**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:**

VM-31 Reporting Issues:

1. Senior Management and Qualified Actuary are distinct, layered reporting roles in VM-G.
2. Life and VA Reports do not discuss the aggregate impact of approximations and simplifications.
3. There are three issues in VM-31’s scenario generation documentation for VM-21 in 3.F.9:
4. In addition to supporting that the number of scenarios is appropriate for the CTE 70 calculation, the company should also support that the number of scenarios is appropriate for the CTE 98 calculation.
5. The version of the ESG should be included and the parameters of the scenario generation should be available upon request.
6. A section reference needs to be corrected: VM-21 Section 8.G.1 does not exist.
7. VM-21 is missing consideration of use of a date prior to the valuation date for the SR and the additional standard projection amount, which is inconsistent with the reporting in VM-31 Section 3.F.12.e.
8. VM-31 should specifically address actual to expected analyses for certain liability assumptions such as expenses, partial withdrawals, annuitizations as well as GMIB/ GMWB utilization.
9. Refine VM-31 documentation to address mortality improvement requirements in VM-21 Section 11.C and Section 11.D.
10. The requirement for the projection period in VM-20 Section 7.A.1.d is not correctly reflected in VM-31 Section 3.D.2.f.

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-21 Section 3.I (new), VM-31 Section 3.D.2.f, VM-31 Section 3.D.5.f (new), VM-31 Section 3.D.11.k (new – renumber current 3.D.11.k and 3.D.11.l), VM-31 Section 3.D.14.c, VM-31 Section 3.F.2.f (new – renumber current 3.F.2.f and 3.F.2.g), VM-31 Section 3.F.3.k (new), VM-31 Section 3.F.3.i.vii, VM-31 Section 3.F.9, VM-31 Section 3.F.12.e (remove – renumber current Sections from 3.F.12.f to 3.F.12.m), VM-31 Section 3.F.13.e (New), VM-31 Section 3.F.16.c

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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. An internal control certification from Senior Management is required by VM-31. It is not appropriate for the qualified actuary to complete the certification for senior management since these two roles have different responsibilities under VM-G, representing distinct layers of reporting and oversight. Senior management receives reporting from the qualified actuary for principle-based valuation under VM-20 and VM-21.
2. In order to better understand the aggregate impact of approximations and simplifications used by the company, VM-31 Life Report and VA Report should add a new section to discuss it. If regulators were to gain comfortable with documentation of the aggregate impact, then the requirement that each individual approximation or simplification not bias the reserves downward could be revisited. For context, here are the current sections on approximations, simplifications, and modeling efficiency techniques, which only address the individual impacts.

***VM-31 Section 3.D.11.j***

*j. Approximations, Simplifications, and Modeling Efficiency Techniques – A description of each approximation, simplification or modeling efficiency technique used in reserve calculations, and a statement that the required VM-20 Section 2.G demonstration is available upon request and shows that: 1) the use of each approximation, simplification, or modeling efficiency technique does not understate the reserve by a material amount; and 2) the expected value of the reserve is not less than the expected value of the reserve calculated that does not use the approximation, simplification, or modeling efficiency technique.*

***VM-31 Section 3.F.2.e***

*e. Approximations, Simplifications, and Modeling Efficiency Techniques – A description of each approximation, simplification or modeling efficiency technique used in reserve or TAR calculations, and a statement that the required VM-21 Section 3.H demonstration is available upon request and shows that: 1) the use of each approximation, simplification, or modeling efficiency technique does not understate TAR by a material amount; and 2) the expected value of TAR is not less than the expected value of TAR calculated without using the approximation, simplification, or modeling efficiency technique.*

If discussions of the aggregate impact of approximations, simplifications, and modeling efficiency techniques were included, then there could be a future consideration of the removal of the requirement in VM-20 Section 2.G and VM-21 Section 3.H that approximations, simplifications, and modeling efficiency techniques not bias the reserve downward.

1. For VA, support should also be provided for the number of scenarios used for the C-3 RBC calculation based on CTE 98. For VA, the version of ESG should be included. Correct section reference.
2. VM-21 is missing consideration of use of a date prior to the valuation date for the additional standard projection amount, whereas VM-31 Section 3.F.12.e implies that the intent was for VM-21 to have such a consideration or allowance. VM-20 explicitly addresses such a consideration in VM-20 Section 2.E, and we use that language as a starting point for VM-21.

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

*The company may calculate the DR and the SR as of a date no earlier than three months before the valuation date, using relevant company data, provided an appropriate method is used to adjust those reserves to the valuation date. Company data used for experience studies to determine prudent estimate assumptions are not subject to this three-month limitation.*

1. In order for regulator reviewers to be able to better understand and evaluate a company’s liability assumptions for expenses, partial withdrawals, annuitizations, as well as GMIB and GMWB utilization, a comparison of actual to expected should specifically be referenced in VM-31. We have used the language for actual to expected policyholder behavior analysis in VM-31 Section 3.D.4.c (Life Report) as a format for a general A/E request.

