

# Exam GIFREU

Date: Thursday, October 28, 2021

## INSTRUCTIONS TO CANDIDATES

### General Instructions

1. This examination has 21 questions numbered 1 through 21 with a total of 100 points.

The points for each question are indicated at the beginning of the question. Questions 9 to 12 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,  $\beta_1$  can be typed as beta\_1 and  $\sigma^2$  can be typed as sigma^2.

b) In the Excel document formulas should be entered. 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.

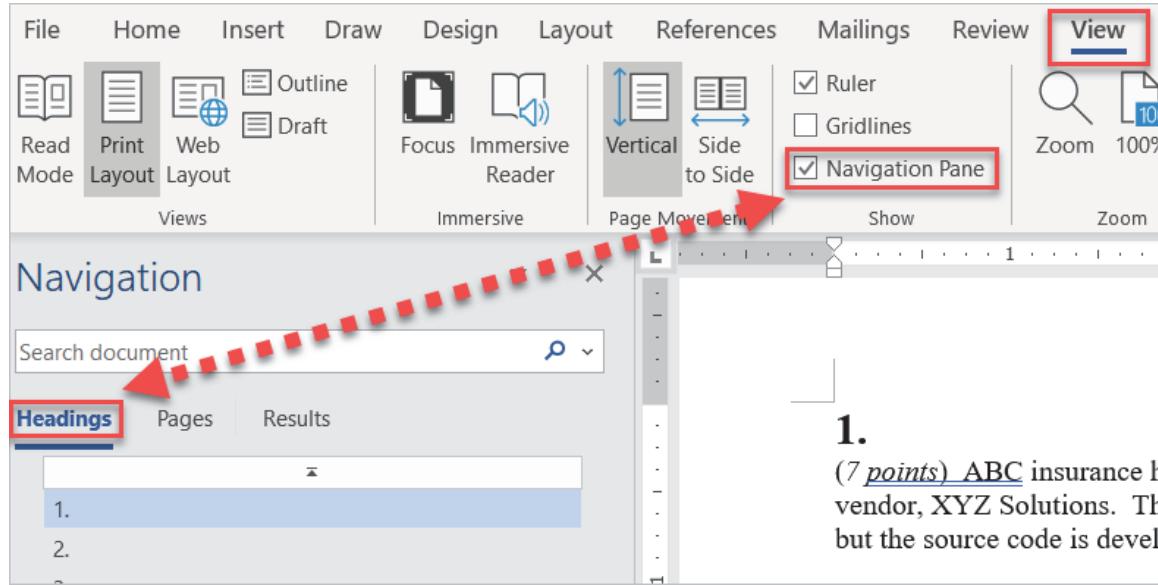
c) Individual exams may provide additional directions that apply throughout the exam or to individual items.

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.

## Navigation Instructions

Open the Navigation Pane to jump to questions.

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



1.

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## **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) Many governments in industrialized countries, despite the existence of a mature and well-functioning private insurance industry, produce and market certain insurance products directly to the public.

- (a) (1.5 points) Provide three reasons that may justify the government producing and marketing certain insurance products directly rather than relying on the private insurance industry.

ANSWER:

Once a government insurance program has been established, it must be evaluated periodically to ensure that it is functioning as intended.

- (b) (1 point) Provide two questions that should be considered in the evaluation of the effectiveness of government insurance programs.

ANSWER:

Many insurance products provided by the government are considered to be social insurance programs.

- (c) (1.5 points) Describe three distinguishing characteristics of social insurance programs.

ANSWER:

In addition to social insurance programs, governments in most industrialized countries also have a variety of social welfare programs.

- (d) (1 point) Provide two differences between social welfare programs and social insurance programs.

ANSWER:

## 2.

(5 points) You are the Appointed Actuary for WXY Insurance, a U.S. domiciled general insurance company. At year-end 2020, your actuarial analysis for gross unpaid loss and LAE reflects the following:

- an actuarial central estimate of 60 million,
- a range of reasonable estimates from 54 to 69 million,
- WXY carries reserves of 63 million,
- there is no reinsurance, and
- the Statement of Actuarial Opinion (SAO) indicates a reasonable carried amount.

