Paper 20 – Financial Analysis & Business Valuation

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Full Marks: 100 **Time allowed: 3 hours**

Question No. 1 which is compulsory and carries 20 marks and answer any five questions from Question No. 2 to Question No. 8

1.(a) State whether the following statements are true or false: [1×8=8]

(i) If EPS (Earnings per Share) of a firm is negative, then one should take the absolute value of it (that is positive value of EPS) while calculating P/E Ratio.

(ii) The higher the Z-Score, there is a greater possibility of bankruptcy.

(iii) If there are no fixed costs, the operating leverage value will be 1.

(iv) Return on Capital employed indicates the liquidity of a firm.

(v) Exchange ratio of equity shares of merging firms is determined by their market price alone.

(vi) According to basic valuation model, the value of a financial asset is present value of its expected future cash flows.

(vii)The value of a firm's equity is equal to value of the firm less the value of non- equity claims.

(viii) Systematic risk of a portfolio is diversifiable.

Answer:

(i) False

(ii) False

(iii) True

(iv) False

(v) False

(vi) True

(vii) True

(viii) False

(b) Particulars about River Ltd. are provided below:

	31-03-2016	31-03-2017
Revenue (₹ lakhs)	**4,800**	**6,200**
Assets (₹ lakhs)	**2,000**	**2,400**
Equity Multiplier (EM)	**1.33**	**1.2**
Return on Equity (ROE) %	**26.67**	**25**

Comment on changes in profit margin, asset efficiency, leverage, return on assets and return on equity of River Ltd. [6]

Answer:

	31-03-2016	31-03-2017	Indentifying change
Revenue (₹ lakhs)	4,800	6,200	Increase in revenue
Assets (₹ lakhs)	2,000	2,400	Increase in assets

Equity Multiplier (EM)	1.33	1.2	Leverage decreases
Return on Equity (ROE)	26.67	25	Profitability of equity Decreases
Asset Turnover (AT) = Revenue/Assets	2.4	2.58	Asset efficiency increases
Return on Asset (ROA) = ROE/EM	20.05	20.83	Profitability of assets increases
Profit Margin = ROA/AT	8.35	8.07	Profit margin decreases

Explaining changes: Although profit margin decreases return on assets increases as assets efficiency increases. Although assets efficiency increases, return on equity decreases as leverage decreases.

(c) Sun Ltd. has announced issue of warrants on 1:1 basis for its equity shareholders. The warrants are convertible at an exercise price of 12. Warrants are detachable and trading at ₹7. What is the minimum price of the warrant and the warrant premium if the current price of the stock is ₹16? [6]

Answer:

Sun Ltd.

Minimum Price of warrant = current stock price - exercise price of warrant
= ₹ (16-12) = ₹4
Warrant Premium = Trading Price of warrant - minimum price
= ₹ (7-4) = ₹3

2.(a) The following figures have been extracted from the records of a company:

Year	2015-16	2016-17
Sales (₹)	**1,50,000**	**2,70,000**
Cost of Goods Sold (₹)	**1,00,000**	**1,80,000**
Units Sold	**10,000**	**15,000**

Account for changes in profit due to changes in sales quantity, cost price and selling price. [8]

Answer:

Particulars	2015-16	2016-17	Changes
(i) Sales (₹)	150,000	2,70,000	(+) 1,20,000
(ii) Cost of goods sold (₹)	1,00,000	1,80,000	(+) 80,000
Gross profit (₹) [i – ii]	50,000	90,000	(+) 40,000
(iii) Units sold	10,000	15,000	(+) 5,000
(iv) Selling price per unit (₹) [i ÷ iii]	15	18	+3
(v) Cost price per unit (₹) [ii ÷ iii]	10	12	+2

Statement showing account for changes in profit:

