VM-20_080922_003

Amendment Proposal Form*

(NAIC Research Division)

1. Identify yourself, your affiliation and a very brief description (title) of the issue.

   Academy Life Reserve Work Group, David Neve, Chair – Prescribed default assumptions on below investment grade assets.

2. Identify the document, including the date if the document is "released for comment," and the location in the document where the amendment is proposed:

   VM-20: Requirements for Principles-based Reserves for Life Products dated 9/22/08 paragraph E.5.2.

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. (Please red-line it from the current version with existing changes already accepted. You may do this through an attachment.)

   Insert the following drafting note at the end of E.5.2 (line 2230)

   Drafting Note: To address the concern that investing in lower quality assets could increase discount rates and thus reduce the minimum reserve, default assumptions (or the approach to determine default assumptions) will be prescribed for starting assets rated below investment grade (for example, assets rated below NAIC 2). The intent is to cap the spread on –starting assets rated below investment grade at a level that does not give "credit" in the discount rate for higher spreads on below investment grade assets. Further research and analysis is needed to:

   - Define what is meant by "investment grade" for this purpose;
   - Define the exact nature of the prescribed default assumptions or the prescribed approach to determine default assumptions for below investment grade assets; and
   - Determine the approach used to identify the specific assets that are subject to this prescribed assumption (for example, when there is no specific quality rating of an asset, or there are conflicting ratings).

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

   Some regulators have expressed a concern with the current approach in VM-20 that defines the discount rate to be equal to the path of net asset earned rates, since this may create an incentive for companies to invest in lower quality assets to increase discount rate in order to reduce the minimum reserve. The LRWG believes this concern can be adequately addressed by capping the default assumption on below investment grade assets at a level that gives no "credit" in the discount rate for higher spreads above treasuries on below investment grade assets.

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NAIC Staff Comments:

Dates: Received	Reviewed by Staff	Distributed	Considered
4/30/08	JLE		Tabled – 5/06/08
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Amendment Proposal Form*

(NAIC Research Division)

1. Identify yourself, your affiliation and a very brief description (title) of the issue.

   Fred Andersen - New York State Insurance Department – Discount Rate

2. Identify the document, including the date if the document is "released for comment," and the location in the document where the amendment is proposed:

   VM-20: Requirements for Principles-Based Reserves for Life Products dated 9/22/08 paragraph Section C.8.3. .

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.)

   3. The path of discount rates for each model segment shall be equal to the path of net asset earned rates <u>with the following exceptions:</u>

      <u>a. For the Deterministic Reserve the Net Asset Earned Rates used in the projections shall be no greater than the applicable corresponding historical U.S. Treasury yield rates most closely coinciding with the dates of purchase and maturity structure of supporting assets, plus 50 basis points.</u>

      <u>b. For the Stochastic Reserve the Net Asset Earned Rates used in the projections shall, on average over all scenarios, be no greater than the applicable corresponding historical U.S. Treasury yield rates most closely coinciding with the dates of purchase and maturity structure of supporting assets, plus 75 basis points.</u>

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

   Using a discount rate higher than the risk-free rate would imply that the policyholders should not see their insurance benefits as being guaranteed and should instead view them as being exposed to the default risk of the insurer's assets. Some net spread for illiquidity may be appropriate, in that a company would not necessarily need to hold liquid assets to back insurance liabilities.

   There may be cases where an entity can consistently "beat the market" by investing in assets that have spreads in excess of expected defaults. However, we believe this instance to be rare and not sustainable and thus we do not believe that the door should be opened for the possibility of a company holding lower reserves due to the setting of inappropriate default assumptions. This is a level playing field issue as well as a reserve adequacy issue in that taking on additional risk in assets should not result in lower reserves.

   We believe the value of a liability should be independent of the assets supporting it, consistent with the international approach.

   We support insurers being able to set their own assumptions in areas where they have control over the factor (e.g., mortality with company-specific underwriting). However, there should be more structure applied to the setting of assumptions where experience is limited or an insurer is exposed to the same risks as other insurers.

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<u>NAIC Staff Comments</u>:

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Amendment Proposal Form*

(NAIC Research Division)

1. Identify yourself, your affiliation and a very brief description (title) of the issue.

   Arnold A. Dicke, Principal, AADicke Consulting; Issue: Assumptions for stochastic exclusion test

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:

   Requirements for Principles-Based Reserves for Life Products -- VM-20, draft of 9/22/08.

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.)

