

3. (2.5 points)

An actuary has submitted the following analysis for a rate level indication:

Calendar/ Accident Year	Calendar Year Earned Premium	Accident Year Reported Losses and Paid ALAE	Accident Year Reported Loss and Paid ALAE Ratio
2010	\$1,023,549	\$703,902	68.8%
2011	\$1,086,756	\$773,430	71.2%
2012	\$1,222,930	\$749,249	61.3%

Three Year Average Reported Loss and Paid ALAE Ratio	67.1%
Fixed Expense Provision	11.0%
Variable Expense Provision	15.0%
Underwriting Profit Provision	8.0%
Variable Permissible Loss Ratio	77.0%
Indicated Rate Change	1.4%

Recommend five improvements to the analysis and briefly explain the purpose of each.

### **Exam 5 Question #3**

1. Adjust the earned premium to current rate level. This will avoid an indication that ignores past rate changes and provides a better projection of future loss ratios.
2. Determine a loss trend and apply to the Loss + ALAE. This will create a better projection of future losses if there is an ongoing or past change in frequency or severity of losses
3. Develop losses to ultimate. The rate must account for all losses from the policies, not just the ones that have been reported thus far. Ignoring IBNR will create an inadequate rate.
4. Include a ULAE load. The rate must provide for all costs associated with the transfer of risk so it must include adjustment expenses that are not allocated to specific claims
5. Use a volume-weighted average of loss ratios. 2012 has significantly more premium than past years and will be more responsive to changes in the book so it should be given more weight.

- b. A common error was to say the premium trend is used to bring historical premium to expected future cost level which is stating what the premium trend does but not why you'd do it. The other common mistake was to mention rate changes as part of the premium trend.
  - c. Candidates often compared average premium to total premium instead of historical premium to current level premium. The other common mistake was to compared written premium to earned premium instead of historical premium to current level premium.
  - d. Candidates scored very well on this part. When candidates missed points it was due to not responding to the actual question asked but instead describing how the issue could be addressed.
3. The question presented an analysis for a rate indication. The candidate was requested to provide 5 improvements for the analysis and briefly explain the purpose of each. Suggesting improvements to the company's operation did not address the question asked and did not receive credit.

The majority of candidates recommended and received full credit for at least four enhancements to the analysis. Many recommended and received full credit for five. Those that did not receive credit for all 5 recommendations didn't attempt an answer or suggested enhancements that did not improve the analysis. Additionally, some candidates confused various concepts (for example, "trend losses to ultimate"), provided a response that summarized prior enhancements, were too general in their recommended improvement, or simply identified a shortcoming in the analysis without offering an enhancement, and did not receive credit.

Candidates generally struggled to receive credit for briefly explaining the purpose of each recommendation; most candidates received less than full credit on four of the five explanations requested. Most candidates did not provide an explanation or attempted to give further explanation of the enhancement without explaining its purpose -- these did not receive credit. Many candidates restated a version of the original recommended improvement to the analysis in their explanation of the purpose (i.e. "Earned premium can be adjusted to the current rate level. This makes sure that all premiums are on-level."), which did not get credit for explaining the purpose of the bringing the premium to current rate levels.

- 4. Many candidates did not identify the need to adjust historical loss ratios for the future 2012 level. Some did not develop on-level-factors or apply them appropriately to the historical loss ratios, while others did not apply loss trend to the historical loss ratios. Some thought that the 2012 on-level earned premium was the only on-level adjustment needed, but this number was provided and the historical loss ratios still need adjustment for future levels. We also frequently saw misidentified loss trend periods (2 years instead of 3, 1.5 years instead of 1, etc.).
- 5. In general, this question was completed well although there were a couple common errors on this question.