

LIFE INSURANCE - OPTION 2

LR025

Basis of Factors

The factors developed represent surplus needed to provide for life insurance mortality risk, which is defined as adverse variance in life insurance deaths (i.e., insureds dying sooner than expected) over the remaining lifetime of a block of business while appropriately reflecting the pricing flexibility to adjust current mortality rates for emerging experience. The mortality risks included in the development of the factors were volatility, level, trend, and catastrophe. The factors were developed by stochastically simulating the run-off of in force life insurance blocks typical of U.S. life insurers.

The capital need, expressed as a dollar amount, is determined as the greatest present value of accumulated deficiencies at the 95th percentile of the stochastic distribution of scenarios over the remaining lifetime of a block of business while appropriately reflecting the pricing flexibility to adjust current mortality rates. Statutory losses are defined as the after-tax quantification of gross death benefits minus reserves released minus mortality margin present in reserves. The after-tax statutory losses are discounted to the present by using 20-year averages for U.S. swap rates. By selecting the largest present value accumulated loss across all projection years, the solved for capital ensures non-negative capital at all projection periods. Earlier period losses are not allowed to be offset by later period gains to reduce capital. The 95th percentile is the commonly accepted statistical safety level used for Life RBC C-2 mortality risk to identify weakly capitalized companies. The after-tax capital needs are translated to a factor expressed as a percentage of the net amount at risk (NAR). The pre-tax factor is determined by taking the after-tax factor divided by (1 minus the tax rate).

The factors are differentiated between individual & industrial life and group & credit life, and by in force block size. Within individual & industrial life, the factors are differentiated into categories by contract type depending on the degree of pricing flexibility. Within group & credit life, the factors are differentiated into categories by the remaining length of the premium rate term by group contract. There are distinct factors for contracts that have remaining premium rate terms 36 months and under and for contracts that have remaining premium rate terms over 36 months. The Federal Employees' Group Life Insurance (FEGLI) and Servicemembers' Group Life Insurance (SGLI) receive a separate factor applied to the amounts in force.

Specific Instructions for Application of the Formula

Lines 2, 5 and 21-41 are not applicable to Fraternal Benefit Societies.

The NAR is derived for each of the factor categories using annual statement sources and company records. In Force and Reserves amounts are net of reinsurance throughout. The In Force amounts throughout derived from company records need to be consistent with the Exhibit of Life Insurance. The Reserves amounts throughout derived from company records need to be consistent with Exhibit 5, Separate Accounts Exhibit, and Schedule S.

The NAR size bands apply to the total amounts for individual & industrial life and group term & credit life. The size bands are allocated proportionately to the NAR for each of the factor categories. Size band 1 is for NAR amounts up to \$500 million. Size band 2 is for NAR amounts greater than \$500 million and up to \$25 billion. Size band 3 is for NAR amounts greater than \$25 billion.

Pricing Flexibility for Individual Life Insurance is defined as the ability to materially adjust rates on in force contracts through changing premiums and/or non-guaranteed elements as of the valuation date and within the next 5 policy years, and reflecting typical business practices. For the purposes of assessing whether business is categorized as having "Pricing Flexibility", grouping of gross amounts may be done at either the contract level or at a cohort level consistent with grouping for pricing purposes. Direct insurers may assess pricing flexibility for gross amounts at either the contract level or at the cohort level used to make pricing decisions. The categorization for ceded amounts for direct insurers should be based on the terms of each reinsurance treaty. Non-affiliated reinsurers are to assess the flexibility to adjust rates on in force contracts based on the terms of each reinsurance treaty and constraints based on typical business practices. For example, if a non-affiliated reinsurer has historical precedent for changing in force rates, then that may provide support for assigning policies to the category with pricing flexibility. Affiliated reinsurers are to assign the factor category based on the direct policies. In force contracts may move between categories throughout their remaining lifetime if the degree of pricing flexibility changes as of each valuation date. A material rate adjustment is defined as the

ability to recover, on a present value basis, the difference in mortality provided for in the factors below for contracts with and without pricing flexibility. These differences in factors are shown in the Line (13) table below in the Permanent Life Flexibility Factor and Term Life Flexibility Factor columns. The flexibility factor for each category multiplied by the NAR results in the minimum dollar margin needed for a material rate adjustment, which can then be compared against margins available to adjust rates. In force contracts that have margin available that is greater than or equal to the minimum dollar margin needed may be assigned to the category for policies with pricing flexibility. Insurers may choose to assign contracts to the categories without pricing flexibility if the evaluation of margins is not completed or if the degree of pricing flexibility is uncertain.

Lines (11) and (12) Life Policies with Pricing Flexibility In Force and Reserves are derived from company records. Examples of products intended for this category include, but aren't limited to, participating whole life insurance, universal life insurance without secondary guarantees, and yearly renewable term insurance where scheduled premiums may be changed on an annual basis from the date of issue. The table below illustrates the RBC requirement calculation embedded in Line (13) for Life Policies with Pricing Flexibility.

<u>Line (13)</u>	<u>Life Policies with Pricing Flexibility</u>	<u>(1)</u> <u>Statement Value</u>	<u>Factor</u>	<u>(2)</u> <u>RBC Requirement</u>	<u>Permanent Life</u> <u>Flexibility Factor</u>	<u>Term Life</u> <u>Flexibility Factor</u>
	<u>Allocation of</u> First \$500 Million	_____	X 0.00190 .00220 =	_____	0.002000230	0.000800110
	<u>Allocation of</u> Next \$24,500 Million	_____	X 0.00075 .00105 =	_____	0.000900120	0.000350065
	<u>Allocation of</u> Over \$25,000 Million	_____	X 0.00050 .00080 =	_____	0.000600085	0.000250055
	Total Life Policies with Pricing Flexibility Net Amount at Risk	=====		=====		

Lines (14) and (15) Term Life Policies without Pricing Flexibility In Force and Reserves are derived from company records. Examples of products intended for this category include, but aren't limited to, level term insurance with guaranteed level premiums and yearly renewable term insurance where scheduled premiums may not be changed. The table below illustrates the RBC requirement calculation embedded in Line (16) for Term Life Policies without Pricing Flexibility.

