address any such non-actuarial activities.**

Transmittal Memorandum Issue #2: Limited or Qualified Opinion—With one exception, the respondents agreed that it *is* appropriate for the standard to authorize the issuance of a limited or qualified opinion. The contrary respondent stated that "the regulation need not mention a partial or qualified opinion for one to be given by an actuary with integrity." Several of the respondents noted that the qualified or limited opinion should include clear statements as to the nature of the qualification or limitation. One respondent asked for more details in the standard regarding the circumstances that would necessitate such an opinion and its contents. Another respondent noted that it would be the regulators' decision as to whether to accept that such an opinion satisfied a state's regulatory requirements. **The committee was pleased with the overwhelming support for the option of using a limited or qualified opinion, which is contained in section 3.6 of the standard. However, individual states will still need to determine—on an individual basis—how to respond to any qualified opinions that may be submitted.**

Transmittal Memorandum Issue #3: Minimum Requirements for Documentation and the Content of the Certification—For this issue, responses varied between those that thought the standard's requirements are reasonable and those that believed the requirements are excessive. The most common criticism was that the documentation and certification requirements should not extend beyond those explicitly mandated by law. One respondent was particularly concerned that the inclusion of "subsequent events" in the certification went beyond any regulatory requirement. Another thought that some guidance ought to be given where state law mandated different requirements than the standard. **It was the intention of the committee to set high standards for required documentation, as evidenced in the exposure draft. Given the nature of the certification of compliance required and the potential reliance placed upon such certification, the required documentation was established at a level the committee felt represented good actuarial practice. The committee felt that supporting documentation at this level would be to the actuary's advantage if the actuary were ever required to support the relevant certification. However, note that only documentation specifically required by a state need actually be submitted. The "subsequent events" test was another area where, because the committee believes it to be good actuarial practice, the committee deliberately set a standard that was higher than that specifically required by several states.**

Transmittal Memorandum Issue #4: Definition of *Actuarial Soundness*—Many respondents voiced the opinion that state laws pertaining to small employer health benefit plan ratemaking are inherently actuarially unsound. In light of this perception, many argued that not only should no definition of *actuarial soundness* be attempted, but that the existence of any standard of practice at all is, at best, giving undue credibility to unsound laws. Other respondents went even further and suggested that it is professionally unconscionable to promulgate any standard on this particular subject. Some felt that a standard could be produced without including a definition of *actuarial soundness*, but they argued that the standard should make clear that it was merely a tool for implementing statutorily mandated certifications. Others argued for producing a standard without a definition of *actuarial soundness* because states interpret this phrase in different ways, thereby making any single definition impossible. One respondent argued that no definition is needed because the drafters of the model legislation probably did not have a precise concept in mind when they inserted this phrase.

Many of the respondents suggested changing the definition. Some wanted to include a clearer statement that this definition only applies to the small group certification, and that other situations would call for differing definitions. Several respondents asked for clarification as to whether the definition is prospective or retrospective in nature. Many questioned limiting the time period to that "covered by the certification," arguing that actuarial soundness is more long-term in nature. Several respondents questioned the aggregate nature of the definition, and suggested that *actuarial soundness* necessitates that each rate is determined using appropriate methods. Some respondents asked that the definition allow for expenses to be determined on a marginal basis and that subsidies be permitted between the small group and other lines of business. One commentator suggested that the definition be made more general so as to allow the carrier to better respond to competitive forces.

Another respondent suggested that the restriction to a single state is too narrow, and also requested some recognition of initial losses incurred by start-up companies. One writer suggested that the phrase “based on information that was reasonably available at the point in time when the premium rates were established” be added. Another asked for clarification as to how this definition relates to the standards on risk classification and rate filings [see Actuarial Standard of Practice (ASOP) Nos. 8 and 12]. Some respondents asked that *investment income* be added to the definition, and one asked that the phrase *cost of capital* be clarified.

The committee carefully considered all of the responses received regarding the definition of *actuarial soundness*, but basically reaffirmed the scope of the definition used in the exposure draft. In developing the definition, the committee grappled with two main issues: (1) the definition needed to work within the context of the certification of compliance being prepared, and (2) the definition had to be one such that an actuary addressing a small group line of business could reasonably certify to. The committee feels the definition in this standard meets these two defining characteristics.

With regard to the comment that no definition of *actuarial soundness* should be attempted, the committee believes that, since the standard relates to actuarial issues, and since many of the applicable laws, including the NAIC model laws, require the actuary to address *actuarial soundness*, it *is* appropriate to address the issue within this standard. Further, the committee believes it has created a better standard of practice by doing so.

Although the committee did not alter its position on the scope of the definition or the necessity of including such a definition within the standard, the committee did make the following changes to the definition of *actuarial soundness*, based on the comments received: (1) combined the original retrospective and prospective definitions into a single definition; (2) inserted the phrase “including expected reinsurance cash flows, governmental risk adjustment cash flows, and investment income, . . .”; (3) inserted the word *expected* before *costs*; (4) changed *health benefit expenses* to *health benefits*; (5) changed *operational* to *marketing*; and (6) inserted a second paragraph, as follows: “For either a retrospective or a prospective certification, the determination of actuarial soundness is based on information available at the time the premium rates were developed.”

The committee notes that the definition of *actuarial soundness* used is an aggregate definition. It is based on the premise that actuarial soundness is an aggregate rate adequacy test. Some commentators suggested a more specific definition be used, based on the rates having appropriate actuarial balance or equivalence between benefit plans or demographic risk characteristics. This approach was considered by the committee, but ultimately rejected.

Issues relating to how to address expense allocations were viewed as too narrow to be considered here. These are valid issues for the pricing actuary to consider in practice.

As noted in section 2, the definitions included in the standard are defined for use *in this standard of practice*. Although it might be helpful to develop definitions that would have more widespread acceptance, the nature of the certification seems to preclude the development of such definitions. However, the committee did add one definition, that of *cost of capital*.

With regard to the request for clarification as to how this definition relates to the standards of practice on risk classification and rate filings, the committee believes that this standard does not conflict with these other ASOPs.

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

Section 1.1, Purpose—Two comments were received on this section. One suggested that the purpose of the standard be broadened to address more elements of small group reform that may impact the certification. The other suggested that the phrase "actuarial practices applicable to carriers for small employer health benefit plans" was too broad, in that there are actuarial practices, such as setting reserves, that are beyond the scope of the standard. **The committee believes that the language in the Purpose section is appropriate. It is the purpose of this standard of practice to address actuarial items relative to which the states require a certification of compliance. It is not appropriate for the standard to go beyond that.**

Section 1.2, Scope—One respondent proposed that the standard be expanded to include issues pertaining to financial solvency. (Comments regarding certification of market conduct compliance are discussed above under Transmittal Memorandum Issue #1.) **As stated in the committee response to section 1.1 (see above), the committee believes it is not appropriate to extend the scope beyond the required *actuarial* aspects of the certification.**

Section 1.3, Effective Date—Comments were received asking for clarification as to the meaning of the January 1, 1997 date. **The committee changed the wording in an effort to clarify its intent.**

<u>Section 2. Definitions</u>

Section 2.1, Actuarial Soundness—See the comments above (again, the committee's response is in **bold**) under Transmittal Memorandum Issue #4.

Section 2.2, Carrier—One respondent suggested changing "*Carrier* includes an insurance company, . . ." to "*Carrier* includes, but is not limited to, an insurance company . . .". It was also suggested that the standard clarify that it is the definition of *carrier* in the state regulation that is the controlling factor. **The committee believes the existing language is suitable and is sufficiently broad to include any entity regulated by the states.**

Section 2.3, Health Benefit Plan—Comments included substituting *medical* for *health* and changing the words to read "provided by a small employer carrier." **The committee believes that the existing language is consistent with common usage in regulatory requirements.**

Section 2.4, Small Employer—One respondent suggested that the actuary certify that the small employers that are insured meet the statutory definition. Others suggested that the definition be modified to clarify that statutory constraints may exist as to who is considered an eligible employee, over what time period the number of eligible employees is determined, and the handling of small employers whose employees are in more than one state. Another suggested that an example of a specific upper bound be provided, such as 50, in order to list specifically what size group would typically be subject to this standard. Another respondent suggested that the phrase *For purposes of this standard* be added at the beginning of the definition, and another suggested that the definition be changed to eliminate the reference to *association*. **Based on the comments received, the committee made the following changes: (1) the word *association* was changed to *organization*; (2) the word *eligible* was inserted before *employees*; and (3) the phrase *and that satisfies any other statutorily defined criteria* was added. In addition, all standards of practice now contain the following introductory sentence, which applies to all definitions listed in section 2: "The definitions below are defined for use in this actuarial standard of practice."**

Section 2.5, Subsequent Events—One commentator suggested dropping the phrase *or future*. **The committee considered this suggestion, but decided not to make this change.**

<u>Section 3. Background and Historical Issues (now in Appendix 1 under Background)</u>

Suggestions included removing the last sentence, adding the phrase *and case characteristics* in the next to last sentence of the second paragraph, and removing the first paragraph entirely on the grounds that these points are more appropriately included in the Scope and Purpose sections. **The committee added the phrase *and case characteristics* to more accurately reflect the intent of the regulatory requirements. The committee also decided to leave the first paragraph in this section, because it believes that this material *does* address the historical background pertaining to the subject of the standard.**

<u>Section 4. Current Practices and Alternatives (now in Appendix 1 under Current Practices)</u>

The only comment on this section was a suggestion to revise the last paragraph to read, "While the current variety of state statutes and regulations and the variety of reasonable interpretations of these statutes and regulations render it extremely difficult to provide precise rules for determining compliance, . . .". **The committee revised the wording in the paragraph to improve readability.**

<u>Section 5. Analysis of Issues and Recommended Compliance (Now Section 3)</u>

Section 5.1, Introduction (now section 3.1)—One respondent suggested adding as a separate item the interpretive material distributed by the state insurance department to the list of items for review. Another suggested deleting the last clause of the last sentence. **The committee added the following sentence:**

> **The actuary should also consider any other mandatory requirements set forth in any applicable, generally distributed interpretive materials issued by regulators in support of the applicable regulatory requirements, and should satisfy those requirements when preparing the certification.**

Section 5.2, Testing of Rates for Compliance with Rating Constraints (now section 3.2)—One respondent suggested adding the following text: "Testing of rates in a community rating system may consist of an examination of the methods and factors used, and audits of their implementation." Another suggested adding the sentence, "All known violations of the rating constraints that result in a rate materially higher than permitted by the statute or regulation must be addressed in a qualified opinion." This respondent suggested that *material* be defined as no greater than 5%. Another thought the words *reasonably*, *materially*, and *appropriate* were too general to be consistently interpreted. **As for the first comment, the committee believes that the suggested language represents a specific example, whereas the standard (appropriately) addresses only the general case. It would be very difficult indeed to create a standard that could address all specific concerns, and, thus, the change was not made. As for the second comment, the committee did not provide definitions for the words *material*, *reasonable*, or *appropriate*, since these words are used frequently in actuarial literature. The definitions of such words are dependent on the context of their use.**

Section 5.3, Testing of Rates for Actuarial Soundness (now section 3.3 and titled Analysis of Rates for Actuarial Soundness)—A couple of respondents suggested substituting *testing* for *analysis* in the first sentence. Several respondents also questioned whether the description of the *retrospective* certification makes sufficiently clear that it is not a test of actual results. One respondent suggested that adding the word *expected* before the word *costs* in the definition of *actuarial soundness* might make this point clearer. Two of the respondents suggested that a retrospective certification is theoretically inappropriate, in that such a certification ignores the most relevant information available. One respondent suggested that only the first sentence be retained, or that the remaining sentences be modified to be more general in nature. Another asked for clarification as to how a certification that is both retrospective and prospective should be handled, and another suggested that the language more specifically point out that "each rate certified is clearly subject to certification only once." Another questioned the value of prospective certifications, given that rate schedules change so frequently. **In response to the first comment listed above, the committee did change the word *testing* to *analysis* (the title to the section was also changed accordingly). The definition of *actuarial soundness* was also revised so that the description of a retrospective certification is more clear. As for the remainder of the comments regarding this section, they apply to the appropriateness of state legislation, and, as such, the topic of these comments is outside the scope of the ASOP.**

Section 5.4, Documentation of Compliance (now section 3.4)—One respondent pointed out that there was no mention of a requirement within the standard relating to the documentation of the data used and commentary on the quality of the data. Another wanted the phrase *if applicable* added to the end of the first sentence. Another suggested that if the actuary receives information from a source outside the actuary's firm, the actuary should obtain signed correspondence from the source verifying the accuracy and completeness of the information. **As for the first comment, a standard already exists on data quality (see ASOP No. 23), so the committee did not believe that any additional language on this subject was necessary within this standard. As for the second comment, the phrase *if applicable* was added at the end of the first sentence. The suggestion regarding obtaining signed correspondence may be a good idea in practice, and the committee notes that such a practice can be used. However, this practice is not *required* by the standard.**

Section 5.4.1, Rating Methods and Renewal Underwriting Practices (now section 3.4.1 and titled Rating Methods and Underwriting Practices)—One respondent suggested changing the title to Rating Methods and New Business and Renewal Underwriting Practices. Others suggested deleting sections (b), (c), and (g) on the grounds of being overly burdensome on small companies. Another thought that all of the sections should be eliminated. If the sections were not eliminated, this respondent suggested combining sections (a), (d), and (e); combining sections (b) and (g); and eliminating section (c). Another suggested that the list of items should be expanded to include the basis of the data on which claims were estimated, corporate practices regarding expense and investment income allocation, pooling/reinsurance mechanisms, and any subsidizing of the small group line by other lines. A couple of respondents also suggested removing the parentheses from the parenthetical phrase in section (a). **In response to the above comments, the committee changed the title of this section by removing the word *renewal*. The committee also added a new section (b) in response to comments received on investment income, pooling/reinsurance, and other items. Further, the committee removed the parentheses in section (a), as was suggested.**

Section 5.4.2, Fees and Charges (now section 3.4.1(i))—One respondent welcomed the reference to fees or charges that may or may not be remitted to the carrier. Another respondent asked for clarification relative to the treatment of association dues. **This section was moved to section 3.4.1, Rating Methods and Underwriting Practices, as being one of several items that are usually reviewed in order to certify compliance with requirements for rating methods and new business and renewal underwriting practices. As for the latter comment, the answer is dependent on regulatory interpretation, and, thus, the material is too specific for this ASOP.**

Section 5.4.3, Demonstration of Compliance with Rating Constraints (now section 3.4.2)—One respondent asked for clarification as to whether the standard requires that the documentation supporting the certification be submitted to regulators. **The committee believes that *regulators* define what documentation they should receive, not the ASOP. Thus, no change was made to the text.**

Section 5.4.4, Demonstration of Compliance with Actuarial Soundness (now section 3.4.3)—One respondent asked for clarification as to whether the required documentation was similar to the actuarial memorandum regulation required for the statutory annual statement. This respondent also asked for clarification regarding the extent to which this information would be considered confidential. One respondent suggested that methods be included as well as assumptions. Another respondent commented that while this section reflected “common sense,” it was good to explicitly include it. Two others suggested that this section be eliminated. **All of the items described within this section of the standard (i.e., everything in sections 3.4.1–3.4.3) are to be available in the file, but not submitted to the regulator unless requested, as noted in the introductory paragraph of section 3.4.**

Section 5.5, Time Period Covered by Certification (now section 3.5)—One respondent suggested deleting the second sentence. Another suggested that compliance should only be certified prospectively. **The committee did not make any changes to the second sentence, since it believes that this text provides some flexibility and room for actuarial judgment. The other comment reflects upon the appropriateness of the *regulation*, which, again, is outside the scope of the ASOP.**

Section 5.6, Qualified or Limited Opinions (now section 3.6)—One respondent suggested deleting the second sentence. Another asked for more explanation regarding what circumstances would warrant a qualified or limited opinion. **The committee believes that the section contains sufficient information regarding the circumstances that necessitate a qualified or limited opinion.**

Section 6. Communications and Disclosures (Now Section 4)

Section 6.1, Content of Certification (now section 4.1)—One respondent stated that the certification should explicitly include the statement that the plan is actuarially sound for the period involved, and that the certification should explicitly include the definition of *actuarial soundness* that is being utilized. Another asked for clarification of section 6.1(d), and pointed out that many of the other sections within section 6.1 seem overlapping and redundant. Another asked that information regarding the name of the actuary and corporate affiliation be required, and that a description of the data used should be included.

