

EXAM 6 – CANADA, SPRING 2017

22. (2.25 points)

A Canadian property and casualty insurance company writes insurance in an earthquake-prone region. The management of the company designs a stress testing program.

a. (0.75 point)

Management only considers insurance risk in the stress testing as they feel it is the most significant risk. Discuss the appropriateness of this approach and justify one change if necessary.

b. (0.75 point)

Management does not consider an earthquake scenario in the stress testing as the company has not experienced an earthquake since its inception. Discuss the appropriateness of this approach and justify one change if necessary.

c. (0.75 point)

The company has a significant portion of its investment portfolio invested in the local real estate market. Briefly describe the interactions between risks that an effective stress testing program would likely reveal.

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EXAM 6C SPRING 2017 SAMPLE ANSWERS AND EXAMINER'S REPORT

QUESTION 22	
TOTAL POINT VALUE: 2.25	LEARNING OBJECTIVE(S): C1
SAMPLE ANSWERS	
Part a: 0.75 point	
<p><u>Sample 1</u></p> <ol style="list-style-type: none"> 1) It's not appropriate as stress testing is a control tool to identify risks, with the purpose of complementing other risk management tool, supporting capital management and improving liquidation management. Only consider insurance risk ignores the potential effects of other risks, which could be significant 2) Change: consider credit and market risks as well <p><u>Sample 2</u></p> <p>Not appropriate because there might be some interactions, dependencies with other risks that could be detected if all material and relevant risks are considered. Because of this, suggested change is to include all material and relevant risks in stress testing</p> <p><u>Sample 3</u></p> <p>Not appropriate. Earthquake could also impact the capacity of the insurer to operate adequately. The stress test should also incorporate operational risk</p>	
Part b: 0.75 point	
<p><u>Sample 1</u></p> <p>That approach is not appropriate; although earthquakes happen very infrequently, they can have devastating effects on a book of business. The company cannot rely on the fact that they haven't had an earthquake to predict future risk. Given lack of data, they should get external data and/or models to better assess their risk exposure & consider it</p> <p><u>Sample 2</u></p> <p>Not Appropriate</p> <p>As in earth prone area, and earthquake risk has accumulated as no earthquake before, it's important to include this scenario</p> <p>Include this scenario and test its effect on insurer surplus</p>	
Part c: 0.75 point	
<p><u>Sample 1</u></p> <ol style="list-style-type: none"> i. Insurance risk and market risk may be related as an earthquake may incur significant claims on the insurer, as well as significant losses on its real estate portfolio. ii. Insurance risk and liquidity risk may be related as an earthquake may incur significant claims on the insurer, requiring the insurer to pay. However, if much of the insurer's portfolio is in real estate, the insurer may not be able to sell earthquake-damaged property quickly. iii. New business risk and market risk may be related as an economic recession in the area can impact the value of the real estate investment, as well as growth of the insurer's book of business. 	

EXAM 6C SPRING 2017 SAMPLE ANSWERS AND EXAMINER'S REPORT

The insurer can invest in real estate in a different region. This way the insurer should be able to still enjoy high returns on its investment, yet avoid adverse interactions between risks.

EXAMINER'S REPORT

Candidates were expected to demonstrate a basic understanding of the purpose and application of stress testing.

Part a

Candidates were expected to understand that a primary purpose of proper risk management is to assess risks that may not seem material at first. Insurance risk may be the most sizable risk for an insurance company. It is not the only risk.

A common error was not explicitly stating whether or not the approach was "appropriate" or not.

Part b

Candidates were expected to understand that an insurer's internal experience is not credible for evaluating exposure to low-frequency events and devise approaches, such as using a stochastic model with industry data, to form the complement.

A common error was not explicitly stating whether or not the approach was "appropriate" or not.

Part c

Candidates were expected to understand interactions between risks and how an effective stress testing program would reveal these.

The most common error was mistaking concentration of risk for an interaction. If the book is concentrated, the concentration is a point of consideration for insurance risk. If the portfolio is concentrated, the concentration is a point of consideration for market risk. The concentration is the risk, not the interaction. Concentration simply exacerbates the concentration.

Another common error was not explicitly stating whether or not the approach was "appropriate" or not.