

23. (2.25 points)

Given the following information as of December 31, 2017:

Accident Year	Cumulative Paid Claims Only (\$) as of (months)		
	12	24	36
2014	172,000	464,400	626,900
2015	168,000	453,600	
2016	170,000		

Accident Year	Calendar Year 2017 Paid Claims Only (\$)	
2014	75,200	
2015	158,800	
2016	289,000	
2017	172,000	

Accident Year	Cumulative Paid ALAE (\$) as of (months)			
	12	24	36	48
2014	5,500	27,000	40,000	55,000
2015	5,600	26,000	39,000	
2016	5,700	26,000		
2017	5,600			

- There is no development beyond 48 months.

a. (0.25 point)

Calculate the last diagonal of the Cumulative Paid Claims Only triangle as of December 31, 2017.

b. (1.75 points)

Estimate ultimate ALAE for Accident Year 2017 using an additive ratio approach.

c. (0.25 point)

Identify one disadvantage of using a ratio technique to estimate ALAE.

EXAM 5 FALL 2018 SAMPLE ANSWERS AND EXAMINER'S REPORT

QUESTION 23

TOTAL POINT VALUE: 2.25

LEARNING OBJECTIVE(S): B7

SAMPLE ANSWERS

Part a: 0.25 point

2014 702,100

2015 612,400

2016 459,000

2017 172,000

Part b: 1.75 points

ALAE to Paid

AY	12	24	36	48
14	.032	.058	.064	.078
15	.033	.057	.064	
16	.034	.057		
17	.033			

Additive LDFs

AY	12-24	24-36	36-48	
14	.026	.006	.014	
15	.024	.007		
16	.023			
Sel Avg	.024	.007	.014	
Age to Ult	.045	.021	.014	

Ult ALAE to Paid Ratio = .033 + .045 = .078

Paid LDFs

AY	12-24	24-36	36-48	
14	2.7	1.35	1.12	
15	2.7	1.35		
16	2.7			
Sel Avg	2.7	1.35	1.12	
Age to Ult	4.0824	1.512	1.12	

Ult Paid = 172,000(4.0824) = 702172.8

AY 2017 Ult ALAE = 702172.8*(.078) = 54,769.48

Part c: 0.25 point

Sample 1:

A disadvantage is that if you incorrectly estimate claims you will then incorrectly estimate ALAE

Sample 2:

EXAM 5 FALL 2018 SAMPLE ANSWERS AND EXAMINER'S REPORT

It will be distorted when some claims are closed without payment but with significant amount of ALAE
EXAMINER'S REPORT
The candidate was expected to demonstrate knowledge of the additive ratio method of estimating unpaid ALAE
Part a
<p>The candidate was expected to calculate the December 31, 2017 paid loss diagonal using the prior diagonal and calendar year 2017 loss payments.</p> <p>A common mistake was adding the calendar year payments to the incorrect year in the prior diagonal</p>
Part b
<p>The candidate was expected to estimate ultimate ALAE using the additive ratio approach. This consists of constructing a triangle of paid alae to paid claims, calculating development factors of this triangle using addition, cumulating selected development factors, and applying the 12-ult factor to the 2017 estimate of ultimate loss, which can be determined using the development method on the cumulative paid claims triangle.</p> <p>Common mistakes include:</p> <ul style="list-style-type: none">• Only providing the ALAE ratio instead of an ultimate ALAE estimate• Applying the ALAE ratio to 2017 paid loss instead of to the 2017 ultimate loss estimate• Using the ALAE development method to calculate ultimate ALAE.
Part c
<p>The candidate was expected to describe a disadvantage of the additive ratio approach.</p> <p>Common mistakes include:</p> <ul style="list-style-type: none">• Describing an advantage of the approach• Describing an assumption of the approach.