From: Serbinowski, Tomasz
To: King, Eric
Cc: Fix, Joylynn; Sigman, Timothy; Andersen, Fred; Lombardo, Paul
Subject: Re: Comments on Utah Approach
Date: Friday, June 23, 2023 10:31:43 AM

PV of total life years = AV of past life-years + PV of future life-years.
My intention was to include all lives (active and disabled). This is trying to capture the stage of life of the block. I think that one could also consider only counting premium paying policyholders (both in the past and in the future). This would probably result in lower weight applied to the make-up premium and therefore, lower approvable rate increases. This is because excluding disabled (or non-premium paying) lives would have more effect on the future than on the past.

This could be an item to discuss - what is preferable. Another approach would be to use premium at the original rate level, that is, use the following ratio:
PV of future premium at the original rate level / PV of lifetime premium at the original rate level

Similar to active vs disabled discussion above, one would have to decide if waived premiums are to be included (all lives) or excluded (active lives). Average premium at the original level tends to decrease as the block ages. This is because the average issue age of the remaining policyholders decreases. So using premium would result in a lower weight applied to the make-up premium and therefore in a lower allowable increase.

All companies should be able to provide accurate count of past live-years. One would hope that they know how many insureds they had at any given time in the past. Total future life have to be projected using current assumptions. If a company does not track separately active and disabled lives, that calculation would use current mortality, current lapse, and possibly some adjustment for benefit exhaustions. If a company tracks separately active and disabled lives, that calculation would include active life mortality, lapse, claim incidence, disabled life mortality, recovery, and claim terminations due to the benefit exhaustion.

Most companies these day can provide life-years, but if a company were to insist that they can't, we could default to the premium at the original level approach (mentioned above) that should result in a lower but comparable number.

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On Fri, Jun 23, 2023 at 7:52 AM King, Eric <EKing@naic.org> wrote:

> Thanks, Joylynn.
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> On Jun 23, 2023, at 8:40 AM, Fix, Joylynn <Joylynn.Fix@wv.gov> wrote:
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> Good morning, Eric! Our actuaries have the following questions on the Utah method to add for comment:
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> - How do you compute the Percent of life-years remaining? The formula states that Percent of life-years remaining =PV of future life-years / PV of total life-years. But is PV of total life-years PV of future life years + AV of past life years (including termed and active members)? Or does it mean something else?
> - Does this mean you need to know the attained age of all current insureds and the issue age of every insured for each policy issued, and then calculate their life expectancy?
> - What mortality table should be used to calculate these items?
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