General Insurance
Financial and Regulatory Environment – U.S.

Exam GIFREU

Date: Friday, October 28, 2022

INSTRUCTIONS TO CANDIDATES

General Instructions

1. This examination has 18 questions numbered 1 through 18 with a total of 100 points.

   The points for each question are indicated at the beginning of the question. Questions 9 to 11 pertain to the Case Study.

2. While every attempt is made to avoid defective questions, sometimes they do occur. If you believe a question is defective, the supervisor or proctor cannot give you any guidance beyond the instructions provided in this document.

Written-Answer Instructions

1. Each question part or subpart should be answered either in the Word document or the Excel file as directed. Graders will only look at work in the indicated file.

   a) In the Word document, answers should be entered in the box marked ANSWER. The box will expand as lines of text are added. There is no need to use special characters or subscripts (though they may be used). For example, β_1 can be typed as beta_1 and σ^2 can be typed as sigma^2.

   b) Calculations should be done in Excel and entered as formulas. Performing calculations on scratch paper or with a calculator and then entering the answer in the cell will not earn full credit. Formatting of cells or rounding is not required for credit. Rows can be inserted to the answer input area as required to provide space for your answer.

   c) Individual exams may provide additional directions that apply throughout the exam or to individual items.

2. The answer should be confined to the question as set.

3. Prior to uploading your Word and Excel files, each file should be saved and renamed with your five-digit candidate number in the filename.

4. The Word and Excel files that contain your answers must be uploaded before the five-minute upload period expires.

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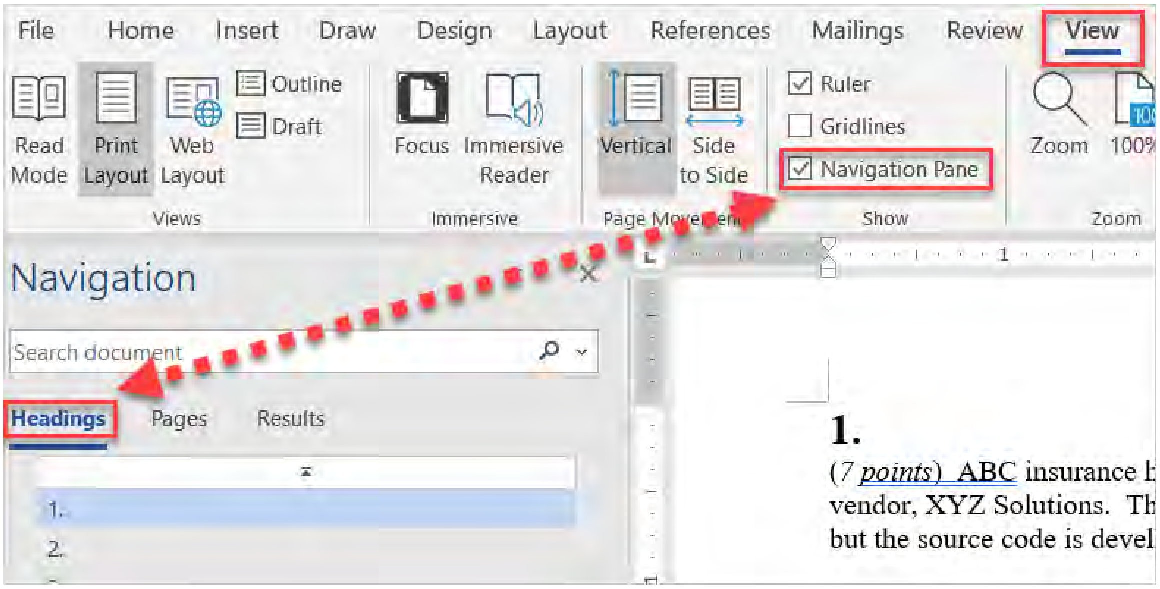
Navigation Instructions

Open the Navigation Pane to jump to questions.

