ACTUARIAL STANDARDS BOARD

Actuarial Standard
of Practice
No. 22

Statements of Opinion Based on Asset Adequacy Analysis by Actuaries for Life or Health Insurers

Revised Edition

Developed by the
Cash Flow Testing Task Force of the
Life Committee of the
Actuarial Standards Board

Adopted by the
Actuarial Standards Board
September 2001

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ASOP No. 22—September 2001

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<u>**ASOP No. 22—September 2001**</u>

September 2001

TO: Members of Actuarial Organizations Governed by the Standards of Practice of the Actuarial Standards Board and Other Persons Interested in Statements of Opinion by Actuaries for Life or Health Insurers

FROM: Actuarial Standards Board (ASB)

SUBJ: Actuarial Standard of Practice (ASOP) No. 22

This booklet contains the final version of ASOP No. 22. The original title, *Statutory Statements of Opinion Based on Asset Adequacy Analysis by Appointed Actuaries for Life or Health Insurers*, has been changed to *Statements of Opinion Based on Asset Adequacy Analysis by Actuaries for Life and Health Insurers*. This standard, along with a revision of ASOP No. 7, now titled *Analysis of Life, Health, or Property/Casualty Insurer Cash Flows,* supersedes ASOP No. 14, *When to Do Cash Flow Testing for Life and Health Insurance Companies*, which has been repealed, all effective April 15, 2002.

<u>Background</u>

The model Standard Valuation Law (SVL) promulgated by the National Association of Insurance Commissioners (NAIC), as amended in 1990, allowed for two different types of actuarial opinions. Opinions required under Section 7 of the NAIC model *Actuarial Opinion and Memorandum Regulation* (*AOMR*) do not include an asset adequacy analysis. Opinions required under Section 8 of the 1991 NAIC model *AOMR* include an asset adequacy analysis, that is, analysis of whether the company's assets supporting the reserves are adequate to mature the company's obligations.

ASOP No. 22, adopted by the Actuarial Standards Board in October 1993, replaced Financial Reporting Recommendation No. 7 of the American Academy of Actuaries (Academy), *Statement of Actuarial Opinion for Life Insurance Company Statutory Annual Statements*, and its related Interpretations as guidance for Section 8 opinions by appointed actuaries that were filed in states that had enacted the 1990 amendments to the SVL and promulgated the *AOMR*. In those states, ASOP No. 22 also replaced the Academy's Financial Reporting Recommendation No. 11, *Statement of Actuarial Opinion for Interest-Indexed Universal Life Insurance Contracts.*

As all states have passed the 1991 *AOMR*, and since ASOP No. 22 is general enough to cover relevant issues on interest-indexed universal life, Financial Reporting Recommendation No. 7 (and its related Interpretations) and No. 11 were repealed by the Academy in conjunction with the adoption of this revised ASOP at the September 2001 ASB meeting.

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Prior to the adoption of the 1993 version of ASOP No. 22, there had been discussions as to whether ASOP No. 22 should cover opinions under both Section 7 and Section 8 of the 1990 NAIC model *AOMR*. The ASB decided to limit ASOP No. 22 to cover opinions required under only Section 8 of that model regulation. The ASB adopted Actuarial Compliance Guideline (ACG) No. 4, *Statutory Statements of Opinion Not Including an Asset Adequacy Analysis by Appointed Actuaries for Life and Health Insurers*, in October 1993 to provide guidance on opinions required under Section 7 of the 1991 NAIC *AOMR*.

The proposed revision of the NAIC *AOMR,* as of this writing, does not make a distinction between opinions with and without asset adequacy analysis. However, applicable law may still provide for an opinion not including asset adequacy analysis. In conformance with the proposed revision of the NAIC *AOMR*, ASOP No. 22 has eliminated reference to Section 8 of the *AOMR*. In order for this standard to be consistent with current applicable law, which may still provide for an opinion not including asset adequacy analysis, section 1.2, Scope, of this standard was revised. Section 1.2 notes that, if applicable law is in conflict with this standard, compliance with applicable law, is not a deviation from this standard, provided the actuary discloses such conflict in his or her report. Because Section 7 opinions are allowed by the *AOMR* as of the time of this revision to ASOP No. 22, and because they may be allowed by some states after the NAIC adopts the proposed version of the *AOMR* that exists as of this writing, it was decided to keep ACG No. 4, which was adopted in October 1993. If such a time comes when Section 7 opinions are no longer allowed in any jurisdiction, it is expected that ACG No. 4 would be repealed.

