ACTUARIAL STANDARDS BOARD

Actuarial Standard
of Practice
No. 7

Life or Health Cash Flow Analysis

Developed by the
ASOP No. 7 Task Force of the
Actuarial Standards Board

Adopted by the
Actuarial Standards Board
December 2025

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TO: Members of the Actuarial Organizations Governed by the Standards of Practice of the Actuarial Standards Board and Other Persons Interested in Life or Health Cash Flow Analysis

FROM: Actuarial Standards Board (ASB)

SUBJ: Actuarial Standard of Practice (ASOP) No. 7

This document contains ASOP No. 7, *Life or Health Cash Flow Analysis*.

History of the Standard

Development of actuarial standards of practice for cash flow testing was originally undertaken separately for life and health, and property/casualty specialties. The first standard to be published was ASOP No. 7, *Concerning Cash Flow Testing for Life and Health Insurance Companies*. This was developed by the American Academy of Actuaries' Committee on Life Insurance Financial Reporting in conjunction with the ASB Life Committee and was adopted by the ASB in 1988.

Subsequently, the ASB Casualty Committee, through its Valuation Subcommittee, developed a proposed standard titled *Cash Flow Testing for Property and Casualty Insurers*. This draft was presented to the ASB in 1990. The ASB decided that the document should be revised so that there would be one broad standard that would apply to life and health insurers as well as to property/casualty insurers. A Joint Casualty/Life Cash Flow Testing Task Force was appointed by the ASB to accomplish this. The resulting standard was adopted in 1991.

ASOP No. 7 was revised in the early 2000s to reflect changes in practice and the adoption of two new National Association of Insurance Commissioners (NAIC) model regulations, *Synthetic Guaranteed Investment Contracts Model Regulation* and *Separate Accounts Funding Guaranteed Minimum Benefits Under Group Contracts Model Regulation*. These two model regulations contain language requiring insurers to submit an actuarial opinion and memorandum related to cash flow testing.

In addition to ASOP No. 7, as part of the project to look at all cash flow testing standards of practice, the ASB also reviewed ASOP Nos. 14, *When to Do Cash Flow Testing for Life and Health Insurance Companies*, and 22, *Statutory Statements of Opinion Based on Asset Adequacy Analysis by Appointed Actuaries for Life or Health Insurers*. Relevant portions of ASOP No. 14 were incorporated within the 2001 revisions of ASOP Nos. 7 and 22.

In 2001, the ASB adopted the revised ASOP Nos. 7 and 22 and repealed ASOP No. 14. In April 2002, the ASB deferred the effective date of ASOP No. 7 to July 15, 2002, while it reviewed concerns raised by the Academy's Casualty Practice Council regarding the standard's applicability to property/casualty practice. At its June 2002 meeting, the ASB amended the scope to conform to generally accepted property/casualty actuarial practice.

Since the 2002 revision, the use of advanced models for cash flow analysis has become widespread. In addition, the ASB has approved several ASOPs related to the modeling and analysis of cash flows. For these reasons, the ASB decided to revise ASOP No. 7 in December 2020. After the exposure of the revised standard, in response to comments received, the ASB decided to remove property/casualty actuarial services from the scope of this standard and expand ASOP No. 20, *Analysis of Property/Casualty Cash Flows, Including Discounting*, to include property/casualty cash flow analysis. This revision of ASOP No. 7 is being issued in conjunction with the revision of ASOP No. 20.

Exposure Draft

The exposure draft of the proposed revision of ASOP No. 7, *Analysis of Life, Health, or Property/Casualty Insurance Cash Flow Risk*, was issued in December 2023 with a comment deadline of June 1, 2024. Nine comment letters were received and considered in making changes that are reflected in this revision.

The ASB decided at its September 2024 meeting to remove property/casualty actuarial services from the scope of this standard.

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

Notable Changes from the Exposure Draft

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

1. In sections 1.1 and 1.2, actuarial services involving property/casualty were removed from the scope of this standard. The title was changed to reflect this.

Notable Changes from the Existing Standard

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

1. In section 1.2, the scope was broadened to include cash flow analysis an actuary performs for a noninsurance entity that insures or self-insures risk. In addition, guidance for reviewing actuaries was added.

2. In sections 1.1 and 1.2, actuarial services involving property/casualty were removed from scope.

3. In section 2, definitions of certain terms were updated, including those of asset, cash flow, cash flow analysis, and liability. Several definitions were also deleted. The defined term “insurer” was changed to “organization” to reflect the inclusion of noninsurance entities that insure or self-insure risk.

4. In section 3.1, guidance for when to perform a cash flow analysis was added.

5. In section 3.2, additional guidance has been provided for cash flow analysis for assets, liabilities, or both assets and liabilities.

6. In section 3.3, guidance was adjusted to include all types of cash flow analysis.

7. Guidance on reinsurance and separate accounts from the existing standard has been incorporated into sections 3.4.1 and 3.5.1.

