ACTUARIAL STANDARDS BOARD

# ● THIRD EXPOSURE DRAFT ●

**Proposed**
**Actuarial Standard**
**of Practice**

# Capital Adequacy Assessment

**Comment Deadline:**
**March 1, 2019**

**Developed by the**
**Enterprise Risk Management Committee of the**
**Actuarial Standards Board**

**Approved for Exposure by the**
**Actuarial Standards Board**
**November 2018**

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## APPENDIXES

November 2018

**TO:** Members of Actuarial Organizations Governed by the Standards of Practice of the Actuarial Standards Board and Other Persons Interested in Capital Adequacy Assessment

**FROM:** Actuarial Standards Board (ASB)

**SUBJ:** Proposed Actuarial Standard of Practice (ASOP), *Capital Adequacy Assessment*

This document contains the third exposure draft of a proposed ASOP, *Capital Adequacy Assessment*. Please review this exposure draft and give the ASB the benefit of your comments and suggestions. Each written comment letter or email received by the comment deadline will receive appropriate consideration by the drafting committee and the ASB.

The ASB accepts comments by either electronic or conventional mail. The preferred form is e-mail as it eases the task of grouping comments by section. However, please feel free to use either form. If you wish to use e-mail, please send a message to **comments@actuary.org**. You may include your comments either in the body of the message or as an attachment prepared in any commonly used word processing format. **Please do not embed your comments in the exposure draft and do not password-protect any attachments. If the attachment is in the form of a PDF, please do not "copy protect" the PDF.** Include the phrase "ASB COMMENTS" in the subject line of your message. Please note: Any message not containing this exact phrase in the subject line will be deleted by our system's spam filter. Also, please indicate in the body of the e-mail if your comments are being submitted on your own behalf or on behalf of a company or organization.

If you wish to use conventional mail, please send comments to the following address:

Capital Adequacy Assessment
Actuarial Standards Board
1850 M Street, NW, Suite 300
Washington, DC 20036

The ASB posts all signed comments received by the comment deadline to its website to encourage transparency and dialogue. Comments received after the deadline may not be considered. Anonymous comments will not be considered by the ASB nor posted to the website. Comments will be posted in the order that they are received. All posted comments will be available to the general public on the ASB website. The ASB disclaims any responsibility for the content of the comments, which are solely the responsibility of those who submit them.

For more information on the exposure process, please see the ASB Procedures Manual.

**Deadline** for receipt of responses in the ASB office: **March 1, 2019**

# Third Exposure Draft—November 2018

## History of the Standard

When the ASB's Enterprise Risk Management (ERM) Task Force (now Committee) started work on ASOP No. 46, *Risk Evaluation in Enterprise Risk Management*, and ASOP No. 47, *Risk Treatment in Enterprise Risk Management*, it was intended that those standards would, in addition to providing general guidance to actuaries performing ERM work, provide support as building blocks for a standard on actuarial opinions regarding the still-developing own risk and solvency assessment (ORSA) process.

Starting in 2012, insurance regulators began implementing the ORSA process throughout the world. Specifically, the ORSA process is a part of the Insurance Core Principles (ICP) set out by the International Association of Insurance Supervisors (IAIS) and is required by the NAIC accreditation standards. A key feature of ORSA is that it requires a formal assessment of capital adequacy be a part of an insurer's ERM program. However, what is included in a capital adequacy assessment varies significantly across the industry. Given the disparity in current practices, the ASB determined that a separate ASOP covering capital adequacy assessments was needed to supplement ASOP Nos. 46 and 47.

In addition to satisfying regulatory requirements, risk-taking enterprises will, on occasion, want to assess their capital adequacy. The purpose of this proposed standard is to provide additional guidance to actuaries preparing an assessment of capital adequacy, whether for a specific regulatory requirement or for general management purposes.

## First Exposure Draft

The ASB issued a first exposure draft of this ASOP in September 2016 with a comment deadline of January 31, 2017. Nine comment letters were received and considered in developing modifications that were reflected in the second exposure draft.

## Second Exposure Draft

The ASB issued a second exposure draft in September 2017 with a comment deadline of March 1, 2018. Nine comment letters were received and considered in making changes that were reflected in this exposure draft. For a summary of the issues contained in these comment letters, please see appendix 2.

## Notable Changes from the Second Exposure Draft

Changes made to the second exposure draft include the following:

1. The scope was modified as follows:

    a. expanded the term "insurer" to include reinsurers and self-insurance plans;

    b. clarified that groups that include at least one insurer are covered. As a result, several sections were modified to be consistent with this clarification;

c. excluded actuarial services within the scope of ASOP No. 6, *Measuring Retiree Group Benefits Obligations and Determining Retiree Group Benefits Program Periodic Costs or Actuarially Determined Contributions*; and

d. clarified how reviewers of a capital adequacy assessment would satisfy the requirements of the ASOP.

2. A new section 3.1(k) was added under General Considerations.

3. Section 4.2 was expanded to include a new paragraph (b): "how the insurer's risk management practices or processes, or the insurer's risk profile, risk appetite, or risk tolerance were reflected in the assumptions or methodology underlying the capital adequacy assessment, if they were material to the capital adequacy assessment (see sections 3.2[a] and 3.2[b])."

