Note: This version of ASOP No. 10 is no longer in effect. It was superseded in 2000 by ASOP No. 10, Doc. No. 068.

ACTUARIAL STANDARD
OF PRACTICE
NO. 10

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

1992 Revision

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

Approved by the Life Committee of the Actuarial Standards Board

Adopted by the Actuarial Standards Board October 1992

(Doc. No. 039)
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TO: Members of Actuarial Organizations Governed by the Standards of Practice of the Actuarial Standards Board and Other Persons Interested in Life Insurance Company GAAP Financial Reporting

FROM: Actuarial Standards Board (ASB)

SUBJ: Actuarial Standard of Practice No. 10 (1992 Revision)

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

**Background**

This booklet contains an updated and expanded version of ASOP No. 10, originally adopted by the ASB in 1989. (The original 1989 standard was developed by the American Academy of Actuaries (AAA) Committee on Life Insurance Financial Reporting for the Life Committee of the ASB.) The purpose of the expansion is to incorporate portions of Recommendation 5, *Recognition of Premiums*; Recommendation 6, *Participating Policies Sold by Stock Life Insurance Companies*; and Interpretation 1-I, *Nonparticipating Guaranteed Renewable Life and Accident and Health Insurance Policies*, of the *Financial Reporting Recommendations and Interpretations* of the AAA. The incorporation of these items was part of a program of reformatting previously published standards and revising them when appropriate. As part of this program and upon adoption of the revised ASOP 10, Recommendations 1, 5, and 6 and their accompanying Interpretations have been eliminated.

This revised standard was submitted to the membership of the AAA and other interested persons in exposure draft form in October 1991. Comments were received into March 1992. The task force of the Life Committee of the ASB that developed the exposure draft considered the comments in preparing the final version of the document for approval by the Life Committee. A summary of comments received and the committee's disposition of them follows.
Responses to Comments on the Exposure Draft

The Life Committee is grateful to the respondents who submitted comments on the exposure draft. Eleven comment letters were received. Changes were recommended and considered for both the underlying text of the original 1989 standard and text added or revised and included in the exposure draft. All comments were considered and a number of changes were made in the exposure draft material to produce this standard, which was approved by the Life Committee in August 1992. Comments received are summarized below, with the committee’s responses in boldface.

Several respondents expressed an interest in revising the draft to delineate more explicitly the requirements imposed by Statement of Financial Accounting Standards (SFAS) No. 60 and SFAS No. 97 of the Financial Accounting Standards Board. Comments of this nature were received with respect to section 2.2, Deferred Policy Acquisition Cost (DPAC) Asset, and sections 5.3, Categories of Assumptions; 5.4, Best Estimate Assumptions, and 5.5, Provision for Risk of Adverse Deviation. As the practicing actuary will be familiar with the requirements imposed by the two financial accounting standards, such changes were generally not incorporated into the final standard. Rather, the standard addresses the actuarial considerations relevant to these requirements, and it is left to the practicing actuary to determine which such considerations bear on the actuary’s work.

One respondent noted that the exposure draft attributed to generally accepted accounting principles (GAAP) the requirement that under lock-in, original-basis assumptions continue to be used unless a need for loss recognition develops. The Audit Guide of the American Institute of Certified Public Accountants allows adjustment in DPAC amortization (and perhaps GAAP policy benefit liabilities) if actual persistency experience differs significantly from that assumed. The standard was modified to reflect this comment.

One respondent suggested including definitions of various additional types of assumptions such as policy and experience. The committee did not consider these types of assumptions to be pertinent to the practice areas addressed by the standard. Another respondent suggested including definitions of the terms redetermination and loss recognition. The committee considered these items to be sufficiently addressed elsewhere in the literature.

As a result of comments received from several respondents, the language in section 3, Background and Historical Issues, and section 4, Current Practices and Alternatives, was broadened to incorporate changes due to the time elapsed since the original standard was adopted.
One respondent commented on the requirement in section 5.1, Preparation of Financial Statements, that the practicing actuary should be familiar with relevant accounting literature, suggesting that it be expanded to include actuarial literature as well. This suggestion was adopted by moving the requirement from section 3 to section 5.1.

Several respondents requested that section 5.2, Actuarial Judgment, be modified to clarify the extent to which actuarial judgment is used to establish net GAAP liabilities. The wording of this section was modified to reflect these suggestions.