Regarding the first point raised, the committee reaffirmed its decision that a certification need only address *actuarial soundness* if required by regulatory requirement. To do otherwise would significantly expand the scope of such a required certification in states where such a certification is not required. In practice, the actuary can always include a certification of actuarial soundness even when not required. If the actuary is using a definition of *actuarial soundness* that differs from that contained in the standard of practice, it must be so noted, either as indicated in the new section 4.2 or in a qualified opinion, as appropriate. (If the actuary is using the standard's definition of *actuarial soundness*, it is not necessary to include such in the certification.) As for the comment that the sections listed in section 6.1 seem overlapping and redundant, the committee believes that section 6.1 (now section 4.1) does not contain overlapping material. The committee decided to leave the items listed in this section unchanged.

The committee thanks everyone who took the time and made the effort to write comment letters. The input was helpful in developing the final standard.

ACTUARIAL STANDARDS BOARD

Actuarial Standard
of Practice
No. 27

Revised Edition

Selection of Economic Assumptions for Measuring Pension Obligations

Developed by the
Pension Committee of the
Actuarial Standards Board

Adopted by the
Actuarial Standards Board
June 2020

Doc. No. 197

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APPENDIXES

June 2020

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

FROM: Actuarial Standards Board (ASB)

SUBJ: Actuarial Standard of Practice (ASOP) No. 27

This document contains a revision of ASOP No. 27, *Selection of Economic Assumptions for Measuring Pension Obligations*.

History of the Standard

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 ASOP No. 27 was issued in September 2013.

In response to specific requests for changes in the ASOPs 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 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. Draft revisions of ASOP Nos. 4, 27, and 35 were exposed for comment in March 2018 with a comment deadline of July 31, 2018.

First Exposure Draft

The first exposure draft was issued in March 2018 with a comment deadline of July 31, 2018. Eighteen comment letters were received and considered in making changes that were reflected in the second exposure draft.

Second Exposure Draft

The second exposure draft was issued in June 2019 with a comment deadline of September 15, 2019. Eight comment letters were received and considered in making changes that are reflected in this revised ASOP.

Notable Changes from the Second Exposure Draft

Notable changes made to the second exposure draft are summarized below. Additional changes were made to improve readability, clarity, or consistency within this ASOP and ASOP No. 35.

1. Section 3.8.3(j), Forward-Looking Expected Investment Returns, was modified to delete the educational material on forward-looking expected geometric and arithmetic returns.

2. Section 3.16, Documentation, was revised to remove the requirement that when preparing documentation the actuary should prepare documentation in a form such that another actuary qualified in the same practice area could assess the reasonableness of the actuary's work or could assume the assignment if necessary.

In addition, a number of changes were made to improve readability, clarity, or consistency within this ASOP and with ASOP No. 35. Please see appendix 2 for a detailed discussion of the comments received and the reviewers' responses.

Summary of Notable Changes from the Existing ASOP No. 27 Adopted September 2013

Notable changes from the existing ASOP No. 27 adopted September 2013 are summarized below.

1. Section 1.2, Scope, was expanded to clarify the application of the standard when an economic assumption is not selected by the actuary and whenever the actuary has an obligation to assess the reasonableness of an economic assumption that the actuary has not selected.

2. Section 3.5.6, Views of Experts (now Other Sources of Economic Data and Analyses), was renamed and clarified to provide for use of other sources of economic data and analyses.

3. Section 3.6, Select a Reasonable Assumption, was clarified to acknowledge that relevant historical data may not exist.

4. Section 3.6.3, Combined Effect of Assumptions, was added to provide guidance regarding the combined effect of assumptions.

5. Section 3.8.3(j), Forward-Looking Expected Investment Returns, was modified to delete the educational material on forward-looking expected geometric and arithmetic returns.

6. Section 3.13, Reviewing Assumptions Previously Selected by the Actuary, was added to provide additional guidance regarding the reviewing of assumptions that the actuary previously selected.

7. Section 3.14, Assessing Assumptions Not Selected by the Actuary, replaced previous section 3.13, Prescribed Assumption(s), and was expanded to provide additional guidance regarding assessing assumptions not selected by the actuary.

8. Section 3.15, Phase-In of Changes in Assumptions, was added to provide guidance regarding the phase-in of changes in assumptions.

9. Section 3.16, Documentation, was added to provide guidance regarding documentation.

10. Section 4.1.2, Rationale for Assumptions, was modified concerning the disclosure of the rationale for assumptions and was clarified concerning the application to planned assumption changes after the measurement date.

The ASB thanks everyone who took the time to contribute comments and suggestions on the exposure drafts.

The ASB also thanks its former Pension Committee members and, in particular, former Pension Committee Chairperson Christopher F. Noble for their contributions in the drafting of this standard.

The ASB voted in June 2020 to adopt this standard.

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.

ACTUARIAL STANDARD OF PRACTICE NO. 27

SELECTION OF ECONOMIC ASSUMPTIONS FOR MEASURING PENSION OBLIGATIONS

STANDARD OF PRACTICE

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

1.1 Purpose—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) economic assumptions—primarily investment return, discount rate, post-retirement benefit increases, **inflation**, and compensation increases—for measuring obligations under defined benefit pension plans;

b. supplements the guidance in ASOP No. 4, *Measuring Pension Obligations and Determining Pension Plan Costs or Contributions*, that relates to the selection and use of economic 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 economic 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 Scope—This standard applies to actuaries when performing actuarial services that include selecting economic assumptions 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.

Throughout this standard, any reference to selecting economic assumptions also includes giving advice on selecting economic assumptions. For example, the actuary may provide advice on selecting economic 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.

As discussed in ASOP No. 41, *Actuarial Communications*, an assumption may be selected by the actuary or selected by another party. Nothing in this standard is intended to require the actuary to select an economic assumption that has otherwise been selected by another party. When an economic assumption is not selected by the actuary, the guidance in section 3.14 and section 4 concerning assessment and disclosure applies.

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.

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 is effective for any actuarial report that meets the following criteria: (a) the actuarial report is issued on or after August 1, 2021; and (b) the **measurement date** in the actuarial report is on or after August 1, 2021.

Section 2. Definitions

The terms below are defined for use in this actuarial standard of practice and appear in bold throughout the ASOP.

2.1 Inflation—General economic **inflation**, defined as price changes over the whole of the economy.

2.2 Measurement Date—The date as of which the values of the pension obligations and, if applicable, assets are determined.

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

2.4 Merit Adjustments—The rates of change in an individual's compensation attributable to personal performance, promotion, seniority, or other individual factors.

2.5 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**.

2.6 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**.

2.7 Productivity Growth—The rates of change in a group's compensation attributable to the change in the real value of goods or services per unit of work.

Section 3. Analysis of Issues and Recommended Practices

3.1 Overview—Pension obligation values incorporate assumptions about pension payment commencement, duration, and amount. Pension obligation values also require discount rates to convert future expected payments into present values. Some of these assumptions are economic assumptions covered under this ASOP, and some are noneconomic assumptions covered under ASOP No. 35, *Selection of Demographic and Other Noneconomic Assumptions for Measuring Pension Obligations*. In order to measure a pension obligation, the actuary will typically need to select or assess assumptions underlying the obligation.

3.2 Identification of Types of Economic Assumptions Used in the Measurement—The actuary should identify the types of economic assumptions to use for a specific measurement. In doing so, the actuary should take into account the following:

a. the purpose of the measurement;

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

c. materiality of the assumption to the measurement (see section 3.5.2).

The types of economic assumptions used to measure pension obligations may include **inflation**, investment return, discount rate, compensation increases, and other economic factors such as Social Security, cost-of-living adjustments, rate of payroll growth, growth of individual account balances, and variable conversion factors.

3.3 General Selection Process—After identifying the types of economic assumptions to be used for the measurement, the actuary should follow the general process set forth below for selecting each economic assumption for a specific measurement:

a. identify components, if any, of the assumption;

b. evaluate relevant data (section 3.4);

c. take into account factors specific to the measurement;

d. take into account other general considerations, when applicable (section 3.5); and

e. select a reasonable assumption (section 3.6).

After completing these steps for each economic assumption, the actuary should review the set of economic assumptions for consistency (section 3.12) and make appropriate adjustments if necessary.

3.4 Relevant Data—To evaluate relevant data, the actuary should review appropriate recent and long-term historical economic data. The actuary should not give undue weight to recent experience. The actuary should take into account the possibility that some historical economic data may not be appropriate for use in developing assumptions for future periods due to changes in the underlying environment.

3.5 General Considerations—The actuary should take into account the following when applicable:

3.5.1 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 economic assumptions to provide for adverse deviation or reflect plan provisions that are difficult to measure. The actuary should disclose any explicit adjustment made in accordance with section 4.1.1.

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

3.5.3 Cost of Using Refined Assumptions—The actuary should take into account the balance between refined economic assumptions and the cost of using refined assumptions. For example, actuaries working with small plans may prefer to emphasize the results of general research to comply with this standard.

3.5.4 Rounding—Taking into account the purpose of the measurement, materiality, and the cost of using refined assumptions, the actuary may determine that it is appropriate to apply a rounding technique to the selected economic assumption. In such cases, the rounding technique should be unbiased.

3.5.5 Changes in Circumstances—The actuary should select economic assumptions that reflect the actuary's knowledge as of the **measurement date**. If the actuary learns of an event occurring after the **measurement date** that would have changed the actuary's selection of an economic assumption, the actuary may reflect this change as of the **measurement date**. For example, a collective bargaining agreement ratified after the **measurement date** may lead the actuary to change the compensation increase assumption that otherwise would have been selected.

3.5.6 Other Sources of Economic Data and Analyses—When the actuary is responsible for selecting or giving advice on selecting economic assumptions, the actuary may incorporate economic data and analyses from a variety of other sources, including representatives of the plan sponsor and administrator, investment advisors, economists, and other professionals. However, the selection or advice should reflect the actuary's professional judgment.

3.6 Selecting a Reasonable Assumption—The actuary should select reasonable economic assumptions. 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 current and historical data that is relevant to selecting the assumption for the **measurement date**, to the extent such relevant data is reasonably available;

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 is expected to have 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 3.5.1) 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*.

3.6.1 Reasonable Assumption Based on Future Experience or Market Data—The actuary should develop a reasonable economic assumption based on the actuary's estimate of future experience, the actuary's observation of the estimates inherent in market data, or a combination thereof. Examples of how the actuary may observe estimates inherent in market data include the following:

a. comparing yields on **inflation**-indexed bonds to yields on equivalent non-**inflation**-indexed bonds as a part of estimating the market's expectation of future **inflation**;

b. comparing yields on bonds of different credit quality to determine market credit spreads;

c. observing yields on U.S. Treasury debt of various maturities to determine a yield curve free of credit risk; and

d. examining annuity prices to estimate the market price to settle pension obligations.

The items listed above, as well as other market observations or prices, include estimates of future experience as well as other considerations. For example, the difference in yields between **inflation**-linked and non-**inflation**-linked bonds may include premiums for liquidity and future **inflation** risk in addition to an estimate of future **inflation**. The actuary may want to adjust estimates based on observations to reflect the various risk premiums and other factors (such as supply and demand for tradable bond or debt securities) that might be reflected in market pricing.

3.6.2 <u>Range of Reasonable Assumptions</u>—Due to the uncertain nature of the items for which assumptions are selected, the actuary may consider several different assumptions reasonable for a given measurement. 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.

3.6.3 <u>Combined Effect of Assumptions</u>—The actuary should select assumptions (both demographic assumptions selected in accordance with ASOP No. 35 and economic assumptions selected in accordance with this standard) such that the combined effect of the assumptions selected by the actuary is expected to have no significant bias (i.e., it is not significantly optimistic or pessimistic) except when provisions for adverse deviation are included or when alternative assumptions are used for the assessment of risk, in accordance with ASOP No. 51.

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.

3.7 Selecting an Inflation Assumption—If the actuary is using an approach that treats **inflation** as an explicit component of other economic assumptions or as an independent assumption, the actuary should follow the general process set forth in section 3.3 to select an **inflation** assumption.

3.7.1 Data—The actuary should evaluate appropriate **inflation** data. These data may include consumer price indices, the implicit price deflator, forecasts of **inflation**, yields on government securities of various maturities, and yields on nominal and **inflation**-indexed debt.

3.7.2 Select and Ultimate Inflation Rates—The actuary may assume select and ultimate **inflation** rates in lieu of a single **inflation** rate. Select and ultimate **inflation** rates vary by period from the **measurement date** (for example, **inflation** of x% for the first 5 years following the **measurement date** and y% thereafter).

3.8 Selecting an Investment Return Assumption—The investment return assumption reflects the anticipated returns on the plan's current and, if appropriate for the measurement, future assets. This assumption is typically constructed by considering various factors including, but not limited to, the time value of money; **inflation** and **inflation** risk; illiquidity; credit risk; macroeconomic conditions; and growth in earnings, dividends, and rents.

In developing a reasonable assumption for these factors and in combining the factors to develop the investment return assumption, the actuary may take into account a broad range of data and other inputs, including the judgment of investment professionals.

3.8.1 Data—The actuary should evaluate appropriate investment data. These data may include the following:

a. current yields to maturity of fixed income securities such as government securities and corporate bonds;

b. forecasts of **inflation**, GDP growth, and total returns for each asset class; and

c. historical and current investment data including, but not limited to, real and nominal returns, the **inflation** and **inflation** risk components implicit in the yield of **inflation**-protected securities, dividend yields, earnings yields, and real estate capitalization rates.

The actuary may also take into account historical and current statistical data showing standard deviations, correlations, and other statistical measures related to historical or future expected returns of each asset class and to **inflation**. The actuary may use stochastic simulation models or other analyses to develop expected investment returns from this statistical data.

3.8.2 Components of the Investment Return Assumption—When the actuary is developing an investment return assumption by combining two or more components or factors, the actuary should ensure that the combination of these components or factors is logically consistent.

