

DATE: December 14, 2020
TO: Bruce Sartain, Chair of VM-22 (A) Subgroup
SUBJECT: ARWG Preliminary Framework Oct 2020

Dear Bruce:

We appreciate the opportunity to provide input on the draft ARWG framework.

- Reinvestment mix should represent the fixed income assets portion of the investment portfolio and reflect moderately adverse conditions.
- A CDHS concept is needed for future hedge modeling that materially reduces the reserves.
- Aggregation requirements and methodology should be clearly defined.
- The design of the exclusion test needs to be clarified and consider non-tested risk factors that may have material impact on the ratio test results, e.g., liability assumptions and hedging. The ratio test passing criteria should be linked to the company's definition of materiality, with the VM-22 threshold as a guardrail.
- The implication of the PBR reserve framework on the non-PBR capital framework needs to be carefully considered.
- Comments for other topics.

Sincerely,



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Appendix I: Requested Feedback

Reinvestment Mix

- **Comments on setting limits to the current VM-22 credit quality mix? (Slide 11)**

A few considerations about the credit quality mix:

1. It should represent the fixed income investment portion of the asset portfolio only. The current proposal does not do this.
2. It should be based on the latest industry data. The current proposal does not do this.
3. Using a typical industry average fixed income portfolio mix is not conservative as needed for the purpose of setting reserves. A mix with higher credit quality to reflect moderately adverse conditions is more appropriate. The current proposal does not reflect this.
4. Currently VM-22 adds additional conservatism not in the current VM-22 credit quality mix by applying a 25 bps spread deduction; without this spread deduction in the ARWG framework, the credit quality mix should be more conservative. The current proposal does not reflect this.
5. It is desired that the same reinvestment mix guardrail be used for all of VM-20, VM-21 and the new VM-22.

Additionally, we are concerned with the grading from short-term spreads to long-term spreads, especially if there is an option to liquidate currently held hedges (as there is in VM-21) reflecting an unrealistic gain in reinvestments when short-term spreads are high as of the valuation date. This problem currently applies to VM-20 and VM-21. Additionally, it may be preferable to use a net yield pickup based criteria for reinvestments instead of a guardrail based on a specific asset mix, which would reduce implementation constraints seen to date with the alternative reinvestment guardrail.

Index Credit Hedging Treatment

- **Does modeling breakage hedge expense seem reasonable? (Slide 13)**

1. Generally speaking, a CDHS concept (having a clearly documented hedging strategy and program) is needed in cases where reserves or TAR is materially reduced. Future hedging should not materially reduce reserves or TAR if it is not a CDHS. For straightforward types of hedging, the CDHS documentation should only be simpler to provide.
2. Hedge breakage expense assumptions
 - a. The wording of "hedge expense" should not be confused with the hedge cost that needs to be reflected in the projections of the hedge modeling.
 - b. Are both sources of error reflected here - error in the hedging itself, and error in the ability to accurately model it? Should we be separately considering the two limitations

- to make sure they are both clear: 1) the real-world hedging error and 2) the modeling error in reflecting the future hedging? Current error factor discussions seem muddled.
- c. The 1% minimum allowed seems too low. How does the 1% breakage expense reflected as either the additional expense or the reduced investment income compare with the 5% reduction in future hedging benefit for reserves (on a PV basis)? A low E factor needs to be supported by the projected hedge gain and loss being within a close range of 100%. VM-21 suggests a range of 80-125%. With a lower minimum expense/error factor should this range be narrowed? The rationale for a lower expense factor (having lower basis risk and greater effectiveness) suggests that we should expect a back-testing result much closer to 100%.
 - d. The same requirement should be considered for VM-20 hedge modeling which are mostly index credit hedging for IUL products.

3. Will companies request special hedge accounting treatment from SAPWG similar to SSAP 108?

Aggregation

- **Any additional principles to include, or suggested modifications or elaboration of principles listed? (Slide 21)**
- **Impose differences in aggregation for exclusion testing purposes? (Side 22)**

We have a concern with this approach, related to concern with the current VM-20 approach. We are not seeing clear or consistent approaches to what "managed together" or "managed separately" means. A fuzzy requirement here is no requirement. If the point is to generally allow full aggregation, why even have a fuzzy requirement? What are examples that one could not reasonably argue should be aggregated?

Consider 1) an aggregation certification to demonstrate that the aggregation chosen meets the requirements if they can be clearly defined and/or 2) if companies change aggregation method they need to get domicile commissioner's approval.

We prefer VM-22 define standard reserving categories for all exclusion test, stochastic reserve and standard projection amount purposes. There should be no aggregation of products with significantly different risk profiles for exclusion testing, but for products that fail the test and go through the SR/SPA calculation, aggregation is allowed but with the reserves for each individual category and the aggregation benefit being disclosed. SR and SPA are supposed to use the same aggregation method.

Ideally, for aggregation benefit disclosure, we would review these product categories:

- Deferred Annuities
 - FIAs with GLBs
 - FIAs without GLBs

- FDAs with GLBs
- FDAs without GLBs
- Payout Annuities
 - SPIAs
 - PRT
 - DIAs
 - SSC

If this is too granular in some instances, a minimum split would include fixed annuities with GLBs, fixed annuities without GLBs, SPIAs, PRT, and then all others.

Exclusion Testing

- **Include testing of longevity risk in the ratio test? (Slide 25)**
 - **Provide potential deterministic calculation option for policies with limited optionality? (Appendix V)**
1. Mortality Component: The shocks should be the greater of the mortality margin magnitude or the fixed amount determined by the ARWG.
 2. Threshold: The threshold needs to consider the absolute dollar amount and be linked to the company's materiality standard. A group of contracts should not be able to be excluded from VM-22, if the aggregate variability under the scenarios exceeds the company's materiality standard. That is, if the economic or mortality variability is material based on the company's definition of materiality, then the SERT is failed. Then, any fixed threshold selected by the ARWG for the SERT (e.g., 6%) is just a "guardrail" on the company's defined materiality standard. Note that this is more principles based than an SERT with a fixed threshold and also applies as a critique of VM-20's SERT.
 3. Impact of Liability Assumptions: Will exclusion testing include SPA results as part of the 16 scenario calculations, if it is for more than disclosure? If you are also being excluded from the SPA, the SPA needs to be somehow reflected as part of the SERT process. What if over-optimistic liability assumptions (e.g., policyholder inefficiency) drive passing the SERT? This reflects a difference between VM-20 and VM-21. VM-20 has a SERT but does not exclude you from the NPR. VM-21 has an SPA but no SERT.
 4. Impact of Hedging: VM-20 does not allow a company to exclude a group of policies for which there is one or more CDHS from stochastic reserve requirements. VM-22 does not require policies with hedging to automatically fail exclusion test. Again, what if hedging drives the passing of the SERT? What hedging documentation and support is needed if a SERT is performed that relies on hedging? Should results be shown with and without hedging? This is another place where we should consider alignment between the two VM chapters.

Allocation Methodology

- **Any alternative methods to consider? (Slides 27-28, Appendix III)**

A single scenario won't capture individual policy risk. Neither will immediate election.

Reserve allocation is not only for tax purpose but also for RBC purpose. For products that calculate RBC using a factor-based approach, reserves need to be allocated if they are aggregated with other products that use a different RBC approach, e.g., C3P1. Need to seek input from the LRBC group. One conservative approach is to use the standalone reserves for RBC purpose.

Appendix II: Additional Feedback

Reflecting Risk in Moderately Adverse Conditions (Slide 2)

Just a note that this is fundamentally different than the PBR approach for economic scenarios. A CTE(70) reflects both less than moderately adverse and more than moderately adverse scenarios, in an average. For non-economic variables that are not stochastically modeled we may partition particular risks or scenarios into moderately adverse and beyond moderately adverse, which needs to be reflected in capital only. But the more we move to stochastic modeling of risks, reserves will just generally be increased by tail risk, both above and below a "moderately adverse" threshold, with a lesser sensitivity to deeper in the tail risks or scenarios than capital.

Potential Management Actions (Slide 2)

Potential management actions reflected should only be those that, at a minimum, are pursuant to documented company policy and are not inconsistent with historical actions.

Principles (Slide 2)

Speaking of Principles, will VM-22 cite/follow the VM-21 principles?

SPA (Slide 3)

Note that the SPA is actually neither formulaic nor a floor. The types of arguments you present here against the SPA seem to be wrestling with the ghosts of past requirements (the old standard scenario), rather than addressing the living, evolving requirements of the Valuation Manual. In contrast, a CSV floor is both formulaic and a prescriptive floor. Is the ARWG opposed to a CSV floor?

Existing PBR Frameworks (Slide 3)

For each deviation from the current VM-21, please outline whether: 1) a deviation is necessary due to unique product features or risk characteristics between the policies in scope (describe) or 2) a deviation from the current VM-21 is proposed that would be a better requirement for both VM-21 and VM-22 (describe). Similar comparisons to VM-20 are also preferable.

Implementation Period (Slide 9)

We need to be mindful of potential inconsistency between reserves and capital. If a principles-based capital framework is not completed(/updated), then interim revisions may be needed if the amount of business under the new VM-22 framework is material.

Can a company wait until the end of the transition period to start PBR, but then apply PBR to the issues from the transition period?

Mortality (Slide 15)

What does "unsupported judgment" mean? Why should there be any unsupported judgment? Let's not perpetuate this phrasing.

Will international lives also use 2012 IAM Basic Table with Scale G2? This may not be appropriate in many cases.

What number of years of future improvement will be used?

Policyholder Behavior (Slide 16)

Margins: VM-20 and VM-21 have analogous requirements - both start with individually determined margins and then one substitutes margins based on the joint distribution while the other discusses a correlation adjustment to reflect the joint distribution. Should these be harmonized, along with VM-22?

VM-22 reporting should quantify the impact of all margins, showing the effect with and without. VM-22 reporting should also ensure A/E's are provided with E being the anticipated or best estimate assumption.

NGEs (Slide 18)

Will this reflect company policy and past actions, and also include any legal and/or reputational considerations in determining anticipated NGEs?

Joint Payouts & Supplemental Benefits (Slide 19)

For VA products with joint payouts and/or supplemental benefits, similar requirements should be added to VM-21.

Reinsurance (Slide 20)

VM-20 requires that treaties be modeled either 1) if they qualify for credit for reinsurance or 2) if modeling them reduces surplus. This is a reasonable treatment, but VM-21 does not have the 2nd. We recommend the VM-20 treatment for VM-22. This should also be considered for VM-21.

Materiality

The ARWG will need to address materiality and simplifications/approximations/modeling efficiency techniques. If you are basing on VM-21, note that VM-21 is missing a consideration of the aggregate impact of all approximations and so does not have an assurance that the reserve is not materially understated in aggregate.

VM-20 has the requirement that individual approximations don't bias reserves downward. This provides some assurance about the aggregate impact, but is not the same as a consideration of the aggregate impact. Possibly all three should have a consideration of the aggregate impact.

Exclusion Test Methodology (Slide 25)

Item h) – Appendix V is mainly about the "certification" but not how the DR itself will be calculated. It may be reasonable to just do DR calculations in some situations, but this depends on the methodology/scenarios.

Allocation (Slide 28)

Again, need to consider non-US mortality.

VM-31 Disclosures (Slide 29)

What certifications will be included for the VM-22 reporting? Will they follow VM-20 or VM-21?

Hedge back-testing should be shown for the full time period current strategy has been in place. This should also apply to VM-21. VM-20 may also need additional details.

CTE(70)

For products with market value adjustment, CTE(70) needs to be floored at cash surrender value with MVA which varies by scenarios.

For products that do not have a cash surrender value, it is recommended that VM-22 use a "working reserve" concept, similar to VM-21 Section 3.G requirement.