



# AMERICAN ACADEMY *of* ACTUARIES

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## **Report of the VA CARVM Survey Results of the American Academy of Actuaries' Variable Annuity Reserve Work Group**

**Presented to the National Association of Insurance Commissioners'  
Life and Health Actuarial Task Force**

**Washington, DC – June 2006**

The American Academy of Actuaries is a national organization formed in 1965 to bring together, in a single entity, actuaries of all specializations within the United States. A major purpose of the Academy is to act as a public information organization for the profession. Academy committees, task forces and work groups regularly prepare testimony and provide information to Congress and senior federal policy-makers, comment on proposed federal and state regulations, and work closely with the National Association of Insurance Commissioners and state officials on issues related to insurance, pensions and other forms of risk financing. The Academy establishes qualification standards for the actuarial profession in the United States and supports two independent boards. The Actuarial Standards Board promulgates standards of practice for the profession, and the Actuarial Board for Counseling and Discipline helps to ensure high standards of professional conduct are met. The Academy also supports the Joint Committee for the Code of Professional Conduct, which develops standards of conduct for the U.S. actuarial profession.

### Variable Annuity Reserve Work Group

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## VA CARVM Survey Results:

There were a total of 61 responses. Two duplicate responses were from the same company, only one of which was counted. Two surveys were not counted as they had incomplete or inapplicable responses. Therefore, the results detailed below are from a total of 58 companies submitted by 45 individuals.

- A total of 42 companies responded “yes” to question 1. A total of 16 companies responded “no” to question 1.
- A total of 24 companies responded “yes” to question 2. A total of 34 companies responded “no” to question 2.
- Of those that responded “no” to question 1, they answered 1b as follows:
  - o 9 companies chose 6/30/2007
  - o 5 companies chose 12/31/2007
  - o 1 company chose 3/31/2008
  - o 1 company chose 12/31/2008
- Of those that responded “no” to question 2, they answered 2b as follows:
  - o 1 company chose 3/31/2007
  - o 17 companies chose 6/30/2007
  - o 1 company chose 9/30/2007
  - o 13 companies chose 12/31/2007
  - o 1 company chose 3/31/2008
  - o 1 company chose 12/31/2008

### Survey Questions:

1. If AG VACARVM, as it is currently exposed, is adopted by LHATF in **June 2006**, will your company be ready to calculate reserves using the new methodology for year-end 2006 **without** substantial deviation from the requirements?
  - a. Comments (optional)
  - b. If the answer to #1 is “no”, which of the following effective dates will be the earliest date your company will be ready (please check only one box): 3/31/2007? 6/30/2007? 12/31/2007? Other?
2. If AG VACARVM, as it is currently exposed, is adopted by LHATF in **September 2006**, will your company be ready to calculate reserves using the new methodology for year-end 2006 **without** substantial deviation from the requirements?
  - a. Comments (optional)
  - b. If the answer to #1 is “no”, which of the following effective dates will be the earliest date your company will be ready (please check only one box): 3/31/2007? 6/30/2007? 12/31/2007? Other?
3. Additional comments:

## ANSWER “YES” TO BOTH QUESTIONS

A total of 24 companies responded “yes” to both question 1 and 2.

### Comments:

#### Question #1a:

- Yes, with the exception of the Option Valuation part, the calculations are similar to those already required for C3 Phase II.
- We use a 3<sup>rd</sup> party to do the reserves. We expect that they will be ready.
- Yes, we will be prepared to substantially comply with VACARVM.
- Yes, [Company name] used the Alternative Method to satisfy C3 Phase 2 requirements, and could use the AM allowed under VACARVM; the Standard Scenario would still have to be implemented (not required under C3P2 with the AM), but we believe that this is feasible.
- Yes, [Company name] uses the Alternative Methodology due to low volume of business. Unless there is a significant increase in the volume of VA business, [Company name] will continue to use the Alternative Methodology.
- Yes, assuming no major changes to the requirements we will be ready to comply.
- We will be using the Alternative Methodology and should be able to comply if the Academy provides the CTE (75) factors on a timely basis.

#### Question #2a:

- Yes, but it would be a stretch. Adoption in June 2006 to provide more lead time is significantly more desirable than waiting until September for the outcome.
- While additional notice is preferred, we can be prepared.
- We use a 3<sup>rd</sup> party to do the reserves. We expect that they will be ready.
- Yes, we are currently preparing for VACARVM to be effective 12/31/2006, using the currently exposed version. However, the possibility for changes decrease the likelihood of being ready. A potential, possibly large problem would be the risk that our valuation software vendor does not have the capabilities ready in time for year-end. The vendor is only required to have changes made 90 days from adoption of new rules.
- Yes, [Company name] uses the Alternative Methodology due to low volume of business. Unless there is a significant increase in the volume of VA business, [Company name] will continue to use the Alternative Methodology.
- Yes, assuming no major changes to the requirements we will be ready to comply.
- We will be using the Alternative Methodology and should be able to comply if the Academy provides the CTE (75) factors on a timely basis.

