EXAMINATIONS

April 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 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 Describe, giving formulae, two methods by which an index representing capital movements can be adjusted to produce a total return index, i.e. including capital growth and divided income, for an equity market.

Discuss the principal limitations of each method. [6]

2 Define and describe the beta of an equity portfolio.

Give two examples, including formulae, of risk-adjusted return measures which make use of the beta of a portfolio. [6]

3 Discuss the main factors which influence the choice of risk discount rate to be used when assessing a capital project.

Describe the additional complications if the assessment were to take account of separate borrowing and lending rates. [10]

4 A call option on a particular share is at the money and is offered to you at a premium of 10% of the exercise price. The only asset you have is a cash deposit equal to the call option premium (interest on this cash deposit can be ignored). Contract profit at expiry is defined as the excess return over cash on deposit.

Explain, both in words and using a diagram, the relationship between contract profit and share price. [6]

5 (i) Define the terms initial margin, settlement price and variation margin, and explain why margin is levied, in the context of exchange-traded futures. [4]

(ii) State the advantages and main disadvantage of dealing in derivatives on an exchange compared to dealing in the OTC market. [3]
[Total 7]

6 (i) Define volatility for a fixed interest bond, using a formula. [1]

(ii) Bond A has an annual coupon of 6% and is redeemable in 3 years. Bond B also has an annual coupon of 6% but is redeemable in 30 years. The volatility of Bond A is 2.673 and the volatility of Bond B is 13.765.

Estimate the % change in price for each bond, if the yield curve changes such that yields at the short end rise by ½% and yields at the long end fall by ½%. [3]

(iii) Outline a scenario of current and future inflation which is consistent with this change in the yield curve. [3]

[Total 7]

7 (i) State a formula relating the rental yield of properties to the dividend yield on equities. Suggest an alternative formula appropriate for properties with low rental growth, stating any assumptions. [3]

(ii) Explain the difference between portfolio-based indices and barometer indices for property investments.

Comment on the suitability of each of these types of index for assessing the performance of a property portfolio. [3]

[Total 6]

8 List the taxation factors which an individual will consider in selecting investments which maximise the after tax return. [6]

9 Outline the additional difficulties which face an analyst conducting fundamental investment analysis of a company based and operating in Latin America. [6]

10 A listed company has a long record of strong sales and profits growth relative to its competitors within an industry where the market has been steadily expanding. The company has recently reported results which show an unexpected decline in profits. The share price, which had been performing well in recent years, has fallen sharply.

You are an investment analyst new to the sector.

Explain in detail the investigations you would conduct and the comparative factors you would assess in carrying out an analysis of the prospects for the company and its relative attractiveness within the sector at the current share price. [11]

11 Economic growth has been strong for a number of years in a medium sized developed country. In order to curb inflation the central bank has raised short term interest rates substantially over the last few months.

Describe how the economic situation may develop over the next two years and how this is likely to affect the level of bond and equity markets. [15]

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12 (i) State the relationship between the total return on equities and the risk free rate of return, expected inflation and the equity risk premium. [2]

(ii) Explain the effect on the components of the relationship in (i) at the point when a country enters into a prolonged recession. [6]

(iii) In the light of these poor domestic prospects, resident investors in the recession-troubled country in (ii) above are considering switching into shares in a neighbouring country. Owing to inflationary problems in this neighbouring country, it has very high interest rates and very strong nominal dividend growth.

Discuss the implications of this investment strategy. [6]
[Total 14]