ACTUARIAL STANDARDS BOARD

Actuarial Standard
of Practice
No. 10

Methods and Assumptions for Use in Life Insurance Company Financial Statements Prepared in Accordance with GAAP

Revised Edition

Developed by a Task Force of the
Life Committee of the
Actuarial Standards Board

Adopted by the
Actuarial Standards Board
March 2000

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March 2000

TO: Members of Actuarial Organizations Governed by the Standards of Practice of the Actuarial Standards Board and Other Persons Interested in Life Insurance Company Financial Reporting According to Generally Accepted Accounting Principles (GAAP)

FROM: Actuarial Standards Board (ASB)

SUBJ: Revision of Actuarial Standard of Practice (ASOP) No. 10

This booklet contains the revision of Actuarial Standard of Practice No. 10, *Methods and Assumptions for Use in Life Insurance Company Financial Statements Prepared in Accordance with GAAP* (formerly titled *Methods and Assumptions for Use in Stock Life Insurance Company Financial Statements Prepared in Accordance with GAAP)*.

Development of the Standard

This booklet contains an updated and expanded version of ASOP No. 10, originally adopted by the ASB in 1989. The 1989 standard was developed by the American Academy of Actuaries (AAA) Committee on Life Insurance Financial Reporting for the Life Committee of the ASB.

In 1992, ASOP No. 10 was expanded. The purpose of the expansion was to incorporate portions of the AAA's Financial Reporting Recommendation (FRR) 1, *Actuarial Methods and Assumptions for Use in Financial Statements of Stock Life Insurance Companies Prepared in Accordance with Generally Accepted Accounting Principles;* FRR 5, *Recognition of Premiums;* FRR 6, *Participating Policies Sold by Stock Life Insurance Companies;* and AAA Interpretation 1-I, *Nonparticipating Guaranteed Renewable Life and Accident and Health Insurance Policies*. The standard was also reformatted. On adoption of the revised ASOP No. 10 in 1992, Recommendations 1, 5, and 6 and their accompanying interpretations were eliminated.

In 1995, the Financial Accounting Standards Board (FASB) issued Statement of Financial Accounting Standards (SFAS) No. 120, *Accounting and Reporting by Mutual Life Insurance Enterprises and by Insurance Enterprises for Certain Long-Duration Participating Contracts*, which extended the requirements of SFAS No. 60, *Accounting and Reporting by Insurance Enterprises*, and SFAS No. 97, *Accounting and Reporting by Insurance Enterprises for Certain Long-Duration Contracts and for Realized Gains and Losses from the Sale of Investments*, to mutual life insurers. SFAS No. 120 also established accounting for certain participating life insurance contracts of mutual life insurance enterprises (and stock life insurance subsidiaries of mutual life insurance enterprises). In the same year, the American Institute of Certified Public

Accountants (AICPA) issued Statement of Position (SOP) No. 95-1, *Accounting for Certain Insurance Activities of Mutual Life Insurance Enterprises*.

This revision of ASOP No. 10 provides guidance in light of these pronouncements, and includes other minor revisions in the text, as well.

Exposure Draft

An exposure draft of this revision was issued in June 1999 with a comment deadline of December 1, 1999. Nine comment letters were received. For a detailed summary of the substantive issues contained in the comment letters and the committee's responses to such, please see appendix 2.

The key change from the exposure draft was the modification of sections 1.2, 3.1, and 3.2 to clarify that the standard applies to actuaries reviewing historical life insurance company GAAP financial statements, as well as to actuaries preparing such statements.

The Task Force on Revision of ASOP No. 10 and the Life Committee would like to thank everyone who contributed comments and suggestions on the exposure draft.

The ASB adopted this revision at its March 2000 meeting.

