EXAMINATION

13 September 2005 (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 9 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.

1 Define the role of a custodian, and list the services that they might offer in addition to document safe keeping. [4]

[Total 4]

2 (i) Explain which of the two types of bond portfolio switches are more likely to be carried out by the following type of investor:

(a) A liability driven investor, investing in bonds to match liabilities of a particular duration.

(b) An unconstrained investor, who is investing in bonds to maximise returns relative to LIBOR.

[2]

(ii) Explain why an analysis of reinvestment rates might mean an investor favours investment in a 10 year bond with a 5% coupon over investing in a 20 year bond with a 10% coupon, when the yield on the longer bond is 0.5% p.a. higher. [2]

(iii) Set out the processes involved in assessing whether or not there is a potential yield difference between a 10 year AA rated corporate bond and a 10 year government bond that can be exploited. [4]

[Total 8]

3 (i) Describe the critical difference between a mortgage backed security and a regular fixed income security. [3]

(ii) A collateralised loan obligation (CLO) is backed by a pool of residential mortgages and divided into three investment classes W, X and Y. Scheduled and pre-payment principal repayments are channelled to class W investors until that group of investors has been completely repaid. Thereafter, scheduled and pre-payment principal repayments are channelled to class X investors until that group of investors has been completely repaid. When class W and class X investors have been fully repaid, all remaining principal repayments are directed to class Y investors.

(a) State, with reasons, which class of investor bears the most pre-payment risk.

(b) Rank in order of increasing duration the three investment classes and give a reason for your answer.

(c) Describe, using a simple example, how the par value of the three classes influences the pre-payment risk of class Y investors. [5]

[Total 8]

4 (i) Describe the main aims of the field of Behavioural Finance as applied to investment management. [4]

(ii) Explain how Behavioral Finance arguments might be used by an equity investment manager to explain why they hold a persistently underperforming stock in a portfolio rather than selling out of the position and re-investing in an alternative stock. [5]

(iii) Outline how the irrational actions suggested by Behavioral Finance might be eliminated. [3]
[Total 12]

5 (i) Describe, with reasons, the types of merger that a UK based retail bank might consider with a similar sized organisation operating in the UK. [8]

(ii) Describe the other factors that would need to be considered if the proposed merger was to be with an organisation domiciled in another EU country. [6]
[Total 14]

6 The trustees of a pension fund have appointed an investment manager to invest in global equities and bonds. The investment manager's performance will be compared with a benchmark equally divided between two representative broad market indices. The trustees wish to impose limits on the investment manager's ability to deviate from the 50/50 proportions to which the benchmark will rebalance on a quarterly basis.

(i) Explain why the investment manager might actively deviate from the benchmark asset allocation on a short-term basis. [4]

(ii) List the factors that should be considered by the trustees in setting the limits. [3]

(iii) Outline appropriate constraints on these factors. [5]
[Total 12]

7 You are the investment manager of a life assurance company that has substantial assets under management and invests a significant proportion of these assets in alternative investments and derivative-type structures.

A sales person from an investment bank approaches you regarding the purchase of a complex derivative product.

(i) List the key questions regarding the derivative product that you would ask the sales person. [5]

(ii) Describe the factors which you would consider in assessing the characteristics of the derivative in terms of its fit with the life assurance company's investment portfolios. [5]
[Total 10]

8 (i) Explain why equities are usually analysed in sector or industry groupings. [5]

(ii) (a) Discuss the advantages and disadvantages of this sub division.

(b) Suggest, with reasons, two possible alternative groupings.
[5]

(iii) State the features that characterise each of the following economic groups:

- General Industries
- Consumer Goods
- Utilities [6]

[Total 16]

9 You are an investment consultant to the trustees of a pension scheme. You are given the following total return data for the fund and the indices included in the benchmark.

	Fund Returns			*Index Returns*		
	Year 1	*Year 2*	*Year 3*	*Year 1*	*Year 2*	*Year 3*
UK Equities	10.1%	–2.5%	17.6%	8.5%	–5.4%	16.0%
Overseas Equities	14.2%	–3.2%	13.2%	13.5%	2.1%	1.0%
UK Bonds	6.4%	3.1%	4.1%	7.2%	4.5%	5.4%
Overseas Bonds	3.2%	1.8%	1.5%	8.1%	2.8%	3.1%

The asset mix of the fund and of the benchmark at the start of year 1 was as follows:

	Fund	*Benchmark*
UK Equities	45%	60%
Overseas Equities	30%	20%
UK Bonds	15%	10%
Overseas Bonds	10%	10%

You may assume that there is no rebalancing at any time. No contributions were paid in and no benefits were paid out during the period.

(i) Describe the principal sources of deviation between a fund and its benchmark. [2]

(ii) Calculate:

(a) the total return for the fund
(b) the benchmark return
(c) the respective contributions from the items in (i)

[10]

(iii) Comment on the results of your calculations. [4]

[Total 16]

END OF PAPER