



AMERICAN ACADEMY *of* ACTUARIES

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February 19, 2019

Mr. Mike Boerner
Chair, Life Actuarial (A) Task Force
National Association of Insurance Commissioners

Re: APF 2019-04

Dear Mike,

The Life Reserves Work Group (LRWG) of the American Academy of Actuaries¹ is pleased to submit the following comments regarding amendment proposal form (APF) 2019-04 on clarification for expense allowance formulas for universal life with secondary guarantee (ULSG).

Our understanding of the intent of APF 2019-04 is to clarify that the expense allowance for a ULSG policy, when determined for a valuation date that is between policy anniversaries, is to be the next terminal value of the expense allowance discounted to the valuation date. However, we are concerned the red-lined language could place constraints on the calculation (item 1 below) and the two definitions of “t” may continue to cause confusion (item 2 below).

1. When a valuation date falls between policy anniversaries for a ULSG policy, the red-lined language requires the expense allowance at the next anniversary be discounted using interest and survivorship to the valuation date. While this is an accurate representation of the expense allowance at the exact valuation date, it seems to preclude the use of a monthly interpolation between $Ex+t-1$ and $Ex+t$, where “t” in this case is an integer value referring to the end of policy year, i.e., a terminal value. Many systems use an interpolation routine such as a monthly interpolation rather than establishing monthly survivorship functions. Would a monthly interpolation be permitted if the red-lined language is made final?
 - a. In addition, by changing “on any valuation date t” to “at any duration t” (this appears in 3.B.5.d), a similar issue exists for $mx+t$ as exists for $Ex+t$, yet the red-lining does not provide a similar change in wording for $mx+t$.

¹ The American Academy of Actuaries is a 19,500-member professional association whose mission is to serve the public and the U.S. actuarial profession. For more than 50 years, the Academy has assisted public policymakers on all levels by providing leadership, objective expertise, and actuarial advice on risk and financial security issues. The Academy also sets qualification, practice, and professionalism standards for actuaries in the United States.

The LRWG suggests that within the 3.B.5 and 3.B.6 requirements, that if “t” is representing the number of completed years since issue, i.e., an integer value, then for valuation dates between (t-1) and t, the valuation date amount be determined using either discounting at interest and survivorship for the fractional year between valuation date and next anniversary, or an interpolation approximation process such as monthly interpolation between the terminal values at policy duration (t-1) and t. The clarification could be placed in a guidance note which would provide for the use of either discounting at interest and survivorship to the exact valuation date, or the use of interpolation between terminal values.

2. As red-lined, the clarifications to $Ex+t$ refer to discounting by interest and survivorship for $12 \cdot (1-t)$ months. The red-lined definition of t is such that $t=1, 2, \dots$ (number of completed years since issue). For example, a t equal to 2 years would imply that one would discount by interest and survivorship for $12 \cdot (1-2)$ months or -12 months. We believe the intent of this change was to require the discounting be done from the anniversary following the valuation date back to the valuation date, which is a fraction of one year. The formula $12 \cdot (1-t)$ months is likely not what was intended. This is only to say that if the red-lined language around present value at interest and survivorship is adopted (i.e., the language provided in the APF 2019-04), the formula for the period of discounting needs attention.
 - a. In addition, if t takes on a definition of “number of completed years since issue,” then the reference to t in 3.B.5.d.ii and 3.B.6.d.i. – v. is in conflict with that definition because in these paragraphs, $x+t$ refers to exact valuation date.

Because 3.B.5 and 3.B.6 combine commutation values (e.g. $mx+t$ and $Ex+t$) with valuation date values (e.g. $ex+t$ and $fx+t$), perhaps a universal definition of “t” will only lead to potential confusion.

If you have any questions, please contact Ian Trepanier (trepanier@actuary.org), life policy analyst at the Academy.

Thank you for your consideration.

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