Request for Comments

The ASB appreciates comments and suggestions on all areas of this proposed standard. Rationale for any suggested changes would be helpful.

The ASB voted in November 2018 to approve this exposure draft.

*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.*

# PROPOSED ACTUARIAL STANDARD OF PRACTICE

# CAPITAL ADEQUACY ASSESSMENT

# STANDARD OF PRACTICE

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

1.1 Purpose—This actuarial standard of practice (ASOP) provides guidance to actuaries when performing professional services with respect to a review of the resiliency of an insurer through a **capital adequacy assessment**.

1.2 Scope—This standard applies to actuaries involved in **capital adequacy assessment** work for life or health insurers (including fraternal benefit societies and health benefit plans), property and casualty insurers, mortgage and title insurers, financial guaranty insurance companies, risk retention **groups**, public entity pools, captive insurers, and similar entities or a combination of such entities, when affiliated (collectively, referred to as “insurer”). The term insurer includes entities that insure or reinsure any entity mentioned in the preceding sentence. For the purposes of this standard, if an actuary is asked to assess the **capital** needed to support self-insured obligations of the types of insurance written by the businesses listed in the first sentence, the term “insurer” includes such self-insured obligations.

This standard does not apply to actuaries when providing actuarial services within the scope of ASOP No. 6, *Measuring Retiree Group Benefits Obligations and Determining Retiree Group Benefits Program Periodic Costs or Actuarially Determined Contributions*.

This standard applies to actuaries designing, performing, or reviewing a **capital adequacy assessment**.

If the actuary’s actuarial services involve reviewing a **capital adequacy assessment**, the reviewing actuary should be reasonably satisfied that the **capital adequacy assessment** was performed in accordance with this standard. The reviewing actuary should use the guidance in this standard to the extent practicable within the scope of the actuary’s assignment.

When designing, performing, or reviewing a **capital adequacy assessment** of a **group**, the actuary need not assess the **capital** of individual members of the **group** unless warranted by the specific circumstances of the **group**.

If the actuary departs from the guidance set forth in this standard in order to comply with applicable law (statutes, regulations, and other legally binding authority), 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 work commenced on or after four months after adoption by the Actuarial Standards Board.

## Section 2. Definitions

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

2.1 Adverse Capital Event—A modeled or actual event that either a) causes **capital** to be significantly less than the **risk capital target(s)** or b) causes **capital** to be less than the **risk capital threshold(s)**.

2.2 Capital—The excess of the value of assets over the value of liabilities, which depends on the **valuation basis** chosen.

2.3 Capital Adequacy Assessment—An assessment of **capital** of an insurer relative to its **risk capital target(s)** or **risk capital threshold(s)**.

2.4 Group—Affiliated group of individual organizations, of which at least one is an insurer.

2.5 Risk Appetite—The level of aggregate risk that an organization chooses to take in pursuit of its objectives.

2.6 Risk Capital Target—The preferred level of **capital** based on specified criteria, which is expressed as a function of a measure of risk. This can result in a single value or a range. There may be multiple **risk capital targets** based on different risk metrics at any one time. Any **risk capital target** is a function of, and aligned with, the insurer's **risk tolerance**. This may include individual company, regulatory, and rating agency developed targets.

2.7 Risk Capital Threshold—The minimum level of **capital** necessary for an organization to operate effectively based on specified criteria and expressed as a function of a measure of risk. There may be multiple **risk capital thresholds** based on different risk metrics at any one time. Any **risk capital threshold** is a function of, and aligned with, the insurer's **risk tolerance**. This may include individual company, regulatory, and rating agency developed thresholds or targets.

2.8 Risk Profile—The risks to which an organization is exposed over a specified period of time.

2.9 Risk Tolerance—The aggregate risk-taking capacity of an organization.

2.10 Valuation Basis—An accounting or economic framework for the recognition and measurement of assets and liabilities.

## Section 3. Analysis of Issues and Recommended Practices

3.1 General Considerations—In designing, performing, or reviewing a **capital adequacy assessment**, the actuary should take into account the following:

a. the insurer's **risk profile** and **capital**;

b. the business and risk drivers, including the legal, tax, regulatory, and economic environments in which the insurer operates, as well as any past and anticipated changes or trends in those drivers;

c. the insurer's strategy and plans and the likelihood of their successful execution;

d. the timing and variability of projected liability-related and asset-related cash flows, including the marketability and availability of assets and other financial resources (commonly forms the basis of a liquidity analysis);

e. the timing and intensity of future calls on **capital** and the means and ability to replenish **capital** in a timely manner;

f. current or available resources, including those available from affiliated entities as well as the capabilities of the insurer and affiliated entities to use the available resources. Resources include **capital**, data, computing power and storage, and human resources;

g. the effect on capital adequacy of changes, or projected changes, in the **risk profile**;

h. correlation of risks and events, diversification benefits, and the uncertainty of the interdependence between risks;

i. projections of future economic conditions;

j. parameter uncertainty; and

k. the methodology used to assess the adequacy of **capital** consistent with the scope of the actuary's assignment.

