III Semester M.Com. (IB) Examination, January 2019
(CBCS Scheme)
3.1: FOREX MANAGEMENT.

Time: 3 Hours
Max. Marks: 70

*Instruction*: Table A1 and A2 to be supplied to students for question No. 10.

**SECTION – A**

Answer any seven questions. Each question carries 2 marks. (7×2 = 14)

1. a) What is Balance of payment?
   b) What is value dating?
   c) Differentiate spot rate and forward rate.
   d) What are currency futures?
   e) Differentiate fixed and floating rate exchange rate system.
   f) What is transaction exposure?
   g) What is hedging? Mention the internal hedging strategies?
   h) Differentiate caps and collars.
   i) Define financial Swaps.
   j) What is put-call parity?

**SECTION – B**

Answer any four questions. Each question carries 5 marks. (4×5 = 20)

2. Explain the features of foreign exchange market.
3. Explain the differences between futures contract and option contracts.
4. Explain briefly currency Swaps.
5. If the rate of inflation in India and USA are 7% and 4% respectively and if the interest rate in USA is 6%, find the interest rate in India.

P.T.O.
6. From the following particulars examine the arbitrage possibility. Assume an investment of USD 50,000 and determine the profit.

   Spot rate – Rs. 70.90/USD
   6 months forward rate – Rs. 71.50/USD
   6 months annualised interest in USA – 6%
   6 months annualised Interest in India – 9%

7. A stock price is currently USD 40. It is known that at the end of 1 month, it will be either USD 42 or USD 38. The risk free interest rate is 8% p.a with continuously compounding.

   What is the value (premium) of European call option with a strike price of USD 39?

**SECTION - C**

Answer any three questions. Each question carries 12 marks. (3×12=36)

8. A firm, ABC Ltd. needs fixed rate funds which is available at 10.50% to be computed half yearly but has access to cheaper floating rate funds at LIBOR + 0.30%.

   Firm XYZ Ltd. needs floating rate funds available at LIBOR flat, but has access to cheaper fixed rate funds at 9.50% computed half yearly. Both the principal are identical in size and maturity and are in the same currency.

   Design an interest rate swap which is attractive to the firms and the swap dealers commission is 0.10%

9. Briefly discuss the types of forex exposures and the techniques of hedging the exposures.

10. From the following particulars find call and put values (premium) using Black and Scholes model.

   Spot rate – Rs. 70.20 USD. Exercise price – Rs. 70.90
   maturity period – 6 months.

   Continuous compounded interest rate – 10.50% p. a. standard deviation – 0.54.
11. A forex dealer gives the following quotes for Belgian Franc Spot, 1 month, 3 month and 6 month forward to a US based treasurer:

US$ 0.02368/70, 4/5, 8/7, 14/12

a) Calculate the outright quotes for 1 month, 3 month and 6 month forward.

b) If the treasurer wished to buy Belgian Franc three month forward, how much would he pay in dollars?

c) If he wished to purchase US D 1 month forward how much would he have to pay in Franc?

d) Assuming the Belgian Franc is bought what is the premium or discount for 6 month rate in annual percentage?

12. Write short notes on the following.

a) Exchange control.

b) Speculations vs hedging.

c) Purchasing power parity.
III Semester M.Com. (F.A.)/M.F.A. Examination, January 2018
(CBCS) (Semester Scheme)
Paper 3.3 : FOREX AND DERIVATIVES

Time : 3 Hours   Max. Marks : 70

SECTION - A

Answer any seven questions. Each question carries 2 marks. (7x2=14)

1. a) What is Arbitrage ?
   b) What is TT buying rate ?
   c) Define European and American options.
   d) Define financial swap.
   e) What are caps and floors ?
   f) What is translation exposure ?
   g) What are derivatives ?
   h) Distinguish hedgers and speculators.
   i) What is cantago ?
   j) What is VaR ?

