

EXAM 5, SPRING 2014

12. (1 point)

An insurance company has the following information available for the four different geographic regions within the same line of business:

<u>Region</u>	<u>Earned Exposures by Accident Year</u>			<u>Ultimate Claim Counts by Accident Year</u>		
	<u>2011</u>	<u>2012</u>	<u>2013</u>	<u>2011</u>	<u>2012</u>	<u>2013</u>
1	21,900	22,560	22,125	2,075	2,143	2,010
2	2,575	2,460	2,520	126	124	125
3	18,000	17,460	17,800	880	895	877
4	4,450	10,720	27,500	227	580	1,330

<u>Region</u>	<u>Observed Average Age to Age Paid Claim Development Factors</u> (Age in Months)				
	<u>12-24</u>	<u>24-36</u>	<u>36-48</u>	<u>48-60</u>	<u>60-Ult</u>
1	7.67	3.07	1.75	1.30	1.10
2	3.20	1.70	1.28	1.10	1.06
3	3.19	1.73	1.31	1.12	1.04
4	4.10	2.28	1.52	1.05	1.03

Justify an appropriate grouping of the regional data for estimating the insurer's unpaid claims for the total book of business.

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QUESTION: 12

TOTAL POINT VALUE: 1 point

LEARNING OBJECTIVE(S): B1

SAMPLE/ACCEPTED ANSWERS:

Region 4 is growing (can be seen in increase in earned exposure and inc. ultimate clm counts). Should be grouped on its own because growth will affect ult. The development is also not similar to region 1, 2 or 3.

Combine 2 & 3: 2 might be too small to stand on its own; both regions appear to be stable (no growth trend) and the development trends similarly.

Region 1 on its own as it appears credible on its own and its development is higher than the other regions at all valuations.

EXAMINER'S REPORT:

- Candidates were expected to explain why regions 1 & 4 should remain ungrouped and regions 2 & 3 should be grouped. For region 1, acceptable reasons included the large size/credibility of the region and the difference in loss development from the other regions. For region 4, acceptable reasons included recognition of the extreme growth in the region and the difference in loss development from the other regions. For the combination of regions 2 & 3, candidates were expected to recognize the obvious similarity in development patterns. In addition, they were expected to recognize another rationale for grouping: either reflecting on the lack of credibility for region 2 or the stability in exposure and/or claim count distribution (or growth) across the accident years. Vague answers about a region being “different” or “unusual” without reference to how the region was different or unusual were not given credit.
- Approximately half of the candidates received full credit for this question, and nearly two-thirds of candidates scored 0.75 or better. There were two common areas that caused errors:
 - Many candidates calculated frequencies based on the given claim counts and exposures. They often used similar frequencies as a rationale for grouping, even though that point is irrelevant. One can encounter two regions with similar frequencies but different development patterns (such as with region 4 vs. 2/3) – one would not want to group those regions, despite the similar frequencies.
 - A number of candidates believed that region 4 should be grouped with regions 2 & 3 because of “similar development patterns” coupled with a concern with 4’s credibility. Their interpretation of the development patterns was curious as the factors are not truly similar. It seems that candidates were stretching to find a way to augment low volumes in the earlier accident years. They latched onto regions 2 & 3 as the closest match, from a development perspective. Most of these did not recognize the effect of

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region 4's growth on their decision but even those who did express concern about that, chose to ignore it for the sake of "credibility."

- There were a few candidates who made mistakes in their numbering of the regions. They might describe region 1 accurately and then later describe region 4 accurately but call it region 1 by accident. So long as the rationale was solid and it was obvious that they had the written equivalent of a "typo", full credit was still granted.
- Aside from blank papers, very few candidates misunderstood what was being asked. In general, the candidates were quite thorough in explaining their rationale, even when that rationale was essentially flawed. There were no candidates who simply listed the groupings with no explanation for why they chose those groups. Note that if there had been such answers, no credit would have been granted without any explanation for why the candidate chose those groups.