3.8.3 Measurement-Specific Considerations—The actuary should take into account factors specific to each measurement in selecting an investment return assumption. Such factors may include the following:

a. Investment Policy—The plan's investment policy may include the following: (i) the current allocation of the plan's assets; (ii) types of securities eligible to be held (diversification, marketability, social investing philosophy, etc.); (iii) a stationary or dynamic target allocation of plan assets among different classes of securities; and (iv) permissible ranges for each asset class within which the investment manager is authorized to make investment decisions. If the actuary takes into account the investment policy in selecting an investment return assumption, the actuary should consider reflecting whether the current investment policy is expected to change during the **measurement period**.

b. Effect of Reinvestment—Two reinvestment risks are associated with traditional, fixed income securities: (i) reinvestment of interest and normal maturity values not immediately required to pay plan benefits, and (ii) reinvestment of the entire proceeds of a security that has been called by the issuer.

c. Investment Volatility—Plans investing heavily in those asset classes characterized by high variability of returns may be required to liquidate those assets at depressed values to meet benefit obligations. Other investment risks may also be present, such as default risk or the risk of bankruptcy of the issuer.

d. Investment Manager Performance—Anticipating superior (or inferior) investment manager performance may be unduly optimistic (or pessimistic). The actuary should not assume that superior or inferior returns will be achieved, net of investment expenses, from an active investment management strategy compared to a passive investment management strategy unless the actuary believes, based on relevant supporting data, that such superior or inferior returns represent a reasonable expectation over the **measurement period**.

e. Expenses Paid from Plan Assets—Investment and other administrative expenses may be paid from plan assets. To the extent such expenses are not otherwise recognized, the actuary should reduce the investment return assumption to reflect these expenses.

f. Cash Flow Timing—The timing of expected contributions and benefit payments may affect the plan's liquidity needs and investment opportunities.

g. Benefit Volatility—Benefit volatility may be a primary factor for small plans with unpredictable benefit payment patterns. It may also be an important factor for a plan of any size that provides highly subsidized early retirement benefits, lump-sum benefits, or supplemental benefits triggered by corporate restructuring or financial distress. In such plans, the untimely liquidation of securities at depressed values may be required to meet benefit obligations.

h. Expected Plan Termination—In some situations, the actuary may expect the plan to be terminated at a determinable date. For example, the actuary may expect a plan to terminate when the owner retires, or a frozen plan to terminate when assets are sufficient to provide all accumulated plan benefits. In these situations, the actuary may select an investment return assumption that reflects a shortened **measurement period** that ends at the expected termination date.

i. Tax Status of the Funding Vehicle—If the plan's assets are not kept in a tax-exempt fund, income taxes may reduce the plan's investment return. Taxes may be reflected by an explicit reduction in the total investment return assumption or by a separately identified assumption.

j. Forward-Looking Expected Investment Returns—In some instances, the actuary will collect or develop forward-looking expected investment returns by asset class or for the entire portfolio. The actuary should take appropriate steps to determine the time horizon, the price **inflation**, and the expenses reflected in the expected returns. In addition, the actuary should take steps to determine the type of forward-looking expected returns (i.e., forward-looking expected geometric returns or forward-looking expected arithmetic returns) and that they are used appropriately.

3.8.4 Multiple Investment Return Rates—The actuary may assume multiple investment return rates in lieu of a single investment return rate. Multiple investment return rates may include the following:

a. Select and Ultimate Investment Return Rates—Assumed investment return rates vary by period from the **measurement date** (for example, returns of x% for the first 10 years following the **measurement date** and y% thereafter). When assuming select and ultimate investment return rates, the actuary should consider reflecting the relationships among **inflation**, interest rates, and market appreciation or depreciation.

b. Benefit Payments Covered by Designated Current or Projected Assets—The actuary may assume one investment return rate for benefit payments covered by designated current or projected plan assets on the **measurement date** and a different investment return rate for the balance of the benefit payments and assets.

3.9 Selecting a Discount Rate—A discount rate is used to calculate the present value of expected future plan payments. A discount rate may be a single rate or a series of rates, such as a yield curve. The actuary should take into account the purpose of the measurement as a primary factor in selecting a discount rate. Measurement purposes may include the following:

a. Contribution Budgeting—An actuary evaluating the sufficiency of a plan's contribution policy may choose among several discount rates. The actuary may use a discount rate that reflects the anticipated investment return from the pension fund. Alternatively, the actuary may use a discount rate appropriate for defeasance, settlement, or market-consistent measurements.

b. Defeasance or Settlement—An actuary measuring a plan's present value of benefits on a defeasance or settlement basis may use a discount rate implicit in annuity prices or other defeasance or settlement options.

c. Market-Consistent Measurements—An actuary making a market-consistent measurement may use a discount rate implicit in the price at which benefits that are expected to be paid in the future would trade in an open market between a knowledgeable seller and a knowledgeable buyer. In some instances, that discount rate may be approximated by market yields for a hypothetical bond portfolio whose cash flows reasonably match the pattern of benefits expected to be paid in the future. The type and quality of bonds in the hypothetical portfolio may depend on the particular type of market-consistent measurement.

The present value of expected future pension payments may be calculated from the perspective of different parties, recognizing that different parties may have different measurement purposes. For example, the present value of expected future payments could be calculated from the perspective of an outside creditor or the entity responsible for funding the plan. The outside creditor may desire a discount rate consistent with other measurements of importance to the creditor even though those other measurements may have little or no importance to the entity funding the plan.

3.10 Selecting a Compensation Increase Assumption—Compensation is a factor in determining participants' benefits in many pension plans. Also, some actuarial cost methods take into account the present value of future compensation. Generally, a participant's compensation will increase over the long term in accordance with **inflation**, **productivity growth**, and **merit adjustments**. The assumption used to measure the anticipated year-to-year change in compensation is referred to as the compensation increase assumption. It may be a single rate, it may vary by age or service, or it may vary over future years. In certain circumstances, such as a temporary reduction or freeze in compensation, the compensation increase assumption may be negative or zero.

When selecting a compensation increase assumption, the actuary should take into account the following:

3.10.1 Data—The actuary should evaluate available compensation data. Compensation data may include the following:

a. the plan sponsor's current compensation practice and any anticipated changes in this practice;

b. current compensation distributions by age or service;

c. historical compensation increases and practices of the plan sponsor and other plan sponsors in the same industry or geographic area; and

d. historical national wage increases and **productivity growth**.

When reviewing available plan-sponsor-specific compensation data, the actuary should take into account the credibility of these data. For small plans or recently formed plan sponsors, industry or national data may provide a more appropriate basis for developing the compensation increase assumption. The actuary should refer to ASOP No. 25, *Credibility Procedures*, for additional guidance.

3.10.2 Measurement-Specific Considerations—The actuary should take into account factors specific to each measurement in selecting a specific compensation increase assumption. Such factors may include the following:

a. Compensation Practice—The plan sponsor's current compensation practice and any contemplated changes may affect the compensation increase assumption, at least in the short term. For example, if pension benefits are a function of base compensation and the plan sponsor is changing its compensation practice to put greater emphasis on incentive compensation, future growth in base compensation may differ from historical patterns.

b. Competitive Factors—The level and pattern of future compensation changes may be affected by competitive factors, including competition for employees both within the plan sponsor's industry and within the geographical areas in which the plan sponsor operates, and global price competition. Unless the **measurement period** is short, the actuary should not give undue weight to short-term patterns.

c. Collective Bargaining—The collective bargaining process impacts the level and pattern of compensation changes. However, it may not be appropriate to assume that future contracts will provide the same level of compensation changes as the current or recent contracts.

d. Compensation Volatility—If certain elements of compensation, such as bonuses and overtime, tend to vary materially from year to year, or if aberrations exist in recent compensation amounts, then volatility should be taken into account. In some circumstances, this may be accomplished by adjusting the base amount from which future compensation elements are projected (for example, the projected bonuses might be based on an adjusted average of bonuses over the last 3 years). In some other circumstances, an additional assumption regarding an expected increase in pay in the final year of service may be used.

e. Expected Plan Freeze or Termination—In some situations, as stated in section 3.8.3(h), the actuary may expect the plan to be frozen or terminated at a determinable date. In these situations, the compensation increase assumption may reflect a shortened **measurement period** that ends at the expected termination date.

3.10.3 <u>Multiple Compensation Increase Assumptions</u>—The actuary may use multiple compensation increase assumptions in lieu of a single compensation increase assumption. Examples of multiple compensation increase assumptions include the following:

a. Select and Ultimate Assumptions—Assumed compensation increases vary by period from the **measurement date** (for example, x% increases for the first 5 years following the **measurement date**, and y% thereafter) or by age or service.

b. Separate Assumptions for Different Employee Groups—Different compensation increases are assumed for two or more employee groups that are expected to receive different levels or patterns of compensation increases.

c. Separate Assumptions for Different Compensation Elements—Different compensation increases are assumed for two or more compensation elements that are expected to change at different rates (for example, x% bonus increases and y% increases in other compensation elements).

3.11 <u>Selecting Other Economic Assumptions</u>—In addition to **inflation**, investment return, discount rate, and compensation increase assumptions, other economic assumptions may be required for measuring certain pension obligations. The actuary should follow the general process described in section 3.3 to select these assumptions. The selected assumptions should also satisfy the consistency requirement of section 3.12. Other economic assumptions may include the following:

3.11.1 Social Security—Social Security benefits are based on an individual's covered earnings, the OASDI contribution and benefit base, and changes in the cost of living. Changes in the OASDI contribution and benefit base are determined from changes in national average wages, which reflect the change in national productivity and **inflation**.

3.11.2 Cost-of-Living Adjustments—Plan benefits or limits affecting plan benefits, including the Internal Revenue Code (IRC) section 401(a)(17) compensation limit and section 415(b) maximum annuity, may be automatically adjusted for **inflation** or assumed to be adjusted for **inflation** in some manner (for example, through regular plan amendments). However, for some purposes (such as qualified pension plan minimum required contribution calculations), the actuary may be precluded by applicable laws or regulations from anticipating future plan amendments or future cost-of-living adjustments in certain IRC limits.

3.11.3 Rate of Payroll Growth—As a result of terminations and new participants, total payroll generally grows at a different rate than does a participant's salary or the average of all current participants combined. As such, when a payroll growth assumption is needed, the actuary should use an assumption that is consistent with but typically not identical to the compensation increase assumption. One approach to setting the payroll growth assumption may be to reduce the compensation increase assumption by the effect of any assumed merit increases. The actuary should apply professional judgment in determining whether, given the purpose of the measurement, the payroll growth assumption should be based on a closed or open group and, if the latter, whether the size of that group should be expected to increase, decrease, or remain constant.

3.11.4 Growth of Individual Account Balances—Certain plan benefits have components directly related to the accumulation of real or hypothetical individual account balances (for example, floor-offset arrangements and cash balance plans).

3.11.5 Variable Conversion Factors—Measuring certain pension plan obligations may require converting from one payment form to another, such as converting a projected individual account balance to an annuity, converting an annuity to a lump sum, or converting from one annuity form to a different annuity form. The conversion factors may be variable (for example, recalculated each year based on a stated mortality table and interest rate equal to the yield on 30-year Treasury bonds).

3.12 Consistency among Assumptions Selected by the Actuary for a Particular Measurement—With respect to a particular measurement, the actuary should select economic assumptions that are consistent with the other assumptions selected by the actuary, including demographic and other noneconomic assumptions, unless an assumption considered individually is not material (see section 3.5.2). For example, if an employer's business is in decline and the effect of that decline is reflected in the turnover assumption, it may be appropriate to reflect a change in the retirement assumption, and it may also be appropriate to reflect a change in the compensation increase assumption.

A number of factors may interact with one another and may be components of other economic assumptions, such as **inflation**, economic growth, and risk premiums. In some circumstances, consistency may be achieved by using the same **inflation**, economic growth, and other relevant components in each of the economic assumptions selected by the actuary.

Consistency is not necessarily achieved by maintaining a constant difference between one economic assumption and another. For each **measurement date**, the actuary should reassess the individual assumptions selected by the actuary and the relationships among them, and make appropriate adjustments.

The actuary is not required to select assumptions that are consistent with assumptions not selected by the actuary.

3.13 Reviewing Assumptions Previously Selected by the Actuary—At each **measurement date**, the actuary should determine whether the economic assumptions selected by the actuary for a previous **measurement date** continue to be reasonable. In making this determination, the actuary should take into account changes in relevant factors known to the actuary that may affect future experience. The actuary should also review recent gain and loss analyses, if any. In addition, the actuary should consider whether an experience study should be performed; however, the actuary is not required to perform an experience study. For each previously selected assumption that the actuary determines is no longer reasonable, the actuary should select a reasonable new assumption.

3.14 Assessing Assumptions Not Selected by the Actuary—At each **measurement date**, the actuary should assess the reasonableness of each economic assumption that the actuary has not selected (other than **prescribed assumptions or methods set by law** or assumptions disclosed in accordance with section 4.2[b]), using the guidance set forth in this standard to the extent practicable.

3.15 Phase-In of Changes in Assumptions—If an economic assumption is being phased in over a period that includes multiple **measurement dates**, the actuary should determine the reasonableness of the economic assumption and its consistency with other assumptions as of the **measurement date** at which it is applied, without regard to changes to the assumption planned for future **measurement dates**. If the actuary determines that an economic assumption is not reasonable as of the **measurement date** at which it is applied, the actuary should select a reasonable new assumption.

3.16 Documentation—The actuary should consider preparing and retaining documentation to support compliance with the requirements of section 3 and the disclosure requirements of section 4. The degree of such documentation should be based on the professional judgment of the actuary and may vary with the complexity and purpose of the actuarial services. In addition, the actuary should refer to ASOP No. 41 for guidance related to the retention of file material other than that which is to be disclosed under section 4.

Section 4. Communications and Disclosures

4.1 Required Disclosures in an Actuarial Report—When issuing an actuarial report to which this standard applies, the actuary should refer to ASOP Nos. 4, 23, *Data Quality*, 25, 35, 41, and 51. In addition, the actuary should disclose the following in such actuarial reports:

4.1.1 Assumptions Used—The actuary should describe each significant economic assumption used in the measurement and, to the extent known, whether the assumption represents an estimate of future experience, an observation of the estimates inherent in market data, or a combination thereof. The actuary should also include a disclosure of any explicit adjustment made in accordance with section 3.5.1 for adverse deviation or plan provisions that are difficult to measure. Sufficient detail should be shown to permit another qualified actuary to assess the level and pattern of each assumption.

Depending on a particular measurement's circumstances, the actuary may disclose information about specific interrelationships among the assumptions (for example, investment return: x% per year, net of investment expenses and including **inflation** at y%).

4.1.2 Rationale for Assumptions—For each economic assumption that has a significant effect on the measurement and that the actuary has selected, the actuary should disclose the information and analysis used to support the actuary's determination that the assumption is reasonable.

For each economic assumption that has a significant effect on the measurement and that the actuary has not selected (other than **prescribed assumptions or methods set by law** or assumptions disclosed in accordance with section 4.2[a] or [b]), the actuary should disclose the information and analysis used to support the actuary's determination that the assumption does not significantly conflict with what, in the actuary's professional judgment, is reasonable for the purpose of the measurement.

The disclosures should be based on the economic assumptions as of the **measurement date** at which they are applied without regard to changes to the assumptions planned for future **measurement dates**. These disclosures 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 study used in the selection process.

4.1.3 Changes in Assumptions—The actuary should disclose any changes in the significant economic 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 study performed, including the date of the study.

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 economic assumptions selected as of the **measurement date**.

4.2 Disclosure about Assumptions Not Selected by the Actuary—The actuary's report 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 report 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 3.14); or

b. any such assumption that the actuary is unable to assess for reasonableness for the purpose of the measurement (section 3.14).

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

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 ASOP is intended to require the actuary to disclose confidential information.

Appendix 1

Background and Current Practices

Note: This appendix is provided for informational purposes but is not part of the standard of practice.

Background

Economic assumptions have a significant effect on any pension obligation measurement. Small changes of 25 or 50 basis points in these assumptions can change the measurement by several percentage points or more. Assumptions such as compensation increases or cash balance crediting rates are often used to determine projected benefit streams for valuation purposes. The discount rate assumption, arguably the most critical economic assumption in determining a pension obligation, is used to determine the discounted present value of all benefit streams that are part of such obligation measurement.

Historically, actuaries have used various practices for selecting economic assumptions. For example, some actuaries have looked to surveys of economic assumptions used by other actuaries, some have relied on detailed research by experts, some have used highly sophisticated projection techniques, and many actuaries have used a combination of these.

The first decade of the 21st century contained a significant amount of debate inside and outside the actuarial profession regarding the measurement of pension obligations. Much of the debate centered on the economic assumptions actuaries use to measure these obligations. The decade also saw the emergence of a financial economic viewpoint on pension obligations. Applying financial economic theory to the measurement of pension obligations has been controversial and has produced a significant amount of debate in the actuarial profession, which has continued in the present decade.

