

Capital Adequacy (E) Task Force

RBC Proposal Form

- | | | |
|---|---|---|
| <input type="checkbox"/> Capital Adequacy (E) Task Force | <input type="checkbox"/> Health RBC (E) Working Group | <input type="checkbox"/> Life RBC (E) Working Group |
| <input type="checkbox"/> Catastrophe Risk (E) Subgroup | <input type="checkbox"/> Investment RBC (E) Working Group | <input type="checkbox"/> Operational Risk (E) Subgroup |
| <input type="checkbox"/> C3 Phase II/ AG43 (E/A) Subgroup | <input type="checkbox"/> P/C RBC (E) Working Group | <input checked="" type="checkbox"/> Longevity Risk (A/E) Subgroup |

DATE: <u>6/6/19</u>	<u>FOR NAIC USE ONLY</u>
CONTACT PERSON: <u>Dave Fleming</u> TELEPHONE: <u>816-783-8121</u> EMAIL ADDRESS: <u>dfleming@naic.org</u> ON BEHALF OF: <u>Longevity Risk (A/E) Subgroup</u> NAME: <u>Rhonda Ahrens, Chair</u> TITLE: <u>Chief Actuary</u> AFFILIATION: <u>Nebraska Department of Insurance</u> ADDRESS: <u>1135 M Street, Suite 300</u> <u>Lincoln, NE 68501-2089</u>	Agenda Item # <u>2019-13-L</u> Year <u>2019</u> <b style="text-align: center;"><u>DISPOSITION</u> <input checked="" type="checkbox"/> ADOPTED <u>2/14/20 – WG</u> <u>4/30/20 – TF</u> <input type="checkbox"/> REJECTED _____ <input type="checkbox"/> DEFERRED TO _____ <input type="checkbox"/> REFERRED TO OTHER NAIC GROUP _____ <input checked="" type="checkbox"/> EXPOSED <u>11/4 12/4</u> <input type="checkbox"/> OTHER (SPECIFY) _____

IDENTIFICATION OF SOURCE AND FORM(S)/INSTRUCTIONS TO BE CHANGED

- | | | |
|--|---|---|
| <input type="checkbox"/> Health RBC Blanks | <input type="checkbox"/> Property/Casualty RBC Blanks | <input checked="" type="checkbox"/> Life and Fraternal RBC Instructions |
| <input type="checkbox"/> Health RBC Instructions | <input type="checkbox"/> Property/Casualty RBC Instructions | <input checked="" type="checkbox"/> Life and Fraternal RBC Blanks |
| <input type="checkbox"/> OTHER _____ | | |

DESCRIPTION OF CHANGE(S)

This proposal creates a new schedule in the life and fraternal RBC formula along with the necessary instructions to incorporate a charge for longevity risk.

REASON OR JUSTIFICATION FOR CHANGE **

The Longevity Risk (A/E) Subgroup was charged with providing recommendations for recognizing longevity risk in statutory reserves and/or RBC, as appropriate. This represents the Subgroup's recommendation as it applies to RBC.

Additional Staff Comments:

- 11-4-19: Proposal was exposed for comments (DBF)
- 12-4-19: Proposal was re-exposed for comments by the Life Risk-Based Capital (E) Working Group (DBF)
- 2-14-20: Proposal was adopted by the Life Risk-Based Capital (E) Working Group (DBF)
- 4-30-20: Proposal was adopted by the Capital Adequacy (E) Task Force (cgb)

** This section must be completed on all forms.

Revised 2-2019

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:

<u>Line (5)</u>	<u>Life Contingent Annuity Reserves</u>	(1) <u>Statement Value</u>	<u>Factor</u>	(2) <u>RBC Requirement</u>
	First 250 Million	_____	X 0.0171 =	_____
	Next 250 Million	_____	X 0.0108 =	_____
	Next 500 Million	_____	X 0.0095 =	_____
	Over 1,000 Million	_____	X 0.0089 =	_____
	Total Life Contingent Annuity Reserves	=====		=====

Longevity Risk

	<u>Annual Statement Source</u>	(1) <u>Statement Value</u>	<u>Factor</u>	(2) <u>RBC Requirement</u>
(1) <u>Life Contingent Annuity Reserves</u>				
(1) General Account Life Contingent Annuity Reserves	Exhibit 5 Column 2 Line 0299999, in part‡			
(2) General Account Life Contingent Supplemental Contract Reserves	Exhibit 5 Column 2 Line 0399999, in part‡			
(3) General Account Life Contingent Miscellaneous Reserves	Exhibit 5 Column 2 Line 0799999, in part‡			
(4) Separate Account (SA) Life Contingent Annuity Reserves	S/A Exhibit 3 Column 2 Line 0299999, in part‡			
(5) Total Life Contingent Annuity Reserves	Lines (1) + (2) + (3) + (4)		X † =	

† The tiered calculation is illustrated in the Longevity Risk section of the risk-based capital instructions.
‡ Include only the portion of reserves for products in scope per the instructions

Denotes items that must be manually entered on the filing software.

