

Actuarial Society of South Africa

EXAMINATION

2 November 2012(am)

Subject F203 — *General Insurance* Specialist Applications

Time allowed: Three hours

INSTRUCTIONS TO THE CANDIDATE

- 1. Candidates will be issued with instructions to log-in using a password (which you will be provided with at the exam center).*
- 2. Candidates are required to submit their answers in Word format only using the template provided.*
- 3. Save your work continuously throughout the exam, on your computer's hard drive that you have been provided.*
- 4. 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.*
- 5. You must not start typing your answers until instructed to do so by the invigilator/supervisor.*
- 6. Mark allocations are shown in brackets on exam papers.*
- 7. Attempt all questions, beginning your answer to each question on a new page.*
- 8. Candidates should show calculations where this is appropriate (these could be copied from Excel into Word).*

Note: The Actuarial Society of South Africa will not be held responsible for loss of data where candidates have not followed instructions as set out above.

AT THE END OF THE EXAMINATION

Save your answers on the hard drive.

<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

(i) Define:

- Accumulation of risk
- Pooling
- Self insurance

[7]

Hats and Coffee is a franchise chain of 25 coffee shops spread throughout South Africa. Hats and Coffee's head office provides centralised administration, human resources and marketing services to all the franchises. They also provide stock, branded products and decor to all franchises from a centralised storage facility in one of Johannesburg's industrial areas.

Hats and Coffee's financial director needs assistance with a thorough investigation into their current insurance portfolio and to advise them on future strategies.

The franchise directors have decided to investigate the possibility of centralising the insurance portfolio from Head Office as opposed to each franchise buying its own insurance, to achieve savings.

(ii) Discuss the possible implications of this strategy including the issues that need to be considered before making the decision to purchase all insurance collectively from head office.

[16]

In addition Hats and coffee is considering the following two options:

- Carrying a substantial part of their risk on their own balance sheet with appropriate top up and catastrophe insurance or
- Purchasing a contingency policy at SuperSaver Insurance Company, a short-term insurance company licensed to write all business classes in South Africa

A contingency policy is a policy tailor-made for a particular client that provides cover in a way similar to the workings of a cell captive. Instead of forming a dedicated insurance company for the benefit of the insured, a customised policy is taken out with an existing insurance company.

(iii) Discuss the merits of each of these options compared to purchasing a commercial policy in the traditional market.

[9]

(iv) Discuss the appropriateness of using a DFA model to determine the appropriate insurance strategy

[5]

PLEASE REMEMBER TO SAVE

Hats and Coffee have decided to purchase a contingency policy from SuperSaver but informs you that the premium for the contingency policy is too expensive.

- (v) Explain what risk mitigation techniques Hats and Coffee can introduce and what special policy conditions can be added to the contingency policy that would result in a reduction in the cost of insurance. Limit your answer to property damage only.

[8]

[Total: 45]

QUESTION 2

- (i) Define a UMA, explaining its typical role and the duties that it may perform. [10]

Xsure is a South African insurance company which operates exclusively through client partnership arrangements.

To avoid competitive conflicts, Xsure selects new partners with unique types of insurance business which differ from that of existing partners. Partnerships are currently in place for the following types of business:

- Personal and commercial motor comprehensive
- Commercial property
- Extended personal motor warranty
- Contractors all risk

Each partnership has a unique reinsurance structure covering only the risks insured by that partnership.

Xsure's business model is to enter into profit and risk sharing arrangements with its partners. Xsure only provides the insurance licence and does not perform any policy or claims administration, nor does it deal directly with the underlying policyholders. This is all performed by the respective partners, who are then able to write their business on Xsure's licence. XSure receives a fixed fee of 5% of gross written premium for providing the licence in each partnership.

Xsure's standard approach is to share profits in predetermined proportions with each of its partners based on individual partnership profits. Currently this predetermined proportion is 50%. Profit at the end of each calendar year is calculated as follows:

	Earned premiums
Less	Incurred claims
Less	Commissions incurred
Less	Administration expenses
Less	5% licence fee
Plus	Investment income
Less	Tax

Where:

- Reserving is based on the current FSB regulatory requirements
- Commissions incurred are based on Xsure's overall average net commission rate for the year
- Xsure allows each partnership to deduct R1,500,000 per year from the premium generated to cover all administration expenses
- Tax is calculated at the corporate tax rate, based on the net profit of the specific partnership for the year.

PLEASE REMEMBER TO SAVE

- Investment income is based on Xsure's overall average investment return for the year

(ii) Discuss the appropriateness of the profit sharing arrangement and suggest improvements that could be made.

[23]

Following the recent SAM QIS1 exercise and the introduction of the FSB interim measures, the management of Xsure has decided that the capital and reserving requirements of all existing and new partnerships are to be assessed on the following bases:

- a. SAM QIS1 specifications
- b. Interim measure specifications

(iii) Discuss the reserve, capital and partnership challenges that this new process will introduce.

[9]

You have been instructed to commence an explicit reinsurance review for Xsure. As part of this process you have to perform your own estimations of the reinsurance rates to assess the appropriateness of the rates sourced by the reinsurance brokers.

The first exercise in this regard is for a risk excess of loss layer for commercial property excess of loss. This layer is aimed at providing protection against individual large property damage losses and is not considered to be a working layer. The reinsurers used a Pareto distribution to model the expected loss above the attachment point in order to determine their rate. When questioned about this approach they explained that the Pareto distribution always provides a good fit with a decent tail distribution shape for commercial property losses.

(iv) Comment on the appropriateness of this approach, explaining in detail the process you would follow to price the layer.

[13]

[Total: 55]