8. Guidance on modeling and data was revised to avoid overlapping guidance provided in ASOP No. 56, *Modeling;* ASOP No. 23, *Data Quality;* and other practice-specific ASOPs that have been adopted since 2002.

9. In section 3.8, guidance on reliance was added.

10. In section 3.9, guidance on documentation was expanded.

11. Section 4 was updated and expanded to reflect changes made to section 3.

The ASB voted in December 2025 to adopt this standard.

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. 7

LIFE OR HEALTH CASH FLOW ANALYSIS

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 the analysis of life or health **cash flow risks**.

1.2 Scope—This standard applies to actuaries when performing actuarial services with respect to the analysis of life or health **cash flow risks**.

If the actuary is performing actuarial services that involve reviewing a **cash flow analysis** performed by another party, the actuary should follow the guidance in this ASOP to the extent practicable within the scope of the actuary's assignment.

If the actuary determines that the guidance in this standard conflicts with another practice-area ASOP, the other practice-area ASOP governs.

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

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

1.4 Effective Date—This standard of practice is effective for actuarial work performed on or after June 1, 2026.

Section 2. Definitions

The definitions below are defined for use in this standard and appear in bold throughout the ASOP. The actuary should also refer to ASOP No. 1, *Introductory Actuarial Standard of Practice*, for definitions and discussions of common terms, which do not appear in bold in this standard.

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

2.2 Cash Flow—A receipt, disbursement, or transfer of cash or equivalent **assets**.

2.3 Cash Flow Analysis—An evaluation of **cash flow risks**. **Cash flow analysis** may include **cash flows** from **assets**, **liabilities**, or both **assets** and **liabilities**. Examples of types of **cash flow analysis** include cash flow testing, gross premium valuation methods, loss ratio methods, risk theory techniques, and profitability projections.

2.4 Cash Flow Risk—A risk associated with the amount or timing of **cash flows**, including the mismatching of **cash flows** between **assets** and **liabilities**.

2.5 Liability—A commitment by, or requirement of, an **organization** that can reduce revenue **cash flows** or generate disbursement **cash flows**.

2.6 Organization—An entity that accepts, self-insures, or retains the risk of financial losses or guarantees stated benefits upon the occurrence of specific contingent events. Examples include insurance companies, risk-bearing healthcare provider **organizations**, health maintenance **organizations**, securitization vehicles, and self-insured employers or corporations.

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

Section 3. Analysis of Issues and Recommended Practices

3.1 When to Perform Cash Flow Analysis—The actuary must perform **cash flow analysis** when required by applicable law. The actuary should consider performing **cash flow analysis** when **cash flow risk** is relevant to the actuary's assignment. Examples of such assignments include the following:

a. determination of reserves or reserve adequacy;

b. determination of capital or capital adequacy;

c. product development;

d. testing of future charges or benefits that may vary at the discretion of the **organization** (for example, policyholder dividend scales and other nonguaranteed elements);

e. risk transfer testing;

f. evaluation of investment strategy; and

g. actuarial appraisals.

3.2 Scope of Cash Flow Analysis—The actuary should determine whether **assets**, **liabilities**, or both **assets** and **liabilities** should be included in the **cash flow analysis**. When doing so, the actuary should take into account the intended purpose of the **cash flow analysis** and the risks and options embedded in the **cash flows**.

When determining which **assets** or **liabilities** to include in the **cash flow analysis**, the actuary should take into account the intended purpose of the **cash flow analysis**, the characteristics of the **cash flows**, and the potential for **cash flow risk**.

3.2.1 Asset Considerations—To the extent that **assets** are included in the scope of the **cash flow analysis**, the actuary should consider including the following:

a. **assets** used in prior or related **cash flow analyses**;

b. notional **assets** that change the risk characteristics of either the **assets** or **liabilities** (for example, synthetic guaranteed investment contracts);

c. policy-related **assets**, such as policy loans and deferred premiums;

d. **assets** representing receivables (for example, those created due to federal or state governmental programs, pharmacy rebates, healthcare provider risk transfer, or reinsurance recoverables);

e. off-balance sheet **assets** (for example, letters of credit or parental guarantees); and

f. **assets** that originate with a related entity or related line of business.

The actuary should determine whether certain items (for example, non-admitted, below investment grade, or illiquid resources) should be excluded from the **cash flow analysis** under applicable law or guidance or based on professional judgment.

The actuary should determine whether the **cash flows** of an **asset** are used to support more than one **liability**. If so, the actuary should confirm that the **cash flows** used are available to support the **liabilities** for the **cash flow analysis**.

