

INSTITUTE OF ACTUARIES OF INDIA

EXAMINATIONS

14th September 2016

Subject SA5 – Finance

Time allowed: Three hours (14.45* - 18.00 Hrs)

Total Marks: 100

INSTRUCTIONS TO THE CANDIDATES

1. *Please read the instructions inside the cover page of answer booklet and instructions to examinees sent along with hall ticket carefully and follow without exception.*
2. ** You have 15 minutes at the start of the examination in which you are required to read the questions. You are strongly encouraged to use this time for reading only, but notes may be made. You then have three hours to complete the paper.*
3. *You must not start writing your answers in the answer sheet until instructed to do so by the supervisor.*
4. *The answers are expected to be India Specific application for the syllabus and corresponding core reading. However, substantially the core reading material is still taken from material supplied by Actuarial Education Company which is meant for UK Fellowship examination. The core reading also contains some material which is India Specific, mostly the IRDA regulation. In view of this, it should be noted that focal point of answers is expected to be India Specific application. However if application specific to any other country is quoted in the answer the candidate should answer the question with reference to Indian environment.*
5. *Attempt all questions, beginning your answer to each question on a separate sheet.*
6. *Mark allocations are shown in brackets.*
7. *Please check if you have received complete Question Paper and no page is missing. If so, kindly get new set of Question Paper from the Invigilator.*

AT THE END OF THE EXAMINATION

Please return your answer book and this question paper to the supervisor separately.

Q. 1) 'S Life' is a large listed insurance company operating in the Indian life insurance market. It provides a range of unit-linked savings products and life assurance products in all parts of the country. In recent years, the market for such products has been shrinking because of poor equity market performance and regulatory changes. The company has huge cash reserves but sees limited opportunities for growth in the unit-linked savings market.

“S Life” is toying with the idea of acquiring “G Life” - a small regional life and health insurance provider. “G Life” has recently won a widely coveted award for offering the most innovative health insurance products and best customer experience.

You have been hired as a consultant by the regulator to perform due diligence on the deal.

- i)** Describe the challenges faced by the regulator of insurance sector in an economy like the Indian economy.

Your answer needs to consider both the regulatory and the developmental roles of the regulator. (8)

- ii)** Explain the factors which “S Life” would have considered prior to making a decision to acquire “G Life”. (6)

- iii)** A reporter of a financial journal has commented that the “S Life' was not doing enough to enhance shareholder value and hence instead should return the excess cash as dividend. He has opined that “S Life” should fund any acquisition or expansion, by borrowing debt. Discuss this statement. (6)

- iv)** Discuss the factors you will consider on behalf of the regulator before according an approval for the proposed acquisition. (7)

“S Life got the required approvals from the regulator and acquired “G Life” using its cash reserves.

The Chief Actuary of “S Life” is developing an internal capital model for estimating the solvency capital requirements for the combined entity.

- v)** Describe what an “Internal Capital Model” is and explain how this model can be used to steer strategic decision-making. (6)

- vi)** The Chief Actuary has submitted the internal model to the regulator for approval. Discuss the criteria which the regulator will use before according approval for using the model to estimate the statutory solvency capital requirement. (5)

Three years after the acquisition, the Board of Directors are concerned that “S Life” has a market capitalization which is just 50% of the reported embedded value of “S Life”.

- vii)** Outline the possible reasons for the divergence between the market capitalization and the embedded value. (5)

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Q. 2) Nova Financial Services Limited (NFSL) is a large listed non-banking financial company (NBFC) operating in India. NFSL has three major divisions-Corporate Finance Division, Retail Finance Division and Retail Investment Advisory Services Division.

The Corporate Finance Division specializes in offering asset-based financial services like equipment leasing, hire purchase financing and factoring to medium and small corporate entities.

The Retail Finance Division provides consumer credit to retail customers for buying automobiles and consumer durables.

The Retail Investment Advisory Services Division provides investment advisory and allied services to high net-worth individuals (HNIs)

Given your expertise as an Actuary specializing in Corporate Finance and Risk Management, NFSL has hired you as a consultant to provide advice and guidance on a wide range of issues.

i) The CEO of the Retail Finance Division wants to understand how economic influences will impact the demand for consumer credit. In particular he wants to have a better understanding of the role of RBI in regulating interest rates.

a) Briefly discuss the key economic variables that can impact the demand for consumer credit. (5)

b) Discuss the key challenges faced by RBI in implementing the monetary policy. (4)

ii) The CEO of the Corporate Finance Division wants to expand the equipment leasing business by offering more variants of its “finance lease” product. He is particularly keen on developing alternative rental structures in order to match lease rentals to the cash flow capabilities of the medium and small scale companies.

a) What are the plausible reasons for leasing from the standpoint of a medium sized manufacturing company? (6)

b) Consider the following data provided by the company for a financial lease transaction

- Cost of the equipment: Rs. 300 lakhs
- Non-cancellable lease term: 5 years
- Estimated Residual Value at the end of the lease term: “NIL”

NFSL requires a pretax return of 20% pa on all such lease transactions

Assume that lease rentals payable annually in arrears. Calculate the annual lease rental(s) over the non-cancellable lease term under the following rental structures:

- Equated annual pattern
- Stepped up pattern assuming 15% increase pa
- Deferred pattern under which the lessee pays nothing during the first two years of the lease term (3)

- c) Explain how accounting for finance lease transactions in the books of a lessee presents scope for creative accounting and outline the appropriate accounting treatment for such lease transactions. (5)

The CFO of NFSL wants you to recommend appropriate methods for assessing the default risk of the existing and potential customers of the Corporate Finance and Retail Finance Divisions.

- d) Discuss the approaches which NFSL can use for assessing the default risk of the potential customers. (10)

The CFO also wants to develop an appropriate methodology for calculating the required economic capital for NFSL and use that as a basis for allocating capital between the three divisions

- e) Using a numerical example, explain how you will apply the EAR (Earnings at Risk) approach to estimate the economic capital (8)

You propose that the “marginal earnings at risk” of each of the three divisions can be used as a basis for allocating economic capital between the three divisions.

- f) Explain what additional information you require to use the proposed approach (3)

- g) What are the benefits and drawbacks of allocating capital using the proposed approach? (6)

The CFO wants to increase the available capital of NFSL. He is evaluating the possibility of securitizing a part of the “financial lease” portfolio. The average remaining term to maturing of this portfolio is 7.5 years and the average post tax yield on this portfolio is around 12 % pa. He proposes to issue stripped asset – backed securities which will divide the lease rental stream into two tranches – one set of claims only on interest payments (interest only bonds) and another set of claims only on capital repayments (principal only bonds).

- h) Discuss the risks inherent in the two tranches of this instrument and explain what type of investors will be keen on buying these tranches. (7)

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