Current Practices

The actuary's discretion over economic assumptions has been curtailed in many situations. In the private single employer plan arena, the IRS, PBGC, and FASB have promulgated rulings that have limited or effectively removed an actuary's judgment regarding the discount rate used for current-year funding or accounting. Actuaries can still set other economic assumptions, such as compensation increases, inflation, or fixed income yields.

For plans other than private single-employer plans (for example, church plans, multiemployer plans, public plans), the discount rate for current-year funding requirements may or may not be prescribed by other entities. Funding valuations for these types of plans often use a discount rate related to the expected return on plan assets. In practice, this discount rate (return on asset) assumption may be set by the legislative body, plan sponsor, a governing board of trustees, or the actuary. The actuary may advise the plan sponsor about the selection of the discount rate.

As in the single-employer situation, the actuary may have discretion over other economic assumptions used to measure obligations for plans other than private single-employer plans.

Alternatively, the actuary may be in an advisory position, helping the legislative body, plan sponsor, or governing board of trustees select the assumptions.

The focus on solvency in the private single-employer plan arena has come along with prescribed economic assumptions that are linked to capital market indices. Actuaries practicing in this area are becoming accustomed to changing assumptions frequently. In nonprescribed situations, practice is still dependent upon the individual actuary. Many actuaries change assumptions infrequently, while other actuaries reevaluate the assumptions as of each measurement date and change economic assumptions more frequently. In the public plan arena, many entities perform assumption reviews every few years, and these reviews may or may not lead to assumption adjustments.

In preparing calculations for purposes other than current-year plan valuations, actuaries often use economic assumptions that are different from those used for the current-year valuation.

The following list of references is a representative sample of available sources of economic data and analyses that may be useful when selecting economic assumptions. It is not intended to be an exhaustive list.

1. General Comprehensive Sources

    a. Kellison, Stephen G. *The Theory of Interest*. 3rd ed. Colorado Springs, CO: McGraw-Hill, 2008.

    b. *Statistics for Employee Benefits Actuaries*. Committee on Retirement Systems Practice Education, and the Pension and Health Sections, Society of Actuaries. Updated annually.

    c. *Stocks, Bonds, Bills, and Inflation (SBBI)*. Chicago, IL: Ibbotson Associates. Annual Yearbook, market results 1926 through previous year.

2. Recent Data, Various Indexes, and Some Historical Data

    a. U.S. Bureau of the Census. *Statistical Abstract of the United States*. https://www.census.gov/library/publications/time-series/statistical_abstracts.html

    b. U.S. Department of Labor, Bureau of Labor Statistics. *Consumer Price Index*. http://www.bls.gov/cpi/

    c. U.S. Federal Reserve Weekly Statistical Release H.15. Interest rate information for selected Treasury securities. http://www.federalreserve.gov/releases/h15/

d. U.S. House of Representatives, Committee on Ways and Means. *Green Book: Background Material and Data on Programs within the Jurisdiction of the Committee*. http://greenbook-waysandmeans.house.gov/

e. U.S. Social Security Administration. *Social Security Bulletin*. http://www.ssa.gov/policy/docs/ssb/

3. Forecasts

a. *Blue Chip Financial Forecasts*. Capital Publications, Inc., P.O. Box 1453, Alexandria, VA 22313-2053. March and October issues contain long-range forecasts for interest rates and inflation.

b. Congressional Budget Office's economic forecast. The forecast projects three-month Treasury Bill rates, 10-year Treasury Note rates, CPI-U, gross domestic product, and unemployment rates. http://www.cbo.gov/publication/43907

Appendix 2

Comments on the Second Exposure Draft and Responses

The second exposure draft of the proposed revision of ASOP No. 27, *Selection of Economic Assumptions for Measuring Pension Obligations*, was issued in June 2019 with a comment deadline of September 15, 2019. Eight comment letters were received, some of which were submitted on behalf of multiple commentators, such as by firms or committees. For purposes of this appendix, the term "commentator" may refer to more than one person associated with a particular comment letter. The Pension Committee carefully considered all comments received, and the ASB reviewed (and modified, where appropriate) the changes proposed by the Pension Committee.

Summarized below are the significant issues and questions contained in the comment letters and the responses to each. Minor wording or punctuation changes that are suggested but not significant are not reflected in the appendix, although they may have been adopted.

The term "reviewers" in appendix 2 includes the Pension Committee and the ASB. Unless otherwise noted, the section numbers and titles used in appendix 2 refer to those in the second exposure draft.

GENERAL COMMENTS	
Comments Response	One commentator suggested that this ASOP and ASOP No. 35, *Selection of Demographic and Other Noneconomic Assumptions for Measuring Pension Obligations*, should be merged into a single ASOP on selection of assumptions for measuring pension obligations. The reviewers may consider merging the two ASOPs in the future.
Comment Response	One commentator suggested publishing a definition of economic assumption. The reviewers disagree and made no change in response to this comment.
Comment Response	One commentator suggested that the title of appendix 1 should be revised to include "Representative Sources." The reviewers disagree and made no change in response to this comment.
Comment Response	One commentator suggested it would be preferable to release second exposure drafts of ASOP Nos. 4, *Measuring Pension Obligations and Determining Pension Plan Costs or Contributions*, 27, and 35 at the same time. The reviewers note that there were no expected changes to the second exposure draft of ASOP No. 4 that necessitated delaying the second exposure drafts of ASOP Nos. 27 and 35.
Comment Response	One commentator suggested that the title of the ASOP should refer to "pension commitments" rather than "obligations." The reviewers disagree and made no change in response to this comment.
Comment Response	One commentator suggested reviewing the use of the phrases "should consider" and "should take into account" for consistency. The reviewers made modifications throughout the ASOP as needed for consistency. To the extent possible, the reviewers included a course of action after the phrase "should consider," as suggested in ASOP No. 1, *Introductory Actuarial Standard of Practice*, section 2.1(a).

Comment	One commentator observed that the standard allows the actuary to not analyze the aggregate effect of assumptions not selected by the actuary, even if that effect is significant, provided each individual assumption not selected by the actuary does not have a significant effect.
Response	The reviewers note that the second exposure draft of ASOP No. 4 provides proposed guidance to address this issue.
SECTION 2. DEFINITIONS	
Section 2.4, Merit Adjustments	
Comment	One commentator suggested that definition 2.4 and related discussion be moved to ASOP No. 35.
Response	The reviewers note that there is not universal agreement as to whether these assumptions are economic or non-economic and believe that the current guidance is sufficient.
SECTION 3. ANALYSIS OF ISSUES AND RECOMMENDED PRACTICES	
Section 3.2, Identification of Economic Assumptions Used in the Measurement	
Comment	One commentator suggested that the title of this section should be Identification of Types of Economic Assumptions Used in the Measurement to be consistent with the first sentence of this section and with section 3.2.1 of ASOP No. 35.
Response	The reviewers agree and modified the title in response to this comment.
Comment	One commentator felt that the difference between the use of materiality in sections 3.2(b) and 3.2(c) was not clear.
Response	The reviewers disagree and made no change in response to this comment.
Section 3.5.1, Adverse Deviation or Plan Provisions That Are Difficult to Measure	
Comment	One commentator suggested that section 3.5.1 should be modified to be consistent with the disclosure requirements in section 4.1.1.
Response	The reviewers agree and modified the language in section 3.5.1.
Section 3.5.3, Cost of Using Refined Assumptions	
Comment	One commentator suggested deleting the last sentence in section 3.5.3.
Response	The reviewers agree and modified the language.
Section 3.5.5, Changes in Circumstances	
Comment	One commentator suggested that in section 3.5.5 either “may” means “has permission to,” in which case it is inappropriate, or else it means “might,” in which case it is purely educational and provides no guidance and suggested the sentence be deleted.
Response	The reviewers believe the use of “may” is consistent with the guidance in ASOP No. 1, section 2.1(b) but deleted “if appropriate” in response to this comment.
Section 3.6.1, Reasonable Assumption Based on Future Experience or Market Data	
Comment	One commentator suggested that section 3.6.1 was too narrowly prescriptive.
Response	The reviewers disagree and made no change in response to this comment.
Section 3.7, Selecting an Inflation Assumption	
Comment	One commentator suggested that section 3.7 (and subsections) was too narrowly prescriptive.
Response	The reviewers disagree and made no change in response to this comment.
Section 3.7.2, Select and Ultimate Inflation Rates	
Comment	One commentator suggested that in section 3.7.2 either “may” means “has permission to,” in which case it is inappropriate, or else it means “might,” in which case it is purely educational and provides no guidance and suggested the sentence be deleted.
Response	The reviewers believe the use of “may” is consistent with the guidance in ASOP No. 1, section 2.1(b) and made no change in response to this comment.

Section 3.8, Selecting an Investment Return Assumption	
Comment Response	One commentator suggested that section 3.8 (and subsections) was too narrowly prescriptive. The reviewers disagree and made no change in response to this comment.
Section 3.8.1, Data	
Comment Response	One commentator suggested that section 3.8.1(c) was not relevant when selecting an investment return assumption and that sections 3.8.1(a) and (b) provided sufficient guidance. The reviewers note that section 3.8.1 states, "the actuary should review appropriate investment data" and made no change in response to this comment.
Section 3.8.3, Measurement-Specific Considerations	
Comment Response	One commentator suggested that the last sentence in section 3.8.3(a) should be modified to add "if appropriate" at the beginning of the sentence. The reviewers modified this section in response to this and other comments.
Comment Response	One commentator suggested that sections 3.8.3(c) and 3.8.3(j) should be combined and offered suggested wording. The reviewers disagree with the suggested wording and that the sections should be combined but modified the language in section 3.8.3(j) to improve clarity in the guidance.
Comment Response	One commentator suggested that the terms "forward-looking expected arithmetic and geometric returns" should be eliminated altogether. The reviewers note that "arithmetic and geometric returns" are commonly used in the investment consulting community. Therefore, the reviewers made no change in response to this comment.
Comment Response	One commentator suggested that the passage "The use of a forward-looking expected geometric return as an investment return assumption will produce an accumulated value that generally converges to the median accumulated value as the time horizon lengthens" should be deleted. The reviewers agree and deleted the entire paragraph in response to this comment.
Section 3.9, Selecting a Discount Rate	
Comment Response	One commentator suggested that section 3.9 was too narrowly prescriptive. The reviewers disagree and made no change in response to this comment.
Comment Response	One commentator suggested that the first two sentences in section 3.9 should be combined into one. The reviewers disagree and made no change in response to this comment.
Comment Response	One commentator suggested revised wording for 3.9(c). The reviewers believe that the current guidance is appropriate and did not make any changes in response to this comment.
Section 3.10, Selecting a Compensation Increase Assumption	
Comment Response	One commentator suggested that section 3.10 was too narrowly prescriptive. The reviewers disagree and made no change in response to this comment.
Section 3.13, Reviewing Assumptions Previously Selected by the Actuary	
Comment Response	One commentator suggested that it would be helpful if this section made clear that the actuary should also review the economic assumptions used by the actuary who last performed the measurement before using them to ensure they remain reasonable. The reviewers disagree and believe the guidance in this ASOP is clear. Therefore, the reviewers made no change in response to this comment.

Section 3.15, Phase-In of Changes in Assumptions	
Comment	One commentator suggested that this section should be clarified to indicate that the assessment of reasonableness and consistency only apply when the phase-in of assumptions is selected by the actuary and should refer to the prior section (section 3.14 in ASOP No. 27 and section 3.8 in ASOP No. 35) for when it is not selected by the actuary.
Response	The reviewers disagree and refer the commentator to section 1.2, which states "When an economic assumption is not selected by the actuary, the guidance in section 3.14 and section 4 concerning assessment and disclosure applies."
Comment	One commentator suggested that this section is not clear or necessary and was concerned this section could be read to apply to select and ultimate assumptions.
Response	The reviewers disagree and believe that the guidance "phased in over a period that includes multiple measurement dates" is sufficiently clear and made no change in response to this comment.
Section 3.16, Documentation	
Comment	One commentator suggested that if section 3.16 is retained, the ASB should change "should consider" to "should."
Response	The reviewers disagree and made no change in response to this comment.
Comment	One commentator suggested that section 3.16 would require retaining documentation that may contain proprietary work product that is not required to be provided to another actuary to assume the assignment.
Response	The reviewers disagree and made no change in response to this comment.
Comment	Two commentators felt section 3.16 is an unnecessary or inappropriate addition to the ASOP. However, one commentator suggested modification to the language if this section was retained.
Response	The reviewers disagree that section 3.16 is an unnecessary or inappropriate addition to the ASOP. However, the reviewers modified the language in response to the one commentator's suggested language.
SECTION 4. COMMUNICATIONS AND DISCLOSURES	
Section 4.1, Required Disclosures in an Actuarial Report	
Comment	One commentator suggested the first sentence of section 4.1 be changed to add "with respect to required disclosures" at the end to specify what the actuary should consider in the listed ASOPs when issuing an actuarial report.
Response	The reviewers disagree and made no change in response to this comment.
Section 4.1.1, Assumptions Used	
Comment	One commentator suggested that the first sentence of section 4.1.1 should be clarified to only require the disclosure that the assumption "represents an estimate of future experience, the actuary's observation of the estimates inherent in market data, or a combination thereof" if the assumption was selected by the actuary.
Response	The reviewers disagree that the disclosure should only be required if the assumption was selected by the actuary but modified the language in response to this comment.
Section 4.1.2, Rationale for Assumptions	
Comment	One commentator suggested that the second paragraph of section 4.1.2 should allow the actuary to assess the reasonableness of a combination of assumptions rather than each assumption selected by another party.
Response	The reviewers disagree and made no change in response to this comment.

Comment Response	One commentator felt that the current requirement that the actuary disclose if he or she believes the assumption significantly conflicts with what would be reasonable is appropriate and sufficient, and objects to requiring the actuary to provide supporting information and analysis for an assumption that does not seem to significantly conflict. The reviewers disagree, believe the current guidance is appropriate, and made no change in response to this comment.
Section 4.2, Disclosures About Assumptions Not Selected by the Actuary	
Comment Response	One commentator suggested that the term "source" in section 4.2 should be clarified. The reviewers disagree and made no change in response to this comment.

ACTUARIAL STANDARDS BOARD

Actuarial Standard of Practice No. 28

Revised Edition

Statements of Actuarial Opinion Regarding Health Insurance Assets and Liabilities

Developed by the ASOP No. 28 Task Force of the Health Committee of the Actuarial Standards Board

Adopted by the Actuarial Standards Board June 2021

Doc. No. 200

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APPENDIXES

ASOP No. 28—Doc. No. 200

June 2021

TO: Members of Actuarial Organizations Governed by the Standards of Practice of the Actuarial Standards Board and Other Persons Interested in Statements of Actuarial Opinion Regarding Health Insurance Assets and Liabilities

FROM: Actuarial Standards Board (ASB)

SUBJ: Actuarial Standard of Practice (ASOP) No. 28

This document contains the revision of ASOP No. 28, now titled *Statements of Actuarial Opinion Regarding Health Insurance Assets and Liabilities*.

History of the Standard

In April 1997, the ASB adopted ASOP No. 28, *Compliance with Statutory Statement of Actuarial Opinion Requirements for Hospital, Medical and Dental Service or Indemnity corporations and for Health Maintenance Organizations.*

In June 2011, this standard was renamed *Statements of Actuarial Opinion Regarding Health Insurance Liabilities and Assets* and revised in consideration of the development of the Health Annual Financial Statement Blank and the revised health actuarial opinion instructions approved by the National Association of Insurance Commissioners (NAIC) in June 2009. The scope was also broadened to encompass all statements of actuarial opinion regarding health insurance liabilities and assets of health insurance or reinsurance companies and other health insurance financing systems, such as health benefit plans provided by self-insured or government plan sponsors. Additionally, in December 2012, the language in section 1.2 of this standard was updated.

