GI FREU Model Solutions
Spring 2021

1.

Learning Objectives:
1. The candidate will understand the elements of financial reporting for general insurance companies.

Learning Outcomes:
(1a) Understand and apply the concepts of insurance accounting.

(1b) Understand and compare different financial reporting standards for general insurers.

Sources:
National Association of Insurance Commissioners (NAIC), Accounting Practices and Procedures Manual, Preamble

General Insurance Financial Reporting Topics, Fourth Edition, Society of Actuaries
- Chapter 2 (Accounting for Insurance Contracts)

Commentary on Question:
This question test's a candidate's understanding of statutory accounting and the differences to GAAP.

Solution:
(a) State the purpose of the NAIC Codification project.

It was to provide a comprehensive guide to the Statutory Accounting Principles that are to be used by various stakeholders – state department of insurance, insurance companies and auditors.

(b) Describe how the NAIC Codification project affects the analyses conducted by insurance departments.

Commentary on Question:
The model solution is an example of a full credit solution.

It resulted in more complete disclosures and more comparable financial statements, making the insurance departments' analysis techniques more meaningful and effective.

1. Continued

(c) Compare U.S. GAAP accounting to U.S. statutory accounting with respect to each of the following:

(i) Focus of accounting rules

(ii) Assets

(iii) Expenses

(iv) Loss reserves

Commentary on Question:
There are numerous factors that can be compared for each of (i) to (iv). Only one factor of comparison was required for full credit. The model solution is an example of a full credit solution.

(i) GAAP focuses on the measurement of emerging earnings of a business from period to period. Statutory accounting focuses on the measure of a company's ability to pay claims.

(ii) GAAP recognizes a number of assets that are either nonadmitted or immediately expensed under statutory accounting.

(iii) GAAP defers acquisition expenses and amortizes them over the premium recognition period. Statutory accounting recognizes acquisition expenses as they are incurred.

(iv) GAAP and statutory accounting both set reserves on an undiscounted basis for most lines of business.

(d) Describe three examples of materiality judgements as provided in the APPM Preamble.

Commentary on Question:
There are more than three examples provided in the APPM Preamble. Only three were required for full credit. The model solution is an example of a full credit solution.

- Is this item large enough for users of the information to be influenced by it?
- Circumstances where an accounting adjustment puts an insurer in danger of being in breach of a regulatory requirement may justify a lower materiality threshold than if its position were stronger.

1. **Continued**

- A failure to disclose separately a nonrecurrent item of revenue may be material at a lower threshold than would otherwise be the case if the revenue turns a loss into a profit or reverses the trend of earnings from a downward to an upward trend.

2. **Learning Objectives:**

5. The candidate will be able to understand tort law and insurance law with respect to its impact on the general insurance industry.

Learning Outcomes:

(5b) Discuss the influence of the U.S. tort law environment in other countries.

Sources:

Cappelletti, A., "Tort Law: Topics for General Insurance Actuaries," Society of Actuaries Study Note

Commentary on Question:

This question tests a candidate's understanding of tort law in the U.S. and how it compares to tort law in Canada.

Solution:

(a) Explain how the following aspects of tort law contribute to a perception that the U.S. is an extremely litigious society.

(i) Use of jury trials

(ii) Rules of discovery

Commentary on Question:

The model solution is an example of a full credit solution.

(i) Jury trials: Most countries limit the use of jury trials to criminal cases. Trial juries are standard practice in the U.S. for civil tort cases. Juries tend to favor the successful plaintiff with greater awards for damages.

(ii) Rules of discovery: Many jurisdictions place limitations on oral discovery in order to reduce expenses and ensure that cases are not unduly delayed. U.S. tort law gives parties broad rights to both documentary and oral discovery that can make suits move forward that would otherwise not move forward.

(b) Compare Canadian tort law to U.S. tort law for each of the following aspects of tort law.

(i) Use of jury trials

(ii) Rules of discovery

2. Continued

Commentary on Question:
There are several points of comparison that may be made for each of (i) and (i). Only one point of comparison was required for each of (i) and (ii) to earn full credit. The model solution is an example of a full credit solution.

Jury trials: Canadian tort law is close to U.S. tort law in this regard in that it permits trial by jury (in all of the common law provinces). However, its use is not as common as it is in the U.S.

Rules of discovery: Canadian tort law does not follow U.S. tort law for rules of discovery. It places significant procedural restrictions on both documentary and oral discovery.

3. Learning Objectives:

4. The candidate will be able to describe the current and historical regulatory environment.

Learning Outcomes:

(4b) Describe and interpret the current state of general insurance regulation in the U.S. and its development.

Sources:

Insurance Regulation, The Institutes

- Chapter 3 (Federal and Other Influences on Insurance Regulation)

Commentary on Question:

This question tests a candidate's understanding of several ways that the federal government can influence insurance regulation in the U.S.

Solution:

(a) Describe three circumstances where the U.S. Constitution can void state laws and regulations.

Commentary on Question:

The model solution is an example of a full credit solution.

1. When a state law contradicts a federal law.
2. When the courts determine that a state law interferes with federal law even though the state law does not expressly contradict the federal law.
3. When a state law imposes an improper burden on interstate commerce, even though a federal law does not exist.

(b) Describe the three criteria set out by this Supreme Court decision.

1. The insurer spreads or underwrites the policyholder's risk.
2. The insurer and the insured have a direct contractual agreement.
3. The activity is unique to entities within the insurance industry.

(c) Identify the crisis that prompted Congress to enact the RRA.

Commentary on Question:

The model solution is an example of a full credit solution.

During a market contraction in the 1970s, business owners found that they either could not obtain or could not afford products liability insurance.

3. **Continued**

(d) Identify two of the factors that caused this crisis as reported by the task force.

Commentary on Question:
There were more than two factors reported. Only two were required for full credit. The model solution is an example of a full credit solution.

- Insurers' questionable ratemaking and reserving practices
- Uncertainties in the tort and legislative system

(e) Describe how the RRA affected the business of general insurance.

Commentary on Question:
The model solution is an example of a full credit solution.

This act enabled product manufacturers to form their own risk retention groups to spread and assume all of, or a portion of, their products liability loss exposures. A risk retention group needs a license in only one state to write liability coverage in all fifty states.

4. **Learning Objectives:**

2. The candidate will understand the analysis of a general insurer's financial health through prescribed formulas, ratios and other solvency regulation methods.

Learning Outcomes:

(2b) Understand and apply the elements of the NAIC RBC formula.

(2e) Demonstrate knowledge of the E.U. Solvency II standard formula solvency capital requirement.

Sources:

General Insurance Financial Reporting Topics, Fourth Edition, Society of Actuaries

- Chapter 12 (Solvency Monitoring)

Commentary on Question:

This question tests a candidate's understanding of catastrophe risk in the NAIC RBC formula and the Solvency II SCR formula. This question required the candidate to respond in Excel for part (a). An example of a full credit solution for this part is in the Excel solutions spreadsheet. The model solution in this file for part (a) is for explanatory purposes only.