3.2 Additional General Considerations—In designing, performing, or reviewing a **capital adequacy assessment**, the actuary should consider the following:

a. the insurer's definition of risk, the primary risk metric(s) used in the risk management system of the insurer, the risk identification process, the risks identified by the insurer, relevant management risk reports, and the limitations of the analytical tools and processes that will be used by the insurer to evaluate and quantify each risk;

b. the insurer's **risk appetite** and **risk tolerance**, including any conflicts between the **risk profile** and the **risk appetite** and how the **risk appetite** and **risk profile** are expected to change over time;

c. inconsistencies between the **capital adequacy assessment** and information contained in publicly released reports the actuary considers relevant, such as annual statements and SEC filings, and the rationale for any inconsistencies;

d. prior **capital adequacy assessments**, including underlying assumptions;

e. if the insurer is part of a **group**, or the assessment is of a **group**:

1. access to **capital** from the entities in the **group**;

2. intra-**group** transactions, including, for example, dividends, reinsurance, and guarantees;

3. transfers of risks from the **group** to each individual organization, for example, reinsurance with aggregates or limits on a multi-company basis; and

4. transfers of risks from each organization to the **group** and the degree to which the **group** manages capital adequacy for each individual organization or primarily at the **group** level; and

f. management actions, including whether they can be executed in a timely manner (see section 3.7).

3.3 Valuation Bases Underlying a Capital Adequacy Assessment—When designing or reviewing a **capital adequacy assessment**, the actuary should review the selected **valuation bases** for assets and liabilities to determine whether they are consistent with and appropriate for the intended use of the **capital adequacy assessment**. When doing so, the actuary should consider the following:

a. criteria used by management for making risk and other financial decisions;

b. any differences between the selected **valuation bases** and any mandated (for example, by regulators, accountants, or others) **valuation bases**;

c. the time horizon(s) considered by management in decision-making;

d. the characteristics and implications of the selected **valuation bases**; and

e. any restrictions on assets or **capital** that are not otherwise reflected in the **valuation bases**.

3.4 Risk Capital Target or Risk Capital Threshold—When the actuary assists in the design of or the review of the appropriateness or applicability of **risk capital target(s)** or **risk capital threshold(s)**, the actuary should take into account the following (on a historical, current, and prospective basis, as appropriate):

a. the **valuation bases**;

b. the principal's objectives for **capital** (such as maintaining minimum ratios of regulatory or rating agency capital, insurer stability, acquisition plans, new business, or infrastructure investment) and reasons they could change;

c. normal and adverse environments;

d. the time horizon over which the **capital** is assessed;

e. the methods used to aggregate results, including diversification benefits and the uncertainty of the interdependence among the risks; and

f. alignment with any existing **risk appetite** and **risk tolerance**.

3.5 Additional Considerations Regarding Risk Capital Target or Risk Capital Threshold—When the actuary assists in the design of or the review of the appropriateness or applicability of **risk capital target(s)** or **risk capital threshold(s)**, the actuary should consider the following:

a. the approach used to determine the "sufficient" level of **capital** (such as models based on factors, historical averages, and economic capital), as well as the uncertainty inherent in the approach;

b. the relative merits of using a range for the **risk capital targets** versus a single number;

c. whether the insurer will be able to access additional **capital** if and when needed, including the availability and sources of **capital** within the **group**;

d. the **risk capital targets** or **risk capital thresholds** that are in use within the

**group**; and

e. the relationship of **risk capital targets** or **risk capital thresholds** established by management and external stakeholders (such as rating agencies and regulators), as well as regulatory **capital** requirements, to the current **capital** and risks of the insurer.

3.6 Scenario Tests and Stress Tests—When scenario tests and stress tests are included in a **capital adequacy assessment**, the actuary should follow applicable guidance for scenario testing and stress testing in ASOP No. 46, *Risk Evaluation in Enterprise Risk Management*, and ASOP No. 47, *Risk Treatment in Enterprise Risk Management*. In addition, the actuary should consider the following:

3.6.1 Types of Tests—One or more forms of scenario tests or stress tests such as the following:

a. Deterministic—Tests to challenge the insurer in specific ways based on its unique exposures. For example, emerging risks may be considered using deterministic stress tests;

b. Stochastic—Tests chosen from one or more sets of stochastically generated scenarios;

c. Combination—Tests where multiple events happen simultaneously or sequentially; and

d. Reverse—Reverse-engineered tests that create an **adverse capital event**.

3.6.2 Level of Adversity—Different levels of adversity such as the following:

a. periods of normal volatility;

b. plausible adverse conditions; and

c. extremely unlikely catastrophic events.

3.6.3 Sensitivity Testing—The actuary may use sensitivity testing as part of a **capital adequacy assessment**. For example, sensitivity testing can be used to determine the applicability of the results of the scenario tests and stress tests under changing conditions, including the passage of time, as well as testing the materiality or impact of different assumptions, including stochastic model assumptions.