Since the last update of this standard, changes have been made to ASOP No. 5, *Incurred Health and Disability Claims*, and ASOP No. 42, *Health and Disability Actuarial Assets and Liabilities Other Than Liabilities for Incurred Claims*, due in part to the changes imposed by the Affordable Care Act. Some assets and liabilities that are included in the scope of the actuarial opinion have changed, and others have gained prominence. Therefore, this revision of ASOP No. 28 reflects these changes in actuarial practice.

This revision to the standard also addresses concerns reported by regulatory actuaries relating to the need for improved consistency of the information provided in the actuarial memorandum supporting an actuarial opinion.

While the standard currently applies to statements of actuarial opinions relating to assets and liabilities other than the NAIC statement of actuarial opinion, the task force recognized the need to broaden the guidance to more fully reflect the needs of actuaries preparing such statements of actuarial opinions . This revision clarifies guidance relating to the applicability of this standard for actuaries issuing non-statutory statements of actuarial opinions or statutory statements of actuarial opinions for health entities not subject to the NAIC rules.

Exposure Draft

The exposure draft was issued in June 2020 with a comment deadline of November 13, 2020. Three comment letters were received and considered in making changes that were reflected in the final ASOP.

Notable Changes from Exposure Draft

Notable changes made to the exposure draft are summarized below. Notable changes do not include changes made to improve readability, clarity, or consistency.

1. The guidance in section 1.2, Scope, was clarified.

2. The definitions for section 2.9, Health Insurance Asset (Asset), and section 2.10, Health Insurance Liability (Liability), were clarified.

3. The language in section 3.3, Basis of Assets and Liabilities; section 3.6, Asset and Liability Evaluation; and section 4.1, Required Disclosures in an Actuarial Report, was revised to improve clarity.

4. A disclosure was added in section 4.1(h) to clarify disclosure requirements for section 3.6.

5. The disclosure requirements in section 4.1, Required Disclosures in an Actuarial Report, were clarified for situations where the actuarial memorandum is issued separately from the statement of actuarial opinion.

Notable Changes from the Existing ASOP

A cumulative summary of the notable changes from the existing ASOP is summarized below. Notable changes do not include additional changes made to improve readability, clarity, or consistency.

1. The title was modified to reflect the increasing importance of actuarial assets to health insurance entities and to be consistent with the current title of ASOP No. 42.

2. Sections 1.1, Purpose, and 1.2, Scope, were clarified to apply to actuaries issuing or reviewing any statement of actuarial opinion and associated actuarial reports or memoranda including, but not limited to, opinions prepared in accordance with the NAIC's annual statement requirements.

3. Section 3.2, Assets and Liabilities Being Opined Upon, was clarified to state that the identification of assets and liabilities being opined upon includes those items with a value of zero.

4. Section 3.3, Basis of Assets and Liabilities, was expanded to address information that should be included in the description of the basis of the assets and liabilities.

5. Section 3.6, Asset and Liability Evaluation, was expanded to address the use of an explicit provision for adverse deviation as well as implicit conservatism in assumptions.

6. Section 3.9, Collectability of Actuarial Assets and Offsets to Liabilities, was expanded to address that collectability guidance currently applicable only to the collectability of ceded reinsurance applies to all actuarial assets and offsets to actuarial liabilities.

7. Section 3.11, Statements of Actuarial Opinion, was expanded to address the application of the documentation requirements for different types of opinions, when applied to statements of actuarial opinions other than statutory NAIC opinions and when the opinion is intended to meet the "good and sufficient" standard.

8. Sections 3.13, Reliance on Data, Assumptions, Methods, Supporting Analysis, and Information Supplied by Others, and 3.14, Evaluation Based on Analyses or Opinions of Another Actuary or Expert, were added to provide guidance regarding reliance on others.

9. Guidance was added to section 4.1, Required Disclosures in an Actuarial Report, related to the information needed to be included in a written statement of actuarial opinion involving assets and liabilities when it is provided as a separate document from the actuarial report or memorandum.

The ASB thanks everyone who took the time to contribute comments and suggestions on the exposure draft.

The ASB voted in June 2021 to adopt this standard.

ASOP No. 28—Doc. No. 200

ASOP No. 28 Task Force

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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.

STATEMENTS OF ACTUARIAL OPINION
REGARDING HEALTH INSURANCE ASSETS AND LIABILITIES

STANDARD OF PRACTICE

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 issuing or reviewing a statement of actuarial opinion (sometimes referred to as "actuarial opinion" or "opinion") regarding **health insurance assets** and **liabilities**.

1.2 Scope—This standard applies to actuaries when performing actuarial services with respect to issuing or reviewing statements of actuarial opinion and any associated **actuarial memorandum** with respect to **health insurance assets** and **liabilities** of insurance companies, reinsurance companies, or other health insurance financing systems that provide similar coverages (such as **health benefit plans** provided by self-insured or government plan sponsors). The standard applies to, but is not limited to, actuaries issuing or reviewing actuarial opinions prepared in accordance with the National Association of Insurance Commissioners' (NAIC's) annual statement requirements.

For actuaries issuing or reviewing statements of actuarial opinion that include both **health insurance assets** and **liabilities**, and non-**health insurance assets** and **liabilities**, other standards may apply in addition to this standard (such as ASOP No 22, *Statements of Opinion Based on Asset Adequacy Analysis for Life and Health Insurers*) or instead of this standard (such as ASOP No. 36, *Statements of Actuarial Opinion Regarding Property/Casualty Loss and Loss Adjustment Expense Reserves*).

If the actuary is performing actuarial services that involve reviewing an opinion, the actuary should use the guidance in this standard to the extent practicable.

The standard does not apply to actuaries issuing or reviewing statements of actuarial opinion that are subject to the following:

- ASOP No. 3, *Continuing Care Retirement Communities*;
- ASOP No. 6, *Measuring Retiree Group Benefits Obligations and Determining Retiree Group Benefits Program Periodic Costs or Actuarially Determined Contributions;*
- ASOP No. 20, *Discounting of Property/Casualty Unpaid Claim Estimates*;

- ASOP No. 36;
- ASOP No. 43, *Property/Casualty Unpaid Claim Estimates*; or
- ASOP No. 53, *Estimating Future Costs for Prospective Property/Casualty Risk Transfer and Risk Retention*.

If the actuary determines that the guidance in this ASOP conflicts with a cross-practice ASOP (applies to all practice areas), this ASOP governs.

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.

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 is effective for work performed involving statements of actuarial opinion regarding **health insurance assets** and **liabilities** issued on or after July 1, 2022.

Section 2. Definitions

The terms below are defined for use in this actuarial standard of practice and appear in bold throughout the ASOP.

2.1 Actuarial Memorandum—A written actuarial report (as defined in ASOP No. 41, *Actuarial Communications*) that provides information regarding the analyses completed in support of statements of actuarial opinion regarding **health insurance assets** and **liabilities**.

2.2 Claim—A demand for payment under the coverage provided by a plan or contract.

2.3 Collectability—The likelihood of receiving the amount of money owed or the **asset** accrued.

2.4 Contract Reserve—A **liability** established when a portion of the premium due prior to the **valuation date** is designed to pay all or a part of the **claims** expected to be incurred after the **valuation date**. A **contract reserve** may or may not include a provision for the unearned premium reserves. A **contract reserve** may also be referred to as an active life reserve or policy reserve.

2.5 Counterparty—Another entity involved in a financial transaction.

2.6 Counterparty Risk—The risk that any **counterparty** does not fulfill its contractual obligations.

2.7 Experience Period—The period of time to which historical data used for actuarial analysis pertains.

2.8 Health Benefit Plan—A contract, such as an insurance policy, or other financial arrangement providing medical, prescription drug, dental, vision, disability income, long-term care, or other health-related benefits, whether on a reimbursement, indemnity, or service benefit basis, regardless of the form of the risk-bearing entity.

2.9 Health Insurance Asset (Asset)—An asset included in the scope of the statement of actuarial opinion related to **health benefit plans**. Examples may include risk adjustment transfer payment receivables, pharmacy rebate receivables, provider settlement receivables, and Medicare Part D settlement receivables.

2.10 Health Insurance Liability (Liability)—A **liability** included in the scope of the statement of actuarial opinion related to **health benefit plans**. Examples may include unpaid **claims liabilities**, unpaid loss adjustment expenses, medical loss ratio rebates, **liabilities** for settlements of provider contracts, **contract reserves**, experience refund **liabilities**, premium deficiency reserves, premium stabilization reserves, and **liabilities** for reinsurance payable.

2.11 Moderately Adverse Conditions—Conditions that include one or more unfavorable, but not extreme, events that have a reasonable probability of occurring.

2.12 Provision for Adverse Deviation—An explicit amount to make some provision for uncertainty in an **asset** or **liability**. This sometimes is called a provision for uncertainty or a margin for uncertainty.

2.13 Valuation Date—The date as of which the **assets** or **liabilities** are estimated for the actuarial opinion provided.

Section 3. Analysis of Issues and Recommended Practices

3.1 Intended Purpose and Users of the Statement of Actuarial Opinion—The actuary should identify the intended purpose and intended users of the statement of actuarial opinion and any associated **actuarial memorandum**. For example, the intended purpose may be to satisfy the requirements for such an opinion and memorandum under the NAIC Health Annual Statement Instructions, and the intended users may be the company and its regulators. Other examples may be when an actuary prepares a statement of actuarial opinion in support of an application for a certificate of authority (the intended purpose) to a regulator (the intended user) or when an actuary prepares a statement of actuarial opinion estimating unpaid **claims liabilities** (the intended purpose) for a self-funded employer (the intended user).

3.2 Assets and Liabilities Being Opined Upon—The actuary should identify applicable balance sheet items within the scope of the opinion (i.e., the **health insurance assets** and **health insurance liabilities**), including items that may have a value of zero. For example, premium deficiency reserves or risk adjustment estimates may have a value of zero. The actuary should consider identifying balance sheet items excluded from the scope of the opinion along with the justification for the exclusion. The actuary should identify the following regarding the **assets** and **liabilities** for which the opinion is being prepared as follows:

a. the **asset** and **liability** amount(s); and

b. the **valuation date**.

3.3 Basis of Assets and Liabilities—The actuary should identify and describe the basis of the **assets** and **liabilities**. The basis may be dependent upon regulatory or accounting requirements. The actuary should include the following items in the description of the basis, if applicable:

a. the data, assumptions, methods, and procedures used to determine the **assets** and **liabilities**;

b. the accounting standards applicable for the **assets** and **liabilities** (for example, US SAP, US GAAP, IFRS);

c. whether the amounts are gross or net of specified recoverables, such as ceded reinsurance or salvage and subrogation, and whether the amounts follow any requirements for the treatment of these amounts specified by a particular accounting method;

d. whether there is a **provision for adverse deviation**, and, if so, the amount of the **provision for adverse deviation**; and

e. whether there is some level of implicit conservatism included in the items within the scope of the actuarial opinion.

In the description of the basis of the **assets** and **liabilities**, the actuary should include any additional items that are needed to describe the amounts sufficiently for the actuary's evaluation of the **assets** and **liabilities**.

To the extent the actuary is not able to identify the basis of the **assets** and **liabilities**, the actuary should request this information. If unable to obtain this information, the actuary should document what the actuary assumed to be the intended basis of the **assets** and **liabilities** and provide justification for the opinion issued in accordance with section 3.11.

3.4 Scope of the Analysis Underlying the Statement of Actuarial Opinion—The actuary should identify the scope of the analysis upon which the opinion is based, which includes the following:

a. the dates relevant to the actuary's analysis:

i. **valuation date**;

ii. **experience period(s)** for any data used, including the runout period;

iii. the date through which material information known to the actuary is included in forming the opinion, if it differs from the date of the opinion; and

iv. the date of the opinion.

b. the **assets** and **liabilities** included in the scope of the actuary's opinion. This should include any major components of the **assets** and **liabilities**. For example, the components of unpaid **claims liabilities** may include amounts determined based on lag-based methodologies, capitation amounts, and offsets for reinsurance;

c. for **asset** and **liability** items disclosed in the statement of actuarial opinion, whether the actuary's opinion applies to those items in the aggregate or individually;

d. when the opinion is limited to only a portion of the **assets** or **liabilities**, the exposure to be covered by the **assets** or **liabilities** (for example, type of coverage, line of business, year, state); and

e. any other items that, in the actuary's professional judgment, are needed to sufficiently describe the scope of the actuary's analysis.

3.5 Materiality—The actuary should evaluate materiality based on the actuary's professional judgment and the intended purpose for which the actuary is performing actuarial services related to a statement of actuarial opinion and any associated **actuarial memorandum**.

The actuary should document the basis used to determine materiality.

When evaluating materiality, the actuary should understand which financial values are important to the intended users of the statement of actuarial opinion and the associated **actuarial memorandum** and how those financial values are likely to be affected by changes in the **assets** and **liabilities**. For example, for a statement of actuarial opinion for an insurance company that is to be used for financial reporting to insurance regulators, materiality might be evaluated in terms of the company's reported **liabilities** or statutory surplus.

3.6 Asset and Liability Evaluation—The actuary should evaluate the **assets** and **liabilities** within the scope of the opinion for reasonableness at a level of aggregation consistent with the purpose of the opinion and consistent with the basis of the **assets** and **liabilities**.

The actuary should consider the amount being evaluated to be reasonable if it is within a range of estimates that could be produced by an appropriate analysis that is, in the actuary's professional judgment, consistent with applicable guidance including, but not limited to, ASOP No. 5, *Incurred Health and Disability Claims*, and ASOP No. 42, *Health and Disability Actuarial Assets and Liabilities Other Than Liabilities for Incurred Claims*. In addition to the methods used, the actuary should take into account, as appropriate, relevant past, present, or reasonably foreseeable future conditions that are likely to have a material effect on the amounts being established.

If the actuary determines that the **asset** or **liability** is outside a reasonable range, considering the purpose of the opinion, such as any "good and sufficient" requirements, the actuary should determine what the actuary believes is a reasonable range or amount.

When evaluating **assets** and **liabilities** for reasonableness, the actuary should take into account the specific characteristics of the policy and contract provisions affecting the **assets** and **liabilities**.

The actuary should determine whether a **provision for adverse deviation** is appropriate to meet the intended purpose of the opinion. The actuary should refer to ASOP Nos. 5 and 42 for guidance as well as any other applicable ASOP covering **assets** and **liabilities**. Examples of **assets** and **liabilities** for which a **provision for adverse deviation** might be appropriate include an explicit offset to a risk adjustment receivable **asset**, or an explicit margin on an unpaid **claims liability**. The actuary should identify the amount and document the justification for any **provision for adverse deviation**.

The actuary should evaluate and document the appropriateness of the aggregate level of conservatism, including any **provision for adverse deviation** and conservatism implicit in the assumptions used to estimate the **assets** and **liabilities** within the scope of the actuarial opinion. For example, in one situation, the actuary might state that aggregate conservatism of a certain percentage is appropriate for the intended purpose. In another situation, the actuary might state that it is appropriate that all **assets** and **liabilities** are developed without conservatism.

If the actuary makes use of other personnel within the actuary's control to carry out assignments relative to analysis supporting the opinion, the actuary assumes responsibility for compliance of those assignments with this ASOP. All work performed in support of the opinion should be documented, even if it was not performed by the actuary.

The actuary should document the methods, assumptions, and procedures used in the analysis upon which the opinion is based. When complex calculations or concepts are involved, the actuary should include technical explanations and exhibits in the documentation. Examples of complex calculations may include the determination of unpaid **claims liability**, premium deficiency reserves, sensitivity tests, and follow up studies.

The actuary should also document the sources of the data used and how the reasonability of the data was determined, including support for any reconciliation with amounts reported in the financial statement. When determining the reasonability of the data, the actuary should comply with ASOP No. 23, *Data Quality*.

