17. (3 points)

A property and casualty insurance company provides earthquake insurance to their insureds and considers purchasing a catastrophe treaty. However, it has struggled with finding an accurate way of quantifying earthquake risk. Earthquake simulation model results show that the probability of a catastrophic event is extremely low.

a. (1 point)

Describe "reasonably self-evident" risk transfer and discuss whether it applies to this treaty.

b. (1 point)

The use of reinsurance pricing assumptions could help assess risk transfer. Describe one advantage and one disadvantage of this method.

c. (1 point)

Briefly describe four practices that the company could use to improve the earthquake risk estimation process and strengthen the catastrophic risk management.

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QUESTION 17	
TOTAL POINT VALUE: 3	**LEARNING OBJECTIVE(S): C1**
SAMPLE ANSWERS	

Part a: 1 point

Sample 1

"Reasonably Self-Evident" Risk Transfer is when it is intuitively obvious there is a transfer of risk and the insurer is protected against significant adverse financial conditions if an event occurs.

It requires that transactions be 1) done at arms length, and 2) there are risk limiting clauses.

Yes, it does, as earthquake risk is material and can devastate financially, however remote the frequency may be.

Sample 2

If the risk transfer is obvious and apparent by nature and design, if there is substantially all situation, where reinsurer bears all the insurance risk, then no need to probe risk transfer assessment.

May not be suitable here, and depends on the treaty, if proportional then yes. Otherwise, the assuming company bear's a low possibility of losses and if the insured value is low, there is not enough risk for assuming reinsurance, thus it is not self-evident if the treaty is excessive.

Part b: 1 point

Advantage:

Sample 1

Reinsurer would have more data and experience that may help insure to have better pricing and risk analysis.

Sample 2

Information on the reinsurance pricing could be readily available, saving time and cost to derive assumptions from scratch. This could help to alleviate a lack of credibility of the insurer's data.

Disadvantage:

Sample 1

Pricing assumptions may vary if it is soft market or hard market. Risk transfer should not depend on the state of the market.

Sample 2

Risk transfer analysis requires more risk load and less conservative assumptions than the assumption used for pricing. Therefore, there is a need to adjust assumptions for this difference.

Sample 3

Reinsurer pricing assumption may not be suitable for insurer because of different risk aspect, tolerance and nature of business. Their assumption could be too conservative for insurers.

Part c: 1 point

Any four of the following:

- Investment in technology to improve data quality
- Auditing of data by an independent party responsible for collection and coding of data
- Implement contingency plans to ensure claim's handling and adequacy of staff
- Testing the output of models with actual data
- Make sure internal controls exist for manage earthquake exposure
- Management should set guidelines
- Calibrate model parameters
- Use multiple models
- Understand assumptions and limitation of models and seek improvement
- Reconcile input data to ensure accuracy and consistency
- Compare models with industry benchmark
- Manipulate models by qualified staff
- Update models regularly
- Inclusion of non-modelled exposure in the model such as business interruption

EXAMINER'S REPORT

Candidates were expected to demonstrate knowledge of different reinsurance accounting issues and earthquake risk management.

Part a

Candidates were expected to know the concept of "reasonably self-evident" and be able to assess if it applies to a specific situation.

Common errors include:

- Describing risk transfer instead of providing a description of "reasonably self-evident"
- Not providing arguments to support whether or not the treaty is "reasonably self-evident"
- Omitting to discuss the terms of contract to describe the treaty
- Omitting to discuss the assessment of protection to describe the treaty

Part b
The candidates were expected to describe the reinsurance pricing assumptions method. A common error was not providing enough detail in the answer. For example, simply mentioning "reinsurance pricing assumptions are readily available" did not receive full credit as more detail was required to adequately "describe" the advantage.
Part c
The candidates were expected to be able to identify practices to improve catastrophic risk management. A common error was providing less than four distinct practices.