3.7 Incorporating Management Actions—When management actions are incorporated into a **capital adequacy assessment**, the actuary should consider the following:

a. effectiveness and applicability of prior management actions, given changes between when such actions were taken and the projection period, for example:

1. the magnitude of the impact of the prior action compared with the impact needed in the projection;

2. the differences in risk environment, including differences in the insurer's business and operations, and the legal and regulatory environment;

3. differences in the insurer's enterprise risk management program and **risk profile**; and

4. differences in the insurer's financial strength;

b. feedback from board members or management;

c. legal, regulatory, and execution timing requirements;

d. experience, if available, of other insurers and non-insurance firms who took similar actions; and

e. expected reactions of regulators and other stakeholders.

3.8 Insurers that Operate in Multiple Jurisdictions—When the actuary is designing, performing, or reviewing a **capital adequacy assessment** of an insurer that individually or as part of a **group** operates in more than one jurisdiction, the actuary should take into account the following factors:

a. different regulatory regimes that might apply to different parts of the insurer or different entities (including non-insurance organizations) of the **group**, including:

1. cooperation and existence or non-existence of memorandums of understanding between regulators;

2. differing requirements for **capital**, scenario and stress tests, and financial reporting structures;

3. expected regulatory changes in some jurisdictions;

4. differing amounts of regulatory oversight;

5. impact of rules, restrictions, and time-lags on **capital** availability;

6. differing definitions of "insurance company" and "regulated entity";

7. differing **valuation bases**; and

b. variations in taxation and approaches to litigation in various regulatory regimes.

3.9 Additional Considerations Regarding Insurers that Are Part of a Group—When the actuary is designing, performing, or reviewing a **capital adequacy assessment** of an insurer that is part of a **group**, or the assessment is of a **group**, the actuary should consider the following, if applicable:

a. level of complexity and extent of information available across all entities in the **group**;

b. levels of autonomy in selecting **capital** strategies for individual organizations within the **group**; and

c. the impact of varying ownership interests, including the following:

1. ownership splits, particularly between customers and shareholders;

2. shares listed on multiple stock exchanges; and

3. ownership concentrations.

3.10 Reliance on Data or Other Information Supplied by Others—When relying on data or other information supplied by others, the actuary should refer to the following ASOPs for guidance: ASOP No. 23, *Data Quality*; ASOP No. 41, *Actuarial Communications*; and, if applicable, ASOP No. 38, *Using Models Outside the Actuary's Area of Expertise (Property and Casualty)*. When relying on projections or supporting analysis supplied by others, the actuary should disclose both the fact and the extent of such reliance. In addition, the actuary should refer to ASOP No. 23, deeming such projections or supporting analysis as data covered by ASOP No. 23.

3.11 Documentation—The actuary should consider preparing and retaining documentation to support compliance with the requirements of section 3 and the disclosure requirements of section 4. The actuary should consider preparing such documentation in a form such that another actuary qualified in the same practice area could assess the reasonableness of the actuary's work or could assume the assignment if necessary. 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, *Actuarial Communications*, section 3.8, 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 under this standard, the actuary should refer to ASOP Nos. 23, 41, 46, 47, and, if applicable, 38. In addition, the actuary should disclose the following in such actuarial reports, if applicable:

a. the businesses (insurance or non-insurance) that are included or excluded (and reasons for exclusion) in the assessment;

b. the key current and future business and risk drivers, including the legal, regulatory, and economic environments in which the insurer operates (see section 3.1[b]);

c. the key elements of business and risk management strategies included in the **capital adequacy assessment** (see section 3.1[c]);

d. a discussion of the timing and variability of projected liability-related and asset-related cash flows, including the marketability and availability of assets and other financial resources (see section 3.1[d]);

e. a discussion of future calls on **capital**, and the insurer's means and ability to replenish it (see section 3.1[e]);

f. the treatment of interdependence and diversification (see section 3.1[h]);

g. the basis for projections of future conditions (see section 3.1[i]);

h. a discussion of the sensitivity of any assumption used to gauge the materiality of alternative assumptions, including any sensitivity tests of the parameters used in stochastic models (see section 3.1[j]); and

i. the selected valuation bases for assets and liabilities, and why they are appropriate (see section 3.3).

4.2 Additional Disclosures in an Actuarial Report—The actuary should include the following disclosures, as applicable, in an actuarial report:

a. the extent to which information regarding prior sources of **capital** was reflected in the **capital adequacy assessment**, including any reasons for deviations from past trends in such sources and uses, if such information was available;

b. how the insurer's risk management practices or processes, or the insurer's **risk profile**, **risk appetite**, or **risk tolerance** were reflected in the assumptions or methodology underlying the **capital adequacy assessment,** if they were material to the **capital adequacy assessment** (see sections 3.2[a] and 3.2[b]);

c. any material differences between a prior **capital adequacy assessment** or relevant publicly available or internal reports and analyses and the assumptions underlying the **capital adequacy assessment,** if the actuary had access to such assessment or reports and analyses (see sections 3.2[c] and 3.2[d]);

d. whether the actuary has considered any **capital adequacy assessments** performed at the **group** level and how that information has been used, and describe how being part of the **group** is reflected in the **capital adequacy assessment,** if the insurer is a part of a **group** (see sections 3.2[e] and 3.9);

