EXAMINATION

24 September 2008 (pm)

Subject ST5 — Finance and Investment
Specialist Technical A

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 all 7 questions, beginning your answer to each question on a separate sheet.*

6. *Candidates should show calculations where this is appropriate.*

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 the 2002 edition of the Formulae and Tables and your own electronic calculator from the approved list.

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1 (i) Set out a formula for calculating the information ratio for a portfolio that contains two asset classes, defining all terms used. [3]

Asset Class	*Annual Return (%)*	*Tracking Error (%)*	*Asset Class Correlations*		
			1	*2*	*3*
1	10.0	10.0	1.00		
2	7.0	5.0	-0.25	1.00	
3	5.0	5.0	0.25	0.50	1.00
Risk Free	4.0				

(ii) Using the above data, for each pair of asset classes calculate:

(a) the proportions of each class that satisfy a minimum variance portfolio
(b) the information ratio for each portfolio

[8]

(iii) Comment on the results in (ii) (b). [2]

(iv) Explain the effects that gearing and being able to sell short might have on portfolio returns and the information ratio. [3]
[Total 16]

2 You are the property fund manager at a large life insurance company and have been approached by a small retail chain that wishes to sell and leaseback the six stores in its chain.

Discuss the factors that you would consider in determining the sale price. [10]

3 A passive investment manager is planning to launch a high alpha fund with the aim of outperforming a global index by 3% p.a. The investment manager believes the outperformance can be generated from three sources:

- gaining superior information
- processing the information better
- eliminating behavioural bias

(i) (a) Explain how outperformance might be generated from each of the three sources.

(b) Comment on whether the target return can be generated by use of these sources.

(c) Comment on whether the 3% p.a. target is reasonable.

[11]

(ii) Discuss the implications the fund launch might have on the structure and management of the investment management department. [7]
[Total 18]

4 A developing country has recently established a stock exchange. There are currently 7 stocks listed, but only one pays a dividend. Dividends are currently paid to investors free of tax. The company that operates the exchange wishes to create an index to measure the performance of the listed companies.

(i) Give the formula that could be used to calculate the index value. [2]

It has been decided that the initial value of the index will be 10,000 and details of the 7 companies are:

Company	*Initial Market Cap (EDUm)*	*Initial Price (C)*	*Price at end of first day (C)*	*Price at end of second day (C)*
A	500	200	205	205
B	300	150	151	155
C	200	50	50	52
D	700	350	345	348
E	800	400	402	380
F	900	100	102	103
G	1,000	500	505	503

(Initial Market Capitalisation is measured in millions of Equivalent Dollar Units "EDU" and Prices are in Cents where 100 Cents = 1 EDU)

Company E had declared a dividend of 25 and the stock went ex-dividend at the beginning of the second day.

(ii) Calculate the value of the index at the end of day 1 and day 2. [4]

(iii) Calculate the total return produced by the index over the two days. [2]

(iv) Outline the practical problems that would be encountered by an overseas pension fund investment manager in using this index as a basis for index-tracking management. [9]
[Total 17]

5 You are an investment manager working for the investment arm of a small life insurance company that has used exchange-traded options as part of its equity portfolio management.

(i) List the uses of equity market indices. [4]

(ii) List the main features and characteristics of the main equity indices of UK, USA, Japan, Germany and France. [5]

(iii) State the main uses of exchange-traded options. [2]

(iv) Outline the appropriateness of using exchange-traded options for your company. [4]
[Total 15]

6 A wealthy UK investor is considering buying shares in a luxury car producer based in an emerging country. The unlisted car producer has been running for less than 12 months, but has decided to float its equity on the local stock exchange in 6 weeks time. The investor has been offered shares at a price which is at a 10% discount to the expected flotation price.

(i) Outline the investigations that the investor should carry out prior to deciding whether to invest in the new company. [5]

(ii) Outline the difficulties the investor might encounter when trying to research, analyse and place a valuation on the company. [2]

The investor expects the global economy to slow in the next 12 months and enter into a recession.

(iii) Discuss how the company and the quoted shares might be affected if the investor's predictions are correct. [3]

The investor decides not to invest in the stock directly, but takes out a 3 month call option on the stock at a price which is 5% below the expected flotation price of 50p. The company floats later in the month. On the first day the stock increases by 3% over the actual flotation price of 45p.

(iv) Define the term "out of the money" for both a put option and a call option giving a brief example of each. [2]

(v) Outline how the price of the call option is likely to have changed in the six weeks since purchase. [3]

[Total 15]

7 The government of an emerging country is encouraging local companies to set up pension funds for their employees. Historically the government has provided retirement provision and, therefore, there has been a lack of regulation of institutional investments. You are a financial advisor to the government and have been asked to develop a regulatory framework for the new pension funds.

(i) State why it is important for there to be regulation of institutional investments. [3]

(ii) Outline the principles you would recommend adopting under legislation for institutional investment. [6]

[Total 9]

END OF PAPER