EXAMINATION

22 September 2008 (pm)

Subject SA5 — Finance
Specialist Applications

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 both 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 In response to the default by a large, well-regarded United States based global financial institution, banks in the United States have become highly reluctant to hold bonds issued by other banks. The Federal Reserve has responded to the events by significantly lowering short-term interest rates.

(i) Explain why the Federal Reserve has acted in this way. [14]

The Bank of England has thus far maintained rates at their high levels in order to combat rising UK inflation.

(ii) (a) Outline two responses the Bank of England could make following the default, taking into consideration the action of the Federal Reserve. In each case, state what is the Bank of England's main rationale for this response.

(b) Discuss the main advantages and disadvantages of each response with reference to the goals of the Bank of England.

(c) State with reasons which response you would recommend.

[14]

The investment firm you work for sells a range of fixed income products. Customers who bought one product have been led to expect the portfolio will not be invested in securities with a credit rating below AA (or equivalent), and to date your firm's portfolio managers have relied on ratings supplied by global credit rating agencies when deciding which instruments to include in the portfolio. In the wake of the above default, the credit rating agencies have stopped publishing their ratings information.

(iii) Outline how credit ratings could be obtained or computed so that your firm could continue to manage the product in line with its customers' expectations. [12]

(iv) List the main data items that will be required if your firm chooses to carry out its own credit ratings. [3]

(v) Outline the impact the default will have on the global mergers and acquisitions market. [7]

[Total 50]

2 A bank has the following assets:

Cash	£100m
Fixed interest investments at call	£200m
Mortgage loans to owner occupiers	£500m

(i) Calculate the minimum capital requirement of the bank under the Basel Accord. [2]

(ii) Describe two methods of converting derivatives into credit equivalents for the purpose of the capital calculation. [5]

(iii) Describe how the standardised approach to credit risk under Basel II differs from the methods described in part (ii) and describe the main problem with the standardised approach. [2]

The bank has elected to securitise part of its residential mortgage book.

(iv) Set out reasons why the bank may have chosen this course of action. [6]

(v) Describe the types of security that could be created by this action. [4]

(vi) (a) State the two main risks which will concern investors when buying these securities.

(b) Give ways that the securitisation could be structured to mitigate these risks. [9]

(vii) Describe a process for valuing mortgage-backed securities where borrowers are expected to prepay their mortgage when refinancing rates fall below the loan rate. Include in the description the inputs the process requires. [10]

(viii) Suggest, with reasons, two modelling techniques that can be used to speed up the computations being made in the process described in part (vii). [2]

(ix) Define the term "option-adjusted spread" and describe how you would use your process in part (vii) to calculate it. [4]

(x) (a) List four factors, aside from interest rates, that a prepayment function may take into account.

(b) Describe why they are applicable. [6]

[Total 50]

END OF PAPER