January 23, 2020

Mr. Philip Barlow
Chair, Life Risk-Based Capital (E) Working Group
National Association of Insurance Commissioners

Via email: Dave Fleming (dfleming@naic.org)

Re: Exposure of proposed longevity risk charge

Dear Philip,

On behalf of the Longevity Risk Task Force of the American Academy of Actuaries,[1] I am providing additional comments on the exposure of the longevity risk charge and risk-based capital (RBC) instructions update from the working group's December 7, 2019, meeting. We want to reinforce our recommendation to add a longevity risk charge to the Life Risk-Based Capital formula (LRBC), and to express our support to include an explicit correlation factor less than 100% within the C-2 component.

The task force's longevity factor recommendation was developed in line with the guidance from the Life Risk-Based Capital (E) Working Group to target a statistical safety level of 95th percentile associated with a longevity risk event that occurs over a 10-year period. The recommended longevity risk factors were calibrated to that target level. Given the close relationship between longevity risk (living longer than expected) and mortality risk (living shorter than expected), the Academy correlation recommendation (of -33%) was developed to maintain the 95th percentile capital target for the aggregate risk of uncertain future life span.

There are two different versions of the RBC worksheet and instructions included in the exposure. One includes a structure to allow for an explicit and transparent correlation between longevity and mortality risk with a correlation factor that can be specified. The second structure implicitly includes 100% correlation between longevity and mortality with no ability to adjust to a different correlation factor. We support the first structure that provides for an explicit correlation assumption and do not support the second, which keeps correlation implicit in the formula and restricted to a value of 100%.

Adding longevity risk and mortality risk with 100% correlation within LRBC would only represent a 95th percentile outcome for companies with concentrated exposure to either longevity

[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.

risk or mortality risk, while representing an outcome materially in excess of 95th percentile for companies with exposure to both longevity and mortality risks. Using a 100% correlation could reduce the usefulness of LRBC as a consistent tool to identify potentially weakly capitalized life insurers.

A 100% correlation assumption would express the view that an adverse longevity outcome where annuitants are living longer than expected would, with 100% certainty, occur concurrent with an equally adverse mortality outcome where insureds are dying sooner than expected. We do not believe this to be a plausible view of how longevity and mortality risk are related. Using a 100% correlation would result in a total C-2 amount that exceeds the 95th percentile objective.

While the task force understands that some regulators might not support a correlation assumption of -33% based on the concern that it may overstate the diversification between mortality risk and longevity risk, we believe that positive 100% correlation is unreasonable and inconsistent with the current RBC framework. The current framework clearly recognizes that the individual risk factors are not expected to all happen at the same time, and that is why a correlation adjustment across the various risk (C-0, C-1, etc.) is part of the current formula. We strongly believe that a similar approach should be applied for the longevity and mortality risk categories, because they are clearly not 100% correlated (and, in our view, are at least partially negatively correlated).

I shared a summary of the correlation recommendation and rationale on behalf of the Longevity Risk Task Force at the NAIC Summer 2019 National Meeting and would gladly share additional detail or address questions at a future call if that would be useful to the working group in moving forward toward implementation of longevity risk within Life Risk-Based Capital.

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Should you have any questions or comments regarding this letter, please contact Ian Trepanier, life policy analyst at the Academy (trepanier@actuary.org).

Sincerely,

Paul Navratil, MAAA, FSA
Chairperson, Longevity Risk Task Force
American Academy of Actuaries