#### Question #3:

- I firmly believe that reserves based on the tails of the distributions of modeled results, WITHOUT MINIMUM SCENARIO OVERLAYS, is the appropriate way to go. CTE 65 reserves based on modeling reveal and make appropriate conservative provisions for risk. I object to arbitrary additional minimum reserve requirements which layer on excess conservatism.
- We would require the support of a consulting actuarial firm since it's doubtful that our current actuarial modeling software would be able to perform the necessary testing by 12/31/2006. If we were doing this without assistance, I would not expect to be ready until 12/31/2007.

- We plan to use the Alternative Method. We will be able to comply with the new requirements by year-end 2006 only if that option remains available, with no changes from its current format.
- As long as the general methodology of VA CARVM tracks the methodology of RBC C3 Phase II, then differences in assumptions or the level of CTE do not cause major extra effort.
- [Company name] is reviewing the full stochastic method for our block of policies. However, we view the Alternate Method as the primary method for compliance and may use the stochastic method if it is developed in time.
- Due to complexities of compliance, a 12/31/07 effective date is strongly desired.

## **ANSWER “NO” TO BOTH QUESTIONS**

A total of **16** companies responded “no” to both question 1 and 2.

To question 1b, **9** companies chose 6/30/2007, **5** companies chose 12/31/2007, **1** company chose 3/31/2008 and **1** company chose 12/31/2008.

To question 2b, **3** companies chose 6/30/2007, **1** company chose 9/30/2007, **10** companies chose 12/31/2007, **1** company chose 3/31/2008 and **1** company chose 12/31/2008.

### **Comments:**

#### **Question #1a:**

- The existence of the option floor requirement and the overall complexity of the Standard Scenario calculation will make it difficult for our company to meet its usual financial reporting deadlines under any circumstances. We believe that we will need to retool the financial close process for our variable annuity business.
- Of course, if implementation at 12/31/2006 becomes a requirement, we will somehow find a way to comply; however, we feel that a “go” decision in less than two months will leave a number of unresolved issues, such as tax compliance and effect on the annual AOM/CFT process, that will complicate the implementation home stretch. We will not have an opportunity to do a relatively full-scale “dress rehearsal” at 9/30/2006, so that in many respects we will be going live without the benefit of prior quarters’ experience. We are still adapting to the 12/31/2005 RBC implementation, which was quite positive but for which we prepared steadily for a fifteen-month period during which there were relatively few fundamental changes or fundamental unresolved issues that impacted our company.
- No, because complying with C3P2 we had to employ consultants, and we had to test the fixed account in a separate model using C3P1 methodology. I don’t see that this simpler treatment of the fixed account is specifically allowed in VACARVM as it was in Appendix 6 of the C3P2 report. I am not aware that vendor software is even available to handle the complexities of several categories of separate account funds along with the investment/reinvestment capabilities for the general account subaccounts of a variable annuity. Also, I don’t think the standard scenario capabilities have been built into software yet.
- The option value calculation would be impossible to implement in 6 months.
- No, I believe there are too many unresolved issues. While I would like to see VACARVM adopted as soon as possible I would prefer we didn’t rush the process. We need to do this right. We have the benefit that the new capital requirements are in place. This should give us all comfort that we are holding an adequate amount of capital and reserves. I would be in favor of adoption of VACARVM sometime during 2006, but with a 12/31/07 effective date.
- It would require substantial efforts for us to implement it for year-end 2006.
- We will not be in a position to perform the option-floor calculations.
- I couldn’t promise that we would be ready. We are set up to make this type of calculation, but currently we have some logistical problems in getting the reserve calculated and validated in time. The logistical timing issues of model set-up and run-time (with running at least 1,000 scenarios) would have to be solved prior to them.

#### **Question #1b:**

- The 6/30/2007 date is contingent upon a clear definition of the option floor requirement by 12/31/2006. The definition needs to be at least as complete as the Recommendations of the American Academy of Actuaries for stochastic testing. We would need a minimum of 6 months after the final definition is officially adopted by the NAIC.

#### **Question #2a:**

- The existence of the option floor requirement and the overall complexity of the Standard Scenario calculation will make it difficult for our company to meet its usual financial reporting deadlines under any circumstances. We believe that we will need to retool the financial close process for our variable annuity business.

