**Exposure of Amendment Proposal 2019-42**

**Tri-Company proposal for VM-20 Treatment for YRT Reinsurance Premiums in Modeled Reserves**

**The amendment proposal recommends a 5-year period of mortality improvement. Commenters are asked to also consider whether 10-year or 15-year mortality improvement periods may be more appropriate and provide feedback.**

**The APF is exposed for a public comment period ending May 13, 2019. Send comments to Reggie Mazyck (RMazyck@NAIC.Org)**

**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.

**Identification:**

Richard Harris, Vice President & US Appointed Actuary, John Hancock Life Insurance Company (U.S.A.);

Ross Zilber, Vice President & Deputy Appointed Actuary, John Hancock Life Insurance Company (U.S.A.);

Nik Godon, Vice President & Chief Actuary, Transamerica Life Insurance Company;

Todd Bryden, Vice President & Chief Actuary, Prudential Financial, Inc.

**Title of the Issue:**

VM-20 Treatment for YRT Reinsurance Premiums in Modeled Reserves

1. 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 (January 1, 2019 edition), VM-20 Section 8.C.18 (New Section) and VM-31 Section 3.C.8.b

1. 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.)

Please see the attached Appendix.

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

Please see the attached Appendix.

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NAIC Staff Comments:

|  |  |  |  |
| --- | --- | --- | --- |
| **Dates:** Received | Reviewed by Staff | Distributed | Considered |
| 4/18/19 |  |  |  |
| **Notes:** VM APF 2019-42 | | | |

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# Appendix

#### ISSUE:

The Tri-Companies are proposing a compromise between APF 2019-17 and APF 2019-24.

This proposal builds upon California and NAIC APF 2019-17, which was in turn based on the Tri-Company’s (John Hancock, Prudential and Transamerica) original APF (2019-24). Similar to these two APFs, this APF employs a principles-based approach, along with prescriptive margins on YRT reinsurance rates to ensure that overly-aggressive assumptions are not used in calculating the modeled reserve.

As currently worded, APF 2019-17 puts the entirety of the margins, both explicit and implicit, on the ceding company, though CA and NAIC are seeking input for mortality improvement limits in their proposal. This APF aims to find a way to equitably split the total margin between ceding and assuming companies by determining a 50-50 sharing of risk between these parties. Based on our companies’ analysis described in the attached letter, this can be achieved by including **five years** of mortality improvement in addition to the cedent’s explicit VM-20 mortality margin.

#### SECTIONS:

VM-20 Section 8.C.18 (New Section) and VM-31 Section 3.C.8.b

#### REDLINE:

**VM-20 Section 8.C.18 (New Section)**

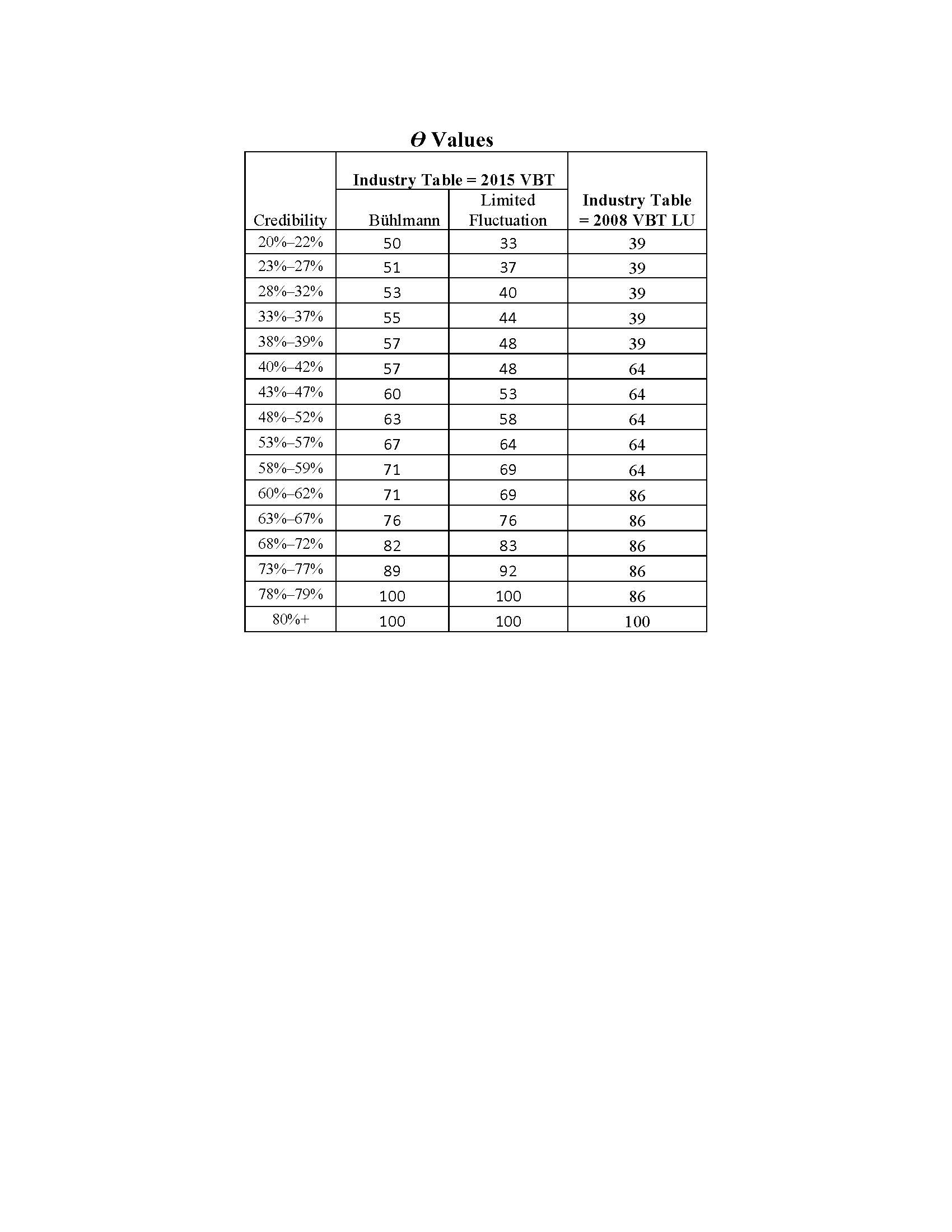
1. When projecting non-guaranteed future reinsurance features, the company shall use prudent estimate reinsurance premiums in projecting the reinsurance cash flows. The company shall project reinsurance cash flows pursuant to all provisions within a reinsurance agreement and shall determine the prudent estimate reinsurance premiums using the following procedure:
   1. Use the reinsurance rates and provisions from the relevant reinsurance agreement as the anticipated experience assumption for reinsurance, subject to any modifications in Section 8.C.18.c. No margin is required for years in which the reinsurance features are guaranteed. For years when reinsurance features are not guaranteed, Section 8.C.18.b below sets forth the prescribed reinsurance premium margin.

**Guidance Note:** While the most commonly considered non-guaranteed reinsurance feature is future YRT premium rates, other non-guaranteed features are also to be considered, such as non-guaranteed expense allowances.

* 1. Set the reinsurance premium margin equal to λ times the reinsurance premium rate, where λ = [(i) – (ii)] divided by (ii), in which (i) and (ii) are described below. The reinsurance premium margin may be calculated in aggregate for each mortality segment.
     1. “Baseline credibility” prudent estimate mortality, i.e., prudent estimate mortality following Section 9.C.1 through Section 9.C.6, but recalculated (1) with the margins determined under Section 9.C.5.b modified to reflect a credibility percentage equal to the greater of the one originally determined pursuant to Section 9.C.4 and 80% and (2) with grading modified to reflect a sufficient data period equal to the greater of the one originally determined pursuant to Section 9.C.6.b.ii and 10 years.
     2. Company experience mortality as provided in Section 9.C.2, but recalculated including mortality improvement for a minimum of 5 years beyond the valuation date. Mortality improvement rates shall equal the mortality improvement rates of Section 9.C.3.g, whether or not the company chose to apply mortality improvement to the industry basic mortality table.

**Guidance Note:** Simplifications or approximations to estimate the effect of the “baseline credibility” prudent estimate mortality in Section 8.C.18.b.i are permissible if they comply with VM-20 Section 2.G.

For example, in situations where the sufficient data period originally determined pursuant to Section 9.C.6.b.ii was greater than or equal to 10 years, there is a simple approximation. Separately for the 2008 VBT limited underwriting, the 2015 VBT using Limited Fluctuation, and the 2015 VBT using Bühlmann, for a given credibility percentage, X%, the ratio of the margin with X% credibility to the margin with 80% credibility is fairly stable across all attained ages. Thus, the effect of the baseline credibility can be approximated by calculating λ′ by following Section 8.C.18.b using prudent estimate mortality rather than “baseline credibility” prudent estimate mortality and then obtaining λ by multiplying λ′, by Ɵ/100 in durations prior to when grading begins, by (100 + Ɵ)/200 in the grading durations, and by 1.0 in durations after grading is complete, where Ɵ is:



**Guidance Note:** In the case where applicable industry tables are used in lieu of company experience, Section 8.C.18.b.i would be the industry tables, but using company experience margins corresponding to the baseline 80% credibility and grading corresponding to a sufficient data period of 10, graded into that same industry table with industry margins. Similarly, Section 8.C.18.b.ii would be the industry tables, with future mortality improvement applied using the mortality improvement rates in Section 9.C.3.g.

* 1. Reinsurance premium prudent estimate assumptions may be modified if, in the company’s judgment, the prescribed reinsurance premium prudent estimate assumptions do not appropriately reflect the expected reinsurance premium experience under a moderately adverse scenario. In cases where the reinsurance premium prudent estimate assumptions are modified, the modifications must not result in reinsurance premium anticipated experience assumptions that are lower than those prescribed in Section 8.C.18.a or reinsurance premium margins that are lower than those prescribed in Section 8.C.18.b without prior approval by the domiciliary commissioner. Note that if the reinsurance agreement allows for the ceding company to recapture the ceded business if the reinsurer raises rates, the ceding company may model this explicitly or limit prudent estimate reinsurance premiums such that they do not exceed the prudent estimate mortality following Section 9.C.1 through Section 9.C.6, and this modification would not require commissioner approval.

**Guidance Note:** Examples of reasons to modify the reinsurance premium prudent estimate assumptions include, but are not limited to, counterparty default concerns, reinsurance contract language that contains particularly restrictive or permissive provisions regarding reinsurance rate increases, and potential recapture of the reinsured business.

**VM-31 Section 3.C.8.b**

b. Assumptions – Description of reinsurance assumptions used to determine the cash flows included in the model, including the anticipated experience assumptions and margins for future reinsurance premiums reflecting non-guaranteed reinsurance features. For future reinsurance premiums, describe any adjustments made pursuant to VM-20 Section 8.C.18.c and provide the rationale for such adjustments.

#### REASONING:

#### As PBR becomes mandatory in 2020, the 2020 Valuation Manual should include clear guidance on the modeling of future YRT premiums.