

EXAMINATION

26 April 2010 (pm)

Subject SA2 — Life 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.

<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 UK proprietary life insurance company writes a range of with and without profits business in its with profits fund. The business comprises without profits annuities, unit-linked contracts, conventional with profits whole life and endowment assurances and unitised with profits contracts. Some with profits contracts have guaranteed annuity options.

The company has assets of £600m and liabilities of £520m.

- (i) Outline reasons why policyholders purchase with profits contracts and the related risks for the policyholder. [6]

Bonus rates applied to with profits whole life contracts are the same as those determined for endowment contracts.

The with profits benefit reserve (WPBR) for the whole life contracts is based on a prospective bonus reserve valuation. The WPBR for all other with profits contracts is based on retrospective asset shares, which are calculated using unsmoothed actual earned investment returns.

The unitised with profits contracts have explicit charges that are deducted from the asset shares.

Shareholder transfers are determined as 1/9 of the cost of bonus.

Profits/losses on surrenders and on without profits contracts are allocated to with profits asset shares by a percentage addition/deduction to the investment return.

The company aims to smooth payouts over time so that the smoothing costs are zero and, on average, 100% of asset shares are paid out on maturities.

Recently sales of new with profits contracts have fallen to a very low level. The company has decided to close the fund to new with profits business.

- (ii) Discuss the issues to consider regarding the management of the with profits fund once it is closed to new with profits business. [30]

The company validates its annual WPBR calculations by analysing the difference between the movement in the aggregate assets backing the WPBR over the year and the movement in the individually calculated WPBR over the year. For this process it determines the aggregate assets at the year end as:

- the value of the assets backing the WPBR at the beginning of the year
- plus premiums received
- plus investment income and gains/losses
- plus profits/losses made on without profits business
- less expenses actually incurred
- less tax paid
- less claims paid
- less shareholder transfers

(iii) Describe the items that may contribute to a difference between the two results. [10]

Over the previous reporting year, the market value of UK equities fell by roughly 20%, property values fell by 10% and fixed interest yields reduced from an average of 7% to 5%.

The Finance Director has estimated that the Peak 2 working capital should have reduced by 6.2% over that same time period, before any allowance for tax. He has based this on information provided to him that this working capital was invested 50% in equities, 10% in property and 40% in fixed interest. His calculations took account of the fact that the average term of the fixed interest assets was 6 years and so the market value of the fixed interest assets rose by around $(1.07/1.05)^6 - 1 = 12\%$.

However, the total reduction in the working capital attributed to these changes in market conditions was actually 15% over the year.

(iv) Discuss why the estimate of 6.2% differs from the outcome of 15%. [11]
[Total 57]

- 2** (i) Describe the taxation of a personal pension policy with no employer contributions from the policyholder's perspective. [5]

Company A is a UK proprietary company that until 2006 had only ever written unit-linked personal pensions and unit-linked endowment assurances.

In 2006, in order to enter the term assurance market, Company A took over Company B which had only ever written term assurance business. In 2009 Company A stopped selling unit-linked endowment assurances.

The following is an extract from Company A's tax computations for 2008 and 2009.

<i>£m</i>		2008	2009
Life Business	I	900	500
	E	700	490
	BLAGAB NCI profit	50	25
Gross Roll-Up Business	Case VI profit	100	65

You are given the following information:

- There are no net realised losses carried forward from 2007.
- There are no unrelieved expenses carried forward from 2007.
- You are not required to gross up the NCI profit.
- The corporation tax rate was 28% for both years.
- You can assume that there is zero BLAGAB UK dividend income.

- (ii) Calculate Company A's tax liability for 2008 and 2009. [8]
- (iii) Suggest possible reasons for the movements in the tax computations. [10]
- (iv) Discuss how the change in tax position would impact writing new business. [6]

The Actuarial Function Holder (AFH) is writing a report on the financial results of the company.

- (v) List the main responsibilities of the AFH. [4]
- (vi) Explain why the AFH would be interested in the company's tax position. [5]

The Board has asked the AFH for some background information on UK life insurance taxation.

- (vii) Explain why the BLAGAB tax computation is split between shareholder profit and policyholder profit and how this leads to the "I-E" basis. [5]
- [Total 43]

END OF PAPER