e. a description of specific management actions, their impact on the **capital adequacy assessment**, and whether the actions could be effectively implemented in a timely manner, if the **capital adequacy assessment** reflects such actions (see sections 3.2[f] and 3.7); and

f. the actuary's role and the rationale underlying the design or the results of the actuary's review if the actuary had a role in the design of or reviewed the **risk capital targets** or **risk capital thresholds** (see sections 3.4 and 3.5);

g. a summary of the tests, including the type and levels of adversity, and the results of the tests, if scenario or stress tests are part of the **capital adequacy assessment**(see section 3.6);

h. a description of how operating in the various jurisdictions is reflected in the **capital adequacy assessment,** if the insurer operates, either individually or as part of a **group**, in multiple jurisdictions (see section 3.8);

i. the disclosure in ASOP No. 41, section 4.2, if any material assumption or method was prescribed by applicable law;

j. the disclosure in ASOP No. 41, section 4.3, 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

k. the disclosure in ASOP No. 41, section 4.4, if, in the actuary's professional judgment, the actuary has otherwise 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

Enterprise risk management (ERM) has been the focus of the insurance industry, including insurers, regulators, and rating agencies, for some time. In response to this increased attention to ERM, the Actuarial Standards Board (ASB) created the ERM Task Force (now Committee), which developed ASOP No. 46, *Risk Evaluation in Enterprise Risk Management*, and ASOP No. 47, *Risk Treatment in Enterprise Risk Management*. These two ASOPs provide guidance to the actuary for overall ERM work.

Historically, most insurers did not undertake formal assessments of capital adequacy. Instead, they tended to use rules of thumb (for example, premium to surplus ratios) or relied on regulatory rules (for example, risk-based capital ratios) or rating agencies (for example, A. M. Best's Capital Adequacy Ratio). Many companies also relied on stress tests or what-if analyses to assess capital levels. Insurance regulators designed deterministic stress tests that reflected potential experience beyond the range of an insurer's normal operations. Over time, deterministic stress tests were developed for a wide variety of assumptions.

Starting in 2012, insurance regulators began implementing the own risk and solvency assessment (ORSA) process throughout the world. Specifically, the ORSA process is a part of the Insurance Core Principles (ICP 16) set out by the International Association of Insurance Supervisors (IAIS) and is required by the NAIC accreditation standards. A key feature of ORSA is that it requires a formal assessment of capital adequacy to be a part of an insurer's ERM program.

### Current Practices

Given the new ORSA requirements and the increasing demands from regulators, rating agencies, and other external stakeholders, insurers are under pressure to perform formal, more sophisticated capital adequacy assessments. These formal capital adequacy assessments typically involve considerations of complex contingencies in determining the impact of adverse experience on the insurer and its capital adequacy, making this a process that will usually involve actuaries in some or all of the assessment process.

Company practice in making these assessments varies significantly. Some companies have created their own stochastic models (or use commercially available software) that simulate underwriting results across all lines of business and geographies, as well as economic conditions and investment results. These models typically incorporate the insurer's strategic plan and may include complicated feedback loops that reflect management's responses, if any, to specific situations (for example, underwriting results, a recession, multiple catastrophic events, a pandemic). They may also include predictions of how regulators and rating agencies may react to changes in the financial condition of the insurer. Other models may analyze capital adequacy at very high levels of aggregation and have limited or no feedback loops (i.e., they analyze specific management actions one at a time).

Larger insurers may have whole departments focused on analyzing the global economy. For smaller insurers, this work may be tasked to a specific individual or may be outsourced to consultants. In many of these insurers, actuaries and non-actuaries are involved in these analyses and the building of the models.

Rating agencies and regulators are concerned with individual company and group-wide capital adequacy. Many insurers are part of complex, multi-national organizations (including insurers and non-insurers) that span many different accounting, financial, and regulatory regimes. The relationships among the members of a group and the differences among these regimes can have a significant impact on capital adequacy and the group's ability to fulfill its promises to its customers. In most countries, ORSA requires groups operating in multiple countries to perform a group-wide assessment of their capital adequacy across all jurisdictions.

## Appendix 2

## Comments on the Second Exposure Draft and Responses

The second exposure draft of this proposed ASOP, *Capital Adequacy Assessment*, was issued in September 2017 with a comment deadline of March 1, 2018. 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 Enterprise Risk Management Committee carefully considered all comments received, reviewed the second exposure draft, and proposed changes. The ASB reviewed the proposed changes and made modifications where appropriate.

Summarized below are the significant issues and questions contained in the comment letters and responses.

