ACTUARIAL STANDARDS BOARD

**Actuarial Standard**
**of Practice**
**No. 11**

# Treatment of Reinsurance or Similar Risk Transfer Programs Involving Life Insurance, Annuities, or Health Benefit Plans in Financial Reports

**Developed by the**
**Task Force to Revise ASOP No. 11 of the**
**Life Committee of the**
**Actuarial Standards Board**

**Adopted by the**
**Actuarial Standards Board**
**April 2021**

**Doc. No. 199**

# TABLE OF CONTENTS

## APPENDIXES

**ASOP No. 11—Doc. No. 199**

April 2021

**TO:** Members of Actuarial Organizations Governed by the Standards of Practice of the Actuarial Standards Board and Other Persons Interested in the Treatment of Reinsurance or Similar Risk Transfer Programs Involving Life Insurance, Annuities, or Health Benefit Plans in Financial Reports

**FROM:** Actuarial Standards Board (ASB)

**SUBJ:** Proposed Revision of Actuarial Standard of Practice (ASOP) No. 11

This document contains a revision of ASOP No. 11, now titled *Treatment of Reinsurance or Similar Risk Transfer Programs Involving Life Insurance, Annuities, or Health Benefit Plans in Financial Reports*.

History of the Standard

The ASB adopted the original ASOP No. 11, then titled *The Treatment of Reinsurance Transactions in Life and Health Insurance Company Financial Statements*, in 1989. Prior to adoption of the standard, Recommendation No. 4 and Interpretation No. 4-A of the *Financial Reporting Recommendations and Interpretations* of the American Academy of Actuaries covered certain aspects of generally accepted accounting principles (GAAP) financial reporting on reinsurance ceded by life and health insurance companies. The original standard superseded Recommendation No. 4 and Interpretation No. 4-A.

By the early 2000s, reinsurance practice and related accounting guidance had evolved significantly for both GAAP and statutory reporting. As a result, in 2005 the ASB decided to revise ASOP No. 11. In the 2005 revision, the scope was changed to apply to reinsurance transactions involving life and health insurance, rather than to life and health insurance company financial statements, as well as to life and health insurance reinsured by property/casualty companies. Furthermore, if a company entered into a transaction that involved reinsurance of both life/health insurance and property/casualty insurance, the 2005 revision stated that the actuary should determine whether ASOP No. 11, ASOP No. 36, *Statements of Actuarial Opinion Regarding Property/Casualty Loss and Loss Adjustment Expense Reserves*, or aspects of both are most appropriate to determine the proper treatment of the transaction.

Since 2005, significant new guidelines and requirements for life insurance policies and annuity contracts have emerged, including the following:

General Changes

- Dodd–Frank Wall Street Reform and Consumer Protection Act;
- Covered Agreement with the European Union; and
- Covered Agreement with the United Kingdom.

GAAP Changes

- GAAP – Accounting Standard Update 2018-12 (ASU 2018-12).

Statutory Changes

- Principle-based reserving (PBR) and the accompanying *Valuation Manual*;
- Actuarial Guideline 48, *Actuarial Opinion and Memorandum Requirements for the Reinsurance of Policies Required to be Valued under Sections 6 and 7 of the NAIC Valuation of Life Insurance Policies Model Regulation (Model 830)*, and Term and Universal Life Insurance Reserve Financing Model Regulation (Model 787);
- Amendments and recent developments in the Credit for Reinsurance Model Law and Regulation and the Nonadmitted and Reinsurance Reform Act;
- State by state requirements for the appointed actuary; and
- Own Risk and Solvency Assessment (ORSA).

New requirements and practices related to health benefit plans have also emerged, including the following:

- The Patient Protection and Affordable Care Act (ACA);
- Increased prevalence of risk sharing with providers;
- Increased prevalence of governmental entities assuming insurance risk;
- Increased use of reinsurance for certain health lines of business, for example, long-term care and ACA-compliant business; and
- A greater variety of entities assuming health insurance risk.

The guidance in the standard is being updated to reflect emerging practices driven by this new environment.

Exposure Draft

The exposure draft was issued in November 2019 with a comment deadline of June 30, 2020. Two comment letters were received and considered in making changes that are reflected in this ASOP.

Notable Changes from Exposure Draft

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

1. The title of the standard was changed to reflect the expanded scope.

2. In section 1.2, an edit was made to clarify that similar risk transfer programs were included in scope. To illustrate how this expansion applies to self-insured programs an example was added.

3. In section 2, definitions of "assuming entity" and "ceding entity" were added, and the definitions of "nonproportional feature," "reinsurance agreement," and "reinsurance program" were clarified.

4. Section 3.2, Financial Reports, was broken up into its two constituent parts, now section 3.2, Impact of Risks Reinsured, and section 3.3, Impact of Risks Retained.

5. Section 3.3(c) was modified to clarify that assumptions need to be reasonable not just in aggregate but also individually.

6. A new section 3.4 was added to consolidate guidance on modeling.

7. In section 3.4, guidance now in ASOP No. 56, *Modeling*, was replaced by references to ASOP No. 56.

8. Section 3.9(c) was expanded to recognize that reinsurance performance can be assured via collateral or other forms of security.

Notable Changes from the Existing Standard

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

1. The title of the standard was changed to reflect the expanded scope.

2. In section 1.2, the scope was clarified and expanded both to include risk transfer programs similar to reinsurance and to apply to internal and external financial reports, rather than only financial statements.

3. The guidance related to health benefit plans was reviewed and expanded throughout section 3.

4. Guidance was clarified and expanded throughout section 3.2.

5. Guidance was added on the financial reporting aspects of nonguaranteed reinsurance elements in section 3.2(a).

6. Guidance was added on the impact of risks retained in section 3.3.

7. Guidance on modeling was added throughout the standard.

8. Guidance related to counterparty risk was added in section 3.5.

9. Guidance was added on the impact of nonguaranteed elements of the policies being reinsured in sections 3.2, 3.7, 3.9(a), and 3.9(b).

10. Disclosures were added in sections 3 and 4 to match the clarifications and expansions made in section 3.

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

The ASB voted in April 2021 to adopt this standard.

**ASOP No. 11—Doc. No. 199**

Task Force to Revise ASOP No. 11

Jeremy Starr, Chairperson

| | |
|---|---|
| Patrick L. Collins | Leonard Mangini |
| Thomas J. Heckel | Martin Snow |
| Annette V. James | |

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 |
| Robert M. Damler | Kathleen A. Riley |
| 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. 11

# TREATMENT OF REINSURANCE OR SIMILAR RISK TRANSFER PROGRAMS INVOLVING LIFE INSURANCE, ANNUITIES, OR HEALTH BENEFIT PLANS IN FINANCIAL REPORTS

## 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 **financial reports** that reflect **reinsurance programs** that involve life insurance, annuities, or **health benefit plans**.

1.2 Scope—This standard applies to actuaries when performing actuarial services in connection with preparing, determining, analyzing, or reviewing **financial reports** for internal or external use that reflect reinsurance or similar risk transfer programs on life insurance, annuities, or **health benefit plans**. Throughout this standard, the word "preparing" includes determining, analyzing, and reviewing. If the actuary is performing actuarial services that involve reviewing **financial reports** for internal or external use that reflect **reinsurance programs**, the actuary should use the guidance in section 3 to the extent practicable.

To the extent that life insurance, annuities, or **health benefit plans** are reinsured by a property/casualty company or through risk financing systems (such as government-sponsored reinsurance pools and programs, or securitization products), this standard applies. To the extent that self-insured plans buy third-party insurance, such as employer stop-loss insurance, this standard applies. To the extent that a self-insured plan is a stand-alone product with no third-party involvement, this standard does not apply.

If a **reinsurance program** includes property/casualty coverages, along with life insurance, annuities, or **health benefit plans**, the actuary should use professional judgment to determine whether this standard; ASOP No. 36, *Statements of Actuarial Opinion Regarding Property/Casualty Loss and Loss Adjustment Expense Reserves;* ASOP No. 43, *Property/Casualty Unpaid Claim Estimates;* or aspects of all three standards apply.

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 actuarial services performed in connection with **financial reports** issued on or after December 1, 2022.

## Section 2. Definitions

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

2.1 Assuming Entity—The entity accepting insurance risk in a **reinsurance agreement**, such as an insurer accepting risk from a stop-loss program, a reinsurer accepting risk from an insurance company, or a retrocessionaire accepting risk from a reinsurer.

2.2 Ceding Entity—The entity that is transferring insurance risk in a **reinsurance agreement**, such as an employer transferring risk under a stop-loss arrangement, an insurance company transferring risk to a reinsurer, or a reinsurer transferring risk to a retrocessionaire.

2.3 Collectability of Reinsurance Proceeds—The ability of the **counterparty** to obtain funds owed to it according to the terms of the **reinsurance program**.

2.4 Counterparty—Another entity involved in the **reinsurance program** including, but not limited to, **ceding entity**, **assuming entity**, or a **service provider**.

2.5 Counterparty Risk—The risk that any **counterparty** does not fulfill its contractual obligations.

2.6 Financial Report—A report that conveys the performance or experience of an **assuming entity** or **ceding entity** at a specific point in time or over an accounting or measurement period. The **financial report** may be based on any financial reporting regime appropriate to the assignment. Examples of **financial reports** include, but are not limited to, statutory financial statements, own risk and solvency assessment (ORSA) reports, enterprise risk management (ERM) reports, GAAP financial statements, asset adequacy analysis reports, and experience study reports.

2.7 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, critical illness, accidental death and dismemberment, or other health-related benefits, whether on a reimbursement, indemnity, or service benefit basis, regardless of the form of the risk-bearing entity.

2.8 Model—A simplified representation of relationships among real world variables, entities, or events using statistical, financial, economic, mathematical, non-quantitative, or scientific concepts and equations.

2.9 Net Liabilities—Reserves (net of reinsurance reserve credits), plus any other liabilities (such as amounts due the **assuming entity**), less any other assets arising from a **reinsurance program** (such as amounts receivable from the **assuming entity** or deferred acquisition costs), for the reinsured block of business.

2.10 Net Retained Business—The portion of the business written or assumed by the **ceding entity** that is not subject to the **reinsurance program**.

2.11 Nonguaranteed Reinsurance Elements—Any premium, charge, or benefit within a **reinsurance program** that affects reinsurance costs or values, is not guaranteed in the **reinsurance program**, and can be changed at the discretion of the **assuming entity** or **service provider**. A **nonguaranteed reinsurance element** may provide a more favorable value to the **ceding entity** than an element that is guaranteed in the policy. Examples of **nonguaranteed reinsurance elements** are the premiums in a yearly renewable term **reinsurance agreement** that are defined as nonguaranteed and **service provider** fees that can be contractually changed.

2.12 Nonproportional Feature—A feature of a **reinsurance agreement** that makes the **assuming entity's** loss experience disproportionate to that of the **ceding entity**, such as the **assuming entity** agreeing to reimburse the **ceding entity** for losses above a predetermined aggregate level and up to an aggregate reimbursement limit. Other examples of such **nonproportional features** include aggregate claim limits, deductibles, limited coverage periods, stop-loss coverage, layers of claims covered (such as claims starting and ending at defined levels), and separate but related **reinsurance agreements** (i.e., where the results of one **reinsurance agreement** affect the operation of the other).

2.13 Reinsurance Agreement—An agreement whereby one or more elements of risk contained in insurance contracts or self-insured benefit plans are transferred from a **ceding entity** to an **assuming entity** in return for some consideration.

2.14 Reinsurance Assumed—Reinsurance as it affects the **assuming entity** under a **reinsurance agreement**.

2.15 Reinsurance Ceded—Reinsurance as it affects the **ceding entity** under a **reinsurance agreement**.

2.16 Reinsurance Program—The combination of the **reinsurance agreement(s)**, its associated service contracts, and their implementation. Activities under a **reinsurance program** include but are not limited to sales, underwriting, claims adjudication, and administration, which might be affected by volume-based or performance-based fees or commissions. When using the term **reinsurance program** in this standard, the term will also include

reference to similar risk transfer programs, such as employer stop-loss insurance, government-sponsored reinsurance pools and programs, or securitization products.

2.17 Service Provider—An entity other than the **assuming entity** and **ceding entity** providing contractual services related to a **reinsurance agreement**, such as reinsurance intermediaries, managing general underwriters, captive manager, third-party administrators (TPAs), claims managers, investment advisors, investment managers, information technology providers (such as cloud data services and credit reporting agencies), and trustees.

## Section 3. Analysis of Issues and Recommended Practices

3.1 Reinsurance Program Features—When preparing **financial reports**, the actuary should take into account aspects of relevant **reinsurance program(s)**, including the following:

a. the risks transferred in the **reinsurance agreement**;

b. the structure of the **reinsurance agreement**. The structure includes but is not limited to the type of the **reinsurance agreement** (for example, coinsurance), whether the risk(s) transferred are in the form of a proportional or **nonproportional feature**, and the parameters (quota share percentage, issue age, attachment point, etc.) associated with the reinsured portion(s) of the business; and

c. the responsibilities of any **service providers**, if applicable.

3.2 Impact of Risks Reinsured—When analyzing the impact of risks reinsured under a **reinsurance program**, the actuary should take into account the following:

a. how the terms and conditions of the **reinsurance program**, including **nonguaranteed reinsurance elements**, impact the expected cash flows. Examples of items that may impact cash flows include but are not limited to premiums, risk fees, allowances, benefits, expenses, experience refunds, investment income, modified coinsurance reserve adjustments, **nonproportional features**, policyholder dividends and other nonguaranteed elements of the policies being reinsured, provider risk-sharing agreements, termination provisions of the **reinsurance agreement**, and volume or other bonuses (including any contingent payments);

b. how activities that are performed by **service providers** impact reinsurance cash flows;

c. penalties, if any, for not performing as required under the terms and conditions of the **reinsurance program**, such as interest penalties, and the likelihood of such penalties;

d. the impact on reinsurance cash flows, if any, of the contractual activities performed by the **assuming entity** or the **ceding entity** participating in the **reinsurance agreement** (for example, the ability of the **assuming entity** to influence the timing, size, and nature of potential rates charged by the **ceding entity** to policyholders, or claims handling practices, or the ability of the **ceding entity** to change nonguaranteed elements of the policies being reinsured);

e. the impact of **counterparty risk** to a **reinsurance program** on reinsurance cash flows (for more on **counterparty risk**, see section 3.5);

f. how the **collectability of reinsurance proceeds** associated with the **reinsurance program** impacts cash flows. Considerations include but are not limited to the ability of the **assuming entity** to meet its obligations, the impact of state or federal law on the **collectability of reinsurance proceeds**, the ability of the **assuming entity** to interpret direct policy language to impact the amount of claims reimbursed, or the ability of the **ceding entity** to meet its obligations under the **reinsurance program**;

g. the impact of incentives or disincentives, if any, on the performance of the **reinsurance program** activities (for example, compensation of employees, fees to third parties, or the terms and conditions of the **reinsurance program**);

h. the impact on reinsurance cash flows of the investment policy of the holder or manager of the assets under the **reinsurance agreement**. When determining whether the investment policy impacts cash flows, the actuary should take into account the following:

   1. the contractual, legal, market, or regulatory constraints;

   2. the impact of deviation from the expected investment policy on cash flows; and

   3. influence of sections 3.2.(h)(1) and 3.2(h)(2) on changes to investment policies in the future, such as the ability to reinvest future cash flows in similar assets;

i. the impact on reinsurance cash flows of operational risks such as poor training, inadequate or malfunctioning technology, unreliable data, and poor processes; and

j. the impact of the **reinsurance program** on reinsured business as reflected in the **model(s)** used in preparing the **financial report** and the consistency of this impact relative to other **models**, both past and current, used by the entity.

3.3 Impact of Risks Retained—When analyzing the impact of risks retained under the terms and conditions of any **reinsurance program**, the actuary should take into account the following:

a. the potential impact of the existence of a **reinsurance program** on assumptions associated with the **net retained business**. For example, policies below an excess of retention **reinsurance program** may be managed differently due to the presence of reinsurance on the excess of retention business, or the **assuming entity** may have the ability to influence the timing, size, and nature of potential rates charged by the **ceding entity** to all policyholders;

b. the consistency of assumptions and methods regarding risks associated with the **net retained business** that are impacted by the existence of a **reinsurance program** with other assumptions and methods used in the current and prior **financial reports**. When the actuary uses different assumptions or methods in the current **financial report**, the actuary should document those differences and the rationale for the differences;

c. the reasonableness, individually and in aggregate, of assumptions regarding risks associated with the **net retained business** that are impacted by the existence of a **reinsurance program**. When the actuary uses different assumptions before and after reflecting the **reinsurance program** in the **financial reports**, the actuary should document those differences and the rationale for doing so;

d. the impact of the **reinsurance program** on the investment policy of the holder or manager of the assets associated with the **net retained business**. When determining whether the **reinsurance program** impacts the investment policy, the actuary should take into account the following:

    1. the contractual, legal, market, or regulatory constraints;

    2. the impact of deviation from the expected investment policy on cash flows; and

    3. the influence of sections 3.3(d)(1) and 3.3(d)(2)on changes to investment policies in the future, such as the ability to reinvest future cash flows in similar assets;

e. the impact of the **reinsurance program** on **net retained business** as reflected in the **model(s)** used in preparing the **financial report** and the consistency of this impact relative to other **models**, both past and current, used by the entity; and

f. the impact on the cash flows of the **net retained business** caused by the contractual activities performed by the **assuming entity** and **ceding entity** participating in the **reinsurance agreement** (for example, the ability of the **assuming entity** to influence the timing, size, and nature of potential rates charged by the **ceding entity** to policyholders, or claims handling practices).

In addition to the guidance in sections 3.2 and 3.3, the actuary should follow the financial reporting regime's requirements for taking account of any credit in the **financial report** for the risk mitigation impact of the **reinsurance program**.

3.4 Models Used in Preparing Financial Reports—When preparing **financial reports**, the actuary should take into account the implications of modeling the **reinsurance program** including:

a. how the terms and conditions of the **reinsurance program** are reflected in the **model(s)** or the implementation of the **model(s).** When doing so, the actuary should refer to ASOP No. 56, *Modeling*; and

b. how the assumptions used in the **model(s)**:

1. appropriately reflect the terms and conditions of the **reinsurance program**. When making this determination, the actuary should identify and take into account the following:

i. the purpose of the assignment;

ii. the guidance in ASOP No. 23, *Data Quality,* on the consideration and the choice of data underlying the assumptions; and

iii. the guidance in ASOP No. 25, *Credibility Procedures*, on the consideration of the credibility of data underlying the assumptions;

2. contain appropriate margins, for example, for uncertainty, statistical error, or conservatism; and

c. the guidance in ASOP No. 56 related to assumptions used in the **model(s)**.

3.5 Assessing and Analyzing the Impact of Counterparty Risk—The actuary should take into account **counterparty risks** that could impact the **financial report** including, but not limited to, the following:

a. the ability of an entity to meet its obligations under the **reinsurance program**;

b. the **collectability of reinsurance proceeds** or lag time in collection of any funds owed under the **reinsurance program**, such as reinsurance claims or reinsurance premiums;

c. performance risk of **counterparties** who are performing specific services related to the **reinsurance agreement**, such as a **counterparty** not performing to established guidelines, a TPA not paying claims on time, or an investment manager not adhering to investment guidelines;

d. any collateral that has been posted in relation to the **reinsurance agreement** and its amount, quality, and permitted uses, as defined by regulation and the **reinsurance agreement**;

e. the measurement of the effectiveness of the procedures designed to identify or mitigate the **counterparty risk**;

f. the **counterparty's** financial health, stability, enterprise risk management (ERM) practices, and changes therein. Examples include financial strength ratings, investment policy, required capital, capital, and the risk level of the types of business written or assumed;

g. any **counterparty** contractual features or risk management policies that might affect the risk, such as parental guarantees, letters of credit, or alternative coverage; and

h. the holder or manager, if different from the owner, of the assets under the **reinsurance agreement** and the implications of this arrangement.

3.6 Assessing and Analyzing the Risks Being Transferred in a Reinsurance Program—When preparing a **financial report** to assess and analyze the risks being transferred in a **reinsurance program**, the actuary should take into account the terms and conditions of the **reinsurance program**. The actuary should also take into account how the risks being transferred compare to the risk appetite of the **ceding entity** or **assuming entity**, as applicable, including the following:

a. a comparison of the original goals for the **reinsurance program** versus the **reinsurance program's** actual performance;

b. the degree of risk mitigation or acceptance that reflects the risk tolerances and risk appetite as of the time of the **financial report**; and

c. changes in the risk mitigation or acceptance goals.

When preparing a **financial report** to assess and analyze a **reinsurance program** for the purposes of ERM or ORSA, the actuary should refer to ASOP Nos. 46, *Risk Evaluation in Enterprise Risk Management,* and 47, *Risk Treatment in Enterprise Risk Management*.

3.7 Treatment of Reinsurance Risks—When preparing values related to a **reinsurance program** in a **financial report**, the actuary should take into account the purposes of the **financial report**, factoring in the applicable accounting and regulatory requirements or guidance, as well as the terms and conditions of the **reinsurance program** and its associated risks. Examples of risks associated with the **reinsurance program** include but are not limited to **counterparty risk**, lack of **reinsurance program** controls, untimely payments, volatility of experience refunds, **nonguaranteed reinsurance elements**,

nonguaranteed elements of the policies being reinsured, the structure of the **reinsurance agreement**, and investment philosophy.

3.7.1 Treatment of Reinsurance Ceded—When preparing values related to **reinsurance ceded,** the actuary should do so without relying upon the values of financial statement items held by the **assuming entity**. The actuary may use data provided by the **assuming entity** in calculating financial statement values (see ASOP No. 52, *Principle-Based Reserves for Life Products under the NAIC Valuation Manual*, and sections 3.11-3.15 of this standard). Because the **ceding entity** and the **assuming entity** each establish and test statement liabilities and assets independently, it is possible for the value of the **net liabilities** held by the **ceding entity**, plus those held by the **assuming entity** on a reinsured contract, to be more or less than the amount that would have been held if the **ceding entity** had not reinsured the contract. For example, the two **counterparties** may have different expectations for assumptions that impact liabilities or investment returns.

3.7.2 Treatment of Reinsurance Assumed—The actuary should take into account the following regarding the treatment of **reinsurance assumed**:

a. the features and risks of the business assumed, such as lack of control over the **ceding entity's** investment philosophy, nonguaranteed elements of the policies being reinsured, other risk-sharing arrangements, dividends, marketing, underwriting practices, or claims adjudication and management practices, or in-force management practices; and

b. the features and risks of the **reinsurance program** referenced in sections 3.2 and 3.3.

The actuary should also consider whether adjustments to data are needed based on the quality and credibility of data when preparing a **financial report** or other information exchanged between the **counterparties**. When adjusting the data, the actuary should refer to ASOP Nos. 23 and 25 for guidance.

3.8 Risk of Termination of Reinsurance Programs—When preparing **financial reports**, the actuary should reflect the following:

a. the impact of the potential termination of **reinsurance programs** on the obligations of the **counterparties**, including post-termination obligations;

b. how the following factors affect the risk of termination including:

1. the terms and conditions of the **reinsurance program**;

2. the regulatory and financial reporting regime governing the **financial report**;

3. the known business practices of the **counterparties**; and

4. the current and potential internal and external environments faced by the **counterparties**.

Examples of potential termination events include but are not limited to the following:

i. **reinsurance agreements** that end prior to underlying risk terminating;

ii. termination due to regulatory intervention;

iii. termination due to inability of a **ceding entity** to pay reinsurance premiums;

iv. termination due to an **assuming entity** exercising rights to change the **reinsurance agreement**;

v. recapture or commutation specified or permitted by the **reinsurance agreement**;

vi. termination due to the financial difficulties of an **assuming entity**;

vii. partial termination of **reinsurance agreement** due to a partial recapture;

viii. partial termination of **reinsurance agreements** due to a **ceding entity** losing its license; and

ix. termination due to inability of **service providers** to perform as specified in their agreement.

The actuary should consider performing scenario testing to quantify the impact of a potential termination of a **reinsurance program** on a **financial report**.

3.9 Additional Liabilities, Reserves, or Allocation of Capital—The actuary should consider establishing additional liabilities, reserves, or allocation of capital based upon the terms and conditions of the **reinsurance program**. When considering this issue, the actuary should use assumptions consistent with the purpose of the **financial report**. Examples of situations where additional liabilities, reserves, or allocation of capital may be needed include but are not limited to the following:

a. an **assuming entity** having the right to change **nonguaranteed reinsurance elements** on in-force business without a corresponding right by the **ceding entity** to change nonguaranteed elements of the policies being reinsured or terminate the **reinsurance agreement**;

b. recapture by a **ceding entity** due to an **assuming entity** changing **nonguaranteed reinsurance elements** on in-force business; or

c. an **assuming entity's** inability to post the amount of collateral or level of security required by agreement or regulation.

3.10 Accounting Guidance—When preparing values in the **financial report** that reflect the terms of a **reinsurance program**, the actuary should take into account applicable accounting guidance. The actuary should determine whether a particular **reinsurance agreement** qualifies as reinsurance for statutory, GAAP, or other purposes, and how this may affect the accounting treatment.

3.11 Experience Analysis—When preparing a **financial report** to analyze the actual-to-expected financial experience of a **reinsurance agreement**, the actuary should establish a baseline to be used as a source of comparison. An example of a baseline is the results of the final **model(s)** used in analyzing the reinsurance proposal at the time of entering the **reinsurance agreement**.

Examples of how to analyze actual-to-expected financial experience include loss ratios and actual-to-expected mortality experience. The actuary should use professional judgment and consider the needs of the principal when deciding which form of analysis to choose.

3.12 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 Nos. 23, 41, *Actuarial Communications*, and 56, and, where appropriate, ASOP Nos. 10, *Methods and Assumptions for Use in Life Insurance Company Financial Statements Prepared in Accordance with U.S. GAAP,* or 52, for guidance. The actuary should disclose the extent of any such reliance.

3.13 Reliance on Assumptions or Methods Selected by Another Party—When relying on assumptions or methods supplied by another party, the actuary should review the assumptions or methods for reasonableness and consistency. For further guidance, the actuary should refer to ASOP No. 41. The actuary should disclose the extent of any such reliance.

3.14 Reliance on Models Developed by Others—If the actuary relies on a **model(s)** designed, developed, or modified by others, such as a vendor or colleague, the actuary should review the **model(s)** for compliance with the applicable sections of this standard and with ASOP No. 56 as it applies to **models** developed by others. The actuary should document and disclose the extent of any such reliance. If the actuary adjusts the **model(s)**, the actuary should document and disclose the adjustments.

3.15 Reliance on Another Actuary—The actuary may rely on another actuary who has provided input to the **financial report**. However, the relying actuary should be reasonably satisfied that the other actuary is qualified to supply information for the **financial report**, the information supplied was compiled in accordance with applicable standards, and the information supplied is appropriate for the particular **financial report** being prepared. The actuary should disclose the extent of any such reliance.

3.16 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 preparing the **financial report**. In determining the appropriate level of reliance, the actuary should take into account the following:

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

b. the extent to which the input provided for the **financial report** has been reviewed or opined on by others with expertise in the applicable field;

c. whether there are legal, regulatory, professional, industry, or other standards that apply to the input for the **financial report** supplied by others with expertise in the applicable field, and whether the input has been represented as having met such standards. For example, it is often the case in reinsurance that an actuary relies upon an accountant or a lawyer to determine whether a **reinsurance agreement** meets regulatory requirements to be accounted for as reinsurance; and

d. whether the input to the **financial report** supplied was relevant and useful to the purpose of the **financial report**.

The actuary should disclose the extent of any such reliance.

3.17 Documentation—In addition to the documentation requirements throughout the rest of section 3, the actuary should consider preparing and retaining documentation to support compliance with the requirements of section 3 and the disclosure requirements of section 4. If preparing such 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. 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. 10, 23, 25, 41, 46, 47, 52, and 56. In addition, the actuary should disclose the following in such actuarial reports, as applicable:

a. features of the **reinsurance program(s)** being analyzed in the **financial report**, as discussed in section 3.1;

b. impacts on the **financial report** caused by the terms of the **reinsurance program(s)** or the practices of any of the parties to the **reinsurance program(s)** as discussed in sections 3.2 and 3.3;

c. assumptions used in the **financial report** that are inconsistent either across time or different lines of business, and an explanation for the inconsistency, as discussed in sections 3.3(a), 3.3(b), and 3.3(c);

d. description of the **model(s)** and assumptions, including a summary of how the **model(s)** and assumptions meet the conditions in sections 3.2(j), 3.3(e), and 3.4;

e. unresolved concerns the actuary has about reinsurance information (for example, reinsurance settlement data, in-force information, and legal agreements) that, in the actuary's professional judgment, could have an effect on the actuarial work product, as discussed in sections 3.2(i), 3.5, and 3.7;

f. the impact of the following risks on the results presented in the report:

   i. variation in assumptions or methods over time, if any, as discussed in sections 3.3(a) and 3.3(b) ;

   ii. **nonguaranteed reinsurance elements** in a **reinsurance agreement**, as discussed in sections 3.2(a), 3.2(d), 3.7, 3.9(a), and 3.9(b);

   iii. **counterparty risk**, as discussed in section 3.2(e) and 3.5;

   iv. non-performance of **service providers**, if any, as discussed in sections 3.2(b), 3.2(g), 3.2(h), 3.3(d), and 3.5; and

   v. termination of **reinsurance programs**, as discussed in section 3.8.

g. the potential impact of risks associated with the **reinsurance program**, as discussed in sections 3.2, 3.3, 3.5, 3.6, 3.7, 3.8, and 3.9;

h. additional reserves that needed to be established due to the nature of the **reinsurance agreement** and the rationale for such additional reserves, as discussed in section 3.9;

i. the extent of reliance on data or other information supplied by others, if any, used in preparing the **financial report**, as discussed in section 3.12;

j. the extent of reliance on others for assumptions or methods used in **financial reports**, including any adjustments made to assumptions or methods, and the steps taken to review the assumptions or methods for reasonableness and consistency, as discussed in section 3.13;

k. the extent of reliance on **model(s)** developed by others, if any, as discussed in section 3.14;

l. adjustments made to the **model(s)** supplied by another party and upon which the actuary is relying, as discussed in section 3.14;

m. the extent of reliance on other actuaries, if any, for input used in preparing the **financial report**, as discussed in section 3.15; and

n. the extent of reliance on the expertise of others, if any, for input used in preparing the **financial report**, as discussed in section 3.16.

4.2 Additional Disclosures in an Actuarial Report—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;

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.

## Appendix 1

## Background and Current Practices

*Note*: The following material is provided for informational purposes and is not part of the standard of practice.

### Background

Actuarial practice with respect to reinsurance, as well as the complexity of reinsurance programs, has evolved significantly since the 2005 version of ASOP No. 11, the last time the standard was adopted. Significant new laws, regulations, and accounting requirements for life insurance policies, annuity contracts, and health benefit plans have also emerged. These refinements have led to this revision of ASOP No. 11.

Financial reports involving reinsurance must comply with many accounting requirements, laws, and regulations. These requirements relate to, for example, whether the reinsurance agreement should be accounted for as reinsurance or as a deposit, the nature and amount of collateral that is required for a reserve credit to be allowed in the financial report, and the types of assets that must back certain kinds of reserves.

The presentation of the components of the net liabilities may vary under different accounting principles. For example, reserves other than principle-based reserves (PBR) are shown net of reinsurance ceded in statutory financial reports. PBR are currently calculated pre-reinsurance, then post-reinsurance, with the difference being the reinsurance reserve credit. Reserves are generally presented on a gross basis before reinsurance in GAAP financial reports with the reinsurance credit reported as an offsetting asset. This difference in presentation affects the analysis that goes into a financial report.

Requirements relating to risk transfer must also be met in order to receive reinsurance accounting treatment under the requirements of Statutory Statement of Accounting Principles (SSAP) No. 61R, which incorporates related guidance in Appendices A-785 and A-791 of the *NAIC Accounting Practices and Procedures Manual*.

