EXAMINATION

28 April 2010 (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 before 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 six 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.

1 (i) Describe the key characteristics needed in a commodities index before an exchange can use the index as a basis for launching a suite of derivatives contracts. [5]

(ii) Explain, by reference to hedging activity, why it would be reasonable to expect that derivatives based on a commodities index constructed using a broad range of basic commodities would be more liquid at longer maturities (e.g. over 1 year) than derivatives based on the individual commodities. [4]

[Total 9]

2 (i) State six factors that need to be considered when analysing the taxation of investment returns. [3]

A tax authority is considering introducing Capital Gains taxation of unrealised gains.

(ii) Discuss the potential advantages and disadvantages of this proposal. [8]

[Total 11]

3 The following data has been extracted from the annual report of a UK trading company.

Income statement

	£000's
Revenue	5121.5
Cost of sales	(3458.5)
Gross profit	1663.0
Other expenses	(1099.3)
Operating profit	563.7
Finance income	16.3
Finance costs	(37.9)
Net profit before tax	542.1
Tax	185.1
Profit after tax	357.0

Balance sheet

Assets			
	Non current assets		2355.5
	Current assets		
	Inventories	364.4	
	Trade receivables	192.6	
	Other current assets	13.9	
	Cash	88.2	
			659.1
	Total assets		3014.6

Equity and liabilities

Share capital	673.7	
Other reserves	491.2	
Retained earnings	757.8	
		1992.7
Non current liabilities		
Long term borrowings	348.8	
Current liabilities		
Trade and other payables	548.4	
Current tax payable	194.7	
	743.1	
Total liabilities		1091.9
Total equity and liabilities		3014.6

(i) Calculate the main ratios for assessing performance that are likely to be of interest to shareholders and managers, including ratios on profitability and liquidity. [8]

(ii) Comment on the financial position of the business as demonstrated by these figures. [7]
[Total 15]

4 A wealthy investor's current asset allocation is 90% equities and 10% cash. The allocation to equities is mainly invested domestically, with a small allocation overseas. The domestic equity holdings represent about 5% of the total market capitalisation of the newly established exchange. The investor wants to change the allocation to 40% cash, 60% domestic bonds and has approached a transition manager to implement the new strategy.

(i) Suggest reasons why the investor might want to change the current asset allocation. [3]

(ii) Outline the costs the transition manager should highlight prior to executing a trade on behalf of the investor. [3]

(iii) (a) Describe the problems that could be incurred with implementing the new asset allocation.

(b) Suggest potential solutions to the problems identified in (a) and their limitations. [12]
[Total 18]

5 Following recent economic turmoil in the credit markets, a consortium of governments has proposed launching a new global currency unit, the “GCU”, that will be freely convertible and provide greater security and independence from each government’s fiscal actions than the currencies currently in existence.

(i) Describe the types of investor who will be attracted to GCU-denominated investments at the time of the launch of the GCU. [5]

(ii) Compare the risk-free overnight interest rate that is likely to be available in the GCU with that for other major currencies such as the Dollar, Euro, Yen and Sterling. [4]

(iii) Explain how you would expect the term structure of the GCU swap curve to compare to the US Dollar swap curve shortly after the GCU is successfully launched. [9]

(iv) Explain how your answer to (iii) would differ for the Euro swap curve. [2]

[Total 20]

6 A charity and an insurance company invest their assets with the same investment manager. The finance directors of the two institutions, who know each other well, are discussing the performance of the investment manager over dinner. They are surprised that the returns of their respective portfolios have differed considerably over the last year.

(i) Suggest reasons why the performance of the two portfolios might differ. [3]

The following portfolio performance and benchmark performance results have been provided by the insurance company.

The strategic asset allocation is 10% domestic equities, 25% overseas equities, 15% cash and 50% bonds.

The portfolio at the start of the year was £2.6m with £1.02m invested in equities in line with the equity benchmark split. The cash value at start of the year is £410,000.

Value at the end of	*Quarter 1*	*Quarter 2*	*Quarter 3*	*Quarter 4*
Domestic Equities value	314.7	335.2	266.2	270.2
Benchmark return	7.4%	6.5%	–7.0%	2.0%
Overseas Equities value	801.5	777.4	612.7	704.6
Benchmark return	10%	–4.2%	–11.0%	12.0%
Cash value	418.2	426.6	439.4	443.8
Benchmark return	1.5%	2.0%	5.0%	1.0%
Bonds value	1216.8	1277.6	1366.1	1420.8
Benchmark return	6.0%	7.0%	2.0%	4.0%

(all figures in £000's)

The portfolio is rebalanced at the end of the second quarter back to the strategic benchmark.

(ii) (a) Calculate the quarterly and the yearly total portfolio returns.

(b) Calculate the quarterly and yearly benchmark returns.

(c) State the under or outperformance of the fund relative to the benchmark for each quarter and for the year.

State any assumptions you make. [8]

(iii) Calculate, for each quarter, the returns attribution from:

- Stock performance for each asset class
- Stock performance at the total fund level
- Asset class performance at the total fund level

showing whether the effect had a positive or negative impact on the performance of the portfolio relative to the benchmark. [8]

(iv) Explain the limitations and disadvantages associated with measuring the performance of the investment manager. [8]

[Total 27]

END OF PAPER