31. (1.75 points)

OSFI expects insurers to develop a formal stress testing process as part of a company's financial risk management.

a. (0.50 point)

Briefly describe two purposes of such stress testing.

b. (1.25 points)

Describe and contrast "scenario testing" and "sensitivity testing."

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-Internal Target Capital Ratio: Insurers are expected to maintain actual capital in excess of their Internal Target, although it may fall below on rare and unforeseen occasions. If the capital level of an insurer falls, or is anticipated to fall within two years, below its Internal Target, it is <u>required to inform OSFI immediately</u> and <u>provide plans on how it expects to manage the risks and/or restore its capital level to its Internal Target within a reasonable and relatively short period of time</u>. Increased supervisory attention may be warranted based on OSFI's assessment of the timeliness and appropriateness of remedial actions.

Actual candidate answer for full marks:

a)

i. Minimum capital required for an insurer to cover the risks specified in the capital test.

ii. Level of capital necessary for insurer to cover the risks specified in the capital tests and provide a margin for other types of risks not included in the capital tests.

iii. Level of capital necessary to cover all risks of the insurer based on insurer's own risk profile and risk appetite. Should be set above supervisory target.

b) Must inform OSFI immediately and provide reasons for capital depletion, correction actions and expected results including specific timelines when capital is expected to return to the internal target.

Examiner's report:
Overall, candidates performed well on this question and managed to get full credit.

Question 31

Answer key:

a) Any 2 of the following:

i. Risk identification and control
ii. Providing a complementary risk perspective to other risk management tools
iii. Supporting capital management
iv. Improving liquidity management

b)

Scenario testing:

Scenario testing uses a hypothetical future state of the world to define changes in risk factors affecting an institution's operations. This will normally **involve changes in a number of risk factors**: as well as **ripple effects** that are other impacts that follow logically from these changes and related management and regulatory actions. Scenario testing is typically conducted over the **time horizon appropriate** for the business and risks being tested. Scenario testing is typically more complex.

Sensitivity testing:

Sensitivity testing typically involves an **incremental change in a risk factor** (or a limited number of risk factors). It is typically conducted over a **shorter time horizon**, for example an instantaneous shock. Sensitivity testing requires **fewer resources** than scenario testing and can be used as a simpler technique for assessing the impact of a change in risks when a quick response or when more frequent results are needed. Sensitivity testing is typically more simple.

Actual candidate answer for full marks:

a)

a. Risk identification and control.
b. Support capital management.

b)

a. Scenario testing: Presents a hypothetical state of the insurer by changing certain risk factors and then determining if such change is reasonable. It includes ripple effects and is more complex. The objective is to alter the financial condition of the company
b. Sensitivity testing: It relates to a change in one single factor and sees the impact on interrelated risks. Fewer resources, simpler. The shock is almost immediate or instantaneous.

Examiner's report:

For part a), most of the candidates managed to get full credit.

For part b), most candidates were able to define sensitivity and scenario testing. Only a few candidates managed to get full credit by comparing and contrasting the two elements.

Question 32

Answer key:

Part A

- Surplus – Buying the cat reinsurance decreases surplus if no cat event occurs, due to the cost of reinsurance.
- Loss reserves – Net reserves are not impacted if no cat event occurs.
- Investment income is reduced

Part B

- Surplus - the risk of significant drop is substantially mitigated when a large cat occurs and the treaty is in place
- Net reserves are at lower level since the cat losses are covered by reinsurance
- Investment income is reduced

Alternative answer

Part B, for reserves, also accept if candidate mentioned that there is no change to loss reserve and that the cat losses are covered by reinsurer (assume 10% is disappear)