

ACME Insurance
Quota Share
Risk Transfer - Simulation Analysis

Table 1 - Summary of Terms - Contract #1

Inception Date	1/1/2008
Estimated Subject Premium	10,000,000
Reinsurance Premium	8,000,000
Cession	80.0%
Ceding Commission	25.0%
Profit Commission	
Loss Ratio	66.0%
Profit Swing	5.0%
Loss Ratio Cap	100.0%
Reinsurers Expenses as % of Prem.	
Brokerage	2.0%
Underwriting Exp.	2.0%
Federal Excise Taxes	1.0%

Table 3 - Results

Frequency	Sum of Col (10) / 10,000	19.7%
Severity	Sum of Col (9) / Sum of Col (10)	-14.5%
ERD as a % of Reins Prem.	ERD / Reinsurance Premium	-2.85%

Table 2 - Simulation Assumptions

Model Loss Ratio excluding ALAE	
Lognormal distribution	
Mean	65.0%
Standard Deviation	20.0%
Minimum Loss	45.0%

Table 4 - Percentiles

Percentile	Loss Ratio	NPV Of Reinsurer Profit / Loss
75%	95.9%	4.1%
80%	99.7%	0.3%
90%	110.5%	-10.5%
95%	118.5%	-18.5%

Iteration #	Direct Loss and LAE Ratio (1)	Direct Losses and LAE (2)	Ceded Losses and LAE (3)	NPV Treaty Losses (4)	Ceding Commission (5)	Profit Commission (6)	NPV Treaty Premium Net of Ceding & Profit Comm (7)	NPV Reinsurer Gain/Deficit (8)	NPV Reinsurer Deficit as a % of NPV of Treaty Premium (9)	Frequency of Deficit (10)
1	63%	6,342,599	5,074,079	4,649,828	2,000,000	164,736	5,724,700	1,074,871	0.0%	0
2	58%	5,792,740	4,634,192	4,246,721	2,000,000	320,000	5,578,412	1,331,691	0.0%	0
3	52%	5,175,628	4,140,502	3,794,309	2,000,000	320,000	5,578,412	1,784,103	0.0%	0
4	45%	4,500,000	3,600,000	3,298,999	2,000,000	320,000	5,578,412	2,279,413	0.0%	0
5	45%	4,500,000	3,600,000	3,298,999	2,000,000	320,000	5,578,412	2,279,413	0.0%	0
6	80%	7,973,888	6,379,111	5,845,744	2,000,000	0	5,879,913	34,169	0.0%	0
7	45%	4,500,000	3,600,000	3,298,999	2,000,000	320,000	5,578,412	2,279,413	0.0%	0
8	53%	5,307,827	4,246,262	3,891,226	2,000,000	320,000	5,578,412	1,687,186	0.0%	0
9	69%	6,928,552	5,542,842	5,079,397	2,000,000	0	5,879,913	800,516	0.0%	0
10	45%	4,500,000	3,600,000	3,298,999	2,000,000	320,000	5,578,412	2,279,413	0.0%	0
9,990	48%	4,783,431	3,826,745	3,506,785	2,000,000	320,000	5,578,412	2,071,627	0.0%	0
9,991	113%	11,284,849	9,027,879	7,331,108	2,000,000	0	5,879,913	-1,451,196	-24.7%	1
9,992	55%	5,470,802	4,376,642	4,010,705	2,000,000	320,000	5,578,412	1,567,707	0.0%	0
9,993	86%	8,606,365	6,885,092	6,309,420	2,000,000	0	5,879,913	-429,507	-7.3%	1
9,994	122%	12,230,549	9,784,439	7,331,108	2,000,000	0	5,879,913	-1,451,196	-24.7%	1
9,995	54%	5,350,772	4,280,618	3,922,709	2,000,000	320,000	5,578,412	1,655,703	0.0%	0
9,996	91%	9,128,508	7,302,806	6,692,208	2,000,000	0	5,879,913	-812,295	-13.8%	1
9,997	81%	8,050,084	6,440,067	5,901,604	2,000,000	0	5,879,913	-21,691	-0.4%	1
9,998	106%	10,578,897	8,463,117	7,331,108	2,000,000	0	5,879,913	-1,451,196	-24.7%	1
9,999	79%	7,892,701	6,314,161	5,786,225	2,000,000	0	5,879,913	93,688	0.0%	0
10,000	83%	8,319,856	6,655,885	6,099,377	2,000,000	0	5,879,913	-219,464	-3.7%	1

