



ACTUARIAL STANDARDS BOARD

• SECOND EXPOSURE DRAFT •

**Proposed Revision of
Actuarial Standard of
Practice No. 25**

Credibility Procedures

**Comment Deadline:
September 30, 2013**

**Developed by the
Credibility Task Force of the
General Committee of the
Actuarial Standards Board**

**Approved for Exposure by the
Actuarial Standards Board
June 2013**

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June 2013

TO: Members of Actuarial Organizations Governed by the Standards of Practice of the Actuarial Standards Board and Other Persons Interested in Credibility Procedures

FROM: Actuarial Standards Board (ASB)

SUBJ: Proposed Revision of Actuarial Standard of Practice (ASOP) No. 25

This document is a second exposure draft of a revision of ASOP No. 25 now titled, *Credibility Procedures*.

Please review this second exposure draft and give the ASB the benefit of your comments and suggestions. Each written response and each response sent by e-mail to the address below will be acknowledged, and all responses will receive appropriate consideration by the drafting committee in preparing the final document for approval by 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 password-protect any attachments. 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.

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

ASOP No. 25 Revision (Second Exposure)
Actuarial Standards Board
1850 M Street, NW, Suite 300
Washington, DC 20036

The ASB posts all signed comments received to its website to facilitate transparency and dialogue. Anonymous comments will not be considered by the ASB nor posted to the website. The comments will not be edited, amended, or truncated in any way. Comments will be posted in the order that they are received. Comments will be removed when final action on a proposed standard is taken. The ASB website is a public website and all comments will be available to the general public. The ASB disclaims any responsibility for the content of the comments, which are solely the responsibility of those who submit them.

Deadline for receipt of responses in the ASB office: **September 30, 2013**

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Background

The original standard, adopted in 1996, was a product of the Health Committee and the Casualty Committee of the ASB. The scope of the standard was limited to accident and health, group term life, and property/casualty coverages.

In 2011, the ASB asked the Life Committee to consider whether the scope of ASOP No. 25 should be expanded to incorporate additional practice areas. The Life Committee agreed that the scope of the ASOP could be expanded. The Board asked that a multi-discipline task force be formed under the direction of the General Committee to begin drafting an exposure draft. A task force was then created that included actuaries from the life, health, pension, and property/casualty practice areas.

First Exposure Draft

The first exposure draft of this revised ASOP was issued in September 2012 with a comment deadline of December 31, 2012. The Credibility Task Force carefully considered the 20 comment letters received and made changes to the language in several sections in response. For a summary of the issues contained in these comment letters, please see appendix 2. The most significant modifications from the first exposure draft are as follows:

1. The scope of the standard has been clarified in section 1.2.
2. A definition of “credibility procedure” was added.
3. The purpose and use of credibility procedures was clarified, in particular regarding the continued need for professional judgment.
4. “Method(s)” and “methodology(ies)” were replaced with “procedure(s)” throughout the ASOP.

The ASB thanks everyone who took the time to contribute comments and suggestions on the first exposure draft.

Request for Comments

The ASB encourages comments on all sections of this second exposure draft and is particularly interested in receiving comments on the following areas:

1. Does the revised language in the standard clarify the application of the standard?
2. Does the standard allow for the appropriate consideration of professional judgment in the application of the standard?

The ASB approved this second exposure draft at its June 2013 meeting.

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Credibility Task Force

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Actuarial Standards Board

Robert G. Meilander, Chairperson

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Stephen G. Kellison	James F. Verlautz

The ASB establishes and improves standards of actuarial practice. These ASOPs identify what the actuary should consider, document, and disclose when performing an actuarial assignment.

The ASB's goal is to set standards for appropriate practice for the U.S.

ACTUARIAL STANDARD OF PRACTICE NO. 25

CREDIBILITY PROCEDURES

STANDARD OF PRACTICE

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

- 1.1 Purpose—The purpose of this actuarial standard of practice (ASOP) is to provide guidance to actuaries when performing professional services with respect to selecting credibility procedures and the application of those procedures to sets of data.
- 1.2 Scope—This standard applies to actuaries when performing actuarial services involving credibility procedures in the following situations:
- a. when the actuary is required by applicable law (statutes, regulations, and other legally binding authority) to evaluate credibility;
 - b. when the actuary chooses to evaluate the credibility of subject experience, or states in any related actuarial communication that credibility has been evaluated in accordance with this ASOP;
 - c. when the actuary is blending or considering blending subject experience with other experience; or
 - d. when the actuary represents the data being used as statistically or mathematically credible.

