

Current Issues in General Insurance

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Non Traditional Role of Actuaries in Reinsurance Broking

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Traditional vs Non Traditional



- Traditional
 - Pricing – insurers or consultants
 - Reserving
- Non-Traditional
 - Reinsurance Broking Analytics

Actuarial Analytics in RI Broking



- Margin Analysis
- Technical Pricing
- Structural Considerations
- Dynamic Financial Analysis
 - Frequency-Severity
 - Exposure Curves
 - Monte Carlo Simulations
- Current issues in India

Margin Analysis

Projected Reinsurers' Margin

Figures in millions INR

	Expiring – Surplus
Treaty Capacity (PML)	5,000
2025/26 EPI	2,500
Treaty Balance Ratio	2
Projected Loss Ratio*	60.5%
Non-Cat Loss Ratio	45.2%
Cat Loss Ratio**	15.2%
Commission***	25.0%
Ceded Margin %	14.5%

* Projected LR allowed for 15% rate increase, that the Company expected in 2025/26.

** Cat loading considered FL, EQ and Cyclone perils, with details in the table below.

*** Commission based on the sliding scale commission clause in the slip. Brokerage is not considered

	Earthquake	Flood	Cyclone	Total
Actual loss experience	0%	3.5%	3.0%	6.5%
Cat Modelling Output	2.4%	24.6%	6.2%	33.2%
Blended Approach*	2.4%	6.6%	6.2%	15.2%

Technical Pricing

						Figures in millions INR
Layer	1 st	2 nd	3 rd	4 th	5 th	Total
Class	All Perils	All Perils	All Perils	All Perils	All Perils	
Limit	150	700	500	5,500	3,000	9,840
Attachment	150	300	1,000	1,500	7,000	7,000
Reinstatements	3@100%	3@100%	2@100%	2@100%	1@100%	
2025 Mean Recoveries	133.61	184.15	140.03	165.89	14.52	638.20
Rate Comparison						
2024/25 FOT ROL	48.8%	46.8%	15.1%	8.2%	3.80%	9.60%
2025/26 Technical ROL	72.20%	47.70%	24.90%	6.10%	1.80%	9.00%
2025/26 Projected ROL						
Premium Comparison						
2024/25 FOT Premium	68.37	187.15	121.12	451.27	114.28	942.20
2025/26 Technical Premium	101.05	190.78	199.53	336.50	54.54	882.39
2025/26 Projected Premium						

Structural Considerations

Modelled Loss OEP : Verisk Earthquake		Figures in millions INR
Return Period	OEP	
1,000	19,604.96	
500	13,832.78	
250	7,634.07	
200	6,206.54	
100	3,562.39	
50	2,026.49	
25	893.76	
20	634.72	
10	201.30	
5	35.21	
3	5.33	
2	0.44	
AAL	192.24	
Standard Deviation	1,292.47	

→ Vertical Limit Adequacy

Horizontal Limit Adequacy ←

Figures in millions INR					
Layer	1 st	2 nd	3 rd	4 th	5 th
Limit	150	700	500	5,500	3,000
Attachment	150	300	1,000	1,500	7,000
Reinstatement / AAL	3 @ 100% 420	3 @ 100% 1,200	2 @ 100% 1,600	2 @ 100% 11,000	1 @ 100% 6,000