Column

- (1) Based upon the model assumptions in Table 2
(2) Estimated Subject Premium x Col (1)
(3) Cession Percent x Col (2)
(4) Minimum of Col (3) or Loss Ratio Cap x Reinsurance Premium, multiplied by Page 3 Col (2)
(5) Reinsurance Premium x Ceding Commission
(6) 1% for every 1% of ultimate loss that is lower than 66%, maximum adjustment 5%
(7) Total Page 2 Col (6) + Col (6) / [(1 + Discount Rate)^2.0833], assumes profit commission is paid 2 years one month after policy effective date
(8) Col (7) - Col (4)
(9) If Col (8) < 0 then Col (8) / Col (7) else 0
(10) If Col (8) < 0 then 1 else 0

Discount Rate Assumption:

(1)	Interest Rate	2.9%
(2)	Discount Factor	0.980

Time of Payments in Months	Premium	NPV of Premium	Ceding Commission	Premium Net of Ceding Commission	Discounted Premium Net of Ceding Commission
(3)	(4a)	(4b)	(5)	(6)	(7)
4	2,000,000	1,981,032	-500,000	1,500,000	1,485,774
7	2,000,000	1,966,925	-500,000	1,500,000	1,475,193
10	2,000,000	1,952,917	-500,000	1,500,000	1,464,688
13	2,000,000	1,939,010	-500,000	1,500,000	1,454,257
Total	8,000,000	7,839,884	-2,000,000	6,000,000	5,879,913

Column/Row	Note
(1)	Page 4, Row (12)
(2)	Total Col (7) / Total Col (6)
(3)	Month premium is due, assumes quarterly payments due one month after quarter end.
(4a)	Reinsurance Premium divided by 4, assumes quarterly payments.
(4b)	$\text{Col (4a)} / \{[1 + \text{Col (1)}] ^ (\text{Col (3)} / 12)\}$
(5)	Ceding Commission divided by 4, assumes quarterly payments.
(6)	$\text{Col (4a)} + \text{Col (5)}$
(7)	$\text{Col (6)} / \{[1 + \text{Col (1)}] ^ (\text{Col (3)} / 12)\}$

Discount Rate Assumption:

(1)	Interest Rate	2.9%
(2)	Discount Factor	0.916

Years of <u>Maturity</u>	% of Ultimate Paid		Discounted
(3)	<u>Cum.</u>	<u>Incr.</u>	<u>Payment</u>
(4)	(5)	(6)	(7)
0	0.00%	0.00%	0.00%
1	20.00%	20.00%	19.72%
2	42.00%	22.00%	21.08%
3	60.00%	18.00%	16.76%
4	70.00%	10.00%	9.05%
5	77.50%	7.50%	6.59%
6	82.00%	4.50%	3.85%
7	90.00%	8.00%	6.64%
8	95.00%	5.00%	4.04%
9	100.00%	5.00%	3.92%

<u>Column/Row</u>	<u>Note</u>
(1)	Page 4, Row (12)
(2)	Sum Col (6) / Sum of Col (5)
(4)	Industry Benchmarks
(5)	Current (4) - prior (4)
(6)	Col (5) discounted to time zero

Years of Maturity	% of Ultimate Losses Paid		Time of Payments in Months	% of Ultimate Premiums Paid		Daily Treasury Yield Curve	
	<u>Cum.</u>	<u>Incr.</u>		<u>Cum.</u>	<u>Incr.</u>	<u>Maturity</u>	<u>Rates</u>
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
0	0.00%	0.00%	4	25.00%	25.00%	0.5	3.32%
1	20.00%	20.00%	7	50.00%	25.00%	1.0	3.17%
2	42.00%	22.00%	10	75.00%	25.00%	2.0	2.88%
3	60.00%	18.00%	13	100.00%	25.00%	3.0	2.89%
4	70.00%	10.00%				5.0	3.28%
5	77.50%	7.50%				7.0	3.54%
6	82.00%	4.50%				10.0	3.91%
7	90.00%	8.00%					
8	95.00%	5.00%					
9	100.00%	5.00%					
10	100.00%	0.00%					
(9)	Duration of Loss Payments		3.14				
(10)	Duration of Premium Payments		0.71				
(11)	Duration of Net Cash Flows		2.43				
(12)	Selected Interest Rate		2.9%				

<u>Column/Row</u>	<u>Note</u>
(2)	Page 3 Column (4)
(3)	Page 3 Column (5)
(4), (5), (6)	Based on premium payments on Page 2
(8)	Rates from U.S. Treasury Securities as of 1/2/08
(9)	Based on loss payment pattern in Column (3)
(10)	Based on premium payment pattern in Column (6)
(11)	Row (9) - Row (10)
(12)	Selected