If the actuary determines that the guidance in this standard conflicts with ASOP No. 35, *Selection of Demographic and Other Noneconomic Assumptions for Measuring Pension Obligations*, ASOP No. 35 will govern.

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.

- 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.

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- 1.4 Effective Date—This standard will be effective for any professional services with respect to credibility procedures performed on or after four months following adoption by the Actuarial Standards Board.

Section 2. Definitions

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

- 2.1 Credibility—A measure of the predictive value in a given application that the actuary attaches to a particular set of data (*predictive* is used here in the statistical sense and not in the sense of predicting the future).
- 2.2 Credibility Procedure—A process that involves the following:
- a. the evaluation of subject experience for potential use in setting assumptions without reference to other data; or
 - b. the identification of relevant experience and the selection and implementation of a method for blending the relevant experience with the subject experience.
- 2.3 Full Credibility—The level at which the subject experience is assigned full predictive value, often based on a selected confidence interval.
- 2.4 Relevant Experience—Sets of data, that include data other than the subject experience, that, in the actuary’s judgment, are predictive of the parameter under study (including but not limited to loss ratios, claims, mortality, payment patterns, persistency, or expenses). Relevant experience may include subject experience as a subset.
- 2.5 Risk Characteristics—Measurable or observable factors or characteristics that are used to assign each risk to one of the risk classes of a risk classification system.
- 2.6 Risk Classification System—A system used to assign risks to groups based upon the expected cost or benefit of the coverage or services provided.
- 2.7 Subject Experience—A specific set of data drawn from the experience under consideration used for the purpose of predicting the parameter under study.

Section 3. Analysis of Issues and Recommended Practices

- 3.1 Purpose and Use of Credibility Procedures—There are two purposes of using credibility procedures: 1) to evaluate subject experience for potential use in setting assumptions without reference to other data; and 2) to improve the estimate of expected values. Examples where credibility procedures may be used include tasks such as pricing,

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ratemaking, prospective experience rating, and assumption setting for valuation and modeling.

- 3.2 Selection of Credibility Procedure—The actuary should use an appropriate credibility procedure when determining if the subject experience is fully credible or when blending the subject experience with the relevant experience. The procedure selected or developed may be different for different practice areas and applications. Additional review may be necessary to satisfy applicable law.

In selecting or developing a credibility procedure, the actuary should consider the following criteria:

- a. whether the procedure is expected to produce reasonable results;
- b. whether the procedure is appropriate for the intended use and purpose; and
- c. whether the procedure is practical to implement when taking into consideration both the cost and benefit of employing a procedure.

The actuary should consider the predictive value of more recent experience as compared to experience from earlier time periods.

- 3.3 Selection of Relevant Experience—The actuary should use care in selecting the relevant experience. Such relevant experience should have characteristics similar to the subject experience. Characteristics to consider include items such as demographics, coverages, frequency, severity, or other determinable risk characteristics that the actuary expects to be similar to the subject experience. If the proposed relevant experience does not meet and cannot be adjusted to meet such criteria, it should not be used. The actuary should apply credibility procedures that appropriately consider the characteristics of both the subject experience and the relevant experience.

The actuary should consider the extent to which subject experience is included in relevant experience. If subject experience data is a material part of relevant experience, the use of that relevant experience may not be appropriate.

In some instances, no relevant experience is available to the actuary. In this situation, the actuary should exercise professional judgment, considering available subject experience, in setting an estimate of expected values.

- 3.4 Professional Judgment—The actuary should exercise professional judgment when using a credibility procedure. The use of credibility procedures is not always a precise mathematical process. For example, in some situations, an acceptable procedure for blending the subject experience with the relevant experience may be based on the actuary assigning full, partial, or zero credibility to the subject experience without using a rigorous mathematical model.

