

19. (2 points)

Discuss whether a frequency-severity technique is appropriate to estimate ultimate claims for the following:

a. (0.5 point)

A very long-tailed line of business.

b. (0.5 point)

A line of business with a significant proportion of reopened claims.

c. (0.5 point)

A line of business with a recent increase in high severity claims during the experience period.

d. (0.5 point)

A line of business that has experienced changes in case reserving philosophy during the experience period.

EXAM 5 SPRING 2016 SAMPLE ANSWERS AND EXAMINER'S REPORT

<p>Common mistakes included:</p> <ul style="list-style-type: none">• Stating that F-S techniques are useful for long-tailed lines, but not explaining why.• Stating that F-S techniques cannot be used for long-tailed lines due to highly-leveraged development factors.
Part b
<p>Candidates were expected to know the underlying assumption of the F-S methods regarding claim counts.</p> <p>Common mistakes included:</p> <ul style="list-style-type: none">• Incomplete explanations• Stating that reopened claims could distort the frequency and/or severity calculation, but not explaining why.
Part c
<p>Candidates were expected to know that the F-S methods assume a stable mix of claims and/or that the methods have the flexibility to allow for adjustment for higher severity claims.</p> <p>Common mistakes included:</p> <ul style="list-style-type: none">• Incomplete explanations, such as stating that an adjustment should be made but not describing what that adjustment would be.
Part d
<p>Candidate were expected to know that there are several methods to applying the F-S technique, which do not necessarily rely upon case reserve levels remaining consistent.</p> <p>Common mistakes included:</p> <ul style="list-style-type: none">• Stating that a change in case reserve adequacy would impact reported losses and/or not impact paid losses, but failing to demonstrate understanding that F-S techniques may use either paid or reported losses.

EXAM 5 SPRING 2016 SAMPLE ANSWERS AND EXAMINER'S REPORT

QUESTION 19	
TOTAL POINT VALUE: 2	LEARNING OBJECTIVE(S): B3, B5
SAMPLE ANSWERS	
Part a: 0.5 point	
<ul style="list-style-type: none"> It is appropriate because the freq & sev may change over time and using freq-sev can help for diagnosis of trending changes Appropriate. Select Frequency and Severity based on the long-term trend is possible using FS method. Yes, as it mitigates very-leveraged and uncertain development factors, particularly for immature years. 	
Part b: 0.5 point	
<ul style="list-style-type: none"> It's not suitable for significant reopen claims for the sev is calculated based on closed claims payments. Claim count definition need to be consistent. Not Appropriate. Not clear definition of claim count ==> hard to estimate frequency If the claim count is defined clearly and objectively (re. reopened claims are not new claims) then it may be appropriate. However, they must be defined appropriately. Otherwise, not appropriate. 	
Part c: 0.5 point	
<ul style="list-style-type: none"> Yes. It's appropriate. One can apply this new trend to restate the sev in the past exposure period. One can use B-F adjustments. The freq-sev technique can be appropriate if we adjust our incremental severity selections to account for the recent increase in severity. Assuming consistent claim count development, we can use the same freq for all years and judgmentally select incremental severities to reflect the recent increase for recent years with the disposal rate technique. Not appropriate, F-S technique require a stable mix of types of claims which isn't satisfied here w/ new bigger claims. 	
Part d: 0.5 point	
<ul style="list-style-type: none"> Changes in reserve adequacy does not impact the paid claims development. If paid claim sev-freq is used, it's appropriate. If reported sev-freq is used then the ult estimation may be distorted if not adjusted properly. (B-F for example can be used for adjustment.) F-S is valuable when there are changes in case reserve. The 3rd method of F-S doesn't require case reserve data, thus it is independent of case reserving philosophy Changes in case reserves philosophy will not affect the incremental paid severities or the development of closed claim counts so the freq-sev disposal rate method will be appropriate. Appropriate: can use pd data only which won't be impacted by case philosophy chgs 	
EXAMINER'S REPORT	
<p>Candidates were expected to know the assumptions of the frequency-severity techniques, when the techniques work and when they don't.</p> <p>This question was challenging, and few candidates scored well on all four parts.</p>	
Part a	
<p>Candidates were expected to know that the frequency-severity techniques are especially useful for long tailed lines, where the development methods do not produce reliable indications for the most recent years.</p>	