14. (2 points)

Given the following information:

- An annual policy is written on January 1, 2016 for a premium of $6,500. The premium is paid on January 1, 2016 and invested at an annual interest rate of 5%.
- A single loss occurs on December 31, 2016. It is promptly reported and recorded on the same day, with an expected loss of $7,000. No other losses are reported for this policy.
- The insurer pays the loss of $7,000 on December 31, 2017.
- Assume an IRS annual discount rate of 5%.
- The insurer expects to pay each claim one year after the claim is reported.

Calculate the tax basis income for year-ends 2016 and 2017.

CONTINUED ON NEXT PAGE

the company writes predominantly liability lines where you'd prefer to see less leverage due to the volatility. The company is increasing premium while decreasing surplus, which results in a more leveraged company. This puts solvency more at risk in a significant surplus event.

- The company is shrinking Net Written Premium. This may imply that the company is not comfortable in its profitability or ability to remain solvent under their current book. It is possible that the company is ceding away profitable parts of its book, and this profit is needed to boost surplus.

EXAMINER'S REPORT

Candidates were expected to identify four areas of concern for the company's financial health, and explain why each item was a concern for health.

Common Errors Included:

- Failure to link why issues would be a concern for financial health. For example, some candidates correctly identified that liability lines were long-tailed, but did not mention that this could cause reserve adequacy and therefore surplus issues. Another example of this is candidates who identified that the company had negative income, but did not identify that this would eventually lead to the company reducing surplus.

QUESTION: SPRING 2018 EXAM 6U, QUESTION 14	
TOTAL POINT VALUE: 2	**LEARNING OBJECTIVES: C4**

SAMPLE ANSWERS

Sample 1

2016

EP = 6500 (no unearned since 1/1 policy)

Inv. Inc. = 6500 * 5% = 325

2016 discounted loss reserve = 7000/1.05 = 6666.67

2016 tax basis income = 6500+325-6666.67 = 158.33

2017

No more EP

Inv. Inc. = (6500 + 325) * 5% = 341.25

Incurred Loss = Paid loss + Δ Reserves = 7000 + (0 – 6666.67) = 333.33

2017 tax basis income = 341.25 – 333.33 = 7.92

Sample 2

2016

Earned Premium = Written Premium - .8 Δ UEPR → Since premium for policy is fully earned as of 12/31/16 there is no UEPR = 6500

Tax basis IL = Paid Loss + Δ Discounted Loss Reserves

Paid Loss = 0
Loss Reserves = 7000/1.05 = 6667
Investment Income = 6500 * (1.05 – 1) = 325
Tax Basis Income = 6500 + 325 – 6667 = 158

2017 EP = 6500 - .8 * 0 = 6500 (assuming policy renews)
2017 IL = 7000-6667 = 333
Investment Income = (6500 + 325 + 6500) * 0.05 = 666

2017 Tax Basis Income = 6500+666-333=6833

Sample 3
2016
Earned Premium = 6500
IL = 7000
II = 6500*.05=325
RTI=158.33

2017
Earned Premium = 6500 (Assume Renewal)
IL = 333.33
II = 325 (Assume only current year's premium is invested, rest distributed to shareholders)
RTI = 6491.67

Sample 4
2016
Earned Premium = 6500
II = (6500)(.05)=325
IL = 7000
PV(Incurred Loss) = 6666.67
Tax Basis Income=158.33

Assume 35% tax rate → 0.35*158.33 = 55.42 paid at start of 2017

2017
EP = 0
Inv Income = (6500 + 325 – 55.42)(.05) = 338.48
Incurred Loss = 333.33
Tax Basis Income = 5.15

EXAMINER'S REPORT

Candidates were expected to know how to calculate the tax basis income, discounting reserves, and interest income. Candidates were expected to carry over the discounted reserve change into the incurred losses for 2017.

Common Errors Included:

- Using the paid loss as the incurred loss for 2017 and not including the reserve change.
- Using the unearned premium reserve formula to carry premium to 2017 when the policy is fully earned in 2016.

QUESTION: SPRING 2018 EXAM 6U, QUESTION 15	
TOTAL POINT VALUE: 2.75	**LEARNING OBJECTIVE: C2**

SAMPLE ANSWERS

Part a: 2.25 points

Sample 1

IRIS 5 = 2 Year Loss Ratio + 2 Year Underwriting Expense Ratio – 2 Year Investment Income Ratio
Loss Ratio = (225+154+36+35+27+26+64+13) / (473+402) = .663
Underwriting Expense Ratio = (123+113+44+54+55+45+76+66 – (-10-17))/(622+501) = .537
Investment Income Ratio = (58+28+47+18)/(473+402) = .173

.663 + .537 – 17.3 = 1.027

Part b: 0.5 point

Sample 1

The ratio is >= 100%, so it is not within the usual values.
The regulator will check other IRIS Ratios with more scrutiny to determine if insurer is in good financial standing with enough surplus.

Sample 2

The ratio is higher than 100%, making this an unusual value. The regulator should look at the income for each line of business and determine which lines are driving this value.

Sample 3 – if part a resulted in a ratio less than 100%

The ratio is less than 100% so it is in the usual range. No regulator reaction necessary.

EXAMINER'S REPORT

Candidates were expected to demonstrate knowledge of Annual Statement data, IRIS Ratio 5, including the usual range for this ratio and the reaction of a regulator based on whether the ratio was in the usual or unusual range.

Part a

Candidates were expected to calculate the IRIS Ratio 5 from the provided annual statement data.

Common errors include:

- Failing to provide the correct formula for the ratio
- Dividing amounts by the incorrect premium (Earned vs Written and vice versa)
- Calculating the ratio and then averaging