Statutory accounting requires any increase in after-tax initial surplus impact from the reinsurance of an existing block of business to be reflected directly through surplus at the inception of the reinsurance agreement. The resulting impact to surplus is then amortized into income over the life of the reinsured business. If the initial impact of a reinsurance program is negative, that impact flows immediately through earnings.

While assumption and indemnity reinsurance are both labeled as reinsurance, they are two different forms of transactions. With indemnity reinsurance, the policyholder's relationship remains with the ceding entity. An assumption reinsurance transaction is a sale of business such that the policyholder's direct relationship is with the "assuming entity." This difference results in a different financial statement presentation for the two types of transactions. The presentation in

financial reports differs for assumption reinsurance agreements and indemnity reinsurance agreements. Under indemnity reinsurance agreements, the ceding entity remains legally responsible for all policyholder obligations of the reinsured policies. The assuming entity indemnifies, or protects, the ceding entity against one or more of the risks in the reinsured policies. Under an assumption reinsurance agreement, the ceding entity is relieved of responsibility for the policies reinsured, and the contracts are accounted for by the assuming entity in the same manner as direct business. The assuming entity assumes all of the obligations formerly assumed by the ceding entity. Typically, regulatory and policyholder approval is required. When a company intends to enter into an assumption reinsurance agreement, an indemnity reinsurance agreement may be used for policies not yet covered by the assumption reinsurance agreement.

The ceding entity is responsible for assessing the collectability of reinsurance proceeds, including determining whether the portion that is non-collectable should be written down. Considerations include financial strength and liquidity of the assuming entity, court or arbitration findings, and other market forces.

Since the 2005 version of this standard was adopted, revisions and new model regulations have significantly changed the nature of reinsurance. One example is the Term and Universal Life Insurance Reserve Financing Model Regulation (Model 787). For reinsurance agreements completed after a certain date for level term and universal life with secondary guarantee policies, Model 787 requires that the calculation of reserves be broken into two pieces and that each piece has a specified type of assets to back them.

The first piece is reserves calculated using the Actuarial Method, a method similar to PBR, but not identical (for example, exclusion testing to determine whether to calculate reserves on a deterministic or stochastic basis is not permitted). These reserves are to be backed by primary securities, defined in the model as certain highly rated securities. Any excess in statutorily required reserves over those calculated using the Actuarial Method would be backed by a combination of primary and other securities. These other securities may include any investments acceptable to the company's domiciliary regulator.

Effective on January 1, 2015, the Risk Management and Own Risk and Solvency Assessment Model Act (Model 505) requires that medium and large insurance groups regularly perform an own risk and solvency assessment (ORSA). The ORSA is a detailed examination of the adequacy of a company's risk management and solvency positions under normal and severe stress scenarios. Reinsurance is often used in a company's risk management program.

Under the Dodd–Frank Wall Street Reform and Consumer Protection Act (Dodd–Frank), if a state is accredited by the National Association of Insurance Commissioners (NAIC) or has solvency standards similar to those mandated by the NAIC, reinsurance reserve credit cannot be denied by other states. In other words, if a ceding entity's domestic regulator complies with these requirements, another US jurisdiction cannot deny reinsurance credit. Further, for an insurer that is predominantly an assuming entity and is domiciled in an NAIC-accredited state or in one that has solvency standards similar to those mandated by the NAIC, its sole solvency regulator is its

domiciliary regulator. Further, no other state can require it to produce financial reports other than those required by their domiciliary regulator.

Another aspect of the Dodd–Frank Act is a provision that allows the U.S. to negotiate an agreement (called a covered agreement) with another country or jurisdiction that will impact the provision of reinsurance by companies domiciled in the other jurisdiction. Two such agreements have been negotiated, one with the E.U. and the other with the U.K. A feature of both of these agreements is that no collateral need be posted under certain conditions. This affects the financial report analysis by allowing the ceding entity to reduce the amount of reserves held backing reinsured business, without having to require the counterparty to establish collateral if the reinsurance agreement and the parties to the reinsurance agreement meet the requirements of the covered agreement.

Statutory collateral requirements have also been modified since this standard was last revised. New types of reinsurers have been defined in the regulation, and international agreements have also affected the amount of collateral that must be posted statutorily. Certified reinsurers are non-U.S. entities that are domiciled in a qualified jurisdiction and maintain certain regulatorily mandated conditions. Once certified, depending on the regulatorily assigned rating of the certified reinsurer, the amount of collateral the reinsurer is required to post can be significantly less than the more typical 100 percent requirement on non-certified, non-E.U., non-U.K. reinsurers. An impact of this change is that the ceding entity may have additional counterparty risk due to the lack of 100 percent collateral backing a reinsurance agreement with a non-U.S. entity.

GAAP has experienced numerous changes with respect to reinsurance under ASU 2018-12. Reinsurance assumed is to use the same accounting methodology as direct insurance. Reinsurance ceded is to use assumptions that are consistent with the assumptions used for direct insurance. While ceded deferred acquisition cost (DAC) is still to be netted against direct DAC, impairment testing is no longer required. Cost of reinsurance is to be amortized over the remaining life of the agreement. There is also a delinking of invested assets, and therefore even when a block of business is 100 percent coinsured, the business will remain on the insurer's books for the life of the business. The standard allows for the reinsurance of market risk in products like guaranteed minimum benefits in variable products, under certain conditions. If those conditions are not met, then ASC 815 (Derivatives and Hedging) dealing with embedded derivatives is invoked.

Since the last revision of ASOP No. 11, much has changed in the health insurance world. The types of products offered and the types of entities assuming risk for these health products have changed, triggering the rise in the use of reinsurance-type coverages in non-traditional ways.

One feature of the Affordable Care Act (ACA) was a temporary transitional reinsurance program that was designed to help stabilize the premiums that insurers charge. Since the federal transitional reinsurance program expired at the end of 2016, several states have established reinsurance programs to stabilize ACA premiums, particularly in the non-group market. These state programs are largely fashioned after commercial specific stop-loss insurance products, with attachment points, caps, and coinsurance parameters set by the state and may be designed to coordinate with any commercial reinsurance purchased by health carriers.

Large commercial companies often provide health insurance to their employees on a "self-insured" basis. In this case, the commercial company assumes the risk for paying claims itself and often purchases stop-loss insurance from a third party to mitigate that risk.

The prevalence of risk-sharing arrangements with health care providers has also increased over the last decade. In response to this trend, the demand for provider excess loss insurance products has increased to help mitigate risk assumed by healthcare providers. Additionally, other risk-bearing entities have emerged to provide value by assuming health insurance risk.

In response to these changes, the ASB decided to revise this standard.

## Current Practices

The actuary may perform actuarial services in a variety of areas with respect to reinsurance. The following are some examples of the areas the actuary may deal with regarding reinsurance. Preparation of regulatory reports involves the analysis of an entity's reinsurance program. This includes preparation of items such as the Actuarial Opinion and Memorandum Report and various aspects of a company's GAAP statement. An actuary may also be called upon to identify risks assumed by the entity and how to mitigate those risks. Knowing the nature of and how to analyze an entity's reinsurance program is essential to understanding an entity's risk profile. An actuary may also be called upon to analyze the experience of reinsurance business assumed or ceded by an entity.

## Appendix 2

## Comments on the First Exposure Draft and Responses

The first exposure draft of this standard, *Reinsurance Involving Life Insurance, Annuities, or Health Benefit Plans in Financial Reports,* was issued in November 2019 with a comment deadline of June 30, 2020. Two comment letters were received, both submitted by 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. 11 Task Force carefully considered all comments received, reviewed the exposure draft, and proposed changes. The ASB 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 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. 11 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 first exposure draft.

| | |
|---|---|
| **GENERAL COMMENTS** | |
| Comment | One commentator recommended revising the title of the standard to reflect the fact that more than just reinsurance is covered. |
| Response | The reviewers agree that the title needs to be broader to align with the broader scope of the standard and changed the title to "Treatment of Reinsurance or Similar Risk Transfer Programs Involving Life Insurance, Annuities, or Health Benefit Plans in Financial Reports." |
| **TRANSMITTAL MEMORANDUM** | |
| **Question #1: Is the scope description relating to the inclusion of self-insurance clear? If not, what wording would make it clearer?** | |
| Comment | One commentator said the language was generally clear but offered modifications. The comment summary and response have been moved to section 1.2. |
| **Question #2: Is the guidance sufficient given current laws, regulations, and accounting rules? If not, please explain what should be added.** | |
| Comment | One commentator suggested modifications to the definition of nonproportional feature in section 2.10. The comment summary and response have been moved to section 2.10. |
| **Question #3: Are there any areas where the guidance is inconsistent with current practice? If so, please explain or provide examples.** | |
| Comment | One commentator suggested modifications to sections 2.11, sections 3.1(b), 3.2.1(k)(2), 3.2.2(c), 3.2.2, and section 3.7(c). These comments and responses have been moved to those sections. |

| | |
|---|---|
| **Question #4: Are there areas where the guidance creates issues with any reinsurance regulatory requirements? If so, please explain or provide examples.** | |
| Comment | One commentator expressed concern that certain reinsurance provisions described in this standard may not comply with A-791. The commentators did not believe that the guidance itself violated any statutory regulation. |
| Response | The reviewers note that the standard is not limited to statutory accounting and therefore made no change in response to this comment. |
| **Question #5: Are there areas where the guidance creates conflict or introduces ambiguity with reinsurance-related guidance in other ASOPs? If so, please explain or provide examples.** | |
| Comment | One commentator said that the standard should restore language from the prior version that said the actuary should consider relevant applicable laws and regulations or other binding authority affecting reserve credit or accounting for reinsurance. |
| Response | The reviewers believe that this issue is adequately covered in ASOP No. 1, *Introductory Actuarial Standard of Practice,* and therefore made no change. |
| **SECTION 1. PURPOSE, SCOPE, CROSS REFERENCES, AND EFFECTIVE DATE** | |
| **Section 1.2, Scope** | |
| Comment | One commentator said that overall responsibility for financial reports generally lies with accountants. |
| Response | The reviewers note that the scope states that the standard covers "performing actuarial services in connection with financial reports" and therefore made no change in response to this comment. |
| Comment | One commentator recommended adding stop-loss as an example of third-party insurance in the second sentence of the second paragraph to clarify that stop-loss insurance of self-insured health plans is within scope. |
| Response | The reviewers agree and made the change. |
| Comment | One commentator recommended adding references 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*, as applicable, throughout ASOP No. 11 (e.g., considering the effect of different lag patterns related to the reinsurance disclosures). |
| Response | The reviewers believe that these and other potentially relevant standards are covered by ASOP No. 1, which states "actuaries are responsible for determining which ASOPs apply to the task at hand" and therefore made no change in response to this comment. |
| **SECTION 2. DEFINITIONS** | |
| **2.4, Financial Report (now section 2.6)** | |
| Comment | One commentator said that the definition of "Financial Reports" is too broad and should be limited to the types of statements named in the standard. |
| Response | The reviewers intentionally set a broad scope in order to have the standard remain useful through the future evolution of best practices and regulations and innovations in risk management/transfer products. The reviewers therefore made no change. |
| Comment | One commentator asked whether the definition of "Financial Reports" was overly broad and included routine or periodic reports used solely for internal management reporting. |
| Response | The reviewers note that because a principal relies on an actuary's work products, the standard applies to all such products. The reviewers therefore made no change. |

| | |
|---|---|
| **Section 2.10, Nonproportional Feature (now section 2.12)** | |
| Comment | One commentator said that the definition of nonproportional feature could be interpreted to scope in certain arrangements that would otherwise be considered proportional, such as a coinsurance treaty where there is inuring yearly renewable term (YRT) reinsurance with third-party reinsurers, and suggested clarifying language. |
| Response | The reviewers agree with the suggested clarifying language and made the change. |
| **Section 2.11, Reinsurance Agreement (now section 2.13)** | |
| Comment | One commentator suggested expanding the definition of Reinsurance Agreement to reflect the expanded scope. |
| Response | The reviewers agree and added a reference to self-insured benefit plans. |
| **SECTION 3. ANALYSIS OF ISSUES AND RECOMMENDED PRACTICES** | |
| Comment | One commentator said that the adjective "material" is used in some sections but not others (for example, section 3.2), may not be used consistently, and should be defined. |
| Response | In response to this comment, the reviewers deleted "material" from every section except section 4. The reviewers note that "materiality" is discussed in ASOP No. 1. Definitions and discussions included in ASOP No. 1 are intended to apply to all other standards. |
| **Section 3.1(b), (Reinsurance Program Features)** | |
| Comment | One commentator suggested replacing "or" with "and" in the language describing the structure of a reinsurance agreement. |
| Response | The commentators agree and made the change. |
| **Section 3.2, Financial Reports (now deleted)** | |
| Comment | One commentator suggested deleting section 3.2 because it is unnecessary and renumbering sections 3.2.1 and 3.2.2 sections 3.2 and 3.3, respectively, since the entire standard applies to financial reports. |
| Response | The reviewers agree and made the suggested change. |
| **Section 3.2.1(a) (Impact of Risks Reinsured) (now section 3.2[a])** | |
| Comment | One commentator asked for a specific reference to ASOP No. 7, *Analysis of Life, Health, or Property/Casualty Insurer Cash Flows*, when discussing how the terms and condition of the reinsurance program impact the expected cash flows. |
| Response | The reviewers do not think a reference is necessary and made no change. |
| **Section 3.2.1(j) (Impact of Risks Reinsured) (now section 3.4, Models Used in Preparing Financial Reports)** | |
| Comment | One commentator suggested adding "entries in" after "prepare." |
| Response | The reviewers disagree and made no change. |
| Comment | One commentator suggested adding "take into account the guidance in ASOP No. 56, *Modeling*; and" to the end of the section. |
| Response | The reviewers agree and added a reference to ASOP No. 56. |
| Comment | One commentator suggested that some of the language included in section 3 may be redundant with ASOP No. 56. The commentator also suggested adding a reference to the assumptions standard. |

| | |
|---|---|
| Response | The reviewers agree that some of the language was redundant with ASOP No. 56, deleted the redundant language, and added appropriate references to ASOP No. 56. The reviewers note that the assumptions standard has not yet been adopted and therefore a reference is not appropriate at this time. |
| **Section 3.2.1(k) (Impact of Risks Reinsured) (now section 3.4, Models Used in Preparing Financial Reports)** | |
| Comment | One commentator suggested adding references to ASOP No. 52, *Principle-Based Reserves for Life Products under the NAIC Valuation Manual*, and ASOP No. 56, in section 3.2.1(k)(1). |
| Response | The reviewers agree that ASOP No. 56 belongs in this section and added a reference. The reviewers do not believe that a reference to ASOP No. 52 is needed. |
| Comment | One commentator suggested using "models" rather than "model" for consistency and "inconsistent" rather than "different" in section 3.1(k)2. |
| Response | The reviewers agree with using "model(s)" throughout. The reviewers replaced section 3.2.1(k)(2) with a reference to ASOP No. 56 and moved language on modeling to a new section 3.4. |
| Comment | One commentator suggested that section 3.2.1(k)(3) should be revised to clarify the intended meaning of "company experience." |
| Response | The reviewers added a reference to ASOP No. 56 and moved language on modeling to a new section 3.4. |
| Comment | One commentator recommended adding a definition of "market estimates." |
| Response | The reviewers added a reference to ASOP No. 56 and moved language on modeling to a new section 3.4. |
| **Section 3.2.2, Impact of Risks Retained (now section 3.3)** | |
| Comment | One commentator suggested a specific description related to the PBR example given. |
| Response | The reviewers believe the example is unnecessary and deleted it. |
| Comment | One commentator suggested that the standard explicitly require individual assumptions to be reasonable, in addition to all assumptions being reasonable in aggregate. |
| Response | The reviewers agree and added language stating that the individual assumptions must also be reasonable individually in section 3.2.2(c) (now section 3.3[c]). |
| **Section 3.3, Assessing and Analyzing the Impact of Counterparty Risk (now section 3.5)** | |
| Comment | One commentator suggested that since a counterparty's rating may change over time, adherence to section 3.3 may prompt more cedants to require collateral on long-duration contracts, which would be expensive. |
| Response | The reviewers believe that this section appropriately addresses the issue and made no change. |

| | |
|---|---|
| **Section 3.4, Assessing and Analyzing the Risks Being Transferred in a Reinsurance Program (now section 3.6)** | |
| Comment | One commentator suggested that this section up to the ERM paragraph seems much too extreme for each and every financial report and should only apply when the actuary is asked to opine on whether the reinsurance program is fulfilling the objectives of the program. |
| Response | The reviewers disagree. The guidance is focused on "a financial report to assess and analyze the risks being transferred in a reinsurance program" not all financial reports and made no change in response to this comment. |
| **Section 3.5.2 (a), (Treatment of Reinsurance Assumed) (now section 3.7.2[a])** | |
| Comment | One commentator said that the broad statement "or other information exchanged between the parties" raised concerns about credibility and reliance. |
| Response | The reviewers believe the language is appropriate and made no change. |
| **Section 3.7(c) (Additional Liabilities, Reserves, or Allocation of Capital) (now section 3.9[c])** | |
| Comment | One commentator suggested adding "or level of security" to clarify the reference to Actuarial Guideline 48. |
| Response | The reviewers agree and made the change. |
| **Section 3.8, Accounting Guidance (now section 3.10)** | |
| Comment | One commentator said that the third and fourth sentences were redundant with section 3.14. |
| Response | The reviewers agree and removed the sentences. |
| **3.11, Reliance on Assumptions or Methods Set by Another Party (now section 3.13)** | |
| Comment | One commentator suggested adding a reference to ASOP No. 52 in sections 3.11, 3.12, 3.13, and 3.14. |
| Response | The reviewers believe the language is appropriate and made no change. |
| **Section 3.12, Reliance on Models Developed by Others (now section 3.14)** | |
| Comment | One commentator questioned the requirements relating to the level of understanding the actuary should have about a model they are using to prepare a reinsurance financial report. |
| Response | The reviewers revised the language to refer to ASOP No. 56, which the ASB adopted after ASOP No. 11 was initially exposed. |
| Comment | One commentator said that this section appears to have been drawn from ASOP No. 56, suggested deleting duplicative language and adding a reference to ASOP No. 56 instead. |
| Response | The reviewers agree and revised the language to refer to ASOP No. 56, which the ASB adopted after ASOP No. 11 was initially exposed. |
| **Section 3.14, Reliance on Experts (now section 3.16, Reliance on the Expertise of Others)** | |
| Comment | One commentator said that this section appears to have been drawn from ASOP No. 56, and suggested deleting duplicative language and adding a reference to ASOP No. 56 instead. |
| Response | The reviewers believe the guidance is not limited to modeling and made no change. |

| SECTION 4. COMMUNICATIONS AND DISCLOSURES | |
|---|---|
| **4.1, Required Disclosures in an Actuarial Report** | |
| Comment | One commentator said that the disclosure requirements of section 4 create a heavy burden with no resulting value if they are to be applied to routine, periodic reports used solely for internal management reporting. |
| Response | The reviewers note that because a principal relies on an actuary's work products, the standard applies to all such products. The reviewers therefore made no change. |
| Comment | One commentator suggested limiting the disclosures to specific instances, practice areas, or report types. |
| Response | The reviewers note that because a principal relies on an actuary's work products, the standard applies to all such products. The reviewers therefore made no change. |
| Comment | One commentator suggested clarifying whether section 4.1 should refer to an actuarial report or actuarial communication. |
| Response | The reviewers believe the guidance is appropriate and made no change. |
| Comment | One commentator suggested adjusting requirements to reflect the intended user. |
| Response | The reviewers believe this is covered by ASOP No. 41 and made no change. |
| Comment | One commentator suggested adding references to ASOP Nos. 5, 42, and 56. |
| Response | The reviewers added references to ASOP No. 56 and ASOP No. 10, *Methods and Assumptions for Use in Life Insurance Company Financial Statements Prepared in Accordance with U.S. GAAP*. The reviewers believe that other potentially relevant standards are covered by ASOP No. 1, which states "actuaries are responsible for determining which ASOPs apply to the task at hand." |

ACTUARIAL STANDARDS BOARD

**Actuarial Standard**
**of Practice**
**No. 12**

# Risk Classification (for All Practice Areas)

**Revised Edition**

**Developed by the**
**Task Force to Revise ASOP No. 12 of the**
**General Committee of the**
**Actuarial Standards Board**

**Adopted by the**
**Actuarial Standards Board**
**December 2005**
**Updated for Deviation Language Effective May 1, 2011**

**(Doc. No. 132)**

**ASOP No. 12—December 2005**

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

## APPENDIXES

**ASOP No. 12—December 2005**

December 2005

**TO:** Members of the American Academy of Actuaries and Other Persons Interested in Risk Classification (for All Practice Areas)

**FROM:** Actuarial Standards Board (ASB)

**SUBJ:** Actuarial Standard of Practice (ASOP) No. 12

This booklet contains the final version of a revision of ASOP No. 12, now titled *Risk Classification (for All Practice Areas).*

Background

In 1989, the Actuarial Standards Board adopted the original ASOP No. 12, then titled *Concerning Risk Classification*. The original ASOP No. 12 was developed as the need for more formal guidance on risk classification increased as the selection process became more complex and more subject to public scrutiny. In light of the evolution in practice since then, as well as the adoption of a new format for standards, the ASB believed it was appropriate to revise this standard in order to reflect current generally accepted actuarial practice.

Exposure Draft

The exposure draft of this ASOP was approved for exposure in September 2004 with a comment deadline of March 15, 2005. Twenty-two comment letters were received and considered in developing the final standard. A summary of the substantive issues contained in the exposure draft comment letters and the responses are provided in appendix 2.

The most significant changes from the exposure draft were as follows:

1. The task force clarified language relating to the interaction of applicable law and this standard.

2. The task force revised the definition of "adverse selection."

3. The task force reworded the definition of "financial or personal security system" and included examples.

4. The words "equitable" and "fair" were added in section 3.2.1 but defined in a very limited context that is applicable only to rates.

5. With respect to the operation of the standard, the task force added language that clarifies that this standard in all respects applies only to professional services with respect to designing, reviewing, or changing risk classification systems.

6. Sections 4.1 and 4.2 were combined into a new section 4.1, Communications and Disclosures, which was revised for clarity. The placement of communication requirements throughout the proposed standard was examined, and a sentence regarding disclosure was removed from section 3.3.3 and incorporated into section 4.1. A similar change was made by adding a new sentence in section 4.1 to correspond to the guidance in section 3.4.1.

   In addition, the disclosure requirement in section 4 for the actuary to consider providing quantitative analyses was removed and replaced by a new section 3.4.4, which guides the actuary to consider performing such analyses, depending on the purpose, nature, and scope of the assignment.

The task force thanks everyone who took the time to contribute comments on the exposure draft.

The ASB voted in December 2005 to adopt this standard.

Task Force to Revise ASOP No. 12

Mark E. Litow, Chairperson

David J. Christianson
Arnold A. Dicke
Paul R. Fleischacker
Joan E. Herman
Barbara J. Lautzenheiser
Charles L. McClenahan
Donna C. Novak
Ronnie Susan Thierman
Kevin B. Thompson

General Committee of the ASB

W.H. Odell, Chairperson

Charles A. Bryan
Thomas K. Custis
Burton D. Jay
Mark E. Litow
Chester J. Szczepanski
Ronnie Susan Thierman

**ASOP No. 12—December 2005**

Actuarial Standards Board

Michael A. LaMonica, Chairperson

| | |
|---|---|
| Cecil D. Bykerk | William A. Reimert |
| William C. Cutlip | Lawrence J. Sher |
| Lew H. Nathan | Karen F. Terry |
| Godfrey Perrott | William C. Weller |

## ACTUARIAL STANDARD OF PRACTICE NO. 12

# RISK CLASSIFICATION (FOR ALL PRACTICE AREAS)

## 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 with respect to designing, reviewing, or changing risk classification systems.

1.2 Scope—This standard applies to all actuaries when performing professional services with respect to designing, reviewing, or changing risk classification systems used in connection with financial or personal security systems, as defined in section 2.4, regarding the classification of individuals or entities into groups intended to reflect the relative likelihood of expected outcomes. Such professional services may include expert testimony, regulatory activities, legislative activities, or statements concerning public policy, to the extent these activities involve designing, reviewing, or changing a risk classification system used in connection with a specific financial or personal security system.

Throughout this standard, any reference to performing professional services with respect to designing, reviewing, or changing a risk classification system also includes giving advice with respect to that risk classification system.

Risk classification can affect and be affected by many actuarial activities, such as the setting of rates, contributions, reserves, benefits, dividends, or experience refunds; the analysis or projection of quantitative or qualitative experience or results; underwriting actions; and developing assumptions, for example, for pension valuations or optional forms of benefits. This standard applies to actuaries when performing such activities to the extent such activities directly or indirectly involve designing, reviewing, or changing a risk classification system. This standard also applies to actuaries when performing such activities to the extent that such activities directly or indirectly are likely to have a material effect, in the actuary's professional judgment, on the intended purpose or expected outcome of the risk classification system.

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 service commenced on or after May 1, 2006.

## Section 2. Definitions

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

2.1 Advice—An actuary's communication or other work product in oral, written, or electronic form setting forth the actuary's professional opinion or recommendations concerning work that falls within the scope of this standard.

2.2 Adverse Selection—Actions taken by one party using risk characteristics or other information known to or suspected by that party that cause a financial disadvantage to the financial or personal security system *(sometimes referred to as antiselection).*

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

2.4 Financial or Personal Security System—A private or governmental entity or program that is intended to mitigate the impact of unfavorable outcomes of contingent events. Examples of financial or personal security systems include auto insurance, homeowners insurance, life insurance, and pension plans, where the mitigation primarily takes the form of financial payments; prepaid health plans and continuing care retirement communities, where the mitigation primarily takes the form of direct service to the individual; and other systems, where the mitigation may be a combination of financial payments and direct services.

2.5 Homogeneity—The degree to which the expected outcomes within a risk class have comparable value.

2.6 Practical—Realistic in approach, given the purpose, nature, and scope of the assignment and any constraints, including cost and time considerations.

2.7 Risk(s)—Individuals or entities covered by financial or personal security systems.

2.8 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.

2.9 Risk Class—A set of risks grouped together under a risk classification system.

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

## Section 3. Analysis of Issues and Recommended Practices

3.1 Introduction—This section provides guidance for actuaries when performing professional services with respect to designing, reviewing, or changing a risk classification system. Approaches to risk classification can vary significantly and it is appropriate for the actuary to exercise considerable professional judgment when providing such services, including making appropriate use of statistical tools. Sections 3 and 4 are intended to provide guidance to assist the actuary in exercising professional judgment when applying various acceptable approaches.

3.2 Considerations in the Selection of Risk Characteristics—Risk characteristics are important structural components of a risk classification system. When selecting which risk characteristics to use in a risk classification system, the actuary should consider the following:

3.2.1 Relationship of Risk Characteristics and Expected Outcomes—The actuary should select risk characteristics that are related to expected outcomes. A relationship between a risk characteristic and an expected outcome, such as cost, is demonstrated if it can be shown that the variation in actual or reasonably anticipated experience correlates to the risk characteristic. In demonstrating a relationship, the actuary may use relevant information from any reliable source, including statistical or other mathematical analysis of available data. The actuary may also use clinical experience and expert opinion.

Rates within a risk classification system would be considered equitable if differences in rates reflect material differences in expected cost for risk characteristics. In the context of rates, the word *fair* is often used in place of the word *equitable*.

The actuary should consider the interdependence of risk characteristics. To the extent the actuary expects the interdependence to have a material impact on the operation of the risk classification system, the actuary should make appropriate adjustments.

Sometimes it is appropriate for the actuary to make inferences without specific demonstration. For example, it might not be necessary to demonstrate that persons with seriously impaired, uncorrected vision would represent higher risks as operators of motor vehicles.

3.2.2 Causality—While the actuary should select risk characteristics that are related to expected outcomes, it is not necessary for the actuary to establish a cause and

effect relationship between the risk characteristic and expected outcome in order to use a specific risk characteristic.

3.2.3 Objectivity—The actuary should select risk characteristics that are capable of being objectively determined. A risk characteristic is objectively determinable if it is based on readily verifiable observable facts that cannot be easily manipulated. For example, a risk classification of "blindness" is not objective, whereas a risk classification of "vision corrected to no better than 20/100" is objective.

3.2.4 Practicality—The actuary's selection of a risk characteristic should reflect the tradeoffs between practical and other relevant considerations. Practical considerations that may be relevant include, but are not limited to, the cost, time, and effort needed to evaluate the risk characteristic, the ongoing cost of administration, the acceptability of the usage of the characteristic, and the potential usage of different characteristics that would produce equivalent results.

3.2.5 Applicable Law—The actuary should consider whether compliance with applicable law creates significant limitations on the choice of risk characteristics.

3.2.6 Industry Practices—When selecting risk characteristics, the actuary should consider usual and customary risk classification practices for the type of financial or personal security system under consideration.

3.2.7 Business Practices—When selecting risk characteristics, the actuary should consider limitations created by business practices related to the financial or personal security system as known to the actuary and consider whether such limitations are likely to have a significant impact on the risk classification system.

3.3 Considerations in Establishing Risk Classes—A risk classification system assigns each risk to a risk class based on the results of measuring or observing its risk characteristics. When establishing risk classes for a financial or personal security system, the actuary should consider and document any known significant choices or judgments made, whether by the actuary or by others, with respect to the following:

3.3.1 Intended Use—The actuary should select a risk classification system that is appropriate for the intended use. Different sets of risk classes may be appropriate for different purposes. For example, when setting reserves for an insurance coverage, the actuary may choose to subdivide or combine some of the risk classes used as a basis for rates.

3.3.2 Actuarial Considerations—When establishing risk classes, the actuary should consider the following, which are often interrelated:

a. Adverse Selection—If the variation in expected outcomes within a risk class is too great, adverse selection is likely to occur. To the extent practical, the actuary should establish risk classes such that each has sufficient homogeneity with respect to expected outcomes to satisfy the purpose for which the risk classification system is intended.

b. Credibility—It is desirable that risk classes in a risk classification system be large enough to allow credible statistical inferences regarding expected outcomes. When the available data are not sufficient for this purpose, the actuary should balance considerations of predictability with considerations of homogeneity. The actuary should use professional judgment in achieving this balance.

c. Practicality—The actuary should use professional judgment in balancing the potentially conflicting objectives of accuracy and efficiency, as well as in minimizing the potential effects of adverse selection. The cost, time, and effort needed to assign risks to appropriate risk classes will increase with the number of risk classes.

3.3.3 Other Considerations—When establishing risk classes, the actuary should (a) comply with applicable law; (b) consider industry practices for that type of financial or personal security system as known to the actuary; and (c) consider limitations created by business practices of the financial or personal security system as known to the actuary.

3.3.4 Reasonableness of Results—When establishing risk classes, the actuary should consider the reasonableness of the results that proceed from the intended use of the risk classes (for example, the consistency of the patterns of rates, values, or factors among risk classes).

3.4 Testing the Risk Classification System—Upon the establishment of the risk classification system and upon subsequent review, the actuary should, if appropriate, test the long-term viability of the financial or personal security system. When performing such tests subsequent to the establishment of the risk classification system, the actuary should evaluate emerging experience and determine whether there is any significant need for change.

3.4.1 Effect of Adverse Selection—Adverse selection can potentially threaten the long-term viability of a financial or personal security system. The actuary should assess the potential effects of adverse selection that may result or have resulted from the design or implementation of the risk classification system. Whenever the effects of adverse selection are expected to be material, the actuary should, when

practical, estimate the potential impact and recommend appropriate measures to mitigate the impact.

3.4.2 Risk Classes Used for Testing—The actuary should consider using a different set of risk classes for testing long-term viability than was used as the basis for determining the assigned values if this is likely to improve the meaningfulness of the tests. For example, if a risk classification system is gender-neutral, the actuary might separate the classes based on gender when performing a test of long-term viability.