Solution:

(a) Calculate the NAIC RBC catastrophe risk for this general insurer.

Commentary on Question:

The NAIC RBC uses net amounts at the 1 in 100-year event level from a recognized model. It is for hurricane (HU) and earthquake (EQ) only.

$R_{CAT} = [\,(75 + 0.048 \times (700 - 75))^2 + (19 + 0.048 \times (175 - 19))^2\,]^{0.5}$

$R_{CAT} = 108.289$

(b) Identify two assumptions requiring mandatory explanations.

Commentary on Question:

There are more than two assumptions requiring mandatory explanations. Only two were required for full credit. The model solution is an example of a full credit solution

- fire following for EQ
- secondary uncertainty

(c) Explain how double counting of catastrophe risk is avoided in the overall NAIC RBC formula.

4. Continued

Historical HU and EQ losses must be removed from the industry and company loss numbers used in calculating the underwriting premium risk charge (R_5) in the RBC formula.

(d) Compare the catastrophe risk charge included in the Solvency II SCR to that in the NAIC RBC formula with respect to each of the following:

(i) Return period used for catastrophe loss modeling

(ii) Natural catastrophe risks included in the formula

(iii) Man-made catastrophe risks included in the formula

(iv) Correlations between catastrophe risks included in the formula

(i) RBC uses a 100-year return period.
SCR uses 200-year return period.

(ii) RBC includes only HU and EQ.
SCR includes HU and EQ, plus other natural catastrophes (e.g., flood, hail).

(iii) RBC excludes man-made catastrophes.
SCR includes several man-made catastrophes.

(iv) RBC assumes HU and EQ are not correlated.
SCR assumes correlations between natural catastrophes and that man-made catastrophes are not correlated to each other or natural catastrophes.

5. Learning Objectives:

1. The candidate will understand the elements of financial reporting for general insurance companies.

3. The candidate will be able to apply the standards of practice regarding the responsibilities of the actuary as defined by regulators and the American Academy of Actuaries.

Learning Outcomes:

(1c) Describe the elements of the NAIC Annual Statement.

(1e) Understand and apply the concepts of reinsurance accounting.

(3a) Describe, interpret and apply the applicable Standards of Practice.

(3b) Describe, interpret and apply the responsibilities of the actuary with respect to the Statement of Actuarial Opinion and the Actuarial Report.

Sources:

General Insurance Financial Reporting Topics, Fourth Edition, Society of Actuaries

- Chapter 4 (Accounting for Reinsurance Contracts)
- Chapter 7 (Schedule P, Statutory Loss Accounting)
- Chapter 14 (Overview of the General Insurance Statement of Actuarial Opinion)

NAIC Annual Statement

AAA, Committee on Property and Liability Financial Reporting, "A Public Policy Practice Note, Statements of Actuarial Opinion on Property and Casualty Loss Reserves"

Actuarial Standards Board, Actuarial Standard of Practice

- No. 23, Data Quality

NAIC Statement of Statutory Accounting Principles,

- No. 62, "Property and Casualty Reinsurance"

Commentary on Question:

This question tests a candidate's knowledge of the responsibilities of the appointed actuary and statutory reporting.

Solution:

(a) Describe four Statement of Actuarial Opinion (SAO) disclosures related to rendering a Qualified Opinion for a U.S. general insurance company.

5. **Continued**

Commentary on Question:
There are more than four disclosures. The disclosures must specifically relate to a Qualified Opinion to earn credit. The model solution is an example of a full credit response.

- The item(s) to which the qualification relates
- The reason for the qualification
- The amount for the qualification
- Whether the carried reserves excluding this item make a reasonable provision

(b) Describe the U. S. statutory requirements for reporting each of these estimates in the following documents:

(i) Actuarial Report

(ii) Actuarial Opinion Summary (AOS)

Commentary on Question:
The model solution is an example of a full credit response.

(i) Actuarial Report – The Appointed Actuary (AA) can provide a point estimate, a range, or both.

(ii) AOS – The AA must provide the same estimates as provided in Actuarial Report.

(c) Explain why the Appointed Actuary's estimate of unpaid claims is not included in a U.S. SAO.

Commentary on Question:
The model solution is an example of a full credit response.

Insurance regulators want to encourage independent actuarial opinions. They do not want to create pressure on the AA to match the carried reserves set by the insurer.

(d) Describe a data review as defined in Actuarial Standard of Practice (ASOP) 23, *Data Quality*.

An examination of the obvious characteristics of the data to determine if it appears reasonable and consistent for the purposes of the assignment.

(e) Describe the reporting of ceded financial reinsurance in the Annual Statement with respect to underwriting income and loss reserves.

5. **Continued**

Commentary on Question:
The model solution is an example of a full credit response.

Ceded financial reinsurance is reported using deposit accounting which does not affect loss reserves. Changes in the deposit (from deposit accounting) flow through interest income and interest expense not underwriting income.

(f) Describe how DJ legal fees are reflected in Schedule P of the NAIC Annual Statement.

DJ legal fees are reported as Adjusting & Other expenses.

6. Learning Objectives:

3. The candidate will be able to apply the standards of practice regarding the responsibilities of the actuary as defined by regulators and the American Academy of Actuaries.

Learning Outcomes:

(3b) Describe, interpret and apply the responsibilities of the actuary with respect to the Statement of Actuarial Opinion and the Actuarial Report.

Sources:

AAA, Committee on Property and Liability Financial Reporting, "A Public Policy Practice Note, Statements of Actuarial Opinion on Property and Casualty Loss Reserves"

General Insurance Financial Reporting Topics, Fourth Edition, Society of Actuaries

- Chapter 14 (Overview of the General Insurance Statement of Actuarial Opinion)

Commentary on Question:

This question tests a candidate's knowledge of certain responsibilities of the AA.

Solution:

The NAIC instructions to the SAO outline the reporting responsibilities for insurance company boards when replacing the AA.

Outline these responsibilities, in chronological order, for BCD's board in this scenario.

Commentary on Question:

A full credit solution was to provide several of the key requirements of <u>BCD's board</u> in the proper chronological order. Not all the requirements were necessary to earn full credit. Number of days within which BCD is required to respond was not required to earn full credit. The model solution is an example of a full credit solution. As such, it does not include all the requirements.

First the board must notify the DOI of the change. The board must also provide the DOI with the following information about the replacement AA:

- Name, title and name of the firm.
- Identification of when the appointment was made.
- Statement that the person meets the requirements of a Qualified Actuary.