One respondent questioned the statement in section 5.3, Categories of Assumptions, A. whereas assumptions with provision for risk of adverse deviation are subject to 'lock-in', noting that in certain situations best-estimate assumptions are also subject to lock-in. The committee agreed and the standard now reflects the broader applicability of lock-in.

Several respondents commented on section 5.4, Best-Estimate Assumptions, and its related paragraphs. These respondents appeared to consider the obligation to select assumptions that reflect the actuary's judgment as to the most likely outcome to be too onerous. The committee agreed that this is indeed a challenging responsibility, but considers it to be a requirement supported in the relevant literature. It does not require the actuary to predict the future, but to use actuarial training and experience to select assumptions in light of this requirement.

Respondents also questioned whether the statement, There is no necessary relationship between best-estimate assumptions and those used for product pricing, might possibly imply that there are relationships between best-estimate assumptions and other types of assumptions. The committee agreed that the statement in question was too limited and appropriately modified it.

One respondent said that the practicing actuary was placed in a dilemma by the requirement that GAAP net premium resulting from assumptions that include provision for the risk of adverse deviation be not greater than the gross premium. In instances where provisions for adverse deviation cause the net premium to exceed the gross premium, the originally established provisions for the risk of adverse deviation should be reduced until the required relationship is attained. This point has been clarified in the standard.
One respondent noted that section 5.6, Methodologies, appeared to use the terms revenue and expense to mean something different from traditional definitions. This is not the case, and, upon review, the committee did not modify this section.

Many additional comments were made with the intent of more clearly stating the requirements of the standard or of eliminating overlap with other literature. In general, these suggestions were adopted.

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ACTUARIAL STANDARD OF PRACTICE NO. 10

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

1992 Revision

PREAMBLE

Section 1. Purpose, Scope, and Effective Date

1.1 Purpose
This standard sets out the considerations that bear on the actuary's professional work in the determination of policy benefit liabilities and deferred policy acquisition cost assets (DPAC) in accordance with generally accepted accounting principles (GAAP). With respect to the preparation of GAAP financial statements for life insurance companies, actuaries and actuarial judgments are frequently relied on. The purpose of this standard is to identify the considerations involved in establishing appropriate actuarial methods and assumptions used for GAAP financial statements.

1.2 Scope
The recommended practices contained in this standard are limited to the use of actuarial methods and assumptions in connection with the preparation of historic stock life insurance company GAAP financial statements. The standard does not apply to purchase accounting situations. For investment contracts (as defined in Statement of 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, they are specifically excluded from the scope of this standard.

1.3 Effective Date
Actuarial Standard of Practice No. 10 was originally adopted July 14, 1989, effective for all financial statements prepared for fiscal periods beginning
Section 2. Definitions

As used in this standard, the following terms will have the indicated definitions:

2.1 Costs C All benefit payments and expenses associated with issuing and maintaining a company's policies.

2.2 Deferred Policy Acquisition Cost (DPAC) Asset C 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 Estimated Gross Profit C As defined in SFAS No. 97, & 22.

2.4 GAAP Net Premium C The portion of gross premium that provides for the costs. It contains no explicit provision for profit.

2.5 Gross Premium C Amounts contractually required to be paid or anticipated to be contributed by the policyholder.

2.6 Indeterminate Premium Policies C 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.

2.7 Investment Contracts, Limited-Payment Contracts, and Universal Life-Type (UL-Type) Contracts C As defined in SFAS No. 97, & 6B14.

2.8 Lock-in C A GAAP concept which requires the continuing use of original basis assumptions (issue, acquisition, or prior redetermination). This concept is further discussed in the FASB's SFAS No. 60 (Accounting and Reporting by Insurance Enterprises) and SFAS No. 97.
2.9 **Net GAAP Liability** The GAAP policy benefit liability for a book of business less any associated DPAC.

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

2.11 **Policy Benefit Liability** An accrued obligation to policyholders that relates to insured events, such as death or disability; the financial statement liability for future policy benefits. This liability includes amounts accrued for deferred revenues. This deferred revenue reserve may be separately identified in the company’s financial statements.

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

### Section 3. Background and Historical Issues

Determination of GAAP is the responsibility of the accounting profession. *Audits of Stock Life Insurance Companies* (the *Audit Guide*) was developed by the American Institute of Certified Public Accountants (AICPA) in 1972, with the cooperation of life insurance company actuaries and accountants. The *Audit Guide* represented the first effort by the accounting profession to establish GAAP for the life insurance industry. The FASB is now responsible for the determination of GAAP for public companies. It does so through the promulgation of statements of financial accounting standards (SFAS).