In addition to the *AOMR*, actuarial opinions are required under the NAIC's *Synthetic Guaranteed Investment Contracts Model Regulation*, and under the NAIC's *Separate Accounts Funding Guaranteed Minimum Benefits Under Group Contracts Model Regulation*. The revision of ASOP No. 22 will apply to these and any similar regulation requiring the actuary to opine on the adequacy of reserves and other liabilities in light of supporting assets.

In addition to ASOP No. 22, as part of the project to look at all cash flow testing standards of practice, ASOP No. 7 and ASOP No. 14 were also reviewed. 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.

Actuaries performing work for health benefit plans such as health insurers, health service plans, and HMOs should note that this standard potentially applies to each of these types of plans. Applicable law will determine for which of these types of plans an appointed or qualified actuary is required to submit a statement of actuarial opinion based on asset adequacy analysis subject to this standard.

<u>ASOP No. 22—September 2001</u>

<u>Exposure Draft</u>

The exposure draft of this revised standard was issued in September 2000 with a comment deadline of March 31, 2001. The Cash Flow Testing Task Force carefully considered the fifteen comment letters received. For a summary of the substantive issues contained in these comment letters, please see appendix 2.

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

1. As noted above, it was decided to keep ACG No. 4 in order to continue to provide guidance to actuaries issuing Section 7 opinions. If such a time comes when Section 7 opinions are no longer allowed in any jurisdiction, it is expected that ACG No. 4 would be repealed.

2. Section 3.4.3, Analysis of Scenario Results—Words were added to note that the failure of a small percentage of scenarios may not indicate the need for further analysis.

The task force thanks all those who commented on the exposure draft.

The ASB voted in September 2001 to adopt this standard.

Cash Flow Testing Task Force

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Actuarial Standards Board

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ACTUARIAL STANDARD OF PRACTICE NO. 22

STATEMENTS OF OPINION BASED ON ASSET ADEQUACY ANALYSIS BY ACTUARIES FOR LIFE OR HEALTH INSURERS

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 serving as an appointed actuary or a qualified actuary in providing a statement of actuarial opinion relating to asset adequacy analysis of a life or health insurer, when such opinion is prepared pursuant to applicable law such as the following:

a. applicable law based on the model Standard Valuation Law as amended by the National Association of Insurance Commissioners (NAIC) in 1990, in conjunction with the model *Actuarial Opinion and Memorandum Regulation* (*AOMR*) adopted by the NAIC in 1991 and subsequently amended;

b. applicable law based on the NAIC's *Synthetic Guaranteed Investment Contracts Model Regulation*;

c. applicable law based on the NAIC's *Separate Accounts Funding Guaranteed Minimum Benefits Under Group Contracts Model Regulation*; or

d. other applicable laws requiring an actuary to opine on the adequacy of a life or health insurer's reserves and other liabilities in light of supporting assets.

1.2 Scope—This standard applies to actuaries when providing statements of opinion and supporting memoranda for life or health insurers, including fraternal benefit societies and health benefit plans, to satisfy applicable law as specified in section 1.1 of this standard.

This standard does not require the actuary to perform asset adequacy analysis in situations where an actuarial opinion relating to asset adequacy analysis is not required by applicable law.

When applicable law conflicts with this standard, complying with such applicable law shall not be deemed a deviation from this standard, provided the actuary discloses that the asset adequacy analysis was performed in accordance with the requirements of such applicable law.

1.3 Cross References—When this standard refers to the provisions of other documents, the reference includes the referenced documents as they may be amended or restated in the future, and any successor to them, by whatever name called. If any amended or restated document differs materially from the originally referenced document, the actuary should consider the guidance in this standard to the extent it is applicable and appropriate.

1.4 Effective Date—This standard is effective for all statements of actuarial opinion issued on or after April 15, 2002.

Section 2. Definitions

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

2.1 Applicable Law—Federal, state, and local statutes, regulations, case law, and other binding authority that may govern statements of actuarial opinion based on asset adequacy analysis.