Particulars	₹	₹

Changes in profit due to changes in sales: 1. Increase in profit due to increase in sales quantity [Change in sales quantity × Base year's unit selling price = (15,000 - 10,000) units × ₹15] 2. Increase in profit due to increase in unit selling price [Change in unit selling price × Base year's sales quantity = (₹18 - ₹15) × 10,000 units] 3. Increase in profit due to increase in price and quantity [Changes in unit selling price × Change in sales quantity = (₹18 – ₹15) × (15,000 – 10,000) units]		75,000 30,000 15,000
		1,20,000
Changes in profit due to changes in cost: 1. Decrease in profit due to increase in quantity [Change in quantity × Base year's unit cost price = (15,000- 10,000) units × ₹10] 2. Decrease in profit due to increase in unit cost price [Change in unit cost price × Base year's quantity = (₹12 - ₹10) × 10,000 units] 3. Decrease in profit due to increase in price and quantity [Change in unit cost price x Change in quantity = (₹12 - ₹10) × (15,000- 10,000) units]	(50,000) (20,000) (10,000)	(80,000)
Net Increase in Gross Profit		40,000

Note: here, the base year is 2015-16.

(b) The following abridged financial information is given to you:

Balance Sheet of Mountain Ltd. **(₹ Crores)**

Liabilities	31.03.2016	31.03.2017
Equity Share Capital	**24**	**24**
Long Term Liabilities	**110**	**110**
Current Liabilities	**70**	**86**
Total	**204**	**220**

Assets	31.03.2016	31.03.2017
Fixed Assets	**120**	**108**
Current Assets	**61**	**57**
Profit and Loss	**20**	**55**
Preliminary Expenses	**3**	**—**
Total	**204**	**220**

Additional Information	31.03.2016	31.03.2017
Depreciation Written Off	**14**	**12**
Preliminary Expenditure Written off	**2**	**3**
Net profit/(Loss)	**16**	**(35)**

Ascertain from above the stages of sickness of Mountain Ltd. on 31.03.2016 and on 31.03.2017. **[4+4=8]**

Answer:

(₹ Crores)

	31-03-2016	31-03-2017
Cash Profit =Net Profit/(Loss) + Depreciation Written Off + Preliminary Expenses Written Off 2015-16: ₹ [16+14+2] 2016-17: ₹ [(35)+12+3]	32	(20)
Net Working Capital = Current Assets – Current Liabilities	(9)	(29)

2015-16: ₹ [61-70] 2016-17: ₹ [57-86]		
Net Worth = Equity Share Capital – Preliminary Expenditure - Profit and Loss (Dr.) 2015-16: ₹ [24-3 -20] 2016-17: ₹ [24-55]	1	(31)
	Tendency of becoming sick	Fully sick

According to NCAER, if any of the three elements, Cash Profits, Net Working Capital and Net Worth is negative, it may be considered that the firm has a tendency of becoming sick. If all the elements are negative the firm is fully sick. On 31-03-2016 Mountain Ltd had a tendency of becoming sick as only one element, Net Working Capital, was negative. On 31-03-2017 the company has become fully sick as all the three elements have negative balance.

3.(a) The following Financial Statement is summarized from the books of Neel Ltd as on 31st Mar-2016

Equity and Liabilities	Amount (₹)	Assets	Amount (₹)
Paid-up Share Capital	**15,00,000**	**Fixed Assets**	**16,50,000**
Reserves and Surplus	**6,00,000**	**Stock-in-Trade**	**9,10,000**
Debentures (Long-term)	**5,00,000**	**Book-Debts**	**12,40,000**
Bank Overdraft	**12,00,000**	**Investments-Short term**	**1,60,000**
Sundry Creditors	**2,00,000**	**Cash**	**40,000**
	40,00,000		**40,00,000**

Annual Sales ₹ 74,40,000. Gross Profit ₹ 7,44,000;
You are required to calculate the following ratios for the year and comment on the financial position as revealed by these ratios.
(i) Debt-Equity Ratio
(ii) Current Ratio
(iii) Proprietary Ratio
(iv) Gross Profit Ratio
(v) Debtors Turnover Ratio
(vi) Stock Turnover Ratio
Bank Overdraft is payable on Demand. **[12]**