SECTION - B

Answer any four questions. Each question carries 5 marks. (4x5=20)

2. A forex dealer gives quotes for USD spot, 1 month forward, 3 month forward and 6 month forward

Rs. 63.70 – 63.90  
1MF 2MF 3MF 6MF

8/9 6/5 7/6

Calculate the outright quote for 1 MF, 3 MF and 6 MF rates. Assuming USD are bought, what is the premium/discount for 3 month forward rate ?

3. Explain the determinants of currency options.

4. Explain the differences between forward and futures contract.

5. What is translation exposure ? Explain the methods under the same.

P.T.O.
6. A call option with an exercise price of Rs. 72 due to expire in 10 days time is selling at Rs. 2.25. The underlying share is selling in the market at Rs. 76. How can an arbitrageur benefit in this scenario, assuming that the contract settlement will be through delivery?

7. Following are the details of cash inflows and outflows in a foreign currency of M/s ABC Ltd. an Indian exporting company which has no foreign subsidiaries.

<table>
<thead>
<tr>
<th>Currency</th>
<th>Inflows (Rs. '000)</th>
<th>Outflows (Rs. '000)</th>
<th>Spot rate Rs.</th>
<th>Forward rate Rs.</th>
</tr>
</thead>
<tbody>
<tr>
<td>USD</td>
<td>4,00,00,000</td>
<td>2,00,00,000</td>
<td>64.14</td>
<td>64.64</td>
</tr>
<tr>
<td>F.Fr</td>
<td>2,00,00,000</td>
<td>80,00,000</td>
<td>7.45</td>
<td>8.12</td>
</tr>
<tr>
<td>U.K.£</td>
<td>3,00,00,000</td>
<td>2,00,00,000</td>
<td>75.57</td>
<td>75.98</td>
</tr>
<tr>
<td>Japen</td>
<td>15,00,000</td>
<td>25,00,000</td>
<td>3.20</td>
<td>2.40</td>
</tr>
</tbody>
</table>

Determine the net exposure of each currency in terms of rupees.

SECTION – C

Answer any three questions. Each question carries 12 marks. (3×12=36)

8. Explain the various types of hedging strategy used to hedge translation exposure.

9. A. U.K. based exporting company has export receivables of US $ 3,50,000 in 3 months. The exchange rates in London are USD/£ 1.5865 – 1.5905
   3 months forward rate – USD/£ 1.6100 – 1.6140.
   Rates of interest in money market
   **Deposit Loans**
   | USD | 7% | 9% |
   | £   | 5% | 8% |

Compute and show how money market hedge can be used. Compare and contrast the outcome of the forward contract.

10. Consider the following information with regard to a call option on the stocks of ABC Ltd.
    - Current market price (Sc) Rs. 115
    - Time period to expiration 3 months
    - Standard deviation (σ) 0.60
    - Continuously compounded risk free interest rate (r) 0.10

Find the value of call option using Black and Scholes model.

11. "Covered interest arbitrage" is an hedging instrument, explain.

12. Discuss the features of foreign exchange market.
(CBCS)  
Paper – 3.1 : FOREX MANAGEMENT

Time : 3 Hours  
Max. Marks : 70

SECTION – A

Answer any seven questions out of ten. Each question carries two marks : \(7 \times 2 = 14\)

1. a) What do you mean by International Fisher Effect ?
   b) What is a Mark-To-Market (MTM) ?
   c) What is meant by Currency Devaluation ?
   d) What do you mean by Exchange traded derivatives ?
   e) Distinguish between ‘Caps and Collars’.
   f) What is the meaning of forward rate agreement ?
   g) Write four advantages of netting.
   h) Consider the following bid-ask prices : Rs 65.00 – 65.75/US$. Find the Bid-Ask spread.
   i) Find out the forward rate differential if spot rate of US$ is Rs. 65.00 and one-month forward rate is Rs. 65.80.
   j) A spot rate is DM = $0.3302-10. Another spot rate is FF = $0.1180-90. Compute the direct quote of FF in Germany.

SECTION – B

Answer any four questions out of six. Each question carries five marks : \(4 \times 5 = 20\)

2. Distinguish between ‘Ask price’ and ‘Bid price’ in foreign exchange.

3. Futures contract as hedging tools and help in protecting the risks associated with uncertainties in exchange rates, explain.

