

25. (2 points)

The following information is available for an insurer as of December 31, 2016:

Accident Year	Cumulative Gross Reported Claims (\$000) as of (months)			
	12	24	36	48
2013	2,757	5,570	6,880	7,047
2014	2,345	4,104	5,121	
2015	2,639	4,677		
2016	2,802			

Accident Year	Cumulative Reported Claims (\$000) Ceded to Excess of Loss Treaty as of (months)			
	12	24	36	48
2013	0	745	1,332	1,332
2014	0	0	402	
2015	154	328		
2016	0			

Accident Year	Cumulative Paid Claims (\$000) Net of Excess of Loss Treaty
2013	5,102
2014	3,834
2015	2,840
2016	1,385

- There is no reported claims development beyond 48 months.
- For each of accident years 2013 through 2015, the insurer maintained a stop loss reinsurance limit that applies after an excess of loss treaty.
- The stop loss limits are:

Accident Year	Stop Loss Limit (\$000)
2013	5,000
2014	5,000
2015	5,000
2016	None

Calculate the unpaid claims net of all reinsurance for all accident years using the reported claims development technique.

SAMPLE ANSWERS AND EXAMINER'S REPORT

QUESTION 25

TOTAL POINT VALUE: 2

LEARNING OBJECTIVE(S): B3, B6

SAMPLE ANSWERS

Sample 1

Net Reported Claims (= Gross - Ceded XOL)

Accident

Year	12	24	36	48
2013	2,757	4,825	5,548	5,715
2014	2,345	4,104	4,719	
2015	2,485	4,349		
2016	2,802			

Age-to-Age Factors

2013	1.750	1.150	1.030
2014	1.750	1.150	
2015	1.750		

Selected

LDF	1.750	1.150	1.030	1.000
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Selected

CDF	2.073	1.184	1.030	1.000
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Accident Year	Net of XOL Incurred	CDF	Net of XOL Ultimate	Stop Loss	Net Ultimate	Net Paid	Net Unpaid
2013	5,715	1.000	5,715	5,000	5,000	5,102	0
2014	4,719	1.030	4,861	5,000	4,861	3,834	1,027
2015	4,349	1.184	5,151	5,000	5,000	2,840	2,160
2016	2,802	2.073	5,808	N/A	5,808	1,385	4,423

Sample 2

Gross Reported Claims

Accident

Year	12	24	36	48	Gross Incurred	Gross CDF	Gross Ultimate
2013	2,757	5,570	6,880	7,047	7,047	1.000	7,047
2014	2,345	4,104	5,121		5,121	1.024	5,245
2015	2,639	4,677			4,677	1.278	5,978
2016	2,802				2,802	2.265	6,347

Age-to-Age Factors							
2013	2.020	1.235	1.024				
2014	1.750	1.248					
2015	1.772						
Sel LDF	1.772	1.248	1.024	1.000			
Sel CDF	2.265	1.278	1.024	1.000			
Ceded Reported Claims							
Accident					Ceded	Ceded	Ceded
<u>Year</u>	<u>12</u>	<u>24</u>	<u>36</u>	<u>48</u>	<u>Incurred</u>	<u>CDF</u>	<u>Ultimate</u>
2013	0	745	1,332	1,332	1,332	1.000	1,332
2014	0	0	402		402	1.000	402
2015	154	328			328	2.328	763
2016	0				0	16.217	0
Age-to-Age Factors							
2013	N/A	1.788	1.000				
2014	N/A	N/A					
2015	2.130						
Sel LDF Vol							
Wtd All Yr -	6.968	2.328	1.000	1.000			
Sel CDF	16.217	2.328	1.000	1.000			
Net of							
Accident	XOL	Stop	Net	Net	Net		
<u>Year</u>	<u>Ultimate</u>	<u>Loss</u>	<u>Ultimate</u>	<u>Paid</u>	<u>Unpaid</u>		
2013	5,715	5,000	5,000	5,102	0		
2014	4,843	5,000	4,843	3,834	1,009		
2015	5,214	5,000	5,000	2,840	2,160		
2016	6,347	N/A	6,347	1,385	4,962		
EXAMINER'S REPORT							
Candidates were expected to use the reported claims development method to obtain an estimate of ultimate net of an excess of loss treaty, apply the stop loss reinsurance to obtain an estimate of ultimate loss and paid loss net of all reinsurance, and subtract the paid losses to date in order to obtain the unpaid amounts.							

SAMPLE ANSWERS AND EXAMINER'S REPORT

Common errors included:

- Not applying the stop loss limitation to either the ultimate losses or the paid losses
- Subtracting undeveloped ceded losses from ultimate developed gross losses
- Capping the net triangle at 5,000 to calculate LDFs and applying those LDFs to AY 2016, which does not have an aggregate stop loss
- Applying a stop loss limitation to AY 2016
- Using the gross LDFs to develop the ceded XOL amounts