   C.4.2.1.c The experience assumptions used within each scenario shall be ~~prudent estimate~~anticipated experience assumptions. Experience assumptions should be dynamically adjusted as **appropriate** to be consistent with each tested scenario.

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

   The purpose of this test is to distinguish between products that do not have material tail risk with respect to future economic conditions (taking into account the underlying investments, as well as the policy provisions) and those that do have such risk. The test is in the form of a ratio of the maximum excess of the reserves calculated for a prescribed set of scenarios over the reserve on a specified scenario divided by the present value of benefits and costs. Products scoring below a threshold level on the test would not be required to calculate stochastic reserves.

   Initial testing showed that the stochastic exclusion test could be constructed so that the ratio calculated under the test was significantly higher for products such as universal life with secondary guarantees than for presumably less risky products, such as participating whole life. The test was originally defined using anticipated experience assumptions for two reasons, one practical and one theoretical.

   From a practical point of view, using anticipated experience would mean that margins would not have to be developed for products that passed the test, except for the scenario used in the deterministic reserve. In particular, margins for policyholder behavior assumptions (possibly dynamic) would not be needed for 15 of the scenarios. Setting such margins could be time-consuming. The test could be carried out using the models already needed for asset-adequacy testing, which is typically based on anticipated experience assumptions. While not a consideration for VM-20, it might be noted that, since the same test is to be used for risk-based capital, the use of anticipated experience would obviate the need to develop margins for many low-risk pre-PBR products.

   From a theoretical point of view, the use of prudent estimate assumptions in the stochastic exclusion test opens the test up to manipulation through choice of the form of the margins. Margins that add to the benefits or costs in the denominator of the ratio do not necessarily increase the range of scenario present values in the numerator. Therefore, *increasing certain kinds of margins* lowers the ratio and *increases the likelihood of passing the test*. Use of anticipated experience assumptions eliminates sensitivity of the test to the choice of margins.

   In summary, both for practical reasons and to maximize the effectiveness of the test in distinguishing products with material economic tail risk from those without such risk, it is recommended that the test be based on anticipated experience assumptions.

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NAIC Staff Comments:

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VM-20_080922_006

Amendment Proposal Form*

(NAIC Research Division)

1. Identify yourself, your affiliation and a very brief description (title) of the issue.

   John Bruins, ACLI, Revise the need to additional margins when projecting NGE.

2. Identify the document, including the date if the document is "released for comment," and the location in the document where the amendment is proposed:

   VM-20: Requirements for Principles-Based Reserves for Life Products dated 9/22/08 paragraph Section C.9.4.

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.)

   ~~4. Establish a margin for the projected NGE that increases the reported reserve compared to the reported reserve that would result without a margin.~~

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

   The reserve should assume that the actuary is appropriately following professional standards, as well as the instructions in C.9.1, 2, and 3 above, and that a margin for management not following its own strategy is unnecessary. Today, any deviations in actual NGE relative to a company's plan flows through surplus, and we don't see that there is a reason to change this treatment and set up a reserve for such possible changes.

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<u>NAIC Staff Comments</u>:

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Amendment Proposal Form*

(NAIC Research Division)

1. Identify yourself, your affiliation and a very brief description (title) of the issue.

   I am Daniel J. McCarthy, FSA, MAAA. I am a principal and consulting actuary with Milliman, Inc. I have been asked by Teachers Insurance and Annuity Association (TIAA) to express my opinion regarding the proposed treatment of Non-Guaranteed Elements (NGE) in the calculation of Principles-Based Reserves. I am aware that the concern I am addressing is also held by other life insurance companies.

2. Identify the document, including the date if the document is "released for comment," and the location in the document where the amendment is proposed:

   VM-20 Requirements for Principles-Based Reserves for Life Products, exposed for comment 9/22/08, amendment proposed in section C.9 - Treatment of Non-Guaranteed Elements.

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.)

   C.9 Treatment of Non-Guaranteed Elements

   1. Include non-guaranteed elements in the models used to project future cash flows for both the deterministic reserve and the stochastic reserve if such NGE are based on some aspect of experience with respect to the policies or contracts being modeled. ~~Where NGE are based on some aspect of experience, reflect future changes in the level of NGE in the cash flow models based on the experience assumed in each scenario~~. In such cases, reflect future changes in the level of NGE in the cash flow models based on the experience assumed in each scenario. When or to the extent that the NGE are not based on some aspect of experience with respect to the policies or contracts being modeled, do not include such NGE in the models.