2.2 Appointed Actuary—Any individual who is appointed or retained in accordance with the requirements set forth by applicable law.

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

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

2.5 Asset Risk—The risk that the amount or timing of items of cash flow connected with assets will differ from expectations or assumptions for reasons other than a change in investment rates of return. Asset risk includes delayed collectibility, default, or other financial nonperformance. This has been commonly referred to in actuarial literature as the *C-1 risk* or *credit risk*.

2.6 Cash Flow—Any receipt, disbursement, or transfer of cash.

2.7 Cash Flow Analysis—Any evaluation of the risks associated with the timing or amount of cash flows.

2.8 Cash Flow Testing—A form of cash flow analysis involving the projection and comparison of the timing and amount of cash flows resulting from economic and other assumptions.

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

2.10 Gross Premium Reserve Test—The comparison of the gross premium reserve computed under one or more scenarios to the financial statement reserve.

2.11 Health Benefit Plan—A contract providing medical, dental, vision, disability income, accidental death and dismemberment, long-term care, and similar benefits, whether on a reimbursement, indemnity, or service benefit basis, regardless of the form of the risk-bearing organization, including benefit plans provided by self-insured plan sponsors.

2.12 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, in exchange for a monetary consideration.

2.13 Investment Rate-of-Return Risk—The risk that investment rates of return will differ from expectations or assumptions, causing a change in the amount or timing of asset, policy or other liability cash flows. This has been commonly referred to in actuarial literature as the *C-3 risk* or *asset/liability mismatch risk*.

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

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

2.16 Other Liability Cash Flows—Cash flows not specifically associated with asset or policy cash flows. Examples are corporate expenses, payables, surplus notes, shareholder dividends, or balance sheet items that result from litigation.

2.17 Policy Cash Flow Risk—The risk that the amount or timing of cash flows under a policy or contract will differ from expectations or assumptions for reasons other than a change in investment rates of return or a change in asset cash flows. This has been commonly referred to in actuarial literature as the *C-2 risk*.

2.18 Policy Cash Flows—All premiums and other amounts paid by policyholders or contract holders to the insurer and all benefits, expenses, and other amounts paid to policyholders or others as required by policy or law.

2.19 Qualified Actuary—An actuary who meets qualification requirements set forth by applicable law.

2.20 Scenario—A set of economic and other assumptions used in performing cash flow analysis.

Section 3. Analysis of Issues and Recommended Practices

3.1 Requirements to Consider—When performing an asset adequacy analysis, the actuary should review and apply applicable law and applicable actuarial standards of practice, such as ASOP No. 7, *Analysis of Life, Health, or Property/Casualty Insurer Cash Flows*. The actuary should be aware of the Actuarial Guidelines published in the NAIC's *Examiners Handbook*, and make a reasonable effort to be aware of generally distributed interpretations of each regulatory authority.

3.2 Appointed or Qualified Actuary—Before accepting an appointment or serving as an appointed or qualified actuary, the actuary should determine that he or she meets the requirements of the *Qualification Standards for Prescribed Statements of Actuarial Opinion,* promulgated by the American Academy of Actuaries. The appointment should be in writing, from the board of directors or its designee, citing the applicable law. If the appointment as an entity's appointed actuary is required by applicable law, the actuary should accept or withdraw from such an appointment in conformance with the applicable law. Acceptance of or withdrawal from the position should be in writing.

3.3 Statement of Opinion—The form, content, and recommended language of the statement of opinion may be specified by applicable law. The actuary should include in the opinion a statement on the adequacy of reserves and other liabilities based on an asset adequacy analysis, the details of which are contained in the supporting memorandum.

3.3.1 Asset Adequacy Analysis—The actuary performs asset adequacy analysis on the underlying asset, policy, or other liability cash flows. In performing an asset adequacy analysis, the actuary should choose a block of assets such that the book value of those assets is no greater than the book value of the reserves and other liabilities being tested. If the actuary determines that additional assets are needed to support these reserves and other liabilities being tested, then the actuary should establish an additional reserve equal to the book value of those additional assets.

The actuary should disclose and justify in the supporting memorandum any material change in the method of allocating assets to the reserve and other liabilities from the method used in the asset adequacy analysis underlying the prior actuarial opinion.