Then the board must provide the DOI with a letter describing the material disagreement with the former AA and the nature of its resolution. Concurrent to this letter, BCD must write a letter to the former AA requesting that they indicate whether or not they agree with BCD's statements in the letter, and, if not, providing reasons for not being in agreement with the statements. A copy of this letter is to be sent to the DOI. When the former AA provides a response to this request, BCD is required to forward this response to the DOI.

7. **Learning Objectives:**

1. The candidate will understand the elements of financial reporting for general insurance companies.

Learning Outcomes:

(1a) Understand and apply the concepts of insurance accounting.

(1e) Understand and apply the concepts of reinsurance accounting.

Sources:

General Insurance Financial Reporting Topics, Fourth Edition, Society of Actuaries

- Chapter 4 (Accounting for Reinsurance Contracts)

Commentary on Question:

This question tests a candidate's knowledge of reinsurance accounting.

Solution:

(a) Identify two reinsurance characteristics that make its accounting complex for the primary insurer.

Commentary on Question:

There are more than two characteristics that make its accounting complex for the primary insurer. Only two were required for full credit. The model solution is an example of a full credit solution with two characteristics.

- Reinsurers may not be able to fulfil their future financial obligations to the primary insurer.
- Reinsurance may include features that limit the transfer of risk.

(b) Describe the difference in claims reporting between assumed reinsurance and primary insurance in terms of each of the following:

(i) Timing

(ii) Lines of business

(iii) Loss Adjustment Expenses (LAE)

Commentary on Question:

The model solution is an example of a full credit solution.

(i) Timing: Whatever the report lag is for claims from the insurance contract to the primary insurer, there will be additional lag for reporting of claims to the assuming reinsurer. For example, if the primary insurer reports monthly to the reinsurer, the additional report lag could be 45 days.

7. **Continued**

(ii) Lines of Business: The line-of-business breakdown for assumed reinsurance is likely to be less granular than for primary insurance. This is mainly because reinsurance losses and premiums are determined for primary lines of business combined that are then not easily divisible.

(iii) LAE: Claims reporting for primary insurance includes LAE. For reinsurance, treatment of LAE is specified in the reinsurance contract. Many reinsurance contracts include allocated LAE, while some exclude it. Most contracts exclude unallocated LAE, but some do include it.

(c) Explain how each of the following reinsurance contract provisions shift underwriting risk back to the primary insurer.

(i) Experience Refunds

(ii) Cancellation Provisions

(iii) Combination provisions

(iv) Payment Schedules

Commentary on Question:
The model solution is an example of a full credit solution

(i) Experience Refunds: These are adjustments that depend on the experience of the ceding insurer during the term of the treaty. This directly transfers risk back to the primary insurer as the reinsurance premium is adjusted for experience.

(ii) Cancellation Provisions: These are provisions that permit the reinsurer to cancel the treaty before the expiration date if experience is worse than expected. This limits the reinsurer's risk, transferring risk back to the primary insurer.

(iii) Combinations of Lines: These are provisions linking low-risk business to high-risk business. Consider the following example. A primary insurer writes low-risk personal lines and high-risk commercial lines. It requires a 50% quota share treaty for its high-risk business. In exchange for this, the reinsurer requires a quota share treaty on the low-risk business to limit its risk. This essentially transfers risk back to the primary insurer.

(iv) Payment Schedules: These are provisions limiting recoverables to an annual maximum or deferring them for several years. This transfers some of the reinsurer's risk back to the primary insurer.

8. Learning Objectives:

4. The candidate will be able to describe the current and historical regulatory environment.

Learning Outcomes:

(4e) Describe the development of general insurance programs controlled by government or collective insurance industry organizations and their mechanisms of operation.

Sources:

American Academy of Actuaries, "The National Flood Insurance Program: Challenges and Solutions," Flood Insurance Work Group, Public Policy Monograph, April 2017

Cappelletti, A., "Government Provision of General Insurance," Society of Actuaries Study Note

Commentary on Question:

This question tests a candidate's knowledge of the government involvement in the provision of catastrophe insurance. This question required the candidate to consider positives and/or negatives for the three options. Full credit was earned by providing a valid critique for each option. Widely varying full credit solutions were possible. The model solution is just one example of a full credit solution.

Solution:

Critique each of the following options being considered by the Catlandian government:

(i) Form a government-owned insurance company offering homeowners insurance policies to all homeowners at a uniform actuarially indicated rate per 1,000 of total insured value. This policy would include coverage for losses from natural catastrophes. This insurance would be in competition with private insurance.

(ii) Form a government-owned reinsurance company which would reinsure 100% of the optional natural catastrophe endorsement for all private insurance companies writing this coverage. Primary rates for the optional natural catastrophe endorsement are to be mandated by the government and set at a uniform actuarially indicated rate per 1,000 of total insured value.

(iii) Form a government-owned reinsurance company providing aggregate excess catastrophe reinsurance to private insurers for homeowners coverage. The reinsurance rates would be at least 20% below market value reinsurance.

8. **Continued**

(i) Unless the government insurer's rates (with catastrophe cover) were significantly above the private industry rates (without the catastrophe cover endorsement), private insurers would cease to write homeowners insurance in Catalandia. It is likely that the government would become a monopolistic insurer for homeowners insurance. Furthermore, charging a single rate per thousand coverage for all insureds does not promote risk mitigation – those with lower risk should pay a lower rate.

(ii) This option would likely promote a continued competitive environment for homeowners insurance. However, there would be no competitive pricing for the catastrophe endorsement. This may give private insurers the ability to ease pricing on homeowners non-catastrophe coverage. Furthermore, the uniform rate would not encourage risk mitigation. However, it should ease affordability issues.

(iii) Like option (ii), this option would likely promote a continued competitive environment for homeowners insurance. But this would be dependent on the catastrophe excess reinsurance terms available from the government-owned reinsurance company. This option would promote competitive pricing for the catastrophe endorsement which could lead to risk mitigation strategies as those with higher risk would pay more. However, this could potentially create affordability problems.

9. **Learning Objectives:**

1. The candidate will understand the elements of financial reporting for general insurance companies.

2. The candidate will understand the analysis of a general insurer's financial health through prescribed formulas, ratios and other solvency regulation methods.

Learning Outcomes:

(1d) Complete and interpret selected pages/schedules in the NAIC Annual Statement as included in the resources.

(2b) Understand and apply the elements of the NAIC RBC formula.

Sources:

General Insurance Financial Reporting Topics, Fourth Edition, Society of Actuaries

- Chapter 12 (Solvency Monitoring)

NAIC Annual Statement

Case Study, Spring 2021, SOA Exam General Insurance, Financial and Regulatory Environment – U.S.

Commentary on Question:

This question tests a candidate's knowledge of the NAIC Annual Statement and the NAIC RBC calculation using information from the GI FREU Case Study. This question required the candidate to use Excel. Data from the GI FREU Case Study was preloaded in Excel for the candidate to use in their solution. The model solution for this question in this document does not represent the actual model solution. It is for explanatory purposes only. Refer to the Excel solution file for an example of a full credit solution in Excel.