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- 3.5 Homogeneity of Data—In carrying out credibility procedures, the actuary should consider the homogeneity of both the subject experience and the relevant experience. Within each set of experience, there may be segments that are not representative of the experience set as a whole. The predictive value can sometimes be enhanced by separate treatment of these segments.

Section 4. Communications and Disclosures

- 4.1 Disclosure—Whenever appropriate in the actuary’s professional judgment, the actuary should disclose the credibility procedures used and any material changes from prior credibility procedures. The actuary should also include the following, as applicable, in an actuarial communication:
- a. the disclosure in ASOP No. 41, *Actuarial Communications*, section 4.2, if any material assumption or method was prescribed by applicable law (statutes, regulations, and other legally binding authority);
 - b. 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
 - c. 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

Background

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

Historical Development

The concept of credibility has been a fundamental part of actuarial practice since the beginning of the profession. Applications of credibility procedures have recognized the traditional concerns regarding the proper balance between responsiveness and stability. Early discussions of credibility tended to focus on estimating mean claim frequency using classical and empirical credibility procedures. The earliest recorded paper on this subject, “How Extensive a Payroll Exposure Is Necessary to Give a Dependable Pure Premium,” was published by Albert H. Mowbray in Volume I of the *Proceedings of the Casualty Actuarial and Statistical Society* (published by the Casualty Actuarial Society in 1914). Later writers have developed formulas for the credibility of claim severity and for the credibility of total losses including Bayesian credibility procedures. Credibility concepts have also been used in other actuarial work.

Current Practices

A variety of approaches are used in credibility procedures. In some cases, the approach is based on judgment; in other cases, mathematical models are used. Some selected mathematical credibility procedures are discussed below.

Classical Credibility Procedures

Classical credibility procedures make assumptions as to the form of the underlying probability distribution. From this probability distribution function, the appropriate number of claims, amount of premium, or other measure of volume is calculated such that the probability that the subject loss experience is within a specified percentage (r) of the expected value is equal to a specified parameter (p). This measure of volume is the full credibility standard.

One such approach that assumes that claims follow a Normal distribution is Limited Fluctuation Credibility. In this approach, the credibility assigned to the subject experience is based on the square root of the ratio of actual claims to the full credibility standard.

Empirical Credibility Procedures

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Empirical credibility procedures measure the statistical relationships of the subject experience to its mean and to comparable experience of prior experience periods, without reference to the underlying distribution.

Bayesian Credibility Procedures

Bayesian analysis procedures merge prior distributions representing the statistical information of the relevant experience with the statistical information of the subject experience to produce posterior distributions that reflect both. Bayesian credibility procedures provide a least squares approximation to the mean of a posteriori distribution that would result from a Bayesian analysis.

One example of the application of Bayesian credibility is Greatest Accuracy Credibility, which is also referred to as linear Bayesian credibility or Bühlmann credibility. In Greatest Accuracy Credibility, partial credibility is assigned to the subject experience using formulas of the form $n/(n+k)$, where n is the volume of subject experience and k is a parameter that may be derived from variances in the subject and relevant experience.

Emerging Practice Involving Generalized Linear Models

More recent advancements in the application of credibility theory incorporate credibility estimation into generalized linear models or other multivariate modeling techniques. The most typical forms of these models are often referred to in literature as generalized linear mixed models, hierarchical models, and mixed-effects models. In such models, credibility can be estimated based on the statistical significance of parameter estimates, model performance on a holdout data set, or the consistency of either of these measures over time.

Credibility Bases

The most commonly used bases for determining credibility are numbers or amounts of claims, losses, premiums, and exposures.

Credibility Procedures for Ratemaking/Pricing

The sample size used for full credibility sometimes is based on the variance of an assumed underlying probability distribution. If using an assumed frequency distribution, the actuary usually adjusts the required sample size to recognize variation in claim size or other factors.

Credibility Procedures for Prospective Experience Rating

Prospective experience rating formulas assign credibility to actual experience of a single risk or a group of risks (the subject experience). In some instances, the subject experience may be subdivided into different components, for example, primary and excess losses, with different credibility levels appropriate for each piece.

More Information

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Expanded discussion of the use of credibility procedures by actuaries setting assumptions can be found in various publications of the American Academy of Actuaries, the Society of Actuaries, the Casualty Actuarial Society, and other similar actuarial professional organizations.

