

Actuarial Society of South Africa

EXAMINATION

27 April 2009 (pm)

Subject SA3RSA — 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 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 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.

<p><i>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.</i></p>
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QUESTION 1

You are an actuary working in a medium sized South African short term insurance company writing personal lines business (motor and household). The company has developed an internal model for the purpose of calculating risk based capital. Your only distribution channel is through brokers. Your management executive has asked you to assist in developing a proposal to the Board justifying a decision to enter the direct motor insurance market, by means of a stand-alone motor product.

The following sections need to be addressed within your proposal.

- a. Distribution channel analysis
- b. Resources
- c. Risk Based Capital

- i For each section, explain its importance in terms of this proposal and explain which factors the company should consider differently to the current business practice of distributing through brokers.

[15]

In recent years the short term insurance industry has experienced good results. However, insurers are currently experiencing a large deterioration in profits and because of the highly competitive environment, rate increases are slow to materialise.

As part of your market analysis you have obtained comparative direct insurance quotes on the internet for the following cars:

Car 1: model valued at R353 300. You obtained 9 quotes ranging between R1459.68 and R2016.75 per month.

Car 2: model valued at R70 200. You obtained 9 quotes ranging from R752.87 to R1177.76 per month.

Your pricing exercise produced the following prices for car 1 and car 2 respectively: R1650.36 and R1056.27.

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ii. Outline the possible reasons for this wide range in prices for each vehicle. [10]

iii. Discuss the approach that you would follow to justify to the Board that your prices are appropriate. [7]

One of the new product features is a bonus payable to the policyholder in the event of good claims experience that operates as follows:

- 15% of total annual premiums paid by the policyholder are refundable after the third policy anniversary provided there have been no claims incurred and continuous cover has been in place up to and including the third policy anniversary.
- 7.5% of total annual premiums paid by the policyholder in each of the subsequent years are refundable provided there have been no claims incurred and continuous cover has been in place from the third policy anniversary up to and including the end of the relevant future policy year.
- In the event of a claim, or break in cover, the structure resets itself with effect from the nearest policy anniversary date.

iv. Outline the advantages and disadvantages for the company of this proposal. [7]

v. Explain how you would calculate the reserve for this product feature and discuss the factors that you would consider. [15]

vi. Recommend how this product's reserves should be accounted for within the annual financial statements, stating what information and regulation you would consider in producing your proposal. [6]

Total [60]

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QUESTION 2

You are the capital actuary of a medium-sized, JSE listed, South African short term insurance company. During 2007 you built an internal model to cater for the envisaged Financial Condition Reporting regulations. For the first time, at the beginning of 2008, you allocated capital to the different lines of business in the company's management accounts, as shown in the table below. During the first quarter of 2009, you reviewed the capital numbers and determined the results, as shown in the table below.

	<i>As at 1 January 2008</i>	<i>As at 1 January 2009</i>
Commercial property	R120 million	R260 million
Household property	R110 million	R200 million
Household contents	R 70 million	R100 million
Motor		R 50 million
Total	R300 million	R610 million

Additional information:

- During 2008 all classes of business wrote equal amounts of premium income in line with expectations.
 - It was estimated that during 2009 all existing lines of business would double their premium income.
 - The new class of Motor was introduced in 2009.
- i. Explain the possible reasons for the change in capital numbers from 1 January 2008 to 1 January 2009. [15]

You have been instructed to prepare a presentation to management of the 2009 capital results, including a comparison to the 2008 capital results.

- ii. Discuss the findings that you think are necessary to include in your report and the resultant issues that management need to consider going forward. [18]

You have discussed your presentation with the managing director. He is concerned that because of the changes in numbers management will not place much credibility on the results and hence not consider capital important in terms of managing their business.

- iii. Explain how you would convince management of the accuracy of your results and the importance of capital in day-to-day business decisions. [7]
- Total [40]

END OF PAPER