Solution:

(a) Demonstrate that the NAIC RBC Basic NWP charge for PPA was correctly calculated.

		PPA	
A	Industry average L&LAE Ratio	79.50%	from NAIC
B	Company average L&LAE Ratio	90.77%	from Sched P
C	Company adjustment factor	1.142	B/A
D	Industry adverse L&LAE Ratio	97.50%	from NAIC
E	Company adj. adverse L&LAE ratio	104.41%	0.5×D×(1.0+C)
F	Company U/W expense ratio	16.16%	from U&I Exhibit
G	Investment income factor	0.93	from NAIC
H	Current year NWP	242,900	from U&I Exhibit
I	Basic NWP RBC charge	32,212	Maximum of 0 and [H×(E×G + F−1.0)]

9. Continued

(b) Calculate R-Dan's NAIC RBC NWP risk charge before the addition of the excess growth charge.

		H/F	PPA	CAL	APD	SP	TOTAL	
J	Current year NWP	184,100	242,900	1,000	178,200	1,500	607,700	from U&I Exhibit
K	Basic NWP RBC charge	24,883	32,212	23	0	74	57,192	given
L	Premium concentration	30.3%	40.0%	0.2%	29.3%	0.2%		using J
M	Premium concentration factor						81.99%	70% + 30% × Max of L
N	NWP RBC charge before excess growth						46,892	K × M

(c) Calculate R-Dan's NAIC RBC NWP risk charge, R_5.

		H/F	PPA	CAL	APD	SP	TOTAL	
O	3-year Gross WP growth rate	24.80%	4.80%	10.10%	6.50%	0.00%		given
P	3-year Net WP growth rate	23.80%	4.20%	10.00%	6.10%	0.00%		given
Q	Capped excess growth rate	14.8%	0.0%	0.1%	0.0%	0.0%		min(15%, max(0%, O−10%))
S	Excess growth charge for WP	6,131	0	0	0	0	6,131	22.5% × J × Q
T	NWP Risk Charge						53,023	S + N

10. **Learning Objectives:**

1. The candidate will understand the elements of financial reporting for general insurance companies.

Learning Outcomes:

(1a) Understand and apply the concepts of insurance accounting.

(1c) Describe the elements of the NAIC Annual Statement.

(1d) Complete and interpret selected pages/schedules in the NAIC Annual Statement as included in the resources.

Sources:

General Insurance Financial Reporting Topics, Fourth Edition, Society of Actuaries

- Chapter 2 (Accounting for Insurance Contracts)
- Chapter 7 (Schedule P, Statutory Loss Accounting)

NAIC Annual Statement

Case Study, Spring 2021, SOA Exam General Insurance, Financial and Regulatory Environment – U.S.

Commentary on Question:

This question tests a candidate's knowledge the reporting of reserves and Schedule P using information from the GI FREU Case Study. This question required the candidate to respond in Excel for part (a). Data from the GI FREU Case Study was preloaded in Excel for the candidate to use in their solution. An example of a full credit solution for this part is in the Excel solutions spreadsheet. The model solution in this file for part (a)is for explanatory purposes only.

Solution:

(a) Develop a table of data to assess R-Dan management's contention that it strengthened case reserves for PPA.

Commentary on Question:

To test for case reserve strengthening, one should review changes in average case reserves at the same age of development. Average case reserves (for losses and DCC) can be calculated using Schedule P information as follows:

- *Case reserves by AY and development [cumulative incurred losses (SchP2B) minus cumulative paid losses (SchP3B) minus bulk & IBNR reserves (SchP4B)]*

Divided by

- *Number of claims outstanding by AY and development age [SchP5B Sec. 2]*

10. Continued

AVERAGE CASE RESERVES						
	Development years					
AY	1	2	3	4	5	6
2013	5,131	13,964	17,772	19,373	17,204	14,286
2014	5,231	14,743	18,022	22,196	22,439	
2015	5,102	15,037	19,874	23,753		
2016	4,690	14,916	22,222			
2017	4,641	17,464				
2018	5,448					

(b) Assess R-Dan's contention that it strengthened case reserves for PPA.

Commentary on Question:
The model solution is an example of a full credit solution.

If case reserve strengthening occurred, we should see a significant increase, above the assumed claim severity trend of 0%, in average case reserves at the same stage of development after calendar year 2016.

- At 1 year of development: AYs 2017 and 2018 should show the increase. Evidence is mixed. AY 2017 average case reserve is lower than expected the previous years while AY 2018 average case reserve is higher than previous years.
- At 2 years of development: AYs 2016 and 2017 should show the increase. Evidence is mixed. AY 2016 average case reserve has not been increased from the AYs 2014 and 2015 level while AY 2017 average case reserve is higher than previous years.
- At 3 years of development: AYs 2015 and 2016 should show the increase. Average case reserves at 3 years show an increasing trend possibly suggesting case reserve strengthening.

It is possible that case reserves have been strengthened. However, since it is not definitive, another year's worth of results (for calendar year 2019) should be analyzed before making a determination. There is stronger evidence that case reserves may have been strengthened in calendar year 2018 only, and not in calendar 2017.

11. Learning Objectives:

1. The candidate will understand the elements of financial reporting for general insurance companies.

2. The candidate will understand the analysis of a general insurer's financial health through prescribed formulas, ratios and other solvency regulation methods.

3. The candidate will be able to apply the standards of practice regarding the responsibilities of the actuary as defined by regulators and the American Academy of Actuaries.

Learning Outcomes:

(1d) Complete and interpret selected pages/schedules in the NAIC Annual Statement as included in the resources.

(2a) Evaluate the financial health of a general insurer using information contained in the Annual Statement.

(2c) Calculate and interpret the results of financial health ratios.

(3b) Describe, interpret and apply the responsibilities of the actuary with respect to the Statement of Actuarial Opinion and the Actuarial Report.

Sources:

General Insurance Financial Reporting Topics, Fourth Edition, Society of Actuaries

- Chapter 11 (Measuring Insurer Financial Strength)
- Chapter 14 (Overview of the General Insurance Statement of Actuarial Opinion)

NAIC Annual Statement

Case Study, Spring 2021, SOA Exam General Insurance, Financial and Regulatory Environment – U.S.

Commentary on Question:

This question tests a candidate's knowledge the reporting of reserves and Schedule P using information from the GI FREU Case Study.

This question required the candidate to respond in Excel for part (b). Data from the GI FREU Case Study was preloaded in Excel for the candidate to use in their solution. An example of a full credit solution for this part is in the Excel solutions spreadsheet. The model solution in this file for part (b)is for explanatory purposes only.