Press Ctrl+F, or click View > Navigation Pane:



CASE STUDY INSTRUCTIONS

The case study will be used as a basis for some examination questions. Be sure to answer the question asked by referring to the case study. For example, when asked for advantages of a particular investment structure to a company referenced in the case study, your response should be limited to that company. Other advantages should not be listed, as they are extraneous to the question and will result in no additional credit. Further, if they conflict with the applicable advantages, no credit will be given.

1.

(*5 points*) Under U.S. Statutory Accounting, *deposit accounting* is used if a reinsurance contract does not have sufficient risk transfer.

Compare *deposit accounting* to *reinsurance accounting*, with respect to how it affects the following items:

(i) (*1 point*) *Liabilities* in the statutory Annual Statement

ANSWER:

(ii) (*1 point*) *Assets* in the statutory Annual Statement

ANSWER:

(iii) (*1 point*) *Surplus as regards policyholders* in the statutory Annual Statement

ANSWER:

(iv) (*2 points*) NAIC Risk-Based Capital requirement (R_3, R_4 and Total)

ANSWER:

2.

(*7 points*) The NAIC RBC formula includes a credit risk charge for reinsurance recoverables. This charge is based on a table of factors varying with two attributes of the recoverables (reinsurer financial rating and collateralization). Total reinsurance recoverables reported in the Annual Statement are reduced before application of these factors for the calculation of this risk charge.

(a) (*1 point*) Identify the following items that reduce the total reinsurance recoverables used in the credit risk charge calculation:

(i) Two amounts that are included in the total reinsurance recoverables

(ii) Two amounts that are not reinsurance recoverables

ANSWER:

The NAIC RBC formula includes an adjustment for excess premium growth.

(b) (*0.5 points*) Identify which RBC risk charges are changed by the adjustment for excess growth.

ANSWER:

The NAIC RBC formula includes an asset concentration factor.

(c) (*1.5 points*) Describe how this factor affects the risk charges in the RBC formula.

ANSWER:

The NAIC RBC formula includes a bond size adjustment factor.

(d) (*1.5 points*) Describe how this factor adjusts the RBC calculation.

ANSWER:

2. Continued

(e) (*1 point*) Describe how the NAIC RBC formula accounts for the risk from investments in directly owned alien insurance subsidiaries.

ANSWER:

(f) (*1 point*) Describe how the NAIC RBC formula accounts for the risk from investments in domestic insurance affiliates not subject to NAIC RBC.

ANSWER:

The NAIC RBC formula includes a catastrophe risk charge that is based upon a one-in-100-years modeled loss event on a net-of-reinsurance basis for each of hurricanes and earthquakes. In addition, the formula reflects the credit risk of the reinsurer.

(g) (*0.5 points*) Describe how the RBC catastrophe risk charge reflects this credit risk.

ANSWER:

3.

(*4 points*)

(a) (*0.5 points*) Explain how representations differ from warranties with respect to insurance contracts.

ANSWER:

(b) (*1.5 points*) Describe the three elements that are required for an insurer to establish that a false representation by an insured has taken place.

ANSWER:

(c) (*1 point*) Explain why insurers may prefer that courts interpret an insured's statements as warranties rather than representations.

ANSWER:

(d) (*1 point*) Explain how courts have lessened the effects of an insured's statement being regarded as a warranty.

ANSWER:

4.
(*6 points*)

(a) (*1.5 points*) Describe the three key objectives for the regulation of private insurance companies.

ANSWER:

In addition to regulating the private insurance industry, governments often provide a variety of social and financial security insurance products to their citizens.

(b) (*1.5 points*) Describe three reasons for the direct provision of insurance by governments.

ANSWER:

Some insurance products provided by governments may be categorized as *social insurance,* while others may be categorized as *social welfare*.

(c) (*1 point*) Explain how social welfare programs differ from social insurance.

ANSWER:

There are several basic types of residual market programs. One of these is a joint underwriting association (JUA).

