25. (2 points)

Given the following estimates of ultimate claims ($000):

Accident	Development Techniques			Bornhuetter-Ferguson Techniques	
Year	Paid	Reported	Case Outstanding	Paid	Reported
2013	2,200	2,100	2,250	2,050	2,300
2014	3,300	3,400	2,700	2,500	2,400
2015	2,300	3,100	3,150	2,400	3,000

a. (1 point)

Identify one potential scenario that explains the differences between estimates resulting from the techniques above for accident year 2014. Select and briefly justify an ultimate claims estimate for accident year 2014 given this scenario.

b. (1 point)

Identify one potential scenario that explains the differences between estimates resulting from the techniques above for accident year 2015. Select and briefly justify an ultimate claims estimate for accident year 2015 given this scenario.

QUESTION 25	
TOTAL POINT VALUE: 2	**LEARNING OBJECTIVE(S): B8**
SAMPLE ANSWERS	

Part a: 1 point

- Since the paid and reported development techniques are larger than the case outstanding and both BF techniques, combined with the case outstanding, BF paid and BF reported methods being in line with each other, I would estimate that a large paid loss has impacted the paid and reported development techniques. I would select the Paid BF method which will capture the large paid losses, but not be influenced by it for calculating the unpaid portion.
- It is possible that there exists changes in LR. In this case, the LR is increasing and the EC would understate the ultimate claims (development gives correct ultimate claims estimate). BF, which is the credibility weighted Dev and EC, will give understated ultimate claims. Therefore, I will use reported development (3,400) as selection.
- The could have been an increase in case reserve adequacy coupled with an increase in settlement rates, causing both the reported and paid development method to be inflated because they are applying historical LDFS to higher reported/paids at early maturities. I would suggest using one of the BF methods, as they will bring more stability to the estimates (relying more on unbiased EC) and are both similar.

Part b: 1 point

- A large reported (unpaid) claim would explain the differences. With a large unpaid claim, the reported development estimate would be high because the large reported amount multiplied by LDF that assumes lower level or reported claims. I recommend the reported BF estimate of 3,000 because it includes the large unpaid claim, but the large unpaid claim does not impact estimate of IBNR.
- Since reported, case outstanding, and BF reported are all larger than the paid methods, there must be an increase in case reserve adequacy. I would choose either the paid development or paid BF method (both close together) since it is not impacted by a change in case reserve adequacy.
- There could be a slowdown in settlement rates. This will cause the paid development technique to underestimate the true IBNR because it will apply historical LDFs to lower levels of paid losses at early maturities. To remedy this, I would recommend using either the reported development or reported BF techniques, as reported data is not affected by changes in settlement rates.

EXAMINER'S REPORT

Candidates were expected to be able to diagnose a potential change in underlying loss data from the results of various methods of unpaid claims analysis. From here, candidates were expected to select an analysis method or methods that react appropriately to the change, and briefly explain why they made that selection.

The question was relatively straightforward, though it required some reasoning to diagnose a cause from its effects. Candidates generally performed well on this question.

Part a

Candidates were expected to observe the discrepancy between the results of both development methods when compared to the results of both Bornhuetter-Ferguson methods, with

development showing higher results. Candidates were expected to propose a scenario that would cause similar discrepancies (development higher than B-F) for both paid and reported data, select the method(s) that were less distorted by the scenario selected, and provide a supporting statement for their selection.

Common mistakes included:
- Selecting settlement rate or case adequacy changes, which would explain the discrepancy on either the paid data or the reported data but not both.
- Selecting an estimate that was distorted by the selected scenario rather than one that reacts appropriately (e.g. selecting Bornhuetter-Ferguson results in the face of a deteriorating loss ratio).
- Not making a selection or not supporting the selection.

Part b

Candidates were expected to observe the discrepancy between the results of methods that rely on case reserves and those that rely only on paid data, with all methods that rely on case reserves showing higher results. Candidates were expected to propose a scenario that would have caused this discrepancy, selected the method(s) that were less distorted by the scenario selected, and provide a supporting statement for their selection.

Common mistakes included:
- Selecting estimates that were distorted by the selected scenario rather than one that reacts appropriately (e.g. selected reported development in the face of increased case reserve adequacy).
- Not making a selection or not supporting the selection.