

## Life Actuarial (A) Task Force/ Health Actuarial (B) Task Force Amendment Proposal Form\*

**1. Identify yourself, your affiliation and a very brief description (title) of the issue.**

American Academy of Actuaries' Life Reserves Work Group. Selection of industry basic table when company experience mortality rates are higher than the industry basic table determined by the underwriting criteria scoring procedure.

**2. Identify the document, including the date if the document is "released for comment," and the location in the document where the amendment is proposed:**

Valuation Manual (VM) (January 1, 2018 edition), with National Association of Insurance Commissioners (NAIC) Adoptions through August 8, 2017. Location of change: VM-20 Section 9.C.

**3. Show what changes are needed by providing a red-line version of the original verbiage with deletions and identify the verbiage to be deleted, inserted or changed by providing a red-line (turn on "track changes" in Word®) version of the verbiage. (You may do this through an attachment.):**

See attached.

**4. State the reason for the proposed amendment? (You may do this through an attachment.)**

When the mortality experience for a mortality segment is worse than the industry basic table determined by the underwriting criteria scoring procedure for the mortality segment, this will result in the rates after grading being lower than what the company actually expects will emerge. And if the company uses the lower industry basic table in lieu of company experience, this will result in the anticipated experience rates being lower than what the company actually expects will emerge.

To address this, Section 9.C.3.d needs to be amended to require that the mortality rates of the industry basic table determined by the underwriting criteria scoring procedure be adjusted upward to ensure that the expected claims of the mortality segment using mortality rates from the adjusted industry table are greater than the expected claims using the company experience rates.

Also, to provide more clarity on how anticipated experience assumptions are used to determinate prudent estimate mortality assumptions, several wording changes have been made to Section 9.C.1, Section 9.C.6, and Section 9.C.7. In addition, the definition of anticipated experience assumptions in Section 9.C.7 has been moved earlier in Section 9.C (is now Section 9.C.4), and the impacted references have been renumbered.

\* This form is not intended for minor corrections, such as formatting, grammar, cross-references or spelling. Those types of changes do not require action by the entire group and may be submitted via letter or email to the NAIC staff support person for the NAIC group where the document originated.

**NAIC Staff Comments:**

Dates: Received	Reviewed by Staff	Distributed	Considered
<b>Notes:</b>			

## Section 9. Assumptions

### C. Mortality Assumptions

#### 1. Procedure for Setting Prudent Estimate Mortality Assumptions

- b. For each mortality segment, the company shall establish prudent estimate mortality assumptions using the following procedure:
  - i. Determine the company experience mortality rates as provided in ~~sub~~Section 9.C.2. If company experience data is limited or not available, the company can use an applicable industry basic table in lieu of company experience as provided in Section 9.C.3.
  - ii. ~~If the company determines company experience mortality rates as provided in Section 9.C.2, then u~~Use the procedure described in Section 9.C.3 to determine the applicable industry table for each mortality segment ~~to grade company experience to the industry table.~~
  - iii. Determine the anticipated experience assumptions as provided in Section 9.C.4.
  - iv. Determine the level of credibility of the underlying company experience as provided in Section 9.C.~~54~~.
  - ~~iv~~. Determine the prescribed mortality margins as provided in Section 9.C.~~65~~. Separate mortality margins are determined for company experience mortality rates and for the applicable industry basic tables.
  - ~~vi~~. Use the procedure described in Section 9.C.~~76~~ to determine the prudent estimate ~~mortality~~anticipated experience assumptions.

#### 2. Determination of Company Experience Mortality Rates

- f. The company may remove from the company experience data any policies for which the experience is reflected through adjustments to the prudent estimate assumptions as provided under subsection 9.C.~~67~~.e below, including policies insuring impaired lives and those for which there is a reasonable expectation, due to conditions such as changes in premiums or other policy provisions, that policyholder behavior will lead to mortality results that vary significantly from those that would otherwise be expected.

#### 3. Determination of Applicable Industry Basic Tables

- c. The company may apply the underwriting criteria scoring procedure described in subparagraph d below to determine:
  - ii. The applicable industry basic table for grading company experience mortality to industry experience mortality using the grading method described in Section 9.C.~~76~~.b.iii.
- d. The underwriting criteria scoring procedure is the algorithm embedded in the Underwriting Criteria Score Calculator, adopted by the Life Actuarial (A) Task Force and maintained on the SOA website, <https://www.soa.org/research/topics/indiv-val-exp-study-list/>, which is used to score every risk class in a preferred risk class structure. The scoring is based on the specific underwriting criteria used by a company.
  - iv. If the expected claims as of the valuation date using the company experience mortality rates for any mortality segment are greater than the expected claims using mortality rates from the industry basic table determined by the underwriting criteria scoring procedure for the mortality segment, then the company shall adjust the industry basic table upward by the number of tables necessary, or multiply the industry basic table rates by an appropriate scalar (i.e., a single factor applied to all rates in the table), such that the expected claims using the mortality rates from the adjusted basic industry table are greater than the expected claims using the company experience rates for the mortality segment. The expected claims as of the valuation date can be determined over the period of time determined by the company (i.e. quarter, year, present value over defined period, etc.), but are not to reflect mortality improvement beyond the valuation date.