When the opinion is provided to meet regulatory requirements, the actuary should follow the detailed requirements specified by regulators regarding the form and content of supporting reports and documentation.

3.7 Prior Opinion—If the actuary prepared the most recent prior opinion, or, if the actuary is able to review the prior actuary's work, then the actuary should determine whether the current assumptions, procedures, or methods differ from those employed in providing the most recent prior opinion prepared in accordance with this standard. If the current assumptions, procedures or methods differ from those employed in the prior opinion, the actuary should evaluate whether the changes are likely to have resulted in an **asset** or **liability** that is materially different and should document the changes appropriately.

The use of assumptions, procedures, or methods for new **liability** segments (for example, a new line of business or product) or new **asset** amounts is not considered a change in assumptions, procedures, or methods within the meaning of this section. Similarly, when the determination of the reasonableness of the **asset** or **liability** is based on the periodic updating of experience data, factors, or weights, such periodic updating is not considered a change in assumptions, procedures, or methods within the meaning of this section. However, the actuary should evaluate whether such periodic updating is appropriate for the current opinion and refer to ASOP Nos. 5, 42, and any other applicable ASOPs for guidance.

The actuary should document the changes in assumptions, procedures, or methods from those employed in the most recent prior opinion prepared in accordance with this standard, unless the actuary concludes the changes are not likely to have a material effect on the **asset** or **liability**. This standard does not require the actuary to quantify the impact of such changes. If the actuary cannot review the prior actuary's work, then the actuary should document that the prior assumptions, procedures, and methods are unknown.

3.8 Significant Risks and Uncertainties—The actuary should determine whether there are significant risks and uncertainties that could result in material adverse deviations from the **assets** or **liabilities**.

If the actuary determines that there are significant risks and uncertainties that could result in material adverse deviation, the actuary should quantify, if practicable, and document such risks and uncertainties, including a description of the major factors or particular conditions underlying the risks and uncertainties.

The actuary is not required to include broad statements about risks and uncertainties, such as those due to economic changes, judicial decisions, political or social forces, nor is the actuary required to include an exhaustive list of all potential sources of risks and uncertainties.

3.9 Collectability of Actuarial Assets and Offsets to Liabilities—If the scope of the statement of actuarial opinion includes actuarial **assets**, such as risk adjustment amounts receivable, or offsets to **liabilities**, such as ceded reinsurance, the actuary should take into account **collectability** in evaluating the reasonableness of **assets** and **liabilities**.

The actuary should use professional judgment when evaluating **collectability** and may consider the following:

a. materiality of the **asset** or the offset to a **liability**;

b. the financial condition of **counterparties**; and

c. other readily available information.

The actuary should consider soliciting information from management or other appropriate parties regarding **collectability**. Examples of information that may be requested include, but are not limited to, issues relating to **counterparty risk**, **collectability** problems, disputes with reinsurers or other **counterparties**, and company practices regarding provisions for uncollectible receivable amounts.

The actuary should document concerns regarding the **collectability** of those **assets** or offsets to **liabilities**. This standard does not require the actuary to quantify the **collectability**. The actuary's consideration of **collectability** does not necessarily imply an opinion on the financial condition of any **counterparty**.

3.10 Follow-up Studies—When an actuary conducts follow-up studies that involve performing tests of reasonableness of **assets** or **liabilities** determined for prior periods, the actuary should refer to ASOP Nos. 5 and 42. If appropriate, the actuary may use the results of such follow up studies to form an opinion regarding the appropriateness of the **assets** or **liabilities** included in the scope of opinion for the current period. The actuary should document the results of any follow-up studies used in the development of the actuarial **assets** and **liabilities** included in the opinion.

3.11 Statements of Actuarial Opinion—If the actuary determines that the **assets** and **liabilities** are reasonable for the intended purpose, the actuary may provide an opinion without any limitations, reservations, or qualifications (sometimes referred to as an "unqualified opinion").

If the actuary determines that the **assets** or **liabilities** are not reasonable for the intended purpose or cannot be evaluated for reasonableness, the actuary should identify the opinion as one of the following:

a. When the **assets** or **liabilities** fall outside a reasonable range for the intended purpose, the actuary should issue an unfavorable opinion (sometimes referred to as an "adverse opinion"). The actuary should document the reasons for issuing an unfavorable opinion; or

b. If the actuary cannot evaluate the reasonableness of certain **assets** or **liabilities**, the actuary should issue a limited opinion (sometimes referred to as a "qualified opinion"). The actuary should document the following:

   i. the **assets** or **liabilities** to which the limitations relate;

   ii. a description of the limitations of the opinion;

   iii. if provided by the entity, the amounts of the **assets** or **liabilities** to which the limitations relate. If the amounts for such items are not provided by the entity, the actuary should document that the **assets** or **liabilities** include unknown amounts for such items; and

iv. whether the total amount makes a reasonable provision for the specified items other than the items to which the limitations relate.

The actuary is not required to document the limitation if the actuary reasonably believes that the items in question are not likely to be material; or

c. If the actuary is unable to reach a conclusion due to deficiencies or limitations in the data, analyses, assumptions, or related information, then the actuary should document the inability to reach a definitive opinion (sometimes referred to as an "inconclusive opinion"), including a description of the reasons that cause the opinion to be inconclusive.

When the actuary is performing services related to an actuarial opinion to comply with NAIC annual statement instructions, the actuary should follow the guidance in the annual statement instructions, including but not limited to the guidance regarding any prescribed language. In order to issue such actuarial opinion that uses the language "good and sufficient," the actuary should determine that the **assets** and **liabilities** are sufficient to cover obligations under **moderately adverse conditions** and be satisfied that the actuarial judgments made give recognition to any relevant factors, including the time periods over which the **assets** and **liabilities** will extend.

3.12 Adequacy of Assets Supporting Liabilities—The actuary should determine whether the adequacy of the **assets** supporting the stated **liabilities** needs to be evaluated. However, this standard does not obligate the actuary to undertake evaluation of the adequacy of the **assets** supporting the stated **liability** amount except as may be needed to comply with any applicable law, regulatory requirement, or other ASOP. For guidance on the analysis of cash flows, the actuary should refer to ASOP No. 7, *Analysis of Life, Health or Property/Casualty Insurer Cash Flows*. For guidance on statements of opinion based on **asset** adequacy analysis, the actuary should refer to ASOP No. 22.

3.13 Reliance on Data, Assumptions, Methods, Supporting Analysis, and Information Supplied by Others—The actuary may rely on data, assumptions, methods, supporting analysis, and information supplied by others. When practicable, the actuary should review such items for reasonableness and consistency. For further guidance, the actuary should refer to ASOP Nos. 23 and 41. The actuary should document the extent of any such reliance.

3.14 Evaluation Based on Analyses or Opinions of Another Actuary or Expert—When relying on the analyses or opinions of others to evaluate the reasonableness of the **assets** or **liabilities**, as described in section 3.6, the actuary should take into account the following:

a. consistency of the analyses or opinions with the stated purpose of the presentation of the **assets** or **liabilities** and with any likely expectations or requirements of subsequent reviewers (for example a regulator or auditor);

b. the appropriateness and reasonableness of the data, methodology, and assumptions underlying the analyses or opinions;

c. any items or factors not included in the analyses or opinions that in the actuary's judgement may need to be considered;

d. the nature of the business, such as types of lives covered, what is covered, and potential external influences;

e. the inherent volatility of the **asset** or **liability**;

f. the amount of the **assets** or **liabilities** covered by the other actuary or expert's analyses or opinions in comparison to the total **assets** or **liabilities** within the scope of the actuary's opinion, or other relevant amounts (for example surplus level) that might be affected by a change in the **assets** or **liabilities**;

g. the way in which reasonably likely deviations may affect the total **assets** and **liabilities** within the scope of the actuary's opinion; and

h. the intended purpose of the analyses or opinions of others.

3.15 Documentation—In addition to the documentation requirements discussed in section 3.1-3.14, the actuary should prepare and retain documentation to support compliance with the requirements of section 3 and the disclosure requirements of section 4. When preparing documentation, the actuary should prepare documentation in a form such that another qualified actuary in the same practice area could assess the reasonableness of the actuary's work. The degree of such documentation should be based on the professional judgment of the actuary and may vary with the complexity and purpose of the actuarial services. In addition, the actuary should refer to ASOP No. 41 for guidance related to the retention of file material other than that which is to be disclosed under section 4.

Section 4. Communications and Disclosures

4.1 Required Disclosures in an Actuarial Report—When issuing an actuarial report to which this standard applies, including a statement of actuarial opinion and any associated **actuarial memorandum**, the actuary should refer to ASOP Nos. 5, 23, 41, and 42. In addition, the actuary should disclose the following in such actuarial report, as applicable:

a. the intended purpose and intended users of the statement of actuarial opinion or the **actuarial memorandum** supporting such actuarial opinion (see section 3.1);

b. the **assets** and **liabilities** being opined upon and related information (see section 3.2);

c. the basis of the amounts presented (see section 3.3);

d. the methods, assumptions, and procedures used in the analysis (see sections 3.3 and 3.6), including any technical explanations and exhibits of complex calculations or concepts (see section 3.6);

e. the scope of the analysis underlying the statement of actuarial opinion and related information (see section 3.4);

f. basis used to determine materiality (see section 3.5);

g. any ranges used to evaluate the reasonableness of the **assets** and **liabilities** (see section 3.6);

h. if the actuary determines that an **asset** or **liability** is outside a reasonable range, the range or amount the actuary believes is reasonable (see section 3.6);

i. any **provision for adverse deviation** (see section 3.6);

j. the appropriateness of the aggregate level of conservatism (see section 3.6);

k. the sources of the data used, and how the reasonability of the data was determined, including support for any reconciliation with amounts reported in the financial statement (see section 3.6);

l. changes in methods, assumptions, and procedures from those in the most recent prior opinion (see section 3.7);

m. a description of any significant risks and uncertainties that could result in material adverse deviation, including the major factors or particular conditions underlying the risks and uncertainties (see section 3.8);

n. any concerns regarding the **collectability** of actuarial **assets** or offsets to **liabilities** (see section 3.9);

o. results of follow-up studies (see section 3.10);

p. the rationale for the opinion including any limitations, reservations, or qualifications, or, if applicable, the justification for an adverse opinion or inability to render an opinion (see section 3.11);

q. whether the adequacy of the **assets** supporting the stated **liabilities** needs to be evaluated (see section 3.12); and

r. extent of reliance on work performed or information provided by other parties (see sections 3.13 and 3.14).

The actuary should include the disclosures above for all actuarial **assets** and **liabilities** within the scope of the opinion, even if these items are listed as zero, unless certain items are zero because they are not applicable to the **health benefit plan** issuer. For nonapplicable items, the actuary should provide an explanation of why such items are not applicable.

When the statement of actuarial opinion is issued separately from the supporting **actuarial memorandum**, the actuary should ensure that all applicable disclosures are included in either the statement of actuarial opinion or the **actuarial memorandum**.

When the statement is provided to meet regulatory requirements such as the NAIC Health Annual Statement, additional disclosures may be required to be included in the statement of actuarial opinion and any associated **actuarial memorandum**.

4.2 Additional Disclosures in an Actuarial Report—The actuary also should include the following, as applicable, in an actuarial report, including a statement of actuarial opinion and any associated **actuarial memorandum**:

a. the disclosure in ASOP No. 41, if any material assumption or method was prescribed by applicable law;

b. the disclosure in ASOP No. 41, 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;

c. the disclosure in section 4.1(p) regarding any limitations, reservations, qualifications of the opinion, the justification for an adverse opinion, or the inability to render an opinion, if the actuary disclaims responsibility for any material assumptions, methods, or model input; and

d. the disclosure in ASOP No. 41, if in the actuary's professional judgment, the actuary has deviated materially from the guidance of this ASOP.

Appendix 1

Background and Current Practices

Note: This appendix is provided for informational purposes and is not part of the standard of practice.

Background

In the early 1980s, the National Association of Insurance Commissioners (NAIC) developed standards for a statement of actuarial opinion on reserves and related actuarial items that were to be included in the annual statement filed by health service corporations. In response to this requirement, the American Academy of Actuaries promulgated Financial Reporting Recommendation 10, *Statement of Actuarial Opinion for Health Service Corporation Statutory Annual Statements*, setting forth the actuary's professional responsibilities in providing such an opinion.

The form and content of these actuarial opinions, as specified in the instructions to the statutory statements, deal specifically with reserves and related actuarial items. Prior to the development of professional standards, some actuaries began to address other issues in forming their opinions, including asset adequacy analysis, claim settlement expense reserves, and the financial condition of capitated providers under health maintenance organization contracts.

In April 1997, the ASB (Actuarial Standards Board) adopted ASOP No. 28. The original version of ASOP No. 28 was a revised and reformatted version of Financial Reporting Recommendation (FRR) 10, *Statement of Actuarial Opinion for Health Service Corporation Statutory Annual Statements*. The reformatting was done to conform to the revised uniform format for actuarial standards of practice adopted by the ASB in 1996. FRR 10 offered guidance to actuaries providing statutory statements of actuarial opinion for health service corporations. FRR 10 followed the Instructions to the 1983 NAIC Blank for Hospital, Medical, and Dental Service or Indemnity Corporations and the NAIC Blank for Health Maintenance Organizations. ASOP No. 28, which replaced FRR 10 entirely, was based on the current versions of the above two Blanks, and it provided more detailed and comprehensive guidance than that provided in FRR 10.

The type of asset adequacy analysis most widely used by actuaries is multi-scenario cash flow testing. To guide actuaries choosing to use this technique, the ASB adopted ASOP No. 7, *Performing Cash Flow Testing for Insurers*, in October 1988. ASOP No. 7 was revised in July 1991 and again in June 2002.

In July 1990, the ASB adopted ASOP No. 14, *When to Do Cash Flow Testing for Life and Health Insurance Companies*, to provide guidance in determining whether to do cash flow testing in forming a professional opinion or recommendation. ASOP No. 14 was repealed in September 2001 after the ASB determined that relevant portions were incorporated in the 2001 revisions of ASOP No. 7 and ASOP No. 22, *Statements of Opinion Based on Asset Adequacy Analysis by Actuaries for Life or Health Insurers.*

To guide actuaries in the development of incurred health claim liabilities, the Interim Actuarial Standards Board approved an actuarial standard of practice, then titled *Incurred Health Claim Liabilities*, in April 1988, which was subsequently reformatted and adopted by the ASB as ASOP No. 5 in January 1991 and revised in December 2000.

To guide actuaries in several important areas requiring special consideration for health maintenance organizations (HMOs) and other managed-care health plans in several areas, including establishing actuarial reserves relating to the transfer of risk to providers and the financial condition of capitated providers, the ASB adopted ASOP No. 16, *Actuarial Practice Concerning Health Maintenance Organizations and Other Managed-Care Health Plans*, in July 1990. This ASOP was repealed in April 2007 after the ASB determined that it provided information redundant with other ASOPs; the document outlining its repeal refers the reader to other relevant ASOPs.

To guide actuaries in the development of health and disability liabilities other than liabilities for incurred claims, the ASB adopted ASOP No. 42, then titled *Determining Health and Disability Liabilities Other Than Liabilities for Incurred Claims,* in March 2004. These include contract reserves, premium deficiency reserves, provider-related liabilities, claim adjustment expense liabilities, and other liabilities of insurance entities, insured or noninsured risk-assuming entities, managed care entities, health care providers, government-sponsored health benefit plans, or risk contracts. In March 2018, the ASB adopted a revision of ASOP No. 42, now titled *Health and Disability Actuarial Assets and Liabilities Other Than Liabilities for Incurred Claim*s, with an expanded scope including actuarial assets and liabilities.

Current Practices

When issuing or reviewing statements of actuarial opinion related to health insurance assets and liabilities, actuaries often refer to other publicly available sources of information. The NAIC publishes Health Annual Statement instructions, which are updated annually and provide specific guidance to the actuary. Additionally, numerous educational papers that are relevant to the topic of reserves, assets, and liabilities and their evaluation, including those published by the Society of Actuaries, are in the public domain.