(d) (*2 points*) Identify the following with respect to a JUA:

(i) (*0.5 points*) Issuer of the residual market policies

(ii) (*0.5 points*) How residual market policy premiums are set

(iii) (*1 point*) How results of the residual market policies are distributed

ANSWER:

5.

(*5 points*) You are given the following ceded reinsurance information for U.S. general insurer GHI as of December 31, 2021. Amounts in the tables are taken from GHI's Schedule F exhibits and are in thousands.

Reinsurer	Authorized	Certified	Reinsurance Recoverable on Paid Losses and Paid Loss Adjustment Expenses				
				Overdue			
			Current	1 to 29 Days	30 to 90 Days	91 to 120 Days	Over 120 Days
J Re	YES	NO	900	270	440	560	200
K Re	NO	NO	600	350	450	340	160

Reinsurer	Amounts Received in the Prior 90 Days	Reinsurance Recoverable on		Reinsurance Ceded Unearned Premiums	Funds Held by Company Under Reinsurance Treaties	Collateral from Letters of Credit
		Known Case Loss & LAE Reserves	IBNR Loss & LAE Reserves			
J Re	190	1,000	500	580	400	200
K Re	150	800	300	100	250	210

- Both reinsurers are based in the U.S. and are not affiliated with GHI.

- The *Reinsurance Recoverable on Paid Losses and Paid Loss Adjustment Expenses* shown in the table above includes amounts in dispute. Amounts in dispute are all from J Re and total 330,000. From this amount:
  - 90,000 is current;
  - 15,000 is overdue between 1 and 29 days;
  - 5,000 is overdue between 30 and 90 days;
  - 120,000 is overdue between 91 and 120 days; and
  - 100,000 is overdue more than 120 days.

- GHI's management estimates that 100,000 of reinsurance recoverables is uncollectible from J Re and 0 is uncollectible from K Re

5. Continued

(a) (*4.5 points*) Determine GHI's total Schedule F provision for reinsurance for the 2021 Annual Statement.

Provide the response for this part in the Excel spreadsheet.

(b) (*0.5 points*) Define *authorized reinsurer* as per NAIC Statement of Statutory Accounting Principles No. 62, *Property and Casualty Reinsurance*.

Provide the response for this part in the Excel spreadsheet.

6.

(*5 points*)

(a) (*2 points*) Describe four major shortcomings of a tort system that a no-fault insurance law attempts to rectify.

ANSWER:

(b) (*1.5 points*) Describe three distinctive features of no-fault insurance.

ANSWER:

(c) (*1.5 points*) Compare *pure* no-fault insurance to *modified* no-fault insurance.

ANSWER:

7.

(*6 points*) The Appointed Actuary (AA) for a U.S. general insurance company (the Company) is an employee of the Company and fully qualified to sign the Statement of Actuarial Opinion (SAO). The AA has extensive knowledge of the Company's book of business.

The external auditor for the Company makes use of a consulting actuary to provide an independent analysis for an estimate of the claim liabilities. The auditor's consultant has a great deal of industry experience and knowledge and is fully qualified to sign the SAO.

The Company booked reserves in the amount of $355 million. The AA developed a central estimate for the SAO while the auditor's consultant developed a reasonable range of reserves for the Company. The results are as follows:

Amounts (in $ millions)	**Low end of reasonable range**	**Central Estimate**	**High end of reasonable range**
AA's estimate	xxx	350	xxx
Consultant's estimate	380	390	400

The AA and the auditor's consultant have compared the analyses supporting their estimates and have determined that the difference is due to a single line of business, personal automobile (PAuto). The source of this difference is that recent legislation was expected to increase the cost of all open claims for PAuto. Historically, PAuto claim liabilities have been about one third of the total claim liabilities for the Company.

Independent studies were done by two actuarial consulting firms to quantify the effect of this legislation. Each study arrived at different results due to ambiguities in the legislation that have not yet been clarified. One study estimated a 9% increase due to the legislation, while the other study estimated a 30% increase due to the legislation. For the estimation of the Company's reserves, the AA used the study with the 9% increase while the auditor's consultant used the study with the 30% increase.