Answer:
Before making any comment on the ratios, the ratios should be computed first along with their components which are:

1. Long –term Debts:

	₹
Debentures	5,00,000
	5,00,000

2. Shareholders (or) Proprietors Fund

	₹
Share capital Reserves & surplus	15,00,000 6,00,000
	21,00,000

3. Current Assets

	₹
Stock	9,10,000

Book Debts	12,40,000
Investment (short term cash)	1,60,000
cash	40,000
	23,50,000

4. Current Liabilities

	₹
Bank overdraft	12,00,000
Sundry Creditors	2,00,000
	14,0,000

5. Total Assets

	₹
Fixed Assets	16,50,000
Current Assets	23,50,000
	40,00,000

6. Cost of Goods sold
   Sales – gross profit
   ₹74,40,000 – ₹7,44,000
   ₹66,96,000

Computation of ratios & comment on them:

(A) Debt – Equity ratio

$$\text{Debt Equity ratio} = \frac{\text{Long term Debts}}{\text{Proprietors Funds}} = \frac{₹5,00,000}{₹21,00,000} = 0.24 : 1$$

This ratio expresses the claims of long –term creditors and debenture holders against the assets of the company. Since it is very low it is favorable from the standpoint of long –term creditors which supplies maximum safety for them, i. e., they are highly secured.

(B) Current ratio

$$\text{Current Ratio} = \frac{\text{Current Assets}}{\text{Current Liabilities}} = \frac{₹23,50,000}{14,00,000} = 1.68 : 1$$

Since this ratio is less than the normal current ratio of 2: 1 it reveals that the liquidity position is not at all satisfactory i. e., the company is able to pay its maturing obligations as soon as it becomes due as only ₹1.68 of current assets are available against each rupee of current liability.

(C) Proprietary ratio:

$$\text{Proprietary Ratio} = \frac{\text{Proprietarys Funds}}{\text{Total Assets}} = \frac{₹21,00,000}{₹40,00,000} = 0.53 : 1$$

This ratio indicates that the company is not so dependent on outsiders' fund (or) external equities, as more than 50% is being contributed by the shareholders.

(D) G. P. Ratio

$$\text{G. P. Ratio} = \frac{\text{Gross Profit} \times 100}{\text{Sales}} = \frac{₹7,44,000 \times 100}{74,40,000} = 10\%$$

This ratio is very low and, as such, not at all satisfactory since it is less than the normal ratio of 25%. This low ratio indicates that there are unfavorable conditions like increase in cost of production (or) sales and decrease in management efficiency and so on.

(E) Debtors Turnover Ratio:

$$\text{Debtors Turnover Ratio} = \frac{\text{Debtors} \times 365}{\text{Sales}} = \frac{₹12,40,000 \times 365}{74,40,000} = 61 \text{ days.}$$

This ratio indicates that the collection policy of the company is faulty since it exceeds its normal level.

(F) $$\text{Stock – Turnover ratio} = \frac{\text{Cost of Goods sold}}{\text{(Avg.) Stock}} = \frac{₹66,96,000}{₹9,10,000} = 7.36 \text{ times}$$

Since this ratio satisfies normal ratio of 5th times on an average and hence the efficiency of the management is found to be good.

(b) Financial statements of Moonlight Ltd. reveals the following information:

(I)	**PBT (Profit before Tax)**	**₹ 1,000 lakhs**
(II)	**Inventory overvalued by**	**₹ 100 lakhs**
(III)	**Revenue expenses capitalised**	**₹ 6 lakhs**
(IV)	**Increase in depreciation due to capitalization**	**₹ 0.60 lakhs**
(V)	**Tax Rate**	**30%**

Calculate PAT (Profit after Tax) after reworking and adjusting the financial manipulation undertaken by the company. [4]

Answer:

	(₹ Lakhs)
PBT	1,000.00
Less: Overvaluation of Inventory	100.00
Less: Revenue expenses capitalized	6.00
Add: Increase in depreciation due to capitalization	0.60
Revised PBT	894.60
Less: Tax @ 30%	268.38
PAT	626.22

