

Summary of Indications

	Quota Share Commission	Aggregate Excess Rate	Property Excess Premium
ROEC	28.5%	7.4%	
LR	25.7%		
Market Combined Ratio Median	4.3%		
Market Combined Ratio Upper	16.8%		
Indirect Industry	22.7%	6.8%	
Rate On Line Low			\$ 750,000
Rate On Line High			\$ 1,250,000
Expected profits	24.8%		
Actual	25.0%	6.8%	\$ 1,027,000

Return on Economic Capital Method - Quota Share

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
Calendar Year	Paid Duration	Paid Loss (%)	Duration Matched Rate (%)	Discount Factor To Time Zero	Disc. Percent Paid	Net Premium paid in	Disc. Percent Outs.	Disc. Outs. Loss	Needed Capital	Capital Charge at 5.00%	Disc. Capital Charge
				1.000		35,751	100.00	92.00	32,200	13,321	
2014	0.500	5.93	0.10	1.000	5.93	-	94.07	86.11	30,140	13,009	329
2015	1.500	8.25	0.26	0.996	8.22		85.81	78.15	27,351	11,648	650
2016	2.500	28.14	0.58	0.986	27.74		57.67	50.84	17,794	6,933	574
2017	3.500	2.48	1.02	0.965	2.39		55.19	49.45	17,306	7,057	335
2018	4.500	15.02	1.51	0.935	14.04		40.17	36.02	12,608	5,154	330
2019	5.500	14.11	1.93	0.900	12.71		26.06	23.29	8,152	3,301	232
2020	6.500	8.44	2.28	0.864	7.29		17.62	15.83	5,541	2,277	143
2021	7.500	4.36	2.55	0.828	3.61		13.26	12.16	4,255	1,844	94
2022	8.500	4.46	2.75	0.794	3.54		8.80	8.21	2,874	1,300	73
2023	9.500	3.80	2.94	0.759	2.88		5.00	4.79	1,677	806	49
2024	10.500	5.00	3.07	0.728	3.64		0.00	0.00	0	40	29

Calculations

(5) $1/(1+(4)/100)^{(2)}$

(6) (3) x (5)

(7) 100 - Cumulative of (3)

(8) Sumproduct of future (3) and (5) divided by current (5)

(9) (8) x (c) x Expected loss Ratio of 70%

(10) Initial Value: (9) x Loss ratio of 123.1 (99.5th percentile) / Expected Loss Ratio of 70.0 x Diversification Benefit of 86.7% - (b)

(b) represents premium and therefore held unearned premium at time contract is written

Subsequent Values subtract Nominal Loss reserves held at each point in time = (7) x (c) x Expected loss Ratio of 70%

(11) Previous (10) x capital charge of 5%

(12) (11) x (5)

(a) Sum of (12)

(b) Solved iteratively such that it is equal to [(a) plus initial value of (9)]/(1-expense ratio of 2%)

(d) $1 - (b)/(c)$

(a) Total Charge	2,836
(b) Economic Premium	35,751
(c) Nominal Premium	50,000
(d) Implied Commission	28.50%

Return on Economic Capital Method - Aggregate Excess

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
Calendar Year	Paid Duration	Paid Loss (%)	Duration Matched Rate (%)	Discount Factor To Time Zero	Disc. Percent Paid	Percent Outs.	Disc. Percent Outs.	Disc. Outs. Loss	Needed Capital	Capital Charge at 5.00%	Disc. Capital Charge
	-			1.000		100.00	89.48	3,876	10,466		
2014	0.500	-	0.10	1.000	-	100.00	89.52	3,878	13,573	258	258
2015	1.500	5.93	0.26	0.996	5.91	94.07	83.89	3,634	12,703	679	676
2016	2.500	8.25	0.58	0.986	8.13	85.81	76.53	3,315	11,589	635	626
2017	3.500	28.14	1.02	0.965	27.16	57.67	50.03	2,167	7,507	579	559
2018	4.500	2.48	1.51	0.935	2.32	55.19	49.16	2,129	7,441	375	351
2019	5.500	15.02	1.93	0.900	13.52	40.17	36.02	1,560	5,464	372	335
2020	6.500	14.11	2.28	0.864	12.19	26.06	23.43	1,015	3,557	273	236
2021	7.500	8.44	2.55	0.828	6.99	17.62	16.01	693	2,438	178	147
2022	8.500	4.36	2.75	0.794	3.47	13.26	12.32	534	1,890	122	97
2023	9.500	4.46	2.94	0.759	3.39	8.80	8.43	365	1,306	95	72
2024	10.500	8.80	3.07	0.728	6.40	0.00	0.00	0	0	65	47

