**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.

John Bruins, Consultant for the ACLI

Alice Fontaine, Consultant for Arizona

Draft Language to address prescribed mortality in VM-21 Section 6.C.9 and Section 11

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:

2019 Valuation Manual, VM-21 Section 6 and Section 11.A.3

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 document with edits to clean version of exposure of APF 2019-27.

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

Attached document provides rationale for edits.

|  |  |  |  |
| --- | --- | --- | --- |
| **Dates:** Received | Reviewed by Staff | Distributed | Considered |
| 4/23/19 |  |  |  |
| **Notes:** APF 2019-45 VM-21 Mortality | | | |

\* 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.

A. Rationale:

a) Expand the definition of business segments in Section 11.A.3 to include distinction by the guarantees included in a policy in addition to the current list of considerations. It was suggested that in order to have mortality rates defined for all contracts, a decision needed to be made with regards to contracts with no guarantees. **The language below (A) groups contracts with no guaranteed benefits with those contracts with only GMDBs.** In the mortality study by Ruark, business was grouped by ‘with living benefits’ and ‘all other’, which would then include business with no guarantees.

Proposed edits: Section 11.A.3. Business Segments

“For purposes of setting prudent estimate mortality assumptions, the products falling under the scope of these requirements shall be grouped into business segments with different mortality assumptions. The grouping should reflect whether the contracts contain either no guaranteed benefits or only GMDBs (i.e., no VAGLBs) vs. contains VAGLBs as well as generally follow the pricing, marketing, management and/or reinsurance programs of the company.”

B Rationale:

Modify Section 6.C.9 to include mortality assumptions for business segments that only contain a GMDB or no guarantees and separate tables for contracts with VAGLBs,. These mortality tables would be consistent with those prescribed in Section 11.B.3 and Section 11.C.1 and use the mortality improvement scale, as referenced in Sections 11.C.2, 11.C.4 and 11.D.

Note that the Alternative Method (which is only allowed if contracts have no VAGLBs) Section 7.B.9 also references the prescribed mortality outlined in Section 11, and specifically references 100% of the 1994 Variable Annuity MGDB Mortality Table. Changes to the “no VAGLB” contract mortality rates may require changes to section 7.B.9, and are not included in this exposure.

Proposed edits: Section 6.C.9. Mortality:

The mortality rate for a contract holder with age x in year (2012 + n) shall be calculated using the following formula, where qx denotes mortality from the 2012 IAM Basic Mortality Table multiplied by the appropriate factor (Fx) from Table 1 and G2x denotes mortality improvement from Projection Scale G2:

\* Fx



Table 1

|  |  |  |
| --- | --- | --- |
| Attained Age (x) | Fx for VA with GLB | Fx for All Other |
| <=65 | 80.0% | 100.0% |
| 66 | 81.5% | 102.0% |
| 67 | 83.0% | 104.0% |
| 68 | 84.5% | 106.0% |
| 69 | 86.0% | 108.0% |
| 70 | 87.5% | 110.0% |
| 71 | 89.0% | 112.0% |
| 72 | 90.5% | 114.0% |
| 73 | 92.0% | 116.0% |
| 74 | 93.5% | 118.0% |
| 75 | 95.0% | 120.0% |
| 76 | 96.5% | 119.0% |
| 77 | 98.0% | 118.0% |
| 78 | 99.5% | 117.0% |
| 79 | 101.0% | 116.0% |
| 80 | 102.5% | 115.0% |
| 81 | 104.0% | 114.0% |
| 82 | 105.5% | 113.0% |
| 83 | 107.0% | 112.0% |
| 84 | 108.5% | 111.0% |
| 85 | 110.0% | 110.0% |
| 86 | 110.0% | 110.0% |
| 87 | 110.0% | 110.0% |
| 88 | 110.0% | 110.0% |
| 89 | 110.0% | 110.0% |
| 90 | 110.0% | 110.0% |
| 91 | 110.0% | 110.0% |
| 92 | 110.0% | 110.0% |
| 93 | 110.0% | 110.0% |
| 94 | 110.0% | 110.0% |
| 95 | 110.0% | 110.0% |
| 96 | 110.0% | 110.0% |
| 97 | 110.0% | 110.0% |
| 98 | 110.0% | 110.0% |
| 99 | 110.0% | 110.0% |
| 100 | 110.0% | 110.0% |
| 101 | 108.0% | 108.0% |
| 102 | 106.0% | 106.0% |
| 103 | 104.0% | 104.0% |
| 104 | 102.0% | 102.0% |
| >=105 | 100.0% | 100.0% |

C. Rationale:

Modify Section 11.B.3 and 11.C. to prescribe industry average mortality tables for VAGLB business segments and “other” business segments instead of making the distinction by reference to “plus” or “minus” segments. Other references to plus or minus segments remain unchanged, as they are used in terms of setting margins when developing prudent estimate assumptions.

References to “applicable published industrywide experience” for mortality improvement were also replaced with a reference to “Projection Scale G2” in order to be consistent with the mortality improvement prescribed in Section 6.C.9

Proposed edits:

Section 11.B.3. No Data Requirements

“When little or no experience or information is available on a business segment, the company shall use expected mortality curves that would produce expected deaths no less than ~~for a plus segment~~ the appropriate percentage (Fx) from Table 1 of the 2012 IAM Basic Table with projection scale G2 for contracts with no VAGLBs and expected deaths no greater than the appropriate percentage (Fx) from Table 1 of the 2012 IAM Basic Mortality Table for ~~a minus segment~~ with projection scale G2 for contracts with VAGLBs. If mortality experience on the business segment is expected to be atypical (e.g., demographics of target markets are known to have higher [lower] mortality than typical), these “no data” mortality requirements may not be adequate.”

\* Fx



Table 1.

|  |  |  |
| --- | --- | --- |
| Attained Age (x) | Fx for VA with GLB | Fx for All Other |
| <=65 | 80.0% | 100.0% |
| 66 | 81.5% | 102.0% |
| 67 | 83.0% | 104.0% |
| 68 | 84.5% | 106.0% |
| 69 | 86.0% | 108.0% |
| 70 | 87.5% | 110.0% |
| 71 | 89.0% | 112.0% |
| 72 | 90.5% | 114.0% |
| 73 | 92.0% | 116.0% |
| 74 | 93.5% | 118.0% |
| 75 | 95.0% | 120.0% |
| 76 | 96.5% | 119.0% |
| 77 | 98.0% | 118.0% |
| 78 | 99.5% | 117.0% |
| 79 | 101.0% | 116.0% |
| 80 | 102.5% | 115.0% |
| 81 | 104.0% | 114.0% |
| 82 | 105.5% | 113.0% |
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| 84 | 108.5% | 111.0% |
| 85 | 110.0% | 110.0% |
| 86 | 110.0% | 110.0% |
| 87 | 110.0% | 110.0% |
| 88 | 110.0% | 110.0% |
| 89 | 110.0% | 110.0% |
| 90 | 110.0% | 110.0% |
| 91 | 110.0% | 110.0% |
| 92 | 110.0% | 110.0% |
| 93 | 110.0% | 110.0% |
| 94 | 110.0% | 110.0% |
| 95 | 110.0% | 110.0% |
| 96 | 110.0% | 110.0% |
| 97 | 110.0% | 110.0% |
| 98 | 110.0% | 110.0% |
| 99 | 110.0% | 110.0% |
| 100 | 110.0% | 110.0% |
| 101 | 108.0% | 108.0% |
| 102 | 106.0% | 106.0% |
| 103 | 104.0% | 104.0% |
| 104 | 102.0% | 102.0% |
| >=105 | 100.0% | 100.0% |

Section 11.C. Adjustment for Credibility to Determine Prudent Estimate Mortality

1. Adjustment for Credibility

“The expected mortality curves determined in Section 11.B shall be adjusted based on the credibility of the experience used to determine the curves in order to arrive at prudent estimate mortality. The adjustment for credibility shall result in blending the expected mortality curves with a mortality table consistent with a statutory valuation mortality table. For ~~a plus segment~~ contracts with no VAGLBs, the table shall be consistent with the appropriate percentage (Fx) from Table 1 of the 2012 IAM Basic Table with projection scale G2 and for contracts with VAGLBs, the table shall be consistent with the appropriate percentage (Fx) from Table 1 of the 2012 IAM Basic Mortality Table with projection scale G2. The approach used to adjust the curves shall suitably account for credibility.

**Guidance Note:** For example, when credibility is zero, an appropriate approach should result in a mortality assumption consistent with 100% of the statutory valuation mortality table used in the blending.

2. Adjustment of Statutory Valuation Mortality for Improvement

For purposes of the adjustment for credibility, the statutory valuation mortality table for a plus segment may be and the statutory valuation mortality table for a minus segment must be adjusted for mortality improvement. Such adjustment shall reflect ~~applicable published industrywide experience~~ Projection Scale G2 from the effective date of the respective statutory valuation mortality table to the experience weighted average date underlying the data used to develop the expected mortality curves (discussed in Section 11.B).

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4. Further Adjustment of the Credibility-Adjusted Table for Mortality Improvement

The credibility-adjusted table used for plus segments may be and the credibility adjusted table used for minus segments must be adjusted for ~~applicable published industrywide experience~~ mortality improvement using Projection scale G2 from the experience weighted average date underlying the company experience used in the credibility process to the valuation date.

Any adjustment for mortality improvement beyond the valuation date is discussed in Section 11.D.