4.(a) The Balance Sheet of Ignu Ltd on 31.03.2016 and 31.03.2017 are presented

(Amount in Lakhs)

Equities and Liabilities	31.03.16	31.03.17	Assets	31.03.16	31.03.17
Share Capital	**300**	**300**	**Freehold Property**	**225**	**240**
Reserves	**225**	**240**	**Plant & Machinery (Net after Dep)**	**135**	**165**
6% Debentures	**75**	**75**	**Unquoted Shares-Investments**	**150**	**150**
Mortgage Loan	**27**	**14.25**	**Quoted Shares – Investments (Market Value ₹ 120 Lakhs in 2015-16 and 150 Lakhs in 2016-17)**	**112.5**	**112.5**
Creditors	**45**	**45**	**Stock**	**52.5**	**75**
Proposed Dividend (Subjected to TDS)	**22.5**	**23.25**	**Debtors**	**45**	**75**
Provision for Tax	**21**	**37.5**	**Bank**	**10.5**	**0**
Secured Overdraft (By a floating charge on assets)	**15**	**82.5**			
	730.5	**817.5**		**730.5**	**817.5**

The following additional information for the year 2016-17 is relevant:

Credit Sales: ₹ 675 Lakhs
Credit Purchases: ₹ 520 Lakhs
Overhead: ₹ 85.75 Lakhs
Depreciation on Plant and Machinery: ₹ 17.5 Lakhs
Dividend for 2015-16 was paid in full.
Amount paid towards taxation for the year 2015-16 is ₹ 21.5 Lakhs.

In view of Credit Squeeze, the company has been asked by the Bank to reduce the overdraft substantially, within six months if possible by 50%.

You are required to prepare a cash flow statement and briefly comment on the financial position of the company on the basis of information of cash flow statement and suggested remedial measures to overcome the financial crises. [10]

Answer:
In the Books of Ignu Ltd.
Cash flow statement for the year ended 31.03.2017

Amount in ₹ Lakhs

	₹	₹	₹
I. Cash flows from operating Activities			
Net profit			
Net profit for 2016 – 17	240.00		
Less: Net profit for 2015 – 16	225.00	15.00	
Add: Non operating expenses			
Depreciation on plant & Machinery	17.50		
Debenture Interest	4.50		
Provision for Taxation	38.00		
Proposed Dividend	23.25	83.25	
		98.25	
Less: Non – operating Income		Nil	
		98.25	
Add: Decrease in current Assets (or) Increase in current liabilities		Nil	
		98.25	
Less: Increase in current Assets (or) decrease in current liabilities			
Increase in stock	22.50		
Increase in Debtor	30.00	52.50	
		45.75	
Less: Income tax paid		21.50	
Net cash flow for operating Activities			24.25
II. Cash flow from Investing activities:			
Purchase of plant & Machinery	47.50		
Purchase of Free hold property	15.00		
Net cash flow from Investing Activities			(-) 62.5
III. Cash flows from Financial Activities:			
Repayment of mortgage Loan	12.75		
Payment of Interest	4.50		
Payment of Dividend	22.50		
Net cash flows from financial activities			(-) 39.75
Net Decrease in cash (or) cash equivalent			(-) 78.00
Add: cash & cash Equivalent at the beginning (₹10.5 lakhs – ₹15.00 lakhs)			(-) 4.5
Cash (or) cash equivalent at the end			(-) 82.5

Dr. Plant and Machinery Account Cr.
(₹ In lakhs)

Particulars	₹	Particulars	₹
To balance b/d	135.00	By Depreciation	17.50
To bank Purchase	47.50	By balance c/d	165.00
	182.50		182.50

Dr. Provision for Taxation Account Cr.

