

27. (1.5 points)

Given the following information for an insurer as of December 31, 2016:

- Company management strengthened outstanding case reserves on all open claims during 2016.
- Four unusually large claims that occurred in 2015 have been paid and closed. There are no other large losses in the company's history.
- No adjustments were made to historical claim development factors.

Briefly assess the appropriateness of each reserving technique provided for each accident year below.

a. (0.5 point)

Accident year 2013:

- i. Paid development technique.
- ii. Reported development technique.

b. (0.5 point)

Accident year 2014:

- i. Disposal rate frequency-severity technique.
- ii. Reported Bornhuetter-Ferguson technique.

c. (0.5 point)

Accident year 2015:

- i. Paid development technique.
- ii. Paid Bornhuetter-Ferguson technique.

SAMPLE ANSWERS AND EXAMINER'S REPORT

| | |
|---|--------------------------------------|
| QUESTION 27 | |
| TOTAL POINT VALUE: 1.5 | LEARNING OBJECTIVE(S): B3, B4 |
| SAMPLE ANSWERS | |
| Part a: 0.5 point | |
| <p><u>Sample Responses for paid development technique</u></p> <ul style="list-style-type: none"> • Will be appropriate as it is not affected by the 2015 claims or case reserve strengthening • Appropriate for AY 2013, the changes listed should not affect paid 2013 ultimate <p><u>Sample Responses for reported development technique</u></p> <ul style="list-style-type: none"> • Reported development would overestimate ultimate due to applying CDFs based on the prior adequacy level to higher reported losses • Changes in case outstanding may have a small effect but due to this being almost fully developed it should be appropriate • Will now overstate ultimate because all LDFs at all maturities will be affected by the strengthening of reserves in CY 2016 | |
| Part b: 0.5 point | |
| <p><u>Sample Responses for disposal rate frequency-severity technique</u></p> <ul style="list-style-type: none"> • This will be accurate since it does not rely on case reserves (uses paid data only) • Appropriate. The settlement rate is unchanged, which is a key requirement of the method. The incremental severities used to calculate reserves for this AY won't be affected by the 2015 large losses. This is a paid technique so it is not impacted by the case reserve adjustment. <p><u>Sample Responses for reported Bornhuetter-Ferguson technique</u></p> <ul style="list-style-type: none"> • Reported BF will overstate AY 2014 loss somewhat since it will use historical % unreported to calculate IBNR but % unreported is lower after strengthening. • Overstated as historical CDFs are too high, so unreported % is too high. | |
| Part c: 0.5 point | |
| <p><u>Sample Responses for Paid development technique</u></p> <ul style="list-style-type: none"> • Not appropriate. The past LDFs were based on data with no large claims and will be too high. They will be applied to higher than usual paid claims overestimating the ultimate claims. <p><u>Sample Responses for Paid Bornhuetter-Ferguson technique</u></p> <ul style="list-style-type: none"> • Paid B-F technique would be appropriate to include the large claims as well as to develop unpaid losses based on a priori estimate • Selected CDFs will be too high since we assumed lower % paid at 24 months than what happened. Will overestimate AY 2015 ult. Loss but not as much as paid dev method does. | |

SAMPLE ANSWERS AND EXAMINER'S REPORT

EXAMINER'S REPORT

Candidates were expected to understand the following reserving techniques, including when they do and do not work: paid and reported development methods, disposal rate frequency-severity technique, paid and reported B-F techniques.

A common mistake was to confuse calendar year and accident year impact to the reserving techniques.

Part a

Candidates were expected to understand how large losses in a future year and a change in case reserve practices would impact the paid and reported development methods.

Common errors included:

- Stating that large losses impacted either method. The large losses occur in a future accident year so will have no impact on either method.
- Stating that the reported development method would be *understated*. The change in case reserves would result in an overstatement using the reported development method.

Part b

Candidates were expected to understand how large losses in a future year and a change in case reserve practices would impact the disposal rate frequency-severity technique and the reported BF technique.

Common errors included:

- Stating that large losses impacted either method. The large losses occur in a future accident year so will have no impact on either method.
- Stating that the disposal rate frequency-severity technique is affected by the strengthening of case reserves. This technique uses paid losses only.
- Stating that the reported B-F method would be *understated*. The change in case reserves would result in an overstatement using the reported B-F method.

Part c

Candidates were expected to understand how large losses in the current accident year and a change in case reserve practices would impact the paid development method and paid B-F technique.

Common errors included:

- Stating that the paid development method is not impacted by the large losses.
- Stating that either method is impacted by the change in case reserves. These are paid methods and therefore unaffected by the case reserve changes.
- Stating that the large losses would result in either method being understated.