

# EXAMINATIONS

September 1999

## Subject 401 — UK Fellowship Investment

### *Paper One*

**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. *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 9 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** You are the adviser to a diversified UK-based utility which has been asked to consider a significant investment in the construction of an electricity generating plant in an emerging Eastern European country. The company has been asked to finance 50% of the construction costs of the project in exchange for an equity stake in the sole electricity provider in the country, which is expected to be privatised and floated on the new stock exchange in two years time. The balance of the construction costs will be met by the government of the country.

Explain how you would conduct the following aspects of the appraisal process:

- (i) the identification and analysis of the risk features involved in the project; [10]
  - (ii) how you might arrive at a distribution of possible net present values for the project. [4]
- [Total 14]

- 2** You are a financial consultant specialising in advising UK “high net worth” individuals.

- (i) A client has asked you to advise him in relation to a proposed investment of £25,000 in an investment trust which invests in listed UK companies with small market capitalisations.  
  
Describe briefly the factors you would investigate in relation to the investment trust before making your recommendations. [3]
  - (ii) A client has £5 million with which to diversify his UK property portfolio which currently consists of one commercial property in the South of England valued at £850,000. Outline the advantages and disadvantages to this client of investing his entire property portfolio in a property unit trust. [4]
- [Total 7]

- 3**
- (i) Discuss the factors that determine the asset mix of a large, well-established with-profits life insurance fund. [8]
  - (ii) The life insurance company also runs a large balanced unit-linked life fund.

Explain why its asset mix might differ significantly from that of the with-profits fund. [3]

[Total 11]

- 4** The price of an American call option on a non-dividend paying stock is £4. The option has a strike price of £30 and expires three months from now. The current stock price is £31 and the risk free rate of interest is 8% per annum.
- (i) Derive upper and lower bounds for the difference between the price of the American call option and that of an American put option on the same stock with the same strike price and expiry date. [7]
  - (ii) Explain the arbitrage opportunities that arise if the American put price is substantially greater than the calculated upper bound. [3]  
[Total 10]
- 5**
- (i) Explain what a gilt repo is and discuss briefly the operation of the gilt repo market in the United Kingdom. [6]
  - (ii)
    - (a) Describe briefly the UK gilt strips market.
    - (b) In a cash-flow match, only maturing strip payments can be used to meet the annuity outgo. Strips are never sold to meet annuity outgo. Discuss the problems which will arise in attempting to use gilt strips to provide a cash-flow match for a large (in terms of number of annuitants) portfolio of annuities. [6]  
[Total 12]
- 6**
- (i) Describe briefly the advantages and disadvantages of investing in unquoted equities. [4]
  - (ii) Discuss the problems a specialist venture capital company faces in trying to get a diversified portfolio of unquoted equity investments. [2]  
[Total 6]
- 7**
- (i) Discuss the advantages and disadvantages of the four main methods used by passive fund managers to match the investment performance of a benchmark. [6]
  - (ii) Suggest reasons why investors might prefer passive to active equity fund management. [5]  
[Total 11]
- 8**
- (i) Explain how and why exchange-traded derivatives might be used for speculation and arbitrage, and comment on the extent to which a life office would use these instruments for the two purposes mentioned. [4]
  - (ii) Discuss the uses of exchange-traded derivatives in portfolio management. [8]  
[Total 12]

**9** You are a consultant who specialises in advising clients on the development of their securities markets. The government of a European country, the currency of which is the Euro, has asked you to prepare a report on how it might go about improving the local securities markets. Foreign investors have found the securities markets in the country very unattractive.

- (i) Describe briefly the possible issues that the government would need to address to make its securities markets more attractive to foreign investors. You may ignore regulatory issues. [6]
- (ii) Describe the roles that a securities market regulator might perform and discuss two contrasting models for regulating the securities markets that the government might consider. [8]
- (iii) The government feels that the “missing link” between writing the rule book and securities firms actually achieving compliance is senior managerial responsibility. Suggest methods by which the regulator could ensure that senior management took its responsibilities for meeting regulatory standards seriously. [3]

[Total 17]