ACTUARIAL STANDARD OF PRACTICE NO. 10

METHODS AND ASSUMPTIONS FOR USE IN LIFE INSURANCE COMPANY FINANCIAL STATEMENTS PREPARED IN ACCORDANCE WITH GAAP

STANDARD OF PRACTICE

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

1.1 Purpose—The purpose of this actuarial standard of practice (ASOP) is to provide guidance to the actuary in establishing appropriate actuarial methods and assumptions for life insurance companies' financial statements prepared in accordance with generally accepted accounting principles (GAAP).

1.2 Scope—This standard applies to actuaries selecting or reviewing methods or assumptions used in the preparation of historical life insurance company GAAP financial statements. The standard does not apply in purchase accounting situations. For investment contracts (as defined in Statement of Financial Accounting Standards (SFAS) No. 97, *Accounting and Reporting by Insurance Enterprises for Certain Long-Duration Contracts and for Realized Gains and Losses from the Sale of Investments*, promulgated by the Financial Accounting Standards Board (FASB)) that are issued by insurance companies, GAAP requires accounting as for other interest-bearing obligations. To the extent that the accounting treatment for these contracts does not involve actuarial methods or assumptions, such contracts are specifically excluded from the scope of this standard.

1.3 Cross References—When this standard refers to the provisions of other documents, the reference includes the referenced document as it may be amended or restated in the future, and any successor to it, by whatever name called. If the 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 revision of ASOP No. 10 will be effective for work on life insurance company financial statements for fiscal periods ending on or after October 15, 2000.

Section 2. Definitions

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

2.1 Costs—All benefit payments and expenses associated with issuing and maintaining a company's policies, with no explicit provision for profit.

2.2 Deferred Policy Acquisition Cost (DPAC)—The unamortized portion of those policy acquisition expenses that vary with, and are primarily related to, the acquisition of new and renewal insurance contracts and coverages.

2.3 GAAP Net Premium—The portion of gross premium that provides for costs.

2.4 Gross Premium—Amounts contractually required to be paid or anticipated to be contributed by the policyholder.

2.5 Indeterminate Premium Policies—Life and health insurance policies under which the insurer is obligated to provide coverage for an extended period of time, and under which premiums may vary at the discretion of the insurer.

2.6 Investment Contracts, Limited-Payment Contracts, and Universal Life-Type (UL-Type) Contracts—As each is defined in SFAS No. 97, ¶ 6–14.

2.7 Lock-In—A GAAP concept that requires the continuing use of original basis assumptions (issue, acquisition, or prior redetermination). This concept is further discussed in SFAS No. 60, *Accounting and Reporting by Insurance Enterprises*, SFAS No. 97, and in the American Institute of Certified Public Accountants (AICPA) Statement of Position (SOP) No. 95-1, *Accounting for Certain Insurance Activities of Mutual Life Insurance Enterprises*.

2.8 Net GAAP Liability—The GAAP policy benefit liability for a book of business less any associated DPAC.

2.9 Participating Policy—An insurance or annuity policy under which the policyholder is entitled to participate in the distributable surplus of the company.

2.10 Policy Benefit Liability—An accrued obligation to policyholders that relates to insured events, such as death or disability. This financial statement liability includes amounts accrued for deferred revenues under SFAS No. 97 and maintenance expenses under SFAS No. 60. The amount accrued for deferred revenue, known as the deferred revenue reserve, may or may not be shown separately in the company's financial statements, but is, in any case, included in the policy benefit liability for purposes of this standard.

2.11 Risk of Adverse Deviation—The risk that actual experience may differ from best-estimate assumptions in a manner that produces costs higher than assumed or revenues less than assumed.

Section 3. Analysis of Issues and Recommended Practices

3.1 The Role of the Actuary—Applicable accounting literature suggests, but does not require, that the actuary select the methods and assumptions used to establish net GAAP liabilities. To the extent the actuary selects or reviews such methods or assumptions, the actuary should be guided by this standard.

