



## **ACTUARIAL STANDARDS BOARD**

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### **● EXPOSURE DRAFT ●**

**Proposed Revision of  
Actuarial Standard  
of Practice  
No. 40**

**Compliance with the NAIC Valuation of Life Insurance Policies  
Model Regulation with Respect to X Factors**

**Comment Deadline:  
September 15, 2023**

**Developed by the  
ASOP No. 40 Task Force of the  
Life Committee of the  
Actuarial Standards Board**

**Approved for Exposure by the  
Actuarial Standards Board  
May 2023**

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May 2023

**TO:** Members of Actuarial Organizations Governed by the Standards of Practice of the Actuarial Standards Board and Other Persons Interested in the Valuation of Life Insurance Policies

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

**SUBJ:** Actuarial Standard of Practice (ASOP) No. 40

This document contains the exposure draft of a proposed revision of ASOP No. 40, *Compliance with the NAIC Valuation of Life Insurance Policies Model Regulation with Respect to X Factors*. 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 consideration by the drafting committee and the ASB.

The ASB appreciates comments and suggestions on all areas of this proposed standard. The ASB requests comments be provided using the Comments Template that can be found [here](#) and submitted electronically to [comments@actuary.org](mailto:comments@actuary.org). Include the phrase [“ASOP No. 40 COMMENTS”] in the subject line of your message. Also, please indicate in the template whether your comments are being submitted on your own behalf or on behalf of a company or organization.

The ASB posts all signed comments received on 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 on the website. Comments will be posted in the order that they are received. 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 comments: September 15, 2023**

### **History of the Standard**

In March 1999, the National Association of Insurance Commissioners (NAIC) adopted a revised version of the *Valuation of Life Insurance Policies Model Regulation* (hereinafter the *Model*), often referred to as “Regulation XXX.” The *Model* took effect January 1, 2000. The *Model* specified that the 1980 Commissioners’ Standard Ordinary mortality tables (1980 CSO valuation tables) were to be used as the minimum mortality standard for basic reserves. The *Model* was revised in 2009 to accommodate the 2001 and later CSO tables.

In the years since the *Model* took effect, NAIC adopted the 2001 CSO and 2017 CSO valuation tables. These tables are in select and ultimate format, whereas the 1980 CSO tables were ultimate

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only. The select period for 2001 and 2017 CSO tables is 25 years. Both include underwriting distinctions not available with the 1980 CSO tables. Actuaries have been navigating the inconsistencies between the *Model* and the new tables without additional guidance, applying ASOP No. 40 to the extent possible.

The NAIC Valuation Manual took effect January 1, 2017. The Valuation Manual does not require X factor calculations for business following VM-20 principle-based reserves methodology. However, these calculations are still required for the valuation of policies that were issued prior to a company's use of VM-20 and for policies that are exempted from VM-20. The appointed actuary must annually opine, for all policies subject to the *Model*, on whether the mortality rates resulting from the application of the X factors meet the requirements of the *Model*, subject to appropriate actuarial standards of practice promulgated by the ASB. Further, VM-30 in the Valuation Manual replaced the Actuarial Opinion and Memorandum Regulation (Model 822), without addressing requirements for the opinions related to the *Model*. For these reasons, the ASB formed a task force to update ASOP No. 40.

### **Notable Changes from the Existing ASOP**

Notable changes made in this exposure draft are summarized below. Notable changes do not include changes made to improve readability, clarity, or consistency.

1. This ASOP now applies to all actuaries performing actuarial services related to compliance with the *Model*, rather than only to the appointed actuary.
2. In section 2, definitions were eliminated or updated for clarity.
3. Throughout section 3, descriptions of *Model* requirements were eliminated.
4. In section 3.3, guidance was added relating to the creation of X factor classes based on risk characteristics.
5. In section 3.4.1, guidance was added regarding adjustments to company experience.
6. In section 3.4.2, guidance was added related to incorporating experience from outside the company.
7. In section 3.4.3, guidance was added for assessing mortality expectations compared to actual experience.
8. In section 3.5, language related to selection of X factors was clarified and expanded.
9. Sections 3.6 and 3.7 were added to provide guidance on reliance on others for data, projections, and supporting analysis and reliance on another actuary.
10. Section 3.8 was updated to conform to the current ASOP format.

