

Answer to MTP_Final_Syllabus 2008_Dec2014_Set 1

Paper-12: FINANCIAL MANAGEMENT & INTERNATIONAL FINANCE

Time Allowed: 3 Hours

Full Marks: 100

Answer Question No. 1 from Part A which is compulsory and any five questions from Part B.
Working notes should form a part of the answer
"Wherever necessary, suitable assumptions should be made and indicated in answers by the candidates"

PART A (25 Marks)

1. (a) (i) The dividend decisions are concerned with: [10 x 2 = 20]
(a) determination of quantum of profits to be distribute to the owners
(b) the frequency of such payments
(c) the amounts to be retained by the firm
(d) all of the above
- (ii) The shares of B Ltd. are trading at ₹370. If put option with a strike price of ₹380 are priced at ₹20, the intrinsic value and time value of the options respectively are:
(a) ₹ 8, ₹ 8
(b) ₹ 10, ₹ 10
(c) ₹ 8, ₹ 10
(d) Incomplete information
- (iii) The dollar is currently trading at ₹40. If rupee depreciates by 10%, what will be the spot rate?
(a) ₹0.0525
(b) ₹0.0552
(c) ₹0.0225
(d) ₹0.0522
- (iv) A company issue commercial paper for ₹ 3 crores with a maturity period of 90 days. The interest rate is 11% p.a. The net amount received by the company will be :
(a) ₹2.94 crores
(b) ₹2.92 crores
(c) ₹2.85 crores
(d) ₹3.08 crores
- (v) The NAV of each unit of a close-end fund at the beginning of the year was ₹18. By the end of the year its NAV equals ₹18.50. At the beginning of the year each unit was selling at a 2% premium to NAV and by the end of the year each unit is selling at a 4% discount to NAV.
If the closed-end fund paid year end distribution of income of ₹2.50 on each unit, the rate of return to the investor in the fund during the year would be
(a) 10.35%
(b) 11.51%
(c) 11.95%
(d) None of the above
- (vi) The face value of a 364-day T-bill is ₹100. If the purchase price is ₹86 then the yield on such a bill is
(a) 12.45%

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- (b) 13.36%
(c) 16.32%
(d) 16.56%
- (vii) A financial lease is preferred in the situation:
(a) when the long-term stability of asset is uncertain
(b) When the lessee want to own the asset but does not have enough funds to invest
(c) when the asset is subject to rapid obsolescence
(d) none of the above
- (viii) About 50 items are required every day for a machine. A fixed cost of ₹ 50 per order is incurred for placing an order. The inventory carrying cost per item amounts to ₹ 0.02 per day. The lead period is 32 days. Compute reorder level.
(a) 1,200 items
(b) 1,400 items
(c) 1,600 items
(d) 1,800 items
- (ix) ABC Ltd. has a debt-equity mix of 30/70. If ABC Ltd.'s debt beta for its activity (or projects) is 1.21, what is the beta for its equity ?
(a) 1.65
(b) 1.60
(c) 1.52
(d) None of the above
- (x) An Indian company is planning to invest in US. The US inflation rate is expected to be 3% and that of India is expected to be 8% annually. If the spot rate currently is ₹ 45/US\$, what spot rate can you expect after 5 years ?
(a) ₹59.09/US\$
(b) ₹57.00/US\$
(c) ₹57.04/US\$
(d) ₹57.13/US\$

(b) State if each of the following sentences is T (=true) or F (= false): [5 x 1=5]

- (i) Risk under transaction exposure can be minimized using Money Market Hedge.
(ii) Flexibility is one among the performance indicators of the organisation.
(iii) Swapping from fixed to floating may save the original borrower if interest rates decline.
(iv) Profitability Index is the profit expected in capital budgeting.
(v) In CAPM, systematic risk is the risk that cannot be eliminated by diversification, it being common to all firms.