Solution:

(a) Provide an argument supporting booked net reserves of $289.5 million for R-Dan's 2018 Annual Statement.

11. **Continued**

Commentary on Question:
The model solution is an example of a full credit solution.

Any booked amount within the range is reasonable. There is no requirement to book the actuarial point estimate.

(b) Recalculate R-Dan's 2018 NAIC IRIS Ratios 11, 12 and 13 using Sue Calvin's point estimate for year-end 2018 only.

Calculate amounts (A) to (F) as follows to use in calculating the IRIS ratios:

(A) One-year development (revised) = One-year development + increased reserves for accident years 2017 and prior = 36.2 + [(318 – 188) – (289.5 – 170.6)] = 47.3

(B) Two-year development (revised) = Two-year development + increased reserves for accident years 2016 and prior = 38.9 + [(318 – 188 – 67) – (289.5 – 170.6 – 62.6)] = 45.6

(C) Developed reserves to premium ratio-1st prior(revised) = (booked reserves first prior year-end + one-year development (revised) / prior year net earned premium = [(203.2 + 45.7) + (A)] / 511.6 = 57.90%

(D) Developed reserves to premium ratio-2nd prior(revised) = (booked reserves second prior year-end + two-year development (revised) / second prior year net earned premium = [(185.7 + 38.8) + (B)] / 470.9 = 57.36%

(E) Reserves-to-premiums ratio is an average of the first and second prior years developed reserves to premium ratio. Reserves-to-premiums ratio (revised) = 0.5 × ((C)+ (D)) = 57.63%

(F) Estimated reserve deficiency = (Premiums earned (current year) × reserves to premiums ratio) – loss & LAE reserves (current year). Estimated reserve deficiency (revised) = 578.5 × (E) – 318 = 15.375

IRIS Ratio 11 (revised) = (A) / PHS_{2017} = 47.3 / 209.1 = 22.6%

IRIS Ratio 12 (revised) = (B) / PHS_{2016} = 45.6 / 197.8 = 23.1%

IRIS Ratio 13 (revised)
= (F) / PHS_{2018}(revised) = 15.375 / [209.4 – (318 – 289.5)] = 8.5%

(c) Assess the implications on R-Dan's IRIS ratios of using Sue Calvin's point estimate.

Commentary on Question:
There are many different possible implications. The model solution only notes some of the implications and represents an example of full credit solution.

11. **Continued**

At the current booked amount for reserves, all three IRIS reserve ratios have results that are acceptable. However, if Sue's point estimate was booked, policyholder surplus would be significantly lower causing R-Dan to have exceptional results for IRIS ratios 11 and 12. On a positive note, the reserve deficiency ratio, IRIS ratio 13, would improve significantly.

Booking reserves at Sue's point estimate will also make R-Dan fail IRIS ratio 2 (NWP / PHS = 607.7 / 180.9 = 3.4) and IRIS ratios 7 and 8 (change in PHS, as the decrease is greater than 10%).

(d) Assess the broader implications of using Sue Calvin's point estimate.

Commentary on Question:
There are many different possible broad implications. The model solution only notes some of the implications and represents an example of full credit solution.

Sue Calvin would need to address this change in R-Dan's methodology for setting the reserves in the Relevant Comments section of the SAO and Actuarial Report.

This change would also likely increase regulatory scrutiny from the failure of several IRIS ratios. However, it may be explained by being the result of strengthening IBNR reserves.

12. **Learning Objectives:**

1. The candidate will understand the elements of financial reporting for general insurance companies.

Learning Outcomes:

(1d) Complete and interpret selected pages/schedules in the NAIC Annual Statement as included in the resources.

Sources:

General Insurance Financial Reporting Topics, Fourth Edition, Society of Actuaries

- Chapter 2 (Accounting for Insurance Contracts)
- Chapter 9 (Measuring Total Income by Line of Business)

NAIC Annual Statement

Case Study, Spring 2021, SOA Exam General Insurance, Financial and Regulatory Environment – U.S.

Commentary on Question:

This question tests a candidate's knowledge of the IEE. This question uses information from the GI FREU Case Study.

This question required the candidate to use Excel. Data from the GI FREU Case Study was preloaded in Excel for the candidate to use in their solution. The model solution for this question in this document does not represent the actual model solution. It is for explanatory purposes only. Refer to the Excel solution file for an example of a full credit solution in Excel.

Solution:

Determine the following items for R-Dan's 2018 IEE using the corrected amount for the 2018 PHS:

(i) Prepaid expense ratio for HO

(ii) Investment gain ratio

(iii) Investment gain on funds attributable to insurance transactions for HO

Commentary on Question:

Amounts in the solution are in millions (M).
The following abbreviations are used in this solution:
PPE = Prepaid expense ratio,
IG = Net investment gain, IGR = IG ratio,
AS = Annual Statement, HO = Homeowners,
IT = Insurance transactions,
WP = net written premium, UPR = Net unearned premium reserves,

12. Continued

LR = Net loss and loss adjustment expense reserves,
AB = Net agents balances,
Mean = Average of current and prior year amounts

(i) Prepaid expense ratio for HO
This is not affected by the reporting error regarding PHS.

PPE_{HO} = Prepaid expenses for HO / WP for HO
Prepaid expenses = Commission and brokerage expenses incurred
+ Taxes, licenses and fees incurred
+ Other acquisition, field supervision and collection expenses incurred
+ One-half of general expenses incurred.
These amounts are in IEE Part II columns 23, 25, 27 and 29, row 4 for HO

$PPE_{HO} = (3.7 + 4.6 + 10.6 + (10.2 / 2)) / 184.1 = 13.0\%$

(ii) Investment gain ratio.
This is directly affected by the reporting error regarding PHS.

IGR = IG / Investable assets
IG = AS page 4 lines 9 and 10 for current year including capital gains tax
= 31.9 + 1.1 + 0.6 = 33.6

Investable assets = Mean LR + Mean UPR – Mean AB + Mean PHS
Mean LR = Mean of AS page 3 lines 1 and 2 = (289.5 + 248.9) / 2 = 269.2
Mean UPR = Mean of AS page 3 line 9 = (208.8 + 179.6) / 2 = 194.2
Mean AB = Mean of AS page 2 lines 15.1 and 15.2 = (54.7 + 48) / 2 = 51.35
Mean PHS = Mean of AS page 3 line 37 where current year is reduced by 20M
= ((209.4 – 20) + 209.1) / 2 = 199.25

IGR = 33.6 / (269.2 + 194.2 – 51.35 + 199.25) = 5.5%

(iii) Investment gain on funds attributable to insurance transactions for HO
This is indirectly affected by the reporting error regarding PHS as it uses the IGR which was directly affected.

