## EXAM 8 - FALL 2016

# 9. (1.5 points)

An actuary and an underwriter are discussing a Worker's Compensation book of business.

## a. (0.5 point)

The underwriter is considering not renewing a risk in the book because the experience modifier of the account has increased. The underwriter notes that the expected loss ratio (ELR) for the predominant class code on the account has decreased over the last three years. Discuss whether the underwriter should non-renew the risk given the change in ELR.

# b. (0.5 point)

A different account had large losses last year and now has a debit modification. The underwriter wants to renew this account since the debit mod will help recoup losses. Evaluate the underwriter's reasoning to renew the account.

## c. (0.5 point)

The underwriter points out that the book of business has an overall experience modifier below 1.0 and believes this is due to superior risk selection. Provide two reasons why this may not be the case.

### **EXAM 8 FALL 2016 SAMPLE ANSWERS AND EXAMINER'S REPORT**

QUESTION: 9	
TOTAL POINT VALUE: 1.5	LEARNING OBJECTIVE(S): B3,B4
SAMPLE ANSWERS	

## Part a: 0.5 point

- The underwriter should consider if the risk is a proper fit for its classification, especially since the class experience has improved, while this risk's experience shows deterioration. However, it is also possible that the recent experience is a random fluctuation. If this risk does seem to belong within this class code, it may foretell good experience if randomness goes the other way. So, should renew.
- Exp Mod ↑ ≠ bad risk!
  - ELR on class code  $\downarrow$  consistently means that class hasn't been rated appropriately in the past  $\rightarrow$  ELRs down b/c exp mods compensating for inadequate rates
  - Most recent year not in exp mod
  - Do NOT non-renew, wait for latest year of experience then re-assess
- If the class code ELR has been decreasing and the experience mod has been increasing, it
  would be worth examining the classification of the risk to see if it would fit better in a
  different class. Regardless, the experience mod is keeping the risk's rate adequate and it
  should not be non-renewed.
- The experience modification should effectively adjust for the individual's expected cost difference from the average of the class. The underwriter can check the modified loss ratios of this insured for the past few years. If experience modification is appropriate and equitable rates are charged, modified loss ratios should be similar for all credit and debit risks that are in the company's book of business. If this is true, then there is no reason for the underwriter not to renew the risk.

# Part b: 0.5 point

- Not supposed to use current premium to recoup losses, only to collect what we expect to pay
  in the future bad reasoning
- Ratemaking is not intended to recoup for past losses. The increased experience mod reflects increased knowledge about expected losses in the prospective period. Despite incorrect reasoning the policy should still be renewed.
- The debit modification is to ensure all modified loss ratios of both credit and debit risks are similar. Hence all debit and credit risks are equally profitable. It is wrong to say that a debit mod helps recoup losses as all other risks are contributing the same profit. The underwriter should renew the account knowing that adequate rates are charged for expected future losses.

### Part c: 0.5 point

- Small risks that have poor loss experience may not qualify for experience rating, or may receive little credibility. Those small risks that would have had mods >1 now have mods close to 1 in the off-balance calculation, which decreases the average mod.
- The underlying accounts may pay higher than average wages to their workers, which will generate more expected losses. These higher expected losses will decrease the emods, possibly generating a net credit emod.
- Larger risks tend to have better experience, resulting in credit mods that get a lot of weight in the book. The book could have lots of small policies not eligible for experience rating that have horrible experience.

### **EXAM 8 FALL 2016 SAMPLE ANSWERS AND EXAMINER'S REPORT**

- Larger risks meet criteria for experience rating, and they tend to be able to afford better safety programs and are more likely to have credit mods.
- It could be the case that manual rates have been set too high, and the experience mod is correcting for this.
- The mod is not a predictor of plan performance. After the application of the mod, all risks should be equal.
- Selecting risks with little prior losses and experience credits does not mean that these risks will outperform in the future.

#### **EXAMINER'S REPORT**

Candidates were expected to show basic understanding of the use and purpose of experience rating in Workers Compensation.

### Part a

Candidates were expected to identify the potential for poor class fit and explain that the experience mod is intended to correct for this.

Graders also accepted what that the increasing experience mod could be due to random large losses, if the candidate explained their response.

Only stating the mathematical reasoning for the experience mod increasing and not discuss why this would be taking place did not receive full credit.

A common mistake was connecting the decreasing ELRs with rate adequacy. While an increasing experience mod can result from deteriorating rate adequacy, this does not necessarily translate to decreasing ELRs.

### Part b

Candidates were expected to evaluate the underwriter's assertion regarding using an experience mod to recoup prior losses. Candidates needed to identify that the rationale is incorrect, as pricing is prospective and does not recoup prior losses.

A common mistake was discussing the random nature of losses, low credibility or capping in the experience mod calculation. These responses were not awarded credit as they did not evaluate the underwriter's reasoning (experience mod allows for recouping of prior losses).

#### Part c

Candidates were expected to provide two separate reasons as to why an overall credit mod doesn't indicate superior risk selection. Many different reasons were accepted, as long as they were accurate.

### Common mistakes include:

- Stating that the mod should be less than 1.0 because a) large risks tend to have better experience and b) large risks are more credible. This was graded as one reason as these comments are not sufficient on their own.
- Stating that small risks are less credible and thus the experience mods are closer to 1.0. This
  did not address the question of why the overall mod would be less than 1.0. Unless further
  reasoning was provided, this answer was not accepted.