The actuary should consider the type of asset, policy, or other liability cash flows and the severity of risks associated with those cash flows, including the investment rate-of-return risk. The actuary may use a single analysis for reserves and other liabilities in aggregate or a number of analyses for each of several blocks of business. In either case, a number of considerations may affect the actuary's work. The actuary should use professional judgment in determining which considerations apply.

3.3.2 Analysis Methods—A number of asset adequacy analysis methods are available to, and used by, actuaries. The most widely used method is cash flow testing (see ASOP No. 7). Cash flow testing is generally appropriate where cash flows of existing assets, policies, or other liabilities may vary, or where the present value of combined asset, liability, or other cash flows may vary under different economic or interest-rate scenarios.

Asset adequacy analysis test methods other than cash flow testing may be appropriate in other situations. The following are examples of acceptable methods. These methods would test moderately adverse deviations in the actuarial assumptions, except for the investment rate-of-return assumptions. The actuary should use professional judgment in choosing an appropriate testing method and in determining which assumptions should be varied for the particular test.

a. A gross premium reserve test may be appropriate where the policy and other liability cash flows are sensitive to moderately adverse deviations in the actuarial assumptions underlying these cash flows. For example, this type of method may be appropriate for term insurance backed by noncallable bonds, where the testing would emphasize the sensitivity of moderately adverse deviations in the underlying mortality, morbidity, withdrawal, and expense assumptions.

b. To the extent that the degree of conservatism in the reserves and other liabilities is so great that moderately adverse deviations in the actuarial assumptions underlying the policy and other liability cash flows are covered, the actuary may demonstrate this degree of conservatism. For example, this type of method may be appropriate for a block of accidental death and dismemberment insurance if that block is reserved using conservative interest rates and mortality/morbidity tables.

c. Some products may have risks that are not subject to material variation, where the policy and other liability cash flow risks have been limited by product design and the investment strategy. Rather than do cash flow testing, the actuary may demonstrate that these risks are not subject to material variation and that moderately adverse deviations in actuarial assumptions underlying the policy and other liability cash flows are covered. For example, this type of method may be appropriate for a variable annuity with no guarantees and no unamortized expense allowance.

d. The risks inherent in products with short-term liabilities supported by short-term assets may be more appropriately analyzed by measuring moderately adverse deviations in actuarial assumptions underlying the policy and other liability cash flows using risk theory techniques. These risks may involve a small number of large individual claims over a short-term period.

e. Loss-ratio methods may be appropriate when the asset, policy, and other liability cash flows are of short duration. Under this method, moderately adverse deviations in the actuarial assumptions underlying the morbidity or mortality costs may be tested. Loss-ratio methods are described in ASOP No. 5, *Incurred Health and Disability Claims*.

If the actuary is uncertain as to whether moderately adverse deviations in the investment rate-of-return assumptions will have a material impact on the asset adequacy analysis results, then the actuary should also test moderately adverse deviations in the investment rate-of-return risk assumptions.

The actuary should document the asset adequacy analysis methods chosen.

3.3.3 <u>Assumptions</u>—In addition to selecting an appropriate analysis method, the actuary should select appropriate assumptions. Accepted methods include the following:

a. adaptation of company experience or industry studies;

b. use of a deterministic scenario or set of scenarios; and

c. statistical distributions or stochastic methods.

The actuary should document the assumptions chosen and provide supporting rationale for the appropriateness of the assumptions.

3.3.4 Additional Considerations—Additional considerations include the following:

a. Use of Analyses or Data Predating the Valuation Date—If appropriate, the actuary may use asset adequacy analyses performed prior to the valuation date, an analysis performed at the time of policy issue, modeling based on data taken from a time that predates the valuation date, or other methods.

For example, if appropriate, the actuary may use a prior analysis of a closed block of business, or the actuary may use September 30 data to support a December 31 valuation.

