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.

   This APF was prepared by:
   Amy Eby, FSA, MAAA
   VP and Appointed Actuary, Lincoln Financial Group

   Kyle Kalmbach, FSA, MAAA
   VP and PBR Qualified Actuary, Lincoln Financial Group

   Issue:
   VM-20 Treatment for Reinsurance Premiums in Modeled Reserves
   This APF addresses recommendation #26 from VAWG's 10/24/2018 memo regarding PBR Recommendations and Referrals to LATF.

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, January 1, 2019 Edition: VM 20 Sections 8.C and 9.B.1 and VM 31 Section 3.C.8

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.)

   Please see the attached Appendix.

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

   Please see the attached Appendix.

* 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
Notes:			

W:\National Meetings\2010\...\TF\LHA\

Appendix

Issue:

We agree that changes to VM-31 requiring disclosure of details around reinsurance premium assumptions should be made. The current exposed APFs to address YRT assumptions go beyond requiring additional disclosure of these details, and we believe their suggested changes to VM-20 do not constitute a principles-based approach that fits within the PBR framework.

<u>VAWG recommendation #26:</u>

26	Provide details on assumed YRT reinsurance premium rates	VM-31 Section 3.D.8	This topic is currently being reviewed by LATF for a potential amendment to the Valuation Manual. Modeling of YRT reinsurance premiums varied substantially across companies. {Drafting consideration: A potential requirement (based on CA PBR review) is to model no less than a realistic increase in YRT reinsurance premiums based on likely reinsurer action no later than the likely timeframe for reinsurer review given the modeled results for other assumptions, such as mortality and lapses.}

We believe the following principles should be reflected in the valuation manual regarding modeling of reinsurance:

1. The methodology for modeling reinsurance under PBR should maintain a principles-based approach and not be prescribed.
2. Reinsurance premiums are a material assumption requiring a margin
3. When setting the assumptions for reinsurance premiums the company should reflect the following:
    a. The terms and guarantees of the reinsurance agreement
    b. Consistency with other assumptions used by the company in calculating the deterministic or stochastic reserve, as outlined in section 8.B.3.c of VM-20
    c. The assumption that assuming companies will take actions, as allowed by the reinsurance agreement, that are in their best interest in the modeled scenario consistent with what is outlined in sections 8.C.7 and 8.C.11 of VM-20
    d. The assumed actions are based on the mortality assumption used by the company in calculating the deterministic or stochastic reserve

These principles are covered within VM-20, but we believe it would be beneficial to make some minor adjustments to the language in Section 8 to more clearly reflect these principles.

We also believe that VM-31 should require additional details to support the reinsurance premium assumptions used including the timing and magnitude of any assumptions for future actions, such as changes to the reinsurance premium scale or changes to expense allowances, by reinsurers based on the mortality under the given scenario.

Sections:
VM 20 Sections 8.C and 9.B.1
VM 31 Section 3.C.8

Redline:
<u>VM 20 Section 8.C</u>

C. Reflection of Reinsurance Cash Flows in the Deterministic Reserve or Stochastic Reserve

In calculations of the deterministic reserve or stochastic reserve pursuant to Section 4 and Section 5:

1. The company shall use assumptions and margins that are appropriate for each company pursuant to a reinsurance agreement. In such instance, the ceding and assuming companies are not required to use the same assumptions and margins for the reinsured policies.

2. For each reinsurance agreement, ~~T~~the company shall use assumptions to project cash flows ~~for each assuming company~~ that are consistent with other assumptions ~~used by the company~~ in calculating the deterministic or stochastic reserve for the reinsured policies and reflect the terms of the reinsurance agreements.

> **Guidance Note:** An example of consistency is projecting reinsurance rate increases that reflect the increased mortality used in calculating the deterministic or stochastic reserve.

3~~2~~. To the extent that a single deterministic valuation assumption for risk factors associated with certain provisions of reinsurance agreements will not adequately capture the risk, the company shall do one of the following:

a. Stochastically model the risk factors directly in the cash-flow model when calculating the stochastic reserve.

b. Perform a separate stochastic analysis outside the cash-flow model to quantify the impact on reinsurance cash flows to and from the company. The company shall use the results of this analysis to adjust prudent estimate assumptions or to determine an amount to adjust the stochastic reserve to adequately make provision for the risks of the reinsurance features.

> **Guidance Note:** An example of reinsurance provisions where a single deterministic valuation assumption will not adequately capture the risk is stop-loss reinsurance.

4~~3~~. The company shall determine cash flows for reinsurance ceded subject to the following:

a. The company shall include the effect of projected cash flows received from or paid to assuming companies under the terms of ceded reinsurance agreements in the cash flows used in calculating the deterministic reserve in Section 4 and stochastic reserves in Section 5.

b. If cash flows received from or paid to assuming companies under the terms of any reinsurance agreement are dependent upon cash flows received from or paid to assuming companies under other reinsurance agreements, the company shall first determine reinsurance cash flows for reinsurance agreements with no such dependency and then use the reinsurance cash flows from these independent agreements to determine reinsurance cash flows for the remaining dependent agreements.

c. The company shall use assumptions to project cash flows to and from assuming companies that are consistent with other assumptions used by the company in calculating the deterministic or stochastic reserve for the reinsured policies and that reflect the terms of the reinsurance agreements.

5~~4~~. The company shall determine cash flows for reinsurance assumed subject to the following:

a. The company shall include the effect of cash flows projected to be received from and paid to ceding companies under the terms of assumed reinsurance agreements in the cash flows used in calculating the deterministic reserve in Section 4 and the stochastic reserve in Section 5.

b. If cash flows received from or paid to ceding companies under the terms of any reinsurance agreement are dependent upon cash flows received from or paid to ceding companies under other reinsurance agreements, the company shall first determine reinsurance cash flows for reinsurance agreements with no such dependency and then use the reinsurance cash flows from these independent agreements to determine reinsurance cash flows for the remaining dependent agreements.

c. An assuming company shall use assumptions to project cash flows to and from ceding companies that ~~reflect the assuming company's experience for the business segment to which the reinsured policies belong and~~ are consistent with other assumptions used by the company in calculating the deterministic or stochastic reserve for the reinsured policies and that reflect the terms of the reinsurance agreements.

6~~5~~. If a company assumes a policy under more than one reinsurance agreement, then the company may treat each agreement separately for the purposes of calculating the reserve.

~~6. An assuming company shall use assumptions to project cash flows to and from ceding companies that reflect the assuming company's experience for the business segment to which the reinsured policies belong and reflect the terms of the reinsurance agreement.~~

7. The company shall assume that the counterparties to a reinsurance agreement are knowledgeable about the contingencies involved in the agreement and likely to exercise the terms of the agreement to their respective advantage, taking into account the context of the agreement in the entire economic relationship between the parties. In setting assumptions for the NGE in reinsurance cash flows, the company shall include, but not be limited to, the following:

   a. The usual and customary practices associated with such agreements.

   b. Past practices by the parties concerning the changing of terms, in an economic environment similar to that projected.

   c. Any limits placed upon either party's ability to exercise contractual options in the reinsurance agreement.

   d. The ability of the direct-writing company to modify the terms of its policies in response to changes in reinsurance terms.

   e. Actions that might be taken by a party if the counterparty is in financial difficulty.

8. The company shall account for any actions that the ceding company and, if different, the direct-writing company have taken or are likely to take that could affect the expected cash flows of the reinsured business in determining assumptions for the modeled reserve.

> **Guidance Note:** Examples of actions the direct-writing company could take include: 1) instituting internal replacement programs or special underwriting programs, both of which could change expected mortality rates; or 2) changing NGE in the reinsured policies, which could affect mortality, policyholder behavior, and possibly expense and investment assumptions. Examples of actions the ceding company could take include: 1) the exercise of contractual options in a reinsurance agreement to influence the setting of NGEs in the reinsured policies; or 2) the ability to participate in claim decisions.

9. For actions taken by the ceding company and, if different, the direct-writing company, set assumptions in a manner consistent with Section 9.D. Note that these assumptions are in addition to, rather than in lieu of, assumptions as to the behavior of the underlying policyholders.

10. The company shall use assumptions in determining the modeled reserve that account for any actions that the assuming company has taken or is likely to take that could affect the expected cash flows of the reinsured business.

> **Guidance Note:** Examples of such actions include, but are not limited to, changes to the current scale of reinsurance premiums (for example, in reaction to mortality from the valuation scenario) and changes to expense allowances.

11. The company shall consider all elements of a reinsurance agreement that the assuming company can change~~,~~ and assume that the assuming company will make changes allowed under the terms of the reinsurance agreement that are to their advantage consistent with past practices. ~~a~~Assumptions for those elements are subject to the requirements in Section 7.C. Appropriate assumptions for these elements may depend on the scenario being tested. The company shall take into account all likely consequences of the assuming company changing an element of the reinsurance agreement, including any potential impact on the probability of recapture by the ceding company.

Guidance Note: The ability of an assuming company to change elements of a reinsurance agreement, such as reinsurance premiums or expense allowances, may be thought of as comparable to the ability of a direct-writing company to change NGE on policies.

VM 20 Section 9.B.1

B. Assumption Margins

The company shall include margins to provide for adverse deviations and estimation error in the prudent estimate assumption for each risk factor that is not stochastically modeled or prescribed, subject to the following:

1. The company shall determine an explicit set of initial margins for each material assumption independently (that is, without regard to any margins in other risk factors and ignoring any correlation among risk factors). Next, if applicable, the level of a particular initial margin may be adjusted to take into account the fact that risk factors are not normally 100% correlated. However, in recognition that risk factors may become more heavily correlated as circumstances become more adverse, the initially determined margin may only be reduced to the extent the company can demonstrate that the method used to justify such a reduction is reasonable, considering the range of scenarios contributing to the CTE calculation or considering the scenario used to calculate the deterministic reserve as applicable or considering appropriate adverse circumstances for risk factors not stochastically modeled. It is not permissible to adjust the initial margin to recognize, in whole or in part, implicit or prescribed margins that are present, or are believed to be present, in other risk factors.

If not stochastically modeled or prescribed, assumptions that are generally considered material include, but are not limited to, mortality, morbidity, interest, equity returns, expenses, lapses, reinsurance premiums, partial withdrawals, loans and option elections.

VM 31 Section 3.C.8

8. Reinsurance – The following information regarding the reinsurance assumptions used by the company in performing a principle-based valuation:

a. Agreements – For those reinsurance agreements included in the calculation of the minimum reserve as per VM-20 Section 8.A, a description of each reinsurance agreement, including, but not limited to, the type of agreement, the counterparty, the risks reinsured, the portion of business reinsured and whether the agreement complies with the requirements of the credit for reinsurance under the terms of the AP&P Manual.

b. Assumptions – Description of reinsurance assumptions used to determine the cash flows included in the model.

i. Consistency: Description of whether and how projected reinsurance premiums in the model are consistent with other assumptions used in each scenario.

~~i.~~ii. Counterparty Actions: Description of the following (i) timing and magnitude of any actions taken by the ceding or assuming company (ii) consistency of assumed actions with ~~past~~permissible and prudent practices by the parties concerning the changing of terms.

~~b.~~c. Separate Stochastic Analysis – To the extent that a single deterministic valuation assumption for risk factors associated with certain provisions of reinsurance agreements will not adequately capture the risk of the company, a description of the separate stochastic analysis that was used outside the cash-flow model to quantify the impact on reinsurance cash flows to and from the company. The description should include which variables are modeled stochastically.

a. Multiple Agreement Allocation Method – If a policy is covered by more than one reinsurance agreement, description of the method to allocate reinsurance cash flows from each agreement.

b. Counterparty Assets – Pursuant to VM-20 Section 8.C.14, if the company concludes that modeling the assets supporting reserves held by a counterparty is not necessary, documentation of the testing and logic leading to that conclusion.

c. Pre-Reinsurance-Ceded Minimum Reserve – Description and rationale for methods and assumptions used in determining the pre-reinsurance-ceded minimum reserve that differ from methods and assumptions used in determining the minimum reserve (post-reinsurance-ceded), including support that such methods and assumptions are consistent with VM-20 Section 8.D.2.