(₹ In lakhs)

Particulars	₹	Particulars	₹
To Bank A/c	21.50	By Balance b/d	21.00
To Balance c/d	37.50	By P & L A/c/ Reserve	38.00
	59.00		59.00

Note:

As per AS -3, Interest on Debentures should be considered under financing Activities. But Interest on mortgage loan is treated as an item of operating activities as such loan is issued to be used for working capital purposes (Rate of interest on such loan is not given)

Comments and Interpretation: -

From the above cash flow statement it becomes clear that the amount of bank overdraft has been taken as a result of the following: capital expenditure ₹62.50 lakhs + repayment of loan ₹12.75 lakhs and payment of interest and dividend over operating cash flow (₹24.25 lakhs – ₹4.5 lakhs – ₹22.50 lakhs) ₹2.75 lakhs = ₹78 lakhs. Since the bank overdraft is costly of finance it is not advisable to expand the firm depending on such sources – more over a conservation policy should be adopted for using long term debts which is evident from debt – equity ratio (i. e.) $\frac{₹89.25\,\text{lakhs} \times 100}{₹540.00\text{lakhs}}$ = 16.53%. It is suggested that the firm may have raised funds for capital expenditure purposes from long term debts. Thus bank overdraft could be reduced by 50% by raising the proceeds from long- term debts.

In order to avoid the liquidity arises in future, the firm may have to improve its quality of earning by the proper utilization of current assets.

(b) On 1st January 2016, Star Ltd. issued 12,000 of 5% convertible bonds at their par value of ₹ 50 each. The bonds will be redeemed on 1st January, 2021. Each bond is convertible at the option of the holder at any time during the five year period. Interest on the bond will be paid annually. The prevailing market interest rate for similar debt without conversion option at the date of issue was 6%. At what value should the equity element of the hybrid financial instrument be recognized in the financial statements of Star Ltd. at the date of issue? Given, at 6% rate of discounting, present value of ₹ 1 to be received at the end of 5 years = 0.747258 and present value of 5 years annuity of ₹ 1= 4.212364. [6]

Answer:

Particulars	₹
Bond Principal: 12,000 × 50	6,00,000.00
Annual interest payment = 6,00,000 × 5%	30,000.00
Present Value of Principal = 6,00,000/(1+0.06)^5 = 6,00,000 × 0.747258	4,48,354.80
Present Value of Interest = 30,000 × present value of annuity at 6% = 30,000 × 4.212364	1,26,370.92
Value of Bond without conversion option on the date of issue	5,74,725.72
Issue price at par	6,00,000.00
Equity element (value of conversion option)	25,274.28

5.(a) From the following extracts of financial data pertaining to HS Ltd., an IT company, you are required to calculate the value of the brand of the company:

Year ended on 31st march	**2016**	**2015**	**2014**
EBIT ₹ lakhs	**750**	**525**	**280**
Non-branded income ₹ lakhs	**60**	**45**	**15**
Inflation (%)	**8**	**15**	**11**
Remuneration of capital	**6% of Average Capital Employed**		
Average capital employed ₹ lakhs	**1,450**		
Corporate tax rate	**30%**		
Capitalization factor	**15%**		

[6]

Answer:

HS Ltd

Calculation of Brand Value as at 31-3-2016 (₹ in lakhs)

Year ended on 31st March	**2016**	**2015**	**2014**
EBIT ₹ lakhs	750	525	280
Less Non-branded income ₹ lakhs	60	45	15
Adjusted profit ₹ lakhs	690	480	265
Inflation (%)	8	15	11
Inflation compound factor	1	1.08	1.242
PV of profit	690	518.4	329.13
Weight	3	2	1
Weighted Profits	2070	1036.8	329.13
Weighted Average profit	572.655 = 573		
Remuneration of capital	6% of Average Capital Employed		
Average Capital employed ₹ lakhs	1450		
Remuneration of capital	87		
Brand related profit	486		
Corporate tax rate	30%		
Corporate Tax	146		
Brand Earning	340		
Capitalization factor	15%		
Brand Value ₹ lakhs	2,266.67		

(b) The following information is available of a concern. Calculate Economic Value Added (EVA).

