AMERICAN ACADEMY *of* ACTUARIES

Progress Report of the American Academy of Actuaries'
Universal Life Work Group

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

Salt Lake City, UT – March 2005

The American Academy of Actuaries is the public policy organization for actuaries practicing in all specialties within the United States. A major purpose of the Academy is to act as the public information organization for the profession. The Academy is non-partisan and assists the public policy process through the presentation of clear and objective actuarial analysis. The Academy regularly prepares testimony for Congress, provides information to federal elected officials, comments on proposed federal regulations, and works closely with state officials on issues related to insurance. The Academy also develops and upholds actuarial standards of conduct, qualification and practice and the Code of Professional Conduct for all actuaries practicing in the United States.

Universal Life Work Group

Dave Neve, F.S.A., M.A.A.A., Co-Chair
Tom Kalmbach, F.S.A., M.A.A.A., Co-Chair

Cliff Angstman, F.S.A, M.A.A.A.
Mary Bahna-Nolan, F.S.A., M.A.A.A.
Aryeh Bak, F.S.A., M.A.A.A.
Mike Barsky, F.S.A, M.A.A.A.
Jeff Beckley, F.S.A, M.A.A.A.
Peter Boyko, F.S.A, M.A.A.A.
Cecil Bykerk, F.S.A, M.A.A.A.
Keith Dall, F.S.A, M.A.A.A.
Arnold Dicke, F.S.A, M.A.A.A.
Bob DiRico, A.S.A., M.A.A.A.
Armand DePalo, F.S.A, M.A.A.A.
Todd Erkis, F.S.A, M.A.A.A.
Gary Falde, F.S.A, M.A.A.A.
Randy Freitag, F.S.A, M.A.A.A.
Elinor Friedman, F.S.A, M.A.A.A.
Carl Friedrich, F.S.A, M.A.A.A.
Dieter Gaubatz, F.S.A, M.A.A.A.
Nathan Greenlee, F.S.A, M.A.A.A.
Joan Hentschel, F.S.A, M.A.A.A.
Doug Knowling, F.S.A, M.A.A.A.
Jeff Lane, F.S.A, M.A.A.A.
Dennis Martin, F.S.A., F.C.I.A., M.A.A.A.
Dwayne McGraw, F.S.A, M.A.A.A.
Esther Milnes, F.S.A, M.A.A.A.
Michael Palace, F.S.A, M.A.A.A.
Karen Rudolph, F.S.A, M.A.A.A.
Lance Schulz, F.S.A, M.A.A.A.
Larry Segal, F.S.A, M.A.A.A.
Tom Skillman, F.S.A, M.A.A.A.
Carolyn Stontz, F.S.A, M.A.A.A.
Steve Strommen, F.S.A, M.A.A.A.
Wayne Stuenkel, F.S.A, M.A.A.A.
Mike Taht, F.S.A., M.A.A.A.
Peter Van Beaver, F.S.A, M.A.A.A.
Jeff Vipond, F.S.A, M.A.A.A.
David Weinsier, F.S.A, M.A.A.A.
John Weum, F.S.A, M.A.A.A.

The Work Group would also like to thank the following individuals for all of their efforts: Allen Booth, John Bruins, Tom Campbell, Mark Cantor, Doug Doll, Alan Emmer, Paul Heffernan, Laurie Killiany, Ronald Klein, Barbara Lautzenheiser, Laurie Lewis, Carol Meyer, Kory Olsen, Dave Sandberg, Eric Schuering, Tomasz Serbinowski, Michelle Smith, Sheldon Summers, and Brandon Welte.

ULWG Progress Report to LHATF
March 11, 2005

This progress report reflects discussions to date by the Universal Life Work Group (ULWG) regarding the development of a principle-based approach to determine both reserve and capital requirements for products in our scope (UL with secondary guarantees, term, and VUL). While our work to date has focused primarily on reserves, we plan to address capital requirements in the future.

Update on Timing and Deliverables

A tremendous amount of work has been completed so far, and **we have met our very aggressive intermediate deadlines**. Significant work is on-going from the group, and we plan to have a further update of our progress (in addition to this report) at the March 11, 2005 meeting in Salt Lake City. The ULWG is holding an all-day meeting on March 9 to discuss recommendations from each of the ULWG subgroups. We expect to provide the Task Force with a summary of the conclusions reached from this ULWG meeting at the LHATF meeting in Salt Lake City.

We also are **planning to provide the Task Force with a first draft of a written proposal for a new reserve standard at the June NAIC meeting**. This draft will likely have incomplete sections, but will contain a specific description of the proposal with supporting details. We also plan to have a very preliminary summary of the results of our modeling runs, which will quantify the impact of the proposal using a model-office of policies. We would look for specific feedback from the Task Force at that time.

We continue to strive towards meeting a **December 2005 target date for a recommendation on a new reserve standard for the products in our scope, as well as a recommendation on capital requirements.** We realize this is a very aggressive timeline, since there is a tremendous amount of work yet to be done to meet this objective. However, at this point, things are progressing well, due to the tremendous time commitment made by ULWG members over the past six months. Through their continued involvement and commitment, we expect to meet this December 2005 target date.

Clarification of Two Items

It has come to our attention through conversations with some members of the Task Force that there is some misunderstanding over the nature of our work in relation to the current debate surrounding Actuarial Guideline 38 (AG38). Also, some have questioned the level of support from the industry in moving to a principle-based approach, particularly in regard to the work of the ULWG. In response, to these two concerns, the ULWG would like to emphasize the following to the Task Force:

1. Some have mistakenly concluded that the ULWG is working to develop a specific proposal for LHATF to consider in regard to the AG38 controversy, and/or to develop some sort of interim solution to the concerns surrounding AG38 until a long-term solution can be defined. **However, we want to make it clear that the work of the ULWG is separate from, and not to be confused with, the current debate surrounding AG38. Our work is part of an Academy effort to move toward a principle-based approach for all products, to replace the current "rule-based" formulaic approach.** While the products in our scope do include UL products with secondary guarantees, we are not attempting to come up with an interim solution to the AG38 debate. To the contrary, we have ULWG members who have differing views on the AG38 controversy, yet are unified in their desire to move to a principle-based approach.

2. Regarding the support of the industry in moving to a principle-based approach, based on the discussions at ULWG meetings, where companies with diverse points of view are represented, we perceive universal (or near universal) support by the industry to move in this direction. While we are an Academy group, and appropriately do not represent the opinions of the industry, it is our understanding that, **there is strong support from the industry in moving to a principle-based approach, based on the following observations:**

    a. We have over 40 members on the ULWG from over 30 firms, representing diverse and differing views of the AG38 controversy.

    b. While there have been differences expressed regarding the timing and the exact elements of this new principle-based approach, we have not heard of any company who is opposed to moving to a principle-based approach.

    c. At their February 10, 2005 meeting, the American Council of Life Insurers' (ACLI) Actuarial Committee voted to support the Academy's long-term effort to develop a principle-based approach for reserves, and in particular, to support the ongoing work of the ULWG.

    d. There have been voices in the recent past that have expressed serious concerns about the tax implications of a principle-based approach. However, both the Academy and the ACLI have recently formed tax groups to address these concerns. The ULWG is coordinating our efforts with these two tax groups, and it is our perception that there is a sincere desire on the part of both of these tax groups to work with the ULWG to develop a principle-based approach that will effectively address the tax concerns. (Having said this however, it is important to not understate the challenges that this represents).

Implementation of Proposed Reserve Changes

The implementation of the reserve changes being discussed will require either: 1) a change in the SVL, or 2) a new Model Regulation, or 3) a new Actuarial Guideline. The ULWG will provide pros and cons of each of these three alternatives as part of our scope. **We will look to the Task Force for guidance on this issue,** as it will be a regulatory decision regarding the appropriate approach to follow when adopting any approved changes.

Regardless of how the change is reflected, the ULWG will continue to pursue our objective of developing a principle-based approach for reserves and capital requirements. We will participate in discussions with the Task Force, the Academy SVL 2 group, and other interested parties regarding the pros and cons of each of the three alternatives as we move through the process.

Guiding Principles

The ULWG has agreed upon several principles to guide our work:

1. Methodology will **appropriately capture the degree of risk** underlying the product being valued, particularly the magnitude of "tail risk". In other words, the higher the risk, the higher the reserve.

2. Methodology will provide a framework that can be **applied to all life products**.

3. A **deterministic** reserve approach may be appropriate for certain products, depending on the level of risk, and **stochastic** approaches may be necessary for other products.

4. For risks that the company has some degree of control over (e.g. mortality), **assumptions should reflect a blend of company experience (if credible data is available) and prescribed assumptions**. For risks that the company has no control over (e.g. interest rate movements), prescribed assumptions or methods for setting the assumption should be used that are the same for all companies.

5. For risks that are not stochastically modeled, assumptions should be based on **"prudent best estimates" that incorporate appropriate margins for uncertainty**.

6. **Alternative methodologies** will be provided for small companies that are sufficiently affordable, both to install and to operate.

Basic Framework for Principle-based Methodology Defined

Using the above principles, the ULWG has agreed on the basic framework that we will pursue to develop a principle-based reserve standard. In a nutshell, the approach defines the statutory minimum reserve to be the greater of:

1. A **deterministic, seriatim reserve**, using a gross premium valuation (GPV) calculation with appropriate valuation assumptions.

2. A **stochastically derived reserve**, based on standard modeling techniques, using a prescribed CTE level (such as 65 CTE) on the distribution of outcomes resulting from the application of a GPV calculation for each scenario.

The deterministic reserve will be calculated using a single set of assumptions that is aligned with economic reality, yet still providing for an appropriate level of conservatism. The stochastic reserve calculation ensures that the resulting minimum reserve level properly captures those risks that cannot be adequately captured in a single deterministic scenario (for example, for Universal Life products with secondary guarantees, the stochastic reserve would capture the interest rate risk embedded in the product).

For the stochastic reserve calculation, we have not yet finalized which assumptions will be stochastically modeled, and which will not. However, we have decided to use a deterministic mortality assumption in the stochastic reserve calculation for all of the products in our scope.
Both the deterministic and stochastic GPV reserves will be based on assumptions that include all material risks, benefits, and guarantees of the contract (e.g. interest rates, mortality, lapse, premium patterns, expenses, etc.). For each risk that is not stochastically modeled, margins will be included in the assumption at an appropriate level of conservatism using the principles of "prudent best estimates", and a consistent set of approaches and standards will be established to derive each assumption. For risks that the company has some control over (such as mortality, premium patterns, etc) assumptions based on company experience will be allowed if sufficient, relevant, and credible experience can be demonstrated, and will be blended with a prescribed assumption level.

Both the deterministic reserve and the stochastic reserve taken together are designed to provide an early warning of increased risk, and determine the appropriate total reserve on the valuation date.

Advantages of Proposed Methodology

1. The stochastic calculation **captures all material risks, benefits and guarantees of the contract** that cannot be captured in a single scenario, deterministic reserve.

2. The deterministic calculation provides a reserve that **may help accommodate tax issues.** (However, challenges still remain since there is not a standard mortality table and interest rate used in the calculation).

3. The principle-based approach can be **universally applied to all life insurance products.**

4. The reserve using this methodology will increase when **underlying risks increase** (and vice-versa).

Challenges

1. A **governance process is needed** to assist regulators in assessing the appropriateness of assumptions and other elements impacting the reserve calculation, such as the use of an independent review by third party. The ULWG will look to the SVL 2 group of the Academy to take the lead in addressing concerns over regulatory governance issues.

2. **Tax issues are a major challenge**, including deductibility under section 807 of the tax code, and MEC limits and definition of life insurance under sections 7702 and 7702A. The ULWG will look to the Academy and ACLI tax groups to take the lead regarding issues related to taxation, and will partner with them to address tax issues in developing appropriate reserve methodologies and assumptions.

3. The development of a new **principle-based approach will be complex**, particularly when stochastic modeling techniques are required. This raises challenges for small companies who may not have adequate resources. Developing simpler, alternative methodologies for small companies that still appropriately capture the risks of the product will be difficult.

4. There are challenges in implementing a **gross premium approach** with various assumptions, particularly expenses.