

EXAMINATION

16 April 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.

- 1**
- (i) List the types of activity central banks engage in. [3]
 - (ii) Define liquidity risk. [2]
 - (iii) Explain why it might be desirable for a central bank to act as a lender of last resort to private sector banks, commenting on the nature of banking assets and liabilities. [4]
 - (iv) Outline the disadvantages of there being a lender of last resort system in place. [3]
 - (v) Describe ways in which these disadvantages could be mitigated. [2]
- [Total 14]

- 2** The trustees of a UK pension fund with £800 million in actively managed assets are looking to restructure the assets in order to more closely match the liabilities. The current and target structures of the assets are given in the table below. Assets are managed by three managers currently. All three managers are to be replaced with two new managers.

<i>Current Assets</i>	<i>Current Value (£m)</i>	<i>Target Assets</i>	<i>Target Value (£m)</i>
US equities	400	UK equities	300
UK equities	100	UK gilts	400
Emerging market equities	100	Overseas bonds	100
Private equity	150		
UK gilts	50		
Total	800	Total	800

The trustees want to move to the target structure immediately but have not yet chosen the managers for the target structure.

- (i) Describe the biggest mismatches between the current and target portfolios. [2]
- (ii) Outline how the trustees can move the assets towards the target structure before the new managers for the target portfolio have been appointed. [4]
- (iii) Outline the limitations and downsides of the strategies proposed. [4]

The trustees finally decide on the target managers and want to go ahead with the move to the new structure, however market conditions have changed and liquidity has decreased and volatility has increased.

- (iv) List the various costs that are incurred when transferring assets. [2]
- (v) Describe how the costs identified in (iv) will be affected by the current market conditions. [3]

[Total 15]

- 3** You are working for a life office in their investment team and have been presented with the opportunity to buy for £150m a freehold on an office block that is currently occupied by a bank. Two years ago, the bank had arranged a 32 year lease with the current freeholder, as follows:

Term of lease 32 years

Annual rent First 3 years £9m p.a., payable annually in advance

Thereafter £9m p.a. plus 5 years' cumulative inflation,
increasing in line with future inflation, payable
annually in advance

Ground rent £100 p.a. payable annually in advance

Inflation lag 3 months

- (i) Write down an equation for the present value of the remaining rental payments, expressed in terms of zero coupon interest rates (z_t) and inflation rates ($z_{\text{inf},t}$) [3]

When the bank hears that the freehold is in the process of being sold, it offers to set up an inflation swap to exchange the inflation-linked rental payments for fixed payments. This would be a separate contract to the lease, and would be subject to daily collateralisation.

- (ii) Describe the cashflows that would be paid and received under the inflation swap with the bank. [4]
- (iii) Explain why the life office might feel the inflation swap makes this transaction more attractive, despite paying a margin to the bank arranging the swap. [2]
- (iv) Describe the various risks that apply to the life office under the freehold, the lease and the swap, and explain how they might vary over time and according to economic factors. [9]
- [Total 18]

- 4** (i) Describe the two principal global equity index series. [2]
- (ii) List five ways in which a large institutional investor can achieve the returns (gross of costs and tax) of a global equity index. [3]
- (iii) Explain why this type of index would be more useful for performance measurement for an overseas investor than the most widely quoted local equity index. [2]
- (iv) Explain why this type of index would be less suitable than the most widely quoted local equity index as a base for exchange-traded derivative contracts. [5]
- [Total 12]

- 5** (i) List the principal aims of financial regulation. [2]
- (ii) (a) Define a self-regulatory system.
- (b) Discuss the advantages and disadvantages of self regulation in the investment management and the securities industries. [6]
- [Total 8]

6 A risk averse individual coming up to retirement age has around 1% of their retirement funds invested in the shares of a highly respected bank. The bank has historically been involved in low risk activities, producing steady returns. Since new management was put in place 3 years ago the bank has been involved in a number of high profile risky investments which have gone wrong. As a result there has been a sharp decline in the share price.

- (i) Outline how the change in management has affected the risk and return profile of the individual's investment portfolio. [2]

The individual had the opportunity to sell the stock 6 months ago, but decided to hold onto the stock. Since then, the share price has fallen further.

- (ii) Outline the various reasons why the stock might not have been sold. [5]
- (iii) Discuss whether the investment is suitable for the individual's circumstances. [2]

The investor believes the share price has reached its lowest point and expects it to rise in the near future. The investor wants to try to make back some of their losses.

- (iv) Describe a technique, using the current share price, that the investor could use to make a profit on their holding without selling any shares. [2]

The investor decides to use the technique in (iv).

- (v) Describe the effect on the investor's exposure to the bank if the bank's share price rose by 30%. [2]
- (vi) Describe the effect on the investor's exposure to the bank if the bank's share price fell by 30%. [2]
- [Total 15]

- 7**
- (i) List six factors that are important to take into account when valuing a company. [3]
 - (ii) List six sources of information that an analyst may use when valuing a company. [3]
 - (iii) Describe how the P/E ratios of the following types of company may change through an economic cycle:
 - (a) a house builder
 - (b) a tobacco company
 - (c) a retail bank[9]

Rather than look at P/E ratios an analyst has decided to value the companies within his sector on a discounted cash flow basis.

- (iv) Discuss the advantages and disadvantages of adopting this methodology. [3]
- [Total 18]

END OF PAPER