

EXAM 5, FALL 2013

19. (2 points)

Within the last year, an insurer implemented a new claims processing system that resulted in faster payment of claims. However, the claims department failed to communicate this change to the actuarial department, and the actuary continues to use the paid loss development method to select the insurer's ultimate losses.

For each item below, discuss the impact of using the actuary's calculation of ultimate losses on the following estimates.

a. (0.5 point)

Ultimate ALAE calculated using a paid ALAE to paid claims ratio method.

b. (0.5 point)

Ultimate ULAE calculated using the Wendy Johnson method.

c. (0.5 point)

Rates calculated for the upcoming policy year using the pure premium method.

d. (0.5 point)

The reinsurance recoverable for the underlying business on an excess-of-loss reinsurance contract where the retention has been exceeded but the limit has not yet been exhausted.

**Exam 5 – Question #19**

- A. The ultimate claims based on the paid loss development will be overstated. The ultimate paid ALAE-to-paid claims ratio will be applied to overstated ultimate claims, resulting in overstated ultimate ALAE.
- B. Wendy Johnson method assumes same amount of ULAE is spent on similar transactions regardless of claim size. Because this is a count-based technique, there is no impact from the actuary's calculation of ultimate losses using the paid due technique.
- C. Since ultimate losses are overstated, the pure premium method will indicate a rate that is too high.
- D. Estimate of reinsurance recoverable will also be overstated because the projection of ultimate L/ALAE will be overstated. Higher L/ALAE above retention in the xs layer. The limit is not exhausted → recovery is possible for losses, retention.

19.

Candidates did not do well on this question, often providing insufficient detail to receive full credit.

- a. Many candidates did mention that the ultimate losses would increase. However, a common mistake was not to explain appropriately how this would lead to higher ALAE (it is the application of the historical paid to paid ratio to the overstated ultimate that produces the overstated ALAE result). Another common error was to focus just on the paid to paid ratio, but neglect that the paid ultimate is going to be significantly higher.
- b. Most candidates did not receive credit for this part.
- c. This part was generally answered quite well. The most common error was to indicate that the ultimate losses/ pure premium increased, but not mention anything about the rates themselves increasing.
- d. This was also answered quite well. A common error was a lack of detail, with credit lost if candidates did not mention the fact that the retention was exceeded or that the limit had not yet been reached.

20.

Candidates were able to handle the basic component of the Cape Cod method but struggled with the adjustments. Some common mistakes were:

- Forgot to adjust the estimated claim ratio to bring it to the 2011 level.
- Used the reported CDF to ultimate factor to adjust the reported claims to ultimate, which produces the same yearly adjusted ECRs but causes an error in the volume weighting in the total.
- Not utilizing the concept of used-up premium which is central to this method.
- Candidates misapplied the pure premium trend and tort reform factors to the earned premium instead of the claims or didn't apply them at all.
- Providing expected ultimate claims as the answer instead of IBNR or provided IBNR for an accident year other than 2011.
- Not calculating IBNR by applying the unreported percentage to the expected ultimate claims. The typical error was subtracting the reported claims or adjusted claims from the expected ultimate claims instead.

21.

Most candidates correctly calculated the disposal rate as well as implementing the LDF method (link ratios, selecting LDFs, calculating CDF, and applying it to the appropriate paid dollars). Candidates had trouble with interpolating for age 12, while many candidates realized that ages 24-48 did not need to be adjusted. The most common errors were:

- Incorrectly interpolating age 12.
- Calculating incremental paids and adding periods together to get to the ultimate.