- Of course, if implementation at 12/31/2006 becomes a requirement, we will somehow find a way to comply; however, we feel that a “go” decision in less than two months will leave a number of unresolved issues, such as tax compliance and effect on the annual AOM/CFT process, that will complicate the implementation home stretch. We will not have an opportunity to do a relatively full-scale “dress rehearsal” at 9/30/2006, so that in many respects we will be going live without the benefit of prior quarters’ experience. We are still adapting to the 12/31/2005 RBC implementation, which was quite positive but for which we prepared steadily for a fifteen-month period during which there were relatively few fundamental changes or fundamental unresolved issues that impacted our company.
- I don’t see the adoption date as mattering if the effective date is still 12/31/2006.
- The option value calculation would be impossible to implement in 3 months. Other elements of the calculation would be very difficult, or impossible, to implement in 3 months.
- No, I believe there are too many unresolved issues. While I would like to see VACARVM adopted as soon as possible I would prefer we didn’t rush the process. We need to do this right. We have the benefit that the new capital requirements are in place. This should give us all comfort that we are holding an adequate amount of capital and reserves. I would be in favor of adoption of VACARVM sometime during 2006, but with a 12/31/07 effective date.
- We will not be in a position to perform the option-floor calculations.
- I couldn’t promise that we would be ready. We are set up to make this type of calculation, but currently we have some logistical problems in getting the reserve calculated and validated in time. The logistical timing issues of model set-up and run-time (with running at least 1,000 scenarios) would have to be solved prior to them.

**Question #2b:**

- This 12/31/2007 date is contingent upon a clear definition of the option floor requirement by 6/30/2007. The definition needs to be at least as complete as the Recommendation of the American Academy of Actuaries for stochastic testing. We would need a minimum of 6 months after the final definition is officially adopted by the NAIC.

**Question #3:**

- We do not believe that the current Standard Scenario meets the criteria for a floor reserve set by the NAIC. To meet this goal, a floor reserve needs to be reasonably easy to calculate (so that companies can meet reporting deadlines), must satisfy the requirements for a tax reserve, and must not exceed the stochastic CTE (65) reserve except in the unusual circumstance that the Company’s actuary is using inappropriate methods or assumptions in the stochastic modeling. The Standard Scenario, as currently fashioned, meets none of these criteria. It is important to note that the C3 Phase 2 calculations are performed annually and that results and certifications are due two months after year-end. By Contract, reserve calculations are done quarterly and many company internal reporting deadlines are in the 7-15 day range. Therefore, it is important that the time and cost of calculating reserves should be both as simple as possible, yet at the same time yield meaningful information and assurances to insurance regulators and company management. The current Standard Scenario will add complexity and cost, will require a reserve that is far too conservative to be a floor in most cases, and will actually deter the development of principles based methods that are capable of assessing risk in a robust and meaningful way. It is also important to note that the LHATF abandoned discussion of Actuarial Guideline MMMM in 2002 because it used a deterministic scenario that was not capable of assessing company’s risk accurately. A deterministic Standard Scenario calculation has the same problem.
- We feel the most fundamental problem is not company readiness but rather regulatory community readiness. We would be going live with a principles-based reserve valuation at a relatively early stage in the evolution of principles-based valuation in the US, when much of the valuable governance/oversight infrastructure that can give regulators comfort is still being hammered out, so that some regulators may understandably have a highly defensive posture that may translate into punitive reserve floors and a related tendency to retreat to formulaic or other prescribed solutions. If this implementation were to occur at a later time when the evolution of this infrastructure and the experience with C3 Phase II is more seasoned, there is the possibility that the defensive posture could be somewhat tempered, resulting in a more genuine principles-based reserve framework. By contrast, if the implementation leads to valuation requirements that dwarf the RBC requirements, the overall VA initiative will become highly problematic and will have much greater difficulty recovering from early tarnished perceptions. Similarly if the implementation precedes a clear vision of the tax consequences of the initiative, that will potentially set the stage for resource-intensive company interactions with the IRS in the interests of clarification that will further complicate the industry landscape during the initial effective period.