GAAP for stock life insurance companies is primarily established by SFAS No. 60 and SFAS No. 97. In 1982, the FASB issued SFAS No. 60, which generally codified the concepts in the *Audit Guide*. 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 universal life (UL) insurance; (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. Other standards are also relevant, as is prevailing accounting practice in areas not specifically addressed by an SFAS.

The AAA has promulgated *Financial Reporting Recommendations and Interpretations* applicable to GAAP for insurance companies, thus establishing actuarial standards of practice in this area. Because of their specificity, as well as changes in GAAP resulting
from SFAS No. 97 and evolution in actuarial practice, it is appropriate to replace certain existing guidance and to promulgate a more generally applicable standard of actuarial practice with respect to stock life insurance company GAAP financial statements. The present standard represents an expansion of ASOP No. 10. It replaces Recommendations 5 and 6 and Interpretation 1-I of the AAA *Financial Reporting Recommendations and Interpretations.*

Section 4. Current Practices and Alternatives

Current practices related to the preparation of GAAP financial statements for life insurance companies have been generally consistent with existing *Financial Reporting Recommendations and Interpretations* applicable to GAAP for insurance companies. Application of these *Recommendations and Interpretations* to certain life insurance contracts (primarily UL-type contracts) has led to various methods being used for the proper reporting of the net GAAP liabilities for these contracts. The methods incorporated into SFAS No. 97 are similar to those used by some insurance companies prior to its issuance. However, in certain respects, the adoption of SFAS No. 97 required the use of methods not previously used for GAAP financial reporting.
STANDARD OF PRACTICE

Section 5. Analysis of Issues and Recommended Practices

5.1 Preparation of Financial Statements An actuary who participates in the preparation of a stock life insurance company GAAP financial statement should be familiar with relevant accounting literature, including the Audit Guide, SFAS No. 60, SFAS No. 97, Practice Bulletin 8, and other relevant accounting and actuarial literature.

5.2 Actuarial Judgment Except where otherwise required by SFAS No. 97, it is appropriate to select the assumptions used to establish net GAAP liabilities on the basis of the actuary's judgment. The Audit Guide suggests that, among other things, it may be necessary to rely on an actuary's judgment in certain areas of an actuary's expertise, including, but not limited to, assumptions as to lapse, mortality, morbidity, and interest rates, and expenses.

5.3 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. Best-estimate assumptions should 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 assure that the proper category of assumptions is used.

5.4 Best-Estimate Assumptions GAAP requires that best-estimate assumptions reflect the most likely outcome. Best-estimate assumptions should be reasonable and realistic. Except in a loss recognition situation, accounting practice usually follows the convention that given two choices which are deemed equally likely, the one that should be selected is the one that produces the larger liability or smaller asset.

5.4.1 Items to be Considered In establishing best-estimate assumptions, items that should be considered include: the characteristics and magnitude of the company's business; the age 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 which might affect costs. There is no necessary relationship between the best-estimate assumptions and those used for product pricing.

5.4.2 Most Likely Outcome Best-estimate assumptions should reflect the
actuary's judgment at each valuation date as to the most likely future outcome with respect to each assumption made.

5.4.3 **Internal Consistency**

Taken together, a set of best-estimate assumptions should reflect all pertinent areas of expected future experience and should be specific to the particular product, line of business, or block of business being valued. The set of assumptions should be comprehensive and internally consistent.

5.4.4 **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, data specific to the company for which the assumptions are being made should be considered. Where such data are not available or are not credible, it is appropriate to consider industry data or data from other similarly situated companies, modified as appropriate.

5.5 **Provision for Risk of Adverse Deviation**

In certain instances GAAP requires a provision for the risk of adverse deviation in setting actuarial assumptions.

5.5.1 **Degree of Risk**

Assumptions that include provision for the risk of adverse deviation should be established in consideration of 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 circumstances.

5.5.2 **Relationship to Best Estimates**

Assumptions that include provision for the risk of adverse deviation should bear a reasonable relationship to the best-estimate assumptions. Under GAAP accounting, the provision for the risk of adverse deviation should be chosen so as not to increase the resulting net premium above the gross premium. The resulting 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 net premium prior to provision for 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.