- (a) (0.5 points) Determine when a risk of material adverse deviation would be indicated in the SAO for WXY, given the information above.

*Provide the response for this part in the Excel spreadsheet.*

- (b) (2.5 points) Prepare parts A through D of the Actuarial Opinion Summary (AOS) for WXY.

*Provide the response for this part in the Excel spreadsheet.*

On March 15, 2021, WXY discovered a computer file containing 10 million of case reserves for claims that occurred in 2020. Neither you nor the insurer considered these case reserves for year-end 2020 statutory financial reporting.

- (c) (1 point) State two key determinations that the Appointed Actuary must make regarding whether or not the SAO issued previously was in error.

ANSWER:

- (d) (1 point) State an additional communication that the insurer would require of you as the Appointed Actuary if you determine that the SAO was in error.

ANSWER:

### **3.**

(5 points) Tort costs are often funded through liability insurance.

- (a) (0.5 points) Identify two direct costs of the tort system other than amounts paid to claimants.

ANSWER:

- (b) (0.5 points) Identify two indirect costs of the tort system.

ANSWER:

Tort reforms have been implemented in some jurisdictions as a means to control the costs of the tort system. Some types of tort reform affect procedural issues that can influence tort costs while other types of tort reform directly address amounts paid to claimants.

- (c) (1 point) Describe two types of tort reform that directly address the amounts paid to claimants.

ANSWER:

Joint and several liability tort reform is an example of a type of tort reform affecting procedural issues. The goal of joint and several liability tort reform is to address the fairness of the tort system.

- (d) (1.5 points) Explain how enactment of joint and several liability tort reform addresses fairness.

ANSWER:

- (e) (1.5 points) Explain how enactment of joint and several liability reform can indirectly control costs of the tort system.

ANSWER:

#### 4.

(5 points) NGI, a U.S. general insurer, has excess of loss reinsurance from reinsurer F-Re for claims occurring in 2020. The reinsurance is \$900,000 excess \$100,000 per occurrence with no aggregate limit.

You are given the following claims information for NGI as of year-end 2020 for claims that are subject to reinsurance from F-Re:

Claim #	Accident Date (m/d/y)	NGI Direct Claim Amount (\$)	Date of NGI Payment to Claimant (m/d/y)	Date of F-Re Payment to NGI (m/d/y)
	(1)	(2)	(3)	(4)
C01	1/1/2020	175,000	4/25/2020	4/30/2020
C02	2/1/2020	550,000	4/15/2020	5/20/2020
C03	3/22/2020	775,000	3/22/2020	unpaid
C04	4/15/2020	130,000	4/20/2020	8/15/2020
C05	6/11/2020	325,000	7/25/2020	9/15/2020
C06	7/27/2020	1,075,000	8/20/2020	unpaid
C07	8/22/2020	395,000	9/15/2020	12/29/2020
C08	9/11/2020	300,000	9/28/2020	unpaid
C09	10/24/2020	215,000	unpaid	unpaid
C10	11/25/2020	445,000	unpaid	unpaid
C11	12/15/2020	175,000	12/20/2020	unpaid

There are no reinsurance recoverables from F-Re with respect to unearned premiums and commissions.

Calculate NGI's 2020 Schedule F provision for reinsurance from F-Re under each of the following scenarios:

Scenario	F-Re Status	Securing funds from F-Re (\$)	Claims disputed by F-Re
(i)	Authorized	0	None
(ii)	Authorized	0	C03
(iii)	Authorized	400,000	C03
(iv)	Unauthorized	400,000	C03

*Provide the response for this question in the Excel spreadsheet.*

## **5.**

(5 points) Statement of Statutory Accounting Principles (SSAP) No. 66 establishes statutory accounting principles for retrospectively rated contracts.

