

Third Semester M.B.A. Degree Examinations
June 2009
(Distance Education)

MBA DP - 305 : FINANCIAL DERIVATIVES

Time : 3 Hours

Max. Marks : 75

SECTION-A

Answer the following sub-questions in two or three sentences each. Each sub-question carries TWO marks. 5x2=10

1. a) Define put-call parity.
- b) What is a straddle?
- c) What is the principle of contango?
- d) Define cross currency cap.
- e) What do you mean by delta-hedge?

SECTION-B

Answer any FIVE of the following. Each question carries SIX marks. 5x6=30

2. State various problems encountered when using binomial option pricing model to value fixed income securities options.
3. What is the differences between the ways on which prices are quoted on the forward rate spot market and futures market? Discuss with suitable illustrations.
4. "Do ledgers need speculators in future market? Critically evaluate the statement?"
5. Suppose that on July 25, a firm knew that it will have to borrow \$10 million on Sep 22 for three months A bank agrees to provide these funds at 1% above whatever the three month LIBOR is on September 22. By chance September 22 is also the last trading of the Sep. 2002. euro dollar futures contract. Firm is concerned about that by that time the LIBOR may rise. How company can ledge its risk by using Eurodollar futures if on July 25 euro dollar price is 91,72 and implied three month eurodollar rate is 8.28%. The three month LIBOR on July 25 is 8.375%.
6. Following are the interest rates on a particular date :

	Borrowing rate	Lending rate
British £ (1 yr)	4.00% p.a.	4.25% p.a.
Indian Re (1 yr)	5.50% p.a.	6.00% p.a.
Spot rate (Re/£)	72.5000/8000	

Calculate the forward buying and selling rates.

7. Elaboratively explain various risks the Individuals and the organizations get exposed to when dealing in International markets? Quote various strategies that provide for efficient management of risk.

SECTION-C

Answer the following questions. Question Nos.8 & 9 carry 10 marks each and 10 carries 15 marks.

8. a) A trader in Euromark futures on LIFFE is considering a butterfly trade using the LIFFE designated strategy 'trade' whereby the butterfly can be traded on a single transaction. Euromark futures prices are as follows :

	Bid	Offer
15 Dec 94	94.70	94.71
16 Mar 95	94.28	94.29
15 June 95	93.83	93.84
14 Sep 95	93.48	93.50
14 DEC 95	93.15	93.20

- a) Indicate the prices which would be bid and offered in the market for the butterfly strategy for Dec/Mar/June as a single trade.
- b) Assuming that the trader purchased the butterfly at the offered price what would be the outcome of the strategy under the following out turns?

A trader in Euro mark futures on LIFFE is considering a butterfly trade using the LIFFE "Designated strategy" trade whereby the butterfly can be traded in a single transactions. Euromark future price is

Bid	Offer
15 Dec 94	94.70 94-71

OR

- b) The shares of Big Can Plc stand at \$ 110. Put options with a strike price of \$ 120 are priced at \$ 14.
- a) What is the intrinsic value of the options?
- b) What is the time value of the options?
- c) What might cause the time value to double with no change in intrinsic value?
- d) If the share price fell to \$ 50 by expiry date, What would be the profit/loss for the holder and writer of the options?
- e) What is the maximum loss for the writes of the options.

OR

9. a) ICICI Bank wishes to borrow Rs. 50 crores at a fixed rate for 10 years and has been offered either 10% fixed (or) raise month LIBOR + 1%. IDBI Bank wishes to borrow Rs. 50 crores at a floating rate for 10 years and has been offered with six month. LIBOR + 0.5% (or) 9% fixed on the basis of above figures:

- a) How many they enter into swap arrangement in which each benefits equally?
- b) What risk may this agreement generate?

OR

- b) List out various advantages and disadvantages on trading on:
 - a) Futures on commodities
 - b) Futures on stock
 - c) Currency futures
 - d) Interest rate futures
 - e) Forward rate agreements
- a) Consider a European call option on stock when there are ex-dividend dates in two months and four months. The dividend on each dividend date is expected to be 0.50. Current price of share is \$ 40, the exercise price is \$ 40, the stock volatility is 30% p.a., the $R_f = 9\%$ p.a., and time to maturity is six months. Calculate the option price using Black-Scholes model.
- b) What are various strategies available for the investors to optimize his portfolio performance using derivatives?

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