3.2.2 Liability Considerations—To the extent that **liabilities** are included in the scope of the **cash flow analysis**, the actuary should consider including the following:

a. **liabilities** used in prior or related **cash flow analyses**;

b. **cash flows** not specifically associated with policy **cash flows** (for example, corporate expenses, payables, surplus notes, shareholder dividends, hedging strategies, or balance sheet items that result from litigation);

c. **liabilities** representing payables (for example, those created due to federal or state governmental programs, or healthcare provider risk transfer);

d. off-balance sheet **liabilities** (for example, letters of credit or parental guarantees); and

e. contingent **liabilities** (for example, contracts that require an insurer to post collateral if its rating falls below the contractual threshold).

3.3 Type of Cash Flow Analysis—When performing a **cash flow analysis**, the actuary should use a type of analysis that is appropriate to the actuary's assignment. Examples of types of **cash flow analysis** include cash flow testing, gross premium valuation methods, loss ratio methods, risk theory techniques, and profitability projections. When determining which type of analysis to use, the actuary should take into account the following:

a. whether the timing and amount of **cash flows** of **assets** could differ materially under a range of plausible **scenarios** (for example, **assets** with optionality or significant prepayment, default, concentration, or liquidity risk);

b. whether the **liabilities** and underlying **assets** could have **cash flows** with different timing or durations (for example, a company has a new or rapidly expanding or contracting line of business, or there is a significant lag between receipt of premium and payment of claims);

c. whether the exercise of any options granted to policyholders, borrowers, or counterparties could have a significant impact on the **cash flow analysis** (for example, an annuity contract holder's option to surrender the annuity for cash at book value);

d. whether the risks to be analyzed are short-term **liabilities** supported by short-term **assets** (for example, short-term disability coverage supported by short-term bonds);

e. whether the **cash flows**, when taken together, are sensitive to changes in economic conditions or noneconomic factors; and

f. applicable law.

The actuary should consider using cash flow testing when the combined **asset** and **liability cash flows** could differ materially under a range of plausible economic **scenarios**.

3.4 Projection of Asset Cash Flows—When projecting **cash flows** of **assets**, the actuary should take into account the **asset** characteristics and investment strategy.

3.4.1 Asset Characteristics—When projecting **cash flows** of **assets** (for example, **cash flows** of callable bonds, mortgage-backed securities, common stocks, or derivative contracts), the actuary should take into account the following **asset** characteristics, when applicable to the assignment:

a. whether **cash flows** are sensitive to economic factors such as interest rates, market returns, currency exchange rates, or inflation rates;

b. the impact on the amount or timing of **cash flows** associated with **asset** quality as it relates to the risk of a delay in **cash flows**, **asset** default, or other financial nonperformance;

c. any limitations on the ability to use **asset cash flows** to support **liability cash flows**, such as when a block of **assets** supports a particular block of business by contract or regulation;

d. the associated costs of maintaining the **assets** or of converting the **assets** into cash when necessary;

e. the historical experience of similar **assets**, to the extent such experience is credible and relevant to the projection of future **cash flows**;

f. the impact of company or industry practices;

g. the ability of the policyholder or other party to exercise options under the policy that have an effect on **cash flows** (for example, paying additional premiums);

h. the impact of regulatory actions or limitations on **cash flows** under certain **scenarios**; and

i. other known factors that are likely to have a material effect on **cash flows**.

When projecting **cash flows** of **liability**-related **assets**, such as a reinsurance or other risk transfer transaction recoverable, premium receivable, or a health risk adjustment transfer accrual, the actuary should take into account the terms and conditions of any agreement or treaty, as well as the **liability** considerations listed in section 3.5.

3.4.2 Investment Strategy—When projecting **cash flows** of **assets**, the actuary should take into account the following investment strategy considerations, when applicable to the assignment:

a. the **organization's asset** segmentation or allocation practices;

b. the **organization's** strategy regarding the sale of **assets** prior to maturity;

c. the extent to which the **organization's** strategy is anticipated to vary over time, such as in response to changing **liability** characteristics;

d. the **organization's** strategy for the investment and reinvestment of future positive or negative **cash flows**;

e. to the extent the **organization's** investment strategy contemplates borrowing to cover negative **cash flows**, whether the funds borrowed pursuant to the strategy are reasonable in relation to the **organization's** existing indebtedness, borrowing capacity, and cost of borrowing funds;

f. the **organization's** use of derivative contracts, including strategies to mitigate **cash flow risk**;

g. to the extent the **organization's** investment strategy contemplates capital contributions from a related entity or other source, whether the capital contributions can be sustained and are appropriate for the analysis;

h. the costs or gains due to **cash flows** denominated in foreign currencies; and

i. other known factors that are likely to have a material effect on investment strategy or the **organization's** ability to execute its investment strategy.

3.5 Projection of Liability Cash Flows—When projecting **cash flows** of **liabilities**, the actuary should take into account the **liability** characteristics and the **organization's** management policies and practices.