Answer:

1. (a) (i) (d) All the above
(ii) (d) – $(380 + 20) - 370 = 30$
(iii) (c) – Dollar direct quoted, to be converted to Indirect
 $1/40 = 0.025$. Dollar trading at 0.025 depreciates by 10% $= (0.025 - 0.0025) = 0.0225$
(iv) (b) - Interest @ 11% p.a. for 90 days on ₹1.
 $= 0.11 \times \frac{90}{365} = 0.0271233$

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Amount after 90 days = $1 + 0.0271233 = 1.0271233$

Net amount received = ₹ 3,00,00,000/1.0271233 = ₹ 2,92,07,788 say ₹ 2.92 crores

(v) (a) -10.35%

Price at the beginning of the year (18×1.02) = ₹18.36

Price of unit at the end of the year $18.50 \times (1 - .04) = ₹17.76$

Price of the fund fell by $(17.76 - 18.36) = -0.60$

Rate of return = $(2.50 - 0.60)/18.36 = 10.35\%$

(vi) (c) - ₹(100 - 86)/(₹86) $\times 365/364 \times 100 = 16.32\%$

(vii) (b)

(viii) (c) 1,600 items

Reorder level

= Maximum usage per day \times Maximum lead time

= 50 items per day \times 32 days = 1,600 items

(ix) (b)

$\beta_A = \beta_D(D/V) + \beta_E(E/V)$

1.21 = $(0.30 \times 0.3) + (\beta_E \times 0.7)$

1.21 = $0.09 + 0.7 \beta_E$

$\beta_E = 1.12/0.7 = 1.60$

(x) (c) According to Purchase Power Parity, spot rate after 5 years
= ₹ $45 \times [(1 + 0.08)/(1 + 0.03)]^5 = 45 \times 1.2675 = ₹ 57.04$

(b) (i) True

(ii) True

(iii) True

(iv) False

(v) True

PART B (75 MARKS)

2. (i) Differentiate between the Capital Market Line and Security Market Line.

[5]

(ii) AES Ltd. is an all equity financed company with a market value of ₹25,00,000 and cost of equity $K_e = 21\%$. The company wants to buyback equity shares worth ₹5,00,000 by issuing and raising 15% perpetual debt of the same amount. Rate of tax may be taken as 30%. After the capital restructuring and applying MM Model (with taxes), you are required to calculate:

- Market value of AES Ltd.
- Cost of Equity K_e
- Weighted average cost of capital and comment on it.

[10]

Answer:

(i) CML stands for Capital Market Line, and SML stands for Security Market Line. The difference between CML and SML are as follows:

- The CML is a line that is used to show the rates of return, which depends on risk-free rates of return and levels of risk for a specific portfolio. SML, which is also called a Characteristic Line, is a graphical representation of the market's risk and return at a given time.
- While standard deviation is the measure of risk in CML, Beta coefficient determines the risk factors of the SML.
- While the Capital Market Line graphs define efficient portfolios, the Security Market Line

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graphs define both efficient and non-efficient portfolios.

(d) The Capital Market Line is considered to be superior when measuring the risk factors.

(e) Where the market portfolio and risk free assets are determined by the CML, all security factors are determined by the SML.

(ii) Computation of Market Value, Cost of Equity and WACC of AES Ltd.

Market Value of Equity = 25,00,000

$K_e = 21\%$

$$\frac{\text{Net income for equity – holders}}{K_e} = \text{Market value of equity}$$

$$\frac{\text{Net income for equity – holders}}{0.21} = 25,00,000$$

Net income for equity holders = 5,25,000

EBIT = 5,25,000/0.7 = ₹7,50,000

	All Equity(₹)	Debt and Equity(₹)
EBIT	7,50,000	7,50,000
Interest to Debt-holders	-	75,000
EBT	7,50,000	6,75,000
Taxes (30%)	2,25,000	2,02,500
Income available to equity shareholders	5,25,000	4,72,500
Income to debt holders plus income available to shareholders	5,25,000	5,47,500

Present value of tax-shield benefits = ₹5,00,000 × 0.30 = ₹1,50,000

- Value of Restructured firm = ₹(25,00,000 + 1,50,000) = ₹26,50,000
- Cost of Equity (K_e)

Total Value	₹26,50,000
Less: Value of Debt	₹5,00,000
Value of Equity	₹21,50,000

$$K_e = \frac{4,72,500}{21,50,000} = 0.219 = 22\%$$

- WACC

Cost of debt (after tax) = 15% (1-0.3) = 0.15 (0.70) = 0.105 = 10.5%

Components of Costs	Amount	Cost of Capital	Weight	Weighted cost of capital
Equity	21,50,000	0.22	0.81	0.178
Debt	5,00,000	0.105	0.19	0.020
	26,50,000			0.198

WACC = 19.8%

Comment: At present the company is all equity financed. So, $K_e = K_o$ i.e. 21%. However after restructuring, the K_o would be reduced to 19.81% and K_e would increase from 21% to 22%. Reduction in K_o and increase in K_e is good for the health of the company.

