**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:**

PBR Staff of Texas Department of Insurance

**Title of the Issue:**

Address several clean-up items for VM-20, as well as related VM-21 and VM-31 Sections.

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:

VM- 20 Section 3.B.5.c.ii.4, VM-20 Section 5.B.3, VM-20 Section 7.E.2 and Guidance Note below, VM-21 Section 4.D.4.c, VM-20 Section 7.K.3, VM-31 Section 3.D.6.f, VM-20 Section 9.A.4

January 1, 2023 NAIC Valuation Manual

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.)

1. The formula for calculating the NPR for ULSG based on the value of the SG in VM-20 Section 3.B.5.c.ii.4 excludes the EA from the scaling of the NPR. This is inconsistent with the formula for calculating the NPR for ULSG disregarding the SG in VM-20 Section 3.B.5.d.iv. The scale is the prefunding ratio of actual SG (denoted ASG) to fully funded SG (denoted FFSG), and it makes intuitive sense that the NPR would be scaled to decrease or increase relative to the level of funding of the SG.
2. The VM-20 Section 5.B.3 stochastic reserve methodology is missing an aggregate cash surrender value (CSV) floor for scenario reserves before calculating CTE70. This allows scenario reserves that exceed the CSV to be dampened or eliminated by being averaged with scenario reserves. A CSV floor in the NPR does not address this concern, because it does not reflect the scenario reserves in the SR that exceed the CSV. In contrast, in VM-21 Section 4.B.1 scenario reserves are floored at the aggregate CSV as appropriate. Scenario reserves, as the asset requirement for specific scenarios, should be held at or above the CSV.
3. Add consideration to VM-20 Section 7.E.2 consistent with VM-21 Section 4.D.4.c’s requirement on the company’s assumed cost of borrowing along with the associated Guidance Note. Editorial clarifications to the existing Guidance Note in VM-21.
4. VM-20 Section 7.K.3 should clarify the requirement to reflect the hedge modeling error or insufficiency. Related to this change, more discussion about the hedging strategy and hedge modeling should be added to the Life Report section of the VM-31 Section 3.D.6.f report.
5. VM-20 Section 9.A.4 implies companies can elect to stochastically model risk factors other than interest rates & equities. Stochastic assumptions are not subject to the requirements of Section 9 relating to prudent estimate assumptions. Nor are any guidance/specific requirements provided if companies elect to stochastically model other risk factors. Add consideration to VM-20 consistent with VM-21 Section 12.B.4’s requirement about the risk factors other than interest rates & equities that are stochastically modelled, which was added to VM-21 for this same reasoning.

\* 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:

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| **Dates:** Received | Reviewed by Staff | Distributed | Considered |
| 1/30/23 | SO |  |  |
| **Notes:** APF 2023-03 | | | |

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**VM-20 Section 3.B.5.c.ii.4**

1. The NPR for an insured age x at issue at time t shall be according to the formula below:

~~𝑀𝑖𝑛 [ 𝐴𝑆𝐺~~~~𝑥+𝑡~~ ~~/𝐹𝐹𝑆𝐺~~~~𝑥+𝑡~~ ~~, 1] ⦁ 𝑁𝑆𝑃~~~~𝑥+𝑡~~ ~~− 𝐸~~~~𝑥+t~~

𝑀𝑖𝑛 [ 𝐴𝑆𝐺𝑥+𝑡 /𝐹𝐹𝑆𝐺𝑥+𝑡 , 1] ⦁ (𝑁𝑆𝑃𝑥+𝑡 − 𝐸𝑥+t)

**VM-20 Section 5.B.3**

1. Set the scenario reserve equal to the sum of the statement value of the starting assets across all model segments and the maximum of the amounts calculated in Subparagraph 2 above.

The scenario reserve for any given scenario shall not be less than the cash surrender value in aggregate on the valuation date for the group of contracts modeled in the projection.