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11. Disclosure requirements in section 4.1 were restructured and expanded.

### **Request for Comments**

The ASB appreciates comments and suggestions on all areas of this proposed standard submitted through the [Comments Template](#). Rationale and recommended wording for any suggested changes would be helpful.

In addition, the ASB would like to draw the readers' attention to the following question:

1. Are there any areas where this ASOP would conflict with current practice? If so, please provide examples.

The ASB voted in May 2023 to approve this exposure draft.

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**ACTUARIAL STANDARD OF PRACTICE NO. 40**

**COMPLIANCE WITH THE NAIC VALUATION OF  
LIFE INSURANCE POLICIES MODEL REGULATION  
WITH RESPECT TO X FACTORS**

**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 adjusting **deficiency reserve** mortality rates using **X factors** pursuant to applicable law (statutes, regulations, and other legally binding authority), including applicable law based on the National Association of Insurance Commissioners (NAIC) *Valuation of Life Insurance Policies Model Regulation (Model)*.
- 1.2 **Scope**—This standard applies to actuaries when performing actuarial services with respect to adjusting **deficiency reserve** mortality rates using **X factors** pursuant to applicable law, including applicable law based on the *Model*. This standard provides specific guidance for actuaries complying with requirements consistent with the *Model*. Actuaries complying with requirements that differ materially from the *Model* should apply the guidance in this standard to the extent appropriate.
- If the actuary is performing actuarial services that involve reviewing the development or use of **X factors**, the actuary should use the guidance in section 3 to the extent practicable.
- If a conflict exists between this standard and applicable law, 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 consider the guidance in this standard to the extent it is applicable and appropriate.
- 1.4 **Effective Date**—This standard will be effective for all statements of actuarial opinion provided for reserves with a valuation date on or after four months after adoption by the Actuarial Standards Board.

**Section 2. Definitions**

The terms below are defined for use in this ASOP and appear in bold throughout the standard. 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 **Basic Reserves**—Reserves calculated in accordance with section 5 of the model NAIC *Standard Valuation Law*.
- 2.2 **Deficiency Reserves**—The excess, if greater than zero, of minimum reserves calculated in accordance with section 8 of the model NAIC *Standard Valuation Law* over **basic reserves**.
- 2.3 **Full Credibility**—The level at which a particular body of data is assigned full predictive value based on a selected confidence interval.
- 2.4 **Valuation Mortality Table**—A table prescribed for determining mortality rates within section 1 of VM-M of the *Valuation Manual*.
- 2.5 **X Factor Class**—A group of policies under one or more plans of insurance to which a single set of **X factors** applies.
- 2.6 **X Factors**—The percentages that may be applied to the *Model* select mortality rates for the purpose of calculating **deficiency reserves** in the first segment only, for segments determined under the contract segmentation method defined in the *Model*.

**Section 3. Analysis of Issues and Recommended Practices**

- 3.1 **Regulatory Requirements**— An actuary performing actuarial services within the scope of this standard should be familiar with the *Model* and applicable state variations in state law based on the *Model*.
- 3.2 **Appointed Actuary**—When adjusting **deficiency reserve** mortality rates, the appointed actuary should confirm that the adjustments comply with applicable law. If any **X factor** is less than 100% at any duration for any policy, the appointed actuary must annually issue an opinion and supporting actuarial report, as required by the *Model*. The appointed actuary must form an overall opinion without claiming reliance on the opinions of other actuaries.
- 3.3 **Creation of X Factor Classes**—When creating **X factor classes**, the actuary should take into account plans of insurance, the applicable policy or rider count, amount of insurance in force, **basic reserves**, and risk characteristics of the underlying policies. The actuary should create **X factor classes** that have similar risk characteristics, such as distribution channel, target market, gender, risk classification, the **valuation mortality table** used to determine reserves, policy size, use of reinsurance, and any other risk characteristics listed



in the *Model*. When risk characteristics are similar across various plans of insurance, the actuary may combine those policies into a common single **X factor class**. The actuary should ensure that no policy is assigned to multiple **X factor classes**.

