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Answer Paper	
Strategic Financial Management	**Duration**: 65
Details: Test – 4	**Marks**: 35

Instructions:

- All the questions are compulsory
- Properly mention test number and page number on your answer sheet, Try to upload sheets in arranged manner.
- In case of multiple choice questions, mention option number only Working notes are compulsory wherever required in support of your solution
- Do not copy any solution from any material. Attempt as much as you know to fairly judge your performance.

SOL 1 –

Since the direct quote for HKD and Rs. is not available it will be calculated by cross exchange rate as follows:

Rs./GBP x GBP/HKD = Rs./HKD

82.05/9.93 = 8.2628

Spot rate on date of export 1HKD = Rs. 8.2628

Expected Rate of HKD for August 2014 = Rs.7.7897 (Rs. 84.83/HKD 10.89)

Forward Rate of HKD for August 2014 =Rs. 8.0158 (Rs. 86.33/HKD 10.77)

i. Calculation of expected loss without hedging

Value of export at the time of export (Rs. 8.2628 x HKD 12,00,000)	Rs.99,15,360
Estimated payment to be received on Aug. 2014 (Rs. 7.7897 x HKD 12,00,000)	Rs.93,47,640
Loss	Rs.5,67,720

Hedging of loss under Forward Cover

Rs. Value of export at the time of export (Rs. 8.2628 x HKD 12,00,000)	Rs.99,15,360
Payment to be received under Forward Cover (Rs. 8.0158 x HKD 12,00,000)	Rs. 96,18,960
Loss	Rs. 2,96,400

By taking forward cover loss is reduced to Rs.2,96,400.

ii. Actual Rate of HKD on August 2014 = Rs. 8.2172 (Rs. 82.09/HKD 9.99)

Value of export at the time of export (Rs.8.2628 x HKD 12,00,000)	Rs.99,15,360
Estimated payment to be received on Aug. 2014 (Rs. 8.2172 x HKD 12,00,000)	Rs. 98,60,640
Loss	Rs. 54,720

The decision to take forward cover is not justified because loss under forward cover was bigger i.e., Rs.2,96,400

SOL 2-

LMN is an exporter. It has a receivable of $6 lakhs. Due date is 3 months from today. Therefore, there is a currency risk at the end of three months.

a) Forward Hedge:

Receivables are in dollars. The firm needs to sell $6 lakhs in the 3-month forward market. The relevant 3 month forward $ currency quote i.e. Rs/$. Since we have rupee quote, we need to convert the rupee quote to equivalent dollar quote. Hence, we have:

Rs./$ quote = 1/$/ Rs. 0.01458 = Rs./$ 68.5871

Thus, the expected receipt from forward hedge = $ 6 lakhs × Rs./$ 68.5871 = Rs 4,11,52,263 Crores

b) Futures Hedge:

Since receivables are in dollars, we need to sell 3 month $ futures to hedge. But only rupee futures are available. As an Indian firm, the firm would like to have right to receive rupees. Thus if 3-month rupee futures are available, it would buy the same.

Number of Futures Contracts to Buy:

To buy or sell contracts of rupee futures contracts we must know rupee exposure. For finding the equivalent rupee exposure, we need to know when the exposure is due. Since it is due three months from now, we need exchange rate at the end of three months. Since we are going to use futures contracts to hedge, we can use the three months' futures rate that is quotes today i.e. 1 Rs. = $0.01449. Hence, $6 lakhs is equivalent to $ 10 million × Rs./$ spot rate

Rs./$ quote = 1/$/ Rs. 0.01449 = Rs./$ 69.0131

= $ 6 lakhs × Rs./$ 69.0131 = Rs 4,14,07,860

Now each futures contract is = Rs 30,00,000

Number of contracts that would be bought = Value of exposure/Value of each contract

= Rs 4,14,07,860 / Rs 30,00,000 = 13.8 or 13 contracts

Thus 13 contracts would be bought at Rs 1 = $ 0.01449, by paying initial margin of Rs 16,000.

Note: By selling 14 contracts we would be over hedging. Hence, we have taken maximum possible contracts of 13.

Futures Settlement:

The future bought at $0.01449/ Rs. close higher after 3 months at $ 0.01462/ Rs. i.e. a gain of $ 0.016134 - $0.01449 = $0.00013/ Rs.. The total gains on 13 contracts = $ 0.00013/ Rs. × 13 × Rs 30,00,000 = $ 5070 approximately. This in rupee based on 3-month spot price as on 1st September 2016 would be = $ 5070 × Rs./$ quote

Rs./$ quote = 1/$/ Rs. 0.01461 = Rs./$ 68.4463

$ 5070 × Rs./$ 68.4463 = Rs 3,47,022.74

Proceeds from selling underlying:

The firm will have to sell the receivables of $ 6 lakhs at the prevailing 3 month spot rate. Thus, the total receipt for LMN after three months would be:

= $ 6,00,000 × Rs./$ quote

Rs./$ quote = 1/$/ Rs. 0.01461 = Rs./$ 68.4463

= $ 6,00,000 × Rs./$ 68.4463 = Rs 4,10,67,780

Cost of Margin:

8.5% cost of initial margin of Rs 16,000 = 13 × Rs 16,000 x 8.5% × 3/12 = Rs 4,420

Total proceeds from Futures Hedge = Rs 4,10,67,780 + Rs 3,47,022.74 – Rs 4,420 = Rs 4,14,10,382.74

c) No hedge:

In this case, the firm would sell the dollars' receivables at the prevailing spot rate of $ 10,000,000 × Rs./$ quote

Rs./$ quote = 1/$/ Rs. 0.01461 = Rs./$ 68.4463

= $ 6,00,000 × Rs./$ x 68.4463 = Rs 4,10,67,780

Decision: Most advantageous is the Futures Hedge with proceeds of Rs 4,14,10,382.74

SOL 3 -

Step-1. Calculation of CFAT (Cash Flow after Tax)

Selling Price	Rs. 15
(-) V. cost	5.2

Contribution	9.8
Quantity	16m
Annual cost	156.8
(-) cash flow cost	4
EBDIT	152.8
(-) Dep (500/5)	100
EBIT	52.8
NOPAT @60%	31.68
+Dep	100
CFAF	131.68

Step-2. PV of Repatriated amount each year

Years	Repatriated Amount (60% of CFAT)	E(S)	Repatriated Rs.	PV@ 15%
1	79.01	5.15	406.90	353.83
2	79.01	5.30	418.75	316.64
3	79.01	5.46	431.39	283.65
4	79.01	5.62	444.04	253.88
5	79.01	5.79	457.47	227.44

After applying 10% withholding tax, PV=1435.44× 0.9=1291.90

Step-3. PV of the blocked funds Repatriated at the end

Blocked funds each year= 40%of CFAT=52.67

Year	Blocked fund	Reinvested @6%
1	52.67	66.49
2	52.67	62.73
3	52.67	59.18
4	52.67	55.83
5	52.67	52.67
	FV of reinvested	296.9
	(-) CF withholding Tax @10%	29.69
		267.21
	E (Ss)	5.82
	Expected Rs. Proceeding	Rs.1555.16
	PV@15%	773.19

Step - 4 We assume that working capital of 30m is received in full. No withholding tax is charged on its repatriation.

So, amount repatriated = 30 × 5.82 = Rs 174.6m

PV @ 15% = 86.81 m

NPV = Step 2 + Step 3 + Step 4 - Initial Investment = 1291.90 + 773.19 + 86.81 - (530 × 5) = 2151.9 - 2650 = (498.1)

Project is not viable.

SOL 4 –

I. If company borrows in $ then outflow would be as follows:

Let company borrows $100	$ 100.00
Add: Interest for 6 months @5.5%	$2.75
Amount Repayable after 6 months	$ 102.75
Applicable 6 month forward rate	36.40
Amount of Cash outflow in Indian Rupees	Rs.3,740.10

If company borrows equivalent amount in Indian Rupee, then outflow would be as follows:

Equivalent Rs. amount 1136.10 x 100	Rs.3,610.00
Add: Interest Rs.11.50%	Rs.207.58
	Rs. 3817.58

Since cash outflow is more in Rs. borrowing then borrowing should be made in $.

II. a. Let 'ir' be the interest rate of Rs. borrowing make indifferent between 3 months borrowings and 6 months borrowing then

(1 + 0.03) (1 + i_r) = (1 + 0.0575)

i_r =2.67% or 10.68% (on annualized basis)

b. Let 'id' be the interest rate of $ borrowing after 3 months to make indifference between 3 months borrowings and 6 months borrowings. Then,

(1 + 0.015)(1 + i_d) = (1 + 0.0275)

i_d= 1.232%or 4.93%(on annualized basis)

SOL 5 –

Spot Rate: 1$ = 140 Yen

Year End

1 1$ = 135 Yen

2 1$ = 130 Yen

3 1$ = 125 Yen

4 1$ = 120 Yen

a) Payment received by Yasufuku after 4 year

In 70 million (1 + 0.10)4 = 102.487 million

In $ (Equivalent Dollars) =

= 102.487/120 million = $ 854058

Hint 1 $ = 120

b) Payment received by Mc. Donald after 4 Year

5,00,000 × $ (1 + 0.13)4 = $ 8,15,236.80

c) Yasufuku is in a better position than Mc. Donald. This is because Yasufuku is receiving more dollars than Mc.

Donald after 4 years.

If Yen do not change in value

Amount received by Yasufuku ($) = 102.487 × 1/140 million = $ 7,32,050

Amount received by Mc. Donald ($) = $ 8,15,236.80

If Yen did not change in value, Mc. Donald will be in a better position.

Additional Analysis:

$ 5,00,000 = Yen 70 million

1 $ = 140 Yen