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

   The current draft of VM-20 provides the following guidance:

   "Include non-guaranteed elements in the models used to project future cash flows for both the deterministic reserve and the stochastic reserve. Where NGE are based on some aspect of experience, reflect future changes in the level of NGE in the cash flow models based on the experience assumed in each scenario."

   This guidance is reasonable in situations in which wherewithal to pay the NGE arises from future anticipated experience. If, for example, an earned interest rate of 6% is projected, and if it is expected that policyholders will receive an interest credit equal to the earned rate minus 125 basis points, then the logic for including the NGE provision is clear, from two points of view. From a balance sheet point of view, the reserve would otherwise be understated because it would include an element of future income but would not include a related element of future expense. From an income statement point of view, income would otherwise be overstated in the time period in which the reserve is established and understated in all subsequent periods.

   The situation is more complex when a company has credited NGEs from time to time (or even on a fairly regular basis) and the wherewithal to pay future NGE is not reflected in the reserve calculation. Two such situations are as follows:

   1. The company realizes a significant addition to surplus that may be non-recurring in nature and is unrelated to the assets whose performance is being modeled. (A large capital gain is one example of such an event.) The existence of this surplus may influence the company's actions in declaring future NGE. In other words, it is possible that future NGE will, at certain (unknown) times, be larger than would have been the case based on emerging experience alone.

2. The company may realize frequent additions to free surplus, and may use those additions to surplus to declare (or enhance) NGEs with respect to policies or contracts that are not related to the source of the surplus. (The release of accumulated target surplus that has been held with respect to policies or contracts that terminate in the future is one such example).

These situations have in common the fact that there is no future experience-related income to fund the NGEs (or increments to normal experience-related NGEs) that may be paid in the future. In fact, in the second case, the surplus has not even emerged yet. In such situations, providing for incremental NGEs in the calculation of the reserve is conceptually incorrect, because it amounts to recognizing a potential future cost that is unrelated to any current recognition of future income.

Accordingly, I recommend that Section C.9 of VM-20 be amended as set forth in Attachment 1 hereof, to provide that future NGEs that are not supported by future experience-related income should not be included in the reserve calculation.

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NAIC Staff Comments:

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5/12/08	JLE		Tabled 7/1/08
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Amendment Proposal Form*

(NAIC Research Division)

1. Identify yourself, your affiliation and a very brief description (title) of the issue.

   AAA Life Reserves Work Group, David Neve, Chair—Delete Certain References to Net Asset Earned Rates

2. Identify the document, including the date if the document is "released for comment," and the location in the document where the amendment is proposed:

   VM-20 Requirements for Principles-based Reserves for Life Products dated 9/22/08, various paragraphs, see #3

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. (Please red-line it from the current version with existing changes already accepted. You may do this through an attachment.)

   <u>Delete Drafting Note in paragraph C.2.3, lines 282-284</u>

   ~~**Drafting Note:** Use the path of net asset earned rates as appropriate to determine benefits, expenses and revenue that depend on earned rates. For example, earned rates may be needed to determine the level of cash surrender benefits.~~

   <u>Change reference from ~~to~~ "net asset earned rates" to ~~be~~ "discount rates" in C.2.2.b, line 267</u>

   2. Use the following steps to calculate the deterministic reserve:

      a. Determine prudent estimate assumptions as described in C.5.1.

      b. Project cash flows for each policy and calculate the path of ~~net asset earned~~<u>discount</u> rates for each model segment as described in C.6, C.7, C.8 and C.9.

   <u>Delete reference to net asset earned rates in C.3.2.c.ii, line 419</u>

      c. For policies that meet the stochastic modeling requirement:

         i. Determine prudent estimate assumptions as defined in C.5.1;

         ii. Project cash flows and calculate the path of ~~net asset earned rates and~~ discount rates for each model segment for each scenario as described in C.6., C.7., C.8., and C.9;

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

   The amendment deletes or changes unnecessary references to net asset earned rates. The only required use of the net asset earned rates, as specifically defined in C.8, is in calculating the path of discount rates under the conditions described in C.8. Thus, it is sufficient to refer to "discount rates" in the reserve steps. For projection of benefit cash flows that depend on the portfolio investment return, e.g., due to non-guaranteed interest credits, the company might base the dependency on some investment return metric other than these specific periodic net asset earned rates.