- (a) (1.5 points) Describe the recording of the amounts for *accrued additional retrospective premiums* in the statutory financial statement as per SSAP No. 66 with respect to the following:
- (i) the accounting transaction including where amounts are recorded
  - (ii) the timing of when amounts are recorded

ANSWER:

In calculating the premium asset on retrospectively rated polices, Teng and Perkins describe an approach using Premium Development to Loss Development (PDLD) ratios. These PDLD ratios may be determined using a formula approach with the retrospective rating parameters or an approach using historical data.

- (b) (0.5 points) Describe a benefit of using the formula approach over an approach using historical data for calculating PDLD ratios.

ANSWER:

## 5. Continued

You are given the following retrospective rating parameters:

Basic premium factor	0.225
Expected loss ratio	0.700
Loss conversion factor	1.200
Tax multiplier	1.035
Loss capping ratio at the first retrospective adjustment	0.875
Incremental loss capping ratio for the second retrospective adjustment period	0.590
Expected percentage of loss emerged for the first retro adjustment	85%

- (c) (*1.5 points*) Calculate the Premium Development to Loss Development (PDLD) ratios under the formula approach for the first and second retrospective premium adjustments.

*Provide the response for this part in the Excel spreadsheet.*

You are given the following information regarding the retrospective rated policies:

Retro Adjustment Period	% Loss Emerged
First	85%
Second	13%
Third	2%

The PDLD ratio for the third retrospective adjustment period is 0.

- (d) (*1 point*) Calculate the cumulative PDLD (i.e., CPDLD) ratios for the first and second retrospective premium adjustments.

*Provide the response for this part in the Excel spreadsheet.*

## 5. Continued

You are given the following premium and loss information for policy years 2019 and 2020 combined as of December 31, 2020.

Expected Future Loss emergence	Premiums Booked from Prior Adjustment	Premiums Booked as of 12/31/20	Completed Retro Adjustments as of 12/31/2020
479,250	0	573,750	0

- (e) (0.5 points) Calculate the premium asset on retrospectively rated polices for policy years 2019 and 2020 combined as of December 31, 2020.

*Provide the response for this part in the Excel spreadsheet.*

## **6.**

*(4 points)*

- (a) *(1 point)* Explain two of the ways that ORSA expands the risk-based capital formula approach to solvency monitoring.

ANSWER:

- (b) *(1.5 points)* Describe the three sections of the NAIC ORSA summary report.

ANSWER:

The Canadian Dynamic Capital Adequacy Testing (DCAT) report (*recently renamed as Financial Condition Testing (FCT)*) provides information on some of the areas covered in an ORSA report.

- (c) *(0.5 points)* Identify which section(s) of the NAIC ORSA summary report are covered in a Canadian DCAT report.

ANSWER:

- (d) *(1 point)* Explain why the ORSA and DCAT Report remain separate regulatory requirements in Canada.

ANSWER:

## **7.**

(4 points) The European Court of Justice has banned the use of gender in pricing insurance products in the European Union.

- (a) (2 points) Provide arguments for or against this decision from the viewpoint of insurers.

ANSWER:

Many automobile insurers in the European Union have adopted usage-based-insurance (UBI) with telematics for the pricing of policies as a replacement for gender-based pricing of policies.

- (b) (2 points) Describe one advantage and one disadvantage of the UBI approach to pricing compared to gender-based pricing.

ANSWER:

## **8.**

(4 points) On January 1, 2020, a U.S. general insurer, TGIC, bought a bond at par with a par value of \$500 million and a 4% annual coupon rate paid semi-annually. The bond matures on December 31, 2023.

You are given the following information:

- The bond is of investment grade.
- A tax rate of 21% applies to TGIC's income.
- After-tax investment income is paid to TGIC's shareholders as it is received.