When creating **X factor classes**, the actuary should take into account the impact that granularity of classes will have on the credibility of the experience the classes will generate. To the extent it is reasonable and permissible, the actuary may exclude one or more risk characteristics to increase the credibility of a class. The actuary should ensure that policies in an **X factor class** are reasonably homogenous in their mortality expectations; for example, policies in the class with the same issue age and duration should have similar mortality expectations. In general, the actuary should not change the **X factor class** to which a policy is assigned.

When creating **X factor classes**, the actuary should confirm that mortality studies of company experience for each **X factor class** are available or will be available as experience emerges in the future. As experience emerges, the actuary may change or adjust **X factor classes** to reflect emerging experience that diverges from original assumptions or to improve credibility.

- 3.4 Anticipated Mortality—When determining anticipated mortality for **X factor classes**, the actuary should review company experience. If using anticipated mortality from past determinations, the actuary should confirm that its use is still appropriate based on relevant emerging experience.

- 3.4.1 Evaluating Company Experience—When evaluating company experience, the actuary should take into account the level and trend of actual company mortality experience.

The actuary should use the most recent relevant company experience that is practicably available. The actuary should take into account the length of the observation period, recognizing the trade-off between having insufficient data if the period is too short and having data no longer relevant if the period is too long. When conducting mortality experience studies, the actuary should follow the guidance in ASOP No. 23, *Data Quality*, and ASOP No. 25, *Credibility Procedures*.

The actuary should analyze the level and trend of actual mortality experience primarily by using exposures based on amounts or units of insurance. The actuary should consider making adjustments for unusual items, such as large claims, contested claims, multiple claims on a single life, and substandard lives.

- 3.4.2 Determining Anticipated Mortality—If relevant company experience for a particular **X factor class** is available and has **full credibility**, the actuary should use that experience as the basis for determining anticipated mortality.

If relevant company experience for a particular **X factor class** is not available, the actuary should use mortality experience from other similar types of business, either

in the same company or affiliated companies, in other companies (including reinsurance companies), from industry experience, or from other sources, generally in that order of preference.

If relevant company experience for a particular **X factor class** is available but does not have **full credibility**, the actuary should determine anticipated mortality by combining relevant company experience with mortality experience described in the previous paragraph, taking into consideration the credibility of data sources used. The actuary should use an appropriate credibility method, including but not limited to limited fluctuation, greatest accuracy, or Bayesian.

If the relevant company experience for a particular **X factor class** and other relevant experience are insufficient to form an assumption, the actuary should use professional judgment in determining anticipated mortality, taking into account where such business would be expected to fall in the spectrum of mortality experience relative to the mortality experience for other **X factor classes**.

The actuary should take into account the adverse effect of any anticipated or actual increase in gross premiums on lapsation and the resultant effect on mortality due to antiselection. The actuary should also take into account any known positive or negative changes in mortality due to the environment in which the company operates and the possible net adverse impact on mortality associated with those changes.

When taking into account the effect of reinsurance on anticipated mortality, the actuary should exclude the future effect of experience refunds or similar adjustments, however characterized in the reinsurance agreements.

- 3.4.3 Periodic Assessment of Anticipated Mortality—The appointed actuary should perform or confirm an annual review of relevant emerging experience to assess the appropriateness of anticipated mortality for each **X factor class** and, in aggregate, for all **X factor classes** reserved under the same **valuation mortality table**. The actuary should use statistical analyses to make this assessment provided the actuary can satisfactorily support such analyses as being sufficient to assess the appropriateness of anticipated mortality. The actuary may use one or more quantitative analyses to adjust experience for extraordinary events or outliers that affect the results when actual experience is used in statistical testing. For example, the actuary may adjust for deaths on policies that are much larger or smaller than the typical policy in the **X factor class** or a temporary event, such as war or a pandemic, which affects the actual mortality but not the expected future mortality.

If the results of the analyses indicate that previously anticipated mortality for a given **X factor class** no longer reflects expected mortality, then the actuary should revise the anticipated mortality assumption for the **X factor class**.