3.4.3 Effect of Changes—If the risk classification system has changed, or if business or industry practices have changed, the actuary should consider testing the effects of such changes in accordance with the guidance of this standard.

3.4.4 Quantitative Analyses—Depending on the purpose, nature, and scope of the assignment, the actuary should consider performing quantitative analyses of the impact of the following to the extent they are generally known and reasonably available to the actuary:

a. significant limitations due to compliance with applicable law;

b. significant departures from industry practices;

c. significant limitations created by business practices of the financial or personal security system;

d. any changes in the risk classes or the assigned values based upon the actuary's determination that experience indicates a significant need for a change; and

e. any expected material effects of adverse selection.

3.5 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.

3.6 Documentation—The actuary should document the assumptions and methodologies used in designing, reviewing, or changing a risk classification system in compliance with the requirements of ASOP No. 41, *Actuarial Communications*. The actuary should also prepare and retain documentation to demonstrate compliance with the disclosure requirements of section 4.1.

## Section 4. Communications and Disclosures

4.1 Communications and Disclosures—When issuing actuarial communications under this standard, the actuary should comply with ASOP Nos. 23 and 41. In addition, the actuarial communications should disclose any known significant impact resulting from the following to the extent they are generally known and reasonably available to the actuary:

a. significant limitations due to compliance with applicable law;

b. significant departures from industry practices;

c. significant limitations created by business practices related to the financial or personal security system;

d. a determination by the actuary that experience indicates a significant need for change, such as changes in the risk classes or the assigned values; and

e. expected material effects of adverse selection;

f. 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);

g. 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

h 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.

The actuarial communications should also disclose any recommendations developed by the actuary to mitigate the potential impact of adverse selection.

## 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

Risk classification has been a fundamental part of actuarial practice since the beginning of the profession. The financial distress and inequity that can result from ignoring the impact of differences in risk characteristics was dramatically illustrated by the failure of the nineteenth-century assessment societies, where life insurance was provided at rates that disregarded age. Failure to adhere to actuarial principles regarding risk classification for voluntary coverages can result in underutilization of the financial or personal security system by, and thus lack of coverage for, lower risk individuals, and can result in coverage at insufficient rates for higher risk individuals, which threatens the viability of the entire system.

Adverse selection may result from the design of the classification system, or may be the result of externally mandated constraints on risk classification. Classes that are overly broad may produce unexpected changes in the distribution of risk characteristics. For example, if an insurer chooses not to screen for a specific risk characteristic, or a jurisdiction precludes screening for that characteristic, this may result in individuals with the characteristic applying for coverage in greater numbers and/or amounts, leading to increased overall costs.

Risk classification is generally used to treat participants with similar risk characteristics in a consistent manner, to permit economic incentives to operate and thereby encourage widespread availability of coverage, and to protect the soundness of the system.

The following actuarial literature provides additional background and context with respect to risk classification:

1. In 1957, the Society of Actuaries published *Selection of Risks* by Pearce Shepherd and Andrew Webster, which educated several generations of actuaries and is still a useful reference.

2. In 1980, the American Academy of Actuaries published the *Risk Classification Statement of Principles*, which has enjoyed widespread acceptance in the actuarial profession. At the time of this revision of ASOP No. 12, the American Academy of Actuaries was developing a white paper regarding risk classification principles.

3. In 1992, the Committee on Actuarial Principles of the Society of Actuaries published "Principles of Actuarial Science," which discusses risk classification in the context of the principles on which actuarial science is based.

## Current Practices

Over the years, a multitude of risk classification systems have been designed, put into use, and modified as a result of experience. Advances in medical science, economics, and other disciplines, as well as in actuarial science itself, are likely to result in continued evolution of these systems. While future developments cannot be foreseen with accuracy, practicing actuaries can take reasonable steps to keep abreast of emerging and current practices. These practices may vary significantly by area of practice. For example, the risk classes for voluntary life insurance may be subdivided to reflect the applicant's state of health, smoking habits, and occupation, while these factors are usually not considered in pension systems.

Innovations in risk classification systems may engender considerable controversy. The potential use of genetic tests to classify risks for life and health insurance is a current example. In some cases, such controversy results in legislation or regulation. The use of postal codes, for example, has been outlawed for some types of coverage. For the most part, however, the legal test for risk classification has remained unchanged for several decades; risk classification is allowed so long as it is "based on sound actuarial principles" and "related to actual or reasonably anticipated experience."

Risk classification issues in some instances may pose a dilemma for an actuary working in the public policy arena when political considerations support a system that contradicts to some degree practices called for in this ASOP. Also, when designing, reviewing, or changing a risk classification system, actuaries may perform professional services related to a designated set of specific assumptions that place certain restraints on the risk classification system.

In such situations, it is important for those requesting such professional services to have the benefit of professional actuarial advice.

This ASOP is not intended to prevent the actuary from performing professional services in the situations described above. In such situations, the communication and disclosure guidance in section 4.1 will be particularly pertinent, and current section 4.1(e), which requires disclosure of any known significant impact resulting from expected material effects of adverse deviation, may well apply. Section 4.1(a), which relates to applicable law, and section 4.1(b), which relates to industry practices, may also be pertinent.

## Appendix 2

## Comments on the Exposure Draft and Responses

The exposure draft of this revision of ASOP No. 12, *Risk Classification for All Practice Areas*, was issued in September 2004 with a comment deadline of March 15, 2005. 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. Summarized below are the significant issues and questions contained in the comment letters and the responses, which may have resulted from ASB, General Committee, or task force discussion. Unless otherwise noted, the section numbers and titles used below refer to those in the exposure draft.

| GENERAL COMMENTS | |
|---|---|
| Comment | Several commentators suggested various editorial changes in addition to those addressed specifically below. |
| Response | The task force implemented such suggestions if they enhanced clarity and did not alter the intent of the section. |
| Comment | One commentator noted that the ASOP should deal with the ability of an insured to misrepresent or manipulate its classification. |
| Response | The task force believed that the considerations raised by the commentator are adequately addressed by sections 3.2.3 and 3.2.4. |
| Comment | One commentator thought that a section on public and social policy considerations should be added to the standard. |
| Response | The task force believed that social and public policy considerations, while essential aspects of the way the public views the profession, did not belong in an ASOP dealing with the actuarial aspects of risk classification. |
| Comment | One commentator questioned whether the ASOP would apply to company selection criteria (tiering criteria) and schedule-rating criteria that may be part of a rating scheme. |
| Response | The task force believes that the ASOP applies to the extent the selection or schedule rating criteria, used by a company as part of the risk classification system, creates the potential for adverse selection. |
| Comment | One commentator believed that the ASOP could conflict with proposed state legislation to ban credit as a rating variable and suggested adding an additional consideration in section 3 that the actuary should select risk characteristics in order to avoid controversy or lawsuits. |
| Response | The task force believes it has addressed issues regarding applicable law, industry practices, business practices, and testing the risk classification system under various scenarios. |
| Comment | In the transmittal memorandum of the exposure draft, the task force asked whether the key changes from the previous standard were appropriate. |
| Response | Several commentators responded that the changes were appropriate and some suggested additional changes that are discussed in this appendix. |

| | |
|---|---|
| Comment | One commentator expressed concern regarding the expansion of scope and the implications in actuarial work that would be otherwise unrelated to risk classification and the expansion of scope to the public policy arena in general. |
| Response | The task force has added modified wording in the standard to clarify that in all cases the standard applies only in respect to design, reviewing, or changing risk classification systems related to financial or personal security systems. |
| Comment | Two commentators believed that the revised standard should discuss the purposes of risk classification similar to the discussion in the previous standard. One commentator noted the discussion about encouraging "widespread availability of coverage" in particular. |
| Response | The task force retained a brief discussion of the purposes of risk classification in appendix 1 but did not believe it was appropriate for the ASOP to provide additional education about the purposes of risk classification. The task force noted that a white paper on risk classification that could contain such material is being developed. |
| Comment | Several commentators noted that the previous ASOP No. 12 had been very useful in court proceedings and recommended that the task force retain some of the wording in section 5 of the previous ASOP. One commentator suggested strengthening the revised standard so that actuarial testimony would be given greater weight by the courts in interpreting rate standards. Another commentator suggested strengthening the ASOP by adding an explicit statement that one objective during the development and use of risk classification systems is to minimize adverse selection. |
| Response | The task force reviewed the revised standard with these concerns in mind but concluded that the revised standard represents current generally accepted practice and provides an appropriate level of guidance. The task force considered the specific suggestions with respect to additional wording and incorporated some of the wording regarding adverse selection from the old section 5.5 into appendix 1. |
| Comment | In the transmittal memorandum of the exposure draft, the task force asked whether it was appropriate for the ASOP not to use the terms "equitable" and "fair." Two commentators believed that the ASOP should use or define these concepts because they have been used in court proceedings, but the majority of commentators believed that it was appropriate not to define them and that the standard adequately addressed these concepts. |
| Response | The task force agreed that the ASOP should not define subjective qualities such as "equitable" and "fair." As the result of ASB deliberation on this issue, language was added to section 3.2.1 to discuss what was meant by the terms "equitable" and "fair." These terms are intended to apply to a risk classification system only to the extent the risk classification system applies to rates. As such, a formal definition was not added. Court decisions notwithstanding, there is no general agreement as to what characterizes "equitable" classification systems or "fair" discrimination. The task force also considered the possibility that further discussions about such issues might become part of the proposed white paper on risk classification that the American Academy of Actuaries is developing. |
| Comment | One commentator questioned why the standard offered separate guidance for "risk characteristics" (section 3.2) and "risk classes" (section 3.3). Another commentator believed there should be greater differentiation between the concepts of "risk characteristic" and "risk classification." |
| Response | The task force believed that the ASOP uses these terms appropriately and made no change. |
| Comment | One commentator thought that section 3.3.2 should include guidance on appropriately matching the risk with the outcome when establishing a risk class. |
| Response | The task force believed that section 3.2.1 addressed this comment and noted that section 3.3.2(a) requires sufficient homogeneity with respect to outcomes. |

| | |
|---|---|
| **Section 1.2, Scope** | |
| Comment | In the transmittal memorandum of the exposure draft, the task force asked whether it was appropriate to include the actuary's advice within the scope of the standard. Several commentators agreed that including guidance on actuarial advice was appropriate. One commentator believed that the disclosure requirements in section 4 could be burdensome to an actuary who has provided brief oral advice. |
| Response | The task force kept actuarial advice within the scope of the standard and intended that the disclosure requirements in section 4 should apply to any actuarial advice that falls within the scope of the standard. |
| Comment | One commentator questioned what was meant by "legislative activities" as an example of a professional service. |
| Response | The task force intended that "legislative activities" could include drafting legislation, for example. |
| Comment | Several commentators questioned the meaning of "personal security system." One commentator questioned whether the definition of "financial or personal security system" would exclude share-based payment systems from the scope of the standard. The commentator recommended that the standard be revised to include such systems. |
| Response | The task force intended that the ASOP should apply if share-based payment systems or stock options were part of a financial or personal security system, as defined in the section 2.5. If such plans were not part of a financial or personal security system, the ASOP would not apply. The task force chose not to expand the scope to include such plans in all situations but did clarify the definition of "financial or personal security system." |
| **SECTION 2. DEFINITIONS** | |
| Comment | One commentator suggested that a definition of experience be included, citing the definition of "experience" in the previous ASOP (old section 2.5), which includes the wording, "Experience may include estimates where data are incomplete or insufficient." |
| Response | The task force agreed that experience may include estimates where data are incomplete or insufficient but did not believe that the old definition was necessary in the revised ASOP. |
| Comment | One commentator suggested that a definition of "reasonable" be included. |
| Response | The task force disagreed and did not add a definition of "reasonable." |
| **Section 2.1, Advice** | |
| Comment | One commentator suggested that "other work product" was not needed, since the standard already listed "an actuary's oral, written, or electronic communication." |
| Response | The task force revised the language to clarify that "communication or other work product" was intended. |
| Comment | One commentator believed that a definition for "advice" is not needed. |
| Response | The task force disagreed and retained the definition of advice. |
| **Section 2.2, Adverse Selection** | |
| Comment | In the transmittal memorandum of the exposure draft, the task force asked if the definition of "adverse selection" was appropriate or whether an alternative definition (included in the transmittal letter) would be preferable. Many commentators responded, some agreeing with the original, some with the alternative, and some suggested other wording. The other wording was most often to change the phrase, "take financial advantage of." |
| Response | The task force believed that some of the reasoning on the part of the commentators who preferred the current version did not accurately describe adverse selection. The task force ultimately decided to use the alternative definition in the standard and believed that it better addressed some commentators' concerns that the other definition could have a negative connotation with respect to motivation. |

| | |
|---|---|
| Comment | One commentator suggested that "antiselection" is synonymous with adverse selection and that should be made clear in the definition. |
| Response | The task force agreed and added that reference. |
| **Section 2.4, Credibility (now 2.3)** | |
| Comment | Two commentators believed that within the definition of "credibility" the language concerning "predictive" was confusing. |
| Response | The task force retained the definition as it is used in several other ASOPs. |
| **Section 2.5, Financial or Personal Security System (now 2.4)** | |
| Comment | Several commentators questioned the meaning of "personal security system." |
| Response | The task force clarified the definition. |
| Comment | One commentator suggested that "impact" be modified to read "financial impact." |
| Response | The task force disagreed and revised the definition of "financial and security systems" to delineate the impacts. |
| **Section 2.6, Homogeneity (now 2.5)** | |
| Comment | One commentator believed the definition of "homogeneity" needed revisions to include the concept of grouping similar risks. Another commentator found the definition unclear. |
| Response | The task force believes that the current definition is appropriate for this ASOP. |
| **Section 2.7, Practical (now 2.6)** | |
| Comment | One commentator believed the definition of "practical" was much too broad and needed to be more actuarial in nature. Alternatively, the commentator suggested dropping it and relying on section 3.2.4. |
| Response | The task force believed the definition was appropriate and made no change. Section 3.2.4 addresses actuarial practice with respect to practicality. While "practical" is used there and in other places, it is always modified by its context. |
| **Section 2.8, Risk(s) (now 2.7)** | |
| Comment | One commentator suggested that the definition of risks as individuals or entities seemed too limiting and noted that covered risks can also include pieces of property or events. |
| Response | The task force disagreed, believing that "entity" could encompass property and events. |
| Comment | One commentator suggested that a unit of risk be defined at the basic unit of risk. |
| Response | The task force disagreed and made no change. |
| **Section 2.9, Risk Characteristics (now 2.8)** | |
| Comment | One commentator suggested defining risk characteristics as "measurable or observable factors or characteristics, each of which is measured by grouping similar risks into risk classes." |
| Response | The task force disagreed and made no change. |
| **Section 2.11, Risk Classification System (now 2.10)** | |
| Comment | One commentator believes the definition of "risk classification system" is circular since "classify" is used in the definition. |
| Response | The task force agreed and revised the wording. |
| Comment | One commentator recommended that the term "risks" be changed to "similar risks" in this definition just as in the old definition of risk classification that used the phrase "grouping risks with similar risk characteristics." |
| Response | The task force disagreed and made no change. |
| Comment | One commentator suggested replacing "groups" with "classes." |
| Response | The task force disagreed and made no change. |

| SECTION 3. ANALYSIS OF ISSUES AND RECOMMENDED PRACTICES | |
|---|---|
| **Section 3.2.1, Relationship of Risk Characteristics and Expected Outcomes** | |
| Comment | One commentator expressed concern with the standard's differentiation between the section's quantitative and subjective factors. |
| Response | The task force did not intend to be prescriptive as to how to quantify the ratings scheme and believed that the ASOP was sufficiently specific. The ASOP does not address rate adequacy. Selection is the focus, not quantification. |
| Comment | One commentator believed that "clinical" was not an appropriate adjective to describe the experience an actuary is allowed to use. |
| Response | The task force intentionally used the term "clinical." |
| Comment | One commentator believed that if the classification cannot be measured by actual insurance data, then it is not really a risk classification system. |
| Response | The task force disagreed and made no change. |
| Comment | One commentator suggested that the three points addressing why risk classification is generally used be moved to background information. |
| Response | The task force agreed that such educational language was more appropriate in an appendix than in the body of the ASOP and has moved it. |
| Comment | One commentator believed that it may be difficult to deal with the process and procedures involved with considering the interdependence of risk characteristics and their potential impact on the operation of the risk classification system. |
| Response | The task force did not change the language to address this comment but notes that section 3.2.4 addresses considerations regarding practicality. |
| **Section 3.2.2, Causality** | |
| Comment | A number of commentators expressed concern with establishing a cause-and-effect relationship while others thought the standard did not go far enough in this regard. |
| Response | The task force agreed that, where there is a demonstrable cause-and-effect relationship between a risk characteristic and the expected outcome, it is appropriate for the actuary to include such a demonstration. However, the task force recognized that there can be significant relationships between risk characteristics and expected outcomes where a cause-and-effect relationship cannot be demonstrated. |
| **Section 3.2.4, Practicality** | |
| Comment | Two commentators suggested the use of examples of practical considerations. |
| Response | The task force revised the section to indicate that the language shows examples of practical considerations. |
| Comment | One commentator suggested that "theoretical," as used in section 3.2.4, be defined. |
| Response | The task force replaced "theoretical" with "other relevant." |
| **Section 3.2.5, Applicable Law** | |
| Comment | One commentator thought that the proposed language in this section was much too broad. |
| Response | The task force disagreed with the comment and made no change. |

| | |
|---|---|
| **Section 3.3, Considerations in Establishing Risk Classes** | |
| Comment | One commentator expressed concern that the documentation requirements for these considerations represented an increase from the previous version. |
| Response | The task force thought the documentation requirements were appropriate and necessary and made no change. |
| **Section 3.3.1, Intended Use** | |
| Comment | One commentator noted that stratifying data sets in loss reserving is different from risk classification, which is done to price risks, and believed that loss reserving permits more flexibility. The commentator stated that the definition of a risk classification system does not apply to loss reserving. |
| Response | The task force agreed with the first concepts but disagreed with the final sentence and therefore made no change. |
| **Section 3.3.2, Actuarial Considerations** | |
| Comment | With respect to section 3.3.2(a), one commentator suggested replacing the word "for" in the first line with "within" for clarification. |
| Response | The task force agreed and made the suggested change. |
| Comment | With respect to section 3.3.2(b), two commentators questioned what was intended by the use of the term "large enough." |
| Response | The task force believed the language was sufficiently clear and made no change. |
| Comment | One commentator pointed out that there are often classes that, individually, have associated experience with low statistical credibility and believed that alternatives to credibility should be included in section 3.3.2(b). |
| Response | While the task force agreed that there are situations in which actuarially sound classification plans will have individual classes where the experience has low statistical credibility, the task force believed that credibility is a desirable characteristic of risk classes within a risk classification system and that no expansion to include alternatives was necessary. |
| Comment | One commentator suggested replacing "statistical predictions" with "predictions" in section 3.3.2(b) to avoid the implication that underlying statistics were required. Another commentator suggested that the term "predictions" needed explanation. |
| Response | The task force agreed with these comments and replaced "predictions" with "inferences" and edited the language to improve its clarity. |
| Comment | One commentator suggested that the last sentence of section 3.3.2(b), while accurate, was irrelevant. |
| Response | The task force agreed and eliminated the sentence. |
| Comment | With respect to section 3.3.2(c), one commentator suggested the need for definitions of "accuracy" and "efficiency." |
| Response | The task force believed that the existing language regarding the actuary's professional judgment was sufficient in determining the meaning of "accuracy" and "efficiency" and did not add a definition of either word. |

| | |
|---|---|
| Comment | Several commentators suggested that section 3.3.2(d) be eliminated. A number of those commentators also pointed out that the language was both inconsistent with current actuarial practice and inappropriate as an implied requirement. |
| Response | The task force agreed and deleted the section. |
| **Section 3.3.3, Other Considerations** | |
| Comment | Several commentators pointed out that the last sentence of the section was unclear and might inadvertently require a degree of testing and determination that was not intended. |
| Response | The task force deleted the last sentence of the section. In addition, section 4.1, Communications and Disclosures, was clarified as to what disclosures are appropriate. |
| **Section 3.3.4, Reasonableness of Results** | |
| Comment | One commentator found the parenthetical wording confusing. |
| Response | The task force believed the examples were appropriate and made no change. |
| Comment | One commentator found this section ambiguous in the context of establishing risk classes. Another commentator suggested that a cost-based definition of reasonable be added or that the section be deleted entirely. |
| Response | The task force retained the section but clarified the wording by mentioning the intended use of the risk classes. The task force did not believe additional clarification of "reasonableness" was necessary because reasonableness is a subjective concept that may depend on the actuary's professional judgment. The task force also notes that the *Introduction to the Actuarial Standards of Practice* discusses this concept in further detail. |
| **Section 3.4, Testing the Risk Classification System** | |
| Comment | One commentator indicated that it may be preferable to substitute the word "or" for "and" on the second line so that the sentence reads, "Upon establishment of the risk classification system or upon subsequent review. … " |
| Response | The task force did not agree and believed the word "and" was appropriate because testing should be carried out both upon establishment and upon subsequent review. |
| Comment | One commentator wanted to substitute "continuing" for "long-term" viability in the second line. The commentator believed that the usual issue is the current and near-future viability of a system, not its long-term prognosis. Also, another commentator said that the requirement to "test long-term viability" is new and questioned its meaning. |
| Response | The task force considered alternative wording but ultimately decided that the existing wording best reflected that the actuary should check the risk classification system for viability both in the short-term and in the long-term. |

| | |
|---|---|
| Comment | One commentator believed that testing the system is set out as something the actuary should do, if appropriate, rather than as something the actuary should consider. The commentator believed that the paragraph implied a duty to test in some situations, without describing explicitly what those situations would be (i.e., when testing would be "appropriate"). The commentator suspected that the situations described in sections 3.4.1–3.4.3 were the kind of situations that the task force had in mind as situations where long-term testing would be "appropriate." However, as currently written, the commentator thought that a stronger duty could be implied. The commentator suggested that section 3.4 itself should read, "…the actuary should consider testing the long-term viability of the risk classification system. …" |
| Response | The task force believed that the existing wording conveyed the concept that the actuary considers whether testing is appropriate and made no change. |
| **Section 3.5, Reliance on Data Supplied by Others (now Reliance on Data or Other Information Supplied by Others)** | |
| Comment | One commentator believed that the provision for reliance on data supplied by others was not needed in this ASOP because ASOP No. 23, *Data Quality*, addresses this. |
| Response | This task force agreed and revised the section to refer to ASOP No. 23, using wording consistent with other recently adopted ASOPs and exposure drafts. |
| **SECTION 4. COMMUNICATIONS AND DISLOSURES** | |
| **Section 4.1, Communications (now Communications and Disclosures)** | |
| Comment | One commentator suggested changing the phrase "when issuing actuarial communications under this standard" to "when issuing actuarial communications that include elements of actuarial work within the scope of this standard." |
| Response | The task force retained the original language to be consistent with other ASOPs. |
| **Section 4.2, Disclosures (now 4.1, Communications and Disclosures)** | |
| Comment | One commentator stated that some of the disclosures, notably section 4.2(a) and 4.2(c) (now 4.1(a) and 4.1(c)), are impractical, since they might require the actuary to begin with the universe and then disclose everything that is not utilized. The commentator suggested replacing these disclosure requirements with a communication that defends the choice of risk classification system and notes in that defense how compliance with applicable law and business practices affected the selection, rather than describing all the alternatives that would have been available in the absence of such constraints. |
| Response | The task force did not agree that the requirement to disclose significant limitations required a discussion of all alternatives that would have been available in the absence of legal or business constraints. The task force noted that the listed disclosures proceed from considerations required in section 3 and modified the wording of the disclosure requirements to be more consistent with that section, including revising the lead-in sentence to require disclosure of the significant impact of such considerations. |
| Comment | One commentator stated that the disclosure issue is heightened by the expansion of scope into the public policy arena and stated that excessive disclosure requirements may weaken the actuary's ability to influence the discussion of public policy. |
| Response | The task force disagreed with the comment and noted that, while the scope of the standard now includes regulatory activities, legislative activities, and statements regarding public policy, the scope does so only in the context of the performance of professional services. |

| | |
|---|---|
| Comment | One commentator suggested deleting section 4.2(a) (now 4.1(a)), which requires disclosure of significant limitations due to compliance with applicable law, noting that other ASOPs have tended not to include this requirement except where the limitations seriously distort the work product. |
| Response | The task force disagreed with this comment, noting that significant limitations on the choice of risk characteristics are likely to distort the risk classification system and therefore should be disclosed. |
| Comment | Several commentators expressed opinions regarding the requirement that the actuary should disclose whether quantitative analyses were performed relative to items being disclosed. One commentator expressed strong objection to this requirement, asserting that the requirement would be counter-productive and would reduce the number of quantitative analyses being done. Another commentator agreed and noted that the disclosure issue was heightened by the expansion of scope to the public policy arena, where an advocacy position may be taken. A third commentator objected to the requirement to disclose that quantitative analyses were *not* done but suggested requiring that any analyses that were done be summarized. A fourth commentator suggested exempting certain of the required disclosures from the requirement to consider quantification. A fifth commentator pointed out that, while the actuary was required to disclose whether quantitative analyses were performed, the actuary was only required to consider providing the results of those analyses in the disclosure. |
| Response | The disclosure requirement for the actuary to consider providing quantitative analyses of the impact of the items being disclosed was removed, and instead similar wording was added as a new section 3.4.4, Quantitative Analyses, which guides the actuary to consider performing such analyses, depending on the purpose, nature, and scope of the assignment. |
| Comment | In the transmittal letter for the exposure draft in request for comment #6, the task force asked whether there were any situations in which the requirement in section 4.2(c) (now 4.1(c)) to disclose any significant limitations created by business practices of the financial or personal security system would not be appropriate. Two comments were received, both agreeing with the appropriateness of the requirement. |
| Response | The task force retained the requirement. |
| Comment | Two commentators suggested substituting "indicates" for "creates" in section 4.2(d) (now 4.1(d)). |
| Response | The task force agreed, changed the wording as suggested, and made other revisions for clarity. |
| Comment | In the transmittal letter for the exposure draft in request for comment #7, the task force asked whether the requirement in 4.2(e) (now 4.1(e)) to disclose the effects of adverse selection was appropriate. Three commentators addressed this request for comment, and all agreed the requirement was appropriate. However, one commentator suggested that there be no requirement to quantify the impact. |
| Response | The task force retained the requirement in what is now 4.1(e) and also removed the requirement to consider providing quantitative analyses. Additionally, the task force deleted section 4.2(f) after determining that it was already covered by ASOP No. 41, Actuarial Communications, to which section 4.1 refers. |
| **APPENDIX (now Appendix 1)** | |
| Comment | One commentator expressed concern with the citing of the textbook *Selection of Risks* by Shepherd and Webster. |
| Response | The task force believed that citing the Shepherd and Webster book was appropriate but added a new lead-in sentence to the citation to indicate that the references cited provide additional background and context with respect to risk classification. |

ACTUARIAL STANDARDS BOARD

---

**Actuarial Standard**
**of Practice**
**No. 13**

# Trending Procedures in Property/Casualty Insurance

**Revised Edition**

**Developed by the**
**Subcommittee on Ratemaking of the**
**Casualty Committee of the**
**Actuarial Standards Board**

**Adopted by the**
**Actuarial Standards Board**
**June 2009**
**Updated for Deviation Language Effective May 1, 2011**

---

**(Doc. No. 133)**

## TABLE OF CONTENTS

June 2009

**TO:** Members of Actuarial Organizations Governed by the Standards of the Actuarial Standards Board and Other Persons Interested in Trending Procedures in Property/Casualty Insurance

**FROM:** Actuarial Standards Board (ASB)

**SUBJ:** Actuarial Standard of Practice (ASOP) No. 13

This document contains the final version of the revision of ASOP No. 13, *Trending Procedures in Property/Casualty Insurance*.

Background

The existing ASOP No. 13, *Trending Procedures in Property/Casualty Insurance Ratemaking*, was developed by the Subcommittee on Ratemaking of the Casualty Committee in July 1989 and adopted by the ASB in July 1990. Since the promulgation of the original standard, developments in trending procedures have continued, and the use of trending in non ratemaking areas has become more widespread. The Subcommittee prepared this revision of ASOP No. 13 to reflect appropriate actuarial practice with respect to trending procedures in property/casualty insurance and to be consistent with the current ASOP format. Further, this proposed revision expands guidance on the application of trend procedures beyond ratemaking to include reserving, valuations, underwriting, and marketing analyses.

Exposure Draft

The exposure draft of this revision was issued in January 2008 with a comment deadline of May 1, 2008. The Subcommittee on Ratemaking carefully considered the thirteen comment letters received and made changes to the language in several sections in response. For a summary of the substantive issues contained in the exposure draft comment letters and the responses, please see appendix 2.

The most significant changes from the exposure draft were as follows:

1. Section 1.2, Scope and section 2.6, Trending Procedure, were revised to indicate that, for the purpose of this standard, trending does not encompass the process commonly referred to as "development."

2. Section 4.1, Actuarial Communication, and section 4.2, Additional Disclosures, have been revised to indicate that the actuary needs to make specific disclosures when certain aspects of the trend procedure have a material effect on the result or conclusions of the actuary's overall analysis.

The ASB voted in June 2009 to adopt this standard.

Subcommittee on Ratemaking

Beth Fitzgerald, Chairperson
Gregory L. Hayward
Marc B. Pearl
Jonathan White

Casualty Committee of the ASB

Patrick B. Woods, Chairperson
Steven Armstrong
Raji Bhagavatula
Beth Fitzgerald
Bertram A. Horowitz
Claus S. Metzner
David J. Otto
Alfred O. Weller

Actuarial Standards Board

Stephen G. Kellison, Chairperson
Albert J. Beer
Alan D. Ford
Patrick J. Grannan
Thomas D. Levy
Robert G. Meilander
James J. Murphy
Godfrey Perrott
James F. Verlautz

*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. 13

# TRENDING PROCEDURES IN PROPERTY/CASUALTY INSURANCE

## 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 using trending procedures to estimate future values.

1.2 Scope—This standard applies to actuaries when performing professional services to estimate future values using trending procedures for all property/casualty coverages. This includes work performed for insurance or reinsurance companies, and other property/casualty risk financing systems that provide similar coverage, such as self insurance.

For purposes of this standard, a trending procedure does not encompass the process commonly referred to as "development," which estimates changes over time in losses (or other items) within a given exposure period (for example, accident year or underwriting year).

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 November 1, 2009.

## Section 2. Definitions

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

2.1 Coverage—The terms and conditions of a plan or contract, or the requirements of applicable law, that create an obligation for claim payment associated with contingent events.

2.2 Experience Period—The period of time to which historical data used for actuarial analysis pertain.

2.3 Forecast Period—The future time period to which the historical data are projected.

2.4 Social Influences—The impact on insurance costs of societal changes such as changes in claim consciousness, court practices, and legal precedents, as well as in other noneconomic factors.

2.5 Trending Period—The time over which trend is applied in projecting from the experience period to the forecast period.

2.6 Trending Procedure—A process by which the actuary evaluates how changes over time affect items such as claim costs, claim frequencies, expenses, exposures, premiums, retention rates, marketing/solicitation response rates, and economic indices. Trending procedures estimate future values by analyzing changes between exposure periods (for example, accident years or underwriting years). A trending procedure does not encompass the process commonly referred to as "development," which estimates changes over time in losses (or other items) within a given exposure period.

## Section 3. Analysis of Issues and Recommended Practices

3.1 Purpose or Use of Trending Procedures—Trending is an important component in many analyses performed by actuaries including, but not limited to, ratemaking, reserving, valuations, underwriting, and marketing. The actuary should identify the intended purpose or use of the trending procedure. The actuary should apply trending procedures that are appropriate for the applicable purpose or use.

Where multiple purposes or uses are intended, the actuary should consider the potential conflicts arising from those multiple purposes or uses and should consider adjustments to accommodate the multiple purposes or uses to the extent that, in the actuary's professional judgment, it is appropriate and practical to make such adjustments.

The actuary may present the trend estimate resulting from the trending procedure in a variety of ways, such as a point estimate, a range of estimates, a point estimate with a margin for adverse deviation, or a probability distribution of the trend estimate. The

actuary should consider the intended purpose or use of the trend estimate when deciding how to present the trend estimate.

3.2 Historical Insurance and Non-Insurance Data—The actuary should select data appropriate for the trends being analyzed. The data can consist of historical insurance or non-insurance information. When selecting data, the actuary should consider the following:

a. the credibility assigned to the data by the actuary;

b. the time period for which the data is available;

c. the relationship to the items being trended; and

d. the effect of known biases or distortions on the data relied upon (for example, the impact of catastrophic influences, seasonality, coverage changes, nonrecurring events, claim practices, and distributional changes in deductibles, types of risks, and policy limits).

3.3 Economic and Social Influences—The actuary should consider economic and social influences that can have a significant impact on trends in selecting the appropriate data to review, the trending calculation, and the trending procedure. In addition, the actuary should consider the timing of the various influences.

3.4 Selection of Trending Procedures—The actuary should select trending procedures after appropriate consideration of available data. In selecting these procedures, the actuary may consider relevant information such as the following:

a. procedures established by precedent or common usage in the actuarial profession;

b. procedures used in previous analyses;

c. procedures that predict insurance trends based on insurance, econometric, and other non-insurance data; and

d. the context in which the trend estimate is used in the overall analysis.

3.5 Criteria for Determining Trending Period—The actuary should consider both the lengths of the experience and forecast periods, and changes in the mix of data between the experience and forecast periods when determining the trending period. When incorporating non-insurance data in the trending procedure, the actuary should consider the timing relationships among the non-insurance data, historical insurance data, and the future values being estimated.

3.6 Evaluation of Trending Procedures—The actuary should evaluate the results produced by each selected trending procedure for reasonableness and revise the procedure where appropriate.

3.7 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.

3.8 Documentation—The actuary should prepare and retain appropriate documentation regarding the methods, assumptions, procedures, and the sources of the data used. The documentation should be in a form such that another actuary qualified in the same practice area could assess the reasonableness of the actuary's work, and should be sufficient to comply with the disclosure requirements in section 4.

## Section 4. Communications and Disclosures

4.1 Actuarial Communication—When issuing an actuarial communication subject to this standard, the actuary should refer to ASOP Nos. 23 and 41, *Actuarial Communications*. In addition, the actuary should disclose the following, as applicable, in an actuarial communication:

a. the intended purpose(s) or use(s) of the trending procedure, including adjustments that the actuary considered appropriate in order to produce a single work product for multiple purposes or uses, if any, as described in section 3.1;

b. significant adjustments to the data or assumptions in the trend procedure, that may have a material impact on the result or conclusions of the actuary's overall analysis;

c. 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);

d. 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

e. 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.

4.2 Additional Disclosures—In certain cases, consistent with the intended purpose or use, the actuary may need to make the following disclosures in addition to those in section 4.1:

a. When the actuary specifies a range of trend estimates, the actuary should disclose the basis of the range provided.

b. The actuary should disclose changes to assumptions, procedures, methods or models that the actuary believes might materially affect the actuary's results or conclusions as compared to those used in a prior analysis, if any, performed for the same purpose.

## Appendix 1

## Background and Current Practices

### Background

Recognition of the significance of trend in many property/casualty analyses and difficulty of discerning turning points has led to a need for increasingly sophisticated trending procedures. Publications of the CAS such as *Variance* and the *Syllabus of Examinations*, and many other publications such as statistics and economics textbooks, provide extensive information on alternative procedures. The actuary may refer to these or develop other procedures, as appropriate for each situation.

### Current Practices

Trending procedures are used in ratemaking, reserving, valuation, underwriting, and marketing for most property/casualty insurance plans or policies. In such procedures, actuaries generally place reliance on (1) data generated by the book of business being analyzed, (2) other insurance data, and (3) non-insurance data, in that order of preference. Mathematical techniques are often used to smooth and extrapolate from historical data. In the absence of strong contrary indications, there is a reliance on extrapolations of historical insurance data. Procedures based on non-insurance data are also used. In trending procedures, judgmental considerations generally include, but are not limited to, the historical data used, the success of these techniques in making prior projections, the statistical goodness of fit of the techniques to the historical data, and the impact of any sudden, nonrecurring changes (for example, tort reform) which had not yet been incorporated in the historical data.

## Appendix 2

## Comments on the Exposure Draft and Responses

The exposure draft of this ASOP, *Trending Procedures in Property/Casualty Insurance*, was issued in January 2008 with a comment deadline of May 1, 2008. Thirteen 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 Subcommittee on Ratemaking carefully considered all comments received, and the Casualty 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.

The term "reviewers" in appendix 2 includes the subcommittee, the Casualty Committee, and the ASB. 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 concept of trending is applicable to all actuaries and any ASOP that's created should serve as a single source of professional guidance. The commentator therefore suggested the ASOP title be changed to "Trending Procedures" and that the document be reviewed to make sure it covers all actuarial practice areas (rather than develop separate ASOPs for each area). |
| Response | The reviewers believe the uses of "trend" can vary among practice areas and that this ASOP is specific to situations that impact property/casualty insurance. The approach taken in other areas has been to incorporate trending as needed in task specific ASOPs. |
| Comment | Several commentators expressed concern that this standard unintentionally covered reserving practices already subject to ASOP No. 43, *Property/Casualty Unpaid Claim Estimates*. The concern was the inclusion of reserving practices commonly known as "loss development." |
| Response | The reviewers agreed that there was a need to carve out "loss development." However, the reviewers wanted to ensure that other uses of trend in a reserving context (examples include Cape Cod, Bornhuetter Ferguson, and frequency/severity methods) were included in this standard. The reviewers added language to section 1.2, Scope and section 2.6, Trending Procedure to achieve the goal of carving out "development," but not the other uses of trend in reserving. In other words, changes between exposure periods are included under this standard but not changes within an exposure period. The term "development" is used rather than "loss development" to recognize that development triangles are also applied to premiums and other components. |

| | |
|---|---|
| Comment | One commentator stated there are many individual assumptions in actuarial work—the most obvious example being loss development factors—that are not the subject of a separate standard. The commentator also stated he didn't feel "trend" was important enough to warrant its own standard and that consideration should be given to greatly broadening the standard (or combining it with another one) to create one standard encompassing all, for example, "Selection of Actuarial Assumptions in Estimation of Ultimate Losses for Casualty Projections." |
| Response | The reviewers believe that trend is important enough to warrant its own standard, and note that ASOP Nos. 12, 25, 29, 30, 38, and 39, in addition to 13, address many different aspects of ratemaking. |
| Comment | Several commentators requested specific guidance on the many problems facing actuaries when trending, such as selecting regression models, extrapolation, statistical methods, etc. |
| Response | The reviewers believe it is not the purpose of the standard to provide specific procedures and that it is too difficult to keep a standard up to date with specific procedures. |
| **SECTION 2. DEFINITIONS** | |
| **Section 2.2, Experience Period** | |
| Comment | One commentator suggested changing "to" to "from" and "pertain" to "was obtained" in the definition stating he sees the experience period as being the source of data for the forecast period. |
| Response | The reviewers believe revising the language would make it less clear and did not make the change. |
| **Section 2.5, Trending Period** | |
| Comment | One commentator suggested that ASOP No. 13 give a more fundamental definition of the trending period and that the description of the simple calculation of the trending period be moved to section 3.5, Criteria for Determining Trending Period. In addition, the commentator suggested the definition of "trending period" be rewritten to, "the time over which trend is applied in projecting from the experience period to the forecast period." |
| Response | The reviewers modified the definition to reflect the suggested language, but did not agree with the suggestion to move the simple calculation to section 3.5 Criteria for Determining Trending Period. |
| **Section 2.6, Trending Procedure** | |
| Comment | One commentator stated that in the definition of "trending procedures," reference is made to "response rates" and "conversion/issue rates," and suggested that these terms be separately defined as they have meaning that may not be readily apparent. |
| Response | The reviewers agreed that these terms may have meaning that is not readily apparent and removed them from the definition as they were meant to be illustrative of items that might be the subject of trend analysis. These examples were replaced by the example of marketing/solicitation response rates. |
| Comment | One commentator suggested modifying the definition to "a process by which the actuary evaluates how changes over time may affect items such as…." |
| Response | The reviewers disagreed with adding the word "may" and left the definition unchanged. |

| SECTION 3. ANALYSIS OF ISSUES AND RECOMMENDED PRACTICES | |
|---|---|
| **Section 3.1, Purpose or Use of Trending Procedures** | |
| Comment | One commentator stated that mention should be made (for example, in section 3.4, Selection of Trending Procedures) of specific situations that may require stochastic trending procedures or, at the very least, consideration of multiple scenarios. In addition, the commentator stated it would not be wise to evaluate reinvestment risk based on a single projection of future interest rates noting that interest rates are an economic index for purposes of section 2.6, Trending Procedures, and thus projection of future interest rates would be subject to this standard. If such was not intended, then the phrase "economic index" should be clarified so as to restrict its meaning. |
| Response | The reviewers added a new paragraph in section 3.1 to recognize that a range or probability distribution of trend estimates may be appropriate. |
| Comment | One commentator was concerned whether a marketing analysis conducted by an actuary is truly an actuarial work product. |
| Response | The reviewers believe if an actuary is applying trending methodologies to marketing, then the standard should apply. This is one of the reasons the standard is being expanded beyond ratemaking. |
| **Section 3.2, Historical Insurance and Non-Insurance Data** | |
| Comment | One commentator believed it would be appropriate to add language such as, "In situations where non-insurance data is being used, the actuary should determine and document the causal relationship between the non-insurance data being used and the event or value being forecasted" to clarify this section. |
| Response | The reviewers disagreed and did not change the language because establishing a causal relationship is not a requirement for use of non-insurance data. |
| Comment | One commentator suggested modifying this section to read, "The actuary should select available data appropriate for the trends being analyzed. The data can consist of historical insurance or non-insurance information. Considerations should include…." |
| Response | The reviewers did not add the word "available" to the language but did remove the word "other" per the commentator's suggestion. |
| Comment | One commentator suggested that the proposed revised ASOP suffers from the complete absence of any mention of "operational influences," stating that trends in observed values as a result of operational changes are very common in marketing and reserving, for example, and suggested language to its effect be added. |
| Response | The reviewers considered operational influences, as reflected in the examples given in this section 3.2 and added "claim practices." |
| Comment | One commentator stated that section 3.2(c) was unclear in stating what actuaries are expected to consider. The commentator also stated that he didn't see how the difference between "explanatory value" and "predictive value" of the data might lead to any change in trending procedure and recommended either removing this section or else providing additional clarification as to its intent. |
| Response | The reviewers modified the language in section 3.2(c) to clarify the intent. |

| | |
|---|---|
| Comment | One commentator suggested including a section 3.2(e), which would state the following:<br><br>e. the data that is used for trending and the data that it is being applied to. |
| Response | The reviewers did not add a 3.2 (e) but modified the existing 3.2 (c) to read as follows:<br><br>c. relationship with items being trended; and |
| Comment | One commentator stated that the first paragraph of this section uses the adjective "historical" to modify "insurance and non-insurance data," which can be interpreted as implicitly prohibiting procedures that blend historic data with projections acquired from external parties and recommend that "historical" be removed. |
| Response | The reviewers did not agree and therefore did not modify the language. |
| **Section 3.3, Economic and Social Influences** | |
| Comment | One commentator stated that the sentence, "It is inappropriate to analyze only those factors that have an impact on trend in one direction," be revised to read, "It is inappropriate to consider for analysis only those factors that have an impact on trend in one direction," stating that certain factors do not lend themselves to rigorous analysis, and the remaining factors could potentially impact the trend only in one direction. |
| Response | The reviewers agreed and deleted the sentence instead. |
| Comment | One commentator believed the comment about "avoidance of bias" is oddly placed and believes if such a comment is needed, it should be promoted to a more prominent, generally applicable place so as to indicate that biases should be avoided wherever they are found, not just in the consideration of economic factors. |
| Response | The reviewers agreed, believing that this is a very broad consideration, which is covered elsewhere such as by aspects of the Code of Professional Conduct, and thus deleted the sentence. |
| **Section 3.7, Reliance on Data or Other Information Supplied by Others** | |
| Comment | One commentator questioned whether sections 3.7, *Reliance on Data or Other Information Supplied by Others*; 3.8, *Documentation*; 4.1, *Actuarial Communication*; and 4.2, *Additional Disclosures* provided sufficient guidance. |
| Response | The reviewers believe these sections provide sufficient guidance and made no modifications. |
| **SECTION 4. COMMUNICATIONS AND DISCLOSURES** | |
| **Section 4.1, Actuarial Communication** | |
| Comment | One commentator believed generic commentary about disclosures, communication, appropriateness, judgment, etc. is not unique to trending, and with rewording could be applied to just about any important actuarial assumption. The commentator stated this implies that the standard could be broadened to encompass a variety of assumptions or that these generic guidances could be restricted to a generic ASOP such as ASOP Nos. 23 and 41 (eliminating the need to repeat them in this section). |
| Response | The reviewers did not believe that there was any redundancy in that the introduction of this section is reinforcing that the actuary in making an actuarial communication should first and foremost be guided by ASOP Nos. 23 and 41. The additional material that follows in this section is guidance that is particularly relevant when offering an actuarial communication relating to trending procedures. |

| | |
|---|---|
| Comment | One commentator felt that the guidance in section 4.1 was insufficient, stating that reference to ASOP No. 41, *Actuarial Communications*, is an inadequate substitute for the professional expectations established in ASOP No. 9, *Documentation and Disclosure in Property and Casualty Insurance Ratemaking, Loss Reserving, and Valuations*. |
| Response | The ASB has determined that ASOP No. 9 will be repealed when a revised ASOP No. 41 is adopted. The reviewers believe that all relevant guidance that was included in ASOP No. 9 is to be covered in the revised ASOP No. 41. |
| Comment | One commentator believed section 4.1(b) placed an undue burden on the actuary stating the actuary is required not only to assess whether or not there were significant limitations in the data, but also to speculate on what a more in-depth analysis (using data that, presumably, isn't available) might produce. |
| Response | The reviewers agreed and modified the language in section 4.1(b) to address the commentator's concern. |
| Comment | One commentator believed the current wording in section 4.1(c) could potentially require documentation of risks and uncertainties that are not likely to result in a large deviation from the trend estimate and recommended that this paragraph be revised to read as follows: "specific significant risks and uncertainties that might cause the actual trend to vary materially from the trend estimate, if any." |
| Response | The reviewers deleted section 4.1(c) because the language was overly broad, and the requirement to disclose all significant assumptions provided the user of the analysis a sufficient basis to evaluate the actuary's work. |
| Comment | One commentator suggested because ASOP No. 23, *Data Quality*, and ASOP No. 41, are referenced in the first sentence of this section, that sections 4.1(b) and 4.1(c) are not necessary, stating that section 4.1, particularly subsection (g), of ASOP No. 23 adequately addresses this guidance and in a way that is more understandable. |
| Response | The reviewers deleted 4.1(c) and revised 4.1(b). |
| **Section 4.2, Additional Disclosures** | |
| Comment | One commentator felt the guidance in section 4.2 was insufficient while another commentator recommended section 4.2(b) be revised to state, "The actuary should disclose changes to assumptions, procedures, methods or models that the actuary believes might materially affect the latest trend estimate from any prior estimates. The actuary should also retain documentation concerning the potential magnitude of the impact of those material changes if those impacts can be reasonably determined." The commentator believed this modification would help limit varying interpretations of the term "update" in the section's lead-in sentence. |
| Response | The reviewers agreed and modified the language. |
| Comment | One commentator recommended that section 4.2(b) be removed from the standard stating that the trigger language seems unclear, particularly the meaning of "update of the previous estimate." The commentator also believed this paragraph to be superfluous since the requirement to document assumptions, procedures, methods or models, or changes to such, already exists. |
| Response | The reviewers revised the language in section 4.2(b) in response to another comment and believe the revision has addressed these concerns. |

| APPENDIX | |
|---|---|
| Comment | One commentator suggested changing "property casualty" to "property/casualty" to be consistent with other references to the practice area. |
| Response | The reviewers agreed and made the change. |
| Comment | One commentator suggested changing "Proceedings" to "Variance" in the Background section to make it a more generalized term. |
| Response | The reviewers agreed and made the change. |

**REPEAL OF**
**ACTUARIAL STANDARD**
**OF PRACTICE**
**NO. 14**

# WHEN TO DO CASH FLOW TESTING FOR LIFE AND HEALTH INSURANCE COMPANIES

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

**Repealed by the**
**Actuarial Standards Board**
**September 2001**

**Doc. No. 082**

September 2001

**TO:** Members of Actuarial Organizations Governed by the Standards of Practice of the Actuarial Standards Board and Other Persons Interested in Cash Flow Testing for Life and Health Insurance Companies

**FROM:** Actuarial Standards Board (ASB)

**SUBJ:** Repeal of Actuarial Standard of Practice (ASOP) No. 14

This booklet notes the repeal of ASOP No. 14, *When to Do Cash Flow Testing for Life and Health Insurance Companies*.

Background

To guide actuaries who needed to perform cash flow testing, the Actuarial Standards Board adopted ASOP No. 7, then titled *Performing Cash Flow Testing for Insurers*, in October 1988 (revised July 1991 and September 2001). 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 or not to do cash flow testing in forming a professional opinion or recommendation.

As part of the project to look at all cash flow testing standards of practice, a task force of the ASB's Life Committee reviewed ASOP No. 7 (titled, as of September 2001, *Analysis of Life, Health, or Property/Casualty Insurer Cash Flows*), ASOP No. 14 (*When to do Cash Flow Testing for Life and Health Insurance Companies*), and ASOP No. 22 (titled, as of September 2001, *Statements of Opinion Based on Asset Adequacy Analysis by Actuaries for Life or Health Insurers*). Relevant portions of ASOP No. 14 were incorporated within the 2001 revisions of ASOP No. 7 and ASOP No. 22.

At its September 2001 meeting, the ASB voted to adopt the revised ASOP No. 7 and ASOP No. 22 and to repeal ASOP No. 14.

ASOP No. 14 is repealed for any work performed on or after April 15, 2002.

ACTUARIAL STANDARDS BOARD

**Actuarial Standard**
**of Practice**
**No. 15**

# Dividends for Individual Participating Life Insurance, Annuities, and Disability Insurance

**Revised Edition**

**Developed by the**
**Task Force to Revise ASOP No. 15 of the**
**Life Committee of the**
**Actuarial Standards Board**

**Adopted by the**
**Actuarial Standards Board**
**March 2006**
**Updated for Deviation Language Effective May 1, 2011**

**(Doc. No. 134)**

## TABLE OF CONTENTS

## APPENDIXES

March 2006

**TO:** Members of Actuarial Organizations Governed by the Standards of Practice of the Actuarial Standards Board and Other Persons Interested in Dividends for Individual Participating Life Insurance, Annuities, and Disability Insurance

**FROM:** Actuarial Standards Board (ASB)

**SUBJ:** Actuarial Standard of Practice (ASOP) No. 15

This booklet contains the final version of the revision of ASOP No. 15, now titled *Dividends for Individual Participating Life Insurance, Annuities, and Disability Insurance*.

Background

The ASB adopted the original ASOP No. 15, *Dividend Determination for Participating Individual Life Insurance Policies and Annuity Contracts,* in 1990 and revised it in 1997 to exclude dividend illustrations that are subject to or represented as being in accordance with the National Association of Insurance Commissioners' *Life Insurance Illustrations Model Regulation.*

This current revision of ASOP No. 15, now titled *Dividends for Individual Participating Life Insurance, Annuities, and Disability Insurance,* was prepared by the Task Force to Revise ASOP No. 15 of the Life Committee of the ASB to be consistent with the current ASOP format, to bring individual disability insurance into its scope, and to reflect current, generally accepted actuarial practices with respect to dividends for participating individual life insurance policies and annuity contracts.

Exposure Draft

The exposure draft of this ASOP was issued in March 2005 with a comment deadline of September 30, 2005. Fourteen comment letters, showing thoughtful insight of the issues, were received and considered in developing the final ASOP. For a summary of the substantive issues contained in the exposure draft comment letter and the responses, please see appendix 2.

The most significant changes since the exposure draft were as follows:

1. References to professional services with respect to long-term care insurance were removed from section 1.2, Scope. References to long-term care were also removed from the title and other areas of the standard.

2. Several definitions were modified for improved clarity and consistency.

3. A sentence was added to section 3.1, Contribution Principle, to clarify that the contribution principle can be applied annually or over an extended period of time.

4. Section 3.3.4, Dividend Factors for New Policies, was changed with respect to setting a dividend factor that differentiates between old and new policies, dropping the reference to setting such a factor on a conservative basis.

5. Guidance with respect to reinsurance was added in new section 3.9, Reinsurance.

6. The discussion of the impact of policy loans was moved from section 3.6, Investment Income, to new section 3.7, Policy Loans.

7. Current practice with respect to disability income insurance in appendix 1 was clarified.

The Life Committee thanks all those who commented on the exposure draft.

The ASB voted in March 2006 to adopt this standard.

Task Force to Revise ASOP No. 15

Thomas A. Phillips, Chairperson

| | |
|---|---|
| Armand M. dePalo | Gary N. Peterson |
| Phillip J. Grigg | Stephen N. Steinig |
| Dale S. Hagstrom | |

Life Committee of the ASB

Robert G. Meilander, Chairperson

| | |
|---|---|
| Charles Carroll | Thomas A. Phillips |
| Michael A. Cioffi | Allan W. Ryan |
| Dale S. Hagstrom | Barry L. Shemin |

Actuarial Standards Board

Cecil D. Bykerk, Chairperson

| | |
|---|---|
| William C. Cutlip | Godfrey Perrott |
| Alan D. Ford | William A. Reimert |
| Robert S. Miccolis | Lawrence J. Sher |
| Lew H. Nathan | Karen F. Terry |

**ASOP No. 15—March 2006**

# ACTUARIAL STANDARD OF PRACTICE NO. 15

# DIVIDENDS FOR INDIVIDUAL PARTICIPATING LIFE INSURANCE, ANNUITIES, AND DISABILITY INSURANCE

## 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 relating to the dividend framework and the determination and illustration of dividends for individual participating life insurance, annuities, and disability insurance, whether issued by a stock, fraternal, or mutual insurer.

1.2 Scope—This standard applies to actuaries when performing professional services in connection with the establishment or modification of the dividend framework and the determination and illustration of dividends for individual participating life insurance, annuities, and disability insurance, including any attached participating riders and agreements.

This standard does not apply to actuaries when performing professional services with respect to illustrations of dividends subject to ASOP No. 24, *Compliance with the NAIC Life Insurance Illustrations Model Regulation*.

This standard does not apply to the establishment of the aggregate amount available to be distributed to policyholders as dividends (i.e., divisible surplus).

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 August 1, 2006.

## Section 2. Definitions

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

2.1 Actual Experience—Historical results within a dividend factor class and trends in those results.

2.2 Contribution Principle—The concept that aggregate divisible surplus is allocated to policies to reflect the proportion that the policies, as part of their dividend factor classes, are considered to have contributed to divisible surplus.

2.3 Dividend Determination—Given the dividend framework, the process by which the divisible surplus is allocated to policies including the determination of dividend factors.

2.4 Dividend Factor—A value or set of values, other than the policy factors, used in the determination of the dividend on a particular policy. A dividend factor reflects the experience of the dividend factor class of policies to which the particular policy belongs. Examples of dividend factors include those related to mortality, morbidity, expense, investment income, policy termination, tax, and experience premiums.

2.5 Dividend Factor Class—A group of policies for which dividends are determined by using the same value or set of values for a particular dividend factor.

2.6 Dividend Framework—The structure by which the insurer allocates divisible surplus among participating policies. This includes the assignment of policies to dividend factor classes, the method of allocating income and costs, and the structure of the formulas or other methods of using dividend factors.

2.7 Divisible Surplus—The aggregate amount available to be distributed to policyholders as dividends.

2.8 Policies—Individual participating policies and contracts for life insurance, disability insurance and annuities, and group certificates for these same types of business that operate in substantially the same manner as individual participating policies and contracts.

2.9 Policy Factors—Financial components of a policy based on the guarantees or actuarial components underlying the policy. Examples of policy factors include cash values, reserves and their associated net premiums, gross premiums, policy loan interest rates, and the rates of interest, mortality, and morbidity used in calculating cash values or reserves.

## Section 3. Analysis of Issues and Recommended Practices

3.1 Contribution Principle—The actuary should use the contribution principle in determining dividends unless, in the actuary's professional judgment, a different basis is preferable, reasonable, and appropriate. The actuary may apply the contribution principle annually or over an extended period of time. Limitations of the dividend determination process require that practical considerations be reflected in applying the contribution principle, and the actuary may recognize such considerations in applying the contribution principle. The actuary may use approximations, simplified processes, or other adjustments considering relevant conditions and circumstances such as the size of a particular group of policies, the costs and practical difficulties of making a dividend scale change, and the effect of the scale change on individual dividends.

3.2 Dividend Framework—When advising the insurer with respect to the dividend framework, the actuary should consider the following: (a) treatment of policies within the line of business that, in the actuary's professional judgment, is equitable; (b) the insurer's marketing, financial, and other objectives; (c) materiality; (d) relevant policy provisions; and (e) practical limitations.

3.3 Dividend Factors—The actuary should determine dividend factors that allocate the divisible surplus within the insurer's dividend framework. The actuary should develop dividend factors based on an analysis of policy factors and actual experience of the participating block for which dividends are being determined. However, when actual experience is not determinable, available, or credible, the actuary should consider the experience and trends in experience of similar classes of business either from the same insurer, from industry sources, or from other non-industry sources, in that order of preference. Dividend factors may differ from actual experience, as the actuary may adjust the factors to reflect the insurer's financial objectives, to reflect practical limitations, and to result in an estimated aggregate dividend payout equal to divisible surplus.

The actuary should consider materiality and practical limitations in determining the policy and dividend factors that are to appear in the dividend formula or other method of using dividend factors. Thus, the analysis underlying dividend determination may involve the use a variety of policy factors and actual experience measures, but the actuary need not include all of these factors.

When developing new dividend factors for all policies is not practical, the actuary may recommend the continuation of a dividend scale, continuation of certain dividend factors, or the use of approximations or simplified processes or formulas.

3.3.1 Projection of Experience—If any projection of experience is made in determining the dividend factor of any dividend factor class, the actuary should project experience for all classes of that dividend factor for a line of business to the same point in time. The actuary should limit such projections to a relatively short time frame (for example, the period for which a dividend scale is likely to remain

appropriate) and should develop projections consistently for dividends on both policies in force and new business.

3.3.2 Dividend Factor Classes—When providing advice with respect to creating, changing, or combining dividend factor classes, the actuary should consider characteristics such as the following:

a. the similarity of the policy types;

b. the structure of the policy factors;

c. the similarity of the actual experience;

d. the time period over which the policies were issued; and

e. the underwriting and marketing of the policies.

The actuary may use the same dividend factor class for policies with different actual experience when this difference is charged for elsewhere. For example, the dividend factor related to mortality used for permanent policies resulting from term conversion may be the same as that for regularly underwritten policies, even though the actual experience is different, provided that the appropriate charges for material differences in mortality experience, net of expense savings, are charged to the term policies.

3.3.3 Uniform Criteria—In placing policies in their respective dividend factor classes, the actuary should base placement on uniformly applied criteria such as criteria designed to group similar experience. The actual occurrence or absence of a claim on a particular policy should not be a criterion for placement of that policy in a particular dividend factor class.

3.3.4 Dividend Factors for New Policies—Dividend factors for new policies or products commonly differ from those of older, otherwise similar policies. When setting dividend factors that differ for otherwise similar old and new policies, the actuary should consider (a) actual experience, if available, and (b) assumptions that are reasonable and methods that are equitable, in the actuary's professional judgment.

3.4 Policy Factors—In the calculation of dividends for a particular policy, the actuary may use the actual policy factors for that policy or approximations to the actual policy factors that the actuary judges appropriate.

3.5 Mortality, Morbidity, and Policy Termination—The actuary may base the dividend factors related to mortality, morbidity, or policy termination on a variety of characteristics or a combination thereof. Examples of such characteristics include, but are

not limited to, age, gender, duration, geographic location, marketing method, plan, size of policy, and risk class.

3.6 Investment Income—The actuary should reflect the investment experience of the line of business for which dividends are being determined in setting a dividend factor related to investment income. The dividend factor related to investment income may reflect investment experience net of investment expenses or, alternatively, investment expenses may be treated separately as expenses. The actuary should consider the treatment of capital gains and losses and taxes in setting the factor. The actuary should use a reasonable basis for allocating investment income to policies, whether using portfolio, segmentation, investment generation, or any other methods.

3.7 Policy Loans—The actuary may reflect the effect of policy loans in setting a dividend factor related to investment income. In determining the effect of policy loans, the actuary should consider the policy loan interest rate, the treatment of policy loan expenses, and whether policy loan interest is aggregated with other investment income recognizing the utilization rate of loanable funds or whether policy loan interest is passed through directly to borrowing policyholders.

3.8 Expense—The actuary should consider expense experience in setting a dividend factor related to expenses. In considering expense experience, the actuary should allocate direct costs (those that can be related to a specific group of policies) to the policies generating those costs. The actuary should reasonably allocate indirect costs, such as overhead. The actuary should develop dividend factor classes and dividend factors related to expenses such that total expenses charged to each class are reasonable.

3.9 Reinsurance—The actuary should review the nature of any applicable reinsurance arrangement and determine the allocation, if any, of the impact (positive or negative) of reinsurance to specific blocks of business. If a reinsurance agreement is reflected in the determination of dividends, the actuary may reflect its impact in the dividend factors such as those related to expenses or mortality, or elsewhere in the dividend framework.

3.10 Tax—The actuary may determine a dividend factor related to taxes without reflecting modest variations in taxes among jurisdictions. The actuary should consider material variations in applicable laws in determining a dividend factor related to taxes, consistent with the analyses underlying other experience.

3.11 Stockholder Retention on Policies Originally Issued by a Stock Company—The actuary should consider applicable state law with respect to stockholder retention charges on participating policies. The actuary should not ordinarily change the dividend factors for stockholder retention from those in the scale used in the original dividend illustrations. If the factors are to be changed from the scale used in the original dividend illustrations, the actuary should make corresponding changes to all participating policies in force.

3.12 Termination Dividends—In establishing or changing termination dividends (dividends that may be provided upon events such as death, maturity or surrender), the actuary should consider the insurer's intent as represented to the actuary by the insurer for the block of business, if available, and develop termination dividends that are consistent with that intent and supportable within the divisible surplus of the insurer. The actuary should consider applicable state law with respect to termination dividends.

3.13 Illustrated Dividends Not Subject to ASOP No. 24—The actuary should determine dividends to be used in illustrations not subject to ASOP No. 24 so that they reasonably relate to actual dividends recently determined for payment on policies in force.

The actuary should consider whether illustrated dividends can be supported by recent experience. If not, the actuary should disclose this and consider the appropriateness of recommending a reduced scale for illustrations.

3.14 Documentation—The actuary should prepare and retain documentation in compliance with the requirements of ASOP No. 41, *Actuarial Communications*. The actuary should also prepare and retain documentation to demonstrate compliance with the disclosure requirements of section 4.2.

3.15 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.

## Section 4. Communications and Disclosures

4.1 Actuarial Report—When advising an insurer on dividends subject to this standard of practice, or on the dividend framework, the actuary should issue an actuarial report in accordance with ASOP No. 41 to the insurer stating the actuary's advice, unless another actuary advising the same insurer is issuing such an actuarial report that incorporates such advice.

4.2 Disclosures Concerning Process of Dividend Determination—The actuary should disclose the following items in appropriate detail in the actuarial report:

a. a description of the process and dividend framework used to determine dividends, the manner in which the policy and dividend factors were reflected in that process, and any material change in process or dividend framework since the last dividend scale;

b. whether the contribution principle has been followed and, if not, the basis used for dividend allocation;

c. if the contribution principle is being applied to divisible surplus for a period other than the current year, the procedures used for such application;

d. a description of the use of any significant approximations, simplified procedures, and practical adjustments to dividends, and the rationale for that usage;

e. a description of the dividend factor classes used and any material changes in such classes or in placement of policies within them;

f. a description of the policy factors and any material change in practice with respect to their determination or use;

g. a description of the dividend factor values used and any material changes in such values, including an identification of dividend factors with more than one dividend factor class. If a projection of experience has been used in setting a dividend factor, the type and extent of usage should be stated;

h. a description of the approach used for allocating investment income to the policies covered by the report. If the approach for a given group of policies has changed, or if a previously unused approach is to be introduced for a new group of policies, the report should identify the approach and include a full description of the nature, rationale, and effect of such approach;

i. for the dividend factors related to stockholder retention, a description of the method, the actual factors, and any material changes in values of these factors since the last dividend scale change;

j. if the insurer provides for termination dividends, a description of the processes used to determine termination dividends and any material changes in practice with respect to the determination of termination dividends since the last report;

k. for illustrations that are not included in the scope of ASOP No. 24, a description of the methods used to determine illustrated dividends;

l. a description of any illustrated dividends that cannot be supported by recent experience;

m. 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);

n. 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

o. 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

The determination of dividends on participating life insurance policies was a fundamental part of actuarial practice in the United States before the founding of actuarial organizations. Principles were defined early and have not changed. Practices have changed. Broad averaging of experience was generally used until the early 1970s. Because of newly emerging products with differentiated pricing, newly emerging differences in experience factors, and increased computer speed and capacity, dividend practices shifted toward more refined reflections of cost and income.

There have been no fundamental changes in life insurance dividend practices since the 1980s. The general trend in practice has been to develop refinements in classes of business. This has paralleled the development of dividend frameworks that are more refined and computer systems that are capable of handling the additional refinements.

The determination of dividends for disability insurance policies has a shorter history than that for life insurance, but the principles are similar.

One trend of the 1990s was the development of closed blocks of participating business, usually as a result of the demutualization of mutual life insurance companies. These closed blocks, according to their operating rules, are self-supporting and preserve the reasonable dividend expectations of their policyholders. The determination of dividends for policies in closed blocks follows the principles outlined in this ASOP. The divisible surplus for the closed block is set so as to exhaust the assets when the last policy terminates, while avoiding the creation of a tontine.

Some insurers have sold blocks of participating individual policies to a reinsurer. In such a situation, the guidance provided by this standard applies to any actuaries providing professional services, as defined in this standard, to an insurer with respect to those policies.

In 1976, the Society of Actuaries appointed a Committee on Dividend Philosophy to consider this subject. Building on the work and recommendations of that committee, the American Academy of Actuaries' (Academy) Committee on Dividend Principles and Practices formulated a set of *Recommendations* for the participating individual life insurance business of mutual companies that was adopted by the Board of Directors of the Academy in 1980. In 1985, the Academy board adopted a revised set of *Recommendations* that covered participating individual life insurance and participating annuity contracts of both mutual and stock companies. The original ASOP No. 15, *Dividend Determination for Participating Individual Life Insurance Policies and Annuity Contracts,* was a reformatted version of those *Recommendations*. This

revision has been updated to reflect current dividend determination practices and to add individual disability insurance to its scope.

## Current Practices

The actuary may provide professional services in two principal areas with respect to dividends. The actuary is normally involved in the determination of dividends, using the dividend framework of the insurer. In addition, the actuary may be involved in advising the insurer with respect to the dividend framework. In providing such services, current practices, such as the following, provide a background for dividend determination.

For typical insurers, management recommends an aggregate amount available to be distributed to policyholders as dividends (i.e., divisible surplus), actuaries recommend an allocation of that amount to individual policies, and the board approves the entire process. Divisible surplus may be determined for the organization as a whole or may be determined for specific lines of business within the organization, including closed blocks or participating lines of business operated by stock life insurers. Also, some insurers have developed policies that are participating but upon which dividends are not anticipated to be paid. For these policies, the insurer determines whether there is any divisible surplus to be allocated to the policies in the line of business.

Dividends may be calculated for a company as a whole but it is more common that dividends are calculated on a "line of business" basis. For this purpose, "line of business" varies by company. Some companies may view the entire individual life block as a single line of business while others may break that down into two or more separate lines. For dividend purposes, disability insurance is often treated as a separate line. Annuity business is also often separated from other lines for dividend purposes.

The use of the contribution principle in determining dividends is generally accepted practice in the United States. Methods of applying the contribution principle in dividend determination described in actuarial literature include the following:

1. the contribution or source of earnings method;

2. the asset share method;

3. the fund method;

4. the experience premium method;

5. the percentage of premium method; and

6. the reversionary bonus method.

Some of these methods, such as the percentage of premium method, refer primarily to the formula used to calculate dividends. Other methods, such as the asset share method, refer

primarily to the process used. Much of the standard is implicitly written in terms of the contribution method, but the standard should be understood in terms of analogous effects under the other methods.

It is the application of a particular method, by means of the dividend factors, that determines whether or not it follows the contribution principle, not the method itself. Also, it may be that a particular method, which does not of itself satisfy the contribution principle, will do so when termination dividends (see section 3.12) are taken into account.

Frequently the calculation of dividend factors takes place at two levels. At the detail level (policy form, issue age, issue year, gender, etc.) the actuary seeks a formula that is simple to administer while producing equitable dividends. A very common formula is the three-factor dividend formula with a dividend factor related to investment, a dividend factor related to mortality, and a dividend factor for all other sources (primarily expenses). After the actuary has selected a formula that the actuary thinks is appropriate, the actuary tests it at a model level (quinquennial issue ages, major policy forms, selected issue years, etc.), using assets share calculations with a complete set of assumptions. The testing determines whether the selected scale is (in the actuary's professional judgment) reasonable and equitable. The dividend factors may reflect experience directly in one or more of the three factors, but more often experience is reflected in the asset share assumptions.

A simplified approach to the determination of dividends for disability policies is common for several reasons. It is more difficult to know claim costs with certainty because of the volatility of morbidity results. The product offerings in these areas tend to be quite complex, with many potential dividend factor classes. An approach for these products may include a simplified formula for paying dividends, such as a percentage of premium or an experience premium determined from underlying experience, and a broad application of the definition of dividend factor class.

As stated in section 3.2 of the standard, practical limitations are part of the dividend framework. In determining dividends, actuaries commonly make adjustments to dividends for a variety of reasons, such as the following:

1. to reflect unusual gains or losses on certain supplementary benefit riders;

2. to reflect losses from the presence of settlement option guarantees;

3. to smooth the transition from one dividend scale to another;

4. to provide consistency in quantity discounts made to varying degrees in the gross premium structure;

5. to serve as a balancing item so that aggregate dividends equal aggregate divisible surplus;

6. to distribute gains from extraneous sources such as nonparticipating benefits or lines of business; and

7. to smooth the incidence of dividends within a dividend scale by policy duration.

Determination of dividends requires analysis of the actual experience of the participating block for which the dividends are being determined. Maintaining distinct accounting for participating business and for nonparticipating business and by line within each of these businesses may be helpful for this purpose.

In allocating divisible surplus to policies, a wide variety of acceptable practice exists in the determination of dividend factors and the treatment of dividend factors in the dividend framework. The actual experience upon which dividend factors are based commonly varies by several characteristics. For example, expenses may vary by plan, size of policy, marketing method, level of policyholder service, and other items. Also, details of taxation vary widely, depending on applicable laws in various jurisdictions. Differences in dividend frameworks are also common among insurers. Dividends may be calculated on a pre-tax basis or the dividend framework may include a dividend factor related to taxes. Some products of some insurers provide for termination dividends and there is a wide variety of practices with respect to termination dividends.

Where an insurer is operating a closed block of participating policies under operating rules developed in a demutualization, the insurer continues to set the divisible surplus for the participating policies, while the actuary continues to use the dividend framework to determine dividends for the policies based on the contribution principle, as defined in the standard. However, as described in ASOP No. 33, *Actuarial Responsibilities with Respect to Closed Blocks in Mutual Life Insurance Company Conversions*, aggregate dividends in a closed block are to be managed so as to exhaust the assets when the last policy terminates, while avoiding the creation of a tontine. In such situations, actuaries commonly include in dividend work an evaluation of the financial position of the closed block relative to the principle of exhausting the assets while avoiding a tontine. Also, as the operating rules for the closed block may refer to one or more dividend factors, actuaries commonly refer to the operating rules for the closed block in setting the dividend factors.

The actuary may have responsibilities in addition to the requirements of this ASOP. For example, the Exhibit 5 Interrogatories of the National Association of Insurance Commissioners' current annual statement address additional issues with respect to the determination of dividends (see section 3.13 of this standard).

## Appendix 2

## Comments on the Exposure Draft and Responses

The exposure draft of this actuarial standard of practice (ASOP), then titled *Dividends for Individual Participating Life Insurance, Annuities, Disability Insurance, and Long-Term Care Insurance*, was issued in March 2005, with a comment deadline of September 30, 2005. Fourteen 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. 15 carefully considered all comments received, and the Life Committee and the ASB reviewed (and modified, where appropriate) the proposed changes to the ASOP. Summarized below are the significant issues and questions contained in the comment letters and responses to each. The term "reviewers" includes the task force, the Life Committee, and the ASB. Unless otherwise noted, the section numbers and titles used below refer to those in the exposure draft.

| **GENERAL COMMENTS** | |
|---|---|
| Comment | Several commentators suggested various editorial changes in addition to those addressed specifically below. |
| Response | The reviewers implemented such changes if they enhanced clarity and did not alter the intent of the section. |
| Comment | One commentator noted that if interest earned is less than required, there may be yearly dividend decreases and policyholder complaints. The commentator suggested that it may be better to level scales, build surplus, and develop dividends with an increasing pattern. |
| Response | The reviewers noted that the development of such scales is a determination of divisible surplus, which is a decision by the insurer and not within the scope of the standard. |
| Comment | Two commentators suggested that the cost of reinsurance might be taken into account in the distribution of costs among policyholders. |
| Response | The reviewers agreed and created new section 3.9, Reinsurance. |
| Comment | Some disability income policies have been issued as participating but where no dividend is anticipated to be paid. One commentator suggested the standard address (a) whether it is appropriate to offer such policies under the contribution principle, and (b) how the actuary is to determine dividends. |
| Response | The reviewers believed determining the appropriateness of policy offerings was beyond the scope of this standard. The reviewers disagreed with the commentator's request that the standard discuss how to determine dividends. |
| Comment | One commentator noted that some blocks of individual participating insurance have been sold to a reinsurer and asked about the scope of the standard in such a situation. |
| Response | The reviewers noted that the standard applies to actuaries providing professional services on dividends whether working for a direct insurer or a reinsurer. |

| | |
|---|---|
| Comment | One commentator noted that, in the case of a closed block of participating policies, one or more dividend factors, such as the factor related to expenses, may be specifically addressed in a plan of reorganization. The commentator suggested the standard should provide guidance in this situation. |
| Response | The reviewers noted that the scope of the standard recognized that the actuary should satisfy the requirements of "other legally binding authority" in performing professional services. |
| Comment | Several commentators believed that the distinction in guidance for paid dividends and illustrated dividends was unclear. |
| Response | The reviewers assessed the scopes of ASOP Nos. 15 and 24 and believed they were clear. |
| Comment | Two commentators made comments that can be summarized in three general areas:<br><br>1. The standard should provide more guidance to actuaries in the area of the actuary's responsibility to act in the beneficial interest of the policyholder in determining dividends and the latitude the actuary may have in following the contribution principle.<br><br>2. The standard did not provide sufficient detail in the level of guidance for performing professional services, both in the dividend framework and determining dividend factors.<br><br>3. The standard should address the role of the actuary, the insurer, and the policyholder in determining divisible surplus. |
| Response | 1. The reviewers assessed the standard with respect to the actuary's responsibility to act in the beneficial interest of the policyholder and the latitude the actuary may exercise in following the contribution principle and believed the standard provided appropriate guidance and reflected accepted practice.<br><br>2. The reviewers assessed the level of detail and made appropriate revisions.<br><br>3. The reviewers noted that determining divisible surplus was outside the scope of the standard. |
| Comment | Several commentators stated that the determination of dividends for participating long-term care policies does not yet have generally accepted practices and should be outside the scope of this standard. |
| Response | The reviewers agreed and removed references to long-term care policies. |
| **SECTION 1. PURPOSE, SCOPE, CROSS REFENCES, AND EFFECTIVE DATE** | |
| **Section 1.1, Purpose** | |
| Comment | One commentator suggested that the standard should clearly state that it covers policyholder dividends whether the policy is issued by a stock, fraternal, or mutual insurer. |
| Response | The reviewers agreed and revised the language in this section to include these entities. |
| **Section 1.2, Scope** | |
| Comment | One commentator asserted that the actual payment of future dividend scales should be tightly and permanently linked to those illustrated at issue. |
| Response | The reviewers believed that the standard adequately addressed the dividend allocation process and that the insurer may change the dividend allocation process, working through the dividend framework, dividend factors, and divisible surplus, resulting in dividend scales that may differ markedly from those originally illustrated. |
| **SECTION 2. DEFINITIONS** | |
| Comment | A few commentators asked for more clarity in the definitions of 2.3, Dividend Determination; 2.4, Dividend Factor; 2.6, Dividend Framework; and 2.8, Policy Factors (now 2.9). |
| Response | The reviewers agreed and amended the definitions. |

| | |
|---|---|
| **Section 2.2, Contribution Principle** | |
| Comment | Some commentators suggested that the definition of contribution principle should clarify the point that policies are grouped into dividend factor classes for the purpose of determining dividends and that the distribution of surplus among policies is based on such factor classes. |
| Response | The reviewers agreed that such clarity is important and changed the definition of the contribution principle. |
| Comment | One commentator asked for clarification of the change in the definition of "contribution principle" because the commentator believed this suggested no difference from current practice. |
| Response | The reviewers added the word "reflects" to acknowledge the impossibility of distributing divisible surplus to policies literally in exact proportion to the contribution to divisible surplus. |
| **Section 2.4, Dividend Factor** | |
| Comment | One commentator suggested that the definition be clarified to reflect experience. |
| Response | The reviewers agreed and modified the definition. |
| **Section 2.7, Policies** | |
| Comment | One commentator suggested that the definition of "policy" with respect to group certificates should be clarified to cover group certificates that include dividend provisions similar to individual participating policies. |
| Response | The reviewers agreed and changed the definition to better reflect that concept. |
| **SECTION 3. ANALYSIS OF ISSUES AND RECOMMENDED PRACTICES** | |
| **Section 3.1, Contribution Principle** | |
| Comment | One commentator suggested that the reference to the contribution principle being applied over an extended period of time be transferred from the appendix to section 3.1, where it was in the previous standard. |
| Response | The reviewers agreed and restored this reference to section 3.1. |
| Comment | One commentator suggested that the contribution principle should include smoothing out and leveling variations in factors, such as mortality, to avoid anomalies in the progression of dividends by duration. |
| Response | The reviewers agreed but believed that the standard adequately covered this. |
| Comment | One commentator noted that some dividend frameworks may provide for a step-up in premium that may be offset by a dividend. The commentator asked whether the contribution principle is being followed in that situation. |
| Response | The reviewers noted that the standard provides for approximations, simplified processes, or other adjustments considering relevant conditions and circumstances. Such latitude is intended to allow for a variety of reasonable practices in following the contribution principle. |
| **Section 3.3, Dividend Factors** | |
| Comment | One commentator suggested that the list of reasons for making adjustments to dividends or dividend factors, which was in appendix 1 of the exposure draft, be moved to the end of this section or be cross referenced. |
| Response | The reviewers believed the list of reasons represented current practice and was more appropriate in the appendix as education. The reviewers changed the wording of the appendix to refer to section 3.2. |
| **Section 3.3.2, Differences between Dividend Factor Classes (now Dividend Factor Classes)** | |
| Comment | One commentator suggested that the characteristics to be considered in defining dividend factor classes be expanded, by making clear that those in the standard are examples, not an exclusive list. |
| Response | The reviewers agreed but believed that the existing language allowed consideration of other characteristics. |

| | |
|---|---|
| **Section 3.3.3, Uniform Criteria** | |
| Comment | One commentator suggested a slight editing of the statement in the draft concerning uniform criteria. |
| Response | The reviewers agreed and revised the language. |
| **Section 3.3.4, Dividend Factors for New Policies** | |
| Comment | One commentator suggested that, when setting a dividend factor that differentiates between old and new policies, it may not be appropriate to set that dividend factor on a conservative basis given a fixed distributable surplus. |
| Response | The reviewers agreed and revised section 3.3.4. |
| **Section 3.5, Mortality, Morbidity, and Policy Termination** | |
| Comment | One commentator suggested it be made clearer that the list of examples in this section is not exclusive. |
| Response | The reviewers agreed and added the appropriate wording. |
| **Section 3.8, Tax (now section 3.10)** | |
| Comment | One commentator suggested that generally accepted practice allows dividend formulas determined on a pre-tax basis with no deduction for taxes and that the standard should make that clear. |
| Response | The reviewers agreed but believed the standard adequately covered this. |
| **Section 3.9, Stockholder Retention on Policies Originally Issued by a Stock Company (now section 3.11)** | |
| Comment | One commentator suggested that determination of shareholder retention as discussed in this section is a part of the determination of divisible surplus and therefore not covered by this standard. |
| Response | The reviewers believed that shareholder retention charges, as they relate to the dividend framework, were appropriately addressed in the revised standard. |
| **Section 3.11, Illustrated Dividends Not Subject to ASOP No. 24 (now section 3.13)** | |
| Comment | One commentator suggested that the standard clarify that illustrated dividends not covered by ASOP No. 24 should reasonably relate to recent paid dividends, not all past dividends paid. |
| Response | The reviewers agreed and amended this section to reflect that. |
| **APPENDIX (now Appendix 1)** | |
| Comment | One commentator took exception to including experience premium method and percentage of premium method as involving simplified formulas. |
| Response | The reviewers made a clarifying revision to the sentence to address the commentator's concern. |

ACTUARIAL STANDARDS BOARD

---

**Repeal of**
**Actuarial Standard**
**of Practice**
**No. 16**

# Actuarial Practice Concerning Health Maintenance Organizations and Other Managed-Care Health Plans

**Developed by the**
**Task Force to Revise ASOP No. 16 of the**
**Health Committee of the**
**Actuarial Standards Board**

**Repealed by the**
**Actuarial Standards Board**
**April 2007**

---

**(Doc. No. 104)**

# TABLE OF CONTENTS

April 2007

**TO:** Members of Actuarial Organizations Governed by the Standards of Practice of the Actuarial Standards Board and Other Persons Interested in HMOs and Other Managed-Care Health Plans

**FROM:** Actuarial Standards Board (ASB)

**SUBJ:** Repeal of Actuarial Standard of Practice (ASOP) No. 16

This document notes the repeal of ASOP No. 16, *Actuarial Practice Concerning Health Maintenance Organizations and Other Managed-Care Health Plans.*

Background

Managed care health plans (MCHPs) accounted for a small proportion of total health care financing until the 1980s. The actuarial information related to them was much less abundant than for indemnity health plans. In June 1989, the ASB requested that its Health Committee draft a standard of practice concerning such plans and released an exposure draft in October 1989. At the time, the standard was written to supplement the general health insurance standards and to deal with a number of considerations unique to or of greater significance for managed-care health plans.

Given the evolution of HMOs and managed care health plans over the past fifteen years, much of the information in the current standard is dated. Further, the standard gets into more detail and educational background than generally expected in an ASOP. While this type of information and guidance was likely necessary at the time it went into effect, many of the issues included in the standard are commonplace today.

The current scope for ASOP No. 16 applies for actuaries "performing professional services in connection with areas requiring special consideration for HMOs and other MCHPs." Many of the items generally refer to practice as it relates to determining liabilities and setting rates. In general, it is believed that the guidance provided in the standard is covered, either explicitly or implicitly, in other ASOPs (for example, Nos. 5, 8, 23, 28, 31, and 42). Appendix 1 provides a grid listing pertinent sections from ASOP No. 16 and a cross reference to other ASOPs, NAIC Instructions, or the Code of Professional Conduct, where actuarial guidance exists for the related item, or notes where the item was considered educational and should not be included in the body of any ASOP.

Exposure Draft

The exposure draft of this repeal document was issued in a blast e-mail in November 2006 with a comment deadline of January 15, 2007 that was subsequently extended to February 1, 2007. Thirteen comment letters were received. Most comments supported the repeal, but several raised issues that were considered by the Task Force to Revise ASOP No. 16, the Health Committee, and the Actuarial Standards Board in finalizing this repeal document. For a summary of the substantive issues and the reviewers' responses, please see appendix 2.

The Actuarial Standards Board wishes to thank all who commented on the repeal.

Action

The ASB voted in April 2007 to repeal ASOP No.16.

ASOP No. 16 is repealed for any work performed on or after April 26, 2007.

## Appendix 1

*Note*: This appendix is prepared for informational purposes only.

The Task Force to Revise ASOP No. 16 prepared the following grid highlighting sections 2 and 5 of the current ASOP as a cross reference against other ASOPs, NAIC instructions, or the Code of Professional Conduct to reflect where appropriate actuarial guidance already exists for the related item or where the item would have been considered educational material and, therefore, not included in any proposed revision other than possibly an appendix.

| **Current Section** | | **Reference to Applicable Standards or Other Guidance** |
|---|---|---|
| Section 2 | Definitions | |
| 2.1 | Capitation | ASOP No. 5 |
| 2.2 | Exclusive Provider Organization | Educational – not needed in standard |
| 2.3 | Fee-For-Service | Educational – not needed in standard |
| 2.4 | Funding Arrangements | Educational – not needed in standard |
| 2.5 | Group-Model HMO | Educational – not needed in standard |
| 2.6 | Group Practice | Educational – not needed in standard |
| 2.7 | Health Care Budget | Educational – not needed in standard |
| 2.8 | Health Maintenance Organization | Educational – not needed in standard |
| 2.9 | Hold-Harmless Clause | Educational – not needed in standard |
| 2.10 | Indemnity Plan | Educational – not needed in standard |
| 2.11 | Individual Practice Association (IPA) – Model HMO | Educational – not needed in standard |
| 2.12 | Managed-Care Health Plan | Educational – not needed in standard |
| 2.13 | Mixed-Model HMO | Educational – not needed in standard |
| 2.14 | Non-Indemnity Plan | Educational – not needed in standard |
| 2.15 | Point-of-Service Product | Educational – not needed in standard |
| 2.16 | Preferred Provider Organization | Educational – not needed in standard |
| 2.17 | Prepaid Health Care Plan | Educational – not needed in standard |
| 2.18 | Primary Care Physician | Educational – not needed in standard |
| 2.19 | Providers | Educational – not needed in standard |
| 2.20 | Risk Pool | |
| 2.21 | Specialist | Educational – not needed in standard |
| 2.22 | Staff-Model HMO | Educational – not needed in standard |
| 2.23 | Uncovered Expenditures | NAIC Blank Instructions |
| 2.24 | Withhold | Educational – not needed in standard |

| | | |
|---|---|---|
| Section 5 | Analysis of Issues and Recommended Practices | ASOP No. 5; ASOP No. 8; ASOP No. 42 |
| 5.1 | Transfer of Financial Risk to Providers | ASOP No. 5 (3.3.6, 3.5.1 - 3.5.5); ASOP No. 8 |
| 5.1.1 | Capitation Contracts with Providers | ASOP No. 5 (3.3.6); ASOP No. 42 (3.5.4) |
| 5.1.2 | Stop-Loss Provisions | ASOP No. 5; ASOP No. 42 (3.5.3) |
| 5.1.3 | Supplemental Payments | ASOP No. 42 (3.5.3, 3.5.5); ASOP No. 5 |
| 5.1.4 | Financial Condition of Capitated Providers | ASOP No. 42 (Sec 3.2, 3.5); ASOP No. 5 |
| 5.1.5 | Primary Care Physician Financial Incentives | ASOP No. 42 (Sec 3.5.5); ASOP No. 5 |
| 5.1.6 | Provider Settlements (General) | ASOP No. 42 (Sec 3.5); ASOP No. 5 |
| 5.1.7 | Covered Liabilities | Implicit in Code of Professional Conduct, General Disclosures, Reliance Section |
| 5.1.8 | Experience Rating | Educational – not needed in standard |
| 5.2 | Management of Health Care Delivery System | |
| 5.2.1 | Effect on Claims Liability | ASOP No. 5 (3.3.6); ASOP No. 42 (3.2.1 - 3.2.2) |
| 5.2.2 | Effect on the Rate Setting Process | ASOP No. 5 (3.2.1-3.2.7); ASOP No. 8 (5.3 - 5.5); ASOP No. 31 (3.7.1 - 3.7.2); ASOP No. 42 (3.2.1 - 3.2.6); ASOP No. 7; ASOP No. 22 |
| 5.2.3 | Changes in Mix of Providers | ASOP No. 5 (3.3.6); ASOP No. 8 (3.2.4); ASOP No. 42 (3.5.1 - 3.5.5) |
| 5.2.4 | Effect on Data Monitoring | ASOP No. 5 (3.6); ASOP No. 23 |
| 5.2.5 | Basis for Claim Reports | ASOP No. 5 (3.4); ASOP No. 23 (3.4 - 3.5) |
| 5.3 | Multiple Delivery Systems and Financial Structuring | |
| 5.3.1 | Scope of Services by Contract | ASOP No. 5 (3.2.1, 3.2.6, 3.3.6) |
| 5.3.2 | Change in Membership Mix | ASOP No. 5 (3.2.1, 3.2.4, 3.3.6) |
| 5.4 | Capitation Paid to a Provider | ASOP No. 8 (3.2.5) |
| 5.5 | Health Care Budget | ASOP No. 8 (3.2.2) |
| 5.6 | Reliance on Data or Other Information Supplied by Others | ASOP No. 8; ASOP No. 23; Code of Professional Conduct |
| 5.7 | Documentation | ASOP No. 8; ASOP No. 31; ASOP No. 41 |

## Appendix 2

## Comments on the Exposure Draft and Responses

The exposure draft of the repeal of ASOP No. 16, *Actuarial Practice Concerning Health Maintenance Organizations and Other Managed-Care Health Plans*, was issued to the membership by blast e-mail in November 2006 with a comment deadline of January 15, 2007 that was subsequently extended to February 1, 2007. Thirteen comment letters were received, one of which was submitted on behalf of multiple commentators, such as a firm or committee. Seven commentators stated they agreed with the repeal of this ASOP. Four commentators did not make any affirmative statement either for or against the repeal but did not raise any opposition to the repeal. Two of these raised certain process issues and are not included in the responses below, while the other two offered comments and suggestions. Two commentators either opposed or offered an alternative to repealing ASOP No. 16. The ASB, Health Committee, and Task Force to Revise ASOP No. 16 carefully considered all comments received. Summarized below are the significant issues and questions contained in the comments and responses to each.

| GENERAL COMMENTS | |
|---|---|
| Comment | One commentator suggested that ASOP No. 16 be retained with all text being deleted except the references to the ASOPs that are appropriate to HMOs and other managed-care health plans. |
| Response | This repeal document lists the ASOPs that provide guidance for HMOs and other managed-care health plans. In addition, appendix 1 has been added, which shows sections 2 and 5 of ASOP No. 16, and whether guidance is provided in other ASOPs, by NAIC instructions, or by the Code of Professional Conduct, or the material is considered educational and is not appropriate for inclusion in an ASOP. |
| Comment | One commentator opposed repeal of ASOP No.16. The commentator expressed concern regarding certain regulatory issues and statutory reserve requirements. The commentator also stated that he/she believes the purpose of an ASOP is to inform/educate actuaries of past and current risks that have been identified and urged the task force to revise ASOP No. 16 rather than repeal. |
| Response | The reviewers believe that instruction on regulatory and statutory requirements should not be explicitly incorporated in an ASOP. All ASOPs require that the actuary comply with applicable law. Both ASOP No. 5, *Incurred Health and Disability Claims*, and ASOP No. 42, *Determining Health and Disability Liabilities Other Than Liabilities for Incurred Claims*, which deal with actuarial liabilities, cover this topic. The reviewers believe that the purpose of ASOPs is to give guidance on appropriate practices, not to educate and inform. |

| | |
|---|---|
| Comment | One commentator expressed concern that statutory minimum reserves for uncovered claims, which are mentioned in ASOP No. 16, are not covered in ASOP No. 42 and thus not identified as a standard of practice. |
| Response | The reviewers note that the concern expressed by the commentator is implicitly covered in NAIC Blank Instructions. As noted in the previous response, the reviewers believe that instruction on regulatory and statutory requirements should not be explicitly incorporated in an ASOP. All ASOPs require that the actuary comply with applicable law. Both ASOP Nos. 5 and 42, which deal with actuarial liabilities, cover this topic. |
| Comment | One commentator suggested certain items from ASOP No.16 be incorporated into other ASOPs, namely, handling of risk sharing-capitation, withholds, and stop loss provisions; financial conditions of risk sharing providers; experience rating as it compares to community rating; PCP financial incentives; and effect of data monitoring. The commentator also suggested adding or expanding comments on reliance on clinic data and personnel, highlighting differences between the different types of managed-care health plans, and risk based capital. |
| Response | The reviewers believe that the other ASOPs noted in the repeal document adequately address the items from ASOP No. 16 as noted above. The reviewers note that appendix 1 has been added, which indicates where these items are covered in other ASOPs or are considered educational material and would not have been included in any revision to ASOP No. 16. The task force also believes the other items that the commentator suggested be added to any revision are considered educational and are not appropriate for inclusion in an ASOP. |

ACTUARIAL STANDARDS BOARD

**Actuarial Standard**
**of Practice**
**No. 17**

# Expert Testimony by Actuaries

**Revised Edition**

**Developed by the**
**ASOP No. 17 Task Force of the**
**General Committee of the**
**Actuarial Standards Board**

**Adopted by the**
**Actuarial Standards Board**
**June 2018**

**Doc. No. 192**

**ASOP No. 17—Doc. No. 192**

## TABLE OF CONTENTS

**ASOP No. 17—Doc. No. 192**

June 2018

**TO:** Members of Actuarial Organizations Governed by the Standards of Practice of the Actuarial Standards Board and Other Persons Interested in Expert Testimony by Actuaries

**FROM:** Actuarial Standards Board (ASB)

**SUBJ:** Actuarial Standard of Practice (ASOP) No. 17

This document contains the revision of ASOP No. 17, *Expert Testimony by Actuaries.*

History of the Standard

The ASB originally adopted ASOP No. 17, *Expert Testimony by Actuaries*, in 1991. Since that time, actuarial practice in this area has evolved. Under the direction of the ASB, the Expert Witness Task Force revised ASOP No. 17 in 2002 to be consistent with the then current ASOP format and to reflect current practices in the area of expert testimony. ASOP No. 17 was further updated for deviation language, effective May 1, 2011. In 2015, the ASB concluded that this ASOP should be revised to reflect applicable law and regulation.

Exposure Draft

The exposure draft was issued in April 2017 with a comment deadline of June 30, 2017. Eleven comment letters were received and considered in making changes that are reflected in this final ASOP. For a summary of issues contained in these comment letters, please see appendix 2.

Notable Changes from the Exposure Draft

Changes made to the exposure draft include the following:

1. Section 1.2, Scope, was reworded to provide additional guidance regarding the circumstances under which the standard applies.

2. The definition of expert in section 2.4 was clarified.

3. Section 3.2, Reliance Upon Attorney or Other Representative of the Principal, was clarified.

4. Section 3.8, Hypothetical Questions, was clarified.

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

The ASB voted in June 2018 to adopt this standard.

ASOP No. 17 Task Force

David R. Godofsky, Chairperson
James P. Galasso
Carl M. Harris
Adam Reese
Lawrence J. Sher
Margaret Tiller Sherwood

General Committee of the ASB

Margaret Tiller Sherwood, Chairperson
Shawna S. Ackerman
Ralph S. Blanchard III
Andrew M. Erman
Dale S. Hagstrom
Susan E. Pantely
Judy K. Stromback
Hal Tepfer
Christian J. Wolfe

Actuarial Standards Board

Beth E. Fitzgerald, Chairperson
Christopher S. Carlson
Maryellen J. Coggins
Robert M. Damler
Mita D. Drazilov
Darrell D. Knapp
Cande J. Olsen
Kathleen A. Riley
Barbara L. Snyder

*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.*

**ASOP No. 17—Doc. No. 192**

# ACTUARIAL STANDARD OF PRACTICE NO. 17

# EXPERT TESTIMONY BY ACTUARIES

# 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 providing **expert testimony**.

1.2 Scope—This standard applies to actuaries who are qualified as **experts** under the evidentiary rules applicable in a forum when they provide **testimony** in court hearings, dispute resolutions, depositions, rate hearings, legislative hearings, or other similar proceedings.

This standard does not apply to an individual whose **testimony** and qualification as an **expert** are unrelated to the individual's education, training, experience, or employment as an actuary.

This standard supplements the *Code of Professional Conduct* (Code) and is intended to provide specific guidance with respect to the actuary providing **expert testimony**. Reference should also be made to other actuarial standards of practice concerned with the actuarial substance of the assignment.

Nothing in this standard is intended to discourage reasonable differences of actuarial opinion, or to inhibit innovation in advancing the practice of actuarial science. Further, this standard is not intended to restrain the selection of **actuarial assumptions** or **actuarial methods**, the communication of actuarial opinions, or the relationship between the actuary and a **principal**. Nothing in this standard is intended to prevent the actuary from challenging the application or a particular interpretation of existing precedent, law, or regulation where such application or interpretation would, in the opinion of the actuary, be inconsistent with otherwise appropriate actuarial practice.

Nothing in this standard is intended to require any communication or action that is inconsistent with the rules of evidence or procedure of any court or other judicial body, legislative forum, administrative forum, arbitral forum, or other forum in which the actuary testifies. To the extent that the standard is inconsistent with the evidentiary and procedural rules applicable in the forum in which the actuary offers **expert testimony**, the actuary should follow the forum's rules of evidence and procedure and any other applicable rules in the forum.

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 **expert testimony** provided by the actuary on or after December 1, 2018.

## Section 2. Definitions

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

2.1 Actuarial Assumption—The value of a parameter or other actuarial choice having an impact on an estimate of a future cost or other actuarial item under evaluation.

2.2 Actuarial Method—A procedure by which **data** or assumptions are analyzed or utilized for the purpose of estimating a future cost or other actuarial item.

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

2.4 Expert—One who is qualified under the evidentiary rules applicable in the forum to testify as an expert, whether explicitly or by acceptance of the actuary's **testimony**. An actuary who has been engaged to testify, or permitted to testify, with the expectation that the actuary will ultimately qualify as an expert is treated as an **expert** for purposes of this standard, even if the actuary does not testify or is later determined not to qualify as an expert.

2.5 Principal—Subject to the rules of evidence and procedure and any other rules applicable in the forum, the client or employer of the actuary with regard to the **expert testimony**, depending on the facts and circumstances surrounding the engagement.

2.6 Testimony—Communication of opinions or findings presented in the capacity of an expert witness at trial, in hearing or dispute resolution, in deposition, by declaration or affidavit or by any other means through which **testimony** may be received. Such **testimony** may be oral or written.

## Section 3. Analysis of Issues and Recommended Practices

3.1 Overview—An actuary providing **expert testimony** performs an important service to the forum, the finder of fact in the forum, and the public by providing information that can be critical to resolution of disputes. This may include explaining complex technical concepts so they can be understood by the audience to whom the **testimony** is directed. Actuaries may

differ in their conclusions even when applying reasonable **actuarial assumptions** and appropriate **actuarial methods**, and a mere difference of opinion between actuaries does not suggest that an actuary has failed to meet professional standards. However, an actuary providing **expert testimony** should, subject to the rules of evidence and procedure and any other rules applicable in the forum, comply with the requirements of the Code.

3.2 Reliance Upon Attorney or Other Representative of the Principal—An **expert** will ordinarily work closely with the attorney or other representative of the **principal**. An actuary serving as an **expert** may reasonably rely upon the advice, information, or instruction provided by an attorney or other representative of the **principal** concerning the meaning and requirements of the rules of evidence or procedure and any other rules applicable in the forum. An actuary relying on such advice, information, or instruction is not in violation of this standard for having complied with the advice or instruction, or used the information, even if a judge, arbitrator, hearing examiner, or other authority of the forum charged with ruling on procedural, evidentiary, or other matters subsequently determines that the advice, information, or instruction is inconsistent with or violates the rules of evidence, procedure, or any other rules applicable in the forum.

3.3 Review and Compliance—In offering **expert testimony**, the actuary should comply with all rules of evidence and procedure and any other rules applicable in the forum. In addition, the actuary should review and comply with any applicable actuarial standards of practice, the Qualification Standards for Actuaries Issuing Statements of Actuarial Opinion in the United States, and the Code.

3.4 Conflict with Laws and Regulations—If the actuary believes that a relevant law or regulation contains a material conflict with appropriate actuarial practices, the actuary should disclose the conflict, subject to the requirements of the forum, including without limitation all rules of evidence and procedure.

3.5 Conflict of Interest—The actuary should be aware of the possibility of conflict of interest, and should address any real or apparent conflict of interest in accordance with Precept 7 of the Code.

3.6 Advocacy—In those circumstances where it is consistent with the rules of evidence and procedure, and any other rules applicable in the forum, an actuary may act as an advocate for a **principal** when giving **expert testimony**. Acting as an advocate does not relieve the actuary of the responsibility to comply with the Code, and to use reasonable **actuarial assumptions** and appropriate **actuarial methods** (unless using **actuarial assumptions** or **actuarial methods** prescribed by law or selected by others that may not be reasonable and appropriate, and so disclosing in accordance with section 3.7).

3.7 Actuarial Assumptions or Actuarial Methods Prescribed by Law or Selected by Others—If the actuary performs calculations using **actuarial assumptions** or **actuarial methods** prescribed by law or selected by others, the actuary should disclose, subject to the rules of the forum, and to the extent material and relevant, whether the results are consistent with the actuary's own **expert** opinion.

3.8 Hypothetical Questions—The actuary may be asked to answer hypothetical questions. Hypothetical questions may fairly reflect facts in evidence, may include only a part of the facts in evidence, or may include **actuarial assumptions** the actuary believes to be unreasonable. If permitted by the rules of evidence and procedure and any other rules applicable in the forum, and by the rulings of a judge or other official charged with overseeing the forum, the actuary may refuse to answer hypothetical questions based upon what the actuary believes in good faith to be unreasonable **actuarial assumptions**.

3.9 Testifying Concerning Other Relevant Testimony—Subject to the rules of evidence and procedure of the forum, when the actuary provides **expert testimony** concerning other relevant testimony, including opposing testimony, the actuary should testify objectively, focusing on the reasonableness of the other testimony and not solely on whether it agrees or disagrees with the actuary's own opinion.

3.10 Cross Examination—During cross-examinations, subject to the rules of the forum, the actuary is not required to volunteer information that is not fairly encompassed within the scope of the question.

3.11 Consistency with Prior Statements—When giving **expert testimony**, the actuary should be mindful of statements the actuary may have made on the same subject. If the actuary employs different **actuarial assumptions** or **actuarial methods** in the current situation, the actuary should be prepared to explain why.

3.12 Discovery of Error—If, after giving **expert testimony**, the actuary discovers that a material error was made, the actuary should make appropriate disclosure of the error to the forum or to the **principal** or the **principal**'s representative as soon as practicable. Any such disclosure should be made in accordance with the rules of evidence and procedure and any other rules applicable in the forum.

3.13 Limitation of Expert Testimony—The actuary should present **expert testimony** in a manner appropriate to the nature of the forum and consistent with the rules of evidence and procedure and any other rules applicable in the forum. If any constraints are imposed or expected to be imposed on the actuary's ability to comply with the Code or other professional standards, the actuary should consider whether it is appropriate to serve or continue to serve as an **expert**.

## Section 4. Communications and Disclosures

4.1 Written Testimony—When providing **expert testimony** in writing, the actuary should provide **testimony** in accordance with the rules of evidence and procedure and any other rules applicable in the forum and describe the scope of the assignment, including any limitations or constraints. The written **testimony** should, to the extent appropriate to the forum and intended audience, include descriptions and sources of the **data**, **actuarial assumptions**, and **actuarial methods** used in the analysis.

4.2 Oral Testimony—When providing **expert testimony** orally, the actuary should provide oral **testimony** in accordance with the rules of the forum and in a manner appropriate to the intended audience. In addition, the actuary should, to the extent practicable and subject to the rules of evidence and procedure and any other rules applicable in the forum, be prepared to provide documentation supporting the oral **testimony**.

4.3 Communication and Disclosure—When providing **expert testimony**, the actuary should comply with ASOP No. 41, *Actuarial Communications*, and, in addition, disclose the following items, as applicable, and as permitted by the rules of evidence and procedure and any other rules applicable in the forum, and to the extent material to the **testimony**:

a. material conflicts between laws and regulations and appropriate actuarial practices, as described in section 3.4;

b. if the actuary performed calculations using **actuarial assumptions** or **actuarial methods** prescribed by law or selected by others, whether the results are consistent with the actuary's own **expert** opinion, as described in section 3.7; and

c. any material errors discovered after giving **expert testimony,** as described in section 3.12.

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

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

Since the standard was first adopted, actuaries have become increasingly active as expert witnesses, appearing in a greater variety of venues and addressing an expanding range of topics. As actuaries have become more knowledgeable about providing expert testimony, the need for educational material has lessened to some degree.

### Current Practices

Actuaries may be called upon to give expert testimony concerning a broad range of issues. These include, without limitation, matters such as the following:

a. actuarial present values of retirement or other benefits;

b. actuarial values incident to a divorce;

c. adequacy or appropriateness of reserves, premium rates, pricing or underwriting procedures, or provision for administrative costs;

d. cost impact of claims-made or claims-paid financing;

e. cost impact of risk classification systems, tort liability decisions, or legislative/regulatory proposals;

f. actuarial reviews of provider reimbursement amounts, provider network adequacy, provider comparison studies, provider quality reviews, and contractual provisions for various health care services;

g. lost earnings of a decedent or injured person and the actuarial present value of such lost earnings;

h. malpractice of an actuary;

i. actuarial equivalency or other technical provisions in the design or administration of defined benefit pension plans;

j. faulty design, administration or communication of amendments to defined benefit pension plans;

k. financial impact on a defined benefit plan of alternative interpretations of, or amendments to, disputed plan provisions;

l. relationships between risk and return on investments;

m. value of an insurance company or other entity; and

n. withdrawal liability assessments under multiemployer benefit plans.

## Appendix 2

## Comments on the Exposure Draft and Responses

The exposure draft of this revision of ASOP No. 17, *Expert Testimony by Actuaries,* was issued in April 2017 with a comment deadline of June 30, 2017. Eleven 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.

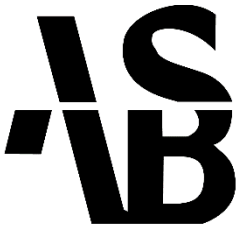
The term "reviewers" includes the Task Force, General Committee, and the ASB. Unless otherwise noted, the section numbers and titles used below refer to those in the exposure draft.

| **GENERAL COMMENTS** | |
|---|---|
| Comment | One commentator noted only that the proposed revisions improve the ASOP. Several commentators had generally favorable comments about the proposed revisions, while providing specific suggestions for certain sections, as outlined below. |
| Comment<br><br>Response | One commentator suggested that the ASOP include a reference to Actuarial Board for Counseling and Discipline (ABCD) guidance.<br><br>The reviewers disagree and note ABCD guidance is readily available and not included in ASOPs. Therefore, the reviewers made no change. |
| Comment<br><br>Response | One commentator suggested that the proposed ASOP was repetitious in stating that the rules of the forum must be followed, and stated that the ASOP should explain why so much legal terminology is used in the ASOP.<br><br>The reviewers concluded that, given the nature of the ASOP as dealing with proceedings that are usually legal in nature, the use of legal terminology is appropriate. Therefore, the reviewers made no change. |
| Comment<br><br>Response | One commentator had numerous suggestions for ways in which the ASOP could provide specific advice to actuaries who serve as expert witnesses.<br><br>The reviewers note that ASOPs are principles-based and do not attempt to be prescriptive, as discussed in ASOP No. 1, *Introductory Actuarial Standard of Practice*, section 3.1.4. Therefore, the reviewers made no change. |
| Comment<br><br>Response | One commentator requested that the ASOP address the issue of actuaries testifying that other actuaries (hired by a different party to a dispute) have violated ASOPs in their testimony. The commentator suggested that the ASOP address the proper way of interpreting ASOPs and further suggested that it is improper for an actuary to testify that another actuary has violated an ASOP.<br><br>The reviewers believe that the ASOP should not limit the ability of an actuary to testify regarding compliance with the ASOPs. Therefore, the reviewers made no change. |

| | |
|---|---|
| **SECTION 1. PURPOSE, SCOPE, CROSS-REFERENCES, AND EFFECTIVE DATE** | |
| **Section 1.2, Scope** | |
| Comment | One commentator stated that the scope is clear and appropriate. Another commentator was appreciative of the statement that the standard is not intended to inhibit innovation in advancing the practice of actuarial science. |
| Comment | One commentator suggested that the first sentence of scope be expanded to include the examples in the definition of testimony, so that it would be clear to a reader who did not have access to the electronic hyperlink. |
| Response | The reviewers note that the standard format relies on reference to the definitions in section 2 and made no change. |
| Comment | One commentator stated that it is unclear whether legislative hearings are included, noting that some are adversarial. |
| Response | The reviewers note that the term "adversarial" was a source of confusion, and modified the scope to avoid the use of that term and to clarify that legislative hearings and similar proceedings are included. |
| Comment | One commentator stated that rate hearings should not be included in the scope because they should be covered by other standards. |
| Response | The reviewers disagree and made no change in response to this comment. |
| Comment | One commentator, referring to the fact that the proposed ASOP did not cover non-actuarial testimony by individuals who happen to also be actuaries, stated that users of such testimony would need some way to understand that the ASOP is not applicable. The commentator suggested that the actuary should so state in his or her written testimony, or be precluded from using initials showing membership in an actuarial organization. |
| Response | The reviewers disagree and note that the standard cannot prescribe disclosures in cases where the standard does not apply. Therefore, the reviewers made no change in response to this comment. |
| **Section 1.4, Effective Date** | |
| Comment | Three commentators expressed the view that an effective date of four months after adoption is reasonable. Several commentators were concerned that the effective date of four months after adoption of the standard would have an adverse impact on expert witness engagements that were initiated before the date of adoption but not completed as of the effective date. Another commentator suggested the effective date should be 12 months after adoption, with voluntary early adoption. |
| Response | The reviewers do not believe an effective date occurring in the middle of an engagement would cause any problems, and made no change. |
| Comment | One commentator stated that the effective date is reasonable but should be clarified to specify which version of the ASOP controls when an engagement started before the effective date and is ongoing after the effective date. |
| Response | The reviewers believe the effective date is clear and made no change. |
| **SECTION 2. DEFINITIONS** | |
| **Section 2.2, Actuarial Method** | |
| Comment | One commentator suggested that "A procedure by which data are analyzed…" should be modified to say "A procedure by which data or assumptions are analyzed…." |
| Response | The reviewers agree and added "or assumptions" to the definition. |

| | |
|---|---|
| **Section 2.3, Data** | |
| Comment | One commentator noted that the definition of "data" was inconsistent with the definition in other ASOPs. |
| Response | The reviewers agree and modified the definition to be consistent with other ASOPs. |
| **Section 2.4, Expert** | |
| Comment | One commentator stated that the standard should remind actuaries that the term "expert" may include an employee of one of the parties to the controversy. |
| Response | The reviewers believe that the guidance is clear and made no change in response to this comment. |
| Comment | One commentator stated that the definition of "expert" is self-referential. |
| Response | The reviewers note that certain uses of the term "expert" within the definition of "expert" refer to the "evidentiary rules applicable in the forum." For clarity, these uses of the term were not bolded. |
| **SECTION 3. ANALYSIS OF ISSUES AND RECOMMENDED PRACTICES** | |
| **Section 3.1, Overview** | |
| Comment | One commentator questioned the statement in the proposed ASOP that an actuary should act with honesty, integrity and competence. The commentator suggested that the ASOP also refer to the purpose of upholding the reputation of the actuarial profession. |
| Response | The reviewers believe that it is not necessary or desirable to restate the Precepts of the *Code of Professional Conduct* (Code) in an ASOP. Therefore, the reviewers simplified the language to not duplicate concepts covered by the Code. |
| **Section 3.2, Reliance Upon Attorney or Other Representative of the Principal** | |
| Comment | Several commentators objected to the statement that an actuary is "not responsible" for following the advice or instructions of an attorney or representative of the principal. |
| Response | The reviewers clarified section 3.2 by substituting "not in violation of this standard" for "not responsible." |
| Comment | One commentator noted that the actuary may rely on the principal's attorney or representative but not on the principal, and asked if this was intended. |
| Response | The reviewers note this was intentional and made no change. |
| Comment | One commentator requested guidance on how an actuary should resolve the conflict if a judge or arbitrator decides that the attorney's advice is contrary to the rules of the forum. |
| Response | The reviewers believe that the ASOP should not address specific questions relating to the rules of the forum, to which the actuary will be subject regardless of the ASOP. Therefore, the reviewers made no change. |

| | |
|---|---|
| **Section 3.6, Advocacy** | |
| Comment | One commentator noted that the rules for advocacy vary by country and suggested that the fact that ASOPs apply only to U.S. practice should be noted in the transmittal memorandum, the standard, or the appendix. |
| Response | The reviewers note that ASOP No. 1, section 1, addresses this issue. Therefore, the reviewers made no change. |
| Comment | One commentator suggested that it may be appropriate to define the word "advocate." |
| Response | The reviewers disagree and believe that defining "advocate" is not necessary because the ASOP applies when the actuary is providing expert testimony, regardless of whether the actuary is acting as an advocate. Therefore, the reviewers made no change. |
| Comment | One commentator requested that the phrase "may act as an advocate" be changed to "may or may not act as an advocate." |
| Response | The reviewers believe the language is clear and made no change. |
| Comment | One commentator requested that the phrase "in the actuary's professional judgement" be inserted between "that" and "may" in the parenthetical phrase. |
| Response | The reviewers believe the parenthetical phrase is clear and made no change. |
| **Section 3.7, Actuarial Assumptions or Actuarial Methods Prescribed by Law or Selected by Others** | |
| Comment | One commentator suggested that additional text be added to clarify that an actuary is not in violation of the standard if the actuary is unable to make the disclosure required by section 3.7. |
| Response | The reviewers believe the language is clear and made no change. |
| **Section 3.8, Hypothetical Questions** | |
| Comment | One commentator suggested that section 3.8 should be expanded to include unreasonable assumptions that are not actuarial assumptions, in addition to unreasonable actuarial assumptions. |
| Response | The reviewers disagree and made no change. |
| Comment | One commentator suggested that an actuary should not have to answer any hypothetical questions. |
| Response | The reviewers disagree and note that hypothetical questions may be a valid part of testimony. Therefore, the reviewers made no change. |
| **SECTION 4. COMMUNICATIONS AND DISCLOSURES** | |
| **Section 4.4, Additional Disclosures** | |
| Comment | One commentator suggested that in certain circumstances, it may be difficult for an actuary to provide the disclosure required by section 4.4 of ASOP No. 41, *Actuarial Communications*, relating to material deviations from an ASOP. The commentator also requested that the ASOP provide examples of how a witness could comply with this requirement. |
| Response | In light of the guidance in the ASOP that an actuary is not required to deviate from the rules of the forum, the reviewers believe that the requirements of this section are not more difficult than other situations in which section 4.4 of ASOP No. 41 would apply. Therefore, the reviewers made no change. |



ACTUARIAL STANDARDS BOARD

---

**Actuarial Standard**
**of Practice**
**No. 18**

# Long-Term Care

**Revised Edition**

**Developed by the**
**ASOP No. 18 Task Force of the**
**Health Committee of the**
**Actuarial Standards Board**

**Adopted by the**
**Actuarial Standards Board**
**March 2022**

---

**Doc. No. 206**

# TABLE OF CONTENTS

## APPENDIXES

**ASOP No. 18—Doc. No. 206**

March 2022

**TO:** Members of Actuarial Organizations Governed by the Standards of Practice of the Actuarial Standards Board and Other Persons Interested in Long-Term Care

**FROM:** Actuarial Standards Board (ASB)

**SUBJ:** Actuarial Standard of Practice (ASOP) No. 18

This document contains the revision of ASOP No. 18, now titled *Long-Term Care.*

History of the Standard

ASOP No. 18 was adopted by the ASB in 1991 and further revised in January 1999. The 1999 version addressed several new developments in the field of long-term care insurance as well as content that was somewhat educational in nature or overlapped with other ASOPs. In 2019, the ASB approved a proposal to revise the ASOP due to recent regulatory developments and emerging government-run long-term care (LTC) insurance programs.

Exposure Draft

The exposure draft was issued in March 2021 with a comment deadline of September 1, 2021. Four comment letters were received and considered in making changes that were reflected in the final ASOP.

Notable Changes from the 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 scope was clarified regarding application to Medicaid programs and long-range financial planning.

2. References to ASOP No. 28, *Statements of Actuarial Opinion Regarding Health Insurance Assets and Liabilities,* and ASOP No. 36, *Statements of Actuarial Opinion Regarding Property/Casualty Loss and Loss Adjustment Expense Reserves,* were added.

Notable Changes from the Existing ASOP

A summary of the notable changes from the existing ASOP are summarized below. Notable changes do not include additional changes made to improve readability, clarity, or consistency.

1. The scope was expanded to include actuarial services for all programs that provide benefits for LTC, including actuarial services related to hybrid products, public programs, and long-range financial projections of Medicaid programs. The title was changed from “Long-Term Care Insurance” to “Long-Term Care” to reflect this expansion.

2. The scope was modified to clarify that reviewing actuarial services is included.

3. General ASOPs that have been revised or adopted since the last revision of ASOP No. 18, and that affect the actuarial services provided to LTC benefits programs, have been accounted for.

The ASB voted in March 2022 to adopt this standard.

ASOP No. 18 Task Force

Bruce A. Stahl, Chairperson

Rhonda K. Ahrens
Frederick J. Andersen
Jamala Arland
Linda Chow
Sivakumar Desai
Seong-Min Eom
Matthew H. Morton
Janet L. Perrie
Matthew J. Winegar

Health Committee of the ASB

Annette V. James, Chairperson

Ashlee Mouton Borcan
Daniel S. Pribe
D. Todd Sherman
Bruce A. Stahl
David T. Stefanski
Jennifer L. Stevenson
Alisa L. Swann

Actuarial Standards Board

Darrell D. Knapp, Chairperson

Elizabeth K. Brill
Robert M. Damler
Kevin M. Dyke
Laura A. Hanson
David E. Neve
Christopher F. Noble
Judy K. Stromback
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. 18

# LONG-TERM CARE

# 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 **long-term care (LTC) benefit plans**, including **LTC** insurance and public programs.

1.2 Scope—This standard applies to actuaries when performing actuarial services with respect to **LTC benefit plans** sponsored by **insurers** or other entities. The standard applies to actuaries designing, pricing, or determining funding of an **LTC benefit plan**. The standard also applies to actuaries measuring or evaluating **LTC** liabilities within an **LTC benefit plan**. The term "**long-term care benefit plan**" includes plans with short-term (for example, less than twelve consecutive months) and long-term benefit durations. The standard does not apply to actuaries providing actuarial services related to **LTC** benefits for Medicaid-eligible recipients, unless the actuarial services are for a long-range financial projection (generally more than five years) of **LTC** benefit expenditures and eligible recipients under the Medicaid program.

If the actuary is reviewing actuarial services performed with respect to **LTC benefit plans**, the actuary should follow the guidance in section 3 to the extent practicable.

Some products combine **LTC** benefits with other insurance benefits. If the actuary determines that the guidance in this standard conflicts with the guidance in another ASOP regarding actuarial services for benefits other than **LTC** benefits, the guidance in the other ASOP will govern with respect to those other specific benefits. For example, the pricing of a product that offers both a death benefit and an **LTC** benefit written on an individual policy form would be within the scope of this ASOP. Nevertheless, to the extent that the guidance in this standard conflicts with guidance in other ASOPs regarding the pricing of the death benefit, the guidance in other ASOPs would govern the pricing of such death benefits.

This ASOP does not apply to actuaries when providing actuarial services related to Medicaid capitation rates that are within the scope of ASOP No. 49, *Medicaid Managed Care Capitation Rate Development and Certification*.

If the guidance in ASOP No. 3, *Continuing Care Retirement Communities*, related to performing actuarial services with respect to continuing care retirement communities conflicts with this ASOP, the actuary should follow the guidance in ASOP No. 3.

If the guidance in ASOP No. 32, *Social Insurance*, conflicts with this ASOP, the actuary should follow the guidance in ASOP No. 32.

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 follow 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 September 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 Assisted Living Facility—A facility that provides residents some assistance with activities of daily living. Residents have apartments, rooms, or shared dwellings and often share community living and dining areas with other residents. Usually meals, utilities, housekeeping, laundry, ambulation assistance, and personal care supervision are provided. Staff members may supervise the self-administration of medication.

2.2 Home Care—Care received at the patient's home, such as part-time skilled nursing care, custodial care, speech therapy, physical or occupational therapy, part-time services of home health aides, or help from homemakers or chore workers.

2.3 Insurer—An entity that accepts the risk of financial losses or, for a specified time period, guarantees stated benefits upon the occurrence of specific contingent events, typically in exchange for a monetary consideration. For purposes of this standard, "**insurer**" also refers to an entity that sponsors **LTC benefit plans** that may be funded by sources other than premiums paid by the potential beneficiary.

2.4 Long-Term Care (LTC)—A wide range of health and social services, which may include adult day care, custodial care, **home care**, hospice care, intermediate nursing care, respite care, and skilled nursing care, but generally not care in a hospital. **Long-term care** is sometimes referred to as long-term services and supports (LTSS).

2.5 Long-Term Care Benefit Plan (or LTC Benefit Plan)—A policy, contract, or arrangement providing **LTC** benefits, either on a stand-alone basis or as part of a plan that provides other benefits as well (except where the **LTC** benefits are an immaterial feature). The plan may describe requirements for benefit eligibility, covered services, benefit amount, benefit payment duration (including short-term and long-term), maximum benefit amount, and other coverage features.

2.6 Nonforfeiture Benefits—Benefits that are available if premiums are discontinued.

2.7 Nursing Home—A residential facility which provides long-term nursing care to those who are unable to handle their own daily living needs. They are typically staffed by nurses with a physician on call, and care may range from custodial to skilled.

## Section 3. Analysis of Issues and Recommended Practices

3.1 Coverage and Plan Features— The actuary should take into account all pertinent provisions found in the applicable **LTC benefit plan**, including benefit eligibility, covered services, benefit amounts, benefit payment duration, and other coverage features that may significantly impact cost. While these provisions apply primarily to stand-alone individual, association-sponsored group, or employer-sponsored group **LTC benefit plans**, the actuary also should take into account material **LTC** provisions found in the following alternative **LTC** arrangements:

a. the acceleration of benefits otherwise payable upon death under a life insurance product;

b. insurance products that provide ancillary **LTC** benefits;

c. **LTC** benefits provided by various administrative and risk-assuming programs, such as health maintenance organizations (HMOs), preferred provider organizations (PPOs), exclusive provider organizations (EPOs), government managed plans, and self-insured plans; and

d. **LTC** benefits provided for individuals living within retirement communities.

3.2 Assumption Setting—When developing actuarial assumptions, the actuary should take into account available experience data and reasonably foreseeable future changes. Many **LTC benefit plans** may remain in effect for many years, and some assumptions depend upon the behavior of covered individuals, providers of care, and society as a whole. As such, the actuary should recognize that assumptions derived from actual experience today may not be valid in the future. The actuary may include a margin or provision for adverse deviation (PAD) when setting assumptions and in such cases should include a margin or PAD that is appropriate for the intended purpose.

When setting, evaluating, or updating assumptions for which the actuary is taking responsibility, the actuary should consider using the following data or information:

a. actual experience adjusted to current conditions where applicable, to the extent it is available, relevant, and sufficiently reliable;

b. other relevant and sufficiently reliable experience, such as industry experience that is properly modified to reflect the circumstances, if actual experience is not available, relevant, or sufficiently reliable;

c. future expectations or estimates, including those inherent in market data, when available and appropriate; and

d. other relevant sources of data or information, including noninsured data as appropriate.

The actuary should develop assumptions in a manner consistent with how the assumptions will be applied. For example, a lapse assumption will be developed differently if it is to be applied to the total projected lives or to the projected active lives. The actuary should be familiar with applicable regulatory considerations as they relate to and govern assumption selection. The actuary should refer to ASOP No. 23, *Data Quality*, and ASOP No. 25, *Credibility Procedures*, when selecting, reviewing, or evaluating data to develop assumptions.

3.2.1 Morbidity Assumptions—The actuary should develop morbidity assumptions consistent with all significant plan features, including the types of **LTC** benefits being provided, the types of optional benefits being provided, the plan's benefit eligibility criteria, the claim adjudication process, the benefit amounts and benefit limits, and the exclusions.

In order to estimate morbidity, the actuary, where appropriate, should develop claim incidence rates, claim termination rates, costs of eligible benefits, and proportion of available benefits expected to be used. The actuary may need to exercise special care when projecting total claim costs rather than the components separately, as the total claim costs may be affected by factors such as discount rates, and as specific sensitivity tests on morbidity components may not be as reliable as when modeling the components separately. When developing morbidity assumptions, whether in total or in separate components, the actuary should take into account the following, as applicable:

a. whether the claim cost elements vary by the type of care provider, such as **nursing home**, **assisted living facility**, and **home care**;

b. participant behavior driven by available benefit choices and benefit limitations;

c. the effect of induced demand for **LTC** services due to the presence of **LTC** benefits;

d. the availability of benefits from other public and private programs such as Medicare, Medicaid, and Medicare supplement policies;

e. the availability of **LTC** services;

f. the effect of selection at the time of policyholder decision points (for example, decisions at the time of rate increase);

g. premium rate classification of applicants;

h. the underwriting processes, which may include the intensity of application questions, the marketing methods, the number and types of underwriting requirements, the number and definitions of underwriting classes, the effect of regulations on the underwriting process, and the experience of the underwriting personnel;

i. the claims process, which may include the effect of regulations on the claim process, the experience of the claim personnel, processes for confirming eligibility (initial and ongoing), fraud detection, and the impact of reimbursement versus indemnity coverage;

j. the potential for adverse selection when optional benefits are offered at any point in time; and

k. interaction and correlation of assumptions, such as the effect of mortality on claim termination rates.

The actuary may also consider adjusting morbidity assumptions to reflect claimants' diagnoses.

3.2.2 Mortality Assumptions—When developing mortality assumptions, the actuary should take into account the effects of underwriting, classification of applicants, and selection on expected mortality experience and use a mortality table that appropriately reflects the expected mortality of the participants in the plan. The actuary should take into account that mortality differs between healthy and disabled lives. Also, the actuary should take into account whether deaths are fully reported and reasonably represented as a proportion of total decrements.

3.2.3 Acceleration of Benefits under Life Insurance Contracts—For **LTC** insurance benefits provided by the acceleration of benefits otherwise payable upon death under a life insurance product, the actuary should ensure that assumptions concerning the amount and timing of payments are determined consistently for the contingencies of both mortality and **LTC** morbidity.

3.2.4 Voluntary Termination (Lapse) Assumptions—When developing voluntary termination (lapse) assumptions, the actuary should take into account the following:

a. product features, premium mode, premium payment method, and **nonforfeiture benefit**;

b. reasonably available information regarding the marketing method, the motivations for purchasing and continuing coverage, product and premium competitiveness, and the quality of service of the entity providing the benefits;

c. changes in rating agency outlooks or ratings;

d. any effect of rate changes or offering reduced benefits on voluntary lapses; and

e. whether lapses are reasonably represented as a proportion of total decrements.

3.2.5 Operating Expense Assumptions—When developing operating expense assumptions, the actuary should consider reflecting the entity business plan and the cost of product development, marketing, producer compensation, regulatory compliance, underwriting, benefit administration, care management, and other **LTC benefit plan** administration, as applicable.

3.2.6 Tax Assumptions—When developing tax assumptions, the actuary should reflect the tax reserve basis of the **LTC benefit plan** and the premium, income, or any other applicable tax rates of the entity.

3.2.7 Investment Return Assumptions—When developing investment return assumptions, the actuary should take into account investment assumptions and economic market assumptions that reflect real world or market consistent theory, where appropriate, and that include assumptions for reinvestment, asset default, asset underperformance, and investment expenses. Where appropriate, the actuary also should take into account the assets of the **insurer** and the **insurer's** investment strategy and refer to ASOP No. 7, *Analysis of Life, Health, or Property/Casualty Insurer Cash Flows*.

3.2.8 Mix-of-Business Assumptions—The actuary should reflect the characteristics of the anticipated distribution of business such as age, gender, marital status, underwriting classes, distribution system, and **LTC benefit plan** options (such as benefit period, elimination period, inflation option, daily benefit, and other coverage options).

3.2.9 Change-Over-Time Assumptions—When developing the assumptions, the actuary also should consider identifying and reflecting assumptions for which experience may be likely to change over the term of the **LTC benefit plan**. Though not necessarily limited to these factors, changes in the experience may be attributable

to changes in health of the participants, changes in participant behavior, changes in care management, changes in sites of care, changes in environment, and changes in lifestyle.

3.2.10 Alternative LTC Arrangements—The actuary should consider using assumptions for the alternative **LTC** arrangements described in section 3.1(a)-(d) that are different from those used for stand-alone insured **LTC benefit plans**.

3.2.11 Sensitivity Testing—Prior to the finalization of assumptions, the actuary should perform sensitivity testing of reasonable variations in assumptions, and reasonable correlations of assumptions. The actuary should expand the range of sensitivity testing when the data supporting the assumptions have limited credibility. Also, the actuary should consider testing the projections under stressed assumptions. The actuary should consider including appropriate margin or PAD to recognize the results of the sensitivity testing.

3.3 Premium Rate Recommendations—When recommending an initial premium rate schedule, the actuary should use methods and assumptions conforming to applicable regulatory requirements such that the premium rate schedule has a reasonable likelihood of being sufficient without future rate adjustments to the recommended schedule.

When developing recommendations regarding revisions to existing premium rate schedules, the actuary should review any material variations in experience and consider reflecting changes in expectations that would make changes in premium rates for in-force business advisable, subject to regulatory review.

Premium rate schedules also may include fees, taxes, surcharges, or other revenue-generating devices.

3.4 Reserve Determination and Asset Adequacy Analysis—In calculating reserves, the actuary should use appropriate methods and assumptions taking into account the benefit features of the particular **LTC benefit plan** in question, including any optional benefits.

Reserves typically required by and appropriate for **LTC benefit plans** are premium reserves, contract reserves, and claim reserves for both reported claims and incurred but not reported claims.

In setting statutory reserves, the actuary should be familiar with applicable sections of the following: the *Standard Valuation Law*, the *Valuation Manual*, Actuarial Guideline LI, and asset adequacy analysis standards.

Because **LTC benefit plans** are often long-term in nature, cash flow testing is a potentially important part of the management of an **LTC benefit plan**. The degree of rigor in analyzing an **LTC benefit plan** has increasing importance if the **LTC benefit plan** is a more significant portion of the sponsoring entity's business. Therefore, when performing asset adequacy analyses, the actuary should refer to ASOP No. 7 and ASOP No. 22, *Statements*

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

To the extent **LTC benefit plans** are included in a statement of actuarial opinion, ASOP Nos. 22, 28, *Statements of Actuarial Opinion Regarding Health Insurance Assets and Liabilities*, and 36, *Statements of Actuarial Opinion Regarding Property/Casualty Loss and Loss Adjustment Expense Reserves*, may apply.

3.5 Experience Monitoring—When practicable, and when emerging experience may be material to the sponsoring entity, the actuary should inform the sponsoring entity that experience data should be collected in a manner that permits an actuary to compare prior assumptions with emerging experience and assess the implications of any significant differences.

To the extent that industry or general population data were used in determining assumptions for estimating benefit costs or establishing reserves, an actuary reviewing **LTC benefit plan** experience should monitor for significant changes that may have emerged in such data. To the extent the actuary plans to rely upon the data when setting assumptions, as described in section 3.2, the actuary should take into account emerging experience.

3.6 Reliance on Data, Other Information, or a Model Supplied by Others—When relying on data, other information, or a model supplied by others, the actuary should refer to ASOP No. 23, ASOP No. 41, *Actuarial Communications*, and ASOP No. 56, *Modeling*, for guidance.

3.7 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. If 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. 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. 7, 22, 23, 25, 28, 36, 41, and 56. In addition, the actuary should disclose the following in such actuarial reports, if applicable:

a. characteristics of the product including optional benefits and guarantees (see section 3.1);

b. key assumptions and the manner in which the actuary established those assumptions to reflect expected future experience (see section 3.2);

c. the range of sensitivity tests evaluated, and any subsequent margin as a result of sensitivity testing (see section 3.2.11);

d. the premium rate recommendation and support for the recommendation, including a description of any provisions for adverse deviations (see section 3.3);

e. a description of the method and assumptions used in calculating reserves, as well as a description of any method used to test reserve adequacy (see section 3.4); and

f. the need to collect and monitor experience data (see section 3.5).

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

4.3 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 and is not part of the standard of practice.

### Background

The utilization of long-term care (LTC) services has been increasing rapidly, and that growth is expected to continue in the decades ahead. Paying for these services is expected to be a challenge for society for the foreseeable future. Many of the funding methods in use involve long-term contractual commitments and estimation of expected costs many years in the future—work that requires actuarial analysis and training.

Estimating future results for LTC is a difficult process. Some of the reasons that actuarial activity in LTC insurance is such a challenge include the following:

1. A limited amount of homogenous data is available, especially on insured lives at older ages and later policy durations. While the Society of Actuaries (SOA) produced a somewhat credible stand-alone LTC insurance experience study in 2015, it was based on experience through only 2011.

2. LTC insurance coverage has been redirected toward combination products in recent years. The SOA experience study may be different than experience expected from the combination market.

3. New financing approaches are regularly being introduced, such as the funding arrangements for LTC services being provided through the Washington State public program, through some states considering similar or "catastrophic" LTC programs, and by the continuing care retirement community model being applied in the home care setting. Even traditional stand-alone policies have scaled back their benefits with smaller lifetime maximums, daily benefit maximums, and automatic benefit increases to reduce the company's risk exposure. These approaches might have quite different experience than traditional stand-alone LTC insurance benefits.

4. Underwriting, marketing, distribution, and claim payment practices can be quite dis-similar under different LTC insurance financing plans, producing diverse results. This compounds the difficulty of developing homogeneous experience data from which to estimate future activity.

5. Changes in the LTC regulatory, medical, or insurance environment or in consumer behavior could alter the expectations of benefits paid by a long-term care benefit plan. The following are examples of such possible changes:

a. The use of LTC services may tend to change when such services are provided in an insured environment with increasing availability of public LTC coverage.

b. Medical advances might reduce LTC insurance costs by preventing or curing maladies requiring LTC services (for example, a cure for Alzheimer's disease). However, medical advances could also increase the life expectancy of impaired persons or enable some persons to develop an impaired condition who otherwise would have died.

c. Current attitudes associated with nursing home care, assisted living facility care, and home health care might change over time. For example, the number of deaths in LTC facilities that were attributed to COVID-19 may orient more people toward care in the home, altering the average utilization.

d. Changes in the family structure in society may reduce the number of family members available to care for the impaired, increasing the need for paid LTC services.

e. Changes may occur in government payment for long-term care, which could impact payment for LTC services under private insurance. Such governmental changes could also affect LTC utilization patterns or the rules relating to taxes on LTC insurance premiums and benefits.

f. New LTC services may be developed and the availability of existing services may increase substantially. As new services become available, they may cause changes in consumers' use of previously existing care services, as well as changes in total service utilization.

g. Impact of rate increases continue to change the in-force mix and policyholder behavior.

Some regulators and interested parties believe that standards or controls beyond those for other coverages are needed to protect consumers in the LTC insurance field. This is partly because most LTC users are senior citizens, who are perceived as having few financial options.

Further, many LTC insurance financing mechanisms involve financial commitments of very long duration. Many LTC insurance policies are guaranteed renewable for the life of the insured. It is also a product characterized by an extremely high degree of advance funding, with most of the claim dollars paid out long after the policy is put into effect.

## Current Practices

Actuaries apply diverse methods to measure the cost of a benefit design, devise a funding system, and evaluate liabilities. A basic part of an actuary's work in this field involves taking into consideration the pertinent provisions in the LTC benefit plan, such as the following:

1. Benefit Eligibility (Definition of Insured Event)—In order to qualify for benefits, an insured person may have to satisfy an elimination period and must provide satisfactory evidence of benefit eligibility. Long-term care benefit plans may define benefit eligibility in several ways. The most common criteria for benefit eligibility are functional or cognitive impairment (as defined for tax qualified plans in an LTC insurance plan) and sometimes medical necessity. Benefit eligibility also frequently depends on the use of covered services or services on a day for which the benefit is payable.

2. Covered Services—An LTC benefit plan may provide coverage for only a limited set of LTC services or a very broad set. A particular plan might cover only nursing home care, or only home care, or could cover a combination of both. Any number of additional types of care, such as assisted living facility care, adult day care, and respite care, may also be covered. When coverage is included for different types of services, the coverage can either be integrated or non-integrated. One example of integrated benefits is a single lifetime benefit maximum that may be utilized for any combination of nursing home care or home care.

3. Benefit Amount—The amount payable for a given service, or for a given day of care, may either be a fixed contractual amount, such as $100 per day of eligibility, or may be related to the actual cost of services provided that day. In the latter case, the reimbursement may be either the full cost of services or a percentage of the cost, and it may be capped at a particular daily maximum. If there is a daily maximum, it may vary depending on the type of service. The fixed daily benefit amount or maximum daily benefit may be increased under an inflation protection provision.

4. Benefit Payment Duration—There are different ways in which benefit length and frequency may be structured for payment. Some examples are as follows:

    a. Benefit Period of Consecutive Days—The maximum benefit period is defined as a stated number of days or years, and benefits are payable during a continuous period of time of that length, starting from the first day of eligibility. Under this approach, days without covered services may not result in a benefit payment but do not extend the benefit period.

    b. Benefit Days—The maximum benefit period is defined as a stated number of days or years, and benefits are payable for days on which the insured person meets the eligibility requirements, until the maximum number of days or benefits have been paid. Under this approach, any day for which the insured is ineligible for benefits does not count as part of the benefit period, and the benefit period is thereby extended.

    c. Maximum Benefit—The maximum benefit is defined in terms of a total dollar amount, and benefits are payable until that amount has been paid. The total dollar amount may be increased under an inflation protection provision.

5. Other Coverage Features That May Significantly Impact Cost—Some examples of additional features that may be found in LTC insurance plans are the following:

    a. an alternative plan of care provision, under which services not expressly covered under the insurance contract may become covered, usually when viewed as an appropriate substitute for a covered service;

    b. a shortened benefit period provision, i.e., a type of nonforfeiture benefit under which the insured has paid-up coverage with a benefit period whose length is determined by the nonforfeiture benefit value that has accrued;

    c. a restoration of benefits provision, under which an insured who has used a portion of the maximum benefit can have the full benefit restored after a stated minimum time period during which the insured person either did not use or was ineligible for benefits; and

    d. a shared benefit maximum provision for spouses.

Apart from the actual provisions in the LTC insurance plan, numerous forms of individual LTC insurance are being offered, ranging from stand-alone nursing home or home care coverage to combination or integrated products that cover a broad range of services in many locations. Long-term care insurance plans are available on both tax-qualified and nontax-qualified bases. There are also LTC insurance riders to life, disability, and annuity products that can enhance benefits, accelerate benefits, waive surrender charges, guarantee purchase rights, or offer conversion options.

The group market consists of both insured and self-insured plans. In either instance, the employer or other sponsor may fund none, a portion, or all of the required contribution. Group coverages also can be extended to eligible groups such as association members, affinity groups, and congregate community residents.

Furthermore, some states are expressing interest in public LTC programs. Washington State implemented a payroll tax funded program for up to $36,500 of benefits for eligible residents who have the inability to perform at least three activities of daily living. From time to time, states consider covering care that exceeds a specified number of months, for example after thirty-six months of care is required.

The Medicaid program is a healthcare program jointly funded by the federal and state governments. The Medicaid programs are managed by the state government with oversight by the Center for Medicare and Medicaid Services. The Medicaid program provides healthcare services to low-income individuals and families, individuals with disabilities, and the elderly. The Medicaid program provides a wide array of coverage, including hospital, physician, pharmacy, and long-term services and supports. Eligibility standards for the Medicaid program depend on a number of requirements including financial requirements associated with assets and income. Long-term services and supports for the Medicaid program include nursing home,

custodial care, home health care, adult day services, respite care services, and other home and community-based services.

## Definitions of Selected Terms

Activities of Daily Living (ADLs)—Basic functions used as measurement standards to determine levels of personal functioning capacity. Typical ADLs include bathing, continence, dressing, eating, toileting, and transferring (between bed and chair or wheelchair).

Adult Day Care—A program of social and health-related services designed to meet the needs of functionally or cognitively impaired adults, provided in a non-residential group setting other than the adult client's home.

Cognitive Impairment—A deficiency in a person's short- or long-term memory; orientation with respect to person, place, and time; deductive or abstract reasoning; or judgment as it relates to safety awareness.

Continuing Care Retirement Community (CCRC)—A residential facility for retired people that provides stated housekeeping, social, and health care services in return for some combination of an advance fee, periodic fees, and additional fees.

Custodial Care—Care to help a person perform ADLs and other routine activities, also known as *personal care*. It is usually provided by people without professional medical skills. It is less intensive or complicated than skilled or intermediate nursing care and can be provided in many settings, including nursing homes, assisted living facilities, adult day care centers, or at home.

Functional Impairment—The inability to perform a specified number of ADLs.

Guaranteed Renewable Contract—A contract that provides the insured has the right to continue the insurance in force for a specified period by the timely payment of premiums and that the insurer may not unilaterally change the contract during that specified period, except that the insurer may revise premium rates on a class basis.

Hospice Care—A program that provides health care to a terminally ill person and counseling for that person and his or her family. Hospice care can be offered in a hospice setting established for this single purpose, a nursing home, or at home, where nurses and social workers can visit the person regularly.

Instrumental Activities of Daily Living (IADLs)—Functions, more complex than ADLs, that are used as measurement standards of functioning capacity; examples include preparing meals, managing medications, housekeeping, telephoning, shopping, and managing finances.

Intermediate Nursing Care—Care needed for persons with stable conditions that require daily, but not 24-hour, nursing supervision. Intermediate nursing care is less specialized than skilled nursing care and often involves more custodial care.

Respite Care—Temporary care for frail or impaired persons that allows volunteers to have a rest from care giving.

Skilled Nursing Care—Care provided by skilled medical personnel, such as registered nurses or professional therapists, but generally not care in a hospital.

## Appendix 2

## Comments on the Exposure Draft and Responses

The exposure draft of the proposed revision of ASOP No. 18, *Long-Term Care*, was issued in March 2021 with a comment deadline of September 1, 2021. Four comment letters were received, some of which were submitted on behalf of multiple commentators, such as 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. 18 Task Force carefully considered all comments received, and the ASB reviewed (and modified, where appropriate) the changes proposed by the ASOP No. 18 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. 18 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 | One commentator felt the transmittal memorandum should have stated that there has been a notable amount of rewording and reordering of material in this ASOP, including additions reflecting developments in LTC practice over the past twenty to thirty years. The commentator felt that the changes went beyond "improv[ing] readability, clarity or consistency." |
| Response | The reviewers agree and made reference to the expansion of the ASOP to hybrid products, public programs, and long-range financial projections of Medicaid programs. |
| **SECTION 1. PURPOSE, SCOPE, CROSS REFERENCES, AND EFFECTIVE DATE** | |
| **Section 1.1, Purpose** | |
| Comment | One commentator suggested deleting "and public programs" in section 1.1 due to potential conflict with ASOP No. 32, *Social Insurance*. |
| Response | The reviewers disagree with deleting "public programs" from the purpose and scope of this ASOP. However, the reviewers added clarifying language regarding potential conflicts with ASOP No. 32 in section 1.2. |
| **Section 1.2, Scope** | |
| Comment | One commentator suggested that a reviewing actuary should "follow" rather than "use" the guidance. |
| Response | The reviewers agree and made the change. |
| Comment | Several commentators suggested clarifying language about applicability to Medicaid programs and long-range financial projections. |
| Response | The reviewers agree and modified the scope to provide further clarity, including an exclusion for actuarial services provided under ASOP No. 49, *Medicaid Managed Care Capitation Rate Development and Certification*. |

| SECTION 3. ANALYSIS OF ISSUES AND RECOMMENDED PRACTICES | |
|---|---|
| **Section 3.2.2 (now 3.2.1), Morbidity Assumptions** | |
| Comment | One commentator suggested that morbidity assumptions should reflect claimants' diagnoses. |
| Response | The reviewers modified the language in response to this comment. |
| **Section 3.2.5 (now 3.2.4), Voluntary Termination (Lapse) Assumptions** | |
| Comment | One commentator suggested deleting "rating agency rating." |
| Response | The reviewers modified the language to clarify the applicability of rating agency outlooks and ratings. |
| **Section 3.2.6 (now 3.2.5), Operating Expense Assumptions** | |
| Comment | One commentator suggested specifically identifying "policy and claims administration." |
| Response | The reviewers modified the language accordingly. |
| **Section 3.3, Premium Rate Recommendations (Including Fees or Other Revenue-Generating Devices)** | |
| Comment | One commentator suggested including "fees, taxes, surcharges, contributions." |
| Response | The reviewers modified the language in response to this comment. |
| **Section 3.4, Reserve Determination and Asset Adequacy Analysis** | |
| Comment | One commentator suggested adding a reference to ASOP No. 28, *Statements of Actuarial Opinion Regarding Health Insurance Assets and Liabilities*. |
| Response | The reviewers agree, made the change, and also added a reference to ASOP No. 36, *Statements of Actuarial Opinion Regarding Property/Casualty Loss and Loss Adjustment Expense Reserves*. |

ACTUARIAL STANDARDS BOARD

---

**Actuarial Standard**
**of Practice**
**No. 19**

# Appraisals of Casualty, Health, and Life Insurance Businesses

**Revised Edition**

**Developed by the**
**Task Force to Revise ASOP No. 19 of the**
**Life Committee of the**
**Actuarial Standards Board**

**Adopted by the**
**Actuarial Standards Board**
**June 2005**
**Updated for Deviation Language Effective May 1, 2011**

---

**(Doc. No. 137)**

**ASOP No. 19—June 2005**

## TABLE OF CONTENTS

**ASOP No. 19—June 2005**

June 2005

**TO:** Members of Actuarial Organizations Governed by the Standards of the Actuarial Standards Board, and Other Persons Interested in Appraisals of Value of Casualty, Health, and Life Insurance Businesses

**FROM:** Actuarial Standards Board (ASB)

**SUBJ:** Actuarial Standard of Practice (ASOP) No. 19

This booklet contains the final version of the revision of ASOP No. 19, *Appraisals of Casualty, Health, and Life Insurance Businesses*.

Background

The ASB originally adopted ASOP No. 19, then titled *Actuarial Appraisals*, in 1991. The former ASOP was prepared by the Actuarial Appraisal Task Force of the Life Committee of the ASB. The current task force has prepared this revision of ASOP No. 19 to be consistent with the current ASOP format and to reflect current, generally accepted actuarial practices with respect to actuarial appraisals and other appraisals.

Exposure Draft

The exposure draft of this ASOP was issued in June 2004, with a comment deadline of November 30, 2004. Thirteen comment letters were received. The task force carefully considered all comments received and made clarifying changes to the language in some sections. For a summary of the substantive issues contained in the exposure draft comment letters and the task force's responses, please see appendix 2.

The most significant change from the exposure draft is that the task force revised section 4.3, which deals with the use of the term "actuarial appraisal" in reference to an appraisal performed by an actuary. The revised section 4.3 requires that an actuary not use the term "actuarial appraisal" to refer to an appraisal that does not meet the definition of an actuarial appraisal contained in the standard. Section 4.3 in the exposure draft required that a report on an appraisal that did not meet the definition contain a statement that it was not an actuarial appraisal.

The task force thanks everyone who took the time to contribute comments on the exposure draft.

The ASB voted in June 2005 to adopt this standard.

**ASOP No. 19—June 2005**

Task Force to Revise ASOP No. 19

Charles Carroll, Chairperson

| | |
|---|---|
| Cynthia S. Miller | John P. Schreiner |
| John O. Nigh | Joy A. Schwartzman |
| Forrest A. Richen | Barry L. Shemin |

Life Committee of the ASB

Robert G. Meilander, Chairperson

| | |
|---|---|
| Charles Carroll | Thomas A. Phillips |
| Michael A. Cioffi | Allan W. Ryan |
| Stephen N. Patzman | Barry L. Shemin |

Actuarial Standards Board

Michael A. LaMonica, Chairperson

| | |
|---|---|
| Cecil D. Bykerk | William A. Reimert |
| William C. Cutlip | Lawrence J. Sher |
| Lew H. Nathan | Karen F. Terry |
| Godfrey Perrott | William C. Weller |

**ASOP No. 19—June 2005**

# ACTUARIAL STANDARD OF PRACTICE NO. 19

# APPRAISALS OF CASUALTY, HEALTH, AND LIFE INSURANCE BUSINESSES

## 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 with respect to appraisals of casualty, health, and life insurance businesses.

1.2 Scope—This standard applies to actuaries when performing professional services with respect to appraisals of casualty, health, and life insurance businesses, as defined in section 2.7.

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 all appraisals of casualty, health, and life insurance businesses initiated on or after November 1, 2005.

## Section 2. Definitions

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

2.1 Actuarial Appraisal—An appraisal of an insurance business presenting a set of actuarial appraisal values. A set of actuarial appraisal values is based on a range of discount rates or a range of assumption sets but may in certain circumstances present a single unique value for the business.

2.2 Actuarial Appraisal Value—The present value, calculated as of the appraisal date, of projected distributable earnings of an insurance business where the distributable earnings are based on a set of assumptions.

2.3 Appraisal—An assessment of the value of an insurance business including, but not limited to, an actuarial appraisal.

2.4 Appraisal Date—The date as of which an appraisal value is assessed.

2.5 Discount Rate—The rate used to discount projected earnings to determine a present value used in an appraisal.

2.6 Distributable Earnings—Amounts that an insurance business can distribute while retaining the level of capital required to support its ongoing operations. Distributable earnings consist of earnings of an insurance business computed using the applicable regulatory accounting basis, adjusted to allow for the injection or release of regulatory capital and surplus, in recognition of appropriate capital and surplus levels needed to support ongoing operations. A regulatory accounting basis is the basis required by the insurance supervisory authority in a particular jurisdiction to be used for financial statement filings by insurance companies and similar entities in that jurisdiction.

2.7 Insurance Business—An enterprise involved in assuming insurance risk, such as one or any combination of the following: an insurance company or health maintenance organization; a collection of policies or contracts in-force that cover insurance risk; and a distribution system that sells such policies or contracts.

2.8 Intended Audience—The persons to whom an appraisal report is directed and with whom the actuary, after discussion with the principal, intends to communicate. Unless otherwise specifically agreed, the principal is always a member of the intended audience. In addition, other persons or organizations, such as investors or regulators, may be designated by the principal, with consent of the actuary, as members of the intended audience.

2.9 Other User—Any user of an appraisal report who is not a principal or member of the intended audience.

2.10 Principal—The actuary's client or employer.

## Section 3. Analysis of Issues and Recommended Practices

3.1 Introduction—When preparing appraisals of life, health, or casualty insurance businesses, the actuary may use a variety of methods. Often, an actuarial appraisal, as defined in section 2.1, will be prepared. Other methods may also be used that may or may not involve actuarial techniques.

3.2 Projected Earnings—When performing an appraisal that is based on discounting projected earnings, the actuary should project earnings using a model of future (a) cash flows related to such items as premiums, investments, benefit or claim payments, and expenses; (b) accrual amounts related to these items; and (c) other items such as reserves for future policy benefits. The actuary should project cash flows in accordance with ASOP No. 7, *Analysis of Life, Health, or Property/Casualty Insurer Cash Flows*.

In the case of an actuarial appraisal, the actuary should project distributable earnings.

3.3 Setting Assumptions—When setting assumptions for use in an appraisal, the actuary should consider the historical experience of the insurance business, adjusted to reflect known material changes in the environment and identifiable trends to the extent such information is available. When experience of the business is unavailable or insufficient to provide a credible basis on which to develop assumptions, the actuary should consider other information sources in setting assumptions. Other information sources may include the pricing or reserving practices applicable to the insurance business and the available experience of other insurance businesses with comparable policies or contracts, markets, and operating environment.

In developing assumptions for which the actuary believes additional expertise is needed, the actuary should obtain necessary input from persons possessing the relevant knowledge or expertise, and should give due weight to their input.

When setting assumptions for use in an appraisal, the actuary should take reasonable steps to ensure that each set of assumptions used is internally consistent.

3.4 Discount Rate—If the appraisal is based on the discounted value of projected earnings, the actuary should consider displaying appraisal values using several discount rates.

3.5 Applicability of Appraisal—The intended audiences for appraisals may include parties with different interests and perspectives (for example, management, investors, regulators, or sellers). The actuary should consider the legitimate circumstances, needs, and strategies of the intended audience, to the extent these are known by the actuary, in setting assumptions, choosing discount rates, and choosing what sensitivity tests to perform.

3.6 Treatment of Assets—If the appraisal involves assumptions about future returns on assets, the actuary should consider the composition of the projected asset portfolio in terms of type, quality, and maturity. The projected earnings rate of the assets should be consistent with the valuation of assets (for example, book or market). The actuary should consider the legitimate circumstances, needs, and strategies of the intended audience, to the extent these are known by the actuary, in making an assumption as to investment strategy.

3.7 Modeling and Model Validation—When the appraisal is based on projected earnings, the actuary should calculate such earnings using a model of the insurance business appropriate to the situation. The actuary should perform validation tests to determine whether the model reasonably reproduces relevant items of the balance sheet and income statements of the insurance business. When the appraisal is based on stochastic projections, the actuary should consider whether the scenarios used are appropriate to the situation.

3.8 Sensitivity Testing—When appropriate and practical in the actuary's judgment, the actuary should address the sensitivities of the appraisal value to changes in key assumptions. The actuary should consider the intended purpose and use of the appraisal and whether the results reflect a reasonable range of variation in the key assumptions, consistent with that intended purpose and use, when determining whether these sensitivities have been appropriately addressed.

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 actuary should create records and other appropriate documentation supporting an appraisal and, to the extent practicable, should take reasonable steps to ensure that this documentation will be retained for a reasonable period of time consistent with any statutory, regulatory or other requirements, any confidentiality or nondisclosure agreement, and company policy. The actuary need not retain the documentation personally; for example, the actuary's principal may retain it. Such documentation should identify the data, assumptions, and methods used by the actuary with sufficient detail that another actuary qualified in the same practice area could evaluate the reasonableness of the actuary's work.

Section 4. Communications and Disclosures

4.1 Appraisal Report—When issuing communications under this standard, the actuary should refer to ASOP No. 23 and ASOP No. 41, *Actuarial Communications*. In addition, when preparing a report on an appraisal, the actuary should disclose the following items to the extent they are relevant to the work performed by the actuary:

a. the scope of the assignment, including the insurance businesses being valued, and any limitations as to the availability of data;

b. the actuary's principal;

c. the duty, if any, that the actuary is assuming with respect to any user of the report other than the actuary's principal;

d. a description of the intended use of the report;

e. a description of the corporate organizational structure of the business, its distribution methods, lines of business, and products;

f. the appraisal date;

g. an appraisal value or range of appraisal values (if a single unique appraisal value is presented, an explanation of why this is appropriate);

h. the methodology used to develop the appraisal, reasons for the choice of methodology, and whether a financial projection is part of the methodology;

i. the projection model, the accounting basis used, and other key items included in the analysis;

j. the results of the model validation;

k. a discussion of the level of capital reflected in the appraisal and the basis on which the level was determined;

l. the assumptions, described in sufficient detail that another actuary qualified in the same practice area could evaluate their reasonableness;

m. the source of any assumption selected by someone other than the actuary;

n. the extent to which taxes have been considered and on what basis;

o. any sensitivity testing results deemed material by the actuary;

p. the source and extent of reliance on information supplied by others;

q. 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);

r. 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

s. 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.

4.2 Variation of Results—When the actuary issues a report on an appraisal, the report should state that actual results can and will vary from projected results used to calculate appraisal values due to deviations of actual from assumed experience.

4.3 Appropriate Use of the Term "Actuarial Appraisal"—The actuary should not refer to an appraisal as an actuarial appraisal in any actuarial communication unless the appraisal meets the definition of an actuarial appraisal in section 2.1.

4.4 No Obligation to Communicate with Other Users—Nothing in this standard creates an obligation for the actuary to communicate with any person or persons other than the intended audience.

## ASOP No. 19—June 2005

## Appendix 1

## Background and Current Practices

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

### Background

Actuaries perform appraisals for a number of purposes and for a variety of users, including sellers, buyers, management, and regulators. Actuaries perform appraisals of insurance businesses of various types using a variety of methods. In some cases, appraisals performed by actuaries show values that are discounted present values of earnings, distributable earnings, or other amounts. In other cases, appraisals performed by actuaries show values based on "rules of thumb" applied to reserve balances, premiums, or other amounts, or on multiples of book value or earnings on various accounting bases.

An actuarial appraisal is a specific type of appraisal. The key distinguishing feature of an actuarial appraisal is the projection of the future stream of distributable earnings attributable to the evaluated business based on the applicable regulatory accounting basis. This stream of earnings includes the runoff of claim liabilities and other liabilities carried on the balance sheet at the valuation date as projected using actuarial assumptions relating to items such as mortality, persistency, expenses, and investment return. The projections may be done for existing and new business separately or in combination. The projected earnings are then discounted at the selected discount rate(s) to derive the actuarial appraisal value.

### Current Practices

In performing an appraisal of an insurance business, the actuary has a myriad of bases for assumptions from which to choose in developing projections of future earnings and ultimately deriving an appraisal value or range of appraisal values for the business. Of course, actual experience can and will vary from the assumptions selected. In actual practice, appraisal values are sometimes based on extensive analysis of confidential or proprietary information, from which thorough testing of key assumptions can be performed. In other instances, actuarial appraisals are based on more limited analysis or data because of materiality considerations or time limitations, or because internal company data are unavailable and only publicly available information can be used.

Appraisals are commonly performed in connection with the sale of an insurance business. Buyers and sellers of insurance businesses often use such appraisals to help them determine the price to be paid or received, although the value of an insurance business resulting from a negotiated

transaction may differ materially from the value or range of values presented in an appraisal. Appraisals are sometimes used to measure fair values of an insurance business for purposes of allocating purchase price in a business combination under Statement of Financial Accounting Standards (SFAS) No. 141 or in testing impairment of identifiable intangible assets or goodwill of an insurance business under SFAS No. 142. Appraisals can also come into play in calculations of embedded values of insurance businesses for purposes of reporting financial results in an embedded value framework. It should be noted that in contrast to actuarial appraisal values, the embedded value of an insurance business typically does not include future business value.

The discount rate used to discount future earnings is a key element of the actuarial appraisal analysis and may be an element of other types of appraisal. This rate impacts both the present value of future earnings and the cost of capital. Often one discount rate is selected for the entire actuarial appraisal. However, because risks vary by product line and between in-force and new business, discount rates sometimes vary similarly, and multiple discount rates may be used in the actuarial appraisal.

Generally, regulatory accounting determines the earnings available to the owner of an insurance business, which is why actuarial appraisals are based on regulatory earnings. Future earnings based on generally accepted accounting principles (GAAP) or other accounting bases may also be relevant to the value of an insurance business. However, appraisals of value based on such other accounting bases are not considered actuarial appraisals.

The present value of distributable earnings in an actuarial appraisal is often expressed as (a) adjusted net worth; plus (b) existing business value; plus (c) future business value; and less (d) cost of capital. For certain types of business (for example, most property/casualty business), existing and future business components are frequently combined into a single component. The sum of (a) through (d) is mathematically equivalent to the present value of all distributable earnings, inclusive of any initial surplus releases or infusions at the inception of the earnings projection period, and inclusive of the release of the all capital and surplus at the conclusion of the earnings projection period.

The adjusted net worth component includes regulatory capital and surplus; any regulatory liabilities that in essence represent allocations of surplus (for example, asset valuation reserve, regulatory portions of casualty Schedule P reserves); any regulatory non-admitted assets that have realizable value; the difference between market value and book value of assets in support of adjusted net worth, and other items impacting value that are not reflected elsewhere (for example, reserve shortfalls or surplus notes).

The existing business value component equals the present value of future earnings attributable to business inforce on the appraisal date, including any remaining effects of coverage previously provided, such as the runoff of claim liabilities.

The future business value component equals the present value of future earnings attributable to business issued or acquired after the appraisal date. Under some circumstances, actuarial

appraisal values do not include a future business value component. Sometimes it is not practical to split earnings between existing business and future business, and in that case future earnings are often projected for the combined existing and future business.

The sum of the above components is often adjusted for the cost of capital so that it is equivalent to a present value of distributable earnings. The cost of capital reflects the fact that capital and surplus needed to be retained in the insurance business are not available as distributable earnings. The cost of retaining capital is often calculated based upon the differential between the after tax rate of investment return expected to be earned on retained capital and the discount rate. The amount of retained capital will depend on the level of capital believed necessary for the risks inherent in the business and to achieve desired ratings from the various rating agencies. Because different users of the actuarial appraisal will have different views on the appropriate level of retained capital, it is often useful to calculate and illustrate the cost of capital separately from the first three components of the actuarial appraisal value.

In recent years, the use of stochastic modeling approaches in performing actuarial appraisals has become more common. Stochastic methodology has been used for assumptions such as investment returns, mortality rates, and claim frequency and severity.

## ASOP No. 19—June 2005

## Appendix 2

## Comments on the Exposure Draft and Task Force Responses

The exposure draft of this proposed actuarial standard of practice (ASOP), titled *Appraisals of Casualty, Health, and Life Insurance Businesses*, was issued in June 2004, with a comment deadline of November 30, 2004. Thirteen 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. 19 carefully considered all comments received. Summarized below are the significant issues and questions contained in the comment letters and the task force's responses. Unless otherwise noted, the section numbers and titles used below refer to those in the exposure draft.

| | |
|---|---|
| **GENERAL COMMENTS** | |
| Comment | Several commentators questioned the applicability of the standard to property/casualty appraisals. Other commentators stated the scope was appropriate. |
| Response | The task force believed that the scope of the standard was appropriate as written. In reaching this conclusion, the task force noted that property/casualty appraisals were included in the scope of the existing ASOP No. 19, and that at the request of the ASB, a property/casualty actuary actively participated in the drafting of the standard. In addition, after receiving these comments, the task force consulted several property/casualty actuaries, including the Casualty Practice Council, and the responses indicated that the scope was appropriate. |
| Comment | One commentator questioned why the ASOP was assigned to the ASB Life Committee. |
| Response | The ASB assigns ASOPs that might apply to more than one practice area, but not necessarily to all practice areas, to the operating committee that it deems most appropriate. The ASB usually bases this determination on which committee represents the practice area that would be most affected by the ASOP or has the most history with the development or periodic review of the ASOP. In this case, the ASB assigned ASOP No. 19 to the ASB Life Committee but requested health and property/casualty members be recruited for the task force. |
| Comment | One commentator suggested that "embedded value" be defined in the standard. |
| Response | The task force added a definition of "embedded value" in appendix 1. |
| The task force implemented editorial changes in addition to those addressed specifically below if they enhanced clarity and did not alter the intent of the section. | |
| **SECTION 2. DEFINITIONS** | |
| **Section 2.1, Actuarial Appraisal** | |
| Comment | One commentator suggested that the definition should mention that distributable earnings projections should reflect the applicable regulatory accounting basis. |
| Response | The task force believed that section 2.7 (now 2.6) sufficiently covered this concern. |

| | |
|---|---|
| Comment | One commentator was concerned that the specific definition of an actuarial appraisal in the standard could put U.S. actuaries at a disadvantage when asked to perform an appraisal of a non-U.S. entity. |
| Response | The task force believed that, while this could be the case, it was important to have a clear definition of this term. |
| **Section 2.7, Distributable Earnings (now 2.6)** | |
| Comment | One commentator urged that the standard provide guidance as to what is the level of "appropriate capital." |
| Response | The approaches to determining the level of required capital continue to evolve, and the appropriate level of capital has varied over time with the evolution of regulatory accounting and will likely vary in the future. For these reasons, the task force believed that the determination of the appropriate level of capital should not be addressed in the standard. Note, however, that Section 4.1(k) requires disclosure of the level of capital and the rationale for that level. |
| Comment | One commentator suggested that this definition did not correctly describe the recognition of capital flows in the determination of distributable earnings. |
| Response | The task force agreed and revised the definition to reflect more clearly the recognition of capital flows. |
| **Section 2.8, Insurance Entity (now 2.7, Insurance Business)** | |
| Comment | Several commentators believed that the term "insurance entity" could be misunderstood to refer to a legal entity and that a more descriptive term such as "insurance business" would better convey the intended meaning. |
| Response | The task force agreed and changed the defined term to "insurance business." |
| **SECTION 3. ANALYSIS OF ISSUES AND RECOMMENDED PRACTICES** | |
| **Section 3.1, Introduction** | |
| Comment | One commentator suggested the second sentence be revised. The commentator acknowledged that in some types of work, particularly certain property/casualty work, it is not typical that an actuarial appraisal will be done. |
| Response | The task force agreed and changed the word "typically" to "often." |
| **Section 3.2, Projected Earnings** | |
| Comment | Several commentators suggested the definition of projected earnings should be clarified. |
| Response | The task force explicitly included the terms "investment earnings" and "claim payments" in the discussion of cash flow and accrual amounts to clarify the definition. |
| **Section 3.4, Discount Rate** | |
| Comment | One commentator believed that this section left the impression that an actuarial appraisal should be performed based on a single deterministic set of assumptions, as opposed to a stochastic approach. The commentator believed that this was not an accurate reflection of current trends in actuarial practice. |
| Response | The task force agreed that stochastic approaches to performing actuarial appraisals are an important part of current practice in this area, revised section 3.7 to include review of stochastic scenarios, and added a section to appendix 1 that discusses stochastic methods applied to appraisals. |
| **Section 3.5, Applicability of Appraisal** | |
| Comment | One commentator suggested that reference to sensitivity testing be included. |
| Response | The task force agreed and added wording to this section to address sensitivity testing. |

| | |
|---|---|
| Comment | One commentator asked if the actuary should consider the perspective of the entity initiating the appraisal. |
| Response | The task force believes that this has been addressed, in that section 3.5 states the actuary should consider the circumstances, needs, and strategies of the intended audience for the appraisal. |
| **Section 3.6, Treatment of Assets** | |
| Comment | One commentator suggested deleting the phrase "that support related liabilities" from the first sentence of this section since there could also be assets supporting required surplus. |
| Response | The task force agreed and deleted the phrase. |
| Comment | One commentator suggested adding wording to state that projected earnings rates should be consistent with a company's current investment strategy. |
| Response | Although this will often be the case, the task force believes that it may be appropriate at times for an appraisal to reflect an investment strategy different from a company's current strategy and made no change. |
| **Section 3.7, Modeling and Model Validation** | |
| Comment | One commentator suggested adding guidance regarding when an actuary should do stochastic testing. |
| Response | The task force carefully considered this issue and noted that any recommendation on when to use stochastic testing is likely to be obsolete quite quickly as this is a rapidly changing area. The task force concluded that the choice of appropriate methodology should be left to the professional judgment of the actuary given the particular circumstances involved and made no change. |
| **Section 3.9, Documentation (now 3.10)** | |
| Comment | One commentator suggested that the term "actuary's employer" be changed to "actuary's principal" as it relates to retention of documentation. |
| Response | The task force agreed and changed the term to "actuary's principal." |
| **SECTION 4. COMMUNICATIONS AND DISCLOSURES** | |
| **Section 4.1, Appraisal Report** | |
| Comment | One commentator believed the report should include a summary of information provided/reviewed in connection with performing the appraisal. |
| Response | The task force believed that the disclosures called for in sections 4.1, 4.3, and 4.4 sufficiently covered what the commentator suggested. |
| **Section 4.3, Required Disclosure If Not an Actuarial Appraisal (now Appropriate Use of the Term "Actuarial Appraisal")** | |
| Comment | Several commentators thought that the disclosure required by section 4.3 was inappropriate, that it could be confusing to some readers, and that it perhaps could lead some actuaries to an inappropriate application of an actuarial appraisal simply to avoid the disclosure. |
| Response | The task force agreed that it was more important to disclose what was done rather than what was not done and revised the language in sections 4.3, 4.1(h), and 4.1(i) to address this concern. |
| Comment | Two commentators challenged the necessity for this type of disclosure. |
| Response | The task force believed that only appraisals that meet the definition in this standard should be considered actuarial appraisals. The task force wanted to distinguish any appraisal done by an actuary from an actuarial appraisal that meets the definition per this standard.<br><br>The task force revised the requirements of section 4.3 to state that actuarial communications related to an appraisal that does not meet the definition of an actuarial appraisal contained in this standard should not refer to the appraisal as an actuarial appraisal. |

| | |
|---|---|
| Comment | One commentator thought that there might be an inconsistency between this section and ASOP No. 41, *Actuarial Communications*, and asked what an actuary calls an actuarial communication that is an appraisal but not an actuarial appraisal as defined in ASOP No. 19. |
| Response | While acknowledging that this may be somewhat awkward, the task force believed that this problem would not prevent the actuary from preparing a suitable communication and disclosure and made no change. |
| **Section 4.7, Deviation from Standard (now 4.6)** | |
| Comment | One commentator thought that section 4.7 (now 4.6) was too harsh without proper context as might be found in the proposed *Introduction to the Actuarial Standards of Practice*. |
| Response | The task force revised this section to be consistent with the new wording developed by the ASB in light of the adoption of the *Introduction to the Actuarial Standards of Practice*. |
| **APPENDIX (now Appendix 1)** | |
| Comment | One commentator thought that since appraisals are often based on a set of stochastic projections, this should be acknowledged in the appendix. |
| Response | The task force agreed and added language on stochastic projections to the appendix. |
| Comment | One commentator thought that the discussion of current practices should make clearer the distinction between an appraisal value itself and the items, such as price or fair value, that may be influenced by the appraisal value. |
| Response | The task force believed the existing language was clear and made no change. |

ACTUARIAL STANDARDS BOARD

---

**Actuarial Standard**
**of Practice**
**No. 20**

# Discounting of Property/Casualty Unpaid Claim Estimates

**Revised Edition**

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

**Adopted by the**
**Actuarial Standards Board**
**September 2011**

---

**Doc. No. 163**

# TABLE OF CONTENTS

September 2011

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

**FROM:** Actuarial Standards Board (ASB)

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

This document contains the final version of a revision of ASOP No. 20, *Discounting of Property/Casualty Unpaid Claim Estimates*.

Background

ASOP No. 20 was originally adopted by the ASB in April 1992. The ASB charged the Casualty Committee with preparing this revision to ASOP No. 20 to reflect current terminology and practice, and to provide more consistency with the language in ASOP No. 43, *Property/Casualty Unpaid Claim Estimates*.

Exposure Draft

The exposure draft of this revised ASOP was issued in December 2010 with a comment deadline of May 1, 2011. The Casualty Committee carefully considered the five comment letters received and made changes in several sections in response. For a summary of the issues contained in these comment letters, please see appendix 2.

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

The ASB adopted this revised standard at its September 2011 meeting.

**ASOP No. 20—September 2011**

Casualty Committee of the ASB

Beth Fitzgerald, Chairperson

| | |
|---|---|
| Shawna Ackerman | Dale F. Ogden |
| Raji Bhagavatala | David J. Otto |
| Larry Haefner | Marc B. Pearl |
| Kenneth R. Kasner | |

Actuarial Standards Board

Albert J. Beer, Chairperson

| | |
|---|---|
| Alan D. Ford | Patricia E. Matson |
| Patrick J. Grannan | Robert G. Meilander |
| Stephen G. Kellison | James J. Murphy |
| Thomas D. Levy | James F. Verlautz |

*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. 20

# DISCOUNTING OF PROPERTY/CASUALTY UNPAID CLAIM ESTIMATES

## 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 relating to discounting an unpaid claim estimate to present value for property/casualty coverages. Any reference to "unpaid claims" in this standard includes (unless explicitly stated otherwise) the associated unpaid claim adjustment expense even when not accompanied by the estimation of unpaid claims.

1.2 Scope—This standard addresses the discounting to present value of unpaid claim estimates for property/casualty coverages. In determining the undiscounted unpaid claim estimate, the actuary should be guided by ASOP No. 43, *Property/Casualty Unpaid Claim Estimates*.

This standard applies when performing professional services related to developing discounted unpaid claim estimates only for events that have already occurred or will have occurred, as of an accounting date, exclusive of estimates developed solely for ratemaking purposes. This standard applies when estimating discounted unpaid claims for all classes of entities, including self-insureds, insurance companies, reinsurers, and governmental entities. This standard applies to estimates of gross amounts before recoverables (such as deductibles, ceded reinsurance, and salvage and subrogation), estimates of amounts after such recoverables, and estimates of amounts of such recoverables.

This standard applies only with respect to discounted unpaid claim estimates that are communicated as an actuarial finding in an actuarial document (as described in ASOP No. 41, *Actuarial Communications*). Actions taken by the actuary's principal regarding such estimates are beyond the scope of this standard.

The terms "reserves" and "reserving" are sometimes used to refer to "unpaid claim estimates" and "unpaid claim estimate analysis." In this standard, the term "reserve" is limited to its strict definition as an amount booked in a financial statement. Services described above are covered by this standard, regardless of whether the actuary refers to the work performed as "reserving," "estimating unpaid claims" or any other term.

This standard does not address the appropriateness of using discounted unpaid claim estimates in specific contexts.

This standard does not address the appropriateness of including a risk margin in specific contexts.

This standard does not apply to the estimation of items that may be a function of discounted unpaid claim estimates or claim outcomes, such as (but not limited to) loss-based taxes, contingent commissions and retrospectively rated premiums.

This standard does not apply to unpaid claims under a "health benefit plan" covered by ASOP No. 5, *Incurred Health and Disability Claims*, ASOP No. 6, *Measuring Retiree Group Benefit Obligations*, or included as "health and disability liabilities" under ASOP No. 42, *Determining Health and Disability Liabilities Other Than Liabilities for Incurred Claims*. However, this standard does apply to health benefits associated with state or federal workers' compensation statutes and liability policies.

An actuary may develop a discounted unpaid claim estimate in the context of issuing a written statement of actuarial opinion regarding property/casualty loss and loss adjustment expense reserves. In such context, the actuary should be guided by ASOP No. 36, *Statements of Actuarial Opinion Regarding Property/Casualty Loss and Loss Adjustment Expense Reserves*, to address additional considerations associated with the issuance of such a statement.

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 any actuarial work product covered by this standard's scope issued on or after January 1, 2012.

## Section 2. Definitions

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

2.1 Book Value—The value of an asset or assets, as included in a financial statement or other financial reporting context.

2.2 Discounted Unpaid Claim Estimate—The actuary's estimate of the present value of the

unpaid claim estimate.

2.3 Investment Risk—Uncertainty surrounding the realization of a specified investment income stream.

2.4 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.

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

2.6 Risk Margin—A provision for uncertainty in an unpaid claim estimate.

2.7 Unpaid Claim Estimate—The actuary's estimate of the obligation for future payment resulting from claims due to past events. For clarity and unless otherwise indicated, this estimate is on an undiscounted basis and the terms "unpaid claim estimate" and "undiscounted unpaid claim estimate" are used interchangeably throughout this standard.

## Section 3. Analysis of Issues and Recommended Practices

3.1 Appropriateness in Context—The actuary should be aware of the context in which the discounted unpaid claim estimate is to be used. The actuary should use a methodology and assumptions in the discounting process that are appropriate for that context.

3.2 Relative Significance of Assumptions—If both an undiscounted unpaid claim estimate and a discounted unpaid claim estimate are determined, the actuary should be aware of the differences in the relative significance of various assumptions between undiscounted and discounted unpaid claim estimates. For example, a development factor at an advanced maturity (such as a "tail factor") is less significant to a discounted unpaid claim estimate than to an undiscounted unpaid claim estimate. Conversely, a change in the timing of loss payments may be more significant to a discounted unpaid claim estimate.

3.3 Payment Timing for Discounting—The actuary should derive the discounted unpaid claim estimate based on assumptions regarding the timing of future payments. A range of estimates for the timing of payments may be reasonable.

3.3.1 Assumptions—The actuary should consider the reasonableness of the assumptions underlying the estimated timing of future payments. Assumptions generally involve significant professional judgment. Assumptions may be implicit or explicit, and may involve interpreting past data or projecting future trends. The actuary should use assumptions that, in the actuary's professional judgment, have no known significant bias to underestimation or overestimation of the identified intended measure and are not internally inconsistent.

The actuary should consider the sensitivity of the timing of future payments to reasonable alternative assumptions. (See section 4.1(f) for related disclosure requirements.)

The actuary may provide the principal with results based on a set of assumptions that differ from the actuary's assumptions, subject to appropriate disclosure as described in section 4.1.

3.3.2 Reconciliation of Estimates—The cumulative amount of payments used by the actuary for discounting should be consistent with the amount of the unpaid claim estimate, even if the latter has not been derived by techniques based on payment data.

3.3.3 Consistency of Assumptions—The actuary should use assumptions in estimating the timing of payments that are consistent with the assumptions used in developing the undiscounted unpaid claim estimate to the extent appropriate.

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. If such conditions are expected to be different from those prevailing during the historical evaluation period, the actuary should make appropriate adjustments.

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

3.3.6 Recoverables—The actuary should consider to the extent appropriate the timing and amount of expected recoverables (for example, deductibles, ceded reinsurance, and salvage and subrogation) when projecting the timing of future payments.

3.3.7 Unpaid Claim Components—The actuary should consider whether such components that have a material effect on the timing and amount of future payments have been reflected appropriately when projected future payments are comprised of multiple components (for example, line of business, accident year, claim adjustment expense).

3.4 Discount Rates—Projected future payments are discounted to present value using discount rate assumptions.

3.4.1 Discount Rate Basis—Discounted unpaid claim estimates may be used in a variety of contexts and the appropriate selected discount rates are a function of the context. A range of discount rates may be reasonable. Common approaches to selecting a discount rate include:

a. Risk-Free Approach—The selected discount rates in this approach approximate 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 those assumed in the discounting of unpaid claim estimates.

b. Portfolio Approach—The selected discount rates in this approach are based on the anticipated return from a selected portfolio of assets. The actuary should consider to the extent appropriate the relationships between the book and market values 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 on unpaid claims. The portfolio rates of return should be net of investment expenses.

c. Discount Rates Requested by Another Party— The actuary is responsible for the discount rates employed in preparing the actuarial findings unless the actuary appropriately discloses otherwise. The actuary should be guided by section 3.4.4 of ASOP No. 41, when using discount rates requested by another party.

3.4.2 Effect of Income Taxes—The actuary should consider whether the discount rates should be consistent with investment returns before or after the payment of income taxes.

3.5 Ranges—The actuary should consider the uncertainty in the discounted unpaid claim estimate when determining a range of estimates. The actuary should recognize that the uncertainty inherent in discounted unpaid claim estimates generally is different than the uncertainty inherent in undiscounted unpaid claim estimates.

## Section 4. Communications and Disclosures

4.1 Actuarial Communication—When issuing an actuarial communication subject to this standard, the actuary should consider the intended purpose or use of the discounted unpaid claim estimate and refer to ASOP Nos. 23 and 41 for additional guidance on disclosure.

In addition, consistent with the intended purpose or use, the actuary should disclose the following in an appropriate actuarial communication:

a. the assumptions as to selected discount rates and the basis for those assumptions, including the effect of income taxes, as described in section 3.4;

b. to the extent practical, the difference between the undiscounted unpaid claim

estimate and the discounted unpaid claim estimate;

c. whether the discounted unpaid claim estimate includes a risk margin, and if so, the basis for the risk margin (for example, stated percentile of distribution or stated percentage load above expected);

d. significant limitations, if any, that constrained the actuary's discounted unpaid claim estimate analysis such that, in the actuary's professional judgment, there is a significant risk that a more in-depth analysis would produce a materially different result;

e. the following dates: (1) the accounting date of the discounted unpaid claim estimate, which is the date used to separate paid versus unpaid claim amounts; (2) the valuation date of the discounted unpaid claim estimate, which is the date through which transactions are included in the data used in the discounted unpaid claim estimate analysis; and (3) the review date of the discounted unpaid claim estimate, which is the cutoff date for including information known to the actuary in the discounted unpaid claim estimate analysis, if appropriate;

f. specific significant risks and uncertainties, if any, with regard to actual timing of future payments;

g. significant events, assumptions, or reliances, if any, underlying the discounted unpaid claim estimate that, in the actuary's professional judgment, have a material effect on the discounted unpaid claim estimate, including assumptions regarding the accounting basis or application of an accounting rule;

h. 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);

i. 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

j. the disclosure in ASOP No. 41, section 4.4, if, in the actuary's professional judgment, the actuary otherwise deviated materially from the guidance of this ASOP.

4.2 Additional Disclosures—In certain cases, consistent with the intended purpose or use, the actuary may need to make the following disclosures in addition to those in section 4.1:

a. When the actuary specifies a range of estimates, the actuary should disclose the basis of the range provided.

b. When the unpaid claim estimate is an update of a previous estimate, the actuary should disclose changes in assumptions, procedures, methods or models that the actuary believes to have a material impact on the discounted unpaid 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.

## 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 1992, the 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*. This revision provides more consistency with the language in these two ASOPs, and is more relevant now with the increased use of discounting related to fair value calculations.

The appropriateness of discounting unpaid claim estimates in various financial reporting contexts is a controversial topic. Traditionally, property and casualty unpaid claim estimates have not been discounted except in certain narrowly defined circumstances. However, the issue of discounting reserves has been discussed for many years. For example, the issue appeared in the 1927 *Proceedings of the Casualty Actuarial Society,* in an article by Benedict D. Flynn. 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. The National Association of Insurance Commissioners has consistently been opposed to discounting except in certain specific circumstances. The accounting profession is studying the issue as it relates to financial reporting.

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.

The discounting of unpaid claim estimates and risk margins are both important elements in estimating the fair value of unpaid claim estimates, yet neither is explicitly included in most current financial reporting. Much of the rationale for unpaid claim estimate discounting is related to the issue of fair value; however, some believe that discounted unpaid claim estimates without risk margin may be a poorer estimate of fair value than undiscounted unpaid claim estimates.

Unpaid claim estimate discounting calculations are commonly performed in conjunction with

valuations of insurance companies for purposes such as acquisition or merger, or with transfers of portfolios or unpaid claims. In these instances and for other reasons, there are increasing numbers of circumstances where actuaries are asked to determine or evaluate discounted unpaid claim estimates.

## Current Practices

Actuaries are currently guided by the existing ASOP No. 20. Other ASOPs issued by the Actuarial Standards Board pertaining to discounting of unpaid loss and loss adjustment expense estimates include ASOP No. 23, *Data Quality*; ASOP No. 36; ASOP No. 41, *Actuarial Communications*; and ASOP No. 43. In addition, disclosures related to discounting are required by the National Association of Insurance Commissioners, and guidance may be forthcoming as part of new International Financial Reporting Standards that are currently under development.

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

## Appendix 2

## Comments on the Exposure Draft and Responses

The exposure draft of this ASOP, *Discounting of Property/Casualty Unpaid Claim Estimates*, was issued in December 2010 with a comment deadline of May 1, 2011. Five comment letters were received, one of which was submitted on behalf of multiple commentators. For purposes of this appendix, the term "commentator" may refer to more than one person associated with a particular comment letter. All comments were carefully considered and the Casualty 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.

The term "reviewers" in appendix 2 includes the Casualty Committee and the ASB. Also, unless otherwise noted, the section numbers and titles used in appendix 2 refer to those in this revised standard.

| SECTION 1. PURPOSE, SCOPE, CROSS REFERENCES, AND EFFECTIVE DATE | |
|---|---|
| **Section 1.2, Scope** | |
| Comment | One commentator suggested that the standard be modified to apply broadly to loss sensitive estimates, such as retrospective premiums or the payment of claims-related assessments. |
| Response | The reviewers note the focus of this standard was on discounting unpaid claim estimates and, therefore, section 1.2 reiterates similar exclusions found in section 1.2 of ASOP No. 43, *Property/Casualty Unpaid Claim Estimates*, which does not apply to loss sensitive estimates. |
| **SECTION 2. DEFINITIONS** | |
| Comment | One commentator noted that the terms "payments" and "future payments" were used throughout the document and suggested that the terms be defined to include the inflow of recoveries in order for it to be clear that potential inflows should be considered. |
| Response | Section 1.2 identifies that this standard applies to estimates of gross amounts before recoverables (such as deductibles, ceded reinsurance, and salvage and subrogation), estimates of amounts after such recoverables, and estimates of amounts of such recoverables. As such, the reviewers believe that it is clear that payments and future payments should consider potential inflows and outflows depending on the context. |
| Comment | One commentator suggested that a definition for discount rate be added to the standard. |
| Response | The reviewers do not believe that a definition is necessary because it is sufficiently described in sections 2.4 and 3.4. |
| **Section 2.1, Book Value** | |
| Comment | One commentator suggested that the definition of book value be removed because the term is not used in the standard. |
| Response | The reviewers note the definition is referenced in section 3.4.1(b) and thus made no change. |

| | |
|---|---|
| **Section 2.3, Investment Risk** | |
| Comment | Several commentators suggested expanding the list of examples of investment risk to include market risk and reinvestment risk. |
| Response | The reviewers believe that the definition is sufficiently clear without the need for examples. The examples given previously with credit risk and liquidity risk, and their associated definitions were removed in order to avoid the misunderstanding that they were an exhaustive list. |
| **SECTION 3. ANALYSIS OF ISSUES AND RECOMMENDED PRACTICES** | |
| **Section 3.1, Appropriateness in Context** | |
| Comment | Several commentators suggested that there may be circumstances where the actuary may use more than one methodology when performing the discounting calculation. For example, multiple methods may be used to determine a reasonable range of discounted unpaid claim estimates. |
| Response | The reviewers believe that actuaries generally use only one methodology when discounting unpaid claim estimates; however, the reviewers acknowledge that an actuary may want to use more than one methodology in some circumstances. The reviewers believe that use of more than one methodology in this context would be characterized as "a methodology" and hence no change was made. |
| **Section 3.3, Payment Timing for Discounting** | |
| Comment | Commentators interpreted the wording of section 3.3 to imply that an actuary must explicitly project the timing of future payments and that an implicit assumption regarding the timing might be a violation of the standard. |
| Response | The reviewers acknowledge that the timing of future payments might be estimated implicitly and rephrased this paragraph to avoid confusion. |
| **Section 3.4, Discount Rates** | |
| Comment | One commentator suggested that the term "discount rate" was incorrect and this standard should use "interest rate" in its place. |
| Response | The reviewers disagree. The term discount rate was chosen to be consistent with other standards of practice as well as other practice areas. |
| Comment | One commentator interpreted the approaches in section 3.4.1 to be a complete and exhaustive list and asked if that is what was intended. |
| Response | The approaches are not intended to be an exhaustive list. This section was rephrased to indicate that there may be other approaches. |
| Comment | One commentator suggested that some liability cash flows may extend beyond the normal range of asset maturity dates and that this standard provides no guidance in these situations. |
| Response | The reviewers believe techniques to address this situation, such as extrapolation, are consistent with the guidance in sections 3.4.1(a) and 3.4.1(b), and made no change. |
| Comment | One commentator requested that reference be made to U.S. Treasuries when discussing the use of a risk-free rate for the discount rate. |
| Response | The reviewers do not believe that sovereign debt or any other asset can be unequivocally defined as having low investment risk even though U.S. Treasuries have been historically viewed as low-risk. The reviewers believe that the risk-free approach in section 3.4.1(a) provides sufficient guidance for the actuary when approximating a |

| | |
|---|---|
| | risk-free interest rate. |
| Comment | One commentator suggested that a discount rate might be based on a benchmark portfolio of assets and questioned whether or not this was accepted practice according to the standard. |
| Response | The reviewers note that section 3.4.1(b) does not prescribe whether the portfolio of assets is derived from actual assets or a benchmark. The use of either type of asset will depend on the context as mentioned in section 3.4.1. |
| Comment | Several commentators objected to the phrase that it is "generally expected" that the actuary is responsible for the discount rates employed in preparing the actuarial findings and suggested section 3.4.1(c) be rephrased accordingly. |
| Response | The reviewers agree and rephrased section 3.4.1(c). |
| **Section 3.5, Ranges** | |
| Comment | One commentator noted that there are many types of ranges, such as a range of best estimates or a range of possible outcomes, and this section was not clear which type of range was being referenced. |
| Response | The reviewers changed the word "range" to "range of estimates" in this section. The type of range used will depend on the context and, according to section 4.2(a), the actuary should disclose the basis of the range, if one is provided. |
| **Section 3.6, Risk Margins [Exposure Draft]** | |
| Comment | One commentator disagreed that an undiscounted unpaid claim estimate contains a margin. |
| Response | This section was removed and a sentence was added to section 1.2, which states: "This standard does not address the appropriateness of including a risk margin in specific contexts." |
| **SECTION 4. COMMUNICATIONS AND DISCLOSURES** | |
| **Section 4.1, Actuarial Communication** | |
| Comment | One commentator suggested that the amount of the risk margin should be disclosed to the extent practical. |
| Response | The reviewers believe that in certain cases it may be difficult to quantify the amount of a risk margin and language requiring disclosure of the amount "to the extent practical" could place an undue burden on the actuary. |
| Comment | One commentator suggested deleting sections (d), (e), and (g) because they are duplicative with other standards. |
| Response | The reviewers acknowledge that the wording is similar to ASOP No. 43 but these sections are used in this standard to address the context of discounted unpaid claims estimates. |
| Comment | One commentator suggested that in some cases an estimate is discounted to a different date that may not coincide with the accounting date and suggested that section 4.1(e) include the concept of a separate "discount to" date. |
| Response | The reviewers agree that there may be circumstances where the estimate is discounted to a date different from the accounting date and believe this standard does not prevent the actuary from using and disclosing the different date. In addition, section 4.1(g) would require the disclosure of a different "discount to" date by virtue of it being a significant assumption underlying the discounted unpaid claim estimate. |