3.5.1 Liability Characteristics—When projecting **cash flows** of **liabilities**, the actuary should take into account the following **liability** characteristics, when applicable to the assignment:

a. the historical experience of the **liabilities**;

b. the historical experience of similar **liabilities**, to the extent such experience is appropriate and relevant to the projection of future **cash flows**;

c. the effect of external factors such as interest rates, equity or other market returns, unemployment rates, currency exchange rates, and inflation rates on **cash flows**;

d. the ability of the policyholder or other party to exercise options under the policy that have an effect on **cash flows** (for example, disintermediation or liquidity options);

e. the associated costs of maintaining **liabilities** and collecting or paying out **cash flows**;

f. the risk of insolvency or other nonperformance by providers of services, including reinsurers and other counterparties;

g. the effect of changes in premium (for example, scheduled or nonscheduled rate increases) or nonguaranteed elements;

h. the impact of regulatory actions or limitations on **cash flows** under certain **scenarios**;

i. company or industry practices; and

j. other known factors that are likely to have a material effect on net **liability cash flows**, such as off-balance sheet items, ratings downgrades, reinsurance or other risk transfer transactions, **liability**-related **assets**, debt payments, and general account guarantees of separate account contracts.

3.5.2 Management Policies and Practices—When projecting **cash flows** of **liabilities**, the actuary should take into account the following management policies and practices of the **organization**, when applicable to the assignment:

a. claim settlement and benefit payment practices;

b. strategies to control expenses or mitigate risks;

c. payment of policyholder dividends;

d. nonguaranteed premiums, charges, or benefits;

e. premium rate change policy; and

f. other management policies and practices that may impact **cash flows**.

When projecting **cash flows** of **liabilities** under various **scenarios**, the actuary should take into account how management actions may vary under different **scenarios**, the **organization's** intent and capacity to take such actions, and whether the **liability** assumptions reflect the impact of such actions.

3.6 Scenarios—When performing a **cash flow analysis**, the actuary should use an appropriate type, range, and number of **scenarios** to reasonably represent the underlying variability of the **cash flows** and should consider

a. testing modeled **cash flows** for sensitivity to alternative data, assumptions, or methods and performing additional analysis when, in the actuary's professional judgment, the resulting **cash flows** are likely to be highly sensitive; and

b. selecting a projection period for which the **cash flows** may be material.

When assumptions are interdependent (for example, interest rates and projected lapse rates within a **scenario**), the actuary should use, or confirm use of, assumptions that are appropriate and reasonably consistent with one another for each **scenario**.

3.7 Interim Values—The actuary should take into account the impact of the pattern of interim values, such as negative balances (particularly surplus), **cash flows**, and earnings, when appropriate for the assignment.

3.8 Reliance on Another Party—When relying on another party and thereby disclaiming responsibility for

a. data and other information relevant to the use of data, the actuary should refer to ASOP No. 23, *Data Quality*.

b. a model, the actuary should refer to ASOP No. 56, *Modeling*.

c. assumptions or methods prescribed by another party, the actuary should review the assumption or method for reasonableness and consistency with other assumptions and methods to the extent practicable and appropriate within the scope of the actuary's assignment.

d. any other item not addressed above (including assumptions or methods not provided but not prescribed by another party), the actuary should review the item for reasonableness and consistency to the extent practicable and appropriate within the scope of the actuary's assignment. In addition, the actuary should be reasonably satisfied that the reliance is appropriate, taking into account the following, as applicable:

1. when the other party is an actuary, whether the actuary knows that the other party is appropriately qualified and has followed applicable ASOPs;

2. whether the actuary knows that the other party has expertise in the applicable field;

3. whether the actuary knows the other party's stated purpose for the item and the extent to which it is consistent with the actuary's intended purpose; and

4. whether the actuary knows of differences of opinion within the other party's field of expertise that are material to the actuary's use of the item.

3.9 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 documentation in a form such that another actuary qualified in the same practice area could assess the reasonableness of the actuary's work. The amount, form, and detail of the 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, *Actuarial Communications*, 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, the actuary should refer to ASOP Nos. 23, 41, and 56. In addition, the actuary should disclose the following in such actuarial reports, if applicable:

a. the intended purpose of the **cash flow analysis** (see section 3.2);

b. the scope of the **cash flow analysis**, as well as relevant **cash flows** omitted from the **cash flow analysis** and the rationale for doing so (see section 3.2);

   1. the **assets** included in the **cash flow analysis** and relevant characteristics (see sections 3.2.1 and 3.4.1);

   2. the **liabilities** included in the **cash flow analysis** and relevant characteristics (see sections 3.2.2 and 3.5.1); and

   3. the treatment of reinsurance or other risk transfer transactions, in the **cash flow analysis** (see section 3.4.1 and 3.5.1);

c. the type of **cash flow analysis** and rationale for the type used (see section 3.3);

d. relevant assumptions related to projection of **assets** and **liabilities** in the **cash flow analysis** (sections 3.4 and 3.5);

e. known deviations from company or industry practices (see sections 3.4 and 3.5);

f. a description of **scenarios**, assumptions, sensitivity testing results, projection period, and any material inconsistencies among assumptions used when modeling the **cash flows** (see section 3.6);

g. the impact of the pattern of interim values, including any negative results (see section 3.7); and

h. any reliance on information provided by another party (see section 3.8).