The actuary should document the reasonableness of such prior period data, studies, analyses or methods, that key assumptions are still appropriate, and that no material events have occurred prior to the valuation date that would invalidate the asset adequacy analysis on which the actuary's opinion is based.

b. Testing Horizon—Asset adequacy should be tested over a period that extends to a point at which, in the actuary's professional judgment, the use of a longer period would not materially affect the analysis.

c. Completeness—The asset adequacy analysis should take into account anticipated material cash flows such as renewal premiums, guaranteed and nonguaranteed benefits, expenses, and taxes. In determining the assets supporting the tested reserves and other liabilities, any asset segmentation system used by the company should be considered. For a reserve or other liability to be reported as "not analyzed," the actuary should determine that the reserve or other liability amount is immaterial.

3.4 Forming an Opinion with Respect to Asset Adequacy Analysis—The actuary should use appropriate analysis methods when forming an opinion with respect to asset adequacy. In judging whether the results from the asset adequacy analysis are satisfactory, the actuary should use professional judgment in determining which of the following, or other, considerations apply:

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

3.4.2 Adequacy of Reserves and Other Liabilities—When forming an opinion, the actuary should consider whether the reserves and other liabilities being tested are adequate under moderately adverse conditions, in light of the assets supporting such reserves and other liabilities. To hold reserves or other liabilities so great as to withstand any conceivable circumstances, no matter how adverse, would usually imply an excessive level of reserves or liabilities.

3.4.3 Analysis of Scenario Results—In the event that the supporting assets are insufficient to meet the reserves and other liabilities under a scenario, the actuary may determine that further analysis is required. However, this situation does not necessarily mandate additional reserves or liabilities. Further analysis may indicate that current reserves and other liabilities are adequate. For example, if a large number of scenarios were run, the failure of a small percentage of them may not indicate the need for additional reserves or liabilities. The basis of any such judgment should be documented in the supporting memorandum.

3.4.4 Aggregation During Testing—When performing an asset adequacy analysis, the actuary should not aggregate the reserves and other liabilities of two or more blocks of business during testing if the assets supporting the reserves and other liabilities of one block of business can not be used to discharge the reserves and other liabilities of other blocks of business. For example, separate account assets are generally not available during the testing period to discharge general account reserves and other liabilities.

3.4.5 Aggregation of Results—After testing is done, the actuary may offset deficiencies in one business segment with sufficiencies in another business segment for the purposes of reporting and documenting the results of testing. The actuary should review applicable law regarding the aggregation of results.

3.4.6 Trends—Test results from prior years can provide the actuary with valuable insight into the dynamics of asset adequacy analyses, particularly if successive years' results have been reconciled. The actuary should consider using analysis of trends and reconciliation analyses in forming an opinion.

3.4.7 Management Action—Any anticipated future actions by management to address adequacy concerns identified by the actuary should be considered in forming an opinion. The assumed results of any such actions should be quantified and documented by the actuary in the supporting memorandum.

3.4.8 Subsequent Events—Whether or not applicable law requires the actuary to consider subsequent events, the actuary should consider all material events that are likely to affect the actuary's analysis up to the date the opinion is signed and disclose those events in the opinion. The actuary has an obligation to be reasonably informed about such events. The actuary's reliance, if any, on representations of company management regarding subsequent events should be disclosed in the opinion.

Section 4. Communications and Disclosures

4.1 Required Communications—The actuary should provide reports, opinions, and memoranda as required by applicable law.

4.2 Format and Content of Statement—Applicable law may specify the content of the statement of actuarial opinion and the supporting memorandum to the company. If the actuary departs materially from the recommended language or gives an adverse opinion, such departure or adverse opinion should be disclosed in both the opinion and the supporting memorandum.

4.3 Reliance on Others for Data, Projections, and Supporting Analysis—The actuary may rely on data, projections, and supporting analysis supplied by others. In doing so, the actuary should disclose both the fact and the extent of such reliance. Such disclosure may be prescribed in applicable law. The accuracy and comprehensiveness of data, projections, and supporting analysis supplied by others are the responsibility of those who supply the data, projections, and supporting analysis. When practicable, the actuary should review the data, projections, and supporting analysis for reasonableness and consistency, and disclose such a review. For further guidance, the actuary is directed to ASOP No. 23, *Data Quality*.

4.4 Opinions of Other Actuaries—When more than one actuary contributes to forming an opinion, supporting memoranda from the other contributing actuaries may be included in the actuary's memorandum. The actuary should review the contributions of these other actuaries. The actuary should then form an overall opinion without claiming reliance on the opinions of other actuaries. The use of the work product of other actuaries should be described in the supporting memorandum.

