

EXAMINATIONS

10 April 2000 (am)

Subject 301 — Investment

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 12 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** (i) List the advantages of investing via an investment trust rather than a unit trust. [3]
- (ii) Explain the term “discount to net asset value” in the context of an investment trust. Give three reasons why an investment trust might stand at a premium, rather than a discount, to net asset value. [3]
- [Total 6]

- 2** (i) (a) List the investment characteristics of property.
- (b) State with reasons how you would expect the return on property to compare to the return on index linked Government bonds. [6]
- (ii) State with reasons whether you would expect industrial property or office property to be the higher yielding investment. [4]
- (iii) Explain the factors which you would expect to influence the difference in performance between individual property company shares in a low inflation environment. [4]
- [Total 14]

3 An equity market index is often broken down into separate industrial sector components.

- (i) Explain the advantages of comparing shares within their industrial sectors. [3]

In analysing each of its equity portfolios, an investment management company compares the dividend yields of its holdings with those of the index. To do this, the company:

- ranks the holdings by increasing yield
- splits the portfolio into five equal numbers of holdings (“quintiles”)
- calculates the weighted average yield of each quintile, using the market value of shareholdings as weights

The company conducts the same exercise for the index, and compares the quintile averages of each portfolio with the other portfolios it manages and also with the quintile averages of the index.

The company carries out the same analysis using earnings growth rates and also price to earnings ratios.

- (ii) Explain what the company expects to achieve from comparing portfolios in this way. [3]
- [Total 6]

- 4** One of the stated objectives for the management of an equity portfolio is that it shall aim to have a beta of 1.2 relative to the market index.
- (i) Explain the term beta, and the meaning of a value of 1.2. [2]
 - (ii) Describe the investigations you would make to determine the value added by the fund manager to the portfolio, assuming full data is available. [3]
 - (iii) List six reasons why the performance of the portfolio might differ from that of the index. [3]
- [Total 8]
- 5**
- (i) Two options have identical characteristics except that one is an American option and the other is a European option.
Explain which option will have the greater market price. [2]
 - (ii) Explain the difference between a futures contract and an option contract. [4]
 - (iii) Explain why only a small proportion of exchange traded futures contracts reach delivery, and describe the practical steps taken to achieve this result. [3]
 - (iv) Explain two types of risk faced by the counterparties in an over the counter swap arrangement. Discuss the steps which can be taken by either counterparty to minimise these risks. [4]
- [Total 13]
- 6** You are the investment manager of a fixed interest unit trust. For several years your remit has been to invest solely in government securities with a term to redemption of less than 7 years. In recent times, total returns from the unit trust have declined and competition has intensified. The chief investment manager has asked you to consider ways in which the total return of the portfolio might be improved.
- Describe what could be done to improve the total return of the portfolio. [6]
- 7** An index manager offers a fund which tracks the local equity index using full replication. As a consequence of a merger of a local company which is an index constituent with a foreign company (which is not an index constituent), the index weight of the local company will increase from 3.5% to 6% of the index.
- Outline the steps which the index manager must conduct to maintain the tracking ability of the fund. [4]

- 8** (i) State the principal aims of the authorities which regulate investment management and securities industries. [3]
- (ii) Define a self-regulated regime and a statutory regime. Discuss their main differences. [3]
- [Total 6]

- 9** (i) List four factors concerning the liabilities which should be taken into account when determining investment strategy. [3]
- (ii) Explain the significance of the covariance of the return for an individual investment with the return of the portfolio, when selecting individual investments for a portfolio. [2]

The director of a small business has managed her company from a wheelchair for many years. She has decided to retire, aged 65, to look after her husband, aged 70, who is suffering from Alzheimer's disease (a progressive brain disorder). They have no dependants. Their principal source of wealth, other than their residence which is specially designed for wheelchair access, is tied up in the business. She has agreed to sell the business for a cash sum of £1 million, which will be used to provide for their future.

- (iii) (a) Describe the information you would require in order to enable you to assess their financial liabilities.
- (b) Propose an asset mix which is appropriate to meet these liabilities, giving reasons for the weighting and choice of each asset. [9]
- [Total 14]

- 10** Over the last 12 months, the dividend yield on a share has doubled so that it is now twice that of the market.
- (i) Discuss possible underlying reasons for the doubling of the yield. [3]
- (ii) State three accounting ratios you would use to conduct further analysis, explaining the relevance of each ratio, in the specific circumstances of this share. [3]
- [Total 6]

- 11** For several years, the equity investments of a pension fund have been allocated between two index tracking funds. One fund tracks the performance of the largest 100 listed global companies (ranked by market capitalisation). The second fund tracks the largest 100 domestic companies (ranked by market capitalisation) listed in the major developed country in which the pension fund's liabilities are domiciled.

Over the years, the domestic fund has performed better than the global fund. You have been asked to advise whether the equity allocation to the two funds should be re-balanced.

Discuss briefly the issues which you would consider and the calculations you would make before deciding whether it is appropriate to re-balance the holdings in the two funds. [6]

- 12** (i) You intend to build a risk model for the purpose of capital project evaluation. Define risk and describe how you would incorporate risk into your model. [3]

For many years the inhabitants of two islands have travelled between the islands in boats and car ferries. A major construction company is planning to build a toll bridge as a link between the two islands. They have asked you to conduct a risk analysis of the project.

- (ii) Describe the steps which you would take to identify the risks facing this project. Include three examples specific to the toll bridge in your answer. [4]

- (iii) List four methods of mitigating risk in a capital project.

For each of the four methods listed, include an example of a risk which is specific to the toll bridge project, and which could be mitigated in this way (provide a different risk example for each of the four mitigation methods). [4]

[Total 11]