- I do not think it would be wise to implement VACARVM with an effective date of 12/31/2006. There are too many outstanding issues and this is such a paradigm shift from the current practice that actuaries need time to study the final approved version, software vendors need time to code for it, and companies need time to run some tests with it. The certifying actuary is being asked to do a lot of work in developing assumptions, reviewing revenue sharing agreements, and developing models. Adding a CDHS would just add to the complexity. VACARVM differs from C3P2 in that it must be done every quarter. As such, it is a significantly larger drain on resources than C3P2 is. A better idea would be to implement VACARVM on an illustrative basis for 2007, but still use the current approach for reported reserves. That will allow companies time to really work through the issues without having to be concerned that the first time through the calculations they need to produce certifiable reserves.
- We strongly oppose the adoption of the January exposure draft and would ask the Academy to continue to support the December exposure draft. With respect to implementation dates, our valuation staff is fully occupied throughout the first quarter of the year and would be unable to comply with a 3/31 implementation date (in any year).
- We prefer to see the adoption in this year but has an effective date next year.
- C3P2 has a provision for smoothing the TAR. Without a similar smoothing process for VACARVM the capital and reserve amounts will move at different rates and possibly in different directions leading to possibly volatile and strange capital requirements. LHATF should consider this prior to any adoption.
- [Several sentences contain too much identifying information and have been redacted.] Our current reserving processes include cashflow adequacy testing and demonstrations.
- Board approval for hedging may prove to be a problem for some companies if AG VACARVM is adopted at the "last minute."

## ANSWER “YES” TO QUESTION 1 AND “NO” TO QUESTION 2

A total of **18** companies responded “yes” to question 1 and “no” to question 2.

To question 2b, **1** company chose 3/31/2007, **14** companies chose 6/30/2007 and **3** companies chose 12/31/2007.

### Comments:

#### **Question #1a:**

- Yes. However, our ability to conform with AG VACARVM specifications for 12/31/2006 depends on early final consensus of the specific details regarding the valuation of VAGLBs and the treatment of hedging under the standard scenario method. There appear to be significantly more nuances to the projection and valuation of various guarantees (such as VAGLBs) and the treatment of hedging under the standard Scenario in AG VACARVM than currently exists under the RBC C3 Phase II regulation. The existence of this added complexity may result in significantly more development time being required to implement AG VACARVM than was needed to implement RBC C3 Phase II.
- If adopted in June 2006, it would be very difficult, if not impossible, to meet a 12/31/06 reporting requirement. Hurdles for the company include complex products, availability of adequate computing power, incorporation of hedging into valuation models, and availability of sufficient resource to address this project. Consulting help may be required to meet a 12/31/06 reporting requirement and deviations from the requirements would be likely. There would likely be no time for a peer review prior to reserve reporting with this timetable. Due to the above contingencies, a yes/no answer is not adequate to respond to this question.
- Yes. Some items may have to be estimated.
- To be ready at year-end 2006 our vendor software [Vendor name] would need to be available early enough to allow time for implementation. It is my understanding that [Vendor name] staff are also responding to this survey. Substantial work would be needed for the standard scenario. While it would be difficult but not impossible to be ready at 12/31/06, we would prefer an effective date of 12/31/07.
- Yes, provided that NY does not adopt a separate variation of AG VACARVM.
- Yes – if adopted there really isn't a choice in the matter. In reality, the requirement for fair market valuation would be very difficult to implement, particularly on a seriatim basis.

#### **Question #2a:**

- No. If the new methodology is adopted that late, it will be difficult to implement the necessary changes to the reserve system by the end of 2006.
- If adopted in September 2006, meeting the requirements for a 12/31/2006 reporting timetable, without substantial deviation from the requirements, would not be feasible. While the company is working on this project, a full scale effort would not take place until the methodology is finalized and the regulation takes final form.
- No, we do not believe it would be possible without substantial estimates.
- No, there would not be enough time to implement all the changes in time for year-end.

#### **Question #3:**

- If requirements were adopted in September 2006, it would be unlikely that we would be able to comply with AG VACARVM requirements before 6/30/2007 due to Q1 2007 being occupied with year-end reporting requirements. We would also like to mention the need for early and final consensus to details regarding the AG VACARVM regulations to be implemented. The last minute changes that occurred with the RBC C3 Phase II regulation made implementation for a 12/31/05 deadline challenging.
- The more often the proposed rules change and the later in the year the method is finalized, the more difficult it becomes to comply.

## **SURVEYS DISREGARDED FOR INCOMPLETENESS**

Two surveys were disregarded because answers were incomplete or answers were not applicable.

### **Survey 1:**

- Question 1a.: Not applicable because the Company does not offer the product.
- Question 2a.: The Company does not plan to offer this type of product. It does plan to offer a Equity Indexed Annuity in 2006. If the AG applies to EIAs, I choose 12/31/2007.

### **Survey 2:**

- Question 1a.: Our company has no products within the scope of AG VACARVM.
- Questions 2a.: Our company has no products within the scope of AG VACARVM.