

EXAM 6 – UNITED STATES, SPRING 2014

17. (4 points)

Using the following Schedule P data for Private Passenger Auto Liability from an insurance company's 2012 Annual Statement (all figures in thousands of dollars):

Part 2B - Incurred Net Losses & DCC
Reported at Year End

Year	<u>2009</u>	<u>2010</u>	<u>2011</u>	<u>2012</u>
2009	Information not provided			
2010		1,570	1,590	1,590
2011			1,550	1,640
2012				1,630

Part 5B - Section 1 - Cumulative
Number of Claims Closed with Loss
Payment

Year	<u>2009</u>	<u>2010</u>	<u>2011</u>	<u>2012</u>
2009	Information not provided			
2010		160	230	250
2011			150	220
2012				150

Part 3B - Cumulative Paid Net Losses &
DCC Reported at Year End

Year	<u>2009</u>	<u>2010</u>	<u>2011</u>	<u>2012</u>
2009	Information not provided			
2010		610	1,090	1,340
2011			630	1,120
2012				788

Part 5B - Section 2 - Number of Claims
Outstanding

Year	<u>2009</u>	<u>2010</u>	<u>2011</u>	<u>2012</u>
2009	Information not provided			
2010		100	30	10
2011			90	30
2012				90

Part 4B - Bulk & IBNR Reserves on Net
Losses & DCC Reported at Year End

Year	<u>2009</u>	<u>2010</u>	<u>2011</u>	<u>2012</u>
2009	Information not provided			
2010		427	190	70
2011			480	210
2012				415

Part 5B - Section 3 - Cumulative
Number of Claims Reported

Year	<u>2009</u>	<u>2010</u>	<u>2011</u>	<u>2012</u>
2009	Information not provided			
2010		310	330	330
2011			290	310
2012				280

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17. (continued)

a. (2.5 points)

Complete the following triangles:

Average Paid Severity Per Closed Claim

Year	<u>2009</u>	<u>2010</u>	<u>2011</u>	<u>2012</u>
2009	3,750	4,417	5,200	5,500
2010		?	?	?
2011			?	?
2012				?

Average Outstanding Case Reserves

Year	<u>2009</u>	<u>2010</u>	<u>2011</u>	<u>2012</u>
2009	5,500	10,333	18,000	20,000
2010		?	?	?
2011			?	?
2012				?

b. (0.5 point)

Calculate the calendar year 2012 loss & DCC development on prior years for accident years 2010 and 2011.

c. (1 point)

Using the results from parts a. and b. above, identify two questions the appointed actuary should raise to the company's management, and briefly describe the rationale for each question.

SAMPLE ANSWERS AND EXAMINER'S REPORT

QUESTION 17

TOTAL POINT VALUE: 4

LEARNING OBJECTIVE: C1

SAMPLE/ACCEPTED ANSWERS

Part a: 2.5 points

Average Paid Severity Per Closed Claim – Both cumulative paid losses per closed claim and cumulative paid losses per claim closed with payment received full credit

1) Part 3 Net Paid Losses / Part 5 Claims Closed with Payment

	2009	2010	2011	2012
2009	3,750	4,417	5,200	5,500
2010		3,813	4,739	5,360
2011			4,200	5,091
2012				5,253

Sample Calculation: $5,253 = 788,000 / 150$

2) Part 3 Net Paid Losses / (Part 5 Reported Claims – Part 5 Outstanding Claims)

	2009	2010	2011	2012
2009	3,750	4,417	5,200	5,500
2010		2,905	3,633	4,188
2011			3,150	4,000
2012				4,147

Sample Calculation: $4,147 = 788,000 / (280 - 90)$

Average Outstanding Case Reserves

1) Net Outstanding Case Reserve (Part 2 – Part 3 – Part 4) / Part 5 Outstanding Claims

	2009	2010	2011	2012
2009	5,500	10,333	18,000	20,000
2010		5,330	10,333	18,000
2011			4,889	10,333
2012				4,744

Sample Calculation: $4,744 = (1,630,000 - 788,000 - 415,000) / 90$

SAMPLE ANSWERS AND EXAMINER'S REPORT

Part b: 0.5 point
<p>Prior Year Development = Incurred Net Losses & DCC Reported at Year End 2012 – Incurred Net Losses & DCC Reported at Year End 2011</p> <p>2010: 1590 – 1590 = 0; 2011: 1640 – 1550 = 90</p>
Part c: 1 point
<p>Below are examples of the correct items that were identified along with sample questions that candidates could ask for each item.</p> <ul style="list-style-type: none"> • Average Outstanding Case Reserve is decreasing at 12 months maturity – Are reserves adequate at 12 months? Are case reserves weakening? • Average Paid Severities are increasing at 12 months maturity – Are claims being paid faster? Has loss experience worsened? Are there changes in environment: mix of business, legal, etc. • Average Outstanding Case Reserves are decreasing at 12 months while average paid severities are increasing – Has there been a change in claims handling practices? Are larger claims being handled differently? • Adverse 1 year development in AY 2010 and/or 2011 from 12 to 24 month – What caused the change? Are reserves for 2012 adequate at 12 months? • Average case outstanding is the same at 24 and 36 months for AY 2009-2011 – Are reserves being set by formula? Do the reserve amounts incorporate inflation? Are reserve amounts appropriate? • Average paid severity decreased from AY 2009 to 2010, but has increased ever since – What changed in 2010 to cause this? (applicable if candidate used total closed claims in part a)
EXAMINER'S REPORT
Part a
<ul style="list-style-type: none"> • The candidate was expected to retrieve the correct values from the appropriate triangles and perform the calculations necessary to complete the average paid severity and average case outstanding triangles. • The candidate should have filled in the two triangles and provided a sample calculation for each. (Full credit was given even if a sample calculation was omitted) • For the average paid severity triangle, the most common errors were using incremental paid losses, incremental closed claims, or a combination of the two. For the average case outstanding triangle, the most common errors were not subtracting IBNR: using (Incurred Losses – Paid Losses)/Outstanding Claims, not subtracting paid losses: using (Incurred Losses – IBNR)/Outstanding Claims, or using IBNR/Outstanding Claims
Part b
<ul style="list-style-type: none"> • The candidate was expected to know what numbers needed to be used to calculate prior year development and to subtract those numbers. • To receive full credit the candidate needed to calculate the total prior year development for AYs 2010 and 2011 and provide sample calculations • Common errors included calculating the 2 year development for 2010 or providing a development factor instead of subtracting the year end losses • Full credit was given if 2 year development was given in addition to 1 year development

SAMPLE ANSWERS AND EXAMINER'S REPORT

Part c

- The candidate was expected to use their answers from parts a and b and ask questions that may be of concern to an appointed actuary
- To receive full credit, the candidate needed to provide 2 questions that an actuary would want to know the answers to given the results from parts a and b. They also needed to provide rationale for why the actuary would want to know the answer to those questions based on what they'd seen in parts a and b
- The most common error was that candidates asked an appropriate question, but did not provide any context to describe why they asked it. These candidates received credit for identifying a question but did not receive credit for briefly describing the rationale.
- Additional common errors included assuming that average case outstanding increasing over time was an issue or providing general questions unrelated to part a and part b. The question stated "Using the results from parts a. and b. above,...". However, these candidates provided answers without tying them to the data. Examples are "mix of business" or "changes in legal environments".