AMERICAN ACADEMY of ACTUARIES

Variable Annuity GMDB Reserves ("Dollar-for-Dollar") Report

Presented by the American Academy of Actuaries' Work Group of the Life Financial Soundness/Risk Management Committee to the National Association of Insurance Commissioners' Life and Health Actuarial Task Force

September 2003 – Chicago, IL

Background
At the June 2003 NAIC meeting, the Life and Health Actuarial Task Force (LHATF) considered the issue of reserve requirements for Guaranteed Minimum Death Benefits (GMDB) on variable annuity contracts that provide a reduction in GMDB equal to the amount withdrawn under partial withdrawal provisions. These types of provisions have been referred to as "dollar-for-dollar" provisions, and allow contract holders to withdraw most of the cash value on the contract without reducing the net amount at risk from the GMDB.

A concern was expressed that the provisions of Actuarial Guideline XXXIII, "Determining CARVM Reserves for Annuity Contacts with Elective Benefits" (AG33), and Actuarial Guideline XXXIV, "Variable Annuity Minimum Guaranteed Death Benefit Reserves" (AG34), were not clear on the treatment of the dollar-for-dollar provisions. AG 34 GMDB reserves currently reflect the dollar-for-dollar partial withdrawal dynamics for contracts that have already elected this option. However, the development of reserves for the portion of contract holders that may elect this option in the future was not clear. Further, there was concern that an application of AG33 to variable annuity contracts might require that the dollar-for-dollar provision be treated as an elective benefit, whereby 100% of contract holders must be assumed to exercise the dollar-for-dollar option to withdraw virtually all of the contract's cash value, leaving the net amount at risk on the GMDB intact. Thus far, companies have only low rates of exercise for this option. Additionally, basing reserves on the assumption of a 100% election rate of the dollar-for-dollar option may generate much greater reserves than the new C3 risk based capital requirement for this product under some market conditions.

The Academy was asked to develop alternatives for LHATF to consider that address the reserve issue on these benefits. The Academy is making two broad recommendations for LHATF to consider:

- Recommendation 1 – Continue to aggressively pursue a long term solution(s) to reserving for variable annuity guarantees of all types; and

- Recommendation 2 – Choose an interim pragmatic solution that can be quickly adopted, ideally in time for 2003 year end, and which thus provides time to allow adequate attention to be devoted to the long-term solution. Included in the write-up below are a series of options to consider for the pragmatic, interim solution.

Long-term Solution
The Academy's Variable Annuity Reserve Working Group is currently working on an approach for defining reserves for variable annuities. This new reserve approach for variable annuities is expected to address the issue of dollar-for-dollar options in the stochastic modeling process, but the new approach, when adopted, is not expected to be effective before the end of 2004. Therefore, there is at least a fifteen-month period where an interim solution is needed concerning reserves for GMDB under dollar-for-dollar options. Further, it is not clear what form the new reserve approach will take (valuation law, regulation, or actuarial guideline) and whether the new reserve approach will apply retroactively to contracts issued before the adoption of the new reserve approach. As such, an interim solution is needed for fifteen months or until the new variable annuity reserve approach is adopted. The interim solution may be needed for a longer period for existing contracts if the new approach is not applied to inforce contracts.

Interim Solutions
The list below summarizes some potential interim solutions, together with the advantages and disadvantages of each alternative. It is not meant to be an exhaustive list, but is designed to facilitate discussion of major issues.

Interim Alternative 1 - Make no changes to AG 33 or AG 34.

Discussion
This alternative focuses on the long-term solution and delays the resolution of this issue until the adoption of the long-term solution.

<u>Advantages</u>

- This is a simple solution, since no changes are needed to the current actuarial guideline structure
- Allows resources to focus on and strengthens the case for developing and implementing the long-term solution
- To the extent it can be seen that CARVM produces redundant reserves, they will be available as offsets to other deficiencies.

<u>Disadvantage</u>

- Does not address a critical issue on a timely basis
- Was voted on by LHATF in June and did not pass.
- Would not be supported by the AAA
- Maintains current environment where different companies and audit firms will continue to take very different approaches to this issue.

Interim Alternative 2 - Revise AG 33 (and make no changes to AG34).
This can be accomplished several ways:

1. Revise AG33 to indicate that AG33 does not apply to variable annuities (i.e., it applies to fixed annuities only), or
2. Revise AG33 to indicate that AG 33 does not apply to the calculation of reserve for GMDBs, or
3. LHATF minutes could indicate intent of AG33 was to address fixed annuities only.

Discussion
This alternative makes it clear that AG33 does not apply to variable annuities (or to GMDBs), and therefore removes doubt as to whether it is required to assume a 100% election rate on the dollar-for-dollar option.

<u>Advantages</u>

- Minimal changes needed, with less time/resources having to be expended on an interim solution
- Allows time and strengthens the case to implement and develop the long term solution

<u>Disadvantages</u>

- While this alternative clarifies that the interim solution is not to assume 100% election of the dollar-for-dollar fund reduction, the interim solution is still ambiguous (i.e., there is no required reserve for the future election of this option)

- No guidance in terms of option election rates is provided for actuaries wanting to reflect future elections of the option into Integrated Benefit Streams.
- If AG33 is defined to apply only to fixed annuities, it is not clear what the reserve requirement is for the base variable annuity contract, and this may have unintended consequences for other variable products and their particular elective benefits.