4.5 Additional Disclosures— In addition to the details of the asset adequacy analysis that may be required by applicable law, the supporting memorandum should include disclosure and discussion of the following:

a. identification of the intended users of the memorandum;

b. the actuary's reliance, if any, on representations of company management regarding subsequent events; and

c. any material change in the method of allocating assets to the reserve and other liabilities from the method used in the asset adequacy analysis forming the prior actuarial opinion.

4.6 Documentation—In addition to complying with section 4.3, Documentation, of ASOP No.7, the actuary should document the following, as appropriate, for the cash flow analysis being conducted:

a. the asset adequacy analysis methods chosen;

b. the assumptions chosen;

c. the reasonableness of any prior period data, studies, analyses, or methods, that key assumptions are still appropriate, and that no material events have occurred prior to the valuation date that would invalidate the asset adequacy analysis on which the actuary's opinion is based;

d. the basis of any judgment as to the adequacy of reserves or other liabilities;

e. whether any aggregation was done, either during testing or during analysis of results; and

f. the assumed results of management actions considered in forming an opinion.

4.7 Conflict with Applicable Law—When applicable law conflicts with this standard, compliance with such applicable law shall not be deemed a deviation from this standard, provided the actuary discloses that the opinion was rendered in accordance with the requirements of such applicable law.

4.8 Retention—The actuary, to the extent practicable, should take reasonable steps to ensure that the documentation will be retained for a reasonable period of time (and no less than the length of time necessary to comply with any statutory, regulatory, or other requirements). The actuary need not retain the documentation personally; for example, it may be retained by the actuary's employer.

4.9 Prescribed Statement of Actuarial Opinion—Any actuarial communication described in section 4.1 of this standard is a prescribed statement of actuarial opinion as described in the *Qualification Standards for Prescribed Statements of Actuarial Opinion* promulgated by the American Academy of Actuaries.

4.10 Deviation from Standard—The actuary must be prepared to defend the use of any procedure that departs materially from this standard and must include, in any actuarial communication disclosing the result 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

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

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

The type of asset adequacy analysis most widely used by actuaries is multi-scenario cash flow testing. To guide actuaries choosing to use this technique, the Actuarial Standards Board adopted ASOP No. 7, then titled *Performing Cash Flow Testing for Insurers*, in October 1988 (revised July 1991). 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.

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

For companies subject to Section 7, the 1991 *AOMR* required an actuarial opinion that the reserves and related actuarial items have been calculated in accordance with the Standard Valuation Law and supporting regulations. Section 7 of the 1991 AOMR did not require an opinion as to reserve adequacy.

The proposed revision of the NAIC *AOMR,* as of this writing, does not make a distinction between opinions with and without asset adequacy analysis. However, applicable law may still provide for an opinion not including asset adequacy analysis. In conformance with the proposed revision of the *AOMR*, ASOP No. 22 has eliminated reference to Section 8 of the *AOMR*.

Current Practices

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

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

Appendix 2

Comments on the Exposure Draft and Task Force Responses

The exposure draft of this revised actuarial standard of practice was issued in September 2000 with a comment deadline of March 31, 2001. (Copies of the exposure draft are available from the ASB office.) Fifteen comment letters were received. The Cash Flow Testing Task Force of the Life Committee of the ASB carefully considered all comments received. Summarized below are the significant issues and questions contained in the comment letters and the task force's responses.

