

20. (1.5 points)

Given the following information for an insurance company subject to regulation under Solvency II (all dollar figures are in millions):

One-Year VaR of Liabilities	
Percentile	VaR
5.0%	\$127
10.0%	\$182
25.0%	\$334
50.0%	\$656
75.0%	\$1,288
90.0%	\$2,363
95.0%	\$3,398
99.0%	\$6,718
99.5%	\$8,621
99.9%	\$14,420

- Management’s best estimate of discounted liabilities is \$1,200.
- The company classifies \$900 as free surplus.
- Assets are recorded at \$11,500 under IFRS.
- The Minimum Capital Requirement (MCR) is \$750.

a. (0.75 point)

Calculate the insurance company’s Technical Provisions.

b. (0.75 point)

Identify three items that are required in an own risk self-assessment (ORSA) as part of Solvency II.

SAMPLE ANSWERS AND EXAMINER'S REPORT

A common error included describing differences in the treatment of liabilities instead of assets.

Part d

Candidates were expected to describe the underlying reason for the differences in account treatment provided in part c.

- Common errors was to describe an accounting difference again rather than discuss the reason for the difference.
- Only explained SAP and not GAAP, or vice versa.
- Confusion among prospective, retroactive and uncollectible reinsurance.

FALL 2018 EXAM 6US, QUESTION 20

TOTAL POINT VALUE: 1.5

LEARNING OBJECTIVE: C3

SAMPLE ANSWERS

Part a: 0.75 point

Sample 1

IFRS ASSETS = Free surplus + Tech Provision + SCR
 $11,500 = 900 + \text{Tech Provision} + 8,621$
Tech Provision = 1,979

Sample 2

SCR is corresponding to 99.5% one-year VaR
SCR = 8,621
Technical provision = $11,500 - 900 - 8,621 = 1,979$

Sample 3

Free Surplus = Assets – Liab – Risk Margin – SCR
SCR = Company's 99.5% VaR

$$900 = 11,500 - 1,200 - \text{Margin} - 8,621$$

$$\text{Margin} = 779$$

$$\text{Technical Provision} = \text{liabilities} + \text{margin} = 1,200 + 779 = 1,979$$

Part b: 0.75 point

Any three of the following:

- Assessment of own solvency need
 - Overall solvency need assessment
 - Overall solvency required capital based on underlying risk profile

SAMPLE ANSWERS AND EXAMINER'S REPORT

- Whether it complies with the technical provision
 - Evaluation of whether the insurer is complying with capital requirements
 - Compliance with minimum capital surplus requirement and applicable rules when developing estimates for technical provision
- The extent to which its risk profile deviates from the underlying assumptions of the technical provision
 - Degree to which the assumptions underlying the SCR deviate from the insurer's risk profile
 - To the extent underlying risk profile has considerations/assumptions/methodology that deviates significantly from those underlying SCR discuss and explain
- Operational Risk
- Catastrophe Risk
- Interest Rate Risk
- Internal report on the controls in place within the company and their adequacy
- Assessment on the adequacy of reserves
- Scenario of catastrophic loss
- Quantitative analysis
- Governance
- Transparency
- Organization chart
- List of affiliates, subsidiaries
- Risk management practices
- Collectability of reinsurance
- Reserve adequacy
- Model validated by a third party

EXAMINER'S REPORT

Candidates were expected to calculate a company's technical provision under the Solvency II regulatory framework and to describe the requirements of the own risk self-assessment.

Part a

Candidates were expected to know how to determine the Technical Provisions for the Solvency II calculation. They were also expected to know which VaR is needed to solve the calculation.

Common errors include subtracting out the liabilities from the calculation.

Part b

Candidates were expected to know the requirements of the own risk self-assessment.

Note: Based on an appeal that was submitted, the list of accepted answers for this question was significantly revised.