22. (2.75 points)

Consider the following balance sheet for an insurance company that has been in business for two years and writes only high limit liability coverage (all figures in millions of dollars):

Assets	
Bonds	$40.0
Cash and cash equivalents	$15.1
Amounts recoverable from reinsurers	$1.0
Liabilities	
Losses	$25.1
Loss adjustment expenses	$18.5
Other expenses	$0.5

- There are no other assets or liabilities.
- The Appointed Actuary has calculated a point estimate of net unpaid loss and loss adjustment expense of $44.6 million.
- The authorized control level RBC for the company is $4.3 million.

a. (1.5 points)

Propose and calculate three materiality standards, based on three different metrics, that may be considered by the Appointed Actuary in preparing the Statement of Actuarial Opinion.

b. (0.5 point)

Justify the selection of one materiality standard from part a. above to be considered when evaluating whether there is a risk of material adverse deviation.

c. (0.75 point)

Fully explain whether there is a risk of material adverse deviation.

CONTINUED ON NEXT PAGE

SPRING 2017 EXAM 6U SAMPLE ANSWERS AND EXAMINER'S REPORT

QUESTION 22	
TOTAL POINT VALUE: 2.75	**LEARNING OBJECTIVE(S): D**
SAMPLE ANSWERS	
Part a: 1.5 points	

Sample answers include:

Sample 1

- 10% of surplus:
  Surplus = 40+15.1+1 – (25.1 +18.5 + 10.5) = 12
  Materiality standard = 1.2M
- 10% of reserve = 10% x (25.1 + 18.5) = 4.36M
- Amount of surplus that would trigger the next RBC level
  =12 – 4.3x2 = 3.4M

Sample 2

- 20% of surplus: 20% x [40+15.1+1 – (25.1 +18.5 + 10.5)] = 2.4M
- 10% of point estimate = 10% x 44.6 = 4.46M
- Amount of deviation to cause insurer to fall to Authorized Control Level
  Standard = 12 (PHS) – 4.3 (ACL) = 7.7

Part b: 0.5 point

Sample answers include:

Sample 1

I would select 10% of surplus or $1.2M because it's the smallest of the three and it's the most conservative.

Sample 2

Regulators are intended user:

- Concerned about solvency
- Select most conservative std of the 3 (min)
- Mat. std = 1.2M

Sample 3

I choose the surplus to get to the next regulatory action level which is 3.4m. This is reasonable since at this level of surplus the company would be in danger of insolvency and providing a detailed plan to the commissioner so this level is material enough to change the user's opinion & decision on actions to take & financial health of the company.

Sample 4

I would choose Amt to trigger company action level (3.4M). This would get the company on regulators scrutiny and would require the co. to write report to Reg stating how they would increase surplus or decrease risk.

Part c: 0.75 point

Sample answers include:

Sample 1

There is a risk of material deviation. If the materiality standard is $1.2m, then adding that to the company's carried loss and LAE reserves gets us to 25.2 + 18.5 + 1.2 = 44.8m. It is very likely that this would be within the actuary's reasonable range of estimates, given his point estimate of 44.6m combined with the fact that high limit liability coverage and new companies are challenging to reserve for. These two facts would certainly widen the actuary's reasonable range to include 44.8m.

Sample 2
As no range of unpaid losses exists, a qualitative determination is needed. As ins co is new to market (inexperienced in reserving) & coverage is hi limits, it seems reasonably possible that unpaid losses could develop by 1.2M, thereby reducing surplus by 1.2M, so yes, RMAD.

Sample 3
Company has only been in business 2 years and writes high limits liability, which is a relatively volatile line. This lack of experience w/ liability line could reasonably result in reserves deviating (1.2/43.6 = 2.75%) 2.75% upwards from where they are now.

Sample 4
Actuary's point estimate = 44.6m
10% of current reserves = 4.36m (from part a.)
Using Bright Line Indicator: 4.36 > 3.4m (surplus – 2xACL from part a.)
Therefore, the regulator would expect a note here that there is risk for material adverse development.

Sample 5
Using the Bright Line Indicator Test, 10% of loss/LAE reserves are greater than the difference of surplus & the company action level, 4.36 > 12 – 2(4.3). Therefore, risk of material adverse deviation is believed to exist and comments should be sought from the Appointed Actuary if he disagrees with this.

EXAMINER'S REPORT

Candidates were expected to demonstrate knowledge of several potential materiality standards, justify the selection of a materiality standard and use this selection, along with other risk factors described in the question, to determine if the company has an RMAD.

Part a

Candidates were expected to describe and correctly calculate three distinct materiality standards which could be used by this company. This was generally one from each category of: percentage of reserves, percentage of surplus, and amount of adverse deviation which would trigger a decrease in RBC level.

Common errors include:

- Including the "other expense" liability as part of the carried reserves.
- Providing two answers which were too similar. For example:
    - Using a percent of carried reserves and a percent of the point estimate
    - Providing two materiality standards which corresponded to dropping to different RBC levels.

  - Providing two different percentages of the same metric (e.g., 10% of surplus, and 20% of surplus)
- Referring to a specific RBC level, but calculating the amount of deviation which would cause the company to enter a different level.
- Identifying an RBC level as "RBC" as opposed to "company action level" or "authorized control level".
- Not adequately describing the materiality standard (for example, just providing an equation without an explanation).
- Using the following materiality standards because they either don't measure materiality with respect to reserves, include other elements not related to reserves, or exclude a significant component of total reserves
  - percentage of assets
  - percentage of total liabilities
  - percentage of loss only reserves (excluding loss adjustment expenses)

Part b

Candidates were expected to select one of their calculated materiality standards, and justify why that selection would be material to this company.

Common errors include:

- Selecting the highest standard because it is the most conservative. The <u>lowest</u> standard represents the most conservative choice.
- Selecting a standard, but not fully justifying the choice. For example, "I select 3.4M because it would cause a drop in the RBC level," or "I select 1.2M because it is the smallest." These answers did not provide a complete justification and were either simply a definition of the selection or just one minor fact about the selection and did explain why that is a good choice (like "…and therefore the most conservative.")

Part c

Candidates were expected to use both quantitative and qualitative reasoning to conclude whether or not an RMAD exists. Candidates generally had difficulty with this subpart with the majority only considering quantitative aspects.

Candidates who assumed a reasonable range of reserves around the central estimate, and correctly concluded whether there was an RMAD based on these criteria were provided partial credit.

Common errors include:

- Concluding that there was or was not an RMAD based on a comparison to the point estimate. For example, "Since the carried + materiality standard > point estimate, there is an RMAD", or "Since the carried + materiality standard < point estimate, there is not an RMAD". Quantitative measures look to the carried reserve + materiality standard relative to the range. In other words, is it reasonable to expect that the carried reserves would develop adversely by the materiality standard.
- Incorrectly interpreting the results of the Bright Line Indicator Test, such as "Since 10% of carried reserves > Surplus – 2 x ACL, there is RMAD". If the test fails, regulators would

expect there to be an RMAD, but it isn't a black and white rule. If the actuary's determination conflicts with the Bright Line results, they may need to provide further justification.

- Creating the actuary's range by adding and subtracting the materiality standard from the actuary's point estimate, and then comparing the carried reserve to that range. Or comparing the actuary's point estimate to the top end of the range of the carried reserve plus the materiality standard. The actuary's range is independent of the materiality standard.