Appendix 2

Comments on the Exposure Draft and Responses

The exposure draft of ASOP No. 25, *Credibility Procedures*, was issued in September 2012 with a comment deadline of December 31, 2012. Twenty 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 Credibility Task Force and the General Committee of the Actuarial Standards Board carefully considered all comments received, and the General Committee and ASB reviewed (and modified, where appropriate) the changes proposed by the Task Force.

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

The term “reviewers” in appendix 2 includes the Task Force, General Committee, and the ASB. Also, unless otherwise noted, the section numbers and titles used in appendix 2 refer to those in the exposure draft.

GENERAL COMMENTS	
Comment	Several commentators suggested wording changes that helped clarify, rather than change the meaning of, various sections of the standard.
Response	The reviewers agree with many of the suggestions and made modifications to language throughout the standard.
Comment	One commentator stated the ASOP needs a full rewrite since it does not provide the proper guidance for actuaries who need to make their communications intelligible to statistical colleagues or to laymen in forums where statistical usage dominates.
Response	The reviewers believe that this ASOP does provide appropriate guidance to actuaries using credibility procedures and does not require a full rewrite because the standard provides guidance for dealing with commonly encountered situations. The standard also provides the actuary with an analytical framework for exercising professional judgment. Further, communication guidance is outside the scope of this standard but is addressed in ASOP No. 41, <i>Actuarial Communications</i> .
Comment	One commentator stated that the title (“Credibility”) was misleading, since the term has a plain language meaning different from its meaning in the standard. Stating a work product meets ASOP No. 25, the ASB standard for credibility, would mean next to nothing about the credibility of the work product.
Response	The reviewers believe the title is appropriate. The title adequately reflects the purpose and scope of the ASOP, as discussed in section 1.

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Comment	One commentator questioned the need for an ASOP, stating that the existence of a standard creates possibility for labeling work product as substandard, negligent, or malpractice, when the work simply involved judgment. Raising the level of practice in the use of credibility would best be accomplished through educational material, which is not the province of the ASB.
Response	The reviewers believe a need does exist, since the practice of credibility procedures occurs in many different practice areas of the actuarial profession. ASOPs provide the actuary with an analytical framework for exercising professional judgment and identify factors that the actuary typically should consider when rendering a particular type of actuarial service. ASOP No. 25 has existed since 1986; it is not a new standard. Expanding ASOP No. 25 to include other practice areas will improve the support needed for actuaries using credibility procedures. However, the reviewers made some revisions to address situations where judgment-based credibility assessments are made.
Comment	<p>One commentator noted that pension practice makes very little use of statistical credibility procedures for selecting actuarial assumptions for specific reasons. Other than occasionally for mortality assumptions, pension actuaries generally have little or no statistically relevant historical experience for pension plans, and rarely have the homogeneity of pension data needed for selecting other demographic assumptions using credibility procedures. As a result, pension actuaries often don't use what has happened in the past to strongly influence future demographic expectations. Instead, general expectations about the future may be more relevant. Pension plan mortality assumptions are prescribed for most plan funding calculations and as a result rarely take into account plan-specific experience. In other circumstances, sufficient mortality data relevant to a participant group is rare, and actuaries usually default to variations on standard tables.</p> <p>The commentator also noted that ASOP No. 35 is the long-established standard of assumption setting for pension practice. ASOP No. 35 uses the word "credible" in a less mathematically rigorous way and does not deal with statistical credibility procedures at all. The commentator believes that having ASOP No. 25 apply to pension practice with different standards than in ASOP No. 35 will lead to ambiguities and confusion and may result in pension actuaries overlooking ASOP No. 25 because it is not cross referenced in ASOP No. 35.</p>
Response	The reviewers revised the scope to address situations where credibility procedures are not used in setting assumptions, and also made revisions to address situations where judgment-based credibility assessments are made. The reviewers also note that section 3.2 states that the credibility procedures may be different for different practice areas. The discussion in section 3.4 has been expanded and states that credibility procedures are not always precise mathematical processes.
SECTION 2. DEFINITIONS	
Comment	One commentator suggested replacing the word "definition" with "terms" in the lead-in sentence after the section header.
Response	The reviewers agree and made the change to reflect standard language.
Section 2.1, Credibility	
Comment	One commentator questioned defining "credibility" as a term and whether the parenthetical in the definition should instead be addressed in the purpose and scope in section 1. The commentator also questioned the narrowing of the standard to the use of predictive in the statistical sense and not in the sense of predicting the future.
Response	The reviewers disagree and made no change, noting that the definition of "credibility" appears in the existing ASOP No. 25 as well as ASOP No. 12, <i>Risk Classification (For All Practice Areas)</i> .