ASOP No. 28—Doc. No. 200

Appendix 2

Comments on the Exposure Draft and Responses

The exposure draft of the *Statements of Actuarial Opinion Regarding Health Insurance Assets and Liabilities* ASOP was issued in June 2020 with a comment deadline of November 13, 2020. Three comment letters were received, some of which were submitted on behalf of multiple commentators, such as by firms or committees. For purposes of this appendix, the term "commentator" may refer to more than one person associated with a particular comment letter. The ASOP No. 28 Task Force carefully considered all comments received, and the ASB reviewed (and modified, where appropriate) the changes proposed by the ASOP No. 28 Task Force and the ASB Health Committee.

Summarized below are the significant issues and questions contained in the comment letters and the responses. Minor wording or punctuation changes that were suggested but not significant are not reflected in the appendix, although they may have been adopted.

The term "reviewers" in appendix 2 includes the ASOP No. 28 Task Force, the ASB Health Committee, and the ASB. Also, the section numbers and titles used in appendix 2 refer to those in the exposure draft, which are then cross referenced with those in the final ASOP.

GENERAL COMMENTS	
Comments Response	One commentator recommended adding specific disclosures to section 4 that a reviewing actuary would be required to include in communicating the results of their review. The reviewers note that section 1.2 indicates that this standard is applicable to the reviewing actuary to the extent practicable. Therefore, the reviewers believe that the existing requirements included in section 4 apply to reviewing actuaries to the extent practicable. The reviewers also believe there is no need to develop additional disclosure requirements specific to reviewing actuaries and made no change in response to this comment.
Comment Response	One commentator said the focus of section 3 is entirely on actuaries preparing statements of opinion and does not refer to the reviewing actuary. The reviewers note that section 1.2 indicates that the reviewing actuary should use the guidance in this standard to the extent practicable. Therefore, the reviewers removed all reference to the reviewing actuary in section 3 to eliminate confusion.

Comment Response	One commentator suggested that the ASOP provide clearer guidance to the actuary when considering accounting standards in the evaluation of assets and liabilities and on how to address deviations from the standard when there is a conflict with accounting standards. The reviewers disagree that clearer guidance is necessary, and note that ASOP No. 1, *Introductory Actuarial Standard of Practice*, and ASOP No. 41, *Actuarial Communications*, address situations involving deviation from standards. Therefore, the reviewers made no change in response to this comment.
SECTION 1. PURPOSE, SCOPE, CROSS REFERENCES, AND EFFECTIVE DATE	
Section 1.2, Scope	
Comment Response	One commentator suggested replacing "governs" with "takes precedence" in this section. The reviewers note the language is consistent with ASOPs currently being issued and made no change in response to this comment.
SECTION 2. DEFINITIONS	
Section 2.9, Health Insurance Asset (Asset), and Section 2.10, Health Insurance Liability (Liability)	
Comment Response	One commentator suggested that the use of the term "actuarial consideration" in sections 2.9 and 2.10 is vague and should be defined in another ASOP such as ASOP No. 1. In addition, the commentator suggested that the use of examples is not necessary and suggested they be removed. The reviewers agree that the term "actuarial consideration" is unnecessary and modified the definitions accordingly. The reviewers disagree that the examples should be removed and added "may" before "include" to remove the definitive nature of the list.
SECTION 3. ANALYSIS OF ISSUES AND RECOMMENDED PRACTICES	
Section 3.3., Basis of Assets and Liabilities	
Comment Response	One commentator suggested a definition of "basis" be included at the beginning of the section. The reviewers agree that the term "basis" should be clarified and revised the language in section 3.3 to provide clearer guidance. The reviewers note that the list of items in section 3.3(a) through 3.3(e) helps clarify what is included in a basis.
Comment Response	One commentator suggested changing "document what the actuary assumed" to "identify what the actuary assumed." The reviewers disagree and made no change in response to this comment.
Comment Response	One commentator suggested that section 3.3(e) should begin with "whether there is…". The reviewers agree and modified the language accordingly.
Comment Response	One commentator believes that the term "best estimate" implies statutory conservatism (i.e., good and sufficient under moderately adverse conditions) based on interpretation of Statement of Statutory Accounting Principles No. 55. The reviewers agree that the term "best estimate" is ambiguous and removed the sentence. The reviewers made additional changes to this section to clarify guidance.
Section 3.4, Scope of the Analysis Underlying the Statement of Actuarial Opinion	
Comment Response	One commentator noted that the use of the term "individual" in section 3.4(b) could result in the actuary being required to include any item that is theoretically possible for the statement line, even if a certain reserve item is not applicable to the company or may require the actuary to identify every element of a reserve category (for example, every element in an unpaid claim liability calculation). The reviewers agree that use of the word "individual" could be confusing and modified the language in section 3.4(b) in response to this comment.

Section 3.5, Materiality	
Comment	One commentator suggested that section 3.5 should also address materiality in terms of the level of conservatism in the assets and liabilities, whether implicit or explicit. The importance of a particular balance sheet item, and especially the potential misstatement of such an item, should be considered in terms of whether it is large enough to impair the required conservatism.
Response	The reviewers disagree and made no change in response to this comment. The reviewers note that the existing general guidance in section 3.6 and the last paragraph of section 3.11 address the evaluation of conservatism.
Section 3.6, Asset and Liability Evaluation	
Comment	One commentator suggested that the current wording—in particular, the word “evaluate”—requires some specific calculation of the aggregate level of conservatism in each assumption.
Response	The reviewers did not intend to require a specific calculation and deleted the last sentence of the first paragraph to avoid ambiguity.
Comment	One commentator suggested that the reference to “best estimate basis” should be removed from the last sentence in the sixth paragraph of section 3.6 and end with “…are developed without conservatism.”
Response	The reviewers agree and made the change.
Comment	One commentator felt the ASOP should not pre-suppose that all of the items listed in this section always stem from “complex calculations.”
Response	The reviewers agree and modified the language in response to this comment.
Comment	One commentator felt the requirement to “document” is unnecessary to include in section 3.6 since it is explicitly included in section 4.1(i).
Response	The reviewers believe that a documentation requirement in section 3 is appropriate and made no change in response to this comment.
Section 3.11, Statements of Actuarial Opinion	
Comment	One commentator suggested that changing the nomenclature of the types of opinions was unnecessary.
Response	The reviewers note that the standard applies to statements other than NAIC annual statements. Therefore, the reviewers added clarifying language in section 1.2, Scope, but made no change to the language in section 3.11.
Comment	One commentator felt that the ASOP was not clear regarding whether excessive conservatism would affect the type of opinion issued and suggested the language be clarified.
Response	The reviewers disagree and made no change in response to this comment. The reviewers believe “outside a reasonable range” addresses the commentator’s concern.
Comment	One commentator suggested that the language in section 3.11 that refers to the “good and sufficient” standard should refer only to liabilities and not to assets because the prescribed wording of an NAIC blank refers to the “good and sufficient standard” with respect to “unpaid claims and other liabilities.”
Response	The reviewers disagree and made no change in response to this comment.

SECTION 4. COMMUNICATIONS AND DISCLOSURES	
Section 4.1, Required Disclosures in an Actuarial Report	
Comment Response	Two commentators suggested clarifying which disclosures should be included in the opinion and accompanying actuarial memorandum. The reviewers revised the language in response to these comments and removed references to individual disclosures.
Comment Response	One commentator noted the disclosures in section 4.1(e) are more appropriate to include in the actuarial memorandum. The reviewers revised language in section 4.1 to allow more flexibility related to what is included in the actuarial memorandum versus in the opinion.
Comment Response	One commentator noted that a range is not required for every asset or liability and suggested that section 4.1(g) be revised to clarify the requirement. The reviewers disagree that section 4.1(g) requires the actuary to develop a range and made no change in response to this comment.
Comment Response	One commentator suggested that sections 4.1(d) and 4.1(j) could be merged as both require a description of the "methods, assumptions, and procedures used." The reviewers agree and combined sections 4.1(d) and (j) in response to this comment.

ACTUARIAL STANDARDS BOARD

Actuarial Standard
of Practice
No. 29

Expense Provisions in Property/Casualty Insurance Ratemaking

Developed by the
Subcommittee on Ratemaking of the
Casualty Committee of the
Actuarial Standards Board

Adopted by the
Actuarial Standards Board
July 1997
Updated for Deviation Language Effective May 1, 2011

(Doc. No. 147)

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STANDARD OF PRACTICE

APPENDIXES

August 1997

TO: Members of Actuarial Organizations Governed by the Standards of Practice of the Actuarial Standards Board and Other Persons Interested in Expense Provisions in Property/Casualty Insurance Ratemaking

FROM: Actuarial Standards Board (ASB)

SUBJ: Actuarial Standard of Practice No. 29

This booklet contains the final version of actuarial standard of practice (ASOP) No. 29, *Expense Provisions in Property/Casualty Insurance Ratemaking*.

Background

This standard was developed by the Subcommittee on Ratemaking of the ASB's Casualty Committee. The Casualty Actuarial Society's *Statement of Principles Regarding Property and Casualty Insurance Ratemaking* identifies and describes principles applicable to the determination and review of property/casualty insurance rates. These principles are limited to that portion of the ratemaking process involving the estimation of costs associated with the transfer of risk. For most lines of business, the expense component is a significant portion of the rate. For some lines of business, the expense component can actually exceed the loss component. For this reason, it is necessary to have a standard of practice to provide guidance to actuaries in the determination of a proper expense component.

Exposure Draft

This standard was exposed for review in October 1994, with a comment deadline of March 15, 1995. Thirty-one comment letters were received. The Subcommittee on Ratemaking reviewed all the comments carefully, and many of the suggestions were incorporated into the final standard. In particular, the subcommittee expanded the discussions concerning (1) residual market and statutory assessment provisions, (2) the provision for reinsurance, and (3) policyholder dividends. (For a detailed discussion of the issues raised in the comment letters, and the subcommittee's responses to such, please see appendix 2.)

Format Changes

A number of format changes have also been made since publication of the exposure draft. The ASB voted in May 1996 to change the format of all future actuarial standards of practice. Thus, sections 3 and 4 now form an appendix titled, Background and Current Practices. (Appendix 1 of this standard contains sections 3 and 4 of the exposure draft.) Further, sections 5 and 6 of the exposure draft have now been renumbered as sections 3 and 4. The "new" sections 3 and 4, along with sections 1 and 2, now form the actual standard of practice. The heading *Preamble*, which used to apply to the first four sections of the standard, has been deleted. The board made these format changes to help the reader distinguish between a standard's substantive requirements and language intended for general information.

The Subcommittee on Ratemaking and the Casualty Committee thank everyone who provided input during the exposure process. The comments were helpful in making revisions. The Casualty Committee also thanks the following former subcommittee members, who made significant contributions to this work: Daniel J. Flaherty, Gary Grant, and Robert Lindquist. The ASB voted in July 1997 to adopt the final standard.

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ACTUARIAL STANDARD OF PRACTICE NO. 29

EXPENSE PROVISIONS IN PROPERTY/CASUALTY INSURANCE RATEMAKING

STANDARD OF PRACTICE

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

1.1 Purpose—The purpose of this standard of practice is to provide guidance to actuaries in estimating costs for property/casualty insurance ratemaking other than (1) incurred losses, (2) the provision for profit and contingencies, (3) investment expenses, and (4) federal and foreign income taxes.

1.2 Scope—This standard of practice applies to all property/casualty insurance coverages. This standard also applies to property/casualty risk financing systems, such as self-insurance, that provide similar coverages. References in the standard to *risk transfer* should be interpreted to include risk financing systems that provide for risk retention in lieu of risk transfer.

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 with respect to work performed after December 1, 1997.

Section 2. Definitions

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

2.1 Commission and Brokerage Fees—Compensation to agents and brokers.

2.2 Expense Limitations—Legislative or regulatory rules that disallow or limit certain categories of expenses in determining rates.

2.3 General Administrative Expenses—All operational and administrative expenses (other than investment expenses) not specifically defined elsewhere in this section.

2.4 Loss Adjustment Expenses (LAE)—All expenses incurred in investigating and settling claims.

2.5 Other Acquisition Expenses—All costs, other than commission and brokerage fees, associated with the acquisition of business.

2.6 Policyholder Dividends—Nonguaranteed returns of premium or distributions of surplus.

2.7 Premium-Related Expenses—Those expenses that vary in direct proportion to premium, e.g., premium taxes. These expenses are sometimes referred to as *variable expenses*.

2.8 Rate—An estimate of the expected value of future costs.

2.9 Residual Market Provision—A provision for the entity's costs that represents its share of residual market profits or losses.

2.10 Statutory Assessment Provision—A provision for the entity's costs stemming from any mandated assessment.

2.11 Taxes, Licenses, and Fees—All taxes and miscellaneous fees except federal and foreign income taxes.

Section 3. Analysis of Issues and Recommended Practices

3.1 Categorizing Expenses—The actuary should be familiar with the pertinent requirements for defining expenses, such as those prescribed in the *Instructions for Uniform Classification of Expenses*, published by the National Association of Insurance Commissioners (NAIC), or Regulation 30 of the New York State Insurance Department. The actuary should also be familiar with the entity's own methods of classifying and assigning expenses.

3.2 Determining Expense Provisions—The actuary should determine the provisions for loss adjustment expenses; commission and brokerage fees; other acquisition expenses; general administrative expenses; and taxes, licenses, and fees that are appropriate for the policies to be written or coverages provided during the time the rates are expected to be in effect. In addition, where appropriate, the actuary should consider subdividing the expense categories. Expense provisions should reflect the conditions expected during the time these policies or coverages are expected to be in effect and should include all expenses expected to be incurred in connection with the transfer of risk.

For expenses other than premium-related expenses, the actuary should consider estimating these expenses on a basis that is not directly proportional to premium, such as per policy, per coverage, a percentage of claim losses, or per unit of exposure. Studies or actuarial judgment may support such estimates.

3.3 Start-Up Costs—The actuary may amortize start-up or development costs using an appropriate amortization period.

3.4 Expense Trending—In determining the future expense components of the rate, the actuary should be guided by Actuarial Standard of Practice (ASOP) No. 13, *Trending Procedures in Property/Casualty Insurance Ratemaking.*

3.5 Policyholder Dividends—The *Statement of Principles Regarding Property and Casualty Insurance Ratemaking* of the Casualty Actuarial Society (CAS) classifies policyholder dividends as an expense to operations. When the actuary determines that policyholder dividends are a reasonably expected expense and are associated with the risk transfer, the actuary may include a provision in the rate for the expected amount of policyholder dividends. In making this determination, the actuary should consider the following: the company's dividend payment history, its current dividend policy or practice, whether dividends are related to loss experience, the capitalization of the company, and other considerations affecting the payment of dividends.

3.6 Residual Market and Statutory Assessment Provisions—The actuary should include a provision in the rate for any residual market costs or statutory assessments expected to occur during the period of time the rates are expected to be in effect. If these costs are assessed retrospectively, it may be appropriate to include a provision to recover these costs to the extent they were not included in previous rates.

3.7 Provision for Reinsurance—The actuary may elect whether to include the cost of reinsurance as an expense provision. If a provision for reinsurance is included, the actuary should consider the amount to be paid to the reinsurer; ceding commissions or allowances; expected reinsurance recoveries; and other relevant information specifically relating to cost, such as a retrospective profit-sharing agreement and reinstatement premiums between the reinsured and the reinsurer.

Section 4. Communications and Disclosures

4.1 Conflict with Law or Regulation—The rate filed with a regulator may differ from an actuarially determined rate because of expense limitations. If a law or regulation conflicts with the provisions of this standard, the actuary should develop a rate in accordance with the law or regulation, and disclose any material difference between the rate so developed and the actuarially determined rate to the client or employer.