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<u>NAIC Staff Comments</u>:

Dates: Received	Reviewed by Staff	Distributed	Considered
5/9/08	JLE		
Notes: Carryover from WM-20_080329_022			

Amendment Proposal Form*

(NAIC Research Division)

1. Identify yourself, your affiliation and a very brief description (title) of the issue.

   AAA Life Reserves Work Group, David Neve, Chair—Discount Rates on Accumulated Deficiencies for Scenario Reserves

2. Identify the document, including the date if the document is "released for comment," and the location in the document where the amendment is proposed:

   VM-20 Requirements for Principles-based Reserves for Life Products dated 9/22/08 paragraph 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.)

C.8 Net Asset Earned Rates and Discount Rates

1. For calculating ~~both~~ the deterministic reserve ~~and the stochastic reserve~~, use cash flow models to determine a path of net asset earned rates for each model segment ~~and for each scenario~~ that reflects the net general account portfolio rate in each projection interval (i.e., monthly, quarterly, annually). Do not include either separate account returns and assets or policy loan interest and assets in the calculation of net asset earned rates. This path of net asset earned rates will depend on, among other things:

   a. The projected net investment earnings from the portfolio of starting assets;

   b. The pattern of projected asset cash flows from the starting assets and subsequent reinvestment assets;

   c. The pattern of net liability cash flows; and

   d. The projected net investment earnings from reinvestment assets.

2. Compute the net asset earned rate for each projection interval in a manner that is consistent with the timing of cash flows and length of the projection interval of the related cash flow model. The net asset earned rate equals the ratio of net investment earnings divided by invested assets. It excludes the impact of separate accounts and policy loans. The following requirements apply to the calculation of this ratio:

   a. Net investment earnings shall include:

      i. Investment income plus capital gains and losses (excluding capital gains and losses that are included in the PIMR), minus appropriate default costs and investment expenses;

      ii. Income from derivative asset programs; and

      iii. Amortization of the PIMR.

   b. Determine invested assets in a manner that is consistent with the timing of cash flows within and the length of the projection interval of the cash flow model.

   c. Adjust invested assets to reflect the negative of the outstanding PIMR liability.

   d. Include the annual statement value of derivative instruments or a reasonable approximation thereof in invested assets.

e. Assure that all items reflected in the ratio are consistent with statutory asset valuation and accrual accounting, including reflection of due, accrued or unearned investment income where appropriate.

Drafting Note: C.1.7~~6.2.4~~ permits the use of simplified approaches to calculate the deterministic reserve and stochastic reserve. This availability for simplification includes ways to determine appropriate net asset earned rates. Small to intermediate size companies, or any size company with smaller blocks of business, have options to create net asset earned rates under simplified approaches if they continue to meet the requirements of C.1.7~~6.2.4~~.

3.~~3.~~ For the deterministic reserve and any other calculations that reference the seriatim reserve methodology in C.2.4, use t~~T~~he path of discount rates for each model segment that is ~~shall be~~ equal to the path of net asset earned rates.

4. For the stochastic reserve and any other calculations that reference the scenario reserve methodology in C.3.6, use the path of discount rates for each model segment within each scenario that is equal to the path of one-year Treasury rates multiplied by 105% for that scenario. For this purpose, the one-year Treasury rates are those in effect in the scenario at the beginning of each projection year.

Drafting Note: Note that the seriatim reserve methodology in C.2.4 is referenced in VM-20 in the context of both the deterministic reserve and the stochastic exclusion test. The scenario reserve methodology in C.3.6 is referenced in VM-20 in the context of both the stochastic reserve and the modified deterministic reserve.

Drafting Note: The use of different discount rate paths for the seriatim and scenario reserves is driven by differences in methodology. The seriatim reserve is based on a present value of all liability cash flows, with the discount rates reflecting the investment returns of the assets backing the liabilities. The scenario reserve is based on a starting estimate of the reserve, and assets that support that estimate, plus the greatest present value of accumulated deficiencies. Here, the discount rates are a standard estimate of the investment returns of only the marginal assets needed to eliminate either a positive or negative deficiency.

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

The primary changes are in C.8.3 and C.8.4. The use of the portfolio net asset earned rates is retained for purposes of the seriatim reserve (see new drafting note for rationale). For the scenario reserves within the stochastic reserve, the recommendation achieves three objectives: 1) addresses a concern expressed by various parties that in the more adverse scenarios within the CTE scenarios, when assets similar to the starting assets may not be available, estimating the cash needed at the valuation date to eliminate the deficiency provides a more suitable solution; 2) simplifies and enhances the auditability of the reserve calculation by assuming common discount rates across all model segments and does not, we believe, give up much precision; 3) provides consistency with the discounting approach for C3 Phase I and the most recent thinking on other capital projects within the Academy.