SECTION 1. PURPOSE, SCOPE, CROSS REFERENCES, AND EFFECTIVE DATE	
Section 1.2, Scope	
Comment Response	One commentator wanted the ASOP expanded to include GAAP reserve testing. The task force believes that is beyond the scope of this standard.
Comment Response	The exposure draft asked for comments on the wording in the draft about the standard not requiring the actuary to perform asset adequacy analysis where an actuarial opinion requiring asset adequacy analysis is not required by applicable law. Some commentators supported the wording in the exposure draft. Some believed that ACG No. 4 should be kept in place to give the actuary guidance on "Section 7"-type (non-asset-adequacy testing) opinions. Some commentators believed this standard needed to make it clear whether Financial Reporting Recommendation No. 7 was still applicable. Some commentators believed that ASOP No. 22 should be expanded to require actuaries to perform asset adequacy testing regardless of regulations on the subject. The task force believes the standard's language regarding the actuary not being required to perform asset adequacy analysis where an actuarial opinion requiring asset adequacy analysis is not required by applicable law is appropriate for actuaries who are allowed to issue Section 7 opinions. Further, the task force agreed with the comments that suggested ACG No. 4 is still appropriate guidance for actuaries in this situation. The task force also believes that Financial Reporting Recommendation Nos. 7, Statement of Actuarial Opinion for Life Insurance Company Statutory Annual Statements; 7-A, Responsibilities of the Actuary and Others; 7-B, Adequacy of Reserves; and 7-C, Qualification of Actuary's Statement of Opinion, are no longer appropriate and should be repealed.
SECTION 2. DEFINITIONS	
Section 2.3, Asset, and 2.14, Liability (previously section 2.13)	
Comment Response	Many commentators suggested changes in these definitions. The task force believes the definitions are appropriate. The definitions are consistent with those found in other standards, where practical. The definitions in ASOP No. 22 are for just this standard and are appropriate for this standard.

Section 2.7, Cash Flow Analysis, and 2.8, Cash Flow Testing	
Comment	One commentator did not like the distinctions made between "cash flow analysis" and "cash flow testing."
Response	The task force believes the definitions are appropriate, since ASOP No. 22 is now designed to make a hierarchy of types of analysis, with "cash flow analysis" being the most general term, and "cash flow testing" being one type of cash flow analysis.
Section 2.15, Moderately Adverse Conditions (previously section 2.14)	
Comment	One commentator wanted more guidance on what constitutes a moderately adverse condition; a second commentator believed the definition "watered-down" the standard.
Response	The task force disagreed and believes the term is defined in a reasonable manner for the purposes of this ASOP.
Section 2.16, Other Liability Cash Flows	
Comment	One commentator noted that the term "other liability cash flows" was used, but not defined, in the exposure draft. One commentator thought that the definition should include surplus notes.
Response	The task force agreed and added a definition of "other liability cash flows," which includes a reference to surplus notes, to both ASOP No. 7 and No. 22.
Section 2.18, Policy Cash Flows (previously section 2.16)	
Comment	One commentator noted that the definition used in the exposure draft did not treat premium taxes properly, as premium taxes are not paid on behalf of policyholders, but rather are paid as required by applicable law.
Response	The task force agreed and changed the definition accordingly.
SECTION 3. ANALYSIS OF ISSUES AND RECOMMENDED PRACTICES	
Section 3.2, Appointed or Qualified Actuary (previously titled "Appointment as Appointed or Qualified Actuary")	
Comment	One commentator noted a qualified actuary is not "appointed."
Response	The task force agreed with the point and changed the wording of the section.
Section 3.3.1, Asset Adequacy Analysis	
Comment	One commentator wanted further guidance about the use of expenses with specific guidance on overhead expenses.
Response	The task force believes the level of guidance in this section is appropriate.
Section 3.3.2, Analysis Methods	
Comment	One commentator noted that the wording in section 3.3.2 seemed to imply that the list of methods in section 3.3.2(a–e) was an exhaustive list of methods, and that this implied no other methods were possible.
Response	The task force agreed that the intention was not to exclude other methods from being considered and clarified the language.
Comment	One commentator noted that the wording in the first paragraph did not properly discuss the two separate issues of testing existing (in force) cash flows vs. testing combined cash flows. On the latter, it was noted that in some situations changes in asset and liability cash flows may offset.
Response	The task force agreed and expanded upon the exposure draft wording to make this clearer.