$IG(IT)_{HO} = IGR \times [\text{Mean } LR_{HO} + \text{Mean } UPR_{HO} \times (1 - PPE_{HO}) - \text{Mean } AB_{HO}]$
Mean $LR_{HO} = ((29.3 + 1.6 + 5.2) + (24.9 + 1.4 + 4.7)) / 2 = 33.55$
Mean $UPR_{HO} = (98.7 + 81.8) / 2 = 90.25$
Mean $AB_{HO} = (16.7 + 14.7) / 2 = 15.7$

$IG(IT)_{HO} = .055 \times [33.55 + 90.25 \times (1 - 0.13) - 15.7] = 5.3$

13. **Learning Objectives:**

4. The candidate will be able to describe the current and historical regulatory environment.

Learning Outcomes:

(4a) Describe the functions of key regulatory bodies in the U.S. including the NAIC and SEC.

(4b) Describe and interpret the current state of general insurance regulation in the U.S. and its development.

Sources:

Insurance Regulation, The Institutes

- Chapter 4 (Roles of State Regulators and the NAIC in Insurance Regulation)

Commentary on Question:

This question tests a candidate's understanding of U.S. insurance regulation including the role of a state DOI and the NAIC.

Solution:

(a) Describe four regulatory insurance functions that every state DOI regularly performs.

Commentary on Question:

There are a number of regulatory insurance functions performed by state DOIs. Only four were required for full credit. The model solution is an example of a full credit solution.

- Licensing of insurers and producers (agents/brokers) to conduct insurance business in the state.
- Reporting and filing requirements for insurers in the state.
- Periodic examination of insurers in the state.
- Power to impose sanctions against insurers in the state.

(b) Describe five ways that state legislatures can influence insurance regulation carried out by DOIs in each state.

Commentary on Question:

There are a number of ways state legislatures can influence insurance regulation carried out by state DOIs. Only five were required for full credit. The model solution is an example of a full credit solution.

- State legislatures have direct legislative oversight of DOIs since they control DOI budgets.
- State legislatures pass the insurance laws that DOIs must enforce.

13. **Continued**

- State legislatures influence insurance regulation through noninsurance laws. For example, tax and corporate laws that affect insurer activities.
- State legislators may have laws requiring insurance commissioners to submit annual reports to the legislature (or other state body/official) summarizing DOI activities and the status of the insurance industry in the state.
- State legislatures conduct performance reviews to evaluate the operations of a DOI. Performance reviews can affect the DOI's budget and operations.

(c) Describe four ways in which the NAIC assists DOIs in the conduct of their insurance regulatory function, other than through the DOI accreditation programs.

Commentary on Question:
There are a number of ways that the NAIC assists DOIs in the conduct of the insurance regulatory function. Only four were required for full credit. The model solution is an example of a full credit solution.

- Maintaining computerized databases to help DOIs track insurer financial solvency.
- Scrutinizing alien surplus or excess lines insurers seeking to do business in a state for the benefit of all DOIs.
- Supporting individual DOIs in court cases by issuing "friend of the court" supportive briefs.
- Tracking insurance issues at the federal level while working on behalf of DOIs to express their concerns and interests to the federal government.

(d) Identify four activities that are part of the NAIC DOI accreditation review.

Commentary on Question:
There are a number of activities that are part of the NAIC DOI accreditation review. Only four were required for full credit. The model solution is an example of a full credit solution.

- Interviewing department personnel
- Reviewing laws and regulations
- Reviewing prior examination reports and supporting work papers and analytical reviews
- Reviewing organizational and personnel policies

(e) Identify two key standards that state DOIs must meet in order to receive accreditation.

13. **Continued**

Commentary on Question:
There are three key standards. Only two were required for full credit. The model solution presents all three for completeness.

- DOI must meet NAIC standards in state laws and regulations.
- DOI must meet NAIC standards in regulatory methods.
- DOI must meet NAIC standards in DOI practices.

14. **Learning Objectives:**

5. The candidate will be able to understand tort law and insurance law with respect to its impact on the general insurance industry.

Learning Outcomes:

(5a) Describe and interpret the key elements of tort law and the underlying principles of insurance law.

Sources:

Excerpts from Business Law for Insurance Professionals, Institutes Custom Publishing, Assignment 3 (The International Legal Environment)

Commentary on Question:

This question tests a candidate's understanding of certain aspects of the international legal environment.

Solution:

(a) Contrast these two legal systems with respect to the following:

(i) Framework for legal decisions

(ii) Role of the judge

Commentary on Question:

The model solution is an example of a full credit solution.

(i) Framework
In the civil-law system, the framework is a written code of statutes. In the common-law system, the framework is precedent cases.

(ii) Role of judge
In a civil-law system, the role of the judge is to find the correct legislative provision within a written code of statutes and apply it to the facts in a case. In a common-law system, the role of the judge is to interpret facts of the case, examining rulings in precedent cases and making a decision on the facts of the case taking into account the precedent cases.

(b) Describe three potential motivations for a company to operate internationally.

- Resource seekers – Companies enter a foreign market to access that market's resources.
- Market seekers – Companies enter a foreign market to acquire new customers.
- Market followers – Companies enter a foreign market to follow their current customers into the market.

14. **Continued**

(c) Describe four potential financial risks from operating internationally.

Commentary on Question:
There are more than four financial risks. Only four were required for full credit. The model solution is an example of a full credit solution.

- Risk of fluctuation in foreign currency causing fluctuations in income earned from a foreign subsidiary
- Risk of restrictions on movements of foreign held assets
- Risk of expropriation of foreign assets
- Risk of dealing with differing accounting standards and procedures

(d) Describe a concern with this investment, from the perspective of WXY's actuarial department, that does not relate to these additional financial risks.

Commentary on Question:
The model solution is an example of a full credit solution.

The U.S. has a common law system, while Country B has a civil law system. The different legal system in Country B will likely result in differences for insured loss experience affecting both loss development and rating. The U.S. experience will be of limited or no value in reserving and ratemaking liability coverages in Country B.

15. **Learning Objectives:**

1. The candidate will understand the elements of financial reporting for general insurance companies.

Learning Outcomes:

(1a) Understand and apply the concepts of insurance accounting.

(1b) Understand and compare different financial reporting standards for general insurers.

(1c) Describe the elements of the NAIC Annual Statement.

Commentary on Question:
This question tests a candidate's understanding of the accounting for premium receivables.

Solution:

(a) State two approaches for securing premium receivables.

Commentary on Question:
There are more than two approaches. Only two were required for full credit. The model solution is an example of a full credit solution.

- Letters of credit
- Funds held

(b) Identify the section of the NAIC annual statement where each approach for securing premium receivables from part (a) is reported.

Commentary on Question:
The response to part (b) depended on the response to part (a). The model solution is an example of a full credit response given the model solution provided for part (a).

- Letters of credit – It is not reported in the statutory balance sheet but is reported in Schedule F.
- Funds held – It is reported on the liability side of the statutory balance sheet and also reported in Schedule F.