Finally, the changes in C.8.1 reflect that the net asset earned rates as precisely defined here would no longer be needed for the stochastic reserve since they would not be used as discount rates. They are still needed for the deterministic reserve. The change to the drafting note under C.8.2 fixes a misplaced reference.

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NAIC Staff Comments:

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Amendment Proposal Form*
(NAIC Research Division)

1. Identify yourself, your affiliation and a very brief description (title) of the issue.

   Amanda Fenwick (NY) – assumptions that vary by scenario

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:

   9/22/08 VM-20 Draft - Section C.5.1.3

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.)

   C.5 Valuation Assumptions

   C.5.1 Prudent Estimate Assumptions

   3. ~~As the company determines is appropriate,~~ For ~~the~~ prudent estimate assumptions that are dependent upon changes in interest rates and equity performance, such assumptions shall vary from scenario to scenario within the stochastic reserve calculation in an appropriate manner that reflects the risk.

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

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NAIC Staff Comments:

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7/9/08	JLE		Tabled 7/15/08
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VM-20_080922_012

Amendment Proposal Form*

(NAIC Research Division)

1. Identify yourself, your affiliation and a very brief description (title) of the issue.

   Fred Andersen (NY) – Assumption setting – margin in each assumption

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:

   9/22/08 VM-20 Draft, Section C.5.4.

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.)

   C.5.4 Assumption Margins

   1. Include a margin to provide for adverse deviations and estimation error in the prudent estimate assumption for each risk factor, or combination of risk factors as allowed in C.5.4.3, which is not stochastically modeled or prescribed.

   Drafting Note: Additional guidance via an ASOP may be needed to clarify how the company determines the modifications that may be needed to reflect the circumstances of the company.

   2. ~~The choice of an appropriate margin for each assumption may result in a distorted measure of the total risk.~~ Conceptually, the choice of margins should be made so that the final result approximates what would be obtained for the reported reserve at the required CTE level if it were possible to calculate results over the joint distribution of all future outcomes.~~ In applying this concept to the actual calculation of the reported reserve, the actuary shall be guided by evolving practice and expanding knowledge base in the measurement and management of risk.~~

   3. From a practical standpoint, it may not be possible to completely apply the concept in C.5.4.2 to determine the level of margins in the aggregate for all risk factors. Therefore, the company shall determine margins for each risk factor independently (e.g., mortality, lapse, premium patterns, etc.) using the requirements and guidance given in C.5.4.4, C.5.4.5, C.5.4.6, C.5.4.7, and C.5.4.8. If applicable, the level of margins can take into account the fact that risk factors may not be 100% correlated.~~, unless the company can demonstrate that an appropriate method was used to jointly determine the Margin for two or more risk factors in combination.~~ In all cases, each assumption shall have a margin.

   Drafting note: Due to the difficulty in determining margins in the aggregate, it is expected that jointly determining margins for 2 or more risk factors will be rare, at least in the initial years following the effective date of these requirements.

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

   It is impossible to verify the reasonableness of a reserve if each assumption is not reasonable and justified.

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NAIC Staff Comments:

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Amendment Proposal Form*

(NAIC Research Division)

1. Identify yourself, your affiliation and a very brief description (title) of the issue.

   Fred Andersen (NY) – Equity returns in deterministic reserve

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:

   9/22/08 VM-20 Draft, Section E.5.4.4.

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.)

   E.5 Asset Assumptions

   E.5.4 Deterministic Scenario

   4. Prescribed S&P 500 Returns and Separate Account Fund Performance. The path of equity returns used to determine the deterministic reserve will be ~~based on a single path of prescribed returns for both general account equity assets and separate account assets. This path will start with the current 10-year Treasury rate as of the projection start date grading to the ultimate 10-year Treasury rate shown in the table in E.5.4.2 over 10 years using linear interpolation, with the prescribed spread over 10-year Treasuries (from E.5.3) added to each rate~~a 3% annual return.

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

   To make the Deterministic Reserve a meaningful proxy for an economic tail CTE value, it needs to account for the volatility of equity returns.

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NAIC Staff Comments:

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VM-20_080922_014

Amendment Proposal Form*

(NAIC Research Division)

1. Identify yourself, your affiliation and a very brief description (title) of the issue.

David Hippen, Life & Health Actuary,
Missouri Department of Insurance, Financial Institutions & Professional Registration

Reporting requirements for sensitivity testing and varying assumptions are unclear in VM-20.