(a) (1.5 points) Provide TGIC's June 30, 2020 accounting entries under U.S. statutory accounting showing the following:

- (i) Credits and debits to balance sheet accounts
- (ii) Credits and debits to income statement accounts
- (iii) Direct charges and credits to surplus

ANSWER:

TGIC has classified this bond as *available for sale* for GAAP accounting purposes.

(b) (2.5 points) Compare the accounting treatment for a change in the value of this bond because of a rise in interest rates under the following accounting standards:

- (i) GAAP accounting
- (ii) U.S. statutory accounting

ANSWER:

*Questions 9 to 12 pertain to the Case Study.  
Each question should be answered independently.*

## 9.

(4 points) You are given the following simplified assumptions applying to tax year 2020 Private Passenger Auto Liability/Medical (PPA):

IRS tax basis loss and LAE reserve discount factors		
	Unpaid	Salvage and Subrogation
Accident years 2019 and prior	0.965	0.970
Accident year 2020	0.960	0.975

(a) (1.5 points) Calculate R-Dan's 2020 tax basis loss and LAE reserves for PPA.

*Provide the response for this part in the Excel spreadsheet.*

R-Dan's tax basis loss and LAE reserves for all lines of business combined are:

- \$306.9 million for year-end 2020, and
- \$261.0 million for year-end 2019.

(b) (2.5 points) Calculate R-Dan's 2020 tax basis underwriting income.

*Provide the response for this part in the Excel spreadsheet.*

*Questions 9 to 12 pertain to the Case Study.  
Each question should be answered independently.*

## 10.

(7 points)

(a) (2 points) Describe the purpose for each of the following NAIC IRIS Ratios:

- (i) IRIS Ratio 4 – Surplus Aid to Surplus
- (ii) IRIS Ratio 8 – Change in Adjusted Policyholders’ Surplus
- (iii) IRIS Ratio 9 – Adjusted Liabilities to Liquid Assets

ANSWER:

(b) (3.5 points) Calculate the NAIC IRIS Ratios noted in part (a) for R-Dan as of December 31, 2020:

*Provide the response for this part in the Excel spreadsheet.*

(c) (1.5 points) Determine whether or not each of the IRIS Ratio results for R-Dan calculated in part (b) represents an exceptional value. Include the criteria used for making each determination.

*Provide the response for this part in the Excel spreadsheet.*

*Questions 9 to 12 pertain to the Case Study.  
Each question should be answered independently.*

## **11.**

(5 points) An audit of R-Dan's financial statement for year-end 2020 indicated that the financial statements should include a premium deficiency reserve (PDR). R-Dan management does not agree with the auditor's conclusion. R-Dan management provided the following analysis to support the position that a PDR was not required.

	<b>Items for 2020</b>	<b>Amount (in thousands)</b>	<b>Source</b>
(1)	Accident year losses and loss adjustment expenses	520,500	Schedule P Part 1 – Summary, column 28 row 11
(2)	Maintenance expenses	33,600	Insurance Expense Exhibit Part I, column 3 row 25
(3)	Cost of policies	554,100	(1) + (2)
(4)	Earned premiums	578,500	Statement of Income, column 1 row 1
(5)	Policy costs to premium ratio	95.8%	(3) / (4)
(6)	Unearned premium reserve	208,800	Underwriting and Investment Exhibit Part 1, column 3 row 35
(7)	Indicated PDR	0	(6) × Maximum of [(5) – 100%] and 0%

R-Dan management's assumptions for the calculation are:

- I. Acquisition costs do not need to be included because they have already been expensed.
- II. It is appropriate to estimate maintenance expenses using general expenses from the Insurance Expense Exhibit.
- III. It is appropriate to ignore anticipated investment income on the funds as it is not material for this book of business in the current low interest rate environment.

R-Dan's auditors agree with the three assumptions in R-Dan management's PDR calculation. However, R-Dan's auditors note that the PDR calculation provided does not follow all of the principles of U.S. statutory accounting.

- (a) (1.5 points) Critique R-Dan management's PDR calculation.

