

INSTITUTE AND FACULTY OF ACTUARIES



EXAMINATION

1 October 2019 (pm)

Subject SA1 – Health and Care Specialist Advanced

Time allowed: Three hours and fifteen minutes

INSTRUCTIONS TO THE CANDIDATE

1. *Enter all the candidate and examination details as requested on the front of your answer booklet.*
2. *You must not start writing your answers in the booklet until instructed to do so by the supervisor.*
3. *Mark allocations are shown in brackets.*
4. *Attempt all questions, begin your answer to each question on a new page.*
5. *Candidates should show calculations where this is appropriate.*

Graph paper is NOT required for this paper.

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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1 A health and care insurance company operates in a country in which the Solvency II regulatory regime applies. The company is considering entering the long-term care market by launching a non-linked, pre-funded, long-term care insurance (LTCI) product. No other insurer in the market currently offers pre-funded long-term care insurance.

- (i) Define what long-term care is. [1]
- (ii) Suggest reasons why the insurer is considering launching this type of product. [4]
- (iii) Discuss aspects of each of the design factors below that the insurer would consider to ensure a successful launch of the new product in terms of adequate sales and profit margin:
 - (a) Benefit structure. [3]
 - (b) Claim definitions. [3]
 - (c) Other key product design factors. [7]

The customer will pay regular premiums on the product. The product benefit is a fixed income that starts when the policyholder meets a specific set of claim definitions that qualifies them for long-term care.

- (iv) Outline the following risks that the company faces by launching this product for the first time:
 - (a) Insurance risks. [3]
 - (b) Underwriting and sales risks. [3]

To improve the marketability of the LTCI product the Marketing Director has asked for the product to offer a surrender value at any time that is not guaranteed, for both pre-claim and when a claim is being paid. The insurer will calculate individual policy reserves and is considering setting the surrender value of a policy by adjusting its policy reserve value.

- (v) Explain the risks to the insurer that the addition of this benefit would introduce. [3]
- (vi) Describe adaptations to the policy reserve basis that would be suitable to create the surrender value basis. [5]

After several years, a large block of this LTCI business has been written. The Investment Director has suggested that a substantial proportion of the backing assets should be invested in equities to maximise the return. Currently the backing assets are all fixed interest assets, government bonds and highly rated corporate bonds that reasonably match the liabilities.

- (vii) Describe the factors that may influence the insurer's decision to adopt a less matched position. [4]

The company uses the Solvency II Standard Formula to determine its Solvency Capital Requirement (SCR).

The company has decided to adopt the Investment Director's suggestion.

(viii) Explain the likely impacts this decision will have on the company's Technical Provisions. [5]

(ix) Describe the likely impacts this decision will have on the components of the SCR that may change and on the overall SCR. [5]

[Total 46]

2 The financial regulator in Country A wants to improve the standards of the health and care insurance industry in Country A and to protect policyholders. The regulator is considering introducing some statutory roles for actuaries to help with these aims.

(i) Suggest why introducing statutory roles for actuaries could achieve the aims of the regulator. [6]

(ii) Describe the typical responsibilities of the statutory roles of actuaries in a country or countries where these already exist. [8]

(iii) Describe the potential consequences for an individual actuary who holds a statutory role and fails to meet the requirements of the role. [4]

(iv) Suggest principles, processes and controls that an actuary, who holds a statutory role, could implement to ensure they meet those responsibilities. [10]

[Total 28]

- 3** In Country A, there is a single organisation, ABC, that provides all health care services for individuals with Private Medical Insurance (PMI) cover. These services include consultations with general practitioners (family doctors), hospitals (including emergency treatment as well as planned surgical procedures) and mental health and social care services.

Insurer XYZ is one of many health insurers in Country A which writes PMI business.

- (i) Discuss how Insurer XYZ would use underwriting at the policy application stage. [10]

Insurer XYZ has an agreed list of fixed prices for services offered by the provider organisation. Insurer XYZ wants to reduce the total claims amount that it pays out. The Commercial Director of XYZ has suggested that it could engage with the provider organisation to help it plan its services and identify opportunities for reducing its costs.

- (ii) Explain how Insurer XYZ could use the information gathered during the initial underwriting, along with subsequent experience investigations, to improve its risk management. [10]

- (iii) Recommend ways in which the provider organisation could use the information gathered by Insurer XYZ's underwriting to support its organisational planning, and align health and care services with the needs of the population. [6]

[Total 26]

END OF PAPER