While the AA has not disclosed a range, the AA used a ± 3.5% range of reasonability in prior years. For this SAO, the AA used a ± 10% range of reasonability due to the additional uncertainty arising from the recent legislation affecting all open claims.

(a) (*0.5 points*) Select the type of SAO the AA should render in this situation. Justify your selection.

ANSWER:

7. Continued

(b) (*0.5 points*) Describe how Actuarial Standard of Practice (ASOP) 21 (*Responding to or Assisting Auditors or Examiners in Connection with Financial Audits, Financial Review, and Financial Examinations)* provides guidance in resolving this situation.

ANSWER:

(c) (*5 points*) Outline how the AA should proceed in this situation.

ANSWER:

8.

(*4 points*)

(a) (*1.5 points*) Provide three reasons as to why rapid premium growth has been identified as a frequent contributor to insurer insolvency.

ANSWER:

Guaranty funds are established to pay claims arising from insolvent insurer policies.

(b) (*0.5 points*) Describe how guaranty funds can increase the amount of risk assumed by insurers.

ANSWER:

There exist two main methods for funding guaranty funds:

- Pre-funding by risk-based premiums charged to all insurers in a market.
- Funding post-insolvency by assessing the remaining solvent insurers.

(c) (*1 point*) Compare the sufficiency of funding under these two methods.

ANSWER:

Under the NAIC Post-Assessment Property and Liability Insurance Guaranty Association Model Act, there are guaranty fund coverage limitations which apply in addition to the policy terms and conditions of the original insurance contracts. One of these limitations is the *large net worth deductible*.

(d) (*0.5 points*) Explain what prompted the NAIC to add this limitation to the Model Act.

ANSWER:

(e) (*0.5 points*) Explain the purpose of including this limitation in the Model Act.

ANSWER:

Questions 9 to 11 pertain to the Case Study.
Each question should be answered independently

9.

(*4 points*) Create the following development triangles for R-Dan's private passenger auto liability (PPAL) line of business (net losses and defense and cost containment expenses) for accident years 2018 to 2021:

(i) Average case basis unpaid

(ii) Average payment per closed claim
- Assume that there are no partial payments on claims.

Provide the response for this question in the Excel spreadsheet.

Questions 9 to 11 pertain to the Case Study.
Each question should be answered independently.

10.

(*9 points*) NAIC IRIS Ratios 11 and 12 measure reserve development to policyholders' surplus. The usual range for these ratios is anything under 20%. Values outside the usual range may indicate deficient reserves.

(a) (*0.5 points*) Explain how values outside the usual range for these reserve ratios could be caused by something beneficial to an insurer's financial health.

ANSWER:

R-Dan's original projections were based upon an optimistic scenario for underwriting results. R-Dan subsequently revised these projections to reflect a more realistic scenario for underwriting results.

The following table shows R-Dan's actual results for 2021 and the revised projections for 2022 to 2024:

REVISED PROJECTIONS	Actual 2021	Projected 2022	Projected 2023	Projected 2024
Gross Premiums Written				
Liability lines	248,200	279,200	293,200	303,500
Property lines	180,600	203,200	213,400	220,900
Property and liability combined lines	189,300	217,700	239,500	263,500
Total	618,100	700,100	746,100	787,900
Net Premiums Written				
Liability lines	243,900	274,400	288,100	298,200
Property lines	179,700	202,200	212,300	219,700
Property and liability combined lines	184,100	211,700	232,900	256,200
Total	607,700	688,300	733,300	774,100
Income				
Net underwriting gain (loss)	(72,500)	(60,000)	(30,000)	(15,000)
Net investment gain (loss)	33,000	28,000	32,000	34,000
Total other income	2,700	3,100	3,300	3,500
Federal and foreign income taxes incurred	(20,300)	(7,500)	(1,500)	2,000
Net income	(16,500)	(21,400)	6,800	20,500
Surplus				
Capital paid-in by parent during year	10,000	10,000	0	0
Surplus as regards policyholders at year-end	209,400	198,000	204,800	225,300

