

Review of Life Mortality Risk-Based Capital (RBC)

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C-2 Work Group
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August 4, 2018

C-2 Work Group

Work Group Purpose:

The C-2 Work Group was formed in 2017 to review the current National Association of Insurance Commissioners (NAIC) C-2 RBC requirement for life insurance. The group is reviewing assumptions and methodology and will recommend revisions, as appropriate, which may include structure and factor updates.

In-Scope	Out-of-Scope
<ul style="list-style-type: none">Life Insurance<ul style="list-style-type: none">Individual & Industrial LifeGroup & Credit Life	<ul style="list-style-type: none">Accident & Health InsuranceAnnuities* <p>*The group will consider interdependencies, if any, with the ongoing work regarding a longevity risk charge within RBC</p>



C-2 Life Insurance Mortality Risk

- RBC requirement is for risk in excess of that covered by statutory policy reserves. Reserves are assumed to cover moderately adverse risks.
- Current Pre-Tax RBC Factors (used since 1993)*:

Net Amount at Risk (NAR)	Individual & Industrial Life C-2 factor per \$1K of NAR	Group & Credit Life C-2 factor per \$1K of NAR
First \$500M	2.30	1.80
Next \$4.5B	1.50	1.20
Next \$20B	1.20	0.90
Over \$25B	0.90	0.80

* Statistical safety level was based on 95th percentile over 5 years for individual (over 3 years for group).

- Life C-2 factors address mortality risks related to:
 - *Volatility* – natural mortality deviation
 - *Level* – base mortality rates
 - *Trend* – mortality improvement
 - *Catastrophe* – severe events



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Original (1993) Factor Development

- Used readily available statutory annual statement information
- Net Amount of Risk was chosen as the exposure basis
 - Reasonable basis for mortality risk exposure
 - Decreasing factor approach reflects the decreasing volatility of larger blocks
 - Recognized expected claims as a desirable basis
 - Not available in statutory annual statement
 - Actual claims would produce too volatile of a requirement



C-2 Work Group Progress

- Reviewed methodology used in current factor development
 - Approximately replicated original 1993 factors
- Reviewed other capital regimes' approaches for mortality risk
 - Including Solvency II, Canadian Life Insurance Capital Adequacy Test (LICAT), and the International Association of Insurance Supervisors (IAIS)
- Developing mortality risk distributions
 - Base mortality rates use unloaded 2017 Commissioners Standard Ordinary (CSO) Tables data
 - Updated catastrophe risk distribution calibrated from multiple models/other capital regimes; added terrorism scenario
 - Level and trend risk distributions in progress
- Created Monte Carlo Simulation Model
 - Have begun analyzing mortality risk with model output



C-2 Work Group Next Steps

- ❑ Finalize level and trend mortality risk distributions
- ❑ Analyze mortality risk with recommended assumptions
 - Will consider factor bases more granular than current approach, such as product type, underwriting, and in-force size
- ❑ Coordinate with the Academy Longevity Risk Task Force regarding any potential mortality risk covariance
- ❑ Based on current work progress, anticipate development and recommendation of a set of factors to be completed in the 2019–2020 time frame



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