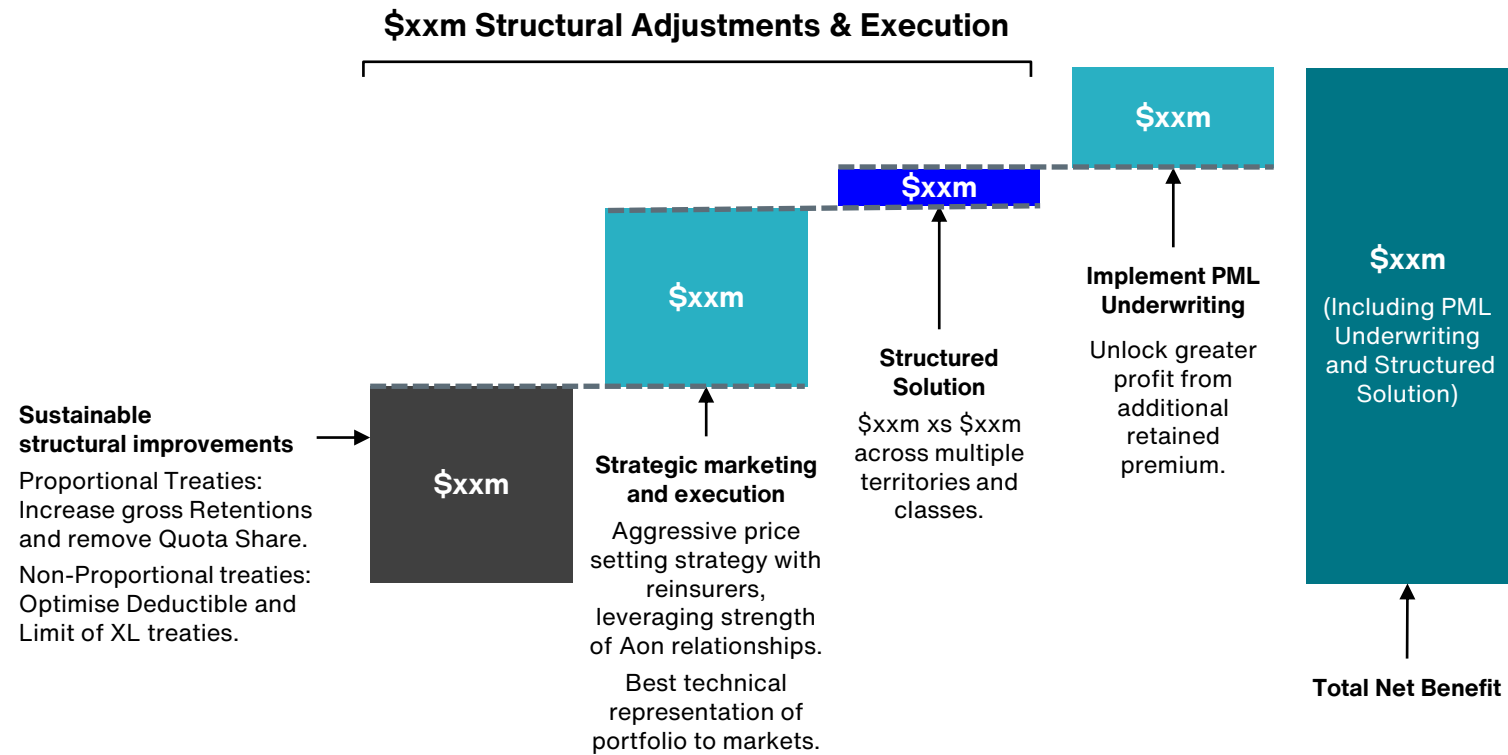
Percentile of Recoveries						
Return Period	Percentile					
2	50.00%	140.00	22.97	0.00	0.00	0.00
5	80.00%	263.13	400.00	178.25	0.00	0.00
10	90.00%	295.62	482.38	800.00	0.00	0.00
50	98.00%	454.27	803.85	918.19	2,938.64	0.00
100	99.00%	536.71	981.22	1,311.86	4,823.82	0.00
200	99.50%	568.71	1,156.10	1,600.00	5,500.00	1,071.37
250	99.60%	589.34	1,200.00	1,600.00	5,500.00	1,955.58
500	99.80%	667.25	1,208.46	1,600.00	5,500.00	3,000.00
1000	99.90%	700.00	1,363.35	1,860.69	5,689.13	3,000.00