#### 4. Anticipated Experience Assumptions

- a. If the company uses an applicable industry basic table in lieu of its own company experience, as described in Section 9.C.2.a., then the anticipated experience assumptions shall be the applicable industry basic table.
- a.b. If the company uses company experience as described in Section 9.C.2.a, then the anticipated experience assumptions shall equal the company experience mortality rates described in Section 9.C.
- c. The mortality rates from the resulting anticipated experience assumptions must be no lower than the mortality rates that are actually expected to emerge and that the company can justify. The company must disclose this conclusion in the PBR Actuarial Report.

#### 54. Credibility of Company Experience

- c. A single level of credibility shall be determined over the entire exposure period, rather than for each duration within the exposure period. This overall level of credibility will be used to:
  - ii. Determine the grading period (based on the credibility percentage shown in column (1) in the applicable table in Section 9.C.~~76~~.b.iii) for grading company experience mortality rates into the applicable industry basic table.

#### 65. Prescribed Mortality Margins

- a. Separate prescribed margins will be added to company experience mortality rates, and to the applicable industry basic tables. The mortality margin shall be in the form of a prescribed percentage increase applied to each mortality rate.
- b. The prescribed margin percentages for the company experience mortality rates will vary by attained age (att age) and by the level of credibility of the underlying company experience, based on the level of credibility determined in Section 9.C.~~54~~. The percentages are as follows:

#### 76. Process to Determine Prudent Estimate Assumptions-

- a. If applicable industry basic tables are used in lieu of company experience as the anticipated experience assumptions, the prudent estimate assumptions for each mortality segment shall equal the respective mortality rates in the applicable industry basic tables as provided in Section 9.C.3, plus the prescribed margin as provided in Section 9.C.~~65~~.c and any additional margin as provided in Section 9.C.~~65~~.d.
- b. If the company ~~uses determines~~ company experience mortality rates as the anticipated experience assumptions, the prudent estimate assumptions will be determined as follows:
  - i. For each mortality segment, use the company experience mortality rates (as defined in Section 9.C.2) for policy durations in which there exists sufficient company experience data (as defined below in paragraph ii), plus the prescribed margin as provided in Section 9.C.~~65~~.b and any additional margin as provided in Section 9.C.~~65~~.d.
  - ii. In determining the sufficient data period the company shall first identify the last policy duration at which sufficient company experience data exists (using all the sources defined in Section 9.C.2.b). The sufficient data period then ends at the last policy duration that has 50 or more claims (i.e., no duration beyond this point has 50 claims or more) subject to the limits in Column 2 of the applicable table in Section 9.C.~~76~~.b.iii.b. The sufficient data period may be determined at a more aggregate level than the mortality segment if the company based its mortality on aggregate experience and then used a methodology to subdivide the aggregate class into various sub-classes or mortality segments.

**Guidance Note:** The objective is to use last duration at which there are 50 or more claims - not the first duration in which there are less than 50 claims.

- iii. Beginning in the policy duration at which sufficient company experience data no longer exists, use the guidelines in the applicable table below to linearly grade from the company experience mortality rates with margins to 100% of the applicable industry table with margins (the determination of the applicable industry table is described in Section 9.C.3). Grading must begin and end no later than the policy durations shown in the applicable table below, based on the level of credibility of the data as provided in Section 9.C.54. For valuations on or after 1/1/2015, if the credibility level is less than 20%, the company is not allowed to use its company experience and must use 100% of the applicable industry table.
  - a) Grading must begin no later than the number of years in column (3) after the first policy duration after the sufficient data period (as defined in Section 9.C.76.b.ii).
  - b) Grading to 100% of the industry table must be completed no later than the number of years in column (4) after the first policy duration after the sufficient data period (as defined in Section 9.C.76.b.ii).

#### ~~7.—Anticipated Experience Assumptions~~

~~Anticipated experience assumptions shall be the company experience mortality rates described in Section C.2 (which excludes prescribed margins). If the company elects to use an applicable industry basic table in lieu of its own company experience, as described in Section C.2.a., then the anticipated experience assumptions shall be the applicable industry basic table (which excludes prescribed margins).~~

- ~~b.—The resulting anticipated experience assumptions must be no lower than the mortality rates that are actually expected to emerge and that the company can justify. The company must disclose this conclusion in the PBR Actuarial Report. —~~