After analyzing the appropriateness of the anticipated mortality for each **X factor class** in isolation and adjusting anticipated mortality as necessary, the actuary should analyze the appropriateness of the anticipated mortality assumption at the aggregate level. If analysis at the aggregate level indicates that aggregate anticipated mortality is lower than what the *Model* requires, then the actuary should increase the anticipated mortality assumption for one or more **X factor classes** until the anticipated mortality assumption is adequate at the aggregate level.

- 3.5 Selection of X Factors—The actuary should select the **X factors** for each **X factor class**, based on anticipated mortality for each class, without recognition of mortality improvement beyond the valuation date. When selecting **X factors**, the actuary should consider providing a margin for conservatism that reflects the degree of uncertainty in anticipated mortality.

The actuary should select **X factors** that result in reasonable progression of mortality rates after the application of the selected **X factors**. The actuary may select **X factors** greater than 100%, such as when anticipated mortality exceeds the **valuation mortality table**.

If any requirement of the *Model* is not satisfied, the actuary must adjust the **X factors** to the extent necessary to meet such requirement. **X factors** may also be adjusted when the actuary determines that it is appropriate to do so, such as when anticipated mortality changes.

The actuary should calculate **deficiency reserves** using the selected **X factors**. The actuary should develop a listing of which plans belong to each **X factor class** and a summary of **X factors** for each **X factor class** as of the valuation date with information that provides a reasonable level of detail that another actuary would be able to assess the appropriateness of the factors. For example, the summary may include minimum, maximum, mean, and median for each **X factor class**, if appropriate.

- 3.6 Reliance on Others for Data, Projections, and Supporting Analysis—The actuary may rely on data, projections, and supporting analysis supplied by others. When practicable, the actuary should review the data, projections, and supporting analysis for reasonableness and consistency. For further guidance, the actuary should refer to ASOP No. 23, ASOP No. 41, *Actuarial Communications*, and ASOP No. 56, *Modeling*.
- 3.7 Reliance on Another Actuary—The actuary may rely on another actuary who has performed actuarial services related to **X factor** determination, subject to section 3.2. However, the relying actuary should be reasonably satisfied that the other actuary is qualified to perform the actuarial service, the actuarial service was performed in accordance with applicable ASOPs, and the actuarial service performed is appropriate for the determination of **X factors**.
- 3.8 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 degree of such documentation should be based on the professional judgment of the actuary and may vary with the complexity and purpose of the actuarial services. In addition, the actuary should refer to ASOP No. 41 for guidance related to the retention of file material other than that which is to be disclosed under section 4.

**Section 4. Communications and Disclosures**

- 4.1 **Required Disclosures by the Appointed Actuary**—When issuing an actuarial report as required by the *Model*, the actuary should refer to ASOP Nos. 23, 25, 41, and 56. In addition, the actuary should disclose the following in such actuarial reports:
- a. purpose of the report and the specific opinion that it supports (see section 3.2);
  - b. the plans of insurance to which the report applies, the **X factor classes** chosen, and the composition and risk characteristics of the policies that led to the determination of the **X factor classes**, including how reinsurance was taken into account (see section 3.3);
  - c. for each **X factor class**, the applicable policy or rider count, amount of insurance in force, **basic reserves**, and **deficiency reserves** as of the valuation date (see section 3.3 and 3.5);
  - d. for each of the plans of insurance to which the report applies, the **valuation mortality table** to which the **X factors** are applied (see section 3.3);
  - e. whether policies have been reclassified into different **X factor classes** from prior reports and the justification for doing so (see section 3.3);
  - f. relevant company experience used as a basis for determining anticipated mortality, including plans included in the study, credibility, period of time covered by the study, trends, whether any adjustments were made for unusual items, and summary of results (see section 3.4.1);
  - g. any affiliated company experience, industry experience, and other relevant experience used as a basis for determining anticipated mortality, including a summary of the findings and results and any rationale for such determination (see section 3.4.2);
  - h. any adjustments for antiselection, trend, or the presence of reinsurance used in determining anticipated mortality (see section 3.4.2);
  - i. analyses performed to evaluate the credibility of relevant, historical company experience when establishing anticipated mortality for each **X factor class**, including a description of related experience or approach used when experience is insufficient to form an assumption (see section 3.4.2);

