18. (1.75 points)

Given the following data evaluated as of December 31, 2018:

Accident Year	Cumulative Paid Claims ($000) as of (months)			
	12	24	36	48
2015	1,200	2,325	2,900	3,100
2016	1,800	3,300	4,100	
2017	1,500	2,800		
2018	1,700			

Accident Year	Case Outstanding ($000) as of (months)			
	12	24	36	48
2015	1,500	800	400	160
2016	2,000	1,150	575	
2017	1,750	975		
2018	2,200			

1.15	48-Ult paid claim to prior case outstanding development factor

- There is no paid or reported development beyond 60 months.

a. (1.5 points)

Estimate unpaid claims for accident year 2018 as of December 31, 2018 using a case outstanding development technique.

b. (0.25 point)

Briefly describe a scenario where it would be appropriate to use the case outstanding development technique.

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QUESTION 18

TOTAL POINT VALUE: 1.75 | **LEARNING OBJECTIVE(S): B3**

SAMPLE ANSWERS

Part a: 1.5 points

Sample 1

Incremental Paid Claims

AY	12	24	36	48
2015	1200	1125	575	200 (=3100-2900)
2016	1800	1500	800	
2017	1500	1300		
2018	1700			

Case to Prior Case

AY	12-24	24-36	36-48
2015	0.532	0.50	0.40 (=160/400)
2016	0.575	0.50	
2017	0.557		
Selected	0.555	0.50	0.40

Incremental Paid to Prior Case

AY	12-24	24-36	36-48	48-Ult
2015	0.75	0.719	0.50 (=200/400)	
2016	0.75	0.696		
2017	0.742			
Selected	0.747	0.708	0.50	1.15

Case Outstanding

AY	12	24	36	48
2018	2200	1221	610.5	244.2 (=610.5*0.4)

Paid on Case

AY	12	24	36	48
2018	1700	1693.40	804.47	280.83 (=244.2*1.15)

AY 2018 Unpaid Claims = 1693.4 + 804.47 + 280.83 = 3093.94

Sample 2

AY 2015 Ultimate Paid Claims = 48-Ult Paid to Prior Case O/S * Prior Case O/S at 48 months + Paid Claims at 48 months
= 1.15 * 160 + 3100 = 3284

Paid Development Factors

AY	12-24	24-36	36-48	48-Ult
2015	1.938	1.247	1.069	1.059 (=3284/3100)
2016	1.833	1.242		
2017	1.867			
Average	1.879	1.245	1.069	1.059

12-Ult Factor = 1.879 * 1.245 * 1.069 * 1.059 = 2.648

Reported Claims

AY	12	24	36	48	Ult
2015	2700	3125	3300	3260 (=3100+160)	3284 (=Paid Ultimate)
2016	3800	4450	4675		
2017	3250	3775			
2018	3900				

Reported Development Factors

AY	12-24	24-36	36-48	48-Ult
2015	1.157	1.056	0.988	1.007 (=3284/3260)
2016	1.171	1.051		
2017	1.162			
Average	1.163	1.054	0.988	1.007

12-Ult Factor = 1.163 * 1.054 * 0.988 * 1.007 = 1.219

Case O/S 12-Ult Development Factor = ((1.219 – 1) * 2.648) / (2.648 – 1.219) + 1.00 = 1.4058

AY 2018 Unpaid Claims = 2200 * 1.4058 = 3092.76

Part b: 0.25 point

Sample 1

When pricing a claims-made policy which has no pure IBNR.

Sample 2

It is appropriate to use this method with short-tailed lines of business when nearly all of the claims have been reported in the first period of development.

Sample 3

For self-insured companies that only have case outstanding data and can use industry paid/reported CDF's to calculate the unpaid factor.

EXAMINER'S REPORT

Candidates were expected to know the mechanics and assumptions of the Case Outstanding method and be able to apply one of the methods to the provided data. They were also expected to know when the Case Outstanding method is appropriate to use.

Part a

Candidates were expected to calculate the 2018 Accident Year Unpaid Claims using the Case Outstanding method of their choosing.

Common mistakes included:

- Calculating Ultimate Claims and not Unpaid Claims
- Not including the 48-Ultimate Paid on Prior Case development factor or applying the factor incorrectly
- Using another method besides one of the two Case Outstanding methods
- Using Cumulative Paid Claims and development factors instead of Incremental Paid Claims and factors
- Using current year Case Outstanding instead of prior year Case Outstanding when calculating Paid on Prior Case Ratios

Part b

Candidates were expected to provide a scenario where using the Case Outstanding method would be appropriate or preferred over other methods.

Common mistakes included:

- Listing an assumption of the method rather than a scenario
- Describing scenarios where the method would not be appropriate to use