12% Debt ₹2,000 crores

Equity capital ₹ 500 crores

Reserves and Surplus ₹ 7,500 crores

Risk-free rate 9%

Beta factor 1.05

Market rate of return 19%

Equity (market) risk premium 10%

Operating profit after tax ₹ 2,100 crores

Tax rate = 30% **[4]**

Answer:

K_d (post tax) =Int rate (1 - tax rate))

= 12% (1-0.3)

= 8.4% (

K_e (CAPM) = (Risk free rate + Beta x Risk premium)

= 9% + (1.05) (19-9)%

= 19.5%

WACC = [(8.4%) (2000) + (19.5%) (8000)] × 100 ÷ 10,000

= 17.28%

EVA = NOP AT – Cost of Capital Employed

= (2100 cr.) – (17.28%) × (10,000 cr.)

= 2100 cr. – 1728 cr.

= ₹ 372 cr.

(c) What is Valuation Multiple? Give examples of any four multiples. [6]

Answer:

Valuation Multiples

A valuation multiple is the ratio of firm value or equity value to some aspect of the firm's economic activity, such as cash flow, sales, or EBITDA. The table below lists the most common multiples used to value firms, together with the terminology that is used to describe the multiple.

Multiples Used in Finance

Quantity	X	Multiple	Terminology = Value
Cash Flow	X	Firm Value / Cash Flow of Firm	"Cash flow multiple" = Value of Firm
EBITDA	X	Firm Value / EBITDA of Firm	"EBITDA multiple" = Value of firm
Sales	X	Firm Value / Sales Value of Firm	"Sales multiple" = Value of Firm
Customers	X	Firm Value / Customers	"Customers multiple" = Value of Firm
Earnings	X	Price per Share / Earnings	"Price earnings ratio" = Share Price

The technique for applying a valuation of multiple is identical to that of applying a price-per-square-foot multiple to value real estate, or a price per Kilogram to a purchase of fish. If you are studying a firm with cash flows of ₹ 5 Crores and you believe it should be valued at a cash flow multiple of 10, you will determine that the firm is worth (5 x 10) = ₹ 50 Crores.

The multiples can also be arrived at by using industry benchmarks developed using average of multiples of comparable companies in the industry.

6.(a) The bidding company B Ltd. is contemplating a merger with the target company, T Ltd. so as to form the merged B Ltd. under two distinct situations X and Y. You are provided with the following information about the proposed merger:

Company	BLtd.	TLtd.
EAT (₹ lakh)	40	12.5
No. of Equity Shares (in lakh)	5	2
P/E ratio	12.5	20

Situation X:

There is no synergy in earnings, but P/E of merged B Ltd. will stand at 15. Merger is based on market value of shares.

Situation Y:

Post merger P/E stands at that of stand-alone B Ltd., but earnings of the merged entity rises by 20% over the aggregate earnings of B Ltd. and T Ltd. Swap ratio is 1.3 for every share of T Ltd.

Find for both the situations X and Y:

(i) Post merger EPS. [3]

(ii) Post merger market value per share. [3]

(iii) Synergy due to merger. [2]

(iv) Gain/loss for merger to shareholders of B Ltd. and T Ltd. (a) in value of share holdings and (b) in earnings available to them. [4+4=8]

Answer:

