

EXAMINATIONS

September 1999

Subject 301 — Investment and Asset Management

Time allowed: Three hours

INSTRUCTIONS TO THE CANDIDATE

1. *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.*
2. *You must not start writing your answers in the booklet until instructed to do so by the supervisor.*
3. *Write your surname in full, the initials of your other names and your Candidate's Number on the front of the answer booklet.*
4. *Mark allocations are shown in brackets.*
5. *Attempt all 13 questions, beginning your answer to each question on a separate sheet.*

AT THE END OF THE EXAMINATION

Hand in BOTH your answer booklet and this question paper.

*In addition to this paper you should have available
Actuarial Tables and an electronic calculator.*

- 1** Describe how the principles underlying the actuarial control cycle can be used in developing a model to manage an equity portfolio. [5]
- 2**
 - (i) Describe the purpose of an investment trust, its pricing, its legal structure, and the basis on which it operates. [5]
 - (ii) Describe how an open-ended investment company (OEIC) differs from an investment trust. [2][Total 7]
- 3** Describe the operation and role of a clearing house in futures trading. [4]
- 4** List the distinctive features of companies classified within the “utilities” industry sector. [5]
- 5** Describe the factors influencing the investment strategy of a collective investment vehicle. [7]
- 6**
 - (i) Distinguish between barometer and portfolio-based property indices. [2]
 - (ii) Discuss the use of portfolio based property indices as a benchmark against which to assess the investment performance of a directly invested property portfolio. [3][Total 5]
- 7** Outline six different methods an actuary might use to value individual investments. [6]
- 8**
 - (i) Explain the relationship between the yields of corporate bonds and government bonds in the same currency. [2]
 - (ii) Describe briefly how this relationship might be affected by an economic downturn. [1]
 - (iii) In a stable economic environment, how might the expectation of sustainable low inflation of under 2% per annum affect the relationship in (i). [2][Total 5]
- 9** A large charitable foundation is considering the acquisition of a substantial forest in North America for its US\$-denominated investment portfolio.

Describe how you would evaluate the investment potential of the forest. [8]

- 10** An index fund aims to track the FTSE All-Share index. The fund will match the index weight in each industry sector, but will not necessarily include every index stock to achieve the sector weight. For example, in a particular sector which contains 15 stocks, the fund manager decides to hold only three of the stocks.

Explain in detail why the fund manager might structure the fund in this particular way. [7]

- 11** You are the investment manager of a large unitised pension fund. The fund has a strict policy of not holding direct property investments. The marketing material of the fund states that it aims to outperform the median of a peer group of pension funds by stock selection alone. The peer group comprises 60 managed funds, a number of which hold property assets. Median performance data and breakdowns of the asset allocation of peer group funds are published every three months.

Discuss the asset allocation issues that arise for you in attempting to meet the marketing claims of the fund. [14]

- 12** You are a consulting actuary specialising in the appraisal of capital projects. An international mining company has approached you to examine one of its proposed projects. The company is considering an investment of £800 million to develop a copper mine in a third world country not known for its political stability. From a technical point of view, the quality of the ore is excellent. Using the company's technology the copper can be produced for less than 25% of the current world-market price of copper.

The company has asked you to identify the risks facing the project and to suggest a method of risk analysis.

- (i) (a) Describe the steps necessary to achieve an effective identification of risks facing the company's project.
- (b) Describe briefly five major risks facing the project. [10]
- (ii) Describe how the risks of the project can be analysed. [4]

[Total 14]

- 13** You are the manager of a global equity fund valued at US\$1 billion. You wish to alter the asset allocation, switching some of the portfolio from the UK market to the US market, with the expectation that the switch will be reversed in three month's time.

- (i) Describe the problems and costs you would encounter, if the switch was conducted by sales and purchases of individual securities. [6]
- (ii) Explain how equity index futures might reduce the costs and problems associated with changing asset allocation on a short term and a long term basis. [7]

[Total 13]