Dynamic Financial Analysis – P&L

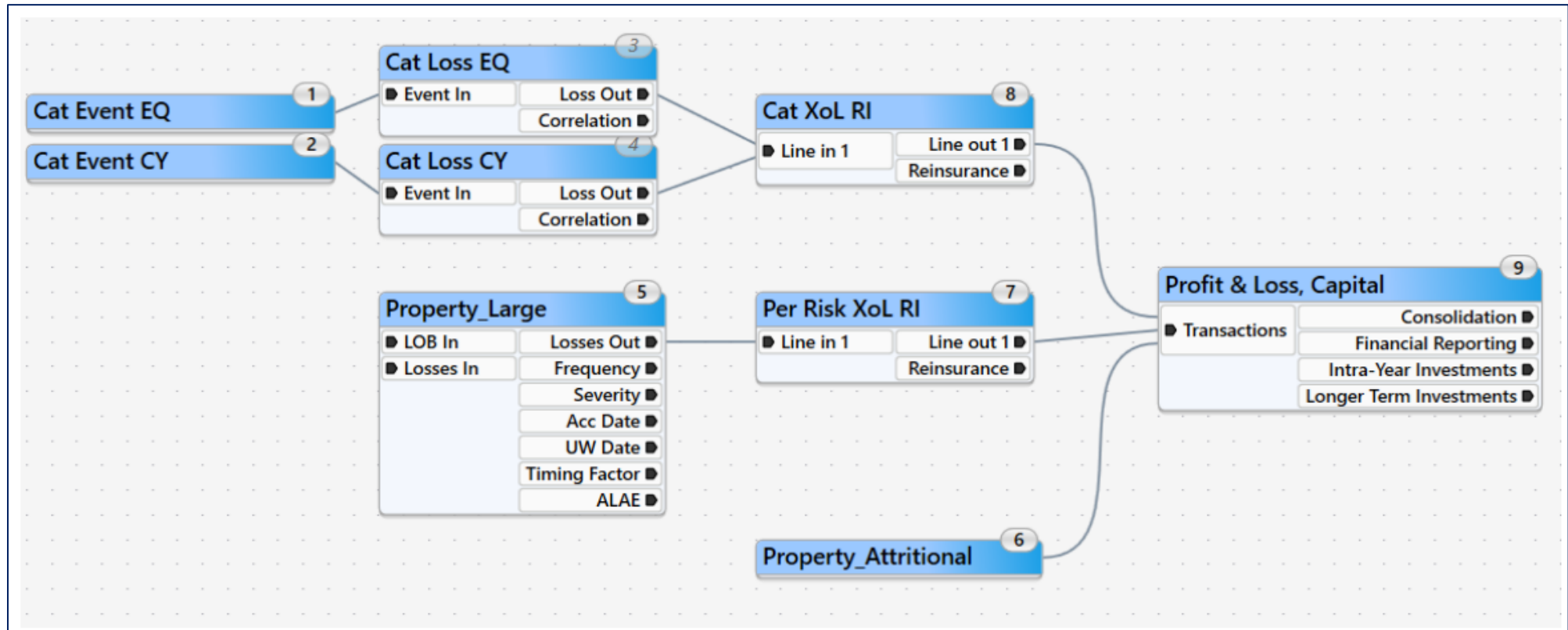
Reinsurance Summary Exhibit	Expiring	Option 1	Option 2	Option 3
	Net Risk	Net Risk	Net Risk	Net Risk
	Economic	Economic	Economic	Economic
Net Premiums Earned	xxxxx	xxxxx	xxxxx	xxxxx
Net Claims Incurred	xxxxx	xxxxx	xxxxx	xxxxx
Net Acquisition + Operating Expenses	xxxxx	xxxxx	xxxxx	xxxxx
Investment Income	xxxxx	xxxxx	xxxxx	xxxxx
Profit / Loss	xxxx	xxxx	xxxx	Xxxx
Standard deviation	xxxxxxx	xxxxxxx	xxxxxxx	xxxxxxx
CV	xx %	xx %	xx %	xx %
Value at Risk:				
1 in 500	(10,807)	(10,877)	(9,665)	(9,549)
1 in 250	(7,043)	(7,114)	(6,622)	(6,507)
1 in 200	(6,432)	(6,502)	(6,069)	(5,953)
1 in 100	(5,230)	(5,300)	(4,975)	(4,859)
1 in 50	(4,214)	(4,284)	(4,016)	(3,901)
1 in 20	(2,882)	(2,953)	(2,757)	(2,641)
1 in 10	(1,780)	(1,851)	(1,707)	(1,592)
1 in 5	(447)	(518)	(441)	(326)

DFA – Net Benefit Analysis

Net Benefit at renewal



Simulation Software – ReMetrica



Current Issues

- RBC – Risk Based Capital
- IFRS 17