## EXAM 5, SPRING 2013

## 13. (2 points)

Given the following for a large deductible commercial general liability policy:

Per occurrence deductible	\$250,000
Loss elimination ratio for a \$250,000 deductible	80%
ALAE/ground up loss ratio	10%
Ground up loss estimate	\$2,000,000
Fixed expenses	\$100,000
Variable expenses as % of premium	12%
Underwriting profit as a % of premium	3%
Deductible processing cost as a % of losses below the deductible	5%
Credit risk as a % of losses below the deductible	2%
Additional risk margin as a % of excess losses	8%

- The insurer will handle all claims, including those that fall below the deductible.
- The insurer will make the payments on all claims and will seek reimbursement for amounts below the deductible from the insured.
- The deductible is for loss only.
- All ALAE is paid by the insurer.

Calculate the premium for the large deductible policy.

## Exam 5 Question #13

$$ALAE = .1$$

$$L = 2M$$

$$ALAE$$
\$= .1  $\times$  (2,000,000) = 200,000

$$LOSS = (1 - .8) \times (2,000,000) = 400,000$$

Fee for handle ded:  $.8 \times (2,000,00) \times .05 = 80,000$ 

Credit Risk = 
$$.8 \times (2,000,000) \times .02 = 32,000$$

Risk Margin = 
$$(1 - .8)(2,000,000)(.08) = 32,000$$

$$L + E_L + Ded Fee + Credit Risk + Risk Margin + F$$
  
 $1 - V - Q$ 

$$\frac{400,000 + 200,000 + 80,000 + 32,000 + 100,000}{1 - .12 - .03} = 992,941.176$$

points were not awarded. Many candidates who chose credit score lost points for saying the levels were "fully credible", as opposed to "good credibility" which leads to a different discussion and also lead to candidates losing points in Part C.

- c. To receive full credit, candidates needed to correctly calculate the full credibility standard, calculate the credibility using the square root rule, calculate the company indicated relativities, credibility weight the company relativities with the competitor relativities, and finally re-base the credibility weighted relativities. The most common mistake here was claiming full credibility, not recognizing that the 400 full credibility standard refers to claim count and not exposure. For candidates who calculated the indicated company relativities relative to the total pure premium, a common mistake was not calculating the revenue neutral competitor relativities as well. Additionally, some candidates missed the instruction to use the competitor's relativities as the complement of credibility.
- 12. In general, the response to this question was poor. Many candidates recognized the small data volume but incorrectly went about combining alarm types or deductibles into one category. This was often accompanied by a calculation of a proposed factor by weighted the GLM output. Time was unnecessarily lost by this calculation. Another common error was candidate's often recognized unintuitive output that seemed to be the result of sparse data but yet still proposed to select the predicted factor.
- 13. Many candidates received full credit on this question. Some common mistakes that were made on this problem:
  - Forgetting fixed expense is in the numerator.
  - Treating the loss elimination ratio as the excess loss ratio. If the candidate used the
    incorrect LER "correctly" (applied the deductible processing and credit risk loads to
    the losses under the deductible, the excess risk margin to the losses above the
    deductible, and used the losses above the deductible in the numerator) candidates
    still received some partial credit.
  - Applying the ALAE % to excess losses.

14.

- a. Candidates not receiving partial credit on often restated the same item twice or two sides of the same item. To receive full credit, 2 separate ideas were necessary.
- b. On part b, very few candidates only received partial credit. Examples of full credit statements include:
  - "An insurer's retention may decline if a rate cap is not adopted."
  - "State laws may require a maximum rate change be followed for all policies."
- 15. This question was answered poorly with few candidates receiving full credit.