(c) Describe the statutory treatment of secured premium receivables.

Admitted assets

15. **Continued**

(d) Describe the statutory treatment of unsecured premium receivables not yet due.

10% of unsecured receivables not yet due are nonadmitted assets—the remainder are admitted assets.

(e) Explain why earned but unbilled (EBUB) premium and accrued retrospective premium (ARP) arise in commercial general insurance.

EBUB premium receivables arise from the fact that commercial insurance premiums often depend on the exposure during the policy term and are only finalized after the policy expiration date.

ARP receivables occur because some commercial policies are retrospectively rated. The premium ultimately depends on the losses incurred during the policy term—these are finalized at some point in time after the policy expiration date.

16. Learning Objectives:

2. The candidate will understand the analysis of a general insurer's financial health through prescribed formulas, ratios and other solvency regulation methods.

Learning Outcomes:

(2h) Demonstrate knowledge of ORSA and its implementations.

Sources:

NAIC Own Risk and Solvency Assessment (ORSA) Guidance Manual

General Insurance Financial Reporting Topics, Fourth Edition, Society of Actuaries

- Chapter 12 (Solvency Monitoring)

Commentary on Question:

This question tests a candidate's understanding of NAIC ORSA.

Solution:

(a) Provide the following information based upon the NAIC Own Risk and Solvency Assessment (ORSA) Guidance Manual:

(i) Definition of ORSA

(ii) Two primary goals of ORSA

(i) Definition of ORSA
ORSA is a component of an insurance company's enterprise risk management (ERM) framework. It is confidential and internal. It attempts to evaluate and assess the insurer's relevant risks based on its current business plan, to ensure that a sufficient amount of capital/reserves are available to support those risks.

(ii) Two primary goals of ORSA

1. Ensure there is an effective level of ERM for all insurers.
2. Provide a group level view on risk and capital, in additional to the existing legal entity view.

(b) Construct this summary addressing three of the five key principles.

Commentary on Question:

The five key principles are as follows:

1. *Risk culture and governance*
2. *Risk identification and prioritization*
3. *Risk Appetite, tolerance and limits*
4. *Risk Management and controls*
5. *Risk reporting and communication*

16. Continued

Any three of these five could have been selected to construct the summary. The model solution is an example of a full credit solution using the first three principles. A full credit response did not need to show the headings for the three key principles selected to earn full credit. They are included in the model solution to remove any ambiguity.

1. Risk culture and governance:
   The company should have clearly defined roles, responsibilities, and accountabilities of each department. It would appear that the decision to expand into workers' compensation was made without consulting the actuarial department. This could pose a significant risk to the company since actuarial department is responsible for pricing accuracy. The risk culture of the company does not have clearly defined accountability and responsibility.

2. Risk identification and prioritization:
   The company has made a major decision that exposes the company to significant pricing and regulatory risks. The risk identification is unclear at this point, more research needs to happen to find out what kind of risks were considered during the decision-making process. We need to disclose the risk identification on our ORSA report, and the company's plan to tolerate the potential risk needs to be discussed.

3. Risk Appetite, tolerance and limits:
   By entering into new states for a new product, it demonstrates that the company's risk appetite and tolerance appears to be quite high. Whether or not this is appropriate needs to be discussed in the ORSA report.

17. **Learning Objectives:**

3. The candidate will be able to apply the standards of practice regarding the responsibilities of the actuary as defined by regulators and the American Academy of Actuaries.

Learning Outcomes:

(3b) Describe, interpret and apply the responsibilities of the actuary with respect to the Statement of Actuarial Opinion and the Actuarial Report.

Sources:

AAA, Committee on Property and Liability Financial Reporting, "A Public Policy Practice Note, Statements of Actuarial Opinion on Property and Casualty Loss Reserves"

General Insurance Financial Reporting Topics, Fourth Edition, Society of Actuaries

- Chapter 14 (Overview of the General Insurance Statement of Actuarial Opinion)

Commentary on Question:

This question tests a candidate's knowledge of certain aspects of the SAO.

Solution:

(a) Describe a situation in which an Appointed Actuary may render each of the following types of Opinions in the U.S. Statement of Actuarial Opinion (SAO):

(i) Qualified

(ii) No opinion

Commentary on Question:

Full credit could be earned by describing either a specific example of a situation or a general situation. The model solution is an example of a full credit solution describing a specific example of a situation.

(i) A general insurance company writes a material amount of accident and health policies that the Appointed Actuary deems to be outside the scope of the SAO.

(ii) The Appointed Actuary discovers that the net loss data supplied by the insurer does not have the reinsurance cessions allocated to their proper line of business or accident year. The insurer is unable to correct this data deficiency in a timely manner.

(b) Prepare parts A through C of the Opinion section of the SAO.

17. Continued

In my opinion, the amounts carried in Exhibit A on account of the items identified:

A. Meet the requirements of the insurance laws of the state of Ohio.

B. Are computed in accordance with accepted actuarial standards and principles.

C. Make an excessive provision for the gross unpaid loss and loss adjustment expense obligations of the Company under the terms of its contracts and agreements. The provision for unpaid losses and loss adjustment expenses is 6 million greater than the maximum amount I consider necessary to be within the range of reasonable estimates.

   Make an inadequate provision for the net unpaid loss and loss adjustment expense obligations of the Company under the terms of its contracts and agreements. The provision for unpaid losses and loss adjustment expenses is 2 million less than the minimum amount I consider necessary to be within the range of reasonable estimates.

(c) Identify one risk factor to mention as a company-specific risk factor in the *Relevant Comments* section of the SAO.

Commentary on Question:
The model solution is an example of a full credit solution.

The large amount of ceded reinsurance could result in collectability or liquidity issues.

18. Learning Objectives:

1. The candidate will understand the elements of financial reporting for general insurance companies.

Learning Outcomes:

(1a) Understand and apply the concepts of insurance accounting.

(1c) Describe the elements of the NAIC Annual Statement.

(1d) Complete and interpret selected pages/schedules in the NAIC Annual Statement as included in the resources.

Sources:

General Insurance Financial Reporting Topics, Fourth Edition, Society of Actuaries

- Chapter 4 (Accounting for Reinsurance Contracts)
- Chapter 8 (Notes to Financial Statements)

NAIC Statement of Statutory Accounting Principles,

- No. 65, "Property and Casualty Contracts"

Commentary on Question:

This question tested the candidate's knowledge of the statutory accounting treatment of structured settlements. This question required the candidate to respond in Excel for parts (b) and (c). An example of a full credit solution for these parts is in the Excel solutions spreadsheet. The model solutions in this file for parts (b) and (c) are for explanatory purposes only.

Solution:

(a) Contrast the reporting of reserves under U.S. statutory accounting for the two claims below, including a key reason for the difference.

