Actuarial Society of India

EXAMINATIONS

13th June 2005

Subject SA2 – Life Insurance Specialist Applications

Time allowed: Three Hours (10.15*am – 1.30 pm)

INSTRUCTIONS TO THE CANDIDATE

1. ***Do not write your name anywhere on the answer scripts. You have to write only your Candidate Number on every answer script.***
2. ***You have 15 minutes at the start of the examination in which to read the questions. You are strongly encouraged to use this time for reading only. But notes may be made. You have then three hours to complete the paper.***
3. ***Mark allocations are shown in brackets.***
4. ***You must not start writing your answers in the answer papers until instructed to do so by the Supervisor.***
5. ***Attempt all questions, beginning your answer to each question on a separate sheet.***
6. ***Fasten your answer sheets together in the numerical order of the questions.***
7. ***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 are 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 same should answer the question with reference to Indian environment.***
8. ***In addition to this paper you should have available Actuarial Tables and your own calculator.***

Professional Conduct:

"It is brought to your notice that in accordance with provisions contained in the Professional Conduct Standards, If any candidate is found copying or involved in any other form of malpractice, during or in connection with the examination, Disciplinary action will be taken against the candidate which may include expulsion or suspension from the membership of ASI."

AT THE END OF THE EXAMINATION

Hand in both your answer script and this question paper to the supervisor

1. Two private life insurance companies were both newly established in India four years ago and today have similar size of premium income and policyholder funds. InvestLife sells only non participating term insurance and unit linked contracts and has been very successful in developing distribution through a number of national banks, but only has a small agency force. TradLife commenced business selling participating endowment and whole life contracts, but last year launched a range of non participating unit linked contracts although this accounts for only 10% of new business. TradLife's distribution has been exclusively through its own agency force which is well trained and has productivity which exceeds the industry average.

The shareholders' of TradLife have agreed to sell the company to InvestLife who have ambitious growth plans.

InvestLife plans to transfer all the assets and liabilities of TradLife to InvestLife and then to deregister and wind up TradLife.

i) Discuss the advantages and disadvantages to InvestLife of acquiring TradLife compared with the alternative of investing to expand their existing distribution system. **[10]**

ii) Discuss the expectations of the participating policyholders of TradLife and how these expectations could be affected by the proposed transfer. Also discuss ways in which their entitlements and expectations could be protected. **[12]**

iii) The legislation requires that the regulator must approve such a transfer. List the other regulatory requirements relating to such a transfer which you would expect in order to protect the interests of the policyholders of both insurers as well as the public interest. **[5]**

iv) List the information that an independent actuary would need in order to prepare a report on the entitlements and expectations of policyholders under the proposed scheme. **[12]**

v) You are an actuary employed by the regulator and you have been asked to prepare a report on the proposed transfer and to recommend whether or not the regulator should approve the scheme. Describe the factors you would consider in your report. **[11]**

Total [50]

2. A new private insurance company in India has been writing only non participating unit linked regular premium endowment contracts since commencing business three years ago. The company uses a model to project revenue accounts and balance sheets several years into the future and to prepare its business plan at the beginning of each year.

You are the company's planning actuary and you are reviewing the results for the year ended 31 March 2005. The company has grown rapidly by opening new branches and recruiting and training large numbers of advisors. Premium income has increased by 300%, compared to 200% assumed in the 2004-05 business plan. During the year growth has been financed from surplus without the need for fresh capital but the actual solvency margin at year end is only slightly in excess of the required minimum solvency margin, and substantially less than the solvency margin projected earlier in the 2004-05 business plan.

i) Comment on the items of experience which may explain why the actual solvency margin has reduced compared with that projected in the business plan. **[15]**

ii) You also use the solvency projection model to project the company's shareholder (embedded) value. Apart from the experience items that affect the change in the solvency margin, describe the additional sources of profit which make up the change in shareholder value. **[8]**

iii) Detail how your projection assumptions for the model would differ from the assumptions used to set supervisory reserves. **[10]**

iv) One of the directors has studied your review of the company's results.

a) He has noticed that the increase in the embedded value (profit) is less than the decrease in the solvency margin (shareholder investment). He has asked you if this means the company has made a loss in spite of the rapid growth in new business.

b) He has also asked you what the effect of the rapid growth in new business will have on the appraisal value of the company.

Prepare a draft reply in point form. **[7]**

v) Describe how the process of calculating unit prices can be a source of risk to an insurance company. **[10]**

Total [50]

****