***VM-31 Section 3.D.4.c***

*Actual to Expected Policyholder Behavior Analysis – The results of the most recently available actual to expected (without margins) analysis, including:*

* + 1. *Definitions of the expected basis used in all actual-to-expected ratios shown.*
		2. *Comments addressing the conclusions drawn from the analysis.*
1. Adding documentation to confirm that the company has applied historical and future mortality improvement when it would result in an increase in the stochastic reserve as required by VM-21 Section 11.C and Section 11.D.
2. The language in VM-31 should be modified to correctly require reporting on VM-20’s requirement for the projection period. For reference, here is the relative passage of VM-20:

***VM-20 Section 7.A.1.d:***

*Projects cash flows for a period that extends far enough into the future so that no obligations remain.*

\* 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 |
| 11/15/2022, revised 1/30/23 | SO |  |  |
| **Notes:** APF 2022-09 |

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**VM-31 Section 3.D.14.c:**

c. Senior Management on Internal Controls – A certification from senior management, other than the qualified actuary, regarding the effectiveness of internal controls with respect to the principle-based valuation under VM-20, as provided in Section 12B(2) of Model #820.

**VM-31 Section 3.F.16.c:**

c. Senior Management on Internal Controls – A certification from senior management, other than the qualified actuary, regarding the effectiveness of internal controls with respect to the principle-based valuation under VM-21, as provided in Section 12B(2) of Model #820.

**VM-31 Section 3.D.11.k (new – renumber current 3.D.11.k and 3.D.11.l):**

k. Aggregate Impact of Approximations, Simplifications and Modeling Efficiency Techniques **–** Support that the aggregate impact of approximations and simplifications does not result in a material understatement of the reserve.  This should include consideration of not just the magnitude of the sum of the individual impacts when considered in isolation, but also consideration of any potential interaction of approximations, simplifications, and modeling efficiency techniques.

**VM-31 Section 3.F.2.f (new– renumber current 3.F.2.f and 3.F.2.g):**

f. Aggregate Impact of Approximations, Simplifications and Modeling Efficiency Techniques **–** Support that the aggregate impact of approximations and simplifications does not result in a material understatement of TAR.  This should include consideration of not just the magnitude of the sum of the individual impacts when considered in isolation, but also consideration of any potential interaction of approximations, simplifications, and modeling efficiency techniques.

**VM-31 Section 3.F.9:**

9. Scenario Generation – The following information regarding the scenario generation for interest rates and equity returns used by the company in performing a principle-based valuation under VM-21 and in determining the C-3 RBC amount under LR027, as it applies to the calculation of the SR, TAR and CTEPA (if used):

a. Sources – Identification of the sources or generators used to produce the scenarios.

Versions should be identified and parameters to the scenario generation shall be available upon request.

b. Number of Scenarios – Number of scenarios used, rationale for that number, methods used to determine

the sampling error of the CTE 70 and CTE 98 statistic when using the selected number of scenarios, and

documentation that any resulting understatement in reserve or TAR, as compared with that

resulting from running additional scenarios, is not material, as discussed in VM-21 Section 8.F.

c. Scenario Reduction Techniques – If a scenario reduction technique is used, a description of the technique and documentation of how the company determined that the technique does not lead to a material understatement of results.

d. Time-Step – Identification of the time-step of the model (e.g., monthly, quarterly, annual), and results of testing performed to determine that use of a more frequent time-step does not materially increase reserves, as discussed in VM-21 Section 4.F.1.

**VM-21 Section 3.I (New):**

The company may calculate the SR and the additional standard projection amount as of a date no earlier than three months before the valuation date, using relevant company data, provided an appropriate method is used to adjust those amounts to the valuation date. Company data used for experience studies to determine prudent estimate assumptions are not subject to this three-month limitation.

**VM-31 Section 3.F.12.e (remove – renumber current Sections from 3.F.12.f to 3.F.12.m):**

**VM-31 Section 3.F.13.e (New):**

Calculations as of a Date Preceding the Valuation Date – If the SR and/or the additional standard projection amount were developed as of a date prior to the valuation date, disclosure of the prior date, the SR and the additional standard projection amount of the in force on the prior date, and an explanation of why the use of such a date will not produce a material change in the results compared to if the results were based on the valuation date. Such an explanation shall describe the process that the qualified actuary used to determine the adjustment required by VM-21 Section 3.I, the amount of the adjustment, and the rationale for why the adjustment is appropriate.

**VM-31 Section 3.D.5.f (New):**

5. Expenses – The following information regarding the expense assumptions used by the

company in performing a principle-based valuation under VM-20:

f. Actual to Expected Analysis – The results of the most recently available actual to expected (without margins) analysis, including:

i. Definitions of the expected basis used in all actual-to-expected ratios shown.

ii. Comments addressing the conclusions drawn from the analysis.

**VM-31 Section 3.F.3.k (New – renumber current section 3.F.3.k):**

k. Actual to Expected Analysis – Disclosure of the results of the most recently available actual to expected (without margins) analysis for the assumptions including 3.F.3.d Expenses Other than Commissions, 3.F.3.e Partial Withdrawals, 3.F.3.g Annuitization Benefits and GMIB and 3.F.3.h GMWB Utilizations, including:

* 1. Definitions of the expected basis used in all actual-to-expected ratios shown.
	2. Comments addressing the conclusions drawn from the analysis.

**VM-31 Section 3.F.3.i.vii:**

Discussion of any assumptions made on mortality improvements both for applying up to and beyond the valuation date (if applicable), the support for such assumptions, and how such assumptions adjusted the modeled mortality. In a case where mortality improvement as discussed in VM-21 Section 11.C and Section 11.D has not been applied, confirmation that applying such improvement would not result in an increase in the SR.

**VM-31 Section 3.D.2.f:**

Projection Period – Disclosure of the length of projection period and comments addressing the conclusion that the projection of cash flows extends far enough into the future that no obligations remain for both the deterministic and stochastic models.