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:

9/22/08, VM-20 E.3.5 Sensitivity testing

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.)

E.3 Policyholder Behavior Assumptions

E.3.5 Reporting and Documentation Requirements Related to Policyholder Behavior Assumptions

The following items shall be included in the PBR Actuarial Report:

<u>7. An explanation of how the results of sensitivity tests and varying assumptions were used or considered in developing assumptions.</u>

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

Require actuarial accountability for actions taken (or not taken) regarding the results of required tests.

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<u>NAIC Staff Comments</u>:

Dates: Received	Reviewed by Staff	Distributed	Considered
7/23/08	JLE		
Notes: Carryover from VM-20_080329_036			

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VM-20_080922_016

Amendment Proposal Form*

(NAIC Research Division)

1. Identify yourself, your affiliation and a very brief description (title) of the issue.

   American Academy of Actuaries' Life Reserves Work Group, David Neve, Chair
   Amendment to VM-20 C.3.2.a. and C.3.3. to expand and clarify the requirements dealing with aggregation of policies.

2. Identify the document, including the date if the document is "released for comment," and the location in the document where the amendment is proposed:

   VM-20 Requirements for Principles-based Reserves for Life Products dated 9/22/08, C.3.2.a and C.3.3.

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. (Please red-line it from the current version with existing changes already accepted. You may do this through an attachment.)

   Change in C.3.2.a:

   Determine the level of aggregation ~~policy grouping~~ as defined in C.3.3~~4~~;

   Current wording for C.3.3:

   3. Alternatively, the stochastic reserve may be calculated by applying the methodology in C.3.2 to grouping of policies defined by the company, and then summing the stand-alone results together for each grouping of policies.

   Proposed wording for C.3.3:

   3. Aggregation of policies for the stochastic reserve calculation.

   Drafting note: Aggregation refers to the number and composition of subgroups of polices that are used to combine cash flows for the purpose of applying the methodology in C.3.2.c. Aggregating policies into a common subgroup allows the cash flows arising from the policies for a given stochastic scenario to be netted against each other (i.e., allows risk offsets between policies to be recognized).

   a. The company shall apply the methodology in C.3.2.c to all policies in the aggregate or to separate subgroups of polices, as determined by the company following the requirements in C.3.3.b. If the company defines two or more subgroups for this purpose, the results of applying the methodology in C.3.2.c to each subgroup of policies on a standalone basis shall be summed together and then added to the modified deterministic reserve as defined in C.3.2.b. to determine the stochastic reserve.

   b. The company shall determine the number and composition of subgroups for aggregation purposes in a manner that is consistent with how the company manages risks across the different product types, and that reflects the likelihood of any change in risk offsets that could arise from shifts between product types. Thus, if a company is managing the risks of two or more different product types as part of an integrated risk management process, then the products may be combined into the same subgroup.

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

   This change expands and clarifies the requirements around the aggregation of policies, and also clarifies that the decision regarding the level of aggregation of policies in C.3.3 is a separate issue from the decision to group policies for the purpose of model cell construction in C.3.4. This change clarifies that the company aggregate policies for the purpose of applying the CTE methodology in a manner that is consistent with how the company manages risks across different product types. This change:

- Is more consistent with the principles of PBR.
- Allows risk offsets to be recognized in the reserve that is consistent with how the company manages risk.
- Reflects the likelihood that the impact of risk offsets could change due to shifts between product types.
- Does not impose an arbitrary level of conservatism in the reserve that can differ widely company to company compared to the approach of mandating specific groupings by product type.
- Relies upon the required disclosure to include the impact of aggregation in the PBR actuarial report to quantify and audit the "standalone" reserve for each product type, rather than requiring the reserve calculation itself to provide this information.

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NAIC Staff Comments:

Dates: Received	Reviewed by Staff	Distributed	Considered
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Amendment Proposal Form*

(NAIC Research Division)

1. Identify yourself, your affiliation and a very brief description (title) of the issue.

   Bob DiRico, Chair, American Academy of Actuaries Consistency Work Group

   The recommended changes are proposed in order to make the NGE requirement of VM-20 and other Principle-based Approaches consistent with one another and consistent with the definition in VM-01

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:

   The document to change is the 9/22/08 draft of VM-20

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.)

   <u>OLD VERSION</u>

   C.9 Treatment of Non-Guaranteed Elements

   1. Include non-guaranteed elements in the models used to project future cash flows for both the deterministic reserve and the stochastic reserve. Where NGE are based on some aspect of experience, reflect future changes in the level of NGE in the cash flow models based on the experience assumed in each scenario.