10. Continued

The following amounts were used in the creation of the revised projections:

	2022	2023	2024
Net unearned premium reserve at year end	236,800	256,100	272,000
Underwriting expenses for the year	111,800	119,200	125,800
Net realized capital gain for the year	600	700	800

(b) (*6.5 points*) Calculate the following NAIC IRIS Ratios for each year, from 2021 to 2024, using R-Dan's actual results for 2021 and revised projections for 2022 to 2024:

(i) (*0.5 points*) IRIS Ratio 2 – Net written premium to policyholders' surplus

Provide the response for this part in the Excel spreadsheet.

(ii) (*5 points*) IRIS Ratio 5 – Two-year overall operating ratio

Provide the response for this part in the Excel spreadsheet.

(iii) (*0.5 points*) IRIS Ratio 7 – Gross change in policyholders' surplus

Provide the response for this part in the Excel spreadsheet.

(iv) (*0.5 points*) IRIS Ratio 8 – Change in adjusted policyholders' surplus

Provide the response for this part in the Excel spreadsheet.

(c) (*2 points*) Determine whether or not each of the NAIC IRIS Ratios calculated in part (b) falls outside the usual range for the ratio. Provide the usual range for the ratios in your determinations.

Provide the response for this part in the Excel spreadsheet.

Questions 9 to 11 pertain to the Case Study.
Each question should be answered independently.

11.

(*10 points*) A-Eye Holdings (A-Eye) has an opportunity to purchase a U.S. general insurance company, O-Bot. O-Bot began operations in 2019 and only writes homeowners insurance policies.

If O-Bot is purchased, A-Eye would have O-Bot and R-Dan enter into an intercompany pooling agreement in which O-Bot would cede 100% of its business to the lead insurer, R-Dan. The business of both companies would be pooled together, for all lines of business and R-Dan would then retrocede 30% of the pooled business back to O-Bot.

In part of its assessment of this potential purchase, A-Eye wants to examine the year-end 2021 financial statements for these two companies under the scenario that the pooling arrangement was in effect and applies to all of the premiums, losses and loss expenses for both companies.

You are given the following Schedule P and Underwriting and Investment Exhibit (UWIE) information for O-Bot as of December 31, 2021 ($000 Omitted):

Schedule P – Part 1A

Year in Which Premiums Were Earned and Losses Incurred	Premiums Earned			Loss and Loss Expense Payments					
				Loss		DCC		AO	
	Direct & Assumed	Ceded	Net	Direct & Assumed	Ceded	Direct & Assumed	Ceded	Direct & Assumed	Ceded
	1	2	3	4	5	6	7	8	9
01. Prior	XXX	XXX	XXX	0	0	0	0	0	0
09. 2019	24,700	600	24,100	17,800	0	500	0	3,000	0
10. 2020	79,800	2,000	77,800	59,500	0	1,400	0	9,900	0
11. 2021	110,300	2,800	107,500	66,000	0	1,500	0	10,400	0
12. Totals	XXX	XXX	XXX	143,000	0	3,400	0	23,300	0

	Losses Unpaid				Defense and Cost Containment Unpaid				Adjusting and Other Unpaid	
	Case Basis		Bulk + IBNR		Case Basis		Bulk + IBNR			
	Direct & Assumed	Ceded	Direct & Assumed	Ceded	Direct & Assumed	Ceded	Direct & Assumed	Ceded	Direct & Assumed	Ceded
	13	14	15	16	17	18	19	20	21	22
01. Prior	0	0	0	0	0	0	0	0	0	0
09. 2019	100	0	0	0	0	0	0	0	0	0
10. 2020	1,350	0	150	0	0	0	0	0	200	0
11. 2021	18,080	0	4,520	0	500	0	0	0	3,600	0
12. Totals	19,530	0	4,670	0	500	0	0	0	3,800	0