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

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

4.3 Confidential Information—Nothing in this standard is intended to require the actuary to disclose confidential information.

Appendix 1

Background and Current Practices

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

Background

Actuaries have been performing financial projections, which include various cash flow elements, for many years. The large increase in the level and volatility of investment rates of return over several decades caused significant swings in cash flows and present values. Regulatory and accounting requirements for reserve setting and testing, including principle-based reserving (PBR), generally accepted accounting principles (GAAP), and international financial reporting standards (IFRS), have changed significantly. Many newer applications of cash flow analysis require more judgment on the part of the actuary. In addition, the sophistication of insurance products has increased during this time. As a result of these changes, cash flow analysis has become an increasingly important aspect of actuarial work.

Current Practices

Cash flow analysis can be used in a variety of ways, such as analyzing the performance of a particular asset or insurance product under certain specified scenarios or evaluating the solvency of the entire company.

Various cash flow analysis methods are used, based on application. Cash flow testing is the most well-known type of cash flow analysis used for the evaluation of long-duration liabilities where combined asset and liability cash flows vary by economic scenario. Other types, such as a gross premium reserve projection or loss ratio methods, may be appropriate in several situations such as when the assets and liabilities have short duration.

Applications where cash flow testing is commonly used include principle-based reserves, asset adequacy analysis, reinsurance risk transfer testing, rate making, actuarial appraisals, and investment strategy analysis.

Appendix 2

Comments on the Exposure Draft and Responses

The exposure draft of the proposed revision of ASOP No. 7, *Analysis of Life, Health, or Property/Casualty Insurance Cash Flow Risk*, was issued in December 2023 with a comment deadline of June 1, 2024. Nine 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. 7 Task Force of the Actuarial Standards Board (ASB) carefully considered all comments received, and a joint life and health review committee and the ASB reviewed (and modified, where appropriate) the changes proposed by the ASOP No. 7 Task Force.

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

The term "reviewers" in appendix 2 includes the ASOP No. 7 Task Force, the joint life and health review committee, and the ASB. The section numbers and titles used in appendix 2 refer to those in the exposure draft, which are then cross referenced with those in the final standard.

TRANSMITTAL MEMORANDUM	
Question 1(b): For the life and health practice areas, is the guidance clear for cash flow analysis based on assets, liabilities, or both assets and liabilities?	
Comment	Three commentators said they believed the guidance appropriately covers the life practice area.
Question 2: Is the guidance appropriate for an actuary performing cash flow analysis for a noninsurance entity that self-insures or takes on insurance risk? If not, please recommend clarifications.	
Comment	One commentator said it is welcome and appropriate that this standard now applies equally to insurance companies, risk retention groups, self-insured entities, and "organizations" generally.
Comment Response	One commentator said that the term "reinsurance" needs to be defined as "insurance" where the standard applies to self-insurance. The reviewers changed "reinsurance" to "reinsurance or other risk transfer transactions" to include insurance for self-insured entities.
Question 3: Is the guidance appropriate for all types of cash flow analysis? Does it provide sufficient guidance when determining which type of cash flow analysis to use? If not, please recommend clarifications.	
Comment Response	One commentator said that for life asset adequacy analysis, it was sufficient in conjunction with ASOP No. 22, *Statements of Actuarial Opinion Based on Asset Adequacy Analysis for Life Insurance, Annuities, or Health Insurance Reserves and Other Liabilities,* but guidance was insufficient for determining which type of analysis to use for life pricing. The reviewers note that the ASOPs are principle-based and believe the current language provides the appropriate level of guidance. Therefore, the reviewers made no change in response to this comment.

