

EXAM 6 – CANADA, FALL 2015

7. (3.5 points)

The following information is provided for the risk-sharing pool in Nova Scotia. All amounts are in thousands (\$000s).

	Company A	Province Total
Direct earned exposures (car years) not ceded to the pool	150	1,000
Direct earned exposures (car years) ceded to the pool	20	500
Total Direct earned exposures (car years)	170	1,500
Premium of non-ceded risks	500	1,000
Premium of ceded risks	50	750
Total Premium	550	1,750
Incurring losses for non-ceded risks	300	1,000
Incurring losses for ceded risks	40	1,000
Total Incurred losses	340	2,000

- Expense allowance for the pool in this province is 25%.
- Company A exclusively writes automobile insurance in Nova Scotia.
- Company A is below the risk-sharing pool maximum total allowable transfer limit.

a. (1.25 points)

Calculate the loss ratio for Company A on their share of the risk-sharing pool.

b. (0.75 point)

Calculate the total loss ratio for Company A which includes the results of the risk-sharing pool.

c. (1 point)

Calculate the revised total loss ratio for Company A if they choose not to cede any risks to the risk-sharing pool.

d. (0.5 point)

Propose how the company can use the risk-sharing pool to lower its total loss ratio.

EXAM 6-CANADA SAMPLE ANSWERS AND EXAMINER'S REPORT

QUESTION 7	
TOTAL POINT VALUE: 3.5	LEARNING OBJECTIVE: B2, B3
SAMPLE ANSWERS	
Part a: 1.25 points	
<p>Earned Premium = 50 Incurred Loss = 40</p> <p>% Participation = (earned car years not ceded) / (total industry) = 150 / 1000 = 15% Ceded business LR = 40 / 50 = 80% Pool LR = 1000 / 750 = 133%</p> <p>LR for share of pool = (share of losses) / (share of premium + allowance for ceded premium) = (1000 x 15%) / (750 x 15% + 0.25 x 50) = 120%</p>	
Part b: 0.75 point	
LR total = (300 + 1000 x 15%) / (750 x 15% + 500 + 0.25 x 50) = 72%	
Part c: 1 point	
<p>Sample #1 Revised Participation Ratio = 170 / (1000 + 20) = 0.16667 Revised Premium = 550 + 0.16667 x (750 – 50) = 666.69 Revised Loss = 340 + 0.16667 x (1000 – 40) = 500.032 Revised LR = 500.032 / 666.69 = 75.0%</p> <p>Sample #2 Participation Ratio = (150 + 20) / (1000 + 20) = 1/6 Assumed premium from pool = (1/6) x (750 – 50) = 117 Assumed losses from pool = (1/6) x (1000 – 40) = 160 Insurer's A loss ratio = (Total losses of Insurer + Assumed Losses) / (Total Premium of Insurer + Assumed Premiums) = (340 + 160) / (550 + 117) = 75.0%</p>	
Part d: 0.5 point	
<p>Sample #1 Since it is below the maximum allowable transfer limit, it could cede more risks to the RSP, business that is currently not profitable, since its LR is lower with the RSP than without.</p> <p>Sample #2 It will lower its LR if it cedes business with higher LR than pool average (riskier business). Also, by using the maximum % allowable to cession, because insurer still assumes part of the pool even if he does not cede the max.</p> <p>Sample #3 Company should cede as many unprofitable risks as possible. This will reduce their participation ratio, increase the expense allowance received from the pool and reduce their non-ceded risk loss ratio.</p>	

EXAM 6-CANADA SAMPLE ANSWERS AND EXAMINER'S REPORT

EXAMINER'S REPORT
<p>Candidates were expected to show a thorough understanding of how the results of a risk sharing pool are shared amongst the member companies. Additionally, this question tests the candidate's knowledge of how those results impact the overall member company's performance. Most candidates struggled to demonstrate the knowledge tested in this question.</p>
Part a
<ul style="list-style-type: none">• Many candidates were not able to calculate the participation ratio correctly.• Candidates commonly failed to make any adjustment for the risk sharing pool expense allowance.• Candidates who did correctly calculate the amount for the expense allowance often applied it incorrectly in the loss ratio formula.
Part b
<ul style="list-style-type: none">• The most common error was the application of the expense ratio. Most candidates did not make any adjustment for the expense ratio in the total loss ratio of the company.
Part c
<ul style="list-style-type: none">• The most common error was to assume that since the member company stopped ceding risks to the pool their participation ratio would decrease to 0%.
Part d
<ul style="list-style-type: none">• Candidates generally scored well on this part.• Commonly candidates would answer with a vague statement about how ceding "bad risks" or "worse risks" would improve results. Partial credit was given for this response unless the candidate provided a further explanation as to how this would impact the participation ratio or the results of the risk sharing pool.