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- j. description or summary of anticipated mortality for each **X factor class** (see section 3.4.2);
  - k. results of statistical or other quantitative analyses performed in assessing the anticipated mortality assumption for each **X factor class** and for **X factor classes** reserved under the same **valuation mortality table** in aggregate (see section 3.4.3);
  - l. any changes made since the last annual valuation in the approach, the parameters applied to the statistical analyses, or the tests performed (see section 3.4.3);
  - m. rationale for any adjustments made for extraordinary events or outliers in the statistical or other quantitative analyses performed (see section 3.4.3);
  - n. a summary of changes to the **X factors** made as a result of the analyses (see section 3.5);
  - o. any adjustments to **X factors** made to satisfy *Model* requirements (see section 3.5);
  - p. a listing of which plans belong to each **X factor class** and a summary of **X factors** for each **X factor class** as of the valuation date with information that provides a reasonable level of detail (see section 3.5);
  - q. the extent of reliance on others for data, projections, and supporting analysis (see section 3.6); and
  - r. the extent of reliance on another actuary (see section 3.7).
- 4.2 Additional Disclosures in an Actuarial Report—The actuary should also include disclosures in accordance with ASOP No. 41 in an actuarial report for the following circumstances:
- a. if any material assumption or method was prescribed by applicable law;
  - b. if the actuary states reliance on other sources and thereby disclaims responsibility for any material assumption or method selected by a party other than the actuary; and
  - c. if in the actuary's professional judgment, the actuary has deviated materially from the guidance of this standard.
- 4.3 Confidential Information—Nothing in this standard is intended to require the actuary to disclose confidential information.

## **Appendix**

### **Background and Current Practices**

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

#### **Background**

During the 1980s, technological updates allowed insurance companies to sell policies that better recognized differences in health and the impact of underwriting. Preferred risk classes were developed, and the effect of underwriting selection was included in premiums charged to policyholders. Companies also began issuing policies with current and guaranteed premium structures. In some cases, the premiums being charged were lower than the valuation net premiums used to determine reserves for statutory financial statement purposes. In these situations, insurance companies were required to establish deficiency reserves.

In March 1999, the National Association of Insurance Commissioners (NAIC) adopted a revised version of the *Valuation of Life Insurance Policies Model Regulation (Model)*, often referred to as “Regulation XXX,” which took effect January 1, 2000. The 1999 version of the *Model* specified that the 1980 Commissioners’ Standard Ordinary mortality tables (1980 CSO valuation tables) would be used as the minimum mortality standard for basic reserves and provided options for including both 10-year select factors and preferred underwriting classifications in the calculations. In addition, the *Model* allows the appointed actuary to apply certain percentages (X factors) to these select factors to modify the mortality basis for deficiency reserves. The choice of the X factors is subject to certain limiting parameters and tests specified in the *Model*.

The *Model* specifies that if any X factor for any policy in a company is less than 100%, then the standard actuarial opinion and memorandum for the company must be based on asset adequacy analysis, and the appointed actuary must annually opine, for all policies subject to the *Model*, on whether the mortality rates resulting from application of the X factors meet the requirements of the *Model*. The *Model* provides that this additional opinion shall be supported by an actuarial report, subject to appropriate actuarial standards of practice (ASOPs) promulgated by the Actuarial Standards Board.

By the late 1990s, the NAIC had determined that a new valuation table was needed, and the 2001 CSO table was developed. Unlike the 1980 CSO table, the 2001 CSO table had select and ultimate rates, and underwriting distinctions were part of this valuation table. This table structure had not been anticipated when the *Model* had last been updated, and additional changes were initiated. In 2009, NAIC adopted updates to the *Model*, a new model regulation (*Model Regulation Permitting the Recognition of Preferred Mortality Tables for Use in Determining Minimum Reserve Liabilities*), and a new model *Standard Valuation Law*. The new model regulation allowed future mortality tables to be adopted by regulation, rather than by changes to state law.