   2. As would be the case in actual practice, do not assume that the projected NGE change simultaneously with the change in projected experience, but only at the date following the recognition of a change in experience on which the company would normally implement a change.

   3. When determining the projected NGE for each scenario, take into consideration those factors that affect how the company will modify its current NGE scale, such as existence of contract guarantees, the company's past NGE practices and current NGE policies.

   4. Establish a margin for the projected NGE that increases the reported reserve compared to the reported reserve that would result without a margin.

   5. Report any liability for dividends declared but not yet paid that has been established according to statutory accounting principles as of the valuation date separately from the reported reserve. Accordingly, where such a separate liability is reported on the statutory balance sheet as of the valuation date, exclude any dividends that are included in the separate liability from the reserve cash flow projection.

   Drafting Note: The reporting requirements for NGE's should be reviewed.

   Drafting Note: The LRWG is considering a procedure whereby the treatment of non-guaranteed elements outlined above would apply only to policies that have material tail risk, as defined by a test. A simplified procedure is under development for policies that do not have material tail risk.

   <u>NEW VERSION</u>

   1. <u>Include non-guaranteed elements (NGE) that are based on some aspect of the policy's or contract's experience or on the competitive environment in the models used to project future cash flows beyond the time the company has authorized their payment or crediting. Future changes in the level of NGE in the cash flow models should be based on the experience assumed in each Scenario.</u>

2. For NGE that are not based on some aspect of the policy's or contract's experience, include any payment or crediting already authorized by the company in the models used to project future cash flows. Do not include non-experience-based NGE that are not already authorized by the company unless the company determines that inclusion is appropriate based on its practices in dealing with the competitive environment or based on its established NGE policy

3. The projected NGE used in the model shall reflect factors that include but are not limited to the following (not all of these factors will necessarily be present in all situations):

    a. the nature of contractual guarantees;

    b. the company's past NGE practices and established NGE policies;

    c. the timing of any change in NGE relative to the date of recognition of a change in experience;

    d. the source of any past non-experience based payment or crediting; and

    e. the benefits and risks to the company of continuing to authorize NGE.

4. Projected NGE should be established in a way that does not eliminate the margin in the Minimum Reserve.

5. Projected levels of NGE in the cash flow model must be consistent with the experience assumptions used in each scenario. Policyholder Behavior Assumptions in the model must be consistent with the NGE assumed in the model.

6. Report any liability for dividends declared but not yet paid that has been established according to statutory accounting principles as of the valuation date separately from the Minimum Reserve. Accordingly, where such a separate liability is reported on the statutory balance sheet as of the valuation date, exclude any dividends that are included in the separate liability from the reserve cash flow projection

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

The old section contains language and requirements that are not consistent with the definition and that, in the view of the Academy, should not have been part of the document. Additionally, it was felt that more guidance was needed in certain areas.

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NAIC Staff Comments:

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9/2/08	JLE		
Notes: Carryover from VM-20_080329_039			

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Amendment Proposal Form*

(NAIC Research Division)

1. Identify yourself, your affiliation and a very brief description (title) of the issue.

   American Academy of Actuaries Life Reserves Work Group, David Neve, Chair—Amendment to VM-20 to require disclosure of sensitivity testing results for all material assumptions, and to delete the requirement that a higher margin be established when there is greater sensitivity of the assumption on the minimum reserve.

2. Identify the document, including the date if the document is "released for comment," and the location in the document where the amendment is proposed:

   VM-20 Requirements for Principles-based Reserves for Life Products dated 9/22/08, C.5.1, C.5.4.5, E.3.3.3, and E.3.4.

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. (Please red-line it from the current version with existing changes already accepted. You may do this through an attachment.)

C.5.1 Prudent Estimate Assumptions

3. Sensitivity Testing of prudent estimate assumptions that have a material impact on the minimum reserve is required. Disclosure of the impact of sensitivity testing shall be included in the PBR Actuarial Report.

   a. Sensitivity testing may be performed using samples of the policies in force; it is not required that the entire valuation be done for each alternative assumption set.

   b. Sensitivity testing may be done using data from prior periods when appropriate.

   c. The company shall update the sensitivity tests when appropriate, considering the materiality of the results of the tests. Less frequent updating of these tests is appropriate when the tests show less sensitivity of the minimum reserve to changes in the assumptions being tested or the experience is not changing rapidly.

   d.