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Section 2.2, Full Credibility	
Comment	One commentator suggested removing the last phrase “based on a selected confidence interval.” In addition, it was suggested that the definition be changed to read, “The assignment of full predictive value to the subject experience.”
Response	The reviewers disagree and did not remove the last phrase but added the word “often” to clarify the language.
Section 2.3, Relevant Experience	
Comment	One commentator suggested adding a more exhaustive list to the parenthetical, or changing “such as” to “including, but not limited to.”
Response	The reviewers agree and added the suggested wording, noting it is not practical to make the list more exhaustive, as there can always be more examples added to the list, and it should not be read as fully complete.
Comment	One commentator suggested expanding the definition to include parameters calculated based on “sets of data” that are described in current definition, by beginning the definition with “[s]ets of data <i>or parameters calculated using sets of data that,....</i> ”
Response	The reviewers disagree and made no change, noting that parameters developed for use in credibility work are a result of analysis of data or sets of data.
Comment	One commentator suggested expanding the defined term from “Relevant Experience” to “Relevant Experience and Analyses” to account for the fact that some models may provide relevant contribution to an actuary’s judgment regarding credibility weighting of different estimates.
Response	The reviewers disagree and did not expand the definition.
Comment	One commentator suggested restoring the wording from the existing ASOP No. 25, which states “other relevant data for coverage analogous to the coverage under consideration.”
Response	The reviewers disagree and did not restore the wording.
Section 2.4, Risk Characteristics	
Comment	One commentator suggested removing the definition of “risk characteristics” because the term is only used once in section 3 and may not justify inclusion in the definitions.
Response	The reviewers disagree and believe it is instructive to include this definition.
Section 2.5, Subject Experience	
Comment	One commentator suggested substituting “subject” for population in the definition, because in statistical usage, population refers to all subjects, not just class under consideration.
Response	The reviewers removed the word “population.”
Comment	One commentator suggested adding a definition of “subject” to clarify that the word can refer to either a class or a single risk.
Response	The reviewers disagree.
Comment	One commentator suggested that the phrase “drawn from the experience of the population” is too restrictive and should be removed.
Response	The reviewers believe that the phrase should remain and made no change.

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SECTION 3. ANALYSIS OF ISSUES AND RECOMMENDED PRACTICES	
Section 3.1, Purpose and Use of Credibility Procedures	
Comment	Several commentators asked for more guidance regarding when credibility procedures are required.
Response	The reviewers agree and revised sections 1.2 to clarify when the standard applies.
Comment	Several commentators asked for clarification between the words “credibility procedure” and “credibility methodology.”
Response	The reviewers agree and added the definition of “credibility procedure” to section 2. The reviewers also replaced “method(s)” and “methodology(ies)” with “procedure(s)” throughout ASOP No. 25 to clarify the guidance provided.
Comment	One commentator suggested substituting a new term for “expected value” in section 3.1, since the term seems too narrow.
Response	The reviewers believe the term is appropriate and did not change it.
Comment	Several commentators addressed the second paragraph of section 3.1, suggesting that an actuary could assign partial credibility to subject experience.
Response	The second paragraph of section 3.1 was deleted. Reference to partial credibility is found in section 3.4.
Comment	One commentator suggested adding a sentence to the effect of, “If the actuary does decide to assign full or zero credibility to the subject experience, the actuary should disclose and discuss the rationale for this decision in the actuarial communication.”
Response	The reviewers disagree and believe that this concern is appropriately addressed in section 4.1, which indicates that the actuary should use professional judgment in determining the appropriate disclosure, if any.
Section 3.2, Selection of Credibility Methodologies	
Comment	One commentator suggested changing the title of the section from “Credibility Methodologies” to “Credibility Analyses.”
Response	The reviewers replaced “method(s)” and “methodology(ies)” with “procedure(s)” throughout ASOP No. 25 to clarify the guidance provided.
Comment	Several commentators questioned the opening sentence in section 3.2, which requires the actuary be familiar with and consider various credibility methodologies.
Response	Wording in section 3.2 was changed to state that the actuary should use an appropriate procedure.
Comment	Several commentators asked if the same credibility method must be used to determine whether the subject experience was fully credible and for blending purposes.
Response	The reviewers note that the guidance does not include this restriction.
Comment	One commentator suggested mentioning some common credibility methodologies in section 3.2.
Response	The reviewers note that common procedures are listed in appendix 1 and do not believe that they should be mentioned in section 3.2.
Comment	One commentator saw no reason to replace “regulations and statutes” with “applicable law.”
Response	The reviewers note that this is common language used by the ASB in many standards and made no change.