ANSWER:

## **11. Continued**

- (b) (2 points) Calculate a year-end 2020 PDR for R-Dan following the principles of U.S. statutory accounting and R-Dan management's three stated assumptions.

*Provide the response for this part in the Excel spreadsheet.*

- (c) (1.5 points) Provide a rationale for the inputs used in your calculation of the PDR in part (b).

*Provide the response for this part in the Excel spreadsheet.*

*Questions 9 to 12 pertain to the Case Study.  
Each question should be answered independently.*

## 12.

(7 points) Sue Calvin is the Appointed Actuary (AA) for R-Dan General Insurance Company (R-Dan). In her Statement of Actuarial Opinion (SAO), Sue Calvin opined that R-Dan's reserves made a reasonable provision for the liabilities she specified.

- (a) (2.5 points) Critique Sue Calvin's opinion that reserves are reasonable.

ANSWER:

Sue Calvin selected a materiality standard of \$29 million for R-Dan's risk of material adverse deviation (RMAD) as the minimum of 15% of statutory surplus and 10% of net loss and loss adjustment expense.

- (b) (1 point) State two alternative materiality standards that may be appropriate for an RMAD.

ANSWER:

- (c) (2 points) Select the materiality standard you would have used if you were the AA for R-Dan (whether the same or different from that selected by Sue Calvin). Justify your selection.

ANSWER:

For the 2021 opinion, Sue Calvin is considering making use of a third-party consultant to perform a portion of the reserve analysis to be included in the actuarial report.

- (d) (1.5 points) Describe what Sue Calvin should consider when doing this in accordance with ASOPs.

ANSWER:

## **13.**

(5 points) Some jurisdictions use a prior approval approach to rate regulation for some lines of business. One alternative to prior approval rate regulation is the flex rating approach.

- (a) (0.5 points) Describe the flex rating approach to rate regulation.

ANSWER:

- (b) (1 point) Describe two approaches to rate regulation other than prior approval and flex rating.

ANSWER:

- (c) (1.5 points) Compare the insurer regulatory compliance costs for the following three approaches to rate regulation: flex rating and the two approaches in your response to part (b).

ANSWER:

Some insurance regulators have introduced no-fault insurance as an alternative to the tort system for automobile insurance.

- (d) (0.5 points) Explain how at-fault drivers bear the consequences of their actions in a no-fault automobile insurance system.

ANSWER:

There are several variants to a no-fault insurance system.

- (e) (1.5 point) Compare a pure no-fault system to a modified no-fault system.

ANSWER:

## **14.**

(4 points) The issues of waiver and estoppel may arise when an insured sues for payment of damages under the policy and the insurer asserts a defense, such as fraud or misrepresentation by the insured. The insured may then argue that the insurer has forfeited the defense, or is prevented from asserting the defense, by the action of waiver or estoppel.

- (a) (0.5 point) Define waiver as it applies to an insurer.

ANSWER:

- (b) (1 point) Define the parol evidence rule with respect to waivers.

ANSWER:

- (c) (1 point) Describe the legal principle of estoppel.

ANSWER:

- (d) (1.5 points) Describe the three events that need to take place for the principle of estoppel to apply under insurance law.

ANSWER:

## **15.**

(4 points) Solvency II permits the use of either an internal capital model or the Solvency II standard formula approach for calculating the solvency capital requirement (SCR).

The Solvency II standard formula is the sum of the following three components:

- I. Basic solvency capital requirement (BSCR)
- II. Adjustment (ADJ)
- III. SCR for operational risk (SCR-OR)

- (a) (1.5 points) Describe the calculation of the BSCR component. You may provide this formulaically or in words.

ANSWER:

- (b) (1 point) Describe the purpose of the ADJ component.

ANSWER:

- (c) (1.5 points) Describe the calculation of the SCR-OR component. You may provide this formulaically or in words.

ANSWER:

## **16**

(6 points) U.S. statutory accounting classifies some assets, or portions of some assets, as nonadmitted.