	Total Losses and Loss Expenses Incurred		
	Direct & Assumed	Ceded	Net
	26	27	28
01. Prior	XXX	XXX	XXX
09. 2019	21,400	0	21,400
10. 2020	72,500	0	72,500
11. 2021	104,600	0	104,600
12. Totals	XXX	XXX	XXX

11. Continued

Schedule P – Part 2A

Year in Which Losses Were Incurred	Incurred Net Losses and Defense and Cost Containment Expenses Reported at Year-End				
	2017	2018	2019	2020	2021
	6	7	8	9	10
01. Prior	0	0	0	0	0
09. 2019	XXX	XXX	17,500	18,200	18,400
10. 2020	XXX	XXX	XXX	61,800	62,400
11. 2021	XXX	XXX	XXX	XXX	90,600

Schedule P – Part 3A

Year in Which Losses Were Incurred	Cumulative Paid Net Losses and Defense and Cost Containment Expenses Reported at Year-End				
	2017	2018	2019	2020	2021
	6	7	8	9	10
01. Prior	0	0	0	0	0
09. 2019	XXX	XXX	14,400	17,900	18,300
10. 2020	XXX	XXX	XXX	49,300	60,900
11. 2021	XXX	XXX	XXX	XXX	67,500

UWIE – Part 1B – Premiums Written

		Reinsurance Assumed		Reinsurance Ceded		
Line of Business	Direct Business	From Affiliates	From Non-Affiliates	To Affiliates	To Non-Affiliates	Net Premiums Written
	1	2	3	4	5	6
Homeowners multiple peril	138,700	-	-	-	2,800	135,900
TOTALS	138,700	-	-	-	2,800	135,900

UWIE – Part 2 – Losses Paid and Incurred

	Losses Paid Less Salvage					
Line of Business	Direct Business	Reinsurance Assumed	Reinsurance Recovered	Net Payments	Net Losses Unpaid Curr. Year	Net Losses Unpaid Prior Year
	1	2	3	4	5	6
Homeowners multiple peril	77,700	0	0	77,700	24,200	13,300
TOTALS	77,700	0	0	77,700	24,200	13,300

UWIE – Part 2A – Unpaid Losses and Loss Adjustment Expenses

	Reported Losses			
Line of Business	Direct	Reinsurance Assumed	Deduct Reinsurance Recoverable	Net Losses excl. IBNR
	1	2	3	4
Homeowners multiple peril	19,530	0	0	19,530
TOTALS	19,530	0	0	19,530

11. **Continued**

(a) (*4 points*) Complete the following Schedule P parts for O-Bot's year-end 2021 Annual Statement under this pooling arrangement scenario:

(i) (*2 points*) O-Bot – Schedule P – Part 1 – Summary

(ii) (*2 points*) O-Bot – Schedule P – Part 2 – Summary

Provide the response for this part in the Excel spreadsheet. *Include only the lines and columns as indicated in the Excel file.*

(b) (*5 points*) Complete the following UWIE parts from R-Dan's year-end 2021 Annual Statement under this pooling arrangement scenario:

(i) (*1.5 points*) R-Dan – UWIE – Part 1B – Premiums Written

(ii) (*1.5 points*) R-Dan – UWIE – Part 2 – Losses Paid and Incurred

(iii) (*2 points*) R-Dan – UWIE – Part 2A – Unpaid Losses and Loss Adjustment Expenses

Provide the response for this part in the Excel spreadsheet. *Include only the lines and columns as indicated in the Excel file.*

(c) (*1 point*) Calculate the following Schedule F entries from R-Dan's year-end 2021 Annual Statement under this pooling arrangement scenario:

(i) (*0.5 points*) R-Dan – Schedule F – Part 1 – Column 7 (*Reinsurance on Known Case Losses and LAE*), Row 9999999 (Total)

(ii) (*0.5 points*) R-Dan – Schedule F – Part 3 – Column 6 (*Reinsurance Premium Ceded*), Row 9999999 (Total)

Provide the response for this part in the Excel spreadsheet.

