

20. (1.5 points)

An actuary is calculating ultimate claim estimates for a long-tailed line of business using the frequency-severity technique using disposal rates. Given the following information:

- This line of business commonly has partial payments made on claims.
- Recently the statute of limitations was extended, resulting in a significant increase in claim counts at later development periods compared to previous years.
- The claims department has been strengthening case reserves for the last several years.
- There has been significant claim inflation over the last several years.
- The claims department has been attempting to settle claims faster.

a. (0.5 point)

Briefly describe two reasons the frequency-severity technique using disposal rates may be appropriate in the current situation.

b. (0.5 point)

Briefly describe two reasons the frequency-severity technique using disposal rates may not be appropriate in the current situation.

c. (0.5 point)

Briefly describe an adjustment to the frequency-severity technique using disposal rates for each of the issues listed in part b. above.

EXAM 5 FALL 2016 SAMPLE ANSWERS AND EXAMINER'S REPORT

QUESTION 20	
TOTAL POINT VALUE: 1.5	LEARNING OBJECTIVE: B4
SAMPLE ANSWERS	
Part a: 0.5 point	
<p><u>Sample Answer 1</u> A disposal rate analysis uses only paid claims and will not be affected by the change in case reserves.</p> <p><u>Sample Answer 2</u> Frequency severity is good for long tailed lines of business because it does not leverage underdeveloped data like the development method.</p> <p><u>Sample Answer 3</u> Claim inflation can be directly addressed through a severity trend.</p>	
Part b: 0.5 point	
<p><u>Sample Answer 1</u> Frequency development is distorted by the recent change in claims processing and increase of statute of limitations. Historical frequency data may not be predictive of future frequency.</p> <p><u>Sample Answer 2</u> Partial payments invalidate the assumption for freq/sev technique in that there are no partial payments and all claims are paid at close.</p> <p><u>Sample Answer 3</u> The change in claim definition is problematic with the statute of limitations change. Frequency and severity techniques require a consistent definition of claim counts.</p> <p><u>Sample Answer 4</u> Frequency severity method heavily depends on severity trend. Significant inflation makes it difficult to select the most accurate severity trend.</p> <p><u>Sample Answer 5</u> Disposal rate technique relies on stable disposal rates over time (stable settlement) which will not be the case due to the statute of limitations extension.</p>	
Part c: 0.5 point	
<p><u>Sample Answer 1</u> Use Berquist-Sherman method to restate data based on changes to claim settlement rates and then apply the frequency severity disposal rates technique.</p> <p><u>Sample Answer 2</u> Partial paid claims can be excluded from severity and then reapplied to the period in which the corresponding claim closes.</p>	

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Sample Answer 3

Use judgment/external information to select disposal rates to deal with statute of limitations change.

Sample Answer 4

Use industry data as a complement of credibility to more effectively select a severity trend rate.

Sample Answer 5

You could do a study of how development has changed, and restate historic development to match the new pattern.

EXAMINER'S REPORT

Part a

Candidates were expected to understand the third frequency severity method using disposal rates and understand what factors in the problem are appropriate for the method

A common mistake was listing bullet points from the problem but did not briefly describe why the method was appropriate for that issue.

Part b

Candidates were expected to understand the third frequency severity method using disposal rates and understand what factors in the problem are inappropriate for the method.

Common mistakes included:

- Candidates listed bullet points from the problem but did not briefly describe why the method was inappropriate for that issue.
- Some candidates referenced the strengthening of case reserves as a problem

Part c

Candidates are expected to understand the third frequency severity method using disposal rates and understand adjustments can be made to the items listed in part b) to allow the method to be used.

Common mistakes included:

- Candidates did not find a reasonable adjustment to the problems identified in part b)
- Some candidates referenced using Berquist-Sherman for case reserve levels rather than claims settlement rates