21. (4.25 points)

A property and casualty insurer began operating on January 1, 1995. Since its inception, the insurer has written only claims-made medical malpractice insurance in one state.

Using the information below from the latest two years of the insurer's Five-Year Historical Data page and other portions of its 2011 Annual Statement, answer the questions that follow (all figures in thousands of dollars).

Premium Written	**2011**	**2010**
Gross Premiums Written	45,430	33,759
Net Premiums Written	24,580	22,122
Statement of Income Lines		
Net Premiums Earned	21,280	25,684
Incurred Losses and LAE	13,832	17,799
Other Underwriting Expenses Incurred	5,320	6,549
Net Investment Income Earned	680	560
Realized Capital Gains	1,359	1,119
Other Income	59	68
Dividends to Policyholders	298	268
Federal Income Tax	2,766	3,082
Balance Sheet Lines		
Losses and LAE Reserves	13,002	15,307
Policyholders' Surplus	5,012	7,705

a. (2.25 points)

Calculate the insurer's IRIS Ratio 5 (two-year overall operating ratio) for 2011 and explain how a regulator might respond to the result.

b. (2 points)

Aside from IRIS Ratio 3 (change in net written premium) and IRIS Ratio 5, calculate two additional IRIS ratios for 2011 that can be calculated from the data provided, and explain how a regulator might respond to each ratio.

CONTINUED ON NEXT PAGE

21) Sample Answer

Answer 1

a. Iris 5 = Loss & LAE ratio + expense ratio - investment yield ratio
= (17799+13832+(298+268))/(21280+25684) + ((5320+6549-59-68)/(24580+22122)) - ((680 + 560)/(21280+25684))= 68.56% + 25.14% - 2.64% = 91.06% < 100%; In the normal range.

b. Iris 7: Change in Surplus = (5012-7705)/7705 = -34.95% < -10%
Not in the normal range. Regulator needs to look at Iris 8 change in adjusted surplus.
Iris 1: GWP/PHS = 45430/5012 = 906.42% > 900%
Not in the normal range. Regulator should look at Iris 2 NWP/Surplus to see if it is normal.

Answer 2

A)

$$\frac{13832+17799+298+268}{21280+25684}+\frac{5320+6549-59-68}{24580+22122}-\frac{680+560}{21280+25684}=.911<1$$

Not unusual, therefore regulator would be okay w/result.

B)

GWP/surplus = $\frac{45430}{5012} = 9.06 > 9$; unusual – look at profitability, LOB and NWP/surplus
NWP/surplus = $\frac{24580}{5012} = 4.90 > 3$; unusual – look at profitability, LOB, reinsurance adequacy

Answer 3

A)
Loss ratio = (13832+17799+298+268)/(21280+25684) = .686
Expense ratio = (5320+6549-59-68)/(24580+22122) = .251
Invest ratio = (680+560)/(21280+25684)=.026
IRISS = .686+.251-.026 = .911 < 1
This is not unusual
B)
GWP/surplus = 45430/5012=9.06>9
This is unusual; regulations will want to be sure this insurer is profitable.
NWP/surplus = 24580/5012 = 4.9 >3
This is unusual; regulator will want to make sure insurer is profitable and that reinsurance is collectible.

Examiner's Report

A
Responses on this part of the question were mixed. While many candidates understood the components of an operating ratio, there were numerous mistakes, with the most common being: ignoring policyholder dividends, ignoring other income, and including (or subtracting) realized capital gains with (from) net investment income earned. Generally, candidates were able to correctly assess the ratio from the regulators perspective; however, some candidates missed the point that IRIS ratios are used for solvency review, as they said the regulator might look into excessive rates.
B

Generally, candidates responded well to this question. The most common mistake was using the data from the wrong year in the calculation, but most candidates could identify and assess two other ratios from the information given.