4. How do firms manage economic risk due to fluctuations in forex market ?

P.T.O.
5. Following information is made available:
   Spot rate for US $1 Rs. 66.0123
   180-day forward rate for US $1 Rs. 66.8190
   Annualised interest rate for 6 months – Rupee 12%
   Annualised interest rate for 6 months – US $ 8%
   Explore arbitrage possibility.

6. A customer with whom the PQR Bank had entered into 3 months forward purchase contracts for Swiss Francs 1,00,000 at the rate Rs. 36.25 comes to the bank after two months and requests cancellation of the contract. On this date, the rates are:

<table>
<thead>
<tr>
<th></th>
<th>Spot</th>
<th>CHF 1 = Rs. 36.30</th>
<th>36.35</th>
</tr>
</thead>
<tbody>
<tr>
<td>One month forward</td>
<td>36.45</td>
<td>36.52</td>
<td></td>
</tr>
</tbody>
</table>

Determine the amount of profit or loss to the customer due to cancellation of the contract.

7. Following are the details of cash inflows and outflows in foreign currency denominations of DMS Co. an Indian export firm, which have no foreign subsidiaries:

<table>
<thead>
<tr>
<th>Currency</th>
<th>Inflow</th>
<th>Outflow</th>
<th>Spot rate</th>
<th>Forward rate</th>
</tr>
</thead>
<tbody>
<tr>
<td>US $</td>
<td>4,00,00,000</td>
<td>2,00,00,000</td>
<td>48.01</td>
<td>48.82</td>
</tr>
<tr>
<td>French Franc (FFr)</td>
<td>2,00,00,000</td>
<td>80,00,000</td>
<td>7.45</td>
<td>8.12</td>
</tr>
<tr>
<td>U. K. (£)</td>
<td>3,00,00,000</td>
<td>2,00,00,000</td>
<td>75.57</td>
<td>75.98</td>
</tr>
<tr>
<td>Japanese Yen</td>
<td>1,50,00,000</td>
<td>2,50,00,000</td>
<td>3.20</td>
<td>2.40</td>
</tr>
</tbody>
</table>

i) Determine the net exposure of each foreign currency in terms of Rupees.

ii) Are any of the exposure positions offsetting to some extent?
SECTION – C

Answer any three questions out of five. Each question carries twelve marks : (3 x 12 = 36)

8. Briefly discuss the three kinds of foreign exchange exposure.

9. EFD Ltd. is an export business house. The company prepares invoice in customers’ currency. Its debtors of US $ 10,000,000 is due on April 1, 2016. Market information as at January 1, 2016 is

<table>
<thead>
<tr>
<th>Exchange rates US$/INR</th>
<th>Currency Futures US$/INR</th>
</tr>
</thead>
<tbody>
<tr>
<td>Spot 0.016667</td>
<td>Contract size Rs. 24,816,675</td>
</tr>
<tr>
<td>1-month forward 0.016529</td>
<td>1-month 0.016519</td>
</tr>
<tr>
<td>3-months forward 0.016139</td>
<td>3-months 0.016118</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th></th>
<th>Initial Margin</th>
<th>Interest rates in India</th>
</tr>
</thead>
<tbody>
<tr>
<td>1-Month</td>
<td>Rs. 17,500</td>
<td>6.5%</td>
</tr>
<tr>
<td>3-Months</td>
<td>Rs. 22,500</td>
<td>7%</td>
</tr>
</tbody>
</table>

On April 1, 2016 the spot rate US$/INR is 0.016136 and currency future rate is 0.016134 which of the following methods would be most advantageous of EFD Ltd. ?

i) Using forward contract

ii) Using currency futures

iii) Not hedging the currency risk.