GENERAL	
Comment	One commentator suggested adding a reference to ASOP No. 11, *Treatment of Reinsurance or Similar Risk Transfer Programs Involving Life Insurance, Annuities, or Health Benefit Plans in Financial Reports*.
Response	The reviewers believe a reference to ASOP No. 11 is unnecessary and made no change.
Comment	One commentator suggested adding examples related to self-insurance.
Response	The reviewers believe the guidance is appropriate for any organization as defined in the standard, including an organization that self-insures, and made no change.
Comment	One commentator suggested that the standard cover foreign-exchange risk explicitly, including a definition of "cash."
Response	The reviewers believe a definition was unnecessary but added references to currency exchange rates in sections 3.4.1(a) and 3.5.1(b) (now 3.5.1[c]).
Comment	One commentator suggested adding more detailed guidance on sensitivity testing and interdependency of risks than exists in ASOP No. 56, *Modeling*.
Response	The reviewers added language on interdependency in section 3.6 but believe sensitivity is adequately addressed.
SECTION 1. PURPOSE, SCOPE, CROSS REFERENCES, AND EFFECTIVE DATE	
Section 1.2, Scope	
Comment	One commentator suggested that ERM is not listed in the USQS as a practice area and asked for clarification of the following sentence: "If the actuary determines that the guidance in this standard conflicts with another practice-area ASOP, the other practice-area ASOP governs."
Response	The reviewers note that the use of the term practice area includes ERM for purposes of standard setting and made no change in response to this comment.
Comment	One commentator suggested including a definition of "applicable law."
Response	The reviewers note that "applicable law" is described in the last paragraph of section 1.2.
SECTION 2. DEFINITIONS	
Comment	Several commentators suggested defining terms that are not applicable to every practice area.
Response	The reviewers acknowledge that practitioners may not be familiar with terminology used outside their area of practice but made no change.
Section 2.1, Asset	
Comment	One commentator suggested defining "risk adjustment payments receivable."
Response	The reviewers deleted the lists of examples in sections 2.1 and 2.5 but added "health" to clarify the term "risk adjustment" in section 3.4.1.
Comment	One commentator asked for an example of intangible assets to be added.
Response	The reviewers changed the language to be consistent with the current ASOP No. 7 in section 2.1 (asset) and section 2.5 (liability).

Section 2.2, Cash Flow	
Comment Response	Several commentators expressed concerns about the definition. The reviewers simplified the definition.
SECTION 3. ANALYSIS OF ISSUES AND RECOMMENDED PRACTICES	
Section 3.1, When to Perform Cash Flow Analysis	
Comment Response	One commentator suggested adding examples for when cash flow testing is not necessary. The reviewers believe such examples are unnecessary and made no change.
Comment Response	One commentator suggested changing “assignment or findings” to “assignment and findings.” The reviewers deleted “or findings.”
Comment Response	One commentator suggested adding a reference to ASOP No. 55, *Capital Adequacy Assessment*. The reviewers believe a reference to ASOP No. 55 is unnecessary and made no change.
Comment Response	One commentator suggested adding “and/or reserve” adequacy in section 3.1(a). The reviewers agree and made changes consistent with the comment.
Comment Response	One commentator suggested adding “and/or capital” adequacy in section 3.1(b). The reviewers agree and made changes consistent with the comment.
Section 3.2, Scope of the Cash Flow Analysis	
Comment Response	One commentator asked for examples of when asset-only or liability-only cash flow analysis is appropriate. The reviewers believe examples are unnecessary in this case and made no change in response to this comment.
Comment Response	One commentator suggested using “cash flow risk” instead of “cash flow volatility.” The reviewers agree and made the change.
Section 3.2.1, Asset Considerations, and 3.2.2, Liability Considerations	
Comment Response	One commentator suggested omitting the lists in section 3.2.1 and 3.2.2 because they are not comprehensive, expanding them, or adding “inter alia.” The reviewers believe the lists are appropriate and made no change in response to this comment.
Section 3.2.1, Asset Considerations	
Comment Response	One commentator suggested adding off-balance sheet assets. The reviewers agree and made the change.
Comment Response	One commentator suggested using “whether subject assets are used in other cash flow analyses” in section 3.2.1(a). The reviewers disagree and made no change in response to this comment.

Comment Response	One commentator suggested deleting "not owned by the organization." The reviewers agree and made the change.
Comment Response	One commentator suggested adding "included" to the sentence after the lettered items. The reviewers believe the current language is appropriate and made no change in response to this comment.
Section 3.3, Type of the Cash Flow Analysis	
Comment Response	One commentator suggested adding a reference to ASOP No. 22 when determining type of cash flow analysis for asset adequacy testing. The reviewers note that ASOP No. 22 includes a reference to ASOP No. 7, believe a reference from ASOP No. 7 to ASOP No. 22 is unnecessary, and made no change.
Comment Response	One commentator suggested restoring the approach used in the current ASOP No. 7 because the new language is too neutral. The reviewers did not restore the approach but modified the language.
Comment Response	One commentator asked for the terms included in the list of types of analyses to be defined. The reviewers note these terms are widely cited in actuarial literature and therefore made no change.
Comment Response	Two commentators suggested changing "could differ materially" to "have a material risk of significant differences." The reviewers clarified the language to address the commentators' concern.
Comment Response	One commentator asked for clarification in section 3.3(d). The reviewers added some examples.
Comment Response	One commentator suggested changing "insensitive" to "sensitive" in section 3.2.1(e). The reviewers made the change.
Section 3.2.3, Completeness (Proposed new section)	
Comment Response	One commentator suggested creating a new section 3.2.3 with the guidance in section 3.7 from the current ASOP and titling it "completeness." The reviewers note that ASOP No. 1, *Introductory Actuarial Standard of Practice*, states, "The guidance in ASOPs need not be applied to immaterial items." Accordingly, the reviewers made no change in response to this comment.
Section 3.5.1, Liability Characteristics	
Comment Response	One commentator suggested adding the experience of the liabilities as a new section 3.5.1(a). The reviewers agree and made changes consistent with the comment.
Comment Response	One commentator suggested adding reference to company news and reputation to the list of items that can affect cash flows. The reviewers agree and made changes consistent with the comment.