	X			Y		
	B	**T**	**Merged**	**B**	**T**	**Merged**
EAT (₹ lakh)	40	12.5	52.5	40	12.5	63
No. of Equity Shares (n) (Lakhs)	5	2		5	2	
P/E (Given)	12.5	20	15	12.5	20	12.5
EPS (EAT/n)	8	6.25		8	6.25	
P = Market value per share (P/E*EPS)	100	125		100	125	
Market Capitalization (MC) (N*P) (₹ Lakh)	500	250	787.5@	500	250	787.5@
No. of shares to be issued to T (Lakh)#			2.5			2.6
No. of shares to Merged B Ltd. (N) [(5+2.5) & (5+2.6)] (Lakh)			7.5			7.6
EPS for Merged B Ltd. (EAT/N)$			7			8.29
Synergy (Merged Value - Aggregate MC) [787.5-(500+250)]			37.5			37.50
Share of Pre-merger B in Merged B			0.667			0.6579
Share of Pre-merger T in Merged B			0.333			0.3421
Value to B [share * merged MC]			525			518.09
Gain in Value to B [Value to B - MC of stand-alone B Ltd]			25			18.09
Value to T [share * merged MC]			262.5			269.41
Gain in Value to T [Value to T - MC of stand-alone T Ltd]			12.5			19.41
Share of Earnings from Merged B**	35	17.5	52.5	41.45	21.55	
Gain /(loss) [Earnings from Merged - Stand alone Earnings]	(5)	5	0	1.45	9.05	10.50
Market value per Share of Merged B [Merged MC/Merged Number of Shares] (787.5/7.5 & 787.5/7.6)			105			103.62

@ MC = EAT × P/E = 52.5 × 15 = 787.50 & 63 x 12.5 = 787.50

(125/100) × 2 = 2.5 for X and 1.3 × 2 =2.6 for Y

$ (52.5/7.5) = 7 for X and (63/7.6) = 8.29 for Y

**(0.667 × 52.5) = 35 (rounded off) for B and (0.333 × 52.5) = 17.5 (rounded off) for T under X;

(0.6579 × 63) = 41.45 (rounded off) for B and (0.3421× 63) = 21.55 (rounded off) for T under Y.

7.(a) Discounted Cash Flow method is not appropriate for valuation of real estate? [5]

Answer:

Discounted Cash Flow (DCF) Method of valuation is not appropriate for valuation of real estate due to following reasons:

(I) Difficult to estimate discount rates for most real estate investments.
(II) Estimating cash flows for the time horizon is tedious and difficult to do, as is the estimation of the terminal value.
(III) DCF does not reflect market conditions- that the market is strong or weak at the time of valuation.

This third argument can be rejected at two levels- on one level, cash flows should reflect the market conditions, since they will be higher (higher rents and lower vacancy rates) and grow faster in strong market conditions. On the other hand, any additional value being assigned by the market beyond the cash flow levels can be considered to be 'overvaluation' and should not be built into the appraised value in the first place.

(b) Amrutha Cements Ltd. earned free cash flow to Equity Shareholders during the Financial Year ending 2015 at ₹ 4.5 lakhs and its cost of equity is 13% with a projected earnings growth rate of 10%. The market value of debt is ₹ 50 lakhs. What will be the value of firm as per Constant Growth Valuation Model? [5]

Answer:

According to the constant growth valuation model.

V0 = (FCFF)1 /(Ke-g)

Where FCFF1 = FCFF0(1+g)

V0 = 4,50,000 x 1.10/(0.13-0.10)

V0 = 495000/0.03

V0 = ₹ 1,65,00,000.

(c) Calculate Economic value added (EVA) with the help of the following information of Moon Ltd.:

Financial leverage: 1.4 times;
Equity capital ₹170 lakhs;
Reserve and surplus ₹130 lakhs;
10% debentures ₹400 lakhs;
Cost of equity: 15%
Income tax: 30% [6]

Answer:

Calculation of EVA of Moon Ltd.

DFL=1.4

I =10% of 400 = 40;

DFL = EBIT/(EBIT -I)
= EBIT/(EBIT -40) = 1.4;
EBIT = 140
NOPAT = EBIT (1-t) = 140×0.7 = 98
Equity = 300
Cost of debt after tax = 0.07
Capital Charge = Equity× Cost of Equity + Debt× Cost of Debt
= 300×0.15 + 400×0.07
= 73
EVA = NOPAT - Capital Charge
= 98-73
= ₹25 lakhs

Note: Tax = 30% of EBT = 30
EAT = EBT- Tax
= 100-30
= 70

8. Write a short note on any four of the following: [4×4=16]

(a) Quality of Earnings
(b) Off- Balance Sheet Financing
(c) EBIT- EPS Indifference Point
(d) Human Resource Accounting
(e) Hostile Takeover Bids

Answer:

(a) Quality of Earnings:

Quality of Earnings means the amount of earnings attributable to higher sales or lower costs rather than artificial profits created by accounting anomalies such as inflation of inventory. Quality of earnings is considered poor during times of high inflation. Also, earnings that are calculated conservatively are considered to have higher quality than those calculated by aggressive accounting policies.