10. From the following information find call and put option values (premium) using Black-Scholes model:

Spot rate – Rs. 68.16/$; Strike rate (E) – Rs. 69.50/$; Maturity period – 6 months; Continuous compounding interest rate – 10.50% p.a.; Standard deviation – 0.54.
11. The interest rate in XYZ Country is 24 per cent annum, whereas it is only 8 per cent annum in the United States. You are considering investing $10,000 for 180 days in XYZ’s securities but are concerned about the exchange risk. XYZ’s currency is crown. You find the following quotations in the newspaper in U.S. dollar terms:

<table>
<thead>
<tr>
<th>XYZ country (crown)</th>
<th>0.1000</th>
</tr>
</thead>
<tbody>
<tr>
<td>30-days forward</td>
<td>0.0980</td>
</tr>
<tr>
<td>90-days forward</td>
<td>0.0970</td>
</tr>
<tr>
<td>180-days forward</td>
<td>0.0950</td>
</tr>
</tbody>
</table>

Questions:

a) Calculate the forward premium (discount) of the crown against the U.S. dollar (based on the 180-days quotation).

b) What is the net gain in U.S. dollars from investing in XYZ’s securities relative to U.S. securities if it is assumed that the exchange rate in 180 days equals today’s spot rate?

c) Suppose the crown depreciates by 10 per cent relative to the dollar in the next 180 days. What is your net gain (or loss) from an uncovered position relative to investment in the United States?

d) What is your net gain (or loss) from a covered position? (Ignore transaction cost).

12. Write short notes in the following:

a) Operations in foreign exchange market are exposed to number of risks

b) Exchange control

c) Speculation Vs hedging.
SECTION – A

Answer any seven sub-questions.

(7x2=14)

1. a) What is Basis risk?

b) Name two major participants in Foreign Exchange.

c) What is Caps?

d) What is partial hedging?

e) What is cross rates?

f) What is direct method of quoting rates?

g) A Japanese radio maker sells radios to a French retailer and is paid in French Franco. What rate will a Japanese bank quote the radio maker to convert the French Frames into Yes? French Franc (6-2150) Yes (126.20).

h) What is time value of option?

i) What is Margin?

j) What is American option?
SECTION-B

Answer any 4 questions: (4x5=20)

2. From the following information you are required to calculate
   
   a) ready bill buying rate
   
   b) 2 months forward buying rate for demand bill
   
   c) ready rate for 60 days usance bill
   
   d) 2 months forward buying rate for 60 days usance bill.

   Interbank rate US dollar
   
   Spot USD 1 = Rs. 48.6000/6075
   
   1 month 3500/3600
   
   2 months 5500/5600
   
   3 months 8500/8600
   
   4 months 1-1500/1-1600
   
   5 months 1-3500/1-3600
   
   6 months 1-5500/1-6600

   Transit period is 25 days. All forward rates are for fixed delivery. Exchange margin is 0.10%.

   3. What factors influence exchange rates?
   
   4. What determine forward rate?
   
   5. What are futures used for?
   
   6. What factors determine spot exchange rate?
   
   7. Explain absolute version of PPP.
SECTION - C

Answer any three questions:

8. A foreign exchange dealer quoted the following rate for the pound sterling on Nov. 30-2015.

<table>
<thead>
<tr>
<th>Time</th>
<th>Rate</th>
</tr>
</thead>
<tbody>
<tr>
<td>Spot</td>
<td>$1.4820/$1.4920</td>
</tr>
<tr>
<td>30 day</td>
<td>66/45</td>
</tr>
<tr>
<td>90 day</td>
<td>146/124</td>
</tr>
<tr>
<td>180 day</td>
<td>291/223</td>
</tr>
</tbody>
</table>

a) Determine the outright quotations for pound sterling.

b) Was the pound sterling selling at a forward premium or a forward discount on the date? Calculate the forward premium (or discount) on the 90-days forward contract.

c) How many US dollar would it cost you buy ₹10,00,000 on Nov. 30, 2015.

d) If you expect to receive ₹10,00,000 is 180 days from the quotation date, how many US dollar would you expect to realise by selling them forward?

9. Explain the types and steps in currency swap.

10. Explain the management of translations exposure.

11. Explain the benefits of option pricing and how it helps buyer/seller.

12. Explain in detail the external technique for covering exchange rate risk.