The term "reviewers" in appendix 2 includes the Enterprise Risk Management 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.

| **TRANSMITTAL MEMORANDUM QUESTIONS** | |
|---|---|
| **Question 1: Given the expanded scope, is the level of guidance appropriate?** | |
| Comment<br><br>Response | Most commentators answered "yes," but several thought the guidance could be improved.<br><br>The reviewers moved specific comments to the sections they believe most appropriate and addressed the comments there. |
| Comment<br><br>Response | Several commentators suggested the standard be modified to provide separate guidance for actuaries who reviewed either the assessment or its design.<br><br>The reviewers modified the scope of the standard to address the role of the reviewing actuary. |
| Comment<br><br>Response | One commentator was concerned the language in sections 4.1 and 4.2 could expand the scope beyond assessment to cover routine financial projections.<br><br>To avoid ambiguity, the reviewers added the words "if applicable" and "as applicable" to section 4.1 and 4.2, respectively |
| **Question 2: With respect to companies that have operations in multiple jurisdictions or as part of a group, does the exposure draft provide appropriate guidance?** | |
| Comment<br><br>Response | Most commentators answered "yes," but several thought the guidance could be improved.<br><br>The reviewers moved specific comments to the sections they believe most appropriate and addressed the comments there. |
| Comment<br><br>Response | One commentator suggested that language be added to section 4.2 to require the actuary to disclose if they had access to assessment of the group when working on the assessment of a member of that group.<br><br>The reviewers agree and added "whether the actuary has considered any capital adequacy assessments performed at the group level and how that information has been used" to section 4.2(c) (now section 4.2[d]. |

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|---|---|
| Comment | One commentator thought the guidance was too general and thought more specific guidance should be provided. The commentator's concern is that actuaries might interpret "differing capital requirements" differently. |
| Response | The reviewers believe the guidance needs to be sufficiently broad to cover a wide range of capital requirements and, therefore, made no change. |
| Comment | One commentator thought the phrase "availability of capital" was too vague. |
| Response | The reviewers agree and changed "availability of" to "access to" to be clearer. |
| Comment | One commentator suggested that currency risk should be added to the list of considerations in section 3.1. |
| Response | The reviewers believe the existing wording is sufficiently broad to include this risk and, therefore, made no change. |
| **Question 3: Do the changes in the exposure draft necessitated by eliminating liquidity and fungibility provide adequate guidance?** | |
| Comment | Most commentators answered "yes," but several thought the guidance could be improved. |
| Response | The reviewers moved specific comments to the sections they believe most appropriate and addressed the comments there. |
| Comment | Two commentators said that "liquidity" was not adequately covered by the standard and should be included. |
| Response | The reviewers modified the language in 3.1(d) to improve clarity. |
| Comment | One commentator asked that the terms "fungibility" and "liquidity" be added back to the standard even though they believe the standard covered the topics. |
| Response | The reviewers believe the concepts underlying the term "liquidity" is adequately addressed in 3.1(d); however, the reviewers added a reference to liquidity to improve clarity. With respect to "fungibility," the reviewers believe the concepts underlying that term are adequately addressed collectively in sections 3.1(e), 3.1(f), 3.2(e), and 3.5(c), and therefore made no change. |
| **Question 4: Are there situations in which the definition of capital in this standard would not be appropriate for a capital adequacy assessment?** | |
| Comment | Most commentators answered that there were no situations in which the definition of capital was not appropriate, but several thought the guidance could be improved. |
| Response | The reviewers moved specific comments to the sections they believe most appropriate and addressed the comments there. |
| **Question 5: Are the revised definitions of risk capital target and risk capital threshold clear and appropriate?** | |
| Comment | Most commentators answered "yes," but several thought the guidance could be improved. |
| Response | The reviewers moved specific comments to the sections they believe most appropriate and addressed the comments there. |
| Comment | One commentator suggested adding "collectability of additional capital" to section 3.5(c). |
| Response | The reviewers did not believe that adding "collectability of additional capital" was appropriate in section 3.5. However, to clarify that collectability is important, the reviewers modified the language in section 3.2(e)(1) from "availability of capital" to "access to capital." |

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| Comment<br><br>Response | One commentator suggested that more specific guidance should be given regarding how to set risk capital targets and risk capital thresholds for insurers of different sizes and complexities.<br><br>The reviewers believe the guidance is appropriate, and therefore, made no change. |
| Comment<br><br>Response | One commentator suggested the standard should clarify the relationship between definitions of risk capital target and risk capital thresholds on the one hand, and risk appetite and risk tolerance on the other.<br><br>The reviewers believe the existing guidance is sufficient and, therefore, made no change. |
| **GENERAL COMMENTS** | |
| Comment<br><br>Response | Several commentators asked for more guidance on or suggested language about the appropriate "time horizon" of an assessment.<br><br>The reviewers added the following to section 3.1: "the methodology used to assess the adequacy of capital consistent with the scope of the actuary's assignment." |
| Comment<br><br>Response | One commentator asked for more guidance on how to treat down-streamed capital in a group.<br><br>The reviewers believe that the guidance in the sections dealing with an insurer being part of a group is sufficient and, therefore, made no change. |
| **SECTION 1. PURPOSE, SCOPE, CROSS REFERENCES, AND EFFECTIVE DATE** | |
| **Section 1.2, Scope** | |
| Comment<br><br>Response | One commentator suggested expanding the definition of "insurer" to include self-insurance.<br><br>The reviewers agree and added the following sentence to the first paragraph: "For the purposes of this standard, if an actuary is asked to assess the capital needed to support self-insured obligations of the types of insurance written by the businesses listed in the first sentence, the term "insurer" includes such self-insured obligations." |
| Comment<br><br>Response | Several commentators were concerned that the words "whether for an insurer's internal or external stakeholders (for example, a regulator)" in the second paragraph could give an external stakeholder the right to request an assessment be performed.<br><br>The reviewers agree the language was confusing and, therefore, deleted the language. |
| Comment<br><br>Response | One commentator was concerned the wording "life or health insurers, including fraternal benefit societies and health benefit plans ..." could be interpreted to mean that the word "including" starts a long list of entity types, which is not the intent.<br><br>The reviewers agree and modified the language to read, "life or health insurers (including fraternal benefit societies and health benefit plans)…" |
| **SECTION 2. DEFINITIONS** | |
| **Section 2.2, Capital** | |
| Comment<br><br>Response | Several commentators thought the definition of capital should be expanded and offered suggestions.<br><br>The reviewers believe the current definition of capital is appropriate and sufficient and, therefore, made no change. |
| **Section 2.3, Capital Adequacy Assessment** | |
| Comment | One commentator suggested changing the definition of capital adequacy assessment to "An assessment of an organization's risk capital requirements or risk capital targets, given its risk profile and risk tolerance, relative to its capital." |