Comment Response	One commentator asked for clarification of "maintaining" liabilities in section 3.5.1(d) (now section 3.5.1[e]). The reviewers believe the guidance is clear and made no change.
Comment Response	One commentator suggested moving section 3.5.1(e) (now 3.5.1[f]) to section 3.4.1. The reviewers note that nonperformance by reinsurers is discussed in the last paragraph of section 3.4.1 and made no change in response to this comment.
Section 3.5.2, Management Policies (now Management Policies and Practices)	
Comment Response	One commentator suggested adding "g. regulator actions/limitations that may impact cash flows." The reviewers agree and made a change consistent with the comment.
Comment Response	One commentator suggested incorporating (f) into the stem. The reviewers disagree and made no change in response to this comment.
Section 3.6, Scenarios	
Comment Response	One commentator recommended restoring the language from the current ASOP to clarify the guidance. The reviewers clarified the language in response to this comment.
Comment Response	One commentator suggested deleting the first sentence. The reviewers disagree but clarified the language.
Comment Response	One commentator said the language in section 3.6(a) was unclear. The reviewers moved (a) to a separate paragraph and clarified the language in response to another comment. The reviewers also made changes for consistency in section 4.1(f).
Comment Response	One commentator suggested replacing "alternative models, assumptions, or data" with "alternative data, assumptions, or methods" in section 3.6(a). The reviewers agree and made the change.
Comment Response	One commentator suggested clarifying or removing section 3.6(b). The reviewers agree and clarified the language, now in section 3.6(a).
Section 3.8, Reliance on Information Provided by Another Party	
Comment Response	One commentator suggested deleting "and to have followed applicable ASOPs." The reviewers believe the guidance is appropriate and made no change in response to this comment.
SECTION 4. COMMUNICATIONS AND DISCLOSURES	
Section 4.1, Required Disclosures in an Actuarial Report	
Comment Response	One commentator suggested adding a reference to ASOP No. 11 in section 4.1(b)3. The reviewers disagree and made no change in response to this comment.

Comment Response	One commentator suggested adding a reference to "insurance" in the case of a self-insured organization in section 4.1(b)3. The reviewers modified the language in sections 3.4.1, 3.5.1(j), and 4.1(b)3 to include other risk transfer transactions.
Comment Response	One commentator suggested adding projection period. The reviewers note that projection period is included in section 4.1(f) and made no change.
APPENDIX 1	
Comment Response	One commentator suggested changing "are" to "may be" in the last sentence of the second paragraph. The reviewers agree and made the change.

Appendix 2A: Property/Casualty Comments

In the exposure draft, the ASB asked questions about the applicability of ASOP No. 7 to actuaries when performing actuarial services involving property/casualty cash flow risks. Of the nine comment letters received, five were from property/casualty actuaries. Most of these comments said that the language in the exposure draft was inappropriate for property/casualty actuarial services and that if the ASOP were to apply to property/casualty actuaries, a major rewrite would be needed.

As a result of these comments, the ASB has decided to remove all property/casualty activities from the scope of this ASOP and to revise ASOP No. 20, *Discounting of Property/Casualty Claim Estimates*, to improve guidance on cash flows for property/casualty actuaries. This revision of ASOP No. 7 is being issued in conjunction with a revision of ASOP No. 20, now titled *Analysis of Property/Casualty Cash Flows, Including Discounting.*

Several individual comments from these letters were addressed as noted in appendix 2 above. The remaining comments are summarized below. The full comment letters were passed along to the ASOP No. 20 Task Force. The ASB is grateful for the comments and thanks the property/casualty commentators for their valuable input.

GENERAL	
Comment	One commentator suggested more consistent terminology between "property/casualty" and "casualty."
Question 1(a): For the P/C practice area: The proposed scope includes P/C investment cash flow risk but not most analyses involving underwriting and reserving risk. Previously, ASOP No. 7 applied to actuaries "when performing the analysis of cash flows involving both invested assets and liabilities for property/casualty insurers." **i. Should P/C actuaries be subject to this standard?**	
Comment	One commentator said yes, but this should be directed to asset cash flow work as done for ERM or capital adequacy studies.

