

EXAMINATION

27 April 2009 (pm)

Subject SA3 — General Insurance Specialist Applications

Time allowed: Three hours

INSTRUCTIONS TO THE CANDIDATE

1. *Enter all the candidate and examination details as requested on the front of your answer booklet.*
2. *You have 15 minutes before 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 then have three hours to complete the paper.*
3. *You must not start writing your answers in the booklet until instructed to do so by the supervisor.*
4. *Mark allocations are shown in brackets.*
5. *Attempt both questions, beginning your answer to each question on a separate sheet.*
6. *Candidates should show calculations where this is appropriate.*

AT THE END OF THE EXAMINATION

Hand in BOTH your answer booklet, with any additional sheets firmly attached, and this question paper.

In addition to this paper you should have available the 2002 edition of the Formulae and Tables and your own electronic calculator from the approved list.

- 1** The Republic of Merino is a developed country with a range of small, medium and large general insurance companies.

Regulations currently require general insurance companies in Merino to establish claims reserves on a best estimate basis. Thus the claims reserves held by companies represent the mean of the range of possible future outcomes, without margins.

Two years ago, one of the largest general insurance companies in Merino became insolvent. In response to public concern about the state of the insurance industry, the government has proposed new regulations. These would require general insurance companies to establish claims reserves that include risk margins. It is proposed that general insurance companies hold claims reserves equal to the 75th percentile of the range of possible future outcomes.

Company A is a general insurance company writing private motor insurance. It has been writing this business for 20 years and is the largest insurer in Merino.

Company B only started writing insurance one year ago. It writes only professional indemnity insurance.

- (i) Give an example of a method that is likely to be suitable for each of the companies A and B to estimate the 75th percentile risk margin, giving a reason for your choice in each case. [2]

The government is keen to understand how general insurance companies are likely to view this proposal.

- (ii) Discuss the advantages to the general insurance industry of requiring insurers to hold 75th percentile risk margins. [9]
- (iii) Describe the concerns that the insurance industry may have with this proposal. [18]

The government announces that it will go ahead with its proposals. However, general insurance companies will be allowed to choose the percentile risk margins that they wish to adopt. The adopted risk margin must provide a probability of sufficiency greater than or equal to 60%. General insurance companies must publicly disclose the percentile that they have adopted as their risk margin.

- (iv) Describe the issues that a general insurance company should consider when deciding the probability of sufficiency to adopt. [14]
- [Total 43]

- 2** A small UK general insurance company writing UK and other European business wishes to expand its employers' liability book of business. It is considering building a new rating model for this portfolio.

The underwriter responsible for this portfolio explains that:

- he is the only underwriter for the employers' liability book
- he has recently hired a junior assistant
- he sometimes uses a US workers' compensation rating model that he was given five years ago as a guide to setting rates and relativities between different trades
- he has never possessed a rating model that he has trusted and does not believe that a rating model can be better than his own judgement
- his incurred loss ratios over the last ten years have been at a level that he believes has made money in every year except one

(i) Explain the risks to the company of not building a new rating model. [12]

(ii) Discuss the advantages to the underwriter of building a new rating model. [8]

(iii) Outline the information that would be required to build the rating model, in particular considering the following areas:

- Underwriting
- Reinsurance
- Claims
- Finance

[17]

(iv) Outline the problems that might be encountered in building the rating model.

[4]

The company has had discussions with a UK based managing general agent (MGA) that specialises in casualty insurance. The MGA offers underwriting and claims handling services. It is looking for a general insurance company to provide capital by taking a coinsurance follow line on its portfolio of employers' liability business through a binding arrangement.

(v) Discuss the advantages and disadvantages to the company of taking a follow line on this coinsurance arrangement.

[16]

[Total 57]

END OF PAPER