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Comment	One commentator suggested adding the phrase “or develop” to the first sentence in the second paragraph of section 3.2.
Response	The reviewers changed the lead-in sentence to, “In selecting or developing a credibility procedure, the actuary should consider the following criteria:”
Comment	One commentator implied that deleting “in the professional judgment of the actuary” from the first bullet point in section 3.2 produces ambiguity in determining “reasonable results.”
Response	The reviewers note that the reference to professional judgment in section 3.4 covers all aspects of applying actuarial judgment in credibility procedures and made no change.
Comment	Many commentators addressed bullet point c (“are unbiased with respect to the results in any material way”) in section 3.2. Some suggested the bullet be deleted, while some suggested restoring to the original language.
Response	The reviewers deleted the bullet.
Comment	Many commentators addressed the last bullet in section 3.2, referring to “resulting in blended data that reflects current experience” rather than “resulting in results that reflect.”
Response	The reviewers simplified the bullet points, and this point was deleted.
Section 3.3, Selection of Relevant Experience	
Comment	One commentator suggested changing the title of the section from “Selection of Relevant Experience” to “Selection of Relevant Experience or Analysis.”
Response	The reviewers disagree and believe the title was appropriate.
Comment	One commentator stated that using the phrase “population characteristics” was not clear and reinforced the idea that relevant experience must be a data set.
Response	The reviewers agree and changed “population characteristics” to “demographics.”
Comment	One commentator asked if the “should” statement in the second sentence of section 3.3 means that the proposed blending experience is ruled out if just one of the criteria is not met.
Response	The reviewers believe that no change is necessary since the list includes examples of characteristics that should be considered and is not a comprehensive list.
Comment	Many commentators addressed the appropriateness of the second paragraph in section 3.3.
Response	The reviewers believe the paragraph provides useful guidance and made no change.
Comment	Two commentators stated that the standard fails to suggest what should be done if the actuary is unable to find or develop sufficiently credible “relevant experience.”
Response	The reviewers agree with the comments and added a new paragraph to section 3.3 to address this situation.

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Section 3.4, Actuarial Judgment	
Comment	One commentator stated that the revised term “professional judgment” is less clear and possibly more restrictive than the existing term “informed judgment” in section 3.4. Presumably professional judgment involves the actuary’s judgment within the limits of his standards of practice and expertise, whereas informed judgment may allow for information provided by other experts, such as accountants, IT experts, and operations personnel.
Response	The reviewers believe that the term “professional judgment” is better terminology and that the commentator’s interpretation is too narrow.
Section 3.5, Homogeneity of Data	
Comment	One commentator suggested that “appropriate treatment” should replace “separate treatment” in the last sentence of section 3.5 to remove the implication that “separate” treatments are necessary to handle non-homogenous segments.
Response	The reviewers disagree and made no change because the sentence states that “[t]he predictive value can <i>sometimes</i> be enhanced....”
APPENDIX	
Comment	Several commentators suggested that the section, Credibility Bases, should be revised to give examples of bases for credibility analyses outside of historically common applications to include reference to more “modern” credibility methodologies.
Response	The reviewers agree and added a section discussing “Emerging Practice Involving Generalized Linear Models.”
Comment	One commentator suggested that the description of “credibility bases” could be clarified.
Response	The reviewers believe the description is sufficient for its purpose and made no change.