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3. (i) Riho Ltd. currently has an equity share capital of ₹10,00,000 consisting of 1,00,000 Equity share of ₹10 each. The company is going through a major expansion plan requiring to raise funds to the tune of ₹6,00,000. To finance the expansion the management has following plans:

Plan – I: Issue 60,000 Equity shares of ₹10 each.

Plan – II: Issue 40,000 Equity shares of ₹10 each and the balance through long-term borrowing at 12% interest p.a.

Plan – III: Issue 30,000 Equity shares of ₹10 each and 3,000 ₹100, 9% Debentures.

Plan – IV: Issue 30,000 Equity shares of ₹10 each and the balance through 6% preference shares.

The EBIT of the company is expected to be ₹4,00,000 p.a. assume corporate tax rate of 40%.

Required:

(i) Calculate EPS in each of the above plans.

Ascertain the degree of financial leverage in each plan.

[10]

- (ii) Venture Capital is considered to be a high risk capital. Do you agree? Enumerate the main features of Venture Capital investment. [5]

Answer:

(i)

	Plan I	Plan II	Plan III	Plan IV
Present Equity Shares	1,00,000	1,00,000	1,00,000	1,00,000
New Issue	60,000	40,000	30,000	30,000
Equity share capital (₹)	16,00,000	14,00,000	13,00,000	13,00,000
No. of Equity Shares	1,60,000	1,40,000	1,30,000	1,30,000
12% long term loan (₹)	—	2,00,000	—	—
9% Debentures (₹)	—	—	3,00,000	—
6% Preference Shares (₹)	—	—	—	3,00,000
EBIT (₹)	4,00,000	4,00,000	4,00,000	4,00,000
Interest on 12% loan (₹)	—	24,000	—	—
Interest on 9% Debentures (₹)	—	—	27,000	—
EBT (₹)	4,00,000	3,76,000	3,73,000	4,00,000
Less: Tax @ 40%	1,60,000	1,50,400	1,49,200	1,60,000
EAT (₹)	2,40,000	2,25,600	2,23,800	2,40,000
Less: Preference Dividend	—	—	—	18,000
(a) Earnings for equity shares (₹)	2,40,000	2,25,600	2,23,800	2,22,000
(b) No. of equity shares	1,60,000	1,40,000	1,30,000	1,30,000
(c) EPS (a/b)	1.50	1.61	1.72	1.71
Degree of Financial leverage $\frac{\text{EBIT}}{\text{EBIT} - \text{I}}$ OR $\frac{\text{EBIT}}{\text{EBT}^*}$	1.00	1.06	1.07	1.05

*EBT is Earnings before tax but after interest and preference dividend in case of Plan IV.

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Comments: Since the EPS and degree of financial leverage both are highest in Plan III, the management could accept it.

(ii) The term 'venture capital' comprises of two words viz. 'venture' and 'capital'. The dictionary meaning of 'venture' is a course of proceedings associated with risk, the outcome of which is uncertain and 'capital' means resources to start the enterprise. In a narrower sense venture capital is understood as the capital which is available for financing new venture. Broadly, it can be interpreted as the investment of long-term equity finance where the venture capitalist earns his return from capital gain.

The venture capital financing refers to the financing of new high risky venture promoted by qualified entrepreneurs who lack experience and funds to give shape to their ideas. In a broad sense, under venture capital financing, venture capitalist make investment to purchase equity of debt securities from inexperienced entrepreneurs who undertake highly risky venture with potential of success.

The main features of venture capital investment are :

- Providing finance of entrepreneurial talents
- Providing capital to persons having managerial skills.
- Expecting a high return in the form of capital gain.