- (a) (*1 point*) Describe two ways in which investment assets can be nonadmitted under the rules of U.S. statutory accounting.

ANSWER:

- (b) (*1.5 points*) Describe the accounting treatment under U.S. statutory accounting, including valuation basis and admitted/nonadmitted status, for the following assets:

- (i) Material assets, not held as investments
- (ii) Goodwill from a statutory purchase
- (iii) Electronic data processing equipment and software

ANSWER:

- (i)
- (ii)
- (iii)

- (c) (*0.5 points*) Explain how it is possible for an increase in nonadmitted assets to reduce surplus.

ANSWER:

## 16. Continued

You are given the following information for a U.S. general insurer:

Item	Amount (000) as of Dec. 31, 2020
Statutory policyholders' surplus	1,105
Statutory loss and LAE reserves	1,830
Estimated deficiency in statutory loss and LAE reserves	125
Cost of holding capital for loss and LAE reserves	175
Unearned premium reserves	893
Equity in the unearned premium reserves	150
Nonadmitted assets	136
Schedule F provision for reinsurance	278
Management's estimate for uncollectible reinsurance	100
Management's estimate for bad debts from agents' balances	35

- Statutory loss and LAE reserves are not discounted.
- Implicit interest discount in statutory loss and LAE reserves is estimated to be 8% of the reserve amount.
- The opportunity cost of capital is 10%.

(d) (3 points) Estimate the target return on statutory surplus for this insurer.

*Provide the response for this part in the Excel spreadsheet.*

## **17.**

(4 points) The Dodd-Frank Wall Street Reform and Consumer Protection Act of 2010 (Dodd-Frank Act) was enacted in the U.S. to modernize and reform financial services regulation.

The Dodd-Frank Act attempted to create national uniformity in two areas of insurance regulation.

- (a) (0.5 points) Identify these two areas of insurance regulation.

ANSWER:

- (b) (0.5 points) Explain how the Dodd-Frank Act affects one of the two areas of insurance regulation identified in part (a).

ANSWER:

The Dodd-Frank Act included the creation of the Federal Insurance Office (FIO) within the U.S. Treasury. The Dodd-Frank Act authorizes the FIO to preempt state laws under certain conditions. However, there are six steps that the FIO must take before a state law may be preempted.

- (c) (1.5 points) Identify three of the six steps.

ANSWER:

The FIO's power of preemption of state law is limited. It may not preempt state insurance laws governing certain functions of the business of insurance.

- (d) (1 point) Identify four such functions included in the limitation.

ANSWER:

The FIO's four primary functions are monitoring, advisory, administrative and reporting.

- (e) (0.5 points) Identify one of the roles of the FIO under its administrative function.

ANSWER:

## **18.**

*(4 points)*

- (a) *(1 point)* Identify the benefit of a class action from the perspective of each of the following parties:

- (i) The plaintiffs
- (ii) The defendants

ANSWER:

Federal Rules of Civil Procedure (FRCP) Rule 23 sets the rules for class actions in U.S. federal courts. FRCP Rule 23 notes four prerequisites that should be considered to determine if a class can be certified. One of these prerequisites is that of commonality.

- (b) *(0.5 points)* Identify two other prerequisites of class certification from FRCP Rule 23.

ANSWER:

The question of commonality was the focus of the Supreme Court of the United States in *Wal-Mart v. Dukes*. Prior to *Wal-Mart v Dukes*, there was ambiguity and different interpretations of commonality used by various courts.

- (c) *(1 point)* Describe the standard for commonality as decided in *Wal-Mart v. Dukes*.

ANSWER:

- (d) *(1.5 points)* Explain why the Supreme Court ruled against class certification in *Wal-Mart v. Dukes*.

ANSWER:

## **19.**

(5 points) You are a consulting actuary and have accepted an assignment from U.S. general insurance company TFI to assist them in their discussions with a rating agency.