3.2 Preparation of Financial Statements—An actuary who selects or reviews methods or assumptions used in a life insurance company GAAP financial statement should be familiar with relevant accounting and actuarial literature, including, but not limited to, SFAS No. 60, SFAS No. 97, SFAS No. 120, *Accounting and Reporting by Mutual Life Insurance Enterprises and by Insurance Enterprises for Certain Long-Duration Participating Contracts*; and the AICPA's *Audits of Stock Life Insurance Companies* (*Audit Guide*), *Practice Bulletin 8,* and SOP No. 95-1.

3.3 Categories of Assumptions—Two general types of actuarial assumptions are used in the preparation of GAAP financial statements. Best-estimate assumptions as of the financial statement date are required in certain instances. In others, assumptions that provide for the risk of adverse deviation are required. Relevant accounting standards call for best-estimate assumptions to be periodically reviewed and updated to reflect emerging experience, whereas assumptions with provision for risk of adverse deviation are subject to lock-in until a loss recognition situation arises. The actuary should exercise care to ensure that the proper category of assumptions is used.

3.4 Best-Estimate Assumptions—In instances where GAAP requires best-estimate assumptions, the actuary should choose assumptions that, in his or her judgment, reflect the most likely outcome of events. Best-estimate assumptions selected by the actuary should be reasonable. Except in a loss recognition situation, accounting practice usually follows the convention that, given two choices that are deemed equally likely, the one that should be selected is the one that produces the larger liability or smaller asset.

3.4.1 Items to Be Considered—In selecting best-estimate assumptions, the actuary should consider the characteristics and magnitude of the company's business; the maturity of the company and its rate of growth; the prior experience of the company, to the extent considered relevant, and the trends in that experience; and medical, economic, social, and technological developments that might affect future experience.

3.4.2 Internal Consistency—The actuary should select best-estimate assumptions that, when taken together, reflect all pertinent areas of expected future experience and are specific to the particular product, line of business, or block of business being valued. These assumptions should be comprehensive and internally consistent.

3.4.3 Sources of Data—In forming a judgment as to the appropriate assumptions, the actuary should consider available pertinent data. To the extent possible and appropriate, the actuary should consider data specific to the company for which the assumptions are being made. Where such data are not available or are not credible, the actuary should consider industry data or data from other similarly situated companies, modified as appropriate. ASOP No. 23, *Data Quality*, gives further guidance to the actuary on issues related to the selection of data, use of imperfect data, and reliance on data supplied by others.

3.5 Provision for Risk of Adverse Deviation—In certain instances GAAP requires a provision for the risk of adverse deviation in actuarial assumptions.

3.5.1 Degree of Risk—In selecting assumptions that include provision for the risk of adverse deviation, the actuary should consider the degree to which the assumption is subject to such risk in total and at each future duration. Provision for the risk of adverse deviation should be reasonable in the actuary's judgment.

3.5.2 Relationship to Best-Estimates—In selecting assumptions that include provision for the risk of adverse deviation, the actuary should consider whether such assumptions bear a reasonable relationship to the best-estimate assumptions. Under GAAP, the provision for the risk of adverse deviation should not increase the resulting GAAP net premium above the gross premium. The resulting GAAP net premium may be less than the gross premium, provided that due provision has been made for the risks of adverse deviation. Note that the GAAP net premium prior to provision for the risk of adverse deviation may be greater than the gross premium.

The actuary should establish that the aggregate net GAAP liability determined using assumptions that include provision for the risk of adverse deviation equals or exceeds a similarly determined net liability determined using best-estimate assumptions without provision for the risk of adverse deviation.

3.6 Methods—One purpose of GAAP is to achieve matching of revenue and expenses. This matching is accomplished primarily through establishing policy benefit liabilities and DPAC assets. Methods used to determine policy benefit liabilities and DPAC assets will vary according to whether SFAS No. 60, SFAS No. 97, or SOP No. 95-1 applies. The actuary should use the methods that are appropriate to the type of contract.

