

EXAM 5, FALL 2013

14. (2 points)

Given the following information:

Claim ID	Accident Date	Report Date	Incremental Payments in Calendar Year		
			2010	2011	2012
1	June 15, 2010	July 1, 2010	\$100	\$400	\$0
2	December 15, 2010	January 15, 2011	\$0	\$300	\$150
3	April 1, 2011	May 1, 2011		\$200	\$200
4	November 15, 2011	January 1, 2012		\$0	\$500
5	April 1, 2012	May 1, 2012			\$200

a. (0.5 point)

Construct an annual incremental accident year paid loss triangle as of December 31, 2012.

b. (0.5 point)

Construct an annual cumulative report year paid loss triangle as of December 31, 2012.

c. (0.5 point)

Assess whether an accident year approach or a report year approach is more appropriate for reserving auto liability insurance.

d. (0.5 point)

Assess whether annual or quarterly triangles are more appropriate for a small company selling a long-tailed line of business.

### Exam 5 – Question #14

#### A. Paid Incremental

<u>AY</u>	<u>12</u>	<u>24</u>	<u>36</u>
10	100	700	150
11	200	700	
12	200		

#### B. Paid cumulative

<u>RY</u>	<u>12</u>	<u>24</u>	<u>36</u>
10	100	500	500
11	500	850	
12	700		

- C. AY is more common but report year is more appropriate if a change in social or legal climate causes severity to correlate more with report date than accident date.

Or

- C. Accident year more approach as it's a long tailed line of business. The reporting nature of this line of business, we need to project IBNR for this line of business. Report year method doesn't project pure IBNR.
- D. Use quarterly: the change in exposures and reporting pattern will shift the average accident date within an accident year and disturb development factors.

Or

- D. Annual triangle as the data is more credible (less fluctuation) because larger volume compared to quarterly data. More volatile and thin data will cause the LDF to be more volatile.

12.

In general, candidates did not provide a thorough argument in support of the proposal. Often, candidates provided either one thought out point or only briefly touched on two or three points. To provide a thorough argument, candidates needed to have at least two well vetted points or at least four basically discussed points. There were many points that were acceptable points, with varying level of discussion leading to different amount of points earned on the question.

When candidates did not receive points for their discussion it was usually for: not supporting the proposal when the question specifically asks to support it, misinterpreting the question to mean that all expenses should be treated as variable or including the unusually large marketing expense, or offering arguments that were not clear or not thorough.

13.

Many candidates did not discuss the impact of the rating structure reviews in discussing overall and territorial premium adequacy. Partial credit was given for stating overall premium inadequacy due to the underinsurance/inadequate rate in Territory A.

Candidates also struggled with addressing equity. Many did not understand the concept of equity, confusing it for equality in premium.

Several candidates did not recognize the loss cost differential between territories resulting in subsidization or unfairness.

14.

- a. The vast majority of candidates correctly answered this question. A small number made a calculation mistake or wrote a cumulative triangle instead of incremental.
- b. The vast majority of candidates correctly answered this question. A small number made a calculation mistake or wrote an incremental triangle instead of cumulative.
- c. Candidates generally answered this question correctly. Some responded that accident year is more appropriate because auto claims are typically reported quickly which was not accepted. Another common incorrect answer was that report year should be used since auto has a long tail or large reporting lag.
- d. Candidates generally answered this question correctly. Some responded that quarterly is more appropriate because there can be seasonality in the claims which was not accepted. Since the question was asking for a reason that is specific to small companies, credit was not awarded for that response.