TFI submitted the results of its planning model to a rating agency. The planning model output is a set of pro forma Annual Statement schedules projected to the end of 2021.

You conferred with TFI's senior management and confirmed the following:

- TFI writes mostly fire and homeowners policies in the U.S. west coast region.
- TFI increased 2021 rates by 4%. This increase was included in the plan.
- Much of the territory that TFI writes in is significantly exposed to wildfire catastrophes. Even though the industry suffered significant wildfire losses, TFI did not incur significant wildfire losses in 2020. TFI has gained market share in 2021 from insurers that have exited the market.
- TFI relaxed its underwriting to permit writing over 25% of the homes in a community. Preliminary results for 2021 show that TFI's growth may exceed plan projections.
- Plan projections assumed that TFI's 2021 reinsurance cost would be the same as in 2020. However, actual reinsurance rates increased significantly in 2021. To offset this increase, TFI increased its net retention on catastrophes. However, this was not a full offset. The net premium to gross premium ratio for 2021 will be lower than that for 2020. TFI management believes that the company can withstand a catastrophe under the increased net retention.

You accompanied TFI senior management in the meeting with the rating agency on June 30, 2021. The lead rating analyst raised the following concerns with respect to the planning model:

- (i) TFI projects significant net written premium growth of 15%, all of which is in its current regional market. This will increase its exposure to wildfires.
- (ii) The projected net premium to gross premium ratio for 2021 is the same as the actual ratio for 2020 despite an increase in reinsurance costs.
- (iii) The net retention level for catastrophe occurrence coverage has increased over that of 2020.

Provide a response to address each of the rating analyst's three concerns.

ANSWER:

## **20.**

(4 points) Statements of Statutory Accounting Principles (SSAP) No. 5, *Liabilities, Contingencies and Impairments of Assets*, outlines two conditions that must both be met for an estimated loss from a loss contingency to be recorded as a charge to operations.

- (a) (1 point) State these two SSAP No. 5 conditions.

ANSWER:

- (b) (0.5 points) Describe what is required of an insurer if a loss contingency is not recorded because only one of the SSAP No. 5 conditions is met.

ANSWER:

SSAP No. 63, *Underwriting Pools and Associations Including Intercompany Pools*, describes the accounting procedures for intercompany pooling arrangements.

You are given the following details for an intercompany pooling arrangement:

- There are four insurance companies, A, B, C and D each writing general insurance policies.
- Companies A, B and C cede 100% of their business to company D.
- Company D cedes 15% to each of companies A, B, and C, while company D retains the remainder of the pooled business.

- (c) (1.5 points) Determine the amount each of the insurers is liable for on a \$10,000 claim from a policy issued by A, under each of the following categories as per SSAP No. 63:

- (i) Directly liable to the claimant
- (ii) Liable as reinsurer

ANSWER:

## **20. Continued**

SSAP No. 65, *Property and Casualty Contracts*, describes the accounting procedures for claims-made policies and any extended reporting endorsements. In some instances, the extended reporting endorsement is provided at no additional charge in the event of death, disability, or retirement of a natural person insured.

- (d) (*1 point*) Outline how an insurer should account for this extended reporting coverage as per SSAP No. 65.

ANSWER:

## **21.**

(4 points) There are many different types of Alternative Risk Transfer (ART) mechanisms. One of these is the formation of a captive insurer.

- (a) (0.5 points) Identify two ART mechanisms, other than captive insurance.

ANSWER:

There are many different types of captives that can be formed.

- (b) (1 point) Define the following types of captive insurers:

(i) Pure captive

(ii) Group captive

ANSWER:

One of the benefits of captive insurance is tax mitigation.

- (c) (1 point) Provide two reasons why the decision to form a captive should not be based solely upon the benefit of tax mitigation.

ANSWER:

- (d) (1.5 points) Describe three drawbacks to creating a captive insurance company that are unrelated to taxes.

ANSWER:

**\*\*END OF EXAMINATION\*\***