16. (1.75 points)

Given the following data for an insurance company evaluated as of December 31, 2018:

Accident Year	Cumulative Reported Claims ($000s) as of (months)			
	12	24	36	48
2015	900	2,150	3,125	3,900
2016	800	2,075	3,225	
2017	850	2,125		
2018	950			

1.100	48 to ultimate reported claim development factor

a. (0.75 point)

Calculate the company's accident year 2018 ultimate claims using the reported claim development technique.

b. (0.5 point)

Briefly describe two factors the company should take into consideration prior to supplementing their own loss development data with industry loss development data.

c. (0.5 point)

Describe the impact that doubling the number of claims handlers may have on the reported development technique.

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QUESTION 16

TOTAL POINT VALUE: 1.75 | **LEARNING OBJECTIVE(S): B1, B3, B4**

SAMPLE ANSWERS

Part a: 0.75 point

LDF's

	12-24	24-36	36-48	48-Ult
2015	2.389	1.453	1.248	
2016	2.594	1.554		
2017	2.5			
Selected	2.494	1.504	1.248	

Ultimate 2018 = 950 x 2.494 x 1.504 x 1.248 x 1.1 = 4892

Part b: 0.5 point

Any two of the following:

- Mix of business differs from industry
- Does industry data count claims as being gross or net of reinsurance?
- Are claims handling processes different?
- Does the data include any large claims that could distort estimates?
- What data aggregation the industry was using, whether it was based on policy year or accident year.
- Claims counts could include closed without pay or losses could be paid or reported.
- They should determine the credibility of their data to see if industry data is even needed.
- The cost of industry data may not justify added credibility.
- Consider the independence of industry experience. That is, if company is 90% market share, the industry data is not independent.

Part c: 0.5 point

Sample 1

There may be changes in case adequacy if now more claims adjusters are working allowing each to spend more time on each claim. Depending on how adequacy changes, reported development would be too high or low.

Sample 2

An increased number of claims handlers may increase the claims recording process so that once claims are reported, they have a case reserve put up quicker. In this case, applying old LDFs to new reported losses would overstate ultimate claims.

Sample 3

Doubling the number of claims handlers will increase the settlement rate. The case reserve won't change. Therefore the ultimate loss will be overestimated as the historical LDFs are based on a slower settlement rate.

Sample 4

This may increase the settlement rate but not the level of case adequacy. Thus the reported development method would not be affected.

EXAMINER'S REPORT

Candidates were expected to perform a simple age-to-age development technique. They also were asked to consider circumstances that might distort this technique if not considered carefully. In particular, what issues might arise when incorporating industry data and what effect would changes to internal claims staffing have on the method.

Part a

Candidates were expected to:

- Accurately calculate reported claim development factors based on the triangle of data given in the question and select reasonable factors for each age-to-age period.
- Calculate a cumulative development factor that incorporates both the selected age-to-age factors and the given tail factor. Multiply that factor by the current reported claims given for AY 2018.

Common mistakes included:

- Failure to include the tail factor in the calculation.

Part b

Candidates were expected to:

- Provide two factors to consider when using industry data to supplement company data.
- Responses could include specific concerns that may make industry data irrelevant when compared to the given company's data. Examples include a difference in the line of business being evaluated or claims handling operations (settlement rates, case adequacy, etc.).
- While responses could include considerations the company would undertake before deciding if use of industry data was needed, candidates were also expected to provide discussion on what to evaluate when considering the appropriateness of industry data once the decision has been made that the company needs to augment their own data.

Common mistakes included:

- Assuming the industry development pattern must be similar to the company's pattern to use industry data. The concept underlying use of an industry pattern is predicated on the idea that the company is skeptical of its own pattern in some way, so the patterns may indeed be different. It is more important that definitional differences between the company's operations and the industry's have been identified – these differences could make the industry data irrelevant.
- Responses that vaguely referred to industry data irrelevance or bias needed to be more specific in terms of the cause of that irrelevance/bias.
- Providing two responses that were not sufficiently different from one another. Examples include: "claim settlement rates" plus "claim handling procedures" or "mix of products" coupled with "mix of business".

Part c

Candidates were expected to:

- Describe the effect of hiring additional claims adjusters on the reported development pattern.
- Describe both how the addition to staff affects the claim operation but also what impact that change has on the resulting development pattern. For example, an increase in

adjusters could increase the rate of claim settlement. The candidate must also describe how that increase in settlement rate would manifest in the reported development pattern.

Common mistakes included:

- Either drawing an incorrect conclusion or making no statement at all on the impact to the reported development pattern. This includes saying that changing payment patterns has no impact on reported development without making it clear if they believe case reserves would also be affected.
- Demonstrating an incorrect understanding on how payment patterns affect reported claim patterns either with or without case reserve changes.
- Assuming an increase in adjusters affects either the number of claims ultimately being reported or that it would possibly result in an increase in ALAE without explaining why.