(a) Total Charge 3,405

(b) Economic Premium 7,430

(c) Nominal Premium 100,000

(d) Rate 7.43%

Calculations

(5) $1/(1+(4)/100)^{(2)}$

(6) (3) x (5)

(7) 100 - Cumulative of (3)

(8) Sumproduct of future (3) and (5) divided by current (5)

(9) (8) x Expected cost of Layer of 4.3% x (c)

(10) Initial Value: (9) x 20% of (c) (99.5th percentile) x initial value of (8)/100 - (b)

(b) represents premium and therefore held unearned premium at time contract is written

Subsequent Values subtract Nominal Loss reserves held at each point in time = 4.3% x (7)

(11) Previous (10) x capital charge of 5%

(12) (11) x (5)

(a) Sum of (12)

(b) Solved iteratively such that it is equal to [(a) plus initial value of (9)]/(1-expense ratio of 2%)

(d) (b)/(c)

Leverage Ratio Method - Quota Share

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
Calendar Year	Paid Duration	Paid Loss (%)	Duration Matched Rate (%)	Discount Factor To Time Zero	Disc. Percent Paid	Percent Outs.	Disc. Percent Outs.	Disc. Outs. Loss	Needed Capital	Capital Charge at 5.00%	Disc. Capital Charge
	-			1.000		100.00	92.00	32,200	20,635		
2014	0.500	5.93	0.10	1.000	5.93	94.07	86.11	30,140	18,291	510	509
2015	1.500	8.25	0.26	0.996	8.22	85.81	78.15	27,351	16,686	915	911
2016	2.500	28.14	0.58	0.986	27.74	57.67	50.84	17,794	11,214	834	822
2017	3.500	2.48	1.02	0.965	2.39	55.19	49.45	17,306	10,732	561	541
2018	4.500	15.02	1.51	0.935	14.04	40.17	36.02	12,608	7,812	537	502
2019	5.500	14.11	1.93	0.900	12.71	26.06	23.29	8,152	5,068	391	352
2020	6.500	8.44	2.28	0.864	7.29	17.62	15.83	5,541	3,427	253	219
2021	7.500	4.36	2.55	0.828	3.61	13.26	12.16	4,255	2,578	171	142
2022	8.500	4.46	2.75	0.794	3.54	8.80	8.21	2,874	1,711	129	102
2023	9.500	3.80	2.94	0.759	2.88	5.00	4.79	1,677	972	86	65
2024	10.500	5.00	3.07	0.728	3.64	0.00	0.00	0	0	49	35

(a) Total Charge 4,201

(b) Economic Premium 37,144

(c) Nominal Premium 50,000

(d) Implied Commission 25.71%

Calculations

(5) $1/(1+(4)/100)^{(2)}$

(6) (3) x (5)

(7) 100 - Cumulative of (3)

(8) Sumproduct of future (3) and (5) divided by current (5)

(9) (8) x (c) x Expected loss Ratio of 70%

(10) Initial Value: (b) / 1.8

(b) represents premium and therefore held unearned premium at time contract is written

Subsequent Values use Nominal Loss reserves held at each point in time = (7) x (c) x Expected loss Ratio of 70% / 1.8

(11) Previous (10) x capital charge of 5%

(12) (11) x (5)

(a) Sum of (12)

(b) Solved iteratively such that it is equal to [(a) plus initial value of (9)]/(1-expense ratio of 2%)

(d) 1 - (b)/(c)