UNIVERSITY OF LONDON

279 0100 ZA

BSc degrees and Diplomas for Graduates in Economics, Management, Finance and the Social Sciences, the Diploma in Economics and Access Route for Students in the External Programme

Banking Operations and Risk Analysis

Wednesday, 14 June 2006 : 2.30pm to 5.30pm

Candidates should answer **FOUR** of the following **EIGHT** questions: **ONE** from Section A, **ONE** from Section B and **TWO** further questions from either section. All questions carry equal marks.

Workings should be submitted for all questions requiring calculations. Any necessary assumptions introduced in answering a question are to be stated.

A hand held calculator may be used when answering questions on this paper but it must not be pre-programmed or able to display graphics, text or algebraic equations. The make and type of machine must be stated clearly on the front cover of the answer book.

PLEASE TURN OVER

SECTION A

Answer **one** question from this section and **not more than** a further **two** questions. (You are reminded that four questions in total are to be attempted with at least one from Section B.)

1. Explain the concept of 'delegated monitoring', and appraise the benefits and risks associated with the liquidity and maturity transformation services offered by banks.

2. Explain the alternative methods available to banks for 'credit risk management' and describe the features and uses of credit derivatives.

3. Describe the practicalities involved in a securitisation transaction, and comment on the implications of securitisation for bank risk and balance sheet management.

4. Critically assess the relative advantages of different measures of bank performance, with specific reference to accounting measures and risk-adjusted performance measures.

SECTION B

Answer **one** question from this section and **not more than** a further **two** questions. (You are reminded that four questions in total are to be attempted with at least one from Section A.)

5. Consider two assets with the following expected returns and standard deviations:

Asset	E(R)	σ
1	0.14	0.22
2	0.24	0.38

(a) For portfolios formed from these two assets, explain in detail how the portfolio return and variance depends on correlation and asset weights.

(10 marks)

(b) Analyse the insights offered by the capital market line and the security market line in the capital asset pricing model (CAPM) representation of the mean-variance optimisation problem.

(15 marks)

6. Consider the following scenario with three states of nature and three assets:

Security	Price	Payoff ($) State 1	State 2	State 3
A	$0.92	1	1	1
B	$0.55	1	0	1
C	$0.20	1	0	0

(a) Use the above example to explain the role of complete markets and Arrow-Debreu securities in the state preference framework.

(20 marks)

(b) Calculate the risk-free rate of return in the above example, and identify the determinants of Arrow-Debreu securities prices.

(5 marks)

7. Explain the importance of 'absence of arbitrage' arguments in the pricing of currency forwards and the pricing of options using the binomial model.

8. Critically analyse the techniques of delta hedging and Value at Risk (VaR) as tools for risk management and measurement.

END OF PAPER