



ACTUARIAL SOCIETY
SOUTH AFRICA

The Power of Reinsurance: **How to leverage it for maximum capital efficiency**

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Introduction to Capital Optimisation





$$\text{SCR cover ratio} = \frac{\text{Own Funds}}{\text{SCR}}$$





Reinsurance capital optimisation



1. Offset clause



ARTICLE XVIII

OFFSET

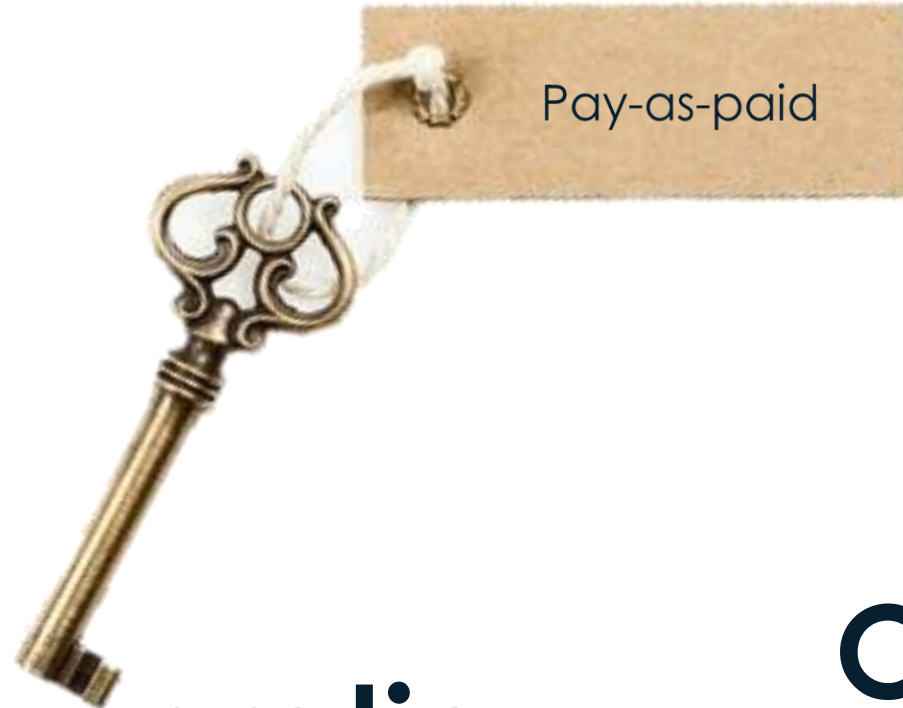
- A. The Company and the Reinsurer shall have the right to offset any balance or amounts due from one party to the other under the terms of this Contract. The party asserting the right of offset may exercise such right any time whether the balances due are on account of premiums or losses or otherwise; however, in the event of the insolvency of any party hereto, offset shall be in accordance with applicable law.
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1. Offset clause



