25. (2 points)

A property and casualty insurance company began writing insurance on January 1, 2014. Since the company is a startup, it purchased a 50% quota share reinsurance treaty for accident year 2014 and accident year 2015.

The margins for adverse deviations are as follows:

- Claims development (gross and ceded) = 20%
- Investment return rates = 25 basis points
- Recovery from reinsurance ceded = 1%

The discount rate is 3%.

a. (0.75 point)

Based on the Canadian Institute of Actuaries' Consolidated Standards of Principle (CSOP) identify the range of margin for adverse deviation for:

i. claims development,
ii. recovery from reinsurance ceded, and
iii. investment return rates.

b. (0.75 point)

Comment on the company's operations based on the selections of the margins for:

i. claims development,
ii. recovery from reinsurance ceded, and
iii. investment return rates.

c. (0.5 point)

The margin for adverse deviations for investment return rates addresses several different types of risk. Briefly describe two of them.

CONTINUED ON NEXT PAGE

QUESTION 25	
TOTAL POINT VALUE: 2	LEARNING OBJECTIVE(S): D1
SAMPLE ANSWERS	

Part a: 0.75 point

i. Claim development: 2.5% to 20%
ii. Recovery from reinsurance: 0% to 15%
iii. Investment return rates: 25 to 200 basis points

Part b: 0.75 point

<u>If the candidate commented on operations based on the selected margins</u>

i. The claims development margin is at the maximum, so this may indicate that the company is writing a long-tailed line or there is insufficient data.
ii. The recovery from reinsurance ceded margin is low, so this should indicate reinsurance is placed with financially solid reinsurers.
iii. The investment return rate margin is at the minimum, so this should indicate a large proportion of low-risk investments.

<u>If the candidate commented on the selection of the margins based on the information provided in the question</u>

i. The claim development margin is at the maximum. This is appropriate because it is a startup company. They may have limited data/experience and loss development may be hard to estimate.

ii. The selected reinsurance margin is either reasonable or too low based on any the following considerations:
(1) portion of related party reinsurer;
(2) ceded loss ratio;
(3) ceded commission rate;
(4) registered/unregistered reinsurer;
(5) reinsurers under receivership or liquidation;
(6) reinsurer with weak financial condition;
(7) signed reinsurance contract/cover notes;
(8) claim coverage dispute with reinsurers;
(9) reinsurance with balance sheet exposure.

iii. The selected investment MFAD is either reasonable or too low based on any of the following considerations:
(1) startup company lacks investment experience;
(2) liability payout pattern and duration is hard to estimate so higher mismatch risk;
(3) 3% discount rate indicates higher return than risk-free rate so should increase MFAD selection;
(4) quality of assets;
(5) asset and liability mismatch;
(6) investment return rate;
(7) claim payment pattern;

(8) length of claim settlement period;
(9) asset default risk or asset valuation issue;
(10) current economic condition;
(11) investment expenses.

Part c: 0.5 point

The margin for adverse deviations for investment return rates addresses several different types of risk, such as

- mismatch risk between payment of claims and availability of liquid assets,
- error in estimating the payment pattern of future claims, and
- asset risk including credit/default risk and liquidity risk.

EXAMINER'S REPORT

Candidates were expected to demonstrate understanding of the considerations involved in the selection of MFADs.

Part a

Candidates were expected to identify the range of MFADs per accepted actuarial practice.

A common mistake was the candidate got the ranges wrong.

Part b

Candidates were expected to interpret the selection of MFADs.

Common mistake was for reinsurance MFAD commenting that the PFAD should be high due to a 50% quota share

Part c

Candidates were expected to demonstrate knowledge of the types of risk addressed by investment MFAD.

A common mistake was listing fewer than two considerations.