5.6 **Methodologies**

One purpose of GAAP is to achieve matching of revenue and
expenses. For insurance contracts, this matching is accomplished primarily through establishing policy benefit liabilities and DPAC assets. For insurance contracts which are subject to the requirements of SFAS No. 60, premiums are included in revenues, while benefits and other expenses are included in expenses. 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 costs.

5.6.1 Simplification

It may be appropriate to use models to 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. Simplification should not materially distort the results, and should be appropriate to the circumstances.

5.6.2 Deferred Policy Acquisition Cost (DPAC)

Acquisition expenses associated with contracts issued by insurance companies are usually significant in relation to ongoing maintenance and administration expenses. GAAP for life insurance companies requires that certain acquisition expenses be deferred and recognized in proportion to anticipated gross premiums, estimated gross profits, or some other appropriate basis, depending on whether SFAS No. 60 or SFAS No. 97 applies. The amount of DPAC should be separately disclosed in the financial statements.

5.6.3 Lock-in/Adjustment

Unless loss recognition or a significant difference between actual and expected persistency exists, policy benefit liabilities and DPAC not associated with UL-type or investment contracts are subject to lock-in under SFAS No. 60. DPAC and the amortization thereof for UL-type and investment contracts should be adjusted as conditions warrant.

5.6.4 Recognition of Loss

Regular reviews of the adequacy of the net GAAP liability should be conducted when experience indicates that the recognition of a loss may be required. 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 and SFAS No. 97.

5.6.5 Basis of Amortization

Methods used to amortize DPAC should be structured to produce a reasonable matching of expenses with revenue, as required by SFAS No. 60 or SFAS No. 97. Where lock-in is applicable,
the amortization should be based on the same assumptions as those underlying the calculation of the GAAP policy benefit liability.

5.6.6 Universal Life-Type (UL-Type) Contracts
The GAAP policy benefit liability for UL-type policies is determined as the aggregated policyholder accounts, plus one or more additional items which may or may not be actuarial in nature. The calculation of any such actuarial items should reflect all contractual provisions and anticipated differences in the incidence of revenue and the associated costs. The DPAC should be amortized to produce a reasonable matching of costs with expected gross profits, as defined in SFAS No. 97.

5.6.7 Matching with Premium
Methods used to determine net GAAP liabilities for non-UL-type and non-investment contracts should be structured to produce a reasonable matching of costs with expected premiums. The reserve methodology should reflect all aspects of the contract and related agreements for which the reserve is established.

5.6.8 Recognition of Premiums
Appropriate methods to be used to recognize premiums in income are defined by the applicable accounting standards and vary by the type of contract. The recognition of 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 included in premium income, any excess of gross premium over net premium should not be recognized in revenue until the related gross premium is due. This applies to life and health contracts (except credit) 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 on a pro rata basis over the premium period by means of an unearned gross premium liability.

5.7 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.

5.7.1 Participating Policies Sold by Stock Life Insurance Companies
In applying GAAP to participating policies, the actuary should ensure that
only that portion of profits inuring to the benefit of stockholders is reflected in reported results. Profits attributable to participating policies inuring to the benefit of stockholders may be restricted (by law, regulation, company practice, or otherwise) or may be unrestricted. Different methods and assumptions may be appropriate for these two circumstances.

a. Restricted Stockholder Profits

Profits in excess of the amount inuring to the benefit of stockholders should be accumulated in a participating policyholders 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. Policy-holder dividends would generally be treated as a disbursement of pre-dividend profits, with no provision as a disbursement in the liability calculation.

b. Unrestricted Stockholder Profits

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.

5.7.2 Indeterminate Premium Policies

Provided the policy is not, in substance, a UL-type policy, SFAS No. 60 is applicable to indeterminate premium policies. The premium flexibility associated with these policies may affect the application of SFAS No. 60. It is considered reasonable to use a somewhat 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.

5.8 Materiality

This standard of practice should be applied with due regard for materiality, an issue which may require discussion with accounting professionals.
Section 6. Communications and Disclosures

6.1 Conformity with Standard
The actuary should be prepared to describe the actuarial work performed for inclusion in the GAAP financial statement, and to demonstrate that such work conforms to this standard of practice.

6.2 Documentation
The actuary should maintain adequate documentation of the assumptions and methods supporting the net GAAP liabilities that he or she provides.

6.3 Deviation from Standard
An actuary must be prepared to defend the use of a procedure which differs materially from this standard and must include, in any actuarial communication disclosing the result of the procedure, an appropriate and explicit statement with respect to the nature, rationale, and effect of such use.