$$\text{SCR cover ratio} = \frac{\text{Own Funds}}{\text{SCR}}$$

2. Pay-as-paid clauses



$$\text{SCR cover ratio} = \frac{\text{Own Funds}}{\text{SCR}}$$

3. Collateral for non-equivalent reinsurers



$$\text{SCR cover ratio} = \frac{\text{Own Funds}}{\text{SCR}}$$

4. Stop loss



$$\text{SCR cover ratio} = \frac{\text{Own Funds}}{\text{SCR}}$$

4. Stop loss



FSI 4.3, paragraph 4.8 footnote

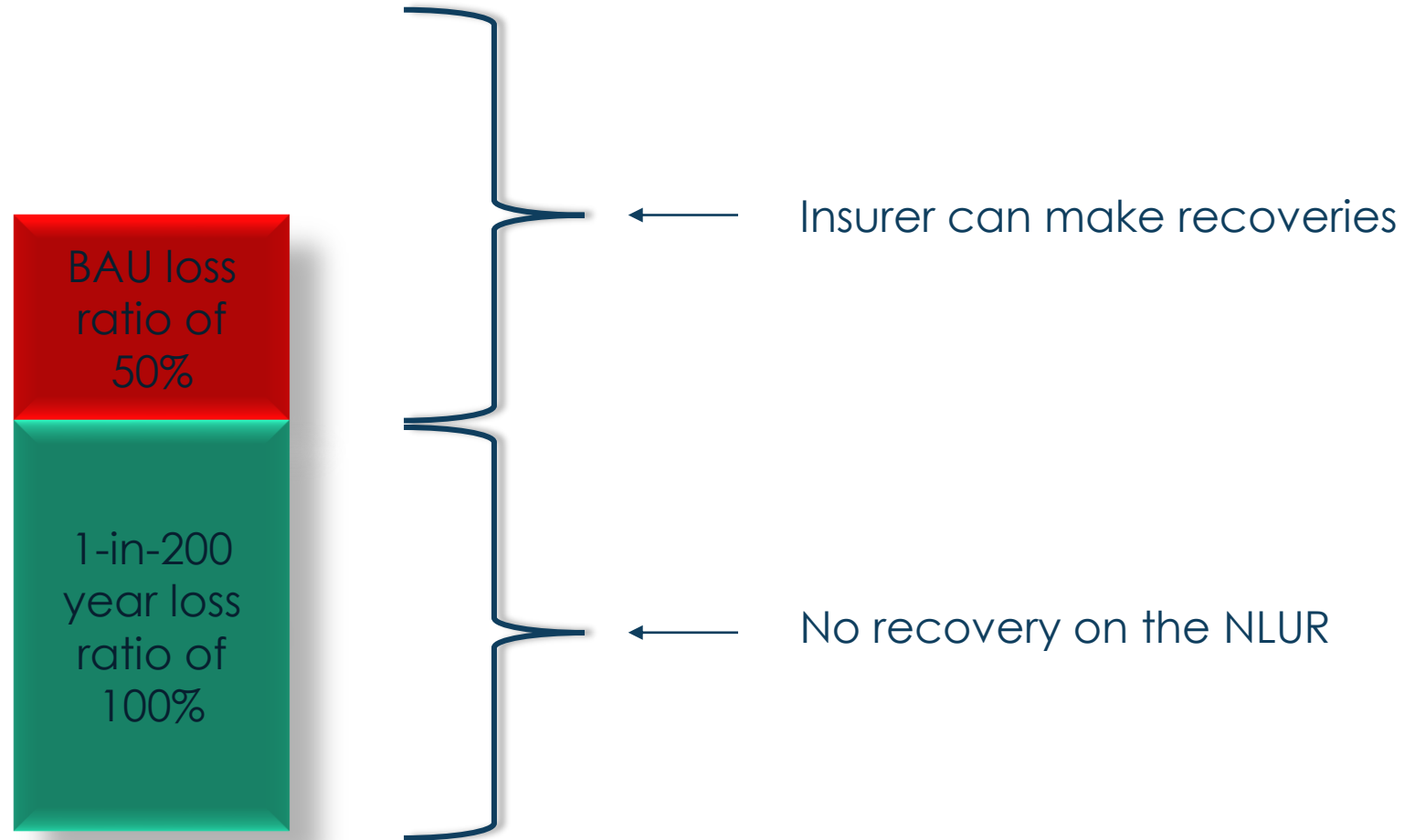
¹ In calculating this amount, insurers should determine which portion of the overall 1-in-200 year loss is covered by the terms of the stop-loss reinsurance arrangement, and ensure there is no duplicate allowance for risk mitigation. A suitable expected loss ratio assumption should be used to determine the combined ratio in a 1-in-200 year scenario, taking into account that expected profits would likely offset a portion of the 1-in-200 year loss prior to the stop-loss being triggered.

GN to FSI 4.3 Section C, paragraph 10

Calculation Step 2: Calculate expected stop-loss recovery

- b) Express the total expected loss as a percentage of the premium, net of applicable reinsurance of the business which is covered by the stop loss program.
 - c) Assess the total expected loss (expressed as a ratio) in relation to the stop-loss attachment point loss ratio and stop-loss upper limit loss ratio.
 - d) Calculate the expected stop-loss recovery from the stop-loss reinsurance arrangement.
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4. Stop loss



4. Economic capital versus regulatory capital



$$\text{SCR cover ratio} = \frac{\text{Own Funds}}{\text{SCR}}$$

5. Pseudo Excess-Of-Loss



$$\text{SCR cover ratio} = \frac{\text{Own Funds}}{\text{SCR}}$$

6. Internal partial rating model



$$\text{SCR cover ratio} = \frac{\text{Own Funds}}{\text{SCR}}$$

6. Internal partial rating model



FSI 4.1 paragraph 10.8

10.8. The calculation of the concentration risk capital requirement per counterparty i ($Conc_i$) under step 2 must be calculated as:

$$Conc_i = \Delta BOF | concentration\ shock_i$$

Where:

ΔBOF = The change in the value of basic own funds

$concentration\ shock_i$ = An instantaneous decrease in the value of E_i , where the decrease in value must be calculated as:

$$XS_i \cdot g_i \cdot Assets_{xI}$$

g_i = A factor dependent on the credit quality step of the counterparty i , as set out in the table below

Credit Quality Step of counterparty i	g_i
1 to 6	0.12
7	0.19
8	0.27
9	0.36
10	0.45
11	0.53
12	0.56

Credit Quality Step of counterparty i	g_i
13	0.58
14	0.61
15	0.63
16	0.66
17	0.68
18	0.71
Unrated	0.73

6. Internal partial rating model



FSI 4.1 paragraph 10.9

- 10.9. For unrated counterparties that are insurers regulated by the Prudential Authority that have sufficient eligible own funds to meet their MCR, g_i must be set according to the SCR cover ratio of the insurance counterparty, based on the table below:

SCR cover ratio	g_i
196%	0.12
175%	0.21
122%	0.27
100%	0.645
95%	0.73

Where the SCR cover ratio of the counterparty falls between the ratios specified above, the g_i factor should be linearly interpolated from the values in the table. Where the SCR cover ratio exceeds 196%, the g_i factor should be set to 0.12. Where the SCR cover ratio is less than 95% or eligible own funds are insufficient to meet the MCR, the g_i factor should be set to 0.73.

6. Internal partial rating model



$$\text{SCR cover ratio} = \frac{\text{Own Funds}}{\text{SCR}}$$

7. Other options



01

Profit Commissions

Allow for profit commissions within the technical provisions as per paragraph 6.18 of FSI 2.2



02

Catastrophe Risk

Move from Catastrophe risk charge Method 2 to Method 1



03

Any other options?

Questions?

Contact Details



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