# EXAMINATIONS

13 September 2002 (pm)

## Subject 402 — UK Fellowship Life Insurance

*Paper Two*

**You must answer this subject only, you may not attempt another subject in the 400 series.**

*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.*

*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 Actuarial Tables and your own electronic calculator.*

**1** A UK proprietary life insurance company distributes its products through two main channels. The larger channel is the insurance intermediary (IFA) channel, the smaller channel is its own national salesforce, which sells direct to customers.

Two main product lines are sold: a with profits investment bond and term assurance. The surplus on with profits business is distributed 90% to the policyholders, 10% to the shareholders. The term assurance product is written wholly in the shareholder fund. To avoid conflict with insurance intermediaries, there is a cap on the volume of bonds sold through the direct channel.

The financial performance of the sales channels is measured in terms of the profit margin, with an adjustment for the difference between the actual cost of distribution compared to that assumed in the pricing basis.

The profit margin is the present value of profit to the shareholders on the pricing basis divided by the Annualised Premium Income (API).

API is the industry standard measure of sales volume. This is one year's premium for regular premium contracts (e.g. the term assurance) and a tenth of any single premiums (e.g. the bond). Commission terms and pricing bases are in terms of API.

The Financial Performance Measure is defined as

Actual API * profit margin +
{API *expected distribution costs % – actual distribution costs}* shareholder value %

The "shareholder value %" is 100% for term assurance and 10% for bonds. This is an attempt to reflect the fact that costs in the with profits fund are shared with the policyholders.

Commission is excluded from the adjustment to profit as this measure is aimed only at the direct expenses of the company.

| | *IFA* (%API) | *Direct* (%API) |
|---|---|---|
| Pricing Basis — Bond | | |
| Broker Commission | 70 | 0 |
| Distribution costs | 10 | 80 |
| Profit margin | 30 | 30 |
| | | |
| Pricing Basis — Term | | |
| Broker Commission | 50 | 0 |
| Distribution costs | 10 | 60 |
| Profit margin | 20 | 20 |
| | | |
| | (£m) | (£m) |
| Actual performance — Bond | | |
| Volumes written (API) | 500 | 100 (its cap) |
| Actual Commission | 380 | n/a |
| Distribution costs | 70 | 85 |

| | *IFA* (£m) | *Direct* (£m) |
|---|---|---|
| Actual performance — Term | | |
| Volumes written (API) | 300 | 500 |
| Actual Commission | 175 | n/a |
| Distribution costs | 35 | 325 |
| | | |
| Financial Performance Measure (£m) | 203 | 100 |
| %API | 25.4% | 16.7% |

(i) Comment upon any inadequacies of the distribution cost adjustment to the Financial Performance Measure. [6]

(ii) Discuss the validity of the "shareholder value %", especially the use of 10% for the bonds. [14]

(iii) The IFA Sales Director has suggested closing the direct distribution arm, believing it to be clearly less efficient than the IFA channel, and using the money saved to increase market share in the IFA market. As the Appointed Actuary, you have been asked to write a paper for the Board on the proposal, including any alternative proposals.

Outline the key points you would make in your reply. [14]

(iv) As an alternative to closing the direct distribution arm it has been suggested that the free estate in the with profits fund could be used to finance the writing of a new unit linked product. The new product is expected to be capital intensive as the only charge is a fund management charge of 1% p.a. It is expected that capital will not be repaid for over ten years.

Discuss what points the Appointed Actuary might make in his report to the Board on the benefits and issues arising from writing such a product particularly in relation to shareholder value. You do not need to consider the impact on either the Financial Performance Measure or the two sales channels.

[16]

[Total 50]

 **PLEASE TURN OVER**

**2** A UK life insurance company writes a wide range of unit-linked individual life and pensions contracts investing in internal linked funds run by the company. No non-linked or accumulating with profits business is written. For each contract type, charges are levied by one or more of the following methods:

- A bid/offer spread.
- An annual management charge on the investment funds.
- An initial nil allocation period.
- An expense deduction from each premium (e.g. £2 per month).
- Allocation of a percentage (which may be more or less than 100%) of each premium to purchase units. The percentage invested each year may be different from previous years, but is fixed at the outset of the policy.

Contracts designed many years ago are invested in funds with a fixed annual management charge. More recent contracts are invested in funds where the annual management charge may be varied at the company's discretion. No such variations have ever been made.

For some contract designs the expense deduction is fixed, for others it may be increased by up to the increase in the retail price index since the charge was last set, while for others the maximum increase is based on an earnings index. From time to time, but not regularly, these charges have been increased to the maximum permitted by the appropriate index.

The Appointed Actuary is preparing the report he is required to make to the Board of the Company detailing his interpretation of Policyholders' Reasonable Expectations (PRE).

Draft the report dealing in particular with the following areas:

(i) How PRE applies to unit-linked contracts. [5]

(ii) Investment policy and the determination of unit prices. [10]

(iii) Appropriate deductions for taxation in the fund pricing. [12]

(iv) The ability of the company to vary charges. [11]

[12 marks are available for drafting style]
[Total 50]