19. (2.25 points)

A company that self-insures has the following limited historical information:

Accident	Cumulative Reported Claims ($000) as of (months)			
Year	12	24	36	48
2012	4,000	6,000	7,500	8,250
2013	5,000	7,500	9,375	
2014	6,000	9,000		
2015	7,500			

Accident	Cumulative Paid Claims ($000) as of (months)			
Year	12	24	36	48
2012	1,600	4,000	6,000	7,500
2013	2,000	5,000	7,500	
2014	2,400	6,000		
2015	3,000			

Industry Benchmark Claims Development Factors		
Age-Age	Reported	Paid
60-Ult	1.015	1.100
48-60	1.025	1.150
36-48	1.050	1.250
24-36	1.150	1.500
12-24	1.250	2.500

• Case outstanding for accident year 2011 as of December 31, 2015 = $500,000.

a. (0.75 point)

Use the industry benchmark claims development factors to estimate the unpaid claims for accident year 2011 as of December 31, 2015.

b. (1 point)

Assess the reasonableness of using the industry benchmark reported and paid claims development factors for this company.

c. (0.5 point)

Given the response to part b. above, discuss the reasonableness of the estimate in part a. above.

QUESTION 19	
TOTAL POINT VALUE: 2.25	**LEARNING OBJECTIVE: B3, B8**
SAMPLE ANSWERS	

Part a: 0.75 point

Sample Answer 1

Case Development Factor = [paid CDF * (reported CDF – 1)]/[paid CDF – reported CDF] +1

= [1.1 * (1.015-1.1)]/(1.1-1.015) = 1.194

Unpaid Claims = Factor * case outstanding

=1.194 * 500,000 = 597,059

Sample Answer 2

	(1)	(2)	(1) X (2) = (3)
AY	Case Outstanding	Factor	Unpaid
2011	500,000	1 – 1/1.1	597,059
		1/1.015 – 1/1.1	

Part b: 1 point

Reported Age-to-Age

AY	12-24	24-36	36-48
12	1.5	1.25	1.1
13	1.5	1.25	
14	1.5		
Selected	1.5	1.25	1.1
Industry	1.25	1.15	1.05

The reported claims are developing much faster than the industry benchmarks.

Paid Age-to-Age

AY	12-24	24-36	36-48
12	2.5	1.5	1.25
13	2.5	1.5	
14	2.5		
Selected	2.5	1.5	1.25
Industry	2.5	1.5	1.25

The paid development/settlement pattern is in line with the industry.

The industry reported development CDF's should not be used for this company. The industry paid CDF's are appropriate to be used for this company. Overall, there is a difference in case reserve philosophy for this company versus industry.

Part c: 0.5 point

The response in a) is not reasonable given that the reported LDF for the industry are not representative for the company. Likely this LDF is too low, meaning the estimate in a) was too low (understated).

EXAMINER'S REPORT
Part a
Candidates were expected to calculate unpaid claims for AY 2011 using the case outstanding technique. Common mistakes included: • Not using the correct formula for case outstanding factor. • Using a 12-ult CDF instead of 60-ult CDF. • Not including the case outstanding amount for AY 2011 in the final answer.
Part b
Candidates were expected to calculate development factors for the company using the given historical company data and then compare the calculated company factors to given industry benchmark factors. Candidates were then expected to assess the reasonableness of using the industry factors for the company based on the comparison to the calculated company factors. Common mistakes included: • Not stating whether or not the given paid and reported industry factors were reasonable based on the comparison to the calculated company factors.
Part c
Candidates were expected to indicate that the estimate in a) would be understated and therefore unreasonable. Common mistakes included: • Candidates stated that the response in a) was inaccurate but did not state that the result in a) was understated. • Indicating that the response in a) was overstated.