The venture capital schemes are designed to promote technological advancement and innovation through introduction of new products, process or plants and equipments. The activities which, in general need venture capital support are :

- Commercial production of viable new process or products.
- Technological up-gradation, including adoption of imported technology suitable to Indian condition.
- Energy conservation with innovative technology.
- Commercial exploitation of proven technology.

Thus, the distinguishing characteristic of venture capital sources is an investment policy aimed at achieving most of the profit through capital gain.

4.(i) The following corporate bonds are considered for investment by the portfolio manager. His aim is to immunize the liability due in six years. All bonds have face value of ₹ 1000.

Bond	Maturity (Years)	Coupon %	Duration Years
Arvind Mills	10	8	7.35
BILT	8	9	6.45
Cipla	5	7	4.30

If the portfolio manager wishes to invest 50% in Arvind Mills, what is the percentage of total amount that can be invested in the other two bonds to immunize the portfolio? [7]

(ii) B Ltd. is foreseeing a growth rate of 12% per annum in the next 2 years. The growth rate is likely to fall to 10% for the third and the fourth year. After that the growth rate is expected to stabilize at 8% per annum. If the last dividend paid was ₹1.50 per share and the investors' required rate of return is 16%, find out the intrinsic value per share of B Ltd. as of date. You may use the following table:

Years	0	1	2	3	4	5
Disc. Factor at 16%	1.00	0.86	0.74	0.64	0.55	0.48

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Answer:

Let W_A , W_B , and W_C be the weights representing investments in Arvind Mills, BILT and Cipla bonds. Now we are given that:

$$W_A + W_B + W_C = 1 \quad [1]$$

It is also given that $W_A = 0.50$.

$$\text{Therefore } 0.50 + W_B + W_C = 1$$

$$\text{i.e. } W_B + W_C = 0.5 \quad [2]$$

For Immunization, Duration of the portfolio = Weighted average of the duration of the bonds

$$\text{i.e. } D_P = D_A W_A + D_B W_B + D_C W_C \quad [3]$$

Now $D_P = 6$ years [required]

And we know D_A , W_A , D_B , and D_C .

Substituting the given values in [3] we get,

$$6 = 0.5 \times 7.35 + 6.15 \times W_B + 4.30 \times W_C \quad [4]$$

Now simultaneously solving equations [2] & [4] we get,

$$W_B = 0.095 \text{ \& } W_C = 0.405$$

Thus the portfolio manager needs to invest 9.5% in BILT Bonds and 40.5% of his money in Cipla Bonds.

(ii) Calculation of Present Value of dividend stream

(a) @ 12% p.a. in the first 2 years

$$= [1.50(1.12) \times 0.86] + [1.50(1.12)^2 \times 0.74] = 1.44 + 1.39 = 2.83$$

(b) @ 10% in the next 2 years

$$= [1.88(1.1) \times 0.64] + [1.88(1.1)^2 \times 0.55] = 1.32 + 1.25 = 2.57$$

Market value of Equity share at the end of 4th year applying the constant dividend growth model:

$$P_4 = \frac{D_5}{K_e - g}$$

Where P_4 = Market price of equity share at the end of 4th year

D_5 = Dividend in 5th year, g = growth rate, K_e = required rate of return

$$D_5 = D_4 (1 + g)$$

$$= 2.28(1 + 0.08) = ₹2.46$$

$$P_4 = \frac{2.46}{0.16 - 0.08} = ₹30.75$$

Present Market Value of $P_4 = 30.75 \times 0.55 = ₹16.91$

The intrinsic value of equity share of B Ltd. would be = ₹ (2.83 + 2.57 + 16.91) = ₹22.31

5. AS Ltd. a textile unit in Ahmedabad has a annual turnover of ₹ 4 Crores, all sold at credit. The average collection period is 30 days. The variable cost to sales ratio is 0.6 and bad debts to sales ratio is 0.01. The company currently incurs Sales ledger administration cost of ₹ 4 lakhs. Its receivables are financed through short term bank finance at 20% p.a. to the extent of 75% and the balance through its own funding whose cost is 22%.

AS Ltd. to increase its sales level is planning to do either of the following:

a. Modify the existing credit arrangement

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b. Seek factoring service from XY Factors

Modification proposed in existing credit arrangement:

Increase the average credit period to 40 days owing to which the sales would increase by ₹ 40 lakhs. Sales ledger administration cost would increase by ₹ 0.80 lakhs and bad debts to sales ratio would increase to 0.02. Amount by way of discount owing to change in credit terms is ₹ 3.52 lakhs.

Factoring Proposal of XY Factors:

Reserve of 20%; Balance payable by the factor in 30 days; A bank is willing to fund 50% of the reserve at an interest rate of 19% p.a.; Interest charge of 18% p.a.; Commission of 2.5%. Under this option sales ledger administration cost would decrease to ₹ 2.50 lakhs and sales are expected to increase by ₹ 20 lakhs.

Which of the two options AS Ltd. need to consider?

[Assume 360 days in a year]

[15]

Answer:

We solve this problem in the following manner:

- Evaluate the present credit policy
- Evaluate the new credit policy
- Evaluate the factoring alternative
- Find the incremental difference between A & B and A & C
- Decide the best course of action.

a. Present Credit Policy:

Sales = ₹ 400 lakhs

- Bad Debts = $0.01 \times ₹ 400 \text{ lakhs} = ₹ 4.00 \text{ lakhs}$
- Sales ledger administration cost = ₹ 4 lakhs

Funding Cost:

- Bank Finance = $400 \times 0.75 \times 0.20 \times \frac{30}{360} = ₹ 5 \text{ lakhs}$
- Own Funds = $400 \times 0.25 \times 0.22 \times \frac{30}{360} = ₹ 1.833 \text{ lakhs}$
- Cost of present policy = $1 + 2 + 3 + 4 = ₹ 14.833 \text{ lakhs}$

b. New Credit Policy:

Increase in Sales = ₹ 40 lakhs

- Additional contribution owing to this = $(1 - 0.6) \times 40 \text{ lakhs} = ₹ 16 \text{ lakhs}$
- Cash Discount = ₹ 3.52 lakhs
- Bad Debts = $0.02 \times ₹ (400 + 40) \text{ lakhs} = ₹ 8.80 \text{ lakhs}$
- Sales ledger administration cost = ₹ 4.80 lakhs

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Funding Cost:

5. Bank Finance = $440 \times 0.75 \times 0.20 \times \frac{40}{360} = ₹ 7.333$ lakhs
6. Own Funds = $440 \times 0.25 \times 0.22 \times \frac{40}{360} = ₹ 2.689$ lakhs
7. Cost of present policy = $2 + 3 + 4 + 5 + 6 - (1) = ₹ 11.142$ lakhs

c. Factoring Proposal:

Increase in Sales = ₹ 20 lakhs

1. Additional contribution owing to this = $(1 - 0.6) \times 20$ lakhs = ₹ 8 lakhs
2. Commission = ₹ $(400+20) \times 0.025 = ₹ 10.50$ lakhs
3. Discount/Interest Charge = $420 \times 0.80 \times 0.18 \times \frac{30}{360} = ₹ 5.04$ lakhs

Funding Cost:

Bank Finance = $0.5 \times 0.2 \times 420 = ₹ 42$ lakhs

4. Bank finance = $42 \times 0.19 \times \frac{30}{360} = ₹ 0.665$ lakh
5. Own Funds = $42 \times 0.22 \times \frac{30}{360} = ₹ 0.770$ lakh
6. Administration Cost = ₹ 2.50 lakhs
7. Total Cost of Factoring = $2 + 3 + 4 + 5 + 6 - (1) = ₹ 11.475$ lakhs

d. Analysis:

New credit policy benefits the company by $(14.833 - 11.142) ₹ 3.691$ lakhs

Factoring proposal benefits the company by $(14.833 - 11.475) ₹ 3.358$ lakhs

e. Decision

Since the incremental benefit of new credit terms policy over the present policy is greater than the benefit of factoring proposal over the present policy, the company should switch to new credit policy and reject factoring proposal.

6. The initial investment outlay for a Capital Investment Project consists of ₹100 lakhs for Plant & Machinery and ₹ 40 lakhs for Working Capital. Other details are summarized below:

Sales	1 lakhs units for years 1-5
Selling price	₹ 120 per units of output
Variable Cost	₹ 60 per units of output

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Fixed Overheads (excluding depreciation)	₹ 15 lakhs per year for years 1 to 5
Rate of Depreciation on Plant & Machinery	25% on WDV method
Salvage Value of Plant & Machinery	Equal to the WDV at the end of year 5
Applicable Tax Rate	40%
Time horizon	5 years
Post-tax cut off rate	12%

Required

- a. Indicate the financial viability of the project by calculating the Net Present Value.
 - b. Determine the Sensitivity of the project's NPV under each of the following condition
 - Increase in cost of Plant & Machinery by 10%
- [15]

Answer:

a. Financial Viability Study:

Particular (₹ Lakhs)	Depreciation Schedule: Initial Investment ₹ 100 lakhs				
	Yr. 1	Yr. 2	Yr. 3	Yr. 4	Yr. 5
Opening P&M	100	75.00	56.25	42.19	31.64
Annual depreciation	25	18.75	14.06	10.55	7.91
Closing P&M	75	56.25	42.19	31.64	23.73

Selling price (₹ per unit.)	120
Less: Variable Cost (T per unit.)	60
Contribution (₹ per unit.)	60

Sales volume per year = 1 lakhs units

Total contribution per year	60
Less : Fixed overheads, other than depreciation, per year	15
Profit before Depreciation and Tax per year (PBDP) (₹ lakhs)	45

b. Computation of P.V. of Net Cash Inflow

End of year (₹ Lakhs)	1	2	3	4	5
PBDT	45.00	45.00	45.00	45.00	45.00
Les : Depreciation	25.00	18.75	14.06	10.55	7.91
PBT	20	26.25	30.94	34.45	37.09
Less : Tax @ 40%	8	10.50	12.38	13.78	14.84

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PAT	12	15.75	18.56	20.67	22.25
Depreciation	25	18.75	14.06	10.55	7.91
Salvage value of P & M	--	--	--	--	23.73
Decrease in Working Capital	--	--	--	--	40.00
Net Cash inflow (i)	37	34.5	32.62	31.22	93.89
P.V.factor@12% (ii)	0.893	0.797	0.712	0.636	0.567
P.V. of Net CF (i) x (ii)	33.04	27.50	23.23	19.86	53.24

NPV = P.V. of Net Cash inflow - Initial Investment outlay = 156.87-140 = ₹ 16.87 lakhs

As the NPV @ 12% is positive the project is financially viable

Increase In Cost of Plant and Machinery by 10%

As a result initial outlay will be higher by ₹ 10 lakhs

However, the net cash flow will be higher due to the tax benefit on depreciation of the increase in the cost of plant and machinery. The present value calculation is shown below:

Year	1	2	3	4	5
Opening Value (₹ Lakhs)	10.0	7.50	5.62	4.21	3.16
Depreciation	2.50	1.88	1.41	1.05	0.79
Closing Value	7.50	5.62	4.21	3.16	2.37
Tax benefit on Depreciation	1.00	0.75	0.56	0.42	0.32
Increase in salvage Value					2.37
Increase in Net Cash inflow	1.00	0.75	0.56	0.42	2.69
P.V.I.F. @ 12%	0.893	0.797	0.712	0.636	0.567
P.V. (6) X (7)	0.890	0.600	0.400	0.270	1.530
				Total PV	3.690

Decline in NPV = P.V. of additional inflow reduced 10 - 3.69 = ₹ 6.31 lakhs.

Percentage decline in NPV = (₹ 6.31/₹ 16.87 lakhs) X 100 = 37.4%.

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7. (i) On January 28, 2014 an importer customer requested a Bank to remit Singapore Dollar (SGD) 25,00,000 under an irrevocable Letter of Credit(LC). However, due to unavoidable factors, the Bank could effect the remittances only on February 4, 2014.

The inter-bank market rates were as follows:

	January 28, 2014	February 4,2014
US\$ 1=	₹45.85/45.90	₹45.91/45.97
GBP £ 1=	US\$ 1.7840/1.7850	US\$ 1.7765/1.7775
GBP £ 1=	SGD 3.1575/3.1590	SGD 3.1380/3.1390

The bank wishes to retain an exchange margin of 0.125%

Required:

How much does the customer stand to gain or lose due to the delay ?

(Note: Calculate the rate in multiples of 0.0001)

[7]

- (ii) A UK Company expects to receive 500,000 Canadian Dollars. The actual due date, falls exactly six months from now. The finance manager decides to hedge the transaction, using forward contracts. Interest rate in Canada is 15%, while that in UK is 12%. Current spot rate is Pd. Sterling 1 = Can \$ 2.5. Evaluate the situation after UK Company hedged its transaction, and if sterling was to :

- i. Gain 4%
- ii. Lose 2% or
- iii. Remain stable at present level

Assume that the forward exchange rate differential reflects the Interest Rate Parity analysis of forward rates.

[8]

Answer:

- (i) On January 28, 2014 the importer customer requested to remit SGD 25 lakhs.
To consider sell rate for the bank:

US\$ 1=	₹45.90
GBP £ 1=	US\$ 1.7850
GBP £ 1=	SGD 3.1575
Therefore, SGD 1=	$\frac{₹45.90 * 1.7850}{SGD 3.1575}$
SGD 1 =	₹25.9482
Add: Exchange margin (0.125%)	₹0.0324
	₹25.9806

On February 4, 2013 the rates are

US\$ 1=	₹45.97
GBP £ 1=	US\$ 1.7775
GBP £ 1=	SGD 3.1390
Therefore, SGD 1=	$\frac{₹45.97 * 1.7775}{SGD 3.1380}$

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SGD 1 =	₹26.0394
Add: Exchange margin (0.125%)	₹0.0325
	₹26.0719

Hence, loss to the importer
= SGD 25,00,000 ₹ (26.0719 – 25.9806) = ₹2,28,250.

(ii) From Interest Rate Parity theory we have, $\frac{F}{S_0} = \left(\frac{1+r_h}{1+r_f} \right)$

£ 1 = CD 2.5. Therefore Home currency is CD (interest rate = $r_h = 15\%$) & $r_f = 12\%$

Therefore we have Forward Exchange Rate $F = 2.5 \times \left(\frac{1 + \frac{0.15}{2}}{1 + \frac{0.12}{2}} \right) = 2.5354$

Thus the company would get £ = 5,00,000/2.5354 = £ 1,97,207.54

- i. If the pound gains 4%, the exchange rate will be CD 2.5 * 1.04 = CD 2.60
Originally £ 1 = CD 2.50 and now £ 1 = CD 2.60. At this rate the firm would be able to buy 5,00,000 / 2.6 = £ 1,92,307.69
i.e., it would have received £ 1,97,207.54 - £ 1,92,307.69 = £ 4,900 less.
Therefore, hedging has saved the company £ 4,900 approximately.
- ii. If the pound loses 2%, the exchange rate will be CD 2.5 * 0.98 = CD 2.45
Originally £ 1 = CD 2.50 and now £ 1 = CD 2.45. At this rate the firm would be able to buy 5,00,000/2.45 = £ 2,04,081.63
i.e., it would have received £ 2,04,081.63 - £ 1,97,207.54 = £ 6,874.09 more.
Therefore, hedging has cost the company £ 6,874.09.
- iii. If the pound remains at 2.5%.
Originally £ 1 = CD 2.50 and now £ 1 = CD 2.50. At this rate the firm would be able to buy 5,00,000/2.5 = £ 2,00,000.
i.e., it would have received £ 2,00,000 - £ 1,97,207.54 = £ 2,792.46 more.
Therefore, hedging has cost the company £ 2,792.46

8. Write short notes on (any three):

[3 x 5 =15]

- (i) Zero working capital concept
- (ii) Foreign Currency Convertible Bonds (FCCBs)
- (iii) Cross border leasing
- (iv) Capital Rationing

Answer:

(i) Zero working capital

Working capital is the comparison of current assets to current liabilities. For most organizations, current assets exceed current liabilities and working capital therefore represents the liquid reserves for meeting current obligations. Creditors prefer high levels of working capital since they are concerned about receiving payment. However, management prefers low levels of working capital since working capital earns an extremely low rate of return. Some companies

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are now driving working capital to record low levels, so-called Zero Working Capital. By keeping working capital at zero, funds are released for many other opportunities. Zero Working Capital requires major changes in how an organization functions. One way to implement Zero Working Capital is to have a demand-based organization. Demand-based organizations do everything only as they are demanded: Fill customer orders, receive supplies, manufacture products, and other functions are done only as needed. The production facilities run 24 hours a day non-stop according to the demands within the marketplace. There are no inventories; everything is supplied immediately as needed. The end result of this demand driven organization is that little, if any, working capital is necessary to run the business. Companies like GE (General Electric) and Campbell Soup have made Zero Working Capital a major strategic objective for the organization. As more and more businesses find faster ways of servicing customers, the concept of Zero Working Capital will become more main stream.

(ii) Foreign Currency Convertible Bonds (FCCBs): They mean bonds issued in accordance with relevant scheme and subscribed by a non-resident in foreign currency and convertible into depository receipts or ordinary shares of the issuing company in any manner, either in whole or in part, on the basis of any equity-related warrants attached to debt instruments. A company seeking to issue FCCBs should have consistent track record of good performance for 3 years.

FCCBs are unsecured; carry a fixed rate of interest and an option for conversion into a fixed number of equity shares of the issuer company. Interest on redemption price (if conversion option is not exercised) is payable in Dollars. Interest rates are very low by Indian domestic standards. FCCB has been popular with issuers. Local debt markets can be restrictive with comparatively short maturities and high interest rates. On the other hand, a straight equity may cause a dilution in earnings, and certainly dilutions in control, which many shareholders, especially major family shareholders, would find unacceptable. Foreign investors also prefer FCCBs because of dollar-denominated servicing, the conversion option and the arbitrage opportunities presented by conversion of FCCBs into equity at discount on prevailing market-price in India. The major drawbacks are that the issuing company cannot plan capital structure as it is not assured of conversion of FCCBs. In addition, FCCBs would result in creation of external debt for the country, as there would be foreign exchange outflow from the country, if conversion option is not exercised by the investors. Some other regulations are: (i) Interest payment on bond, until the conversion option is exercised, shall be subjected to TDS; (ii) Conversion of FCCBs into shares shall not give rise to capital gain in India; and (iii) Transfer of FCCBs shall not give rise to capital gain in India.

(iii) Cross-border leasing is a leasing agreement where lessor and lessee are situated in different countries. This raises significant additional issues relating to tax avoidance and tax shelters. It has been widely used in some European countries, to arbitrage the difference in the tax laws of different countries.

Cross-border leasing have been in practice as a means of financing infrastructure development in emerging nations. Cross-border leasing may have significant applications in financing infrastructure development in emerging nations – such as rail and air transport equipment, telephone and telecommunications, equipment, and assets incorporated into power generations and distribution systems – and other projects that have predictable revenue streams.

A major objective of cross-border leases is to reduce the overall cost of financing through utilization by the lessor of tax depreciation allowances to reduce its taxable income. The tax savings are passed to the lessee as a lower cost of finance. The basic prerequisites are relatively high tax rates in the lessor's country, liberal depreciation rules and either very flexible or very formalistic rules governing tax ownership.

(iii) Capital Rationing – Capital Rationing refers to a situation where the firm is constrained for external or self-imposed reasons to obtain necessary funds to invest in all profitable investment projects.

Capital Rationing exists when funds available for investment are to undertake all projects which are otherwise acceptable. Capital Rationing may arise due to :

- (i) External constraints, or
- (ii) Internal constraints imposed by management.

External Capital Rationing arises out of the inability of firm to raise sufficient funds from the market at given cost of capital.

Internal Capital Rationing is caused by self imposed restriction by management to its capital expenditure outlays.

The selection process under capital Rationing will involve two steps :

- (i) Ranking of projects according to some measure of profitability : P.I, BCR, NPV, IRR etc.
- (ii) Selecting projects in descending order of profitability until the budget figures are exhausted keeping in view the objective of maximizing the value of the firm.