16. (5 points)

An insurer exclusively wrote monoline homeowners insurance through 2009 and diversified into general liability beginning in 2010. The following excerpts have been provided from the insurer's 2013 Annual Statement.

Schedule P - Part 2 Summary				
Year in Which Losses Were Incurred	Incurred Net Losses and Defense and Cost Containment Expenses Reported at Year End ($000 omitted)			
	2010	2011	2012	2013
2010	75,000	87,500	92,000	92,500
2011	XX	81,000	94,000	101,000
2012	XX	XX	92,000	102,500
2013	XX	XX	XX	103,000

Earned Premium	101,000	109,000	112,000	148,000
Loss & DCC Reserves	58,000	81,000	103,000	125,000
Policyholders' Surplus	88,000	92,000	95,000	101,000

IRIS Ratio 11	11.2%	14.2%	19.0%
IRIS Ratio 12	14.5%	13.1%	18.5%
IRIS Ratio 13	10.6%	8.5%	7.6%

- Development in accident years 2009 and prior have no impact on the 2013 IRIS ratios.
- Assume there is no reinsurance payable on paid losses.

a. (0.75 point)

Calculate IRIS ratio 11 for 2013 and indicate whether the result is in the range of usual values.

b. (0.75 point)

Calculate IRIS ratio 12 for 2013 and indicate whether the result is in the range of usual values.

c. (1.5 points)

Calculate IRIS ratio 13 for 2013 and indicate whether the result is in the range of usual values.

<<QUESTION 16 CONTINUED ON NEXT PAGE>>

16. (continued)

d. (1 point)

Given the IRIS ratios from prior years, interpret the results for 2013.

e. (1 point)

Beyond RBC and IRIS, identify two tools used to categorize insurance companies at risk of financial impairment and briefly describe one potential limitation of each tool.

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QUESTION 16

TOTAL POINT VALUE: 5	**LEARNING OBJECTIVE: C2**

SAMPLE ANSWERS (BY PART, AS APPLICABLE)

Part a: 0.75 point

IRIS 11 = 18.9% = 18000/ 95000
Usual as < 20%

Part b: 0.75 point

IRIS 12 = 27.2% = 25000/ 92000
Unusual as > 20%

Part c: 1.5 point

106/109=97.2%
121/112=108.0%
Average: 102.6%

148000 × 102.6%=151,909.73
Held Reserves: 125,000
Deficiency: 26,909.73
IRIS 13: 26,909.73/101,000=26.6%

Unusual as >25%

If one year and two year development were calculated incorrectly in part a and/or b, then candidates could still receive full credit on part c. As an example, candidate calculated one year development as 18000 and two year development as 30000.

$$\frac{\text{Average}\left(\frac{(81000+30000)}{109000},\frac{(103000+18000)}{112000}\right)\times 148000-125000}{101000}=30\%$$

>25% Unusual

Part d: 1 point

The following provide examples of responses having the necessary components to demonstrate knowledge of the topic and obtain full credit; any one of the following received full credit:

- Prior year IRIS ratios are all within the usual range whereas 2013 has Ratio 12 and 13 outside the usual range with ratio 11 close to threshold. 2013 seems to have brought significant adverse development to the company's reserves. Also of note is the sharp increase in premium from 2012 to 2013 could lead to an overstated ratio 13.
- All three ratios have fallen inside usual range. However, the ratios 11 and 12 have been trending upward and ratio 12 and 13 now fall outside usual range. This indicates the reserve development from GL may be emerging several years later due to long tail nature. EP also increased significantly.
- Given IRIS 12 and IRIS 13 have increased to unusual values and IRIS 11 is now close to unusual it seems like the insurer is under reserving. There has also been premium growth

and mix of business change due to GL.

Part e: 1 point

The following provide examples of responses having the necessary components to demonstrate knowledge of the topic and obtain full credit; any two of the following received full credit (along with the brief description of the limitation of each):

SAO

- Limitation is that SAO does not contain Actuary's estimate so it may provide less info than required.
- This only addresses reserve adequacy, not a holistic evaluation of financial impairment

AOS

- This tool is confidential

Credit Rating Agencies

- Ratings agencies core analysis is once a year and may not be able to identify a troubled insurer in time.
- Rating agencies don't respond quickly to changing conditions
- Proprietary formulas

ATS

- Team does not have regulatory authority
- Limited resources; cannot analyze all companies

FAST

- These are not public so the opining actuary will not have knowledge of their findings
- Ratios can be distorted if insurers manipulate the reserves

Scoring System

- Doesn't take into account qualitative risk assessment such as discussion with management regarding risks and reinsurance collectability

Insurer Profile System

- Only uses quantitative measures
- Retrospective and may not provide insight into future

Five Year Historical Exhibit

- Historical may not be representative of current book
- Retrospective, not prospective look

Annual Statement or Other Financial Statements

- Doesn't reveal management's insights or motives
- May hide trouble if company deliberately underreserves or acts fraudulently.

ORSA

- Not widely used in US and lack of experts in the area
- Can be swayed by company self interest

Internal Capital Models

- Hard for a regulator to review since each company's model will be different
- Integration of economic variables may cloud the volatility derived from solely capital position

FAD

- Does not have regulatory authority

FAWG

- Has no regulatory authority to take action
- Limited data available to this group (access mostly to public data)

Solvency II

- Uses internal models. Hard to compare results from different companies
- Not yet mandatory for all US insurers

Onsite Exams

- Regulatory fallibility could cause regulators to be incorrect and misevaluate financial impairment
- Costly and time consuming

EXAMINER'S REPORT (BY PART, AS APPLICABLE)

- The candidates were expected to know IRIS Ratios 11 through 13 in regards to calculation and unusual range values. The candidates were expected to take the given IRIS ratios from prior years and interpret the movement in ratios through 2013 and provide reasons for that movement. Finally, the candidates were expected to identify other tools which help categorize companies at risk of financial impairment as there are many tools available.
    - Overall, the candidates performed well on this question. Candidates had difficulty with part d of the question.
    - Part d of the question was more challenging as it required candidates to provide an interpretation of results.

Part a

Candidates performed very well on this part of the question. Common errors included calculating one year development incorrectly, using earned premium in denominator and referencing the incorrect usual range.
Part b
Candidates performed very well on this part of the question. Common errors included using earned premium in denominator, calculating two-year development incorrectly, and referencing the incorrect usual range.
Part c
Candidates performed very well on this part of the question. Common errors included not developing losses correctly and referencing the incorrect usual range.
Part d
This part of the question was more challenging as interpretation was required. Common errors included not identifying the change in prior ratios as question specifically referenced prior ratios. Candidates did not identify appropriate reasons behind movement in ratios. A common error occurred when candidates only specified the 2013 ratio was usual/unusual which was already done for parts a through c. A candidate needed to interpret ratios across all years.
Part e
Candidates performed well on this part of the question with a multitude of answers. Common errors included not providing two tools, not identifying a limitation, providing a fact about the tool rather than a limitation, or not providing a specific limitation about the tool which was mentioned.