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| Response | The reviewers believe the current definition is appropriate and, therefore, made no change. |
| **Section 2.6, Risk Capital Target** | |
| Comment<br><br>Response | One commentator suggested that "risk capital threshold" should not be set at a level at which the insurer could "operate most effectively." Instead, that language should apply to "risk capital targets."<br><br>The reviewers believe the current definitions are appropriate and, therefore, made no change. |
| **Section 2.7, Risk Capital Threshold** | |
| Comment<br><br>Response | One commentator suggested changing "risk capital threshold" to "risk capital requirement" to align it with other industry standards, such as A.M. Best's "Net Required Capital." In addition, the commentator suggested a revised definition of "risk capital requirement: "The minimum level of capital necessary to ensure that the organization is able, with a high level of confidence, to absorb losses arising from severe adverse fluctuations in the value of its assets and liabilities and /or operating results and still meet its policyholder obligations. There may be multiple risk capital requirements based on different risk metrics at any one time. Any risk capital requirement is a function of, and aligned with, the organization's risk tolerance."<br><br>The reviewers believe the current definition is appropriate and, therefore, made no change. |
| Comment<br><br>Response | One commentator was concerned that the definition of "risk capital threshold," allowing for multiple thresholds, is not robust enough. In addition, the commentator believed that the disclosures were insufficient.<br><br>The reviewers believe the definition of risk capital threshold (including the use of multiple thresholds) is appropriate for its intended use within a capital adequacy assessment. In addition, the reviewers believe the guidance in sections 3.5 and 4.2 is sufficient. Therefore, the reviewers made no change. |
| **SECTION 3. ANALYSIS OF ISSUES AND RECOMMENDED PRACTICES** | |
| **Section 3.1, General Considerations** | |
| Comment<br><br>Response | One commentator suggested adding "the time horizon over which the capital adequacy will be assessed" as an item to be reflected in an assessment in section 3.1. In addition, the commentator suggested adding "tax" to the list of items in section 3.1(b).<br><br>The reviewers agree that "tax" should be added to section 3.1(b) and modified the language. The reviewers added section 3.1(k) to deal with the issue of time horizon. |
| Comment<br><br>Response | One commentator suggested adding "in a stress environment" at the end of section 3.1(e).<br><br>The reviewers believe that adding the suggested language would limit the applicability of section 3.1(e) and, therefore, made no change. |
| Comment<br><br>Response | One commentator suggested that the "quality of capital" should be incorporated into an assessment of capital.<br><br>The reviewers believe that section 3.1(d) adequately addresses the "quality of capital" (as the term is generally used in the industry) and, therefore, made no change. |
| Comment<br><br>Response | One commentator asked for more guidance on what constituted "available resources" in section 3.1(f).<br><br>The reviewers agree that more clarity is appropriate and added the following language to section 3.1(f): "…to use the available resources. Resources include capital, data, computing power and storage, and human resources;" |