Interim Alternative 3 - Revise AG 33 and AG 34 with an asset adequacy analysis requirement. Alternative 3 expands upon Alternative 2 by revising AG 34 to include a requirement that possible increases in reserves due to future elections of the dollar-for-dollar option be considered in an/the asset adequacy analysis.

Discussion

This alternative makes it clear that any additional reserves for the portion of contract holders that may elect this option in the future should be considered as part of an asset adequacy analysis. While this alternative does not define an explicit process for developing the reserves, it is in line with the general direction of the new reserve approach for variable annuities and is consistent with the approach taken in Actuarial Guideline XXXIX (AG39). This alternative can involve an analysis of the GMDB only or the entire variable annuity contract, or in consideration of the adequacy of total company reserves. Other issues would need to be discussed and resolved, depending on the type of analysis. For many practical and theoretical reasons[1], the AAA does not believe an analysis of the GMDB benefit in isolation is a good solution. We thus only comment below on two variants of the asset adequacy alternative:

Option A – for the entire variable annuity contract

Option B - consideration of the adequacy of total company reserves with an explicit disclosure and discussion of this benefit in the memorandum.

<u>Advantages Option A</u>

- Minimal analysis needed since basic framework of the requirement was already considered in the development of AG 39 (no need for a full-blown project).
- Consistent with direction of the long term solution and thus allows continued focus on the long-term solution.
- Allows for more actuarial expertise to be applied to reflect underlying business reality.
- Allows recognition of company experience to be a driver of anticipated results.
- Avoids the perception of addressing only a single element that is believed to be inadequate while ignoring other elements that are believed to be redundant.
- Could allow for aggregation of results.

<u>Disadvantages</u>

- Does not give same answer for all companies – No stated minimum
- This option ignores the interaction of GMDB risk with other non-VA risks within the same company or hedging between other product lines.

<u>Advantages Option B – All of the advantages for Option A plus:</u>

- Analysis potentially addresses other GMDB issues besides dollar-for-dollar (e.g., use of hedges, limits on reinsurance programs, "up-side" GMDBs)
- Avoids the perception of addressing only a single element that is believed to be inadequate while ignoring other elements that are believed to be redundant.

[1] These include – No way to anchor the company definition of imputed income as can be done in AG 39, applies an aggregate risk measurement process (asset adequacy analysis) to one specific risk, will require a lot of work to specify scope and requirements

- Allows for aggregation of results.

<u>Disadvantages Option B</u>
- Does not give same answer for all companies – No stated minimum

Interim Alternative 4 - Revise AG 33 so it does not apply to variable products with this MGDB feature and revise AG 34 with an explicit formula.
Alternative 4 expands upon Alternative 2 by revising AG 34 to provide an explicit formula for reserves for future elections of the dollar-for-dollar option. One example would be an explicit requirement to assume the higher of a minimum election rate for the dollar-for-dollar option (e.g., 5%, 10%) and expected company experience.

Discussion
This alternative would include an explicit formula to calculate reserves for the dollar-for-dollar option.

<u>Advantages</u>
- This alternative would be more consistent between companies
- Creates a mandated minimum
- Easy to understand and apply

<u>Disadvantages</u>
- It may take a considerable amount of time and effort to reach agreement on an explicit formula for this reserve, and the expected lifetime of the interim solution before the long-term solution is implemented may be only fifteen months.
- Developing an explicit formula for this reserve would not be consistent with the general direction of the new reserve approach for variable annuities.
- Formula approach does not allow for benefit of aggregation as occurs in Alternative 3.
- Formula approach would not reflect use of hedges as could be done through testing adequacy of total company reserves.
- Compared to Alternative 3, recognition of non-proportional reinsurance is much more difficult to include.
- Will need to be simple, yet will not address the diversity of risks that are inherent in these types of benefits.

Hybrid Alternatives – Combinations of the above, could also be considered, resulting in a blended list of advantages and disadvantages.

APPENDIX

Once an alternative is chosen, the Academy is willing to quickly draft language options to facilitate the timely adoption of the alternative. Below are initial draft examples we have already begun to explore. Once the direction of the interim solution is determined, more work will be needed to review the current requirements for all necessary revisions.

Draft Text Alternatives 2 - 4 (assuming the solution is to revise AG33 to indicate that it does not apply to variable annuities)

Insert the word “fixed” in the Title of AG 33, and possibly throughout the guideline
“Determining CARVM Reserves For Fixed Annuity Contracts with Elective Benefits”

Insert the following sentence in AG 33, Purpose:
“This Actuarial Guideline does not apply to variable annuities.”

Draft Text Alternatives 2 - 4 (assuming the solution is to revise AG 33 to indicate that it does not apply to the calculation of reserves for GMDBs)

Insert the following sentence in AG 33, Purpose:
“This Actuarial Guideline does not apply to the calculation of reserves for GMDBs offered with variable annuities.”

Draft Text Alternative 3

Same as changes describe above, plus add the following sentence to AG 34, Scope:

“While the method described in this Actuarial Guideline does not reflect future partial withdrawal activity, the appointed actuary must perform a standalone asset adequacy analysis of the GMDB (or variable annuity contract) risks. Such analysis shall be performed reflecting all benefits and guarantees in the contract associated with the GMDB (or variable annuity contract), as well as all expenses and asset-based charges associated with the GMDB (or variable annuity contract). The analysis shall be performed consistent with the requirements of Section 6 of the NAIC Model AOMR, including the requirement that the analysis conform to the Actuarial Standards of Practice as promulgated from time to time by the Actuarial Standards Board."

Draft Text Alternative 4

{Drafting note – need to describe explicit formula}