

EXAM 6 – UNITED STATES, FALL 2016

24. (2 points)

Given the following information for an insurance company as of December 31, 2015 (all figures in thousands of dollars):

Gross case loss and LAE reserves	40,000
Appointed Actuary's point estimate of gross IBNR	20,000
Gross carried loss and LAE reserves	58,000

And the following excerpt from the Five-Year Historical Data exhibit from the company's 2014 and 2015 Annual Statements (all figures in thousands of dollars):

	1 2015	2 2014	3 2013	4 2012	5 2011	6 2010
Surplus as regards policyholders	30,000	35,000	38,000	40,000	40,000	38,000
Development in estimated losses and loss expenses incurred prior to current year	(900)	1,500	1,600	(1,800)	2,000	4,000
Development in estimated losses and loss expenses incurred 2 years prior to current year and prior year	(1,000)	1,800	1,900	(2,000)	2,500	5,000

- The Appointed Actuary has developed a reasonable range of unpaid claims equal to +/- 10% of the point estimate of unpaid claims. The Company has no ceded reinsurance.

Draft Items A through E of the 2015 Actuarial Opinion Summary (AOS).

**SAMPLE ANSWERS AND EXAMINER'S REPORT**

**QUESTION 24**

**TOTAL POINT VALUE: 2** | **LEARNING OBJECTIVE: D1**

**SAMPLE ANSWERS**

*Sample 1*

	Net			Gross		
	Low	Central	High	Low	Central	High
A: Range of Estimates for Reserve	54,000		66,000	54,000		66,000
B: Actuary's Point Estimate for Reserve		60,000			60,000	
C: Management Booked Reserve		58,000			58,000	
D: Difference	4,000	-2,000	-8,000	4,000	-2,000	-8,000

No cessions so gross equals net

E: The company has not experienced a 1-year adverse development in excess of 5% of prior year surplus in 3 or more of the last 5 years.

Calculation for E

2015	$(900)/35,000 = -.026$
2014	$1,500/38,000 = .04$
2013	$1,600/40,000 = .04$
2012	$(1,800)/40,000 = -.045$
2011	$2,000/38,000 = .05$

*Sample 2 (Candidates did not lose points if A –D were in the wrong order)*

	Gross and Net are the same		
	Low	Central	High
A: AA Point Estimate		60,000	
B: AA Range of Reasonable Est	54,000		66,000
C: Carried L & LAE Reserves		58,000	

**SAMPLE ANSWERS AND EXAMINER'S REPORT**

D: Difference Carried and Indicated	4,000	-2,000	-8,000
-------------------------------------	-------	--------	--------

E: The company did not experience one year development in excess of 5% of prior PHS for at least 3 out of the last 5 years.

Calculation for E

	2015	2014	2013	2012	2011
Ratio 11	-900/35,000 = -2.6%	3.9%	4%	-4.5%	5.3%

*Sample 3 (Alternate for Parts A-D)*

	Low	Point	High
A: Actuary Estimate Gross Loss&:LAE Reserves	54,000	60,000	66,000
B: Company Carried		58,000	
C: Difference	4,000	-2,000	-8,000

*Sample 4 (Alternate Explanation for Part E)*

E: In the last 5 years, only year 2011 had one year adverse development larger than 5%.

**EXAMINER'S REPORT**

The candidates were expected to demonstrate that they knew the content of the Actuarial Opinion Summary (AOS). They were expected to identify:

- A: The Appointed Actuary's range of reasonable estimates for loss and loss adjustment expense reserves, net and gross of reinsurance;
- B: The Appointed Actuary's point estimate for loss and loss adjustment expense reserves, net and gross of reinsurance;
- C: The company's carried reserve, net and gross of reinsurance;
- D: The difference between the company's carried reserves and the Appointed Actuary's estimates as calculated in part A and B, net and gross of reinsurance;
- E: If there was one-year adverse development in excess of 5% of surplus in at least 3 of the last 5 years.

## SAMPLE ANSWERS AND EXAMINER'S REPORT

The candidates were expected to correctly calculate parts A-D including both net and gross amounts, if they correctly calculated the one-year adverse development in at least 3 out of the 5 years and if they provided a statement on whether the company has experienced one-year adverse development in excess of 5% of surplus in at least 3 of the last 5 years.

Candidates did receive credit for the statement in part E if they made a statement that only 1 year in the last 5 had one-year adverse development in excess of 5% of surplus. They also received credit if they combined lines A and B of the AOS.

Common mistakes included:

- Failing to provide the estimates net of reinsurance or saying that there is no net or net is N/A
- Not including case reserves as part of the Appointed Actuary's estimates
- Calculating the lower end of the Actuary's range as  $60,000/1.1$  instead of  $60,000 \times .9$
- Subtracting case reserves from the company's carried reserve amount
- Not using the prior year's surplus in the calculation for part E
- Including both development on one-year prior and two-year prior in the calculation for part E (for example  $(-900 - 1000)/35,000$ )
- Only calculating part D for the point estimate and not the range of reasonable estimates
- Subtracting items in the wrong order for part D (the final answer having the wrong +/- sign)