(i) a claim that includes a structured settlement funded by an annuity

(ii) a claim that includes retroactive reinsurance

Commentary on Question:

There are several key reasons. Only one was required for full credit. The model solution is an example of a full credit solution.

Statutory accounting for retroactive reinsurance does not permit a reduction of the gross loss reserves on the ceding company's statements, exhibits or schedules. However, a reduction is permitted for structured settlements. This is because structured settlements are encouraged by regulators as they are generally beneficial to accident victims.

18. Continued

(b) Calculate the two amounts that GCIC must report in Note 27 Part A.

Commentary on Question:
This part of the question required the candidate to respond in Excel. An example of a full credit solution for this part is in the Excel solutions spreadsheet. The model solution in this file for this part is for explanatory purposes only.

Note 27 Part A requires the calculation of loss reserves eliminated by annuities and the unrecorded loss contingencies. Loss reserves eliminated by annuities are calculated as the total amount of reserves at the valuation date for all structured settlements with the claimant as the payee. Unrecorded loss contingencies are calculated as the amount for which it is contingently liable (i.e., no release obtained). For loss reserves eliminated by annuities in this question, we need the total reserves for annuities (A), (C), (E), (G), and (H). For unrecorded loss contingencies, the contingently liable amount is total amount of reserves eliminated by annuities less the amounts from which they obtain a release of liability (rated A or higher). In this question, release was obtained for annuities (A) and (E).

Note that the question did not provide the amount of loss reserves for the claims. In order to calculate these amounts, one had to assume that the loss reserves were equal to the amount of the structured settlements. One could also earn full credit by noting that the loss reserves were not provided, and for which claims each reserve amount was to be included in the calculation.

Loss reserves eliminated by annuities
= 750,000 + 300,000 + 450,000 + 250,000 + 700,000 = 2,450,000

Unrecorded loss contingencies
= 2,450,000 – (750,000 + 450,000) = 1,250,000

(c) Construct GCIC's required disclosures for Note 27 (Parts A and B).

Commentary on Question:
This part of the question required the candidate to respond in Excel. An example of a full credit solution for this part is in the Excel solutions spreadsheet. The model solution in this file for this part is for explanatory purposes only.

Refer to commentary on part (b) for the amounts required in Note 27 Part A. Disclosure Note 27 Part B shows the amounts for annuities purchased from life insurance companies if the total amount, by life insurer, is greater than 1% of policyholders' surplus (PHS). This only includes annuities where the claimant is the payee and the company has not obtained a release of liability. As such it can only apply to CTL and DEL as they are rated below A.

18. **Continued**

Surplus is 50 million, so 1% is 0.5 million. CTL has 0.25 million payable to the claimants, so disclosure in Note 27(B) is not required. DEL has 0.7 million payable to the claimants, so disclosure in Note 27(B) is required.

Part A:
Loss reserves eliminated by annuities in the amount of $2.45 million for which there are unrecorded loss contingencies in the amount of $1.25 million.

Part B:

Life Insurance Co.	Licensed in Company's State of Domicile	Statement Value at 12/31/2018
DEL	Yes	$700,000

19. **Learning Objectives:**

4. The candidate will be able to describe the current and historical regulatory environment.

Learning Outcomes:

(4e) Describe the development of general insurance programs controlled by government or collective insurance industry organizations and their mechanisms of operation.

Sources:

Cappelletti, A., "Government Provision of General Insurance," Society of Actuaries Study Note

Commentary on Question:

This question tests a candidate's knowledge of WC coverage.

Solution:

(a) Describe four common characteristics of workers compensation (WC) programs found in most industrialized countries.

Commentary on Question:

There are more than four common characteristics. Only four were required for full credit. The model solution is an example of a full credit solution.

- Employees give up the right to sue an employer
- Employees receive prompt no-fault compensation with benefits that are defined by statute
- Incentives are established to promote workplace safety
- Coverage is compulsory for most employers in the jurisdiction

(b) Describe two features of WC programs that make them an example of social insurance.

Commentary on Question:

There are more than two features that can be cited. Only two were required for full credit. The model solution is an example of a full credit solution.

- Participation by employees is compulsory
- Benefits are specified by statutes

(c) Describe four factors that have been identified as generating (or potentially generating) upward pressure on WC rates in the United States.

Commentary on Question:

There are more than four factors. Only four were required for full credit. The model solution is an example of a full credit solution.

19. **Continued**

- Low investment portfolio yields due to the prolonged low interest rate environment. The reduced investment income will influence underwriting and rating putting upward pressure on rates.
- The average age of employees is rising over time. The duration of claims tends to be longer for older workers. Older workers are also more susceptible to bone fractures. This is causing an increase in claim costs.
- Their appears to be an increasing incidence of obesity. Obese workers' claim frequency is double that of non-obese workers. Medical and indemnity costs (i.e., claim severity) are significantly higher for obese workers.
- There appears to be a problem from the overuse of narcotic pain killers. The long-term use of narcotic pain killers for pain management increases the likelihood that the employee will not return to work because of drug addiction/dependency. This will increase claim costs.

20. **Learning Objectives:**

5. The candidate will be able to understand tort law and insurance law with respect to its impact on the general insurance industry.

Learning Outcomes:

(5a) Describe and interpret the key elements of tort law and the underlying principles of insurance law.

(5d) Understand mass torts/class action suits and discuss their impact on the general insurance industry.

(5e) Describe and interpret legal cases/issues included in the syllabus resources.

Commentary on Question:
This question tests a candidate's knowledge of the asbestos mass tort.

Solution:

(a) Explain how the court's interpretation of insurance coverage increased the cost to the insurance industry.

Commentary on Question:
The model solution is an example of a full credit solution.

The asbestos mass tort involved what was viewed by the insurance industry as the liability of exposure to asbestos—a product. Products liability insurance coverage has a set aggregate policy limit. Courts interpreted that premises and operations liability insurance coverage was applicable to claims from asbestos exposure, not products liability insurance coverage. Premises and operations liability insurance coverage only has an occurrence limit and no aggregate policy limit. This exposed insurers to potentially unlimited liability when each claim is considered a separate occurrence.

(b) Explain why the Manville bankruptcy did not reduce asbestos litigation in the United States.

Commentary on Question:
There are many reasons why this occurred. The model solution is an example of a full credit solution that provided several (but not all) reasons in an explanation.

The trust had insufficient funds for all the claims it was faced with. Furthermore, the trust would only pay 10% of the full value for each claim.

Despite Manville being the largest supplier of asbestos and asbestos products, there are other suppliers. In addition to this, the courts have allowed peripheral defendants to be sued.

20. **Continued**

With multiple trusts and a vast number of claimants, it has been a challenge for trust administrators to be vigilant with respect to detecting fraudulent claims, so litigation continues.