RBC Proposal Form

[   ] Capital Adequacy (E) Task Force   [   ] Health RBC (E) Working Group   [   ] Life RBC (E) Working Group

[   ] Catastrophe Risk (E) Subgroup   [   ] Investment RBC (E) Working Group   [   ] Operational Risk (E) Subgroup

[   ] C3 Phase II/ AG43 (E/A) Subgroup   [   ] P/C RBC (E) Working Group   [x] Longevity Risk (A/E) Subgroup

DATE: **4/29/2021**	**FOR NAIC USE ONLY**
CONTACT PERSON: **Dave Fleming**	Agenda Item # _2021-13-L_
TELEPHONE: **816-783-8121**	Year __2021__
EMAIL ADDRESS: **dfleming@naic.org**	**DISPOSITION**
ON BEHALF OF: **Longevity Risk (A/E) Subgroup**	[X] ADOPTED **6/30/21**
NAME: **Rhonda Ahrens, Chair**	[ ] REJECTED
TITLE: **Chief Actuary**	[ ] DEFERRED TO
AFFILIATION: **Nebraska Department of Insurance**	[ ] REFERRED TO OTHER NAIC GROUP
ADDRESS: **1135 M Street, Suite 300**	[ ] EXPOSED
Lincoln, NE 68501-2089	[ ] OTHER (SPECIFY)

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

[ ] Health RBC Blanks   [ ] Property/Casualty RBC Blanks   [x] Life and Fraternal RBC Instructions

[ ] Health RBC Instructions   [ ] Property/Casualty RBC Instructions   [x] Life and Fraternal RBC Blanks

[ ] OTHER _____

DESCRIPTION OF CHANGE(S)

LONGEVITY RISK
LR025-A

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.

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Longevity Risk

		(1)		(2)
	Annual Statement Source	Statement Value	Factor	RBC Requirement
Life Contingent Annuity Reserves				

CALCULATION OF TAX EFFECT FOR LIFE AND FRATERNAL RISK-BASED CAPITAL

			(1)			(2)
	Insurance Risk					
(133)	Disability Income Premium	LR019 Health Premiums Column (2) Lines (21) through (27)	$0 X	0.2100	=	$0
(134)	Long-Term Care	LR019 Health Premiums Column (2) Line (28) + LR023 Long-Term Care Column (4) Line (7)	$0 X	0.2100	=	$0
(135)	Life Insurance C-2 Risk	LR025 Life Insurance Column (2) Line (8)	$0 X	0.2100	=	$0
(136)	Group Insurance C-2 Risk	LR025 Life Insurance Column (2) Lines (20) and (21)	$0 X	0.2100	=	$0
(136b)	Longevity C-2 Risk	LR025-A Longevity Risk Column (2) Line (5)	$0 X	0.2100	=	$0
(137)	Disability and Long-Term Care Health Claim Reserves	LR024 Health Claim Reserves Column (4) Line (9) + Line (15)	$0 X	0.2100	=	$0
(138)	Premium Stabilization Credit	LR026 Premium Stabilization Reserves Column (2) Line (10)	$0 X	0.0000	=	$0
(139)	Total C-2 Risk	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)]]	$0			$0

Guardrail Factor: 0.0
Correlation Factor: 0.25

=D5+D6+D11+D13+MAX($L13*(D8+D9),$L13*D10,SQRT((D8+D9)^2+D10^2+2*$L14*(D8+D9)*D10))

CALCULATION OF AUTHORIZED CONTROL LEVEL RISK-BASED CAPITAL

(1)

Insurance Risk (C-2)

(43)	Individual and Industrial Life Insurance	LR025 Life Insurance Column (2) Line (8)	0
(44)	Group and Credit Life Insurance and FEGI/SGLI	LR025 Life Insurance Column (2) Lines (20) and (21)	0
(44b)	Longevity Risk	LR025-A Longevity Risk Column (2) Line (5)	$0
(45)	Total Health Insurance	LR024 Health Claim Reserves Column (4) Line (18)	$0
(46)	Premium Stabilization Reserve Credit	LR026 Premium Stabilization Reserves Column (2) Line (10)	$0
(47)	Total (C-2) - Pre-Tax	L(45) + L(46) + Greatest of [Guardrail Factor * (L(43)+L(44)), Guardrail Factor * L(44b), Square Root of [(L(43) + L(44))2 + L(44b)2 + 2 * (TBD Correlation Factor) * (L(43) + L(44)) * L(44b)]]	$0
(48)	(C-2) Tax Effect	LR030 Calculation of Tax Effect for Life and Fraternal Risk-Based Capital Column (2) Line (139)	$0
(49)	Net (C-2) - Post-Tax	Line (47) - Line (48)	$0

Guardrail F   0.0
Correlation   0.25

=D7+D8+MAX(H9*(D4+D5),H9*D6,SQRT((D4+D5)^2+D6^2+2*H10*(D4+D5)*D6))