12.

(*5 points*) Actuarial Standard of Practice (ASOP) No. 38, *Catastrophe Modeling*, notes that the actuary should understand and evaluate the catastrophe model when selecting, using or reviewing the model.

(a) (*1 point*) Describe the level of effort that should be undertaken by the actuary in understanding and evaluating the model.

ANSWER:

In making use of a catastrophe model developed by an expert, ASOP No. 38 requires that the actuary should take into account several items.

(b) (*1.5 points*) Describe three items that the actuary should take into account when using a model developed by an expert.

ANSWER:

ASOP No. 38 requires the actuary to understand the user input for the catastrophe model.

(c) (*1 point*) Describe what this requirement entails.

ANSWER:

ASOP No. 38 requires the actuary to validate that the output reasonably represents that which is being modeled.

(d) (*1.5 points*) Describe three potential ways to validate the model output.

ANSWER:

13.

(*4 points*) Two areas of insurance regulation that the Dodd-Frank Act addressed were reinsurance and non-admitted insurance.

(a) (*1 point*) Describe one of the changes to the regulation of non-admitted insurance that was introduced in the Dodd-Frank Act.

ANSWER:

(b) (*1 point*) Describe one type of state reinsurance regulation for non-domiciled insurers that is preempted under the Dodd-Frank Act.

ANSWER:

The Dodd-Frank Act established the Federal Insurance Office (FIO) within the U.S. Treasury. FIO's scope of authority extends to most lines of insurance.

(c) (*0.5 points*) Identify two lines of business that are not under the FIO's scope of authority.

ANSWER:

One of the FIO's primary functions is monitoring.

(d) (*1 point*) Describe one aspect of the business of insurance that the FIO is tasked to monitor.

ANSWER:

To monitor the business of insurance, the FIO is authorized to require any insurer to submit data or information as specified by the FIO. However, the FIO does not have enforcement authority over data submissions.

(e) (*0.5 points*) Explain how compliance with FIO data requirements are enforced.

ANSWER:

14.

(*8 points*) PIC is a U.S.-based general insurer. PIC plans to cede a share of its direct premium and losses on high-value commercial property (HVProp) policies to Q-Re. The inception date for the reinsurance agreement would be January 1, 2022. On November 30, 2021, Q-Re proposed a reinsurance agreement with the following terms:

A. Agreement to cover losses on HVProp policies written from October 1, 2021 to December 31, 2022.

B. Proportional reinsurance with PIC ceding business to Q-Re as follows: 35% ceded on HVProp with an insured value under $8 million, 50% ceded otherwise.

C. Reinsurance premium payable by PIC to Q-Re quarterly from December 31, 2021 through December 31, 2022.

D. There is an event limit of $10 million for any one loss occurrence.

E. Reinsured losses are paid by Q Re to PIC in a lump sum on June 30, 2023.

F. If PIC is unable to financially meet its obligations to claimants, Q-Re will stop reinsured loss payments to PIC or PIC's claimants.

G. PIC is to provide premium and loss payment reports to Q-Re quarterly from December 31, 2021, through June 30, 2023.

H. Termination of the agreement is on a cut-off basis.

I. A provisional commission of 5% is payable by Q-Re to PIC when reinsured premiums are payable. Upon settlement of reinsured losses, the commission is adjusted as follows: sliding scale from a minimum rate of 5% at a 75% loss ratio to a maximum rate of 35% at a 45% loss ratio.

J. The agreement may be canceled by Q-Re at its discretion if PIC's HVProp loss ratio is over 80% for the period from October 1, 2021 to June 30, 2022.

