

This paper is not to be removed from the Examination Halls

UNIVERSITY OF LONDON

279 0121 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

International Financial Markets

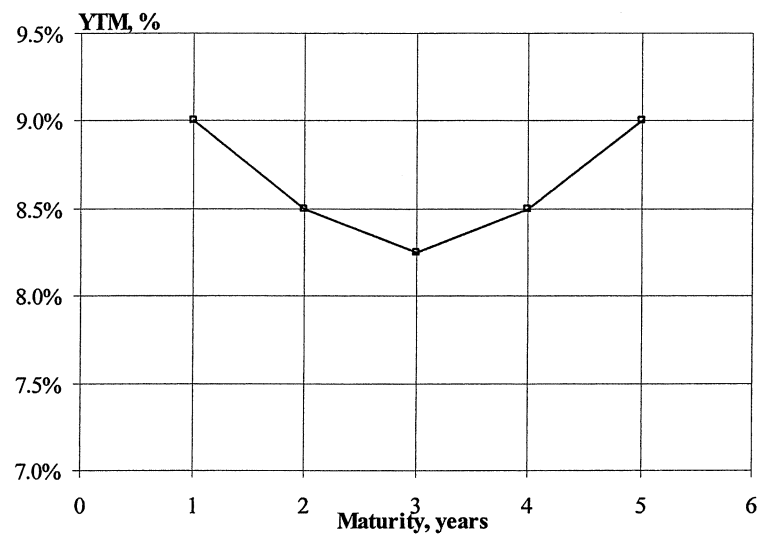
Friday, 19 May 2006 : 10.00am to 1.00pm

Candidates should answer **FOUR** of the following **EIGHT** questions. All questions carry equal marks.

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

1. a The graph below displays the current spot yield curve.



Assuming the expectations hypothesis holds, what is the expected evolution of one-year rates over the next four years? Compute the yield curve next year and draw it on a graph, suitably labelled, along with the current yield curve. Show all calculations. **(10 marks)**

- b. Distinguish between the expectations hypothesis and the segmented market theory. **(15 marks)**

PLEASE TURN OVER

2. Use the prices in the table for this question.

Dollar Spot - Forward Against the Dollar						
Country	Currency	Closing mid-point	Bid / offer spread		One month Rate	
Mexico	(New Peso)	10.9600	550	- 650	10.9921	
South Korea	(Won)	1177.55	750	- 760	1180.95	

As manager of an international equity mutual fund, you plan to sell shares denominated in Mexican New Pesos and valued at NP5 million and purchase an equivalent amount of equities denominated in South Korean Won.

- a.
 - i. Working through the US dollar, what Won value of fund would you hold? You will assume the transaction can be done at the prices shown. Calculate the Won/NP cross-currency rate you are implicitly accepting.
 - ii. If the sales are expected to be done over one month what rate could you fix for the currency exchange?
 - iii. What can be said about interest rates in the US, Mexico and South Korea? Give your assumptions and explain your reasoning. **(15 marks)**
- b. A dealer offers spot prices Won/NP which are 1% too high for both bid and offer. What arbitrage profit can you make using a principal of \$1,000,000? Explain each step of the process. **(10 marks)**

3. a. Samuel Samosir who trades in currencies for Peregrine Investments in Jakarta, Indonesia, focuses nearly all of his time and attention on the US\$/Singapore \$ (\$/S\$) cross rate. The current spot rate is \$0.6000/S\$. After considerable study this week, he has concluded that the Singapore dollar will appreciate versus the US dollar in the coming 90 days, probably to about \$0.7000/S\$. he has the following options on the Singapore dollar to choose from:

Option	Strike	Premium
Put on S\$	\$0.6500/S\$	\$0.00003/S\$
Call on S\$	\$0.6500/S\$	\$0.00046/S\$

Should Samuel buy a put or a call on Singapore dollars?

What is Samuel's break-even price?

What is Samuel's gross profit and net profit (including premium) if the spot rate at the end of the 90 days is indeed \$0.7000/S\$?

What is Samuel's gross profit and net profit (including premium) if the spot rate at the end of the 90 days is \$0.8000/S\$? **(15 marks)**

- b. Using a binomial option pricing model examine the difference in pricing of two call options, one on a share with high volatility and one on a share with low volatility. Both options share the same price for the underlying, the same exercise price and the same time to expiry. **(10 marks)**

4.

- a. Apart from exploiting a comparative advantage, for what reasons might one wish to use an interest rate swap. **(10 marks)**

- b. A manufacturer wishes to raise £20,000,000 for 5 years for an investment in a new welding facility. It can borrow from banks at a rate of LIBOR+2 per cent per annum but would have to pay 7 per cent per annum to borrow in the fixed rate market. It wishes to use floating rate finance.

A large legal practice needs the same borrowing to finance an office development. It can only borrow pounds at 8 per cent per annum in the fixed rate market but can access bank funds at LIBOR+2 ¼ per cent per annum. It wishes to use fixed rate finance.

As a bank, set up a bid/offer quote for LIBOR that will benefit both companies and still provide compensation for itself. Explain the swap and show the gains to all parties. **(15 marks)**

PLEASE TURN OVER

5. How do eurocurrency markets differ from domestic money markets?
Examining the features of roll-over and syndicated loans, plus any one other instrument of your own choosing, demonstrate their attractiveness to market participants.

6.
 - a. March 2004 Australian dollar futures have a price of \$0.7315.
Contract size is A\$ 100,000.
 - i. An American exporter is due to receive A\$15 million in March.
What is the exporter afraid of? Construct an appropriate hedge for the exposure and calculate the \$ revenue that is locked in. **(10 marks)**
 - ii. Calculate the profit/loss on the futures position should rates in March fall to 0.6 \$/A\$, or rise to 0.8 \$/A\$ **(5 marks)**
 - b. Assess the relative importance of interest rates, the spot exchange rate and expectations in determining the price of a currency future? **(10 marks)**

7.
 - a.
 - i. Explain how forward rate agreements (FRAs) are priced. **(5 marks)**
 - ii. Bank A sells to bank B a €2,500,000 FRA for a three-month period beginning three months from today and ending six months from today (a “three against six”). The agreed rate is 3 % per annum. On maturity the settlement rate is 4% per annum. Calculate the losses/ gains for the two banks. **(5 marks)**
 - b. What are the advantages of an FRN over (i) a roll-over loan and (ii) a fixed coupon eurobond? **(15 marks)**

- 8 a. The correct measure of risk for an inefficient portfolio or individual asset is beta, but the correct measure for an efficient portfolio is standard deviation.

Critically discuss.

(15 marks)

- b. Returns and standard deviations for two securities are given in the table. The correlation between returns is 0.

	X	Y
Expected returns	15%	10%
Std. Deviation	12%	18%

- i Calculate the return and standard deviation of the portfolio given that 40% of the funds are put into X and 60% into Y. **(5 marks)**
- ii Construct a portfolio that dominates the above combination. **(5 marks)**

END OF PAPER

