

Proposal for Longevity Reinsurance C-2 Factor Development:

The proposed methodology is to develop the Life RBC C-2 Longevity Risk factor for Longevity Reinsurance, as the ratio of quantities A (the numerator) and B (denominator), as defined below:

- A – calculate combined impact of Mortality Level Stress (ML) and Mortality Trend Stress (MT) on Present Value of Liabilities (Benefits), with each covering 95th percentile* of respective mortality and mortality improvement scenarios. The combined impact (quantity A) would be calculated as SQRT of ((ML squared) + (MT squared)).
 - * Other confidence intervals may be considered during the factor development process: e.g. 99%
- B – is set equal to the Present Value of Liabilities (Benefits) used in the PBR VM-22 reserves

The rationale for selecting B as the denominator for the RBC factors (as opposed to reserves) is that the reserves tend to start out very small (often at the reserve floor level referenced above), but then grow substantially higher, while the impact of mortality and mortality deterioration tends to be proportional to liabilities only (not the reserves). Also, as the block of business matures, this would be consistent with higher volatility of the runoff business (when the volumes become small) and lack of credible older age mortality data.

Once the C-2 factor is developed, it won't be updated unless there are material changes in the mortality level and mortality trend patterns, or longevity reinsurance market distribution (e.g. expansion of the longevity reinsurance market to other countries).

Total Longevity Risk C-2 Capital would be equal to the C-2 factor (calculated as per above) times the average of 1-year liabilities**.

** Scheduled longevity benefits payable by the benefit provider within the next 12 months from the date of valuation.