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By the time this ASOP was being revised, NAIC had also adopted a 2017 CSO table. Similar to the 2001 CSO table, the 2017 CSO table has a 25-year select period and underwriting distinctions. VM-M within the Valuation Manual now references all tables used for valuation purposes.

The NAIC Valuation Manual took effect January 1, 2017. The Valuation Manual does not require X factor calculations for business following VM-20 principle-based reserves methodology. However, these calculations are still required for the valuation of policies that were issued prior to a company's use of VM-20 and for policies that are exempted from VM-20. The appointed actuary must annually opine, for all policies subject to the *Model*, as to whether the mortality rates resulting from the application of the X factors meet the requirements of the *Model*, subject to appropriate actuarial standards of practice promulgated by the ASB. Further, VM-30 in the Valuation Manual replaced the Actuarial Opinion and Memorandum Regulation (Model 822), without addressing requirements for the opinions related to the *Model*.

### **Current Practices**

Although there is no single established practice for complying with the requirements of the *Model*, there are several analytical procedures that the actuary may find useful in developing and reviewing anticipated mortality. Technological advances make additional statistical analysis practical, and companies have been improving their analyses. With the additional analysis, it is common for actuaries other than the appointed actuary to participate in the X factor calculations and analysis.

### **Determining Anticipated Mortality**

The process of using a company's relevant experience of the recent past to set an assumption for future mortality experience can, when the exposure is large enough, proceed by using the average level of the past experience, as modified by trend factors and known changes in the environment. But often the exposure may not be large enough, either because the company is small or because a small or newer segment of a large company is the subject of the assumption. In such cases, actuaries frequently turn to the experience of other companies or other segments (appropriately modified) to help set the assumption.

For some purposes, such as selecting a valuation mortality rate that will remain appropriate with moderate future fluctuations in mortality, the actuary may wish to select an X factor that yields a mortality rate higher than the appointed actuary's assumption for anticipated mortality, i.e., a level of assumed mortality that has a reasonably high probability of exceeding the actual mortality that may emerge in the future. To accomplish this, the actuary needs an understanding of the underlying distribution of potential mortality results.

When mortality studies are based on lives or policies exposed, either the normal distribution (with 35 or more deaths) or the Poisson distribution (with fewer than 35 deaths) can provide a

satisfactory approximation of the distribution of deaths. However, neither of these approximations accounts for varying experience across different policy sizes.

Monte Carlo methods are useful when experience may be insufficient for the Poisson or normal approximations to be sufficiently accurate and are particularly useful for analyses that are based on amounts of insurance or units of insurance exposed. These methods produce results that converge to the underlying distribution as the number of trials increases.

#### Periodic Assessment of Anticipated Mortality

There are several methods for analyzing the appropriateness of anticipated mortality in light of emerging company experience.

Hypothesis testing is one useful technique. Two types of errors are associated with hypothesis testing. A Type I error is the false rejection of a correct null hypothesis, while a Type II error is the failure to reject an incorrect null hypothesis. In terms of the *Model*, the null hypothesis would presumably state that anticipated mortality is consistent with emerging experience and would only be rejected if statistically significant data indicated otherwise. In this setting, the Type I error is a company increasing anticipated mortality when it is in fact adequate, while a Type II error is a company failing to increase anticipated mortality when it is in fact inadequate. The Type I error rate can be controlled by the choice of significance level. Type II error rates are largely beyond the control of the statistician and difficult to assess, but are influenced by the choice of significance level, the amount of data available, and the magnitude of the difference between the assumed and true values.

Another approach to analyzing anticipated mortality is to treat each review of the mortality assumption as if it were the original development of the mortality assumption, making use of the now more extensive experience base. For example, the actuary might set a new assumption by using the emerging experience, plus any other experience considered relevant, or choosing a higher mortality rate to increase the probability of adequacy.

Credibility procedures may be useful when blending data from two or more sources and for incorporating emerging experience into an existing body of experience.

This appendix does not provide an exhaustive list of possible approaches to analyzing anticipated mortality. Actuarial literature and other sources provide specific information on various analyses that may be useful in analyzing anticipated mortality.