



Date: 08/25/2025
To: Seong-min Eom, Chair of the Longevity Risk (A/E) Subgroup
Subject: C-2b Charge for Longevity Reinsurance

Thank you for the opportunity to provide comments on the Life C-2 Mortality Factor proposal. We support the effort to explore the development of a C-2 longevity risk factor for longevity reinsurance agreements. In this letter we offer one possible approach to consider for such factor's development.

We believe that one method to consider for measuring longevity risk is to shock the longevity assumption (i.e., trend risk for reductions in mortality) while holding all other assumptions and factors constant. Given that this business will soon be subject to VM-22 calculations, we believe this method can leverage the PBR calculation, resulting in both a theoretically correct and practically feasible method. Our proposed method follows the below steps:

1. Baseline Present Value – Using the latest year-end PBR model (or CFT model for pre-PBR business), calculate the actuarial present value of outflows less inflows, including the recognition recurring premiums, under Scenario 12 from the NAIC economic scenario generator, for the entire block of longevity reinsurance contracts held by the company.
 - a. If less feasible for companies to obtain a net asset earned rate (NAER) for discounting cash flows in this method, we could also explore modifying this method such that it uses a scenario reserve calculation rather than an actuarial present value calculation.
2. Shock Present Value – Repeat step 1, but increase mortality improvement to a [X]%, reflecting a CTE90 level within a representative longevity risk distribution.
 - a. The [X]% shock would be hardcoded in the instructions and the same for all companies calculating the method.
 - b. We recommend that [X]% be no lower than 1%, as this is the shock used for the VM-22 stochastic exclusion ratio test.
 - c. Any quantitative evidence offered by interested parties would be considered in determining the final number. In absence of any supporting data, one possible starting point could be a shock of 2.0% to future mortality improvement.
3. Impact of Shock – Subtract the present value of actuarial cash flows in step 1, floored at zero, from the actuarial present value of cash flows in step 2, floored at zero.

4. Factor Development – Divide the amount in Step 3 by the latest year-end statutory reserve held for the associated contracts. This equals the C-2b factor to use for RBC.
 - a. Note the statutory reserves may be as low as the sum of anticipated benefits over the next 12 months, as this is the floor within the VM-22 reserve calculation for longevity reinsurance.
 - b. If statutory reserves are low relative to the difference of the actuarial present value of cash flows and, therefore, are expected to produce unstable ratio levels, one modification to this proposed method for the Subgroup to consider is using the present value of Scenario 12 projected benefits instead of the statutory reserves. Of course, the disadvantage is that this number is less auditable.

5. RBC Amount – Calculate the C-2b amount by multiplying the factor from step 4 by the statutory reserves included in the RBC instructions.

We believe that using this “longevity shock method” is a direct and implementable approach to calculate a C-2b factor for longevity risk. In addition, this approach only shocks the longevity assumption in excess of moderately adverse risk, therefore avoiding double-counting between capital and reserves.

We also believe it is appropriate to include recurring premium within this calculation because, if such premium is guaranteed, then we would expect the floating leg payments to vary considerably from the fixed leg payment in an adverse scenario, and therefore still capture the inherent longevity risk associated with such agreements.

Thank you for consideration of our letter and, of course, we are happy to discuss further or answer any questions.

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