4

4~~3~~. As the company determines is appropriate, the prudent estimate assumptions shall vary from scenario to scenario within the stochastic reserve calculation.

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C.5.4 Assumption Margins

5. Greater analysis and more detailed justification ~~for changes in assumptions~~ are needed to determine the level of uncertainty when establishing margins for risk factors that produce greater sensitivity on the minimum reserve (see C.5.1.3). ~~Higher margins shall be required unless justified otherwise.~~

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E.3.3 Margins for Policyholder Behavior Assumptions

~~3. Sensitivity testing of assumptions is required to establish the margin, as discussed in E.3.4. These tests should include, but are not limited to, premium payment patterns, premium persistency, surrenders, partial withdrawals, allocations between available investment and crediting options, benefit utilization, and other option elections if relevant to the risks in the product.~~

~~4.~~3. Margins for policyholder behavior assumptions shall assume, without relevant and credible experience or clear evidence to the contrary, that policyholders' efficiency will increase over time.

~~5.~~4. Margins shall reflect the data uncertainty associated with using data from a similar but not identical block of business to determine the anticipated experience assumption.

~~6.~~5. A higher margin is appropriate for partial withdrawal and surrender assumptions where the company's marketing and /or administrative practices encourages anti-selection.

E.3.4 Sensitivity Testing

1. The company is required to examine the sensitivity of results to understand the materiality of making alternate policyholder behavior assumptions on the reported reserve. (See C.5.1.3) These tests should include, but are not limited to, premium payment patterns, premium persistency, surrenders, partial withdrawals, allocations between available investment and crediting options, benefit utilization, and other option elections if relevant to the risks in the product. ~~Sensitivity testing may be performed using samples of the policies in force; it is not required that the entire valuation be done for each alternate assumption set. Sensitivity testing may be done using data from prior periods when appropriate.~~

~~2. The company should update the sensitivity tests when appropriate, considering the materiality of the results of the tests and trends in experience data. Less frequent updating of these tests is appropriate when the tests show less sensitivity of reported reserve to changes in the assumptions being tested or the experience is not changing rapidly.~~

~~3.~~2. With respect to policies which give policyholders flexibility in the timing and amount of premium payments, the company must examine, but not be limited by the following, premium scenarios:

a. Minimum premium scenario;

b. No further premium payment scenario;

c. Pre-payment of premiums – Single premium scenario; and

d. Pre-payment of premiums – Level premium scenario.

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

1. To make it clear that sensitivity testing is required for all material assumptions. In the current draft, sensitivity testing is only required for policyholder behavior assumptions in E.3.4. Thus, the wording that was in E.3.4 has been moved to the section in VM-20 (C.5.1) that describes the requirements that apply to all assumptions.

2. To make it clear that a higher margin is required when there is a greater degree of uncertainty in the underlying anticipated experience assumption, but not when there is greater sensitivity of the assumption on the reserve. For example, if the minimum reserve is very sensitive to certain outcomes of a given risk factor, but it is known with certainty that those outcomes will not occur, then no additional margin is required.

3. The proposed wording also clarifies in C.5.4.5 the reason for requiring greater analysis and more detailed justification when there is greater sensitivity. The reason is that since the reserve is more sensitive to the assumption, greater rigor is needed to assess the degree of uncertainty in the underlying

anticipated experience assumption, so that a proper margin is established to reflect that level of uncertainty.

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NAIC Staff Comments:

Dates: Received	Reviewed by Staff	Distributed	Considered
9/2/08	JLE		Amended and Adopted 10/15/08

Notes: Carryover from VM-20_080329_040

Modifications:
1. First sentence of C.5.1.3 replaced with a sentence based on the first sentence of E.3.4.
2. Second sentence to C.5.1.3.a added to require a sufficient sample size.

C.5.1 Prudent Estimate Assumptions

3. The company is required to examine the results of sensitivity testing to understand the materiality of prudent estimate assumptions on the reported reserve. Disclosure of the impact of sensitivity testing shall be included in the PBR Actuarial Report.

   a. Sensitivity testing may be performed using samples of the policies in force; it is not required that the entire valuation be done for each alternative assumption set. The choice of the sample must not have a material impact on the results of the sensitivity testing.

   b. Sensitivity testing may be done using data from prior periods when appropriate.

   c. The company shall update the sensitivity tests when appropriate, considering the materiality of the results of the tests. Less frequent updating of these tests is appropriate when the tests show less sensitivity of the minimum reserve to changes in the assumptions being tested or the experience is not changing rapidly.

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