

19. (3 points)

a. (1 point)

Describe the NAIC's Bright Line Indicator Test and explain how it is used by regulators.

b. (2 points)

The follow information is given for two insurance companies (all figures are in millions of dollars):

Company	Company Carried Reserves	Total Adjusted Capital	RBC Authorized Control Level	One-Year Reserve Development	Actuary's Range of Reserves	Materiality Standard
A	500	750	360	-60	475 to 525	30
B	800	900	400	80	700 to 900	80

The Appointed Actuaries for Company A and Company B each state that there are not significant risks and uncertainties that could result in material adverse deviation. Fully explain why regulators may question those conclusions.

## SAMPLE ANSWERS AND EXAMINER'S REPORT

### Part a

Candidates were expected to set up the reserve tables, showing columns for low, point estimate, and high end of range. Format and order of the rows was not critical. Candidates were expected to show both gross and net tables.

Since the actuary's range was not provided, candidates were not expected to fill in this row. If candidates stated an assumption for a range and correctly applied the range, points were not deducted.

Common mistakes included:

- Labeling the rows with only A-D without describing what is included in Items A-D.
- Including either Net or Gross but not both.
- Not adding Loss Reserves, Defense and Cost Containment Reserves, and Adjusting and Other Reserves.
- Miscalculating the reserves; most often by not including Adjusting and Other.
- Including a range without providing an assumption as to how the range was determined.

### Part b

Candidates were expected to explain when the actuary is required to provide an explanatory statement, calculate the appropriate ratios, and apply the test to the ratios.

Common mistakes included:

- Calculating the ratios as adverse development to current policyholder surplus instead of to prior year policyholder surplus.
- Calculating the ratios as prior year adverse development to current policyholder surplus instead of current year adverse development to prior year policyholder surplus.
- Not including calculation or results of calculation.
- Incorrect number of years or threshold that would require a statement.
- Failure to include a statement describing the criteria/trigger that determines whether an explanatory note is needed
- Incorrectly applying the trigger to the calculation.

### SPRING 2019 EXAM 6US, QUESTION 19

TOTAL POINT VALUE: 3

LEARNING OBJECTIVE: D

### SAMPLE ANSWERS

Part a: 1 point

#### Sample 1

- If 10% of loss & LAE reserves is greater than the difference between adjusted surplus and company action level capital & surplus, regulators will need an explanation on why the actuary doesn't think there exists material adverse deviation.

## SAMPLE ANSWERS AND EXAMINER'S REPORT

### Sample 2

- If 10% of carried net loss & LAE reserves  $> TAC - 2*ACL$ , then regulators look for explanations of RMAD or why there is no RMAD.  $2*ACL$  corresponds to company action level. They may seek further explanation from AA if RMAD not discussed.

### Sample 3

- The Bright Line indicator test looks at total adjusted capital – company action level and if it is less than 10% of the carried loss reserves, regulators want an explanation from the actuary if they did not conclude there was a risk of material adverse deviation.

### Sample 4

- If 10% of reserves is greater than the difference between the company's adjusted capital and company action level capital, regulators seek comment if the company concluded than risk of material adverse deviation doesn't exist. Used by regulators to get further information on companies who are approaching RBC company action level on the risks and uncertainties that may impact their reserves.

### **Part b: 2 points**

#### Sample Responses for Company A

- 10% reserves = 50  
Company action level =  $2*ACL \Rightarrow 720$   
 $50 > 750 - 720 \Rightarrow$  company A fails bright line indicator test which disagrees with appointed actuary's conclusion
- Using Bright Line test  
 $10\% (500) = 50$   
 $TAC - 2*ACL = 30$   
 $50 > 30$  therefore RMAD likely
- Bright Line test:  
 $TAC - CAL = 750 - 360*2 = 30$   
 $10\% \text{ reserves} = (.1) * 500 = 50$   
Since  $30 < 50$  regulators will question the actuary about why they don't believe there is risk of material adverse deviation
- Company A: Carried reserves  $* 0.1 = 500 * 0.1 = 50 > 750 - 2 * 360 = 30$   
So bright line test indicator means regulators must investigate why there is no RMAD

#### Sample Responses for Company B

- $800 + 80 = 880$  is within the actuary's range of estimates so there is likely RMAD
- As materiality standard is 80 and carried amount is 800, the total  $800 + 80 = 880$  is within the range of actuary's range of reserves. So regulators need an explanation as this shows material adverse deviation does exist.
- Carried reserve + materiality standard =  $800 + 80 = 880$   
This is still within the actuary's range of reasonable reserve estimates (700 – 900) so actuary should conclude there is a risks of material adverse deviation given that materiality standard
- Company B:  $10\% * 800 = 80$ ,  $TAC - 2 * ACL = 100$

## SAMPLE ANSWERS AND EXAMINER'S REPORT

$80 < 100 \Rightarrow$  No RMAD

$80 + 800 = 880$  falls within the range indicating there is indeed RMAD deviation

### EXAMINER'S REPORT

The candidate was expected to demonstrate knowledge and understanding of tests used by actuaries and regulators in assessing the risk of material adverse deviation with respect to loss reserves

#### Part a

Candidates were expected to demonstrate knowledge of the formula used in the Bright Line Indicator Test, and how the results of the test are used by the regulator.

Common mistakes include:

- Stating that regulators always perform / act on the results of the Bright Line Indicator Test. In practice, regulators only act on the results of the test when the appointed actuary's SAO states that there is no RMAD.
- Using Authorized Control Level in the formula rather than Company Action Level.
- Just stating the formula and either not commenting on how it is used, or stating that it is used to assess the financial status or solvency of the company.

#### Part b

For Company A, candidates were expected to show that the Company failed the Bright Line Indicator Test and as a result the regulator would seek explanation from the appointed actuary on why they concluded RMAD doesn't exist.

For Company B, candidates were expected to show that the Company's carried reserve plus the materiality standard fall within the appointed actuary's range of estimates, indicating that RMAD likely exists.

Common mistakes included:

- Questioning other information provided (such as the width of the range of estimates, selected materiality standard, or amount of one-year reserve development). While regulators may question these items, this does not answer why the regulator may question the appointed actuary's RMAD conclusion.
- Questioning the RMAD conclusion based on the level of adverse reserve development even if negative. RMAD is concerned with adverse development, not favorable.