It is to mean the degree to which management's choices of accounting estimates can affect reported income (these choices occur ever; period.) For example: those who use the term in this manner judge an insurance company's earnings to be of low quality. The company's management must re-estimate its future payments to the insured, by period- and the estimates are made about long term imponderables, such as how long a person will live or future earnings on investments.

In the long run, net income should be about equal to cash flows because a company is normally in business in order to earn cash. The timing may be slightly different. That is, a company may get cash and subsequently do something to earn it or the company may earn revenues by delivering services or products and then later receive the cash. The closer the amount of net earnings is to the amount of cash flow in the short run, the higher the perception of the quality of earnings.

Another-issue is the sustainability of earnings. Earnings are higher quality if they will be ongoing rather than just a blip on the screen. For example, a company may convince customers at year end to go on and stock up on their product. There may also be included the implied promise or assumption that the company will buy back the product some time after year end if necessary. In such a case the quality of earnings is poor.

(b) Off- Balance Sheet Financing:

It is a form of financing in which large capital expenditures are kept off of a company's balance sheet through various classification methods. Companies will often use off-balance-sheet financing to keep their debt to equity (D/E) and leverage ratio low, especially if the inclusion of a large expenditure would break negative debt covenants.

Off Balance Sheet item is an asset or debt that does not appear on a company's balance sheet. Items that are considered off balance sheet are generally ones in which the company does not have legal claim or responsibility for. For example, loans issued by a bank are typically kept on the bank's books. If those loans are securitized and sold off as investments, however, the securitized debt is not kept on the bank's books. One of the most common off-balance sheet items is an operating lease. Off balance sheet (OBS) usually means an asset or debt or financial activity not on the Company's balance sheet. It could involve a lease or a separate subsidiary or a contingent liability such as a letter of credit. It also involves loan commitments, futures, forwards and other derivatives, when-issued securities and loans sold.

Contrast to loans, debt and equity, which do appear on the balance sheet. Examples of off-balance sheet financing include joint ventures, research and development partnerships, and operating leases (rather than purchase of capital equipment.)

Operating lease are one of the most common forms of off-balance-sheet financing. In these cases, the asset itself is kept on the lessor's balance sheet and the lessee reports only the required rental expenses for use of the asset. Generally Accepted Accounting Principles in the U.S. have set numerous rules for companies to follow in determining whether a lease should be capitalized (including on the balance sheet) or expensed. This term came into popular use during the Enron bankruptcy. Many of the energy traders' problems stemmed from setting up inappropriate off balance-sheet entities.

(c) EBIT- EPS Indifference Point :

It is one of the basic objectives of Financial Management to design an appropriate capital structure which can provide the highest EPS (Earnings per Share) over the firm's expected range of EBIT (Earnings before Interest & Taxes). EPS is a yard stick to evaluate the firm's performance for the investors. The level of EBIT varies from year to year shows how successful the firm's operations are. EBIT-EPS approach is an important tool for designing the optimal capital structure framework of the firm. EBIT-EPS analysis is widely used by Finance Manager because it provides a simple picture of the consequences of alternative financing methods, however more sophisticated techniques are available.

When two alternative financial plans do produce the level of EBIT where EPS is the same, this situation is referred to as *'indifferent point'*. In case, the expected level of EBIT exceeds the indifference point, the use of debt financing would be advantageous to maximize the EPS. The indifference point may be defined as the level of EBIT beyond which the benefits of financial leverage begins to operate with respect to earnings per share.

The indifference point between the two financing alