March 2, 2018

Mr. Mike Yanacheak
Chair, Variable Annuities Issues (E) Working Group
National Association of Insurance Commissioners
Via Email: Dan Daveline (ddaveline@naic.org)

Re: VA QIS II Recommendations vF

Dear Mr. Yanacheak,

The AG43/C3P2 Work Group of the American Academy of Actuaries,[1] appreciates the opportunity to provide comments on the documents[2] exposed on December 1, 2017, by the Variable Annuities Issues (E) Working Group (VAIWG). We welcome the opportunity to help you shape proposed modifications to Actuarial Guideline XLIII (AG43) and C-3 Phase II (C3P2).

The comments in this letter represent our initial review of the proposal contained in the exposed documents. Although we requested a longer exposure period, we understand the stated desire to have a discussion at the National Association of Insurance Commissioners (NAIC) Spring National Meeting on the proposal. Given that the proposal was developed over an extended period, that early December was the first opportunity we have had to see the proposal, and that the exposure period spanned a very busy period for our WG members (including the holidays and year-end closing), we were not able to finalize the review of every single issue in the proposal. While we are able to provide significant comments in this letter, there are several issues requiring more thought and analysis. We look forward to having the ability to present more comments in the coming months before any proposed modifications to AG43 and C3P2 might be finalized.

In addition, due to the deadlines associated with these comments, we were unable to review the additional reports sent out on Feb. 12[3]. We will review this material over the next several weeks.

[1] The American Academy of Actuaries is a 19,000-member professional association whose mission is to serve the public and the U.S. actuarial profession. For more than 50 years, the Academy has assisted public policymakers on all levels by providing leadership, objective expertise, and actuarial advice on risk and financial security issues. The Academy also sets qualification, practice, and professionalism standards for actuaries in the United States.

[2] This includes *20171201 NAIC VA QIS II Recommendations vF.pdf, 20171201 Revised AG43 (REDLINE on ORIGINAL) vF.pdf*, and *20171201 Revised RBC LR027 (REDLINE on ORIGINAL) vF.pdf*.

[3] *20180212 QIS II Public Report.pdf* and 201800211_2200 QIS II Public Report Summary (sent).pdf.

General Comments

1. It is troubling that results from the quantitative impact studies, even at a summary level, are not available to all interested parties. The recommendations in the proposal are based on the results of these studies. This lack of transparency makes it difficult for us, and for any other interested party not having access to this information, to comment on areas such as whether the results of the studies are being interpreted correctly and whether the results are being applied properly to the recommendations.

2. During the VAIWG meeting on Dec. 1, it was noted that the proposals have not been tested on a balance sheet moving through time. This suggests the need for more testing of the framework.

3. The exposed documents contain 28 separate recommendations, and some of these recommendations involve multiple proposals. This appears to add a great deal of complexity to the requirements and raises the question of the value of the additional work and disclosures, both for companies and for regulators. Having this many proposed changes appears to be inconsistent with one of the stated enhancement objectives to "minimize implementation complexity." Looking at the changes in aggregate, it appears the proposed modifications are designed to address more than the stated objectives. This could create new and different issues, and even increase incentives for using captives. This suggests the need to: 1) understand the size of the impact of the various recommendations (which has not been provided); 2) prioritize the recommendations; and 3) test the impact of the recommendations on the balance sheet moving though time (consistent with comment no. 2 above).

We suggest consideration be given to limiting the number of modifications, with a focus on the following items:

a. Updating hedge accounting (and applying this to all hedges, per our comments in our Nov. 14, 2016 letter);
b. Implementing VM-20 interest rate scenario requirements;
c. Removing the Working Reserve;
d. Removing the Standard Scenario (SS) reserve, perhaps along with using the proposed Standard Projection reserve as a disclosure item to allow time to evaluate its effectiveness and consider further updates as needed (see our comments on recommendation #11 below);
e. Removing the SS in C3P2;
f. Increasing the admissibility limit for deferred tax assets (DTAs) associated with VA portfolios;
g. Working with interested parties to develop disclosure items and required reports that will help companies meet the requirements to justify their conditional tail expectation (CTE) calculation assumptions and help regulators to better understand the reasonableness of those assumptions; and
h. Aligning AG43 and C3P2 (with more thought to using the C3P2 framework).

These eight items are directly aligned with the core objectives that were identified for the modifications to AG43 and C3P2. Other recommendations (e.g., equity scenario changes and revenue sharing) are less relevant to the core objectives and should be considered under separate work streams going forward, once it is confirmed that the first set of changes addresses the more critical objectives.

4. A regulatory review process, in line with the infrastructure put into place for VM-20, is needed for AG43 and C3P2. One approach could be to use the VM-20 infrastructure (including the NAIC Valuation Analysis Working Group). However, more discussion is needed to ensure doing this will meet the needs for AG43 and C3P2.

5. As noted in our Nov. 14, 2016 letter, we view tax reserves as being an important part of the issues associated with changes to AG43. For example, differences between tax and AG43 reserves give rise to deferred tax assets and liabilities, which in turn impact statutory surplus. The proposed changes to C3P2 requirements also incorporate tax reserve and non-admitted deferred tax asset and liability considerations. We believe there should be additional analysis of these interactions and recent tax law changes on the estimated impact of these proposals.

6. The first and second properties of current framework shortcomings identified on slide 4 (slide numbers referenced in this letter are based on *20171201 NAIC VA QIS II Recommendations vF.pdf*) discuss the impact of hedging on statutory reserves and Total Asset Requirement (TAR). As we discuss these recommendations, we need to differentiate between the desire for companies to hold lower reserves and risk-based capital (RBC), and the desire for companies to avoid noneconomic volatility in reserves and RBC. It is our observation that the desire to hold lower reserves and RBC it is not necessarily a primary reason for forming a captive. Rather, the issue is more likely that, under the current requirements, hedging adds noneconomic volatility to statutory reserves and RBC. (Note that there are situations where companies are willing to hold higher statutory requirements in a captive in order to avoid noneconomic volatility.) The difference between identifying this issue as "noneconomic volatility" versus "lower reserves and RBC" is important, since it impacts which modifications are needed. For example, modifying statutory accounting requirements for VA hedges can help address the issue of noneconomic volatility. Once this is addressed, there may no longer be a need (nor a desire) to address hedges creating higher requirements.

7. One of the objectives in slide 5 states that additional risk mitigation should reduce a portfolio's total funding requirement. While we agree that sound risk mitigation should be appropriately reflected in reserve and RBC requirements, we believe it is important to also recognize how sound risk management manifests in different levels of stress. For example, in a best estimate or moderately adverse scenario, there may be more cost than benefit from a sound risk management strategy that is focused on protecting against tail risk. The reverse then may be true in a severe tail event. Therefore, we believe the objective should be that the risk mitigation is appropriately reflected based on its design (considering both the benefits AND the costs), and not that risk mitigation in every instance will lower reserves and RBC.

8. The objective to minimize implementation complexity on slide 5 appears to conflict with the increase in complexity produced by the proposal, particularly in the proposal for the Standard Projection. This objective sounds like a reasonable one, but does not appear to have been a priority based on the complexity that has been introduced.

9. While we agree with the statement on slide 15 encouraging "VAIWG and industry to hold discussions to verify or elaborate select recommendations prior to formal decision-making," we strongly believe that such discussions should include all interested parties.

10. As we suggested in our Nov. 14, 2016 letter, we recommend reviewing the consistency of the proposed changes to AG43 with the NAIC Model Standard Valuation Law (SVL). For example, such a review could confirm that applying the flexible valuation interest rates proposed for the Standard Projection to inforce variable annuity contracts meets the provisions of the SVL, since Section 4b of the SVL still applies to those contracts.

11. The proposals for AG43 and C3P2 leave the Alternative Methodology (AM) unchanged. Is this the intent or is more discussion or testing needed? It may make sense to further review the redline version of proposed AG43 to ensure that any intended changes to the AM are included and are adequately described.

Comments on the Recommendations

Recommendation #1—Use VM-20 economic scenario generator for interest rate scenarios (Slide 21)

The statement in slide 21 that the statutory framework does not provide guidance on interest rate generation, is incorrect, because AG43 does provide guidance. However, we have stated in prior letters to the VAIWG that additional guidance is needed, and suggested AG43 should contain the same requirements for interest rate scenarios used in VM-20. It appears that the proposed interest rate scenario generator and the Appendix 12 assumptions in the redline version of proposed AG43 are identical to the requirements of VM-20. Therefore, we agree with this recommendation, with the option to use proprietary generators if they meet minimum requirements. We suggest using the interest rate calibration criteria developed by the Academy Economic Scenario Work Group, outlined in a 2008 Report of that WG and used for the 2014 C-3 Phase 1 testing, to provide guidance regarding minimum requirements for proprietary generators.

We propose going one step further, however, as we suggested in our Nov. 14, 2016 letter. The interest rate scenario provisions should be removed from VM-20, AG43, and VM-21, and replaced with references to a new section in the Valuation Manual containing these requirements. This will ensure ongoing consistency between the requirements.

We also agree with the VAIWG's decision to pursue interest rate scenario changes as a separate effort, since this will also affect other products and frameworks, such as Life principle-based reserves (PBR) and C3 Phase 1.

Recommendation #2—Use VM-20 economic scenario generator for separate account returns, but with parameters recalibrated based on data from 1926 to 2016 (Slide 22)
We recommend keeping the equity calibration criteria as it currently applies to AG43 and C3P2. The material supporting this proposal indicates the more severe scenarios are designed to promote hedging by producing hedging benefits at lower CTE levels. This is not a desirable objective; equity scenarios should be objective, fundamentally sound (e.g., based on relevant and appropriate data), and consistent across products. As noted in the comments above, we believe reserves and RBC should reflect both the costs and benefits of risk mitigation based on the design of the mitigation strategy. This will sometimes result in net costs and sometimes result in net benefits, depending on the severity of the stress scenario and the nature of the strategy.

One comment made during a recent VAIWG open conference call implies that this recommendation is intended, in part, to address a disincentive for weakly capitalized companies to hedge, and that the recommended equity calibration criteria is designed to make the tail scenario more closely approximate risk neutral equity returns. We think this comment deserves more discussion, since it points to a key rationale for this recommendation. From the discussion on the call, it appears that this disincentive is not based on observation, but rather, it is a hypothesis based on testing. Even if the numbers show that hedging produces higher results for weakly capitalized companies, it is not clear that this would, in fact, create a disincentive—why would a company that has been hedging stop doing so and risk insolvency when it becomes weakly capitalized? As noted in comments above, even if there is a disincentive to hedge (or stop hedging), it is not clear that the disincentive will continue to be in place once other modifications have been made to address issues involving hedging, such as updating hedge accounting and removing the Working Reserve. We do not support what appears to be an attempt to introduce a risk-neutral-like valuation, especially if it is based on what we think is a hypothesis.

We do not agree that data predating the modern regulatory framework are relevant, and believe the existing equity calibration criteria are representative of, and more conservative than, the historical data available since the advent of modern securities and banking regulations. The analysis performed by the Academy WG in 2013 supports keeping the equity calibration criteria at the current levels.

We also disagree with the stated rationale to directly promote hedging in this manner. A statutory framework should appropriately reflect the economics of hedging or any other risk mitigation strategy, so decisions aren't driven by noneconomic accounting anomalies. Risk management decisions should not be manipulated to promote one particular strategy (e.g., full capital markets hedging) over others. Other recommendations in this proposal already address artificial disincentives to hedge (e.g., removal of Working Reserve, hedge accounting), and those should allow better recognition of hedging in statutory reserves and RBC, and should help reduce noneconomic volatility.

The Academy WG recommendation for the current equity calibration criteria was extensive, documented and vetted over several years. We don't see the same level of discussion and documentation for this proposal. For example:

- The proposal does not adequately discuss why the recommended scenarios are more appropriate than the calibration criteria.
- The proposal does not adequately discuss why the earlier timeframe, particularly the inclusion of pre-1934 data, which apparently drives a great deal of the change in equity calibration criteria, is more appropriate.
- It is not clear how the total return data from 1926 to 2016 was used to determine the cumulative return data in slide 22.
- It is not clear why the minimum and maximum volatility parameters were removed. This change deserves justification, since it does not appear that there has ever been, for example, an extended period of zero or near zero equity volatility.
- The recalibration using 1926-2016 data applies only to US Diversified Equity. It is highlighted by higher volatility and reduced mean reversion strength, and the minimum and maximum volatility parameters were removed. The parameters for the International Diversified Equity, Intermediate Risk Equity, and Aggressive/Exotic Equity funds were also adjusted. However, rather than basing the recalibration on empirical data, it appears the volatility and mean reversion strength parameters for these funds were simply adjusted by the same proportion as US Diversified Equity. This was not included in any of the material and was not discussed at the 12/1/17 NAIC meeting. Better support for the rationale for this approach is needed, along with details about how less simplistic adjustments would impact the results of the quantitative impact studies.
- There is no discussion or documentation demonstrating that the mandated 8.75% arithmetic mean return[4] and the resulting material reduction in geometric mean return is appropriate given the expanded period used for the data, including why an arithmetic mean is deemed to be appropriate, since an arithmetic mean is not a meaningful parameter for volatile returns.

Furthermore, we don't understand how any changes to the equity calibration criteria can be proposed without disclosure of the results of the testing that was done to support the proposal. Before further consideration of this proposal is undertaken, the results should be shared publicly, and all interested parties should be given the opportunity to review and comment on whether the results of the testing supports the proposal.

Recommendation #3—Allow companies to use proprietary economic scenario generators if—and only if—they do not reduce Total Asset Requirement (Slide 23)

The use of proprietary economic scenario generators should be judged on the merits of the generator, rather than on whether the generator produces higher or lower results. We note that use of any given proprietary generator could result in higher TAR some of the time, and lower TAR at other times. Is the intent to alternate between the proprietary generator and prescribed scenarios? If so, this appears inconsistent with one of the goals to reduce noneconomic volatility, and consideration should be given as to how this will impact the company's risk management.

This proposal will require a company using a proprietary generator to rerun AG43 and C3P2 using the prescribed assumptions. The additional work and the potential for higher results on an

[4] Section A5.3) of the redline version of proposed AG43 requires a "prescribed arithmetic mean annual total return of 8.75%."

arbitrary basis could result in a disincentive to use a proprietary generator, even when that approach makes more sense for that company.

Companies may wish to use proprietary generators to develop risk-neutral scenarios that are more consistent with their own internal risk management, and this should be allowed. The proposed prescribed generator may not be optimal for this.

Proprietary scenario generators that satisfy the calibration criteria should still be allowed. The current equity calibration criteria and proposed interest rate calibration criteria establish minimum requirements and promote consistency. If there are further concerns with consistency then additional criteria could be considered. The proposed changes aren't necessary to meet VAIWG's objectives—the current calibration criteria are more in line with the stated objectives of promoting review, enabling challenge of the generator, and allowing companies to use the generators they use for internal risk management.

If there is a need for further disclosure, AG43 could be modified to require additional disclosures to help regulators understand the proprietary generator and how it compares to the prescribed VM-20 generator. Such required disclosures would not necessarily be needed annually if the generator did not materially change.

Principle 1 in Section 1 of AG43 notes that the "objective of the approach used to determine the Conditional Tail Expectation Amount is to quantify the amount of statutory reserves needed by the company to be able to meet contractual obligations in light of the risks to which the company is exposed." Putting unreasonable constraints around the use of proprietary economic scenario generators may result in the actuary being hindered from attempting to model those risks.

AG43 (as well as VM-20) allows for the use of simplifications, approximations and modeling efficiency techniques if it can be demonstrated that the use of such techniques does not materially understate the reserve. AG43 (as well as VM-20) also provides guidance relative to the number of scenarios used in the calculations. The issues involving the number of scenarios from the prescribed generator, and the potential use of a proprietary generator, are similar, and the same guidance can be applied to both situations.

<u>Recommendation #4—Introduce principles to govern implied volatility scenario generation, with a "safe harbor" approach provided (Slide 24)</u>
This proposal needs to be clarified for us to better understand what is being proposed. For example:

- Is this proposal only required for companies projecting future option purchases? If not, in what other ways would this apply?
- It is not clear how this proposal would interact with the proposal that "requires" equity scenarios.
- The redline version of proposed AG43 doesn't include the safe harbor described in the recommendation document.

It makes sense to allow companies to use their own model with disclosure and high-level principles.

In addition, the proposal mandating that implied volatility may not exceed realized volatility is not a realistic assumption. Requiring this will diminish the ability of companies to use the resulting models in their risk management efforts, and could contradict the VAIWG goals of minimizing noneconomic volatility and promoting sound risk management. The results of the modeling will be inconsistent with actual results. It may also constrain the development of modeling enhancements.

Recommendation #5—Remove the Working Reserve when calculating scenario GPVAD (Slide 25)
We support removing the Working Reserve, as we discussed in prior letters.

Recommendation #6—Discount deficiencies at the Net Asset Earned Rate on Additional Assets (Slide 26)
This proposal has two components: a requirement for the starting asset amount (SAA) and a requirement for the discount rate. For both of these components, we favor approaches that are consistent with how the models are set up and run. This should be supported by high-level principles and disclosure requirements. Using prescribed methods can lead to noneconomic results or decisions to take advantage of the prescription to the extent permitted by the rules. While we can see that more clarification is needed for both of these components, the diversity in practice created by the current language may be warranted.

Regarding the requirement for the SAA, we agree with allowing companies the option to set starting assets at a given level, such as cash surrender value (CSV) or the prior quarter's reserves. The level of the starting assets should be clarified. For example, noting that the original intent of the SAA requirements in AG43 was to use the prior quarter's reserve amount, the level of starting assets could be modified to be the total CSV plus the excess of the prior quarter's reserve over the total CSV.

We also agree with allowing an iterative process as an option. This would permit companies that are willing to develop a more complex process to improve the accuracy of their model. The redline version of the proposed AG43 itself does not specifically state that an iterative process is allowed, so the language should be modified to clarify this.

Regarding the discount rate proposal, the approach used to determine the discount rate should be based on how assets are chosen for the SAA. For example, if one is determining the SAA by taking a percentage of the assets in the general account supporting VAs, then using a portfolio rate would make sense, since the "additional assets" would be chosen by increasing that percentage (adjustments may be needed to the extent the additional asset would increase the percentage above 100%). If one is choosing specific assets, then using the rate consistent with available assets would make sense.

While the wording in the redline version of proposed AG43 (i.e., the "available asset" provision) may be interpreted to support the approach to base the discount rate on how the assets in the SAA are chosen, clarification would be helpful.

Whatever language is used, it is important that the actuary include an explanation and justification for the approach taken in the disclosures.

We also note that the formula used to determine the Net Asset Earned Rate in section A1.2) of the redline version of proposed AG43 requires the Scenario Greatest Present Value and the Starting Asset Amount. The determination of both of these amounts may require the Net Asset Earned Rate. This appears to be a circular reference, and we would suggest providing more guidance for this calculation.

Recommendation #7—Follow VM-20 guidance on general account asset projections, with additional constraint on borrowing cost (Slide 27)

While we agree that using spread and default assumptions that are consistent with VM-20 may be a reasonable approach, the proposal increases the level of the default cost assumptions. Currently, AG43 requires expected default costs to be used, and this proposal would increase this to a CTE 70 level. Before making this change in AG43, the provisions for default costs, including those in reserves, RBC, and the Asset Valuation Reserve (AVR), should be analyzed to ensure that the total provision appropriately reflects this risk.

In addition, we do not agree that the floor on the CTE Amount (i.e., using a reinvestment portfolio of 50/50 AA/A public, non-callable corporate bonds) is reasonable. If the spreads and default cost assumptions are reasonable, a floor (and the additional work to show compliance) is not needed.

The proposed reinvestment strategy restriction contradicts the rationale to "promote accurate reflection of ALM and yield characteristics." If comparability is the concern, the reinvestment strategy restrictions would be more appropriate as a disclosure. Perhaps this disclosure could be done less frequently than annually.

Recommendation #8—Permit immediate liquidation of currently held hedges and nonreflection of mark-to-market hedge gains and losses (Slide 28)

Slide 28 indicates that immediate liquidation of currently held hedges is being proposed only for the CTE Amount (adjusted) calculation. If this is the intent, then we agree with this recommendation. However, the first paragraph of Appendix 7 in the redline version of proposed AG43 (PDF page 78)[5] is worded in a way that would permit immediate liquidation of currently held hedges in the CTE Amount (best efforts) calculation. Permitting immediate liquidation of currently held hedges in the CTE Amount (best efforts) calculation is inconsistent with properly modeling the execution of the hedging strategy, which is the goal of the CTE Amount (best efforts).

[5] The added language states: "At the option of the actuary, the full portfolio of these hedge instruments may be substituted by cash or other general account assets in an amount equal to their aggregate market value in the starting assets; however, the actuary may not conduct such substitution for individual hedge instruments."

The language in Appendix 7 concerning the recommendation on permitting liquidation of currently-held hedges needs to be clarified.

The recommendation regarding nonreflection of mark-to-market hedge gains and losses has merit. However, it is not clear where that recommendation is reflected in the redline AG43 proposal.

In addition to these comments, we reiterate our comments from past letters (Oct. 16, 2015; Nov. 14, 2016; and Feb. 3, 2017) regarding the use of the Clearly Defined Hedging Strategy (CDHS) criteria. In those letters we suggested eliminating the use of CDHS as a condition to including hedges in the stochastic calculations. We recommended replacing CDHS with a provision that requires hedging strategies to be modeled, supported by a combination of actuarial judgment, disclosure, margins, guidance, and company governance that provides checks and balances. This would also remove the need to determine the "E" factor and to calculate a CTE (adjusted).

If the CDHS criteria are retained, we recommend that they be modified. The original intent of the CDHS criteria was to prevent companies from incorporating hedging strategies, which were not actually being used by the company or for which the company was not committed to apply, into the CTE Amount calculation—especially if that hedging strategy reduced results. Our observation is that the current criteria are structured in a way that makes it too easy for companies that have robust hedging strategies, and the commitment of senior management to execute those strategies, to "opt out" of reflecting that strategy in the CTE Amount calculation by failing to meet one or more of the criteria (in particular in instances in which including the strategy increases the reserve or RBC). A company using such a strategy should reflect that strategy in the CTE Amount calculation, and the requirements should be structured to ensure this happens.

Recommendation #9—Lower minimum allowable CDHS "error factor," but require back-testing to support chosen "error factor" (Slide 29)
To the extent the CDHS criteria are retained, we agree with lowering the minimum allowable "E" factor, and with the update to the CTE Amount (reported) formula in Appendix 7 of the redline version of proposed AG43. The updated formula addresses the suggestion in our Nov. 14, 2016; and Feb. 3, 2017, letters to provide more guidance on how to treat "E" when CTE (best efforts) exceeds CTE (adjusted).

While we agree with supporting the treatment of hedging in the CTE Amount calculation with back-testing, we need to more carefully review the requirements in Recommendations #21 and 22 (which have not been tested to our knowledge) to better understand and interpret the calculations, regulatory approval requirements, and E-factor restrictions and to review them for practicality.

The discussion of back-testing in the redline version of proposed AG43 mentions three different approaches: explicit method, implicit method, and cost of reinsurance method. We have two comments regarding these approaches. First, the latter two approaches are categorized as methods where the company doesn't directly model hedge cash flows. It is not clear whether the requirements of AG43 allow these approaches. As drafted, the back-testing proposal may

inadvertently legitimize these approaches. If these various approaches are all appropriate, or if they are considered safe harbor approaches, then we recommend adding language to Appendix 7 that specifically states this.

Second, the specificity of the back-testing requirements seems to vary based on the modeling method used. Back-testing principles for explicit and all potential implicit methods should be consistent and not disadvantage or discourage companies from employing more direct modeling approaches.

Recommendation #10—Differentiate treatment of non-guaranteed revenue sharing income by affiliated funds vs. non-affiliated funds (Slide 30)

A more comprehensive review of the treatment of revenue sharing is needed, rather than an add-on to the current requirements. We favor a principle-based approach. When the current approach was developed, the Academy WG developed criteria for including revenue sharing in the CTE Amount calculation. Subsequent to the initial proposal, the terms guaranteed and non-guaranteed revenue sharing were added, but no definitions or guidance as to what that entailed were included. The proposal to differentiate between affiliated and non-affiliated revenue sharing further clouds the treatment of revenue sharing. We think a better approach would be to start with the current criteria in Section A1.1)E)2) of AG43, and developing criteria that reflects attributes of guaranteed and affiliated/non-affiliated revenue sharing that are desirable to increase the amount of revenue sharing that is reflected.

Consideration should be given to using revenue sharing assumptions that follow the existing C3P2 requirements, which is more principle-based. Applying the AG43 restrictions to affiliated funds results in levels of conservatism that are inconsistent with other assumptions. In addition, it was reported at the Dec. 1 meeting that the AG43 haircuts are not supported by industry experience.

We suggest that VAIWG provide interested parties with a written summary providing more details about the discussions regarding the "moral hazard" associated with affiliated funds (noted on the Feb. 7 VAIWG conference call), since these appear to have informed the recommendation and were not public discussions. We also suggest sharing more information on the American Council of Life Insurers (ACLI) study that was mentioned on that call, since it may contain information pertinent to this issue.

Recommendation #11—Align AG43 Standard Scenario calculations with CTE ("adjusted") (Slide 33)

While we don't have comments on this specific recommendation, we do have the following comments on Standard Scenario (SS) in general.

As noted earlier, we do not believe the SS reserve is needed any longer as a reserve floor. However, if consideration is being given to using the proposed Standard Projection (SP) as a reserve floor, the VAIWG should work with interested parties to update the SP reserve to better align with companies' VA business before the SP is implemented. The results of the quantitative impact study and other sources (such as published experience studies) could potentially be used as guidance, but we suggest that the VAIWG commit to capturing how the SP reserve compares

to the CTE Amount going forward so that such a comparison can be used to further adjust the assumptions in the SP. This way, the SP can be calibrated to the experience of all VA writers. Our rationale for this recommendation is discussed further in the other recommendations pertaining to the SP.

The proposed SP structure could be used as an approach to provide feedback on the reasonableness of assumptions used in the CTE Amount calculation, but we believe this should be used only as a disclosure item (if used at all), and with consideration of our other comments below on the SP.

Recommendation #12—Remove the C3 Phase II Standard Scenario (Slide 34)
We agree with removing the C3P2 Standard Scenario, as we discussed in prior letters.
See our comments on recommendation #18 regarding the proposal to keep the SP as a floor for TAR.

Recommendation #13—Project Standard Scenario on an aggregated basis, but with disclosure of aggregation benefit observed (Slide 35)
Aggregation for the SS makes sense, and disclosure of the impact of aggregation seems reasonable. However, the proposed disclosure seems operationally complex (e.g., year-by-year, seriatim adjustment for three different adjustments, applied to both deterministic scenarios used to calculate the SS amount). We do not know whether the proposed disclosures have been tested, since we have not seen results of any testing. Testing of this proposal and release of testing results are needed.

Recommendation #14—Refresh prescribed policyholder behavior assumptions to align with industry experience (Slide 36)
One reason we recommend that the proposed SP be used only for disclosure purposes is because the proposed policyholder behavior assumptions may not necessarily align with any given company's experience. We believe that the proposal will result in a false sense of accuracy; that is, it is possible that the SP reserve will prevail for companies that have more favorable (and credible) experience and that it will be understated for companies that have less favorable experience.

Until the study is released, we have no way of confirming the accuracy of the experience study supporting the proposal. However, we know that policyholder behavior varies across a wide range of factors, such as surrender charge period, duration, attained age, tax status, policy size, type of guarantees and their "moneyness" on various bases, historical behavioral patterns, distribution channel and commission/trail patterns, open vs. closed block, and others. Moreover, the relative weights for these factors are not stable through time. A certain amount of volatility in experience results is natural, and the experience may also change over time. Because of this, any one company may have reasonable (and even credible) experience that varies significantly from what would be considered industry average.

Since there is no practical way to address this by prescribing assumptions, we believe it is best to avoid directly using industry averages as the assumptions to determine the reserve. The best method is to use the approach in the CTE Amount (and both the Stochastic Reserve and

Deterministic Reserve in VM-20)—a principle-based framework for policyholder behavior assumptions that is appropriately customized and calibrated to each company's products, and supported by credibility weighting, disclosure, and sensitivity testing. This will mitigate the risk of unduly punishing/rewarding those who are above/below averages, and instead let each company's assumptions be set and updated on the quantitative merits that fit their situation.
If the SP reserve is going to be used as a floor reserve, a more comprehensive approach will be needed for the development of the proposed prescribed policyholder behavior assumptions, particularly in relation to the appropriate use of industry data, the time periods for the data used in the refresh, and credibility procedures (see generally ASOP No. 25, *Credibility Procedures*). At a fundamental level, these are not new issues to our profession across product lines, but AG43 would benefit from having a more robust process for determining policyholder behavior assumptions.

The proposed SP would benefit from a more robust, published industry-wide experience study. Data can be collected using the parameters of VM-50. This could be supplemented by experience studies that already exist. Not only would this benefit the use of the proposed SP as a disclosure item, but it would also be useful in the development of company assumptions for the CTE Amount calculation (e.g., as part of the credibility weighting of assumptions). In addition, it will benefit the SP reserve if the VAIWG decides to use it as a floor.

Other possible sources of policyholder behavior data, including Society of Actuaries (SOA) studies and studies from other organizations, along with data from the quantitative impact study should be used to obtain a broader base of experience and industry expertise in analyzing the experience. Some of these other studies appear to be performed with more rigor than the results produced by the quantitative impact study.

If prescribed policyholder behavior is included in any manner, we will need to better understand whether any implicit and explicit conservatism is included in the proposed assumptions.

In addition, we have identified technical issues with the proposed policyholder behavior assumptions, including the Withdrawal Delay Cohort method. We have more specific comments and plan to share those with the VAIWG in a subsequent comment letter.

<u>Recommendation #15—Use Standard Scenario construct to govern model choices and actuarial assumptions only, via a reserve "add-on" calculation (Slide 37)</u>
Slide 37 overstates the purposes of the current SS. The original intent was to provide a simplified calculation that applies the principles of AG33 and 34, uses simplified assumptions, and helps ensure consistency with the SVL and the federal income tax code. It was also put in place to allow reviewers to better understand the reserve calculation—people were concerned about the complexity of the CTE approach and wanted a simplified calculation that allowed comparison. The resulting Standard Scenario Amount was meant to be close to the stochastic CTE Amount, but the intent was for the stochastic CTE Amount to be the "real" reserve and the one that prevailed in most situations. The other purposes identified in slide 37—governing model choices, assumptions and CDHS reflection, and prescribing a market path—were not part of the original intent of the SS.

We disagree with the objective to govern model choices and actuarial assumptions in this manner.

We disagree with the formula that results in adding on to the Stochastic Reserve to get to the reported reserve. It has been stated by both regulatory actuaries and interested parties, including Academy WGs, that the Stochastic Reserve should represent "the real reserve" (i.e., the reserve that prevailed most of the time). We understand that some desire to have a Standard Scenario floor, but this recommendation proposes to add amounts to the CTE Amount based on very general and non-company-specific elements from the SP calculation. In addition, the recommendation will result in a more complex SS, which conflicts with the stated goal of minimizing implementation complexity.

As noted in our comments above, this recommendation will result in a false sense of accuracy. We are concerned that some companies will be unduly impacted merely because their company-specific credible experience proves favorable versus the "industry averages" used to construct the Prescribed Assumptions (and not, for example, due to overly aggressive assumption setting). The Buffer of CTE 70-65 may not be sufficient, especially in situations where the "CTE Curve" is flat.

If the recommended calculation is needed for regulatory oversight, we recommend using it as a disclosure item without requiring the Additional Reserve to be held. This would provide transparency that that can be used for oversight, and it will avoid a fruitless search for a prescriptive universal solution. Using this calculation as a disclosure should be combined with other required disclosures (including those that we have previously recommended) to address concerns with assumptions used in the stochastic calculation.

Recommendation #16—Calculate Standard Scenario Amount based on company-specific market paths (selected from a panel of standardized market paths) (Slide 38)
Unlike the approach in recommendation #17 (see our comments below), the approach in recommendation #16 may not produce the desired comparability. Appropriate margins are not necessarily captured in a single scenario; therefore, it may not be valid to equate two individual scenarios to a CTE 70 result. Depending upon how any given company's assumptions are developed, there could be substantial margins in tail scenarios. Because of this, the margins that are incorporated into a CTE 70 reserve may not necessarily appear in the two "matching" individual scenarios. This could result in a company being required to hold a higher reserve (and to hold a higher RBC) even though the CTE 70 result contains appropriate prudence.

According to section A3.2)E) in the redline version of proposed AG43, additional equity scenarios must be run in order to find two scenarios that bound the CTE 70 results. The additional equity scenario that assumes continuing the 5 percent increment pattern and additional interest scenarios must be run, continuing the 25 percent increment pattern. The current proposal is silent on whether additional equity stress scenarios or additional interest stress scenarios should be applied first.

Section A3.2)E)3) in the redline version of proposed AG43 states: "The following market indicators and fund returns are constructed in a consistent manner across all three prescribed

scenarios:" The word "three" should be removed, since there are approximately 40 scenarios in the proposal.

Notwithstanding our other comments on this recommendation, the proposed calibration should be to CTE (adjusted) before application of the CSV floor. The current proposal could lead to odd calibrations for scenarios hitting the CSV floor.

Feedback is also needed to determine whether 40+ paths using two sets of assumptions (prescribed and company assumptions) for each path may be more operationally complex than necessary.

It is not clear whether interest rates and bond fund returns in the prescribed scenarios are fully consistent. If this is meant to be a simplification, we recommend ensuring that this does not result in an inconsistency that materially impacts results for some companies.

Recommendation #17—Allow the Standard Scenario Amount to be calculated as a CTE Amount with prescribed assumptions (Slide 39)
Notwithstanding our prior comments on the appropriateness of the proposed SS, this recommendation is a more direct and theoretically accurate approach of estimating the impact of differences between company and prescribed assumptions. In our opinion, performing this more "exact" calculation shouldn't require regulatory approval, and a company shouldn't be required to perform both this calculation and the calculations in recommendation #16.

It is not clear from the recommendation how often regulatory approval would be required (annually?), but using this approach in lieu of recommendation #16 will reduce the regulatory burden associated with seeking approval.

Recommendation #18—Calculate C3 as the difference between reserves and a CTE 95 on the same distribution of Scenario GPVADs (Slide 42)
The comment in slide 9 that the RBC ratio should provide greater "signal value" is inconsistent with the NAIC's intent for RBC, i.e., RBC is a tool to identify weakly capitalized companies. Using the RBC ratio as a signal will result in making C3P2 a different measure than the rest of the RBC formula. This recommendation is in conflict with the spirit of the RBC regulations. The comment implies that a company that has an RBC ratio (i.e., total adjusted capital divided by RBC) of, say, 310 percent, is stronger than a company with an RBC ratio of 300 percent. This is not necessarily the case given the multitude of factors impacting both company strength and the RBC calculation itself.

While it makes sense to have consistency between C3P2 and AG43, this proposal is not the best way to address concerns about voluntary reserves. The RBC regulations are designed with the goal of having companies hold appropriate levels of statutory surplus in excess of various action-level RBC amounts. Voluntary reserves would not materially change whether a company meets these action levels. If there are concerns with voluntary reserves, we believe the best way to address them would be to simply exclude them from the "TAR – Reserve" calculation, or to only allow voluntary reserves to be reflected with prior regulatory approval.

Consistent with prior comments in this letter, it isn't clear what the basis is for the conclusion in slide 42 that a higher CTE measure for RBC will promote hedging.

We believe that if the SP reserve is used as a floor reserve, it should be part of the "TAR – Reserve" calculation. Given the concerns with the SP reserve producing noneconomic reserves, using the SP reserve in this calculation will decrease the likelihood of noneconomic results. There is no basis for treating some reserves differently than others when calculating RBC.

Regarding the proposed revisions to section A1.6) in the redline version of proposed AG43, it is not appropriate to include the C3P2 requirements within AG43. This could create conflicts, considering these two requirements (AG43 and C3P2) support different model laws and regulations. We recommend removing sections A1.6) B) and C) from the proposal, and modifying A1.6)A) to state only that there is an option in C3P2 regarding the treatment of federal income tax. It should be clear that AG43 does not supersede the RBC instructions.

Regarding the redline version of proposed C3P2, the disclosures in steps G and H should be coordinated more closely with AG43 disclosures if the proposal to use the same calculation for AG43 and C3P2 is accepted.

Recommendation #19—Permit smoothing to be conducted on the C3 charge, but not on the Total Asset Requirement (Slide 43)

Smoothing the C3 charge, rather than the TAR, seems reasonable in light of some of the improvements to the framework. While it is prudent to retain the option to smooth, it is not clear to us how thoroughly this recommendation was tested, and whether there is a need for additional testing. We suggest providing more information regarding the testing performed to interested parties. Guidance on the starting point for smoothing is also needed (e.g., is an adjustment needed for past smoothing decisions).

Recommendation #20-24—Disclosures

While there isn't necessarily enough detail to fully understand the mechanics of the recommended disclosures, and no previous testing, our first impression is that the recommended disclosures appear to be computationally intensive. Therefore, it would make more sense to see where the overall proposals land, what the remaining concerns are, and tailor the disclosures to address those concerns without creating more work than necessary.

Other comments:

- We suggest providing information regarding how widespread these issues are and whether the issues that these recommended disclosures would address have been documented.
- Regarding the recommended disclosure of CTE (best efforts) relative to the unhedged CTE and full contract fair value (recommendation #23), more specific guidance is needed to define these terms, as there are several ways to potentially apply this. For example, is the intent for the full contract fair value to be the approach defined by FAS 133? How would this be addressed for companies that do not report on US GAAP?

- The purpose and effectiveness of the proposed disclosure in recommendation #23 is also unclear. If the objective is for hedging to reduce TAR, why would having a hedged TAR being less than an unhedged TAR (and full contract fair value) indicate an issue with hedge modeling? In addition, fair value of the full VA contract is not a relevant statutory liability valuation basis. Depending upon the purpose of this disclosure, it may make more sense to only require disclosure of the impact of hedging.
- We suggest providing more details regarding the proposed disclosure of a "cumulative decrement" analysis under companies' own and prescribed Standard Scenario assumptions (recommendation #24). The proposed calculation may not work as intended. For example, unless the Account Value (AV) used is the AV of the valuation date, and not the projected AV (as specified), the proposal won't capture AV depletion (since by definition, AV = 0 at the point of depletion).
- Slide 50, which discusses recommended disclosure #24, correctly mentions that current AG43 requires disclosure of and rationale for assumptions. While the disclosure appears to be an approach to validate assumptions, slide #50 understates the current requirements in AG43. During the development of AG43, concerns were raised about the ability of regulators to review the appropriateness of assumptions. The Academy WG worked with LATF and other interested parties to implement an approach to develop requirements in Appendix 9 to capture "actual to modeled" information on select assumptions. Appendix 9 was drafted to capture this for lapses as a "first step." The intent at the time was to expand this to other assumptions over time. Unfortunately, it doesn't appear that this approach is being recommended in the proposal. The proposed disclosure #24 appears to attempt to capture something similar. However, it appears to be more of a comparison of industry average to modeled assumptions, rather than attempting to validate modeled assumptions to company experience. More consideration should be given to capturing how modeled assumptions compare to company experience, which we believe is a more useful metric for evaluating the reasonableness of assumptions than comparing assumptions to industry data.

Recommendation #25—Increase admissibility limit for designated VA hedges (Slide 53)
We generally support this proposal, but suggest providing more information regarding what is meant by "designated VA hedge assets." We suggest expanding the scope of this proposal if the intent is to limit increased admissibility only to interest rate hedges. The proposal should allow increased admissibility for all VA hedges that are part of the derivative use plan for the VA business. For example, this should apply to VA hedges on the balance sheet as of the valuation date that are not part of an ongoing CDHS.

Recommendation #26—Increase admissibility limit for DTAs associated with VA portfolios (Slide 54)
While we don't object to admitting more VA-related DTA, we suggest providing more information regarding the impact on and interaction with RBC. If this was tested as part of the quantitative impact studies, we suggest that the results be communicated. If it wasn't tested, then more analysis should be conducted to better understand how RBC under this proposal will interact with the impact of RBC under other recommendations in the proposal.

Recommendation #27—Endorse hedge accounting for derivatives originated as part of a VA hedge program (Slide 55)

Assuming that the proposal from the NAIC Statutory Accounting Principles Working Group (SAPWG) to do this hasn't been updated, we reiterate our comments on this proposal from our Nov. 14, 2016 letter.

1. We recommend expanding the scope of this proposal from apply only to interest rate hedges to applying to all derivatives originated as part of a VA hedge program.
2. We are concerned that the proposed amortization period for unrealized gains/losses may be too short, since it is shorter than the typical liability duration for these products. The proposal in the Special Accounting Treatment for Limited Derivatives issue paper (NAIC SAPWG issue paper) allows a five-year amortization period, with the ability for the company to increase the amortization period up to 10 years with regulatory approval. We suggest allowing an amortization period beyond 10 years with regulatory approval (i.e., we recommend removing the 10-year limitation in the current proposal).
3. The proposal addresses volatility at the statutory surplus level. While this may result in more stability for surplus, statutory income may still be volatile because, under the proposal, unrealized gains and losses are recorded through surplus, but the change in reserves continue to be recorded through income. We think consideration should be given to pursuing an approach where the company records a portion of the change in AG43 reserves through surplus, so that it is matched with the unrealized gains and losses. This approach will reduce the incentive for companies to create captive reinsurers to manage statutory income volatility. We also think additional testing of this proposal to ensure the impact on statutory and tax reporting is appropriate would be warranted.

Recommendation #28—Allocate aggregate reserve to seriatim level based on Present Value of Accumulated Product Cash Flows (Slide 56)

This proposal needs to be better described, including the mechanics of the allocation and the overall impact and the reasonability of results.

Other Comments

The proposed requirement to disclose reserves under both the old and the new basis in Section V of the redline version of proposed AG43 should apply only if the company is using a grade-in. Once a company is fully using the new basis, there should not be a requirement to calculate reserves on the old basis in light of the operational complexity to do so.

In addition, this proposal implies that companies must use a three year grade-in. The grade-in should be optional, consistent with how changes in actuarial guidelines have historically been treated. Companies should not be required to maintain two separate parallel systems for three years, unless they choose to use the grade-in.

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We look forward to discussing these comments further and working with the VAIWG on developing proposed modifications to AG43 and C3P2. If you have any questions, please contact Ian Trepanier, life policy analyst at the American Academy of Actuaries (Trepanier@actuary.org).

Sincerely,

Tom Campbell, MAAA, FSA, CERA
Chair, AG43/C3 Phase II Work Group
American Academy of Actuaries