**Longevity risk**

LRtbd

*Basis of Factors*

The factors chosen represent surplus needed to provide for claims in excess of reserves resulting from increased policyholder longevity calibrated to a 95th percentile level. For the purpose of this calibration aggregate reserves were assumed to provide for an 85th percentile outcome.

Longevity risk was considered over the entire lifetime of the policies since these annuity policies are generally not subject to repricing. Calibration of longevity risk considered both trend risk based on uncertainty in future population mortality improvements, as well as level or volatility risk which derives from misestimation of current population mortality rates or random fluctuations. Trend risk applies equally to all populations whereas level and volatility risk factors decrease with larger portfolios consistent with the law of large numbers.

Statutory reserve was chosen as the exposure base as a consistent measure of the economic exposure to increased longevity. Factors were also scaled by reserve level since number of insured policyholders is a less accessible measure of company specific volatility risk. Factors provided are pre-tax and were developed assuming a 21% tax adjustment would be subsequently applied.

*Specific Instructions for Application of the Formula*

Annual statement reference is for the total life contingent reserve for the products in scope. The scope includes annuity products with life contingent payments where benefits are to be distributed in the form of an annuity. It does not include annuity products that are not life contingent, or deferred annuity products where the policyholder has a right but not an obligation to annuitize. Line (3) for General Account Life Contingent Miscellaneous reserves is included in the event there are any reserves for products in scope reported on Exhibit 5 line 0799999; it is not meant to include cash flow testing reserves reported on this line. Included in scope are:

* Single Premium Immediate Annuities (SPIA) and other payout annuities in pay status
* Deferred Payout Annuities which will enter annuity pay status in the future upon annuitization
* Structured Settlements for annuitants with any life contingent benefits
* Group Annuities, such as those associated with pension liabilities with both immediate and deferred benefits

The total reserve exposure is then further broken down by size as in a tax table. This breakdown will not appear on the RBC filing software or on the printed copy, as the application of factors to reserves is completed automatically. The calculation is as follows:

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  |  | (1) |  | (2) |
| Line (5) | Life Contingent Annuity Reserves | Statement Value | Factor | RBC Requirement |
|  | First 250 Million |  | X 0.0000 = |  |
|  | Next 250 Million |  | X 0.0000 = |  |
|  | Next 500 Million |  | X 0.0000 = |  |
|  | Over 1,000 Million |  | X 0.0000 = |  |
|  |  |  |  |  |
|  | Total Life Contingent Annuity Reserves |  |  |  |