4.2 Documentation—The actuary should be guided by the provisions of ASOP No. 9, *Documentation and Disclosure in Property and Casualty Insurance Ratemaking, Loss Reserving, and Valuations*.

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

a. in addition to the disclosure covered in section 4.1, the disclosure in ASOP No. 41, *Actuarial Communications*, 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.

Appendix 1

Background and Current Practices

Note: This appendix is provided for informational purposes, but is not part of the standard of practice.

Background

Inflation—Prior to the relatively high inflation of the 1970s, a predominant ratemaking technique involved including expenses, other than loss adjustment expenses, as a percentage of premium. In doing so, it was assumed that the expense portion of the rate was subject to the same trend (usually very low) to which the loss and loss adjustment expense portions were subjected. However, higher levels of inflation had a rather significant impact on the expected change in the various components of the rate. By the 1970s, the assumption that the trend in expenses would approximate the trend in losses was being questioned. Although the actuarially determined loss trend may have been applied to the loss and loss adjustment expenses as usual, a separate analysis and trend may have been necessary to properly reflect the anticipated change in certain other expenses.

Expense Flattening—Expense flattening techniques assign expenses to policies or other units of exposure rather than in proportion to premium or losses. Thus, expense flattening is a procedure sometimes used to determine that portion of the rate that does not vary in direct proportion to premium or losses.

Expense Trending—Expense trending reflects how changes over time affect expenses. Over the years, separate trending of expenses has become a more common ratemaking technique. However, including expenses as a proportion of premium is still used.

Actuarial Literature—Although the property/casualty actuarial literature is relatively sparse on the topic of expense provisions in ratemaking, techniques for separately trending losses and expenses and alternatives to premium-related ex-pense provisions have been included in such literature. Also included are discussions about the inappropriateness, in some cases, of assuming proportional expenses for administrative ease when, in fact, some expense categories do not vary in direct proportion to premium.

Regulation—Beginning in the late 1970s, some regulators have applied expense limitations in either limiting or disallowing certain expenses and in requiring expense flattening.

Current Practices

Categories—Expenses other than investment expenses are generally divided into five broad categories to determine the expense component of the rate. These expenses are (1) loss adjustment expenses, (2) commission and brokerage fees, (3) other acquisition expenses, (4) general administrative expenses, and (5) taxes, licenses, and fees. Studies may be conducted to determine which expenses vary in direct proportion to premium, losses, number of policies, or other units of exposure, and which expenses may be independent.

Loss Adjustment Expenses—Loss adjustment expenses are generally of two types: allocated and unallocated. Allocated loss adjustment expenses (ALAE) are sometimes combined with and, thus, treated the same as, incurred losses (IL). ALAE are combined with unallocated loss adjustment expenses (ULAE) for some lines of business. ULAE may be expressed as a function of IL plus ALAE, but may also be expressed as a function of premium. For lines of business in which all loss adjustment expenses are combined, the loss adjustment expenses are generally expressed as a function of either IL or premium.

Commissions and Premium Taxes—Commissions and premium taxes are typically paid as a percentage of direct written premium. Such expenses are generally treated as premium-related expenses.

General Administrative Expenses and Other Acquisition Expenses—General administrative expenses and other acquisition expenses may be expressed as a function of premium; or may be partially related to premium, partially related to the number of policies, and partially related to the number of exposures.

Current Information—Historical expenses are generally analyzed in light of current relevant information to determine whether they will be representative of future costs.

Budgeted versus Historical Expenses—Because of the prospective nature of ratemaking, certain expenses, such as commissions, are generally based on budgets rather than determined from historical data.

Expense Trending—Historical expenses may be adjusted to reflect changes over time.

Residual Market and Statutory Assessment Provisions—Residual market costs and statutory assessments are often included as expenses. For those classes of business written in the voluntary market that caused the insurer to receive a share of the residual market, the residual market provision may be separately identified or embedded in the rate.

Appendix 2

Comments on the Exposure Draft and Subcommittee Responses

The proposed standard of practice was approved for release as an exposure draft in October 1994, with a comment deadline of March 15, 1995. Thirty-one comment letters were received and reviewed by the Subcommittee on Ratemaking of the ASB's Casualty Committee. Summarized below are the substantive issues raised and questions contained in the comment letters, printed in lightface. The subcommittee's responses to those issues appear in **boldface**.

Note also that, as mentioned in the transmittal memorandum to this standard of practice (see page vi), the ASB adopted on May 1, 1996, a new format for all actuarial standards of practice. Thus, the section numbers below refer to section numbers in the exposure draft, unless otherwise noted (some section numbers have remained the same).

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

Section 1.1, Purpose—Several comments were received asking for clarification of the issues covered by the standard. **The subcommittee added the phrase *for property/casualty insurance ratemaking* to clarify that the standard is limited to ratemaking. Further, the section was revised to note that the subject of federal and foreign income taxes is clearly *excluded* by the standard. The subject of investment expenses was also specifically excluded since the subcommittee agreed that the subject should not be considered in this standard.** One commentator questioned whether allocated loss adjustment expenses were included in the standard. **The subcommittee revised the section to make it clear that all loss adjustment expenses are included in this standard.**

Section 1.2, Scope—A few commentators noted that this section is ambiguous in its use of examples. **The subcommittee modified the text to clearly note that the standard applies to all property/casualty coverages.**

<u>Section 2. Definitions</u>

Section 2.1, Allocated Loss Adjustment Expenses—**This definition was deleted since it is not used in the standard.**

Section 2.4, General Administrative Expenses (now section 2.3)—Several comments were received regarding reinsurance expenses. **The subcommittee added a new section, Provision for Reinsurance (see section 3.7), to discuss the treatment of reinsurance expenses. No changes were made to the definition of *general administrative expenses*.**

Section 2.5, Guaranty Fund Assessments (now section 2.10 and titled, Statutory Assessment Provision)—**The subcommittee developed a broader definition that refers to all statutory assessments in order to reflect guaranty fund assessments, and emerging statutory insurance and reinsurance mechanisms, such as the Florida Hurricane Catastrophe Fund, the Florida Windstorm Underwriting Association, and the California Earthquake**

Authority, as well as various administrative and special fund expenses for which entities are assessed. The subcommittee also replaced the word *insurer* with *entity* to further broaden the application.

Section 2.8, Policyholder Dividends (now section 2.6)—One comment letter noted that this was a weak definition. **Although the definition was slightly modified, the subcommittee believes that the revised definition is the most descriptive and definitive one available. The subcommittee deleted the phrase *charged to operations* at the end of the definition and added the phrase *or distributions of surplus*.**

Section 2.9, Rate (now section 2.8)—**No change was made. This definition is the same as the one found in the CAS *Statement of Principles Regarding Property and Casualty Insurance Ratemaking*.**

Section 2.10, Residual Market Provision (now section 2.9)—**Per comments received, the entire second sentence of the section was moved to section 4.9 of the exposure draft, which can now be found in appendix 1 under the title, Residual Market and Statutory Assessment Provisions.**

Section 2.11, Taxes, Licenses, and Fees—**Based on comments received and on an analysis of the insurance expense exhibit breakout, the subcommittee inserted the words *federal and foreign* before *income taxes* to make clear that state income, municipal, police department, fire department, etc., premium taxes should be considered.**

Section 2.12, Unallocated Loss Adjustment Expenses—Some commentators noted that since some companies contract claim handling as a percentage of each claim cost, some types of claim costs could be classified as "allocated" for one company and "unallocated" for another. **This definition was deleted since it is not used in the standard.**

Section 2.13, Variable Expenses (now section 2.7 and titled Premium-Related Expenses)—One commentator suggested that this section be titled, Premium Variable Expenses. **The subcommittee agreed in concept and changed the title to, Premium-Related Expenses.**

Other commentators suggested that the standard define *nonvariable expenses,* since the term is used in section 4.8 (this section can now be found in appendix 1, Current Practices, with the title, Expense Trending) and section 5.4, Measurement Base. **The subcommittee deleted use of this term. Thus, no definition is necessary. Expenses that are not related to premiums are treated in the second paragraph of section 3.2, Determining Expense Provisions, in this standard.**

<u>Section 3. Background and Historical Issues (Now in Appendix 1 under Background)</u>

Section 3.1, Inflation and Price Controls (this section can now be found in appendix 1 under the title, Inflation)—It was noted that *price controls* are not mentioned elsewhere in the section. **This phrase was deleted. The subcommittee also modified the wording in the last sentence of the paragraph to make the application of the loss trend less restrictive.**

Section 3.2, Expense Flattening (this section can now be found in appendix 1)—It was suggested that the word *policies* be expanded to *policies or other units of exposure*. **The subcommittee agreed and made the modification. In addition, the wording in the last sentence was changed to make the definition of *expense flattening* more explicit.**

Section 3.3, Expense Trending (this section can now be found in appendix 1 under Background)—It was noted that the phrase *expense trending* does not need to be italicized. **The subcommittee deleted the italics and replaced *measures* with *reflects*, since expense trending is not a true measure of changes.**

Section 3.4, Actuarial Literature (this section can now be found in appendix 1)— **In the first sentence, the subcommittee replaced the word *expenses* with the phrase *expense provisions in ratemaking* to make it consistent with the subject of the standard of practice. In the last sentence, the wording was modified to be consistent with the section, Expense Flattening.**
Section 3.5, Regulation (this section can now be found in appendix 1)—It was suggested that the second sentence (*These expense limitations should be taken into account when establishing the premium rate filed with the regulator*.) reflects procedure rather than background. **The subcommittee deleted this sentence from the section, and modified the wording in section 4.1 of the standard to reflect this change.**

<u>Section 4. Current Practices and Alternatives (Now in Appendix 1 under Current Practices)</u>

Section 4.1, Categories (this section can now be found in appendix 1)—Suggestions included rearranging this section to remove the reference to specific loss adjustment expenses and inserting this reference into section 4.2. It was also suggested that the draft may be too limiting regarding current practice. **The subcommittee moved a portion of this section to the section directly below it (i.e., the old section 4.2, Loss Adjustment Expenses), and rewrote the remaining text to broaden the scope of current practice. Also, the word *special*, describing the studies that could be conducted, was deleted.**

Section 4.2, Loss Adjustment Expenses (this section can now be found in appendix 1)—It was suggested that the third and fourth sentences were inconsistent. **The subcommittee revised the third and fourth sentences of this section to clarify that unallocated expenses may be expressed as a function of premium.**

Section 4.3, Commissions and Premium Taxes (this section can now be found in appendix 1)—A concern was expressed that this section did not mention “truly variable commissions, e.g., ones that include profit-sharing based on loss ratios.” In addition, minor editorial changes were recommended. **The subcommittee is satisfied that this section is broad enough to allow the actuary to work with variable commissions. The editorial suggestions were adopted.**

Section 4.4, General Administrative Expenses and Other Acquisition Expenses (this section can now be found in appendix 1)—One commentator suggested that this section is inconsistent with sections 4.1 and 5.1 of the exposure draft. In addition, minor editorial suggestions were offered.

The subcommittee does not agree that an inconsistency exists among the sections, but it did incorporate the suggested editorial changes.

Section 4.5, Specific Jurisdiction versus Nationwide—Minor editorial changes were suggested. **After further consideration, the subcommittee concluded that this section was not necessary and deleted it.**

Section 4.8, Nonvariable Expenses (this section can now be found in appendix 1, Current Practices, with the title, Expense Trending)—Concern was expressed that this section restricts expense trending to only nonvariable expenses. It was also suggested that this section be broadened to include a discussion of the prospective treatment of expenses. **The subcommittee renamed this section Expense Trending, modifying the text to acknowledge that expenses may need to be adjusted to reflect changes over time.**

Section 4.9, Residual Market Provisions and Guaranty Fund Assessments (this section can now be found in appendix 1 with the title, Residual Market and Statutory Assessment Provisions)—A few comment letters requested making this section more general by removing references to *guaranty funds* and removing the reference to *state-specific residual market costs*. **The phrase *guaranty fund* was replaced with the term *statutory* in the title, and the phrase *state-specific* was eliminated from the section. The subcommittee also added language to identify an appropriate treatment of a residual market provision.**

<u>Section 5. Analysis of Issues and Recommended Practices (Now Section 3)</u>

Section 5.1, Categorizing Expenses (now section 3.1)—Concerns were expressed that requiring the actuary to be familiar with the *Instructions for Uniform Classification of Expenses* and with the entity's own methods of classifying expenses is too onerous. **This information (i.e., that contained in the NAIC publication and the entity's own methods) is important to the selection of an appropriate expense methodology. The section was left unchanged**. It was also suggested that the National Council on Compensation Insurance statistical plan be added to the list of expense definitions. **The subcommittee believes that the requirement to be "familiar with the entity's own methods" covers this issue.**

Section 5.2, Determining Expense Components (now section 3.2 and titled Determining Expense Provisions)—Several concerns were expressed about the discussion of ULAE and ALAE. Also, several comments requested that residual market costs be discussed in a separate section. **The discussion of ULAE and ALAE was deleted. Also, the subcommittee added a new section, Residual Market and Statutory Assessment Provisions (see section 3.6), and a new paragraph providing direction for handling expenses that do not vary directly with premium. This new paragraph replaces section 5.4 of the exposure draft.**

Section 5.3, Start-Up Costs (now section 3.3)—Comments were received that start-up costs should be more precisely defined. **The subcommittee believes that the determination of which costs are start-up costs and which are not should be made by the actuary in each unique situation. The subcommittee changed the language to include development costs, and made**

other editorial changes, but did not think it appropriate to more explicitly define these costs.

Section 5.4, Measurement Base—Several comment letters stated that the term *nonvariable expenses* needs to be defined. It was also suggested that the reference to *premium discounts or expense constants* be deleted. **As noted earlier regarding comments on section 5.2, the subcommittee deleted this section and moved the discussion of expenses that do not vary directly with premium to the second paragraph of section 3.2 of this standard.**

Section 5.5, Expense Trending (now section 3.4)—It was suggested that this section specifically identify the pertinent sections of ASOP No. 13, so that actuaries would not need to review the other standard of practice. **ASOP No. 13, *Trending Procedures in Property/Casualty Insurance Ratemaking*, should be reviewed whenever an actuary is engaged in ratemaking. No changes were made to this section.**

Section 5.6, Policyholder Dividends (now section 3.5)—Concerns were expressed that this section is unclear as to when policyholder dividends are (or are not) associated with the transfer of risk. **The subcommittee rewrote this section for clarification and to provide additional guidance.**

Note, as well, that two new sections have been added: section 3.6, Residual Market and Statutory Assessment Provisions (see the comments above regarding section 5.2 of the exposure draft), and section 3.7, Provision for Reinsurance (see the comments above regarding section 2.4 of the exposure draft).

Section 6. Communications and Disclosure (Now Section 4)

Section 6.1, Conflict with Law or Regulation (now section 4.1)—It was suggested that the actuary should quantify the economic impact of any limitations or exclusions. It was also suggested that conflicts should be disclosed to the regulator, in addition to the client or employer. **The subcommittee revised this section to note that, if a law or regulation conflicts with the provisions of this standard, the actuary should develop a rate in accordance with the law or regulation, and disclose any material difference between the rate so developed and the actuarially determined rate to the client or employer. In those situations where the regulator is neither a client nor an employer, it could be inappropriate for an actuary to disclose information directly to the regulator. Thus, the section was modified accordingly.**

Section 6.2, Documentation—One comment letter suggested that this section should simply reference ASOP No. 9, *Documentation and Disclosure in Property and Casualty Insurance Ratemaking, Loss Reserving, and Valuations.* **The subcommittee made the suggested change.**
The Subcommittee on Ratemaking of the Casualty Committee thanks everyone who took the time and made the effort to write comment letters. The input was helpful in developing the final standard.