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| **Section 3.2, Additional General Considerations** | |
| Comment<br><br>Response | One commentator suggested changing “management” to “applicable management” in 3.2(f), as well as in sections 3.3(a), 3.3(c), 3.7, and 4.2(f).<br><br>The reviewers believe the current language is appropriate and, therefore, made no change. |
| Comment<br><br>Response | Several commentators suggested adding the words “if applicable” to sections 3.2, 3.5, 3.7, and 3.8.<br><br>The reviewers believe that the guidance is appropriate and, therefore, made no change. |
| Comment<br><br>Response | One commentator suggested adding an additional item: “regulatory and/or stakeholder response to adverse capital events.”<br><br>The reviewers believe the suggested item is beyond the scope of this standard and, therefore, made no change. |
| Comment<br><br>Response | One commentator suggested the examples given in section 3.2(c) were not properly illustrative.<br><br>The reviewers agree and modified the examples to be “annual statements and SEC filings.” |
| Comment<br><br>Response | One commentator suggested adding “whether at the group or individual organization level” to the end of the sentence.<br><br>The reviewers believe the language of the current section 3.2(f) is appropriate. However, the standard was changed elsewhere to clarify that the standard applies to both individual insurers and to groups. |
| **Section 3.3, Valuation Bases Underlying a Capital Adequacy Assessment** | |
| Comment<br><br>Response | One commentator wanted more guidance on “valuation basis” of assets and liabilities.<br><br>The reviewers believe that the term “valuation basis” is well understood in the industry and, therefore, believe no further guidance is needed. |
| Comment<br><br>Response | One commentator suggested changing “mandated valuation bases” to “regulatory valuation bases.”<br><br>The reviewers believe that parties other than regulators could mandate valuation bases and modified the language. |
| Comment<br><br>Response | One commentator suggested adding a bullet for “Any differences between selected time horizon and any mandated horizon” in section 3.3(c).<br><br>The reviewers believe the current language is sufficient and, therefore, made no change. |
| **Section 3.4, Risk Capital Target or Risk Capital Threshold** | |
| Comment<br><br>Response | One commentator suggested adding “new business growth” as an additional example of an objective in section 3.4(b).<br><br>The reviewers reconsidered the list of examples and instead added “new business” to the list. |
| Comment<br><br>Response | One commentator suggested adding “the adequacy of” before “the capital is assessed” in section 3.4(d).<br><br>The reviewers believe the current language is appropriate and, therefore, made no change. |
| **Section 3.5, Additional Considerations Regarding Risk Capital Target or Risk Capital Threshold** | |
| Comment<br><br>Response | Several commentators suggested changing “and” to “or” between risk capital targets and risk capital thresholds in sections 3.5(d) and 3.5(e).<br><br>The reviewers agree and made the change. |

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| **Section 3.6, Selecting Scenario Tests and Stress Tests (now Section 3.6, Scenario Tests and Stress Tests)** | |
| Comment<br><br>Response | One commentator wrote: "Section 3.6 and Section 3.7 do NOT mention the reviewer. As a reviewing actuary, Section 3.6 is exactly where the State wants my advice regarding which tests are appropriate and whether the calculations are accurate. If management actions are asserted to have a material mitigating effect, I would probably be asked to focus on quality and quantification of those assertions.'<br><br>The reviewers agree that section 3.6 was unclear regarding the role of a reviewer and modified the introductory paragraph of section 3.6. In addition, the scope was modified to clarify applicability of the guidance to a reviewer. |
| Comment<br><br>Response | One commentator suggested providing a definition of the term "plausible adverse conditions."<br><br>The reviewers believe that the term is self-explanatory and, therefore, made no change. |
| **Section 3.6.1, Types of Tests** | |
| Comment<br><br>Response | One commentator suggested modifying the description of stochastic tests to the following: "Tests to evaluate the distribution of exposures from variations in key assumptions such as interest rates or equity returns."<br><br>The reviewers believe the current description is sufficient, but added the following language to the end of section 3.6.3: "including stochastic model assumptions." |
| **Section 3.6.2, Level of Adversity** | |
| Comment<br><br>Response | One commentator suggested that the "level of adversity" should also consider variations in potential market reactions to perceived insurer financial strength.<br><br>The reviewers believe the current list under "level of adversity" is sufficiently illustrative and, therefore, made no change. |
| **Section 3.7, Incorporating Management Actions** | |
| Comment<br><br>Response | One commentator suggested adding a bullet point to this section that warns the actuary not to assume management has complete foresight.<br><br>The reviewers do not believe such a warning is appropriate (as it could apply to all actuarial assumptions) and, therefore, made no change. |
| Comment<br><br>Response | One commentator suggested changing "if available" to "if publicly available" in section 3.7(d) out of a concern that this might create antitrust issues.<br><br>The reviewers did not believe the suggested change was necessary and, therefore, made no change. |
| **SECTION 4. COMMUNICATIONS AND DISCLOSURES** | |
| **Section 4.1, Actuarial Communication** | |
| Comment<br><br>Response | One commentator suggested deleting items (j) "the selected valuation bases for assets and liabilities, and why they are appropriate (see section 3.3)" and (k) "any limitations of the analysis." The commentator also suggested reordering the list of items in order of importance.<br><br>The reviewers believe that item (j) (now [i]) is appropriately on the list. The reviewers agreed that item (k) was unnecessary and deleted it. In addition, the reviewers believe that the importance of any one item in the list would be specific to the assessment in question and did not want to prejudge the list. Therefore, no change was made. |

| Section 4.2, Additional Actuarial Communication | |
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| Comment<br><br>Response | One commentator suggested adding “relevant” before “publicly available or internal reports” in section 4.2(b) (now section 4.2[c]).<br><br>The reviewers agree and made the change. |
| Comment<br><br>Response | One commentator suggested changing “management” to “management, regulators, and stakeholders” in section 4.2(f) (now section 4.2[e]) to be consistent with section 3.7(e).<br><br>The reviewers believe the current language in both sections is appropriate and, therefore, made no change. |