Comment	One commentator said yes, but the use of the terms “specific to investments” at the end of the first scope paragraph seems to contradict this.
Comment	One commentator said that given the current scope for the property/casualty practice area, the ASOP No. 7 draft is not adequate and provides incomplete guidance on cash flow analysis for the property/casualty practice. In addition, given that the scope of the standard for the property/casualty practice area is limited to investments, many of the sub-sections of section 3 lack relevance for the property/casualty practice area.
Comment	One commentator said yes.
Comment	Two commentators said no because much of section 3 is irrelevant or the language used is unfamiliar to property/casualty practice.
Question 1(a)ii: Is the guidance in proposed section 1.2, Scope, and section 3.1, When to Perform a Cash Flow Analysis, appropriate for P/C actuaries? Please explain.	
Comment	One commentator said the language is appropriate if the ASOP applies only to property/casualty cash flow risks, stated in section 1.2, Scope, which does not mention property/casualty underwriting or reserving risk. The commentator said that if there are circumstances where both property/casualty assets and property/casualty liabilities should be included, then section 1.2 should be changed to reflect that.
Comment	One commentator said no for scope due to its inclusion of investments only, and yes for section 3.1, except in governing ASOPs, as more complete guidance on cash flows appears in other ASOPs.
Comment	One commentator said that the proposed language could be interpreted in several different ways, none of which would be desirable in the property/casualty area.
Comment	One commentator said that the guidance should note that items (a) “reserve adequacy” and items (c) “product development or ratemaking” rarely require cash flow testing in property/casualty.
Question 1(a)iii: Is there current actuarial practice with respect to underwriting or reserving risk that would benefit from expanding the scope for P/C actuaries to include liability cash flow risk?	
Comment	One commentator said that there may be cases where reserving risk could benefit from cash flow analysis but noted that the current draft is incomplete with respect to property/casualty loss reserve liabilities. The commentator noted that ASOP No. 20 contains some helpful guidance, but thought a reference to the whole of ASOP No. 20 would be inappropriate because not all property/casualty loss reserves are discounted.
Comment	One commentator gave examples of current actuarial practice with respect to underwriting or reserving risk that would benefit from expanding the scope of this ASOP for property/casualty actuaries to include liability cash flow risk. However, the commentator noted that the guidance would have to be extensively expanded to provide comprehensive guidance for property/casualty cash flow analysis and suggested that several property/casualty ASOPs could be leveraged to address property/casualty cash flow risk items instead.
Comment	One commentator said that property/casualty liability cash flow (underwriting and reserving) risk should be in scope in situations such as capital models, funding studies, and ERM models of property/casualty risk—but not for typical underwriting or reserving analysis undertaken in line with ASOPs such as ASOP Nos. 43, *Property/Casualty Unpaid Claim Estimates*, and 53, *Estimating Future Costs for Prospective Property/Casualty Risk Transfer and Risk Retention*.
Comment	One commentator said that as the draft was so heavily oriented toward life and health, it would make more sense to provide guidance in related property/casualty ASOPs such as ASOP No. 43 than in ASOP No. 7.
Comment	One commentator said no, as there are already ASOPs governing specific property/casualty activities.

Question 3: Is the guidance appropriate for all types of cash flow analysis? Does it provide sufficient guidance when determining which type of cash flow analysis to use? If not, please recommend clarifications.	
Comment	Two commentators said that this standard was not appropriate for property/casualty cash flow analysis.
SECTION 1. PURPOSE, SCOPE, CROSS REFERENCES, AND EFFECTIVE DATE	
Section 1.1, Purpose	
Comment	One commentator suggested that the scope should specifically exclude ceded reinsurance contracts involving property/casualty cash flow risks.
Comment	One commentator suggested excluding property/casualty cash flow risks governed by a property/casualty ASOP.
SECTION 2. DEFINITIONS	
Comment	One commentator suggested including examples from the property/casualty practice area.
Comment	One commentator suggested adding a definition of “investments” to clarify what property/casualty work is in scope.
Section 2.4, Cash Flow Risk	
Comment	Two commentators suggested adding guidance for cash flow risk related to property/casualty claim estimates.
Section 3.1, Cash Flow Analysis (now When to Perform Cash Flow Analysis)	
Comment	One commentator suggested noting that this standard does not apply to most property/casualty assignments in categories (a) and (c).
Comment	One commentator suggested expanding guidance on when property/casualty actuaries should consider performing a cash flow analysis of investments.
Section 3.2.1, Asset Considerations	
Comment	One commentator suggested deleting section 3.2.1(a) (now section 3.2.1[b]) or explaining why it should be considered, as it is not clear in the property/casualty context.
Comment	One commentator suggested adding “deductible amounts” in section 3.2.1(c) (now section 3.2.1[d]).
Section 3.2.2, Liability Considerations	
Comment	One commentator said it was unclear what section 3.2.2(c) (off-balance sheet liabilities) represented.