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Comment Response	One commentator wanted guidance specifically on allowing other methods of asset adequacy analysis when either or both the C-1 and C-3 risks are not likely to impact present values. The task force agreed that the exposure draft wording implied the actuary would have to vary all assumptions, even those that were basically fixed or immaterial to the analysis being performed. The task force changed the wording to clarify that the actuary should use professional judgment in determining which assumptions should be varied.
Comment Response	One commentator asked why, under the method discussed in section 3.3.2(b) (conservatism in the reserves being so great as to not need to cash flow test), accidental death and dismemberment insurance is always an appropriate example. The task force agreed and added wording that stated accidental death and dismemberment insurance would be an example only if the block is reserved using conservative interest rates and mortality tables.
Comment Response	A few commentators noted that the phrase "short-term products" in section 3.3.2(d) has meaning under GAAP. The task force agreed that the use of the phrase "short-term products" could cause confusion in that regard and changed the language to refer to products with short-term liabilities.
Section 3.3.3, Assumptions	
Comment Response	A few commentators wanted more detailed guidance on the choice of assumptions. The task force believes the level of guidance in this section is appropriate.
Comment Response	Two commentators believed the actuary should provide supporting rationale for the choice of assumptions in addition to simply documenting what they were. The task force agreed and clarified the wording.
Section 3.3.4, Additional Considerations	
Comment Response	A few commentators noted the issue of cash flows being more uncertain the further into the future a projection is done. The task force agreed, but believed no change to ASOP No. 22 was necessary. Rather, the task force changed section 3.10.2, Number of Scenarios, in ASOP No. 7, noting more potential for variability the further into the future the cash flows are projected.
Section 3.4.2, Adequacy of Reserves and Other Liabilities	
Comment Response	One commentator noted that the phrase "would usually imply an excessive level of reserves or liabilities" should be deleted. The task force disagreed, since those words are needed to help define what it means for reserves to be adequate under moderately adverse conditions.
Comment Response	One commentator wanted wording to clarify what reserving assumptions should be used under the current Health Insurance Reserves model regulation in doing that regulation's required gross premium reserve test. The task force disagreed, since guidance on meeting the Health Insurance Reserves model regulation is beyond the scope of this standard.

Section 3.4.3, Analysis of Scenario Results	
Comment	A few commentators asked for guidance in terms of what happens if a few scenarios out of a large number of scenarios tested showed failure.
Response	The task force agreed that guidance was needed and added language noting that a small percentage of failures may not indicate the need for additional reserves.
Section 3.4.4, Aggregation During Testing	
Comment	One commentator wanted further guidance on what aggregation should be done.
Response	The task force believes the level of guidance in this section is appropriate.
Section 3.4.5, Aggregation of Results	
Comment	A few commentators noted there may be restrictions on aggregation of results; in addition, some commentators asked for further guidance.
Response	The task force agreed with the first point and added a sentence noting that the actuary should review applicable law when aggregating results. Regarding further guidance, the task force believes the level of guidance in this section is appropriate.
Section 3.4.6, Trends	
Comment	One commentator wanted to require the actuary to analyze trends and reconcile results.
Response	The task force disagreed, noting that while the actuaries should consider these steps, the steps should not be required, as in some situations they may be of limited value.
Section 3.4.8, Subsequent Events	
Comment	Many comments were received on this section. Some commentators believed the draft went beyond what is required by the *AOMR* in requiring an actuary to write a subsequent events paragraph. Other commentators believed the draft should go further and require the actuary to consider subsequent events that are in process. Some commentators essentially supported the wording in the draft ASOP.
Response	The task force believes that the wording does not go beyond the *AOMR*, in that it merely clarifies how the regulation applies to existing practice. The task force further believes that requiring the actuary to consider events that happen beyond the date the opinion is signed would go too far. The task force left the wording unchanged.
Comment	One commentator asked about procedures to recall the opinion, if subsequent events beyond the date the opinion was signed lead the actuary to believe that opinion is no longer valid.
Response	The task force believes no general guidance is needed on this and that the actuary can deal with this on a case-by-case basis as needed.
SECTION 4. COMMUNICATIONS AND DISCLOSURES	
Section 4.2, Format and Content of Statement	
Comment	Two commentators noted that any departure from the recommended language should be explained, as well as disclosed.
Response	The task force disagreed.
Section 4.5, Additional Disclosures	
Comment	One commentator noted that section 4.5(a) on disclosure and discussion of Actuarial Guidelines was not appropriate for this section.
Response	The task force agreed and removed it.

Section 4.9, Prescribed Statement of Actuarial Opinion (previously section 4.8)	
Comment	A few commentators noted that the phrase "whether or not it is issued for purposes of compliance with the law, regulation, or other standard" at the end of the first sentence does not make any sense, since opinions are required only when there are laws or regulations.
Response	The task force agreed and removed this phrase.