ACTUARIAL STANDARDS BOARD

Actuarial Standard
of Practice
No. 22

Revised Edition

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

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

Adopted by the
Actuarial Standards Board
September 2021

Doc. No. 203

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APPENDIXES

ASOP No. 22—Doc. No. 203

September 2021

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

FROM: Actuarial Standards Board (ASB)

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

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

History of the Standard

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

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

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

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

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

First Exposure Draft

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

Second Exposure Draft

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

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

Notable Changes from the Second Exposure Draft

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

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

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

3. Modified the discount rates language in section 3.1.2.3.

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

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

Notable Changes from the Existing ASOP

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

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

2. Added sections to provide guidance on the following:

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

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

4. Strengthened documentation requirements (section 3.4).

5. Modified disclosure items (section 4).

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

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

The ASB voted in September 2021 to adopt this standard.

ASOP No. 22—Doc. No. 203

Task Force to Revise ASOP No. 22

Laura A. Hanson, Chairperson

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

Life Committee of the ASB

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The Actuarial Standards Board (ASB) sets standards for appropriate actuarial practice in the United States through the development and promulgation of Actuarial Standards of Practice (ASOPs). These ASOPs describe the procedures an actuary should follow when performing actuarial services and identify what the actuary should disclose when communicating the results of those services.

ACTUARIAL STANDARD OF PRACTICE NO. 22

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

STANDARD OF PRACTICE

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

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

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

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

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

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

If the actuary departs from the guidance set forth in this standard in order to comply with applicable law, or for any other reason the actuary deems appropriate, the actuary should refer to section 4. If a conflict exists between this standard and applicable law, the actuary should comply with applicable law.

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

1.4 Effective Date—This standard is effective for all statements of actuarial opinion covered by the scope of this ASOP issued on or after June 1, 2022.

Section 2. Definitions

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

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

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

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

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

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

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

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

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

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

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

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

Section 3. Analysis of Issues and Recommended Practices

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

c. whether the margins vary over time;

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

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

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

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

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

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

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

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

a. starting **assets**;

b. assumptions, including margins;

c. sensitivities;

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

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

f. distribution of surplus; and

g. taxes.

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

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

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

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

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

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

c. the policy provisions;

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

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

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

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

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

Examples of data or analyses an actuary may use include:

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

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

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

d. prior analysis of a closed block of business.

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

Section 4. Communications and Disclosures

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

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

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

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

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

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

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

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

h. any discount rates used (section 3.1.2.3);

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

b. if the actuary states reliance on other sources and thereby disclaims responsibility for any material assumption or method selected by a party other than the actuary; and

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

Appendix 1

Background and Current Practices

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

Background

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

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

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

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

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

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

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

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

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

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

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

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

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

Current Practices

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

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

Appendix 2

Comments on the Second Exposure Draft and Responses

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

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

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

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

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

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

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

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