K. BB is the reinsurance intermediary for this agreement. PIC is fully exposed to credit risk from BB.

14. **Continued**

You are given the following information regarding PIC's HVProp policies:

- Twelve-month policies are written uniformly over the agreement period.
- The expected loss ratio is 55%.
- Insured values will range from $4 million to $30 million.
- The likelihood of an insured event exceeding $10 million for PIC's HVProp book of business is 1-in-150 years.
- Claims are expected to be reported no later than two weeks after occurrence and are settled no later than three months after report.

(a) (*5 points*) Determine which terms, A through K, will likely prevent it from being accounted for as reinsurance under the rules of U.S. statutory accounting. Justify your determinations.

ANSWER:

(b) (*3 points*) Propose a potential revision to each term, if needed, so that the agreement may be accounted for as reinsurance under the rules of U.S. statutory accounting.

ANSWER:

15.

(*4 points*) Rating agencies provide two types of ratings: credit ratings for corporate, municipal and government bonds, and financial ratings for insurance companies.

(a) (*0.5 points*) Identify two benefits of a credit rating from the perspective of investors.

ANSWER:

(b) (*0.5 points*) Identify two benefits of a financial rating from the perspective of the insurance industry.

ANSWER:

(c) (*3 points*) Explain why financial ratings are particularly important for the following:

(i) Reinsurance contracts

ANSWER:

(ii) Surety insurance contracts

ANSWER:

(iii) Homeowners insurance contracts

ANSWER:

(iv) Structured settlements

ANSWER:

16.

(*5 points*)

(a) (*1 point*) Explain how liability insurers are exposed to the cost of a punitive damages award.

ANSWER:

Punitive damages awards are only indicated for reprehensible conduct. The Supreme Court of the United States' decision in *BMW of North America v. Gore* outlined five factors for consideration to determine the reprehensibility of a defendant's conduct.

(b) (*1.5 points*) State three of these five factors.

ANSWER:

The size of punitive damages awards was addressed by the Supreme Court in its decision in the case of *State Farm Mutual Automobile Insurance Co. v. Campbell*.

(c) (*1 point*) Explain the guidance this decision provided regarding the size of punitive damages awards.

ANSWER:

The defendant's conduct on non-parties is an issue that has been brought forth by plaintiffs in cases involving punitive damages awards. The Supreme Court's decision in *Philip Morris USA v. Williams* addressed this issue.

(d) (*1.5 points*) Explain how a defendant's conduct on non-parties may or may not be used based on this decision.

ANSWER:

17.

(*5 points*) The International Actuarial Association (IAA) has defined five key areas where active actuarial participation can be valuable in prudential supervision.

(a) (*1 point*) Identify four of these areas.

ANSWER:

According to the textbook *General Insurance Financial Reporting Topics*, U.S. insurance regulators are interested in four attributes for booked reserves: *sufficiency, unbiasedness, soundness and reasonability*.

(b) (*1.5 points*) Describe three of the four attributes:

ANSWER:

The NAIC Instructions for the Statement of Actuarial Opinion (SAO) define five opinion categories, the most common of which is a reasonable provision.

(c) (*2 points*) Define each of the other four categories.

ANSWER:

U.S. statutory accounting includes rules on the reporting of retroactive reinsurance in the Annual Statement.

(d) (*0.5 points*) Describe the reporting of *assumed* retroactive reinsurance in the Annual Statement with respect to the following:

(i) Liabilities

(ii) Surplus

ANSWER:

18.

(*4 points*) Flood insurance for most homeowners in the United States is provided by the federal government through the National Flood Insurance Program (NFIP). Some private insurers in the United States have begun offering flood insurance for homeowners in direct competition with the NFIP.

(a) (*1.5 points*) Explain how private flood insurance could weaken the financial position of the NFIP.

ANSWER:

(b) (*1.5 points*) Compare the coverage provided by NFIP policies to those provided by private insurance flood policies. Include two coverage differences in your comparison.

ANSWER:

Extreme catastrophic losses may render private insurers insolvent. This is not the case for the NFIP.

(c) (*1 point*) Explain how the NFIP can continue operating after a catastrophic loss exhausts its available funds.

ANSWER:

****END OF EXAMINATION****