**VM-20 Section 7.E.2**

1. Model at each projection interval any disinvestment in a manner that is consistent with the company’s investment policy and that reflects the company’s cost of borrowing where applicable, provided that the assumed cost of borrowing is not lower than the rate at which positive cash flows are reinvested in the same time period, taking into account duration, ratings, and other attributes of the borrowing mechanism. Gross asset spreads used in computing market values of assets sold in the model shall be consistent with, but not necessarily the same as, the gross asset spreads in Section 7.E.1.d and Section 7.E.1.f above, recognizing that starting assets may have different characteristics than modeled reinvestment assets.

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| **Guidance Note:** The simple language above "provided that the assumed cost of borrowing is not lower than the rate at which positive cash flows are reinvested in the same time period" is intended to prevent excessively optimistic borrowing assumptions. If in any case, the assumed cost of borrowing restriction cannot be fully applied or followed precisely, then as with all other simplifications/approximations, the company shall not allow borrowing assumptions to materially reduce the reserve. |

**VM-21 Section 4.D.4.c**

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| --- |
| **Guidance Note:** The simple language above “provided that the assumed cost of borrowing is not lower than the rate at which positive cash flows are reinvested in the same time period” is intended to prevent excessively optimistic borrowing assumptions. If in any case, the assumed cost of borrowing restriction cannot be fully applied or followed precisely, then as with all other simplifications/approximations, the company shall not allow borrowing assumptions to materially reduce the reserve. |

**VM-20 Section 7.K.3**

1. In circumstances where one or more material risk factors related to a derivative program are not fully captured within the cash-flow model used to calculate CTE 70, the company shall reflect the approximation, simplification or model limitations in the modeling of such risk factors by increasing the SR as described in Section 5.E. The company shall also be able to justify that the method appropriately reflects the potential error using historical experience, e.g., analysis of historical performance or backtesting.

**VM-31 Section 3.D.6.f**

1. Risk Management – Detailed description of model risk management strategies, such as hedging and other derivative programs, including any future hedging strategies supporting the policies and any adjustments to the SR pursuant to VM-20, Section 7.K3 and VM-20, Section 7.K.4, specific to the groups of policies covered in this sub-report and not discussed in the Life Summary Section 3.C.5. Documentation of any future hedging strategies should include documentation addressing each of the CDHS documentation attributes. The following should be included in the documentation:
2. Descriptions of basis risk, gap risk, price risk and assumption risk.
3. Methods and criteria for estimating the a priori effectiveness of the strategy.
4. Results of any reviews of actual historical hedging effectiveness.
5. Strategy Changes – Discussion of any changes to the hedging strategy during the past 12 months, including identification of the change, reasons for the change, and the implementation date of the change.
6. Hedge Modeling – Description of how the hedge strategy was incorporated into modeling, including:

* Differences in timing between model and actual strategy implementation.
* For a company that does not have a future hedging strategy supporting the contracts, confirmation that currently held hedge assets were included in the starting assets.
* Evaluations of the appropriateness of the assumptions on future trading, transaction costs, other elements of the model, the strategy, and other items that are likely to result in materially adverse results.
* Discussion of the projection horizon for the future hedging strategy as modeled and a comparison to the timeline for any anticipated future changes in the company’s hedging strategy.
* If residual risks and frictional costs are assumed to have a value of zero, a demonstration that a value of zero is an appropriate expectation.
* Any discontinuous hedging strategies modeled, and where such discontinuous hedging strategies contribute materially to a reduction in the SR, any evaluations of the interaction of future trigger definitions and the discontinuous hedging strategy, including any analyses of model assumptions that, when combined with the reliance on the discontinuous hedging strategy, may result in adverse results relative to those modeled.
* The approach and rationale used to reflect the hedge modeling error(s).

**VM-20 Section 9.A.4**

1. If the company elects to stochastically model risk factors in addition to those listed in Section 9.A.3 above, the requirements in this section for determining prudent estimate assumptions for these risk factors do not apply.

It is expected that companies will not stochastically model risk factors other than the economic scenarios, such as policyholder behavior or mortality, until VM-20 has more specific guidance and requirements available. Companies shall discuss with domiciliary regulators if they wish to stochastically model other risk factors.