<u>Line (16)</u>	<u>Term Life Policies without Pricing Flexibility</u>	<u>(1)</u> <u>Statement Value</u>	<u>Factor</u>	<u>(2)</u> <u>RBC Requirement</u>
	<u>Allocation of</u> First \$500 Million	_____	X 0.00270 00280 =	_____
	<u>Allocation of</u> Next \$24,500 Million	_____	X 0.00110 00120 =	_____
	<u>Allocation of</u> Over \$25,000 Million	_____	X 0.00075 00085 =	_____
	Total Term Life Policies without Pricing Flexibility Net Amount at Risk	=====		=====

Lines (17) and (18) Permanent Life Policies without Pricing Flexibility In Force and Reserves are derived from the aggregate amounts derived in lines (1) to (10) minus the amounts recorded in the other individual life categories. Examples of products intended for this category include, but aren't limited to, universal life with secondary guarantees and non-participating whole life insurance. Policies that aren't recorded in the other individual life categories default to this category which has the highest factors. The table below illustrates the RBC requirement calculation embedded in Line (19) for Permanent Life Policies without Pricing Flexibility.

<u>Line (19)</u>	<u>Permanent Life Policies without Pricing Flexibility</u>	<u>(1)</u> <u>Statement Value</u>	<u>Factor</u>	<u>(2)</u> <u>RBC Requirement</u>
	<u>Allocation of</u> First \$500 Million	_____	X 0.00390	_____

<u>Allocation of</u> Next \$24,500 Million	_____	<u>00400</u> =	_____
		X <u>0.00165</u>	_____
<u>Allocation of</u> Over \$25,000 Million	_____	<u>00175</u> =	_____
		X <u>0.00110</u>	_____
		<u>00120</u> =	_____
Total Permanent Life Policies without Pricing Flexibility	=====		=====
Net Amount at Risk			

Lines (35) and (36) Group & Credit Life In Force and Reserves with Remaining Rate Terms 36 Months and Under are derived from company records. This category includes group contracts where the premium terms have 36 months or fewer until expiration or renewal. Insurers may choose to assign contracts to the category for remaining rate terms over 36 months if the evaluation of remaining rate terms is not completed. The in force amount classified in this category needs to be consistent with the Exhibit of Life Insurance. The reserves amount classified in this category needs to be consistent with Exhibit 5 used for Lines (28) and (29), Separate Accounts Exhibit used for Line (30), and Schedule S used for Lines (31) and (32). Federal Employees' Group Life Insurance (FEGLI) and Servicemembers' Group Life Insurance (SGLI) contracts are excluded. The table below illustrates the RBC requirement calculation embedded in Line (37) for Group & Credit Life Net Amount at Risk with Remaining Rate Terms 36 Months and Under.

<u>Line (37)</u>	<u>Group & Credit Life with Remaining Rate Terms 36 Months and Under</u>	(1) <u>Statement Value</u>	<u>Factor</u>	(2) <u>RBC Requirement</u>
	<u>Allocation of</u> First \$500 Million	_____	X <u>0.00130</u>	_____
			<u>00140</u> =	_____
	<u>Allocation of</u> Next \$24,500 Million	_____	X <u>0.00045</u>	_____
			<u>00055</u> =	_____
	<u>Allocation of</u> Over \$25,000 Million	_____	X <u>0.00030</u>	_____
			<u>00040</u> =	_____
	Total Group & Credit Life Net Amount at Risk with Remaining Rate Terms 36 Months and Under	=====		=====

Lines (38) and (39) Group & Credit Life In Force and Reserves with Remaining Rate Terms Over 36 Months are derived from the aggregate amounts derived in lines (21) to (34) minus the Group & Credit Life In Force and Reserves with Remaining Rate Terms 36 Months and Under in lines (35) and (36). FEGLI and SGLI contracts are excluded. The table below illustrates the RBC requirement calculation embedded in Line (40) for Group & Credit Life Net Amount at Risk with Remaining Rate Terms Over 36 Months.

<u>Line (40)</u>	<u>Group & Credit Life with Remaining Rate Terms Over 36 Months</u>	(1) <u>Statement Value</u>	<u>Factor</u>	(2) <u>RBC Requirement</u>
	<u>Allocation of</u> First \$500 Million	_____	X <u>0.00180</u>	_____
			<u>00190</u> =	_____
	<u>Allocation of</u> Next \$24,500 Million	_____	X <u>0.00070</u>	_____
			<u>00080</u> =	_____
	<u>Allocation of</u> Over \$25,000 Million	_____	X <u>0.00045</u>	_____
			<u>00055</u> =	_____
	Total Group & Credit Life Net Amount at Risk with Remaining Rate Terms Over 36 Months	=====		=====

Line (41) FEGLI/SGLI In Force amounts are retrieved from the Exhibit of Life Insurance. The capital factor assigned is the same as the largest size band for group & credit life contracts with remaining rate terms 36 months and under.

	(1)		(2)
<u>Line (41) FEGLI/SGLI</u>	<u>Statement Value</u>	<u>Factor</u>	<u>RBC Requirement</u>
In Force	_____	X 0.00030 <u>00040</u> =	_____

All amounts should be entered as required. The risk-based capital software will calculate the RBC requirement for individual and industrial and for group and credit.