

17. (1.5 points)

The following information is available for a private passenger automobile insurer:

- The insurer started writing business five years ago.
- External data from other private passenger automobile insurers is used to supplement the insurer's data in estimation of unpaid claims.
- Unpaid claims have been estimated historically on a combined bodily injury and property damage basis.
- Internal data shows that the bodily injury claims take longer to reach ultimate than the property damage claims.

Internal management has asked the reserving actuary to begin estimating reserves separately for bodily injury and property damage claims using only internal data.

a. (0.75 point)

Fully discuss an argument to support this proposed change.

b. (0.75 point)

Fully discuss an argument against this proposed change.

## SAMPLE ANSWERS AND EXAMINER'S REPORT

<b>QUESTION 17</b>	
<b>TOTAL POINT VALUE: 1.5</b>	<b>LEARNING OBJECTIVES: B1</b>
<b>SAMPLE ANSWERS</b>	
<b>Part a: 0.75 point</b>	
<p>Any three of the following:</p> <ul style="list-style-type: none"><li>• As the internal data shows that there is a difference between the BI and PD claims, separating the claims will yield more accurate estimates.</li><li>• If the distributions of claim type are changing over time, then continuing to produce on a combined basis will produce inaccurate results.</li><li>• Internal data may be very different from industry data with respect to mix of business, claim handling practices, development patterns, etc. and using internal data only may improve accuracy of the reserves; relying on internal data only will increase homogeneity of data used in reserve analysis.</li><li>• Claim accuracy will improve pricing of products and improve competitive edge</li><li>• Will be able to more accurately and with greater ease diagnose changing patterns/trends for individual claim type</li></ul>	
<b>Part b: 0.75 point</b>	
<p>Any three of the following:</p> <ul style="list-style-type: none"><li>• The company only started writing five years ago, so true emergence may not have been borne out, especially for a long tailed line like bodily injury.</li><li>• Company has been supplementing with external data so it's very likely that internal data may not be credible on its own.</li><li>• Further break-down of the data to individual claim type may further compromise any credibility in the data, leading to inaccurate and volatile estimates.</li><li>• The benefit in the possibly more accurate results are not offset by the additional work and resources required to conduct additional reserve analyses.</li><li>• Key financial metrics used by investors/shareholders could be misleading if there are drastic swings in the reserve estimates.</li></ul>	
<b>EXAMINER'S REPORT</b>	
<p>Candidates were expected to demonstrate general knowledge with respect to: homogeneity and credibility of data, fundamentals of different types of insurance, types of data and their sources, understanding of 'development patterns', etc.</p> <p>Candidates were expected to demonstrate advantages and disadvantages for BOTH separating Auto Claims by claim type with respect to a reserve analysis, and moving from supplementing internal with external data to analyzing with internal data only.</p>	
<b>Part a</b>	

## SAMPLE ANSWERS AND EXAMINER'S REPORT

Candidates were expected to demonstrate an understanding of the advantages/benefits that come from: separately analyzing PD vs BI claims with respect to a reserve analysis, AND those that come from reliance only on the company's internal data.

Common errors included:

- Only addressing the claim type split, or the internal vs external data component, but not both.
- Only responding with an acknowledgment that BI vs PD claims develop differently, as the question states, but fail to appropriately tie that to accuracy of the reserve estimate or other diagnostics/conclusions that may be drawn from evaluating claim types separately.
- Broadly assuming that insurers writing business for 5 years results in fully credible internal data, even by claim type. Candidates who responded with this, generally contradicted this statement in part b (appropriately), acknowledging 5 years is too immature, especially for BI claims to be fully reliant on internal data.

### Part b

Candidates were expected to demonstrate an understanding of the disadvantages/drawbacks that come from: separately analyzing PD vs BI claims with respect to a reserve analysis, AND those that come from reliance only on the company's internal data.

Common errors included:

- Only addressing the claim type split, or the internal vs external data component, but not both.
- Generalization of 'lack of credibility;' there were opportunities to mention both lack of credibility for internal data only due to immaturity of company data, as well as credibility lost by further splitting down to claim type level, which would have received additional credit.
- Mentioning the possibility of claims not being able to be broken out, but the question has already stated that internal data is down to this grain since differences in development patterns have been recognized.