For contracts subject to the requirements of SFAS No. 60, premiums are included in revenues, while benefits and other expenses are included in expenses. Matching is achieved by accruing costs against premiums.

For UL-type contracts subject to SFAS No. 97, amounts assessed against the policyholder are included in revenue; benefits in excess of the policy value and other expenses are included in expenses. Matching is achieved by amortizing deferrable acquisition expenses and unearned revenue against margins.

For contracts subject to SOP No. 95-1, premium and benefit recognition is identical to the requirements of SFAS No. 60, but amortization revenue is analogous to that used for UL-type contracts subject to SFAS No. 97.

3.6.1 Lock-In/Adjustment—Unless loss recognition or a significant difference between actual and expected persistency exists, policy benefit liabilities and DPAC for insurance contracts subject to SFAS No. 60 are subject to lock-in. Where lock-in is applicable under SFAS No. 60, the actuary should base the amortization on the same assumptions as those underlying the calculation of the GAAP policy benefit liability.

The actuary should adjust DPAC and the amortization thereof for UL-type contracts, investment contracts, and participating contracts subject to SOP No. 95-1 as conditions warrant.

3.6.2 Recognition of Loss—GAAP requires the recognition of a loss when it is probable and can be reasonably estimated (SFAS No. 5, *Accounting for Contingencies*). This is further discussed in SFAS No. 60, SFAS No. 97, and SOP No. 95-1. When asked to perform a loss recognition analysis, the actuary should use best-estimate assumptions.

3.6.3 Recognition of Premiums—The actuary should use appropriate methods to recognize premiums in income. These are determined by the applicable accounting standards and vary by the type of contract. The recognition of GAAP net premiums in the GAAP benefit liability and DPAC computations should be consistent with the treatment of gross premiums in the income statement.

When deferred premiums are appropriate, any excess of gross premium over net premium should not be recognized in net GAAP income until the related gross premium is due. This applies to life and health contracts (except credit) under SFAS No. 60 and SOP No. 95-1 if it is expected that the policy may be renewed for more than one year with reasonably predictable persistency. For credit insurance, or where persistency is such that a term of one year or less is expected, gross premiums should be recognized as revenue over the premium period by means of an unearned gross premium liability.

3.7 Special Situations—In preparing GAAP financial statements, the actuary will encounter circumstances that require significant interpretation of the general considerations already addressed in this standard. Two of these situations are sufficiently common to be addressed in this standard.

3.7.1 Participating Policies That Are Subject to SFAS No. 60—GAAP requires that only the portion of profits that inures to the benefit of stockholders is reflected in reported results. Profits that are derived from participating policies and inure to the benefit of stockholders may be restricted (by law, regulation, company practice, or otherwise) or may be unrestricted. The actuary should use the appropriate methods and assumptions for each of the following two circumstances.

a. Restricted Stockholder Profits—Profits in excess of the amount inuring to the benefit of stockholders should be accumulated in a participating policyholder account. Assumptions, including provision for the risk of adverse deviation, may be established at a level consistent with those underlying gross premiums or may be comparable to those used for the company's nonparticipating business. Policyholder dividends would generally be treated as disbursements of predividend profits, not as disbursements in the liability calculation.

b. Unrestricted Profits—Policyholder dividends should be treated as disbursements in the liability calculation. Assumptions may include a somewhat smaller provision for the risk of adverse deviation, given the flexibility provided by the dividend scale.

3.7.2 Indeterminate Premium Policies—Provided the policy is not, in substance, a UL-type contract, SFAS No. 60 is applicable to indeterminate premium policies. The premium flexibility associated with these policies may affect the application of SFAS No. 60, such as the use of a smaller provision for the risk of adverse deviation. The ability and willingness of the insurer to change premiums may be anticipated in performing loss recognition. Assumptions may be "unlocked" at gross premium change dates. If assumptions are adjusted, it should be done prospectively, without a change in the liability as of the valuation date.

3.8 Materiality—It may be appropriate to use assumptions and techniques (for example, models) that simplify the calculation of policy benefit liabilities and DPAC amortization. For example, it may be appropriate to assume that policy anniversaries occur on July 1 of each calendar year. Another example is that statutory reserves might be deemed a proxy for net GAAP reserves on small or old blocks of business. Simplification and approximations are acceptable only if the results can reasonably be expected not to differ materially from the results of detailed calculations. The actuary may seek guidance from accounting professionals on the issue of materiality.

Section 4. Communications and Disclosures

4.1 Documentation—The actuary should maintain adequate documentation of the assumptions selected and methods used, such that another actuary qualified in the same practice area could assess the reasonableness of the work.

4.2 Prescribed Statement of Actuarial Opinion (PSAO)—This ASOP does not require a prescribed statement of actuarial opinion (PSAO) as described in the *Qualification Standards for Prescribed Statements of Actuarial Opinion* promulgated by the American Academy of Actuaries (AAA). However, law, regulation, or accounting requirements may also apply to an actuarial communication prepared under this standard, and as a result, such actuarial communication may be a PSAO.

4.3 Deviation from Standard—An actuary must be prepared to justify the use of any procedures that depart materially from those set forth in this standard and must include, in any actuarial communication disclosing the results of the procedures, an appropriate statement with respect to the nature, rationale, and effect of such departures.

Appendix 1

Background and Current Practices

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

Background

Determination of generally accepted accounting principles (GAAP) is the responsibility of the accounting profession. The American Institute of Certified Public Accountants (AICPA) developed *Audits of Stock Life Insurance Companies* (*Audit Guide*) in 1972 with the cooperation of life insurance company accountants and actuaries. The *Audit Guide* represented the first effort by the accounting profession to establish GAAP for the life insurance industry. The Financial Accounting Standards Board (FASB) is now responsible for the determination of GAAP for companies whose financial statements are audited. It does so through the promulgation of Statements of Financial Accounting Standards (SFAS).

GAAP standards for stock life insurance companies are primarily established by SFAS No. 60, *Accounting and Reporting by Insurance Enterprises*, and SFAS No. 97, *Accounting and Reporting by Insurance Enterprises for Certain Long-Duration Contracts and for Realized Gains and Losses from the Sale of Investments*. The FASB issued SFAS No. 60, which generally codified the concepts in the *Audit Guide*, in 1972. In 1987, the FASB issued SFAS No. 97, which (1) established GAAP for certain forms of insurance contracts not specifically addressed by SFAS No. 60, primarily UL-type contracts; (2) established GAAP for investment contracts not involving a significant insurance component; and (3) revised GAAP for limited-payment contracts. In November 1990, the AICPA issued *Practice Bulletin 8,* providing guidance for certain questions related to SFAS No. 97. In 1995, the FASB issued SFAS No. 120, *Accounting and Reporting by Mutual Life Insurance Enterprises and by Insurance Enterprises for Certain Long-Duration Participating Contracts*, which extended the requirements of SFAS No. 60 and SFAS No. 97 to mutual life insurers; and established accounting for certain participating life insurance contracts of mutual life insurance enterprises (and stock life insurance subsidiaries of mutual life insurance enterprises) in its Statement of Position (SOP) No. 95-1, *Accounting for Certain Insurance Activities of Mutual Life Insurance Enterprises*. This statement permits other stock life insurers to apply its provisions to participating life insurance contracts that meet the SOP’s conditions. Other standards are also relevant, as is prevailing accounting practice in areas not specifically addressed by an SFAS. Prior to the issuance of SFAS No. 120, mutual life insurers’ statutory financial statements were, in practice, described as being in accordance with GAAP.

Current Practices

The AAA had promulgated *Financial Reporting Recommendations and Interpretations* applicable to GAAP for insurance companies, thus establishing guidance to actuaries in this area before the formal appearance of ASOP No. 10 in 1989. Because of changes in GAAP resulting from SFAS No. 97, SFAS No. 120, and evolution in actuarial practice, it is appropriate once again to replace certain existing guidance and to promulgate a more generally applicable standard of actuarial practice with respect to life insurance company GAAP financial statements.

Appendix 2

Comments on the Exposure Draft and Committee Responses

The exposure draft of this actuarial standard of practice (ASOP) was issued in June 1999, with a comment deadline of December 1, 1999. (Copies of the exposure draft are available from the ASB office.) Nine comment letters were received, which the Life Committee carefully considered. Summarized below are the significant issues and questions contained in the comment letters, printed in standard type. The Life Committee's responses to these issues and questions appear in **boldface**.

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

Section 1.2, Scope—One commentator suggested that actuaries are not only involved in the preparation of financial statements, but that some review historical GAAP financial statements. **The committee agreed and modified the wording to reflect the role of some actuaries to review historical GAAP financials. In addition, the committee modified wording in section 3.1, The Role of the Actuary, and section 3.2, Preparation of Financial Statements, to reflect this role.**

The same commentator also suggested the inclusion of Purchase GAAP in the scope. **The committee believes that Purchase GAAP should be excluded from the standard. Many changes in the ASOP would have to be made to accommodate Purchase GAAP. In addition, industry practice varies considerably. Nonetheless, in many cases, Purchase GAAP requires either best-estimate assumptions or provisions for the risk of adverse deviation. In these instances, even though Purchase GAAP is excluded from this ASOP, it might still be reasonable for an actuary to apply the spirit of this ASOP.**

<u>Section 2. Definitions</u>

Section 2.1, Costs, and section 2.3, GAAP Net Premium—One commentator suggested that it would be more logical to exclude profits from the definition of *costs* instead of from the definition of *GAAP Net Premium*. **The committee agreed and modified the wording.**

<u>Section 3. Analysis of Issues and Recommended Practices</u>

Section 3.1, The Role of the Actuary—**See the comments under section 1.2, Scope.**

Section 3.2, Preparation of Financial Statements—**See the comments under section 1.2, Scope.** Two commentators suggested the inclusion of additional accounting guidance. **The committee believes that the accounting guidance listed is the most relevant to this standard, and feels**

comfortable that the phrase "including, but not limited to" encompasses the other guidance as necessary.

Section 3.3, Categories of Assumptions—One commentator believed that *loss recognition* should be defined. **The committee believes that this subject is sufficiently defined in the accounting literature.**

Section 3.4, Best-Estimate Assumptions—Three commentators were uncomfortable with the phrase *most likely outcome* and suggested using more defined statistical measures such as *mean, median*, or *mode*. One of the commentators strongly suggested that *mean expected value* is a much more appropriate measure, although this commentator acknowledged that accounting literature uses the phrase *most likely*.

Although the committee believes that *mean expected value* has theoretical merit for some assumptions, the committee does not want to change current practice by requiring its use. The standard calls for the actuary to use judgment and pick reasonable assumptions. Therefore, the committee did not modify the wording.

Two commentators suggested that the guidance for assumptions in loss recognition situations should be clearer. **The committee believes that the current language is sufficiently clear. Therefore, the committee did not modify the wording.**

Section 3.6, Methods—One commentator suggested some clarification was necessary in the phrases describing matching of revenue and expenses. **The committee agreed and changed the phrase in the second paragraph from "amortizing costs against premiums" to "*accruing* costs against premiums."**

Section 3.6.3, Recognition of Premiums—One commentator suggested that the guidance for credit insurance should be slightly different depending upon exactly the type of coverage. For example, the pro rata method is not commonly used for single premium credit insurance with decreasing benefits. **The committee agreed and made the language more general by deleting the reference to the pro rata method.**

The committee thanks everyone who took the time and made the effort to comment on the exposure draft. The input was helpful in developing the standard.