[CALCULATION OF TAX EFFECT FOR LIFE AND FRATERNAL RISK-BASED CAPITAL (CONTINUED)]

	Source	(1) RBC Amount	Tax Factor	(2) RBC Tax Effect
(134) Long-Term Care	LR019 Health Premiums Column (2) Line (28) + LR023 Long-Term Care Column (4) Line (7)	_____ X	0.2100	= _____
(135) Life Insurance C-2 Risk	LR025 Life Insurance Column (2) Line (8)	_____ X	0.2100	= _____
(136) Group Insurance C-2 Risk	LR025 Life Insurance Column (2) Lines (20) and (21)	_____ X	0.2100	= _____
(136b) Longevity C-2 Risk	LR024 Longevity Risk Column (2) Line (5)	_____ X	0.2100	= _____
(137) Disability and Long-Term Care Health Claim Reserves	LR024 Health Claim Reserves Column (4) Line (9) + Line (15)	_____ X	0.2100	= _____
(138) Premium Stabilization Credit	LR026 Premium Stabilization Reserves Column (2) Line (10)	_____ X	0.0000	= _____
(139) Total C-2 Risk	L(133) + L(134) + L(137) + L(138) + Square Root of [(L(135) + L(136))² + L(136b)² + 2 * (TBD Correlation Factor) * (L(135) + L(136)) * L(136b)]	_____		= _____
(140) Interest Rate Risk	LR027 Interest Rate Risk Column (3) Line (36)	_____ X	0.2100	= _____
(141) Health Credit Risk	LR028 Health Credit Risk Column (2) Line (7)	_____ X	0.0000	= _____
(142) Market Risk	LR027 Interest Rate Risk Column (3) Line (37)	_____ X	0.2100	= _____
(143) Business Risk	LR029 Business Risk Column (2) Line (40)	_____ X	0.2100	= _____
(144) Health Administrative Expenses	LR029 Business Risk Column (2) Line (57)	_____ X	0.0000	= _____
(145) Total Tax Effect	Lines (109) + (120) + (132) + (139) + (140) + (141) + (142) + (143) + (144)	_____		= _____

Alternative with Guardrail Factor:

L(133) + L(134) + L(137) + L(138) + Greatest of [Guardrail Factor * (L(135)+L(136)), Guardrail Factor * L(136b), Square Root of [(L(135) + L(136))² + L(136b)² + 2 * (TBD Correlation Factor) * (L(135) + L(136)) * L(136b)]]

Company Name

Confidential when Completed

(1)
RBC

NAIC Company Code

Insurance Risk (C-2)

- (43) Individual and Industrial Life Insurance
- (44) Group and Credit Life Insurance and FEGLI/SGLI
- (44b) Longevity Risk**
- (45) Total Health Insurance
- (46) Premium Stabilization Reserve Credit
- (47) Total (C-2) - Pre-Tax
- (48) (C-2) Tax Effect
- (49) Net (C-2) - Post-Tax

LR025 Life Insurance Column (2) Line (8)
 LR025 Life Insurance Column (2) Lines (20) and (21)
LR025 Longevity Risk Column (2) Line (5)
 LR024 Health Claim Reserves Column (4) Line (18)
 LR026 Premium Stabilization Reserves Column (2) Line (10)
 $L(45) + L(46) + \text{Square Root of } [(L(43) + L(44))^2 + 2 * (TBD \text{ Correlation Factor}) * (L(43) + L(44)) * L(44b)]$
 LR030 Calculation of Tax Effect for Life and Fraternal Risk-Based Capital Column (2) Line (139)
 Line (47) - Line (48)

Alternative with Guardrail Factor:
 $L(45) + L(46) + \text{Greatest of } [\text{Guardrail Factor} * (L(43)+L(44)), \text{Guardrail Factor} * L(44b), \text{Square Root of } [(L(43) + L(44))^2 + 2 * (TBD \text{ Correlation Factor}) * (L(43) + L(44)) * L(44b)]]$

Interest Rate Risk (C-3a)

- (50) Total Interest Rate Risk - Pre-Tax
- (51) (C-3a) Tax Effect
- (52) Net (C-3a) - Post-Tax

LR027 Interest Rate Risk Column (3) Line (36)
 LR030 Calculation of Tax Effect for Life and Fraternal Risk-Based Capital Column (2) Line (140)
 Line (50) - Line (51)

Health Credit Risk (C-3b)

- (53) Total Health Credit Risk - Pre-Tax
- (54) (C-3b) Tax Effect
- (55) Net (C-3b) - Post-Tax

LR028 Health Credit Risk Column (2) Line (7)
 LR030 Calculation of Tax Effect for Life and Fraternal Risk-Based Capital Column (2) Line (141)
 Line (53) - Line (54)

Market Risk (C-3c)

- (56) Total Market Risk - Pre-Tax
- (57) (C-3c) Tax Effect
- (58) Net (C-3c) - Post-Tax

LR027 Interest Rate Risk Column (3) Line (37)
 LR030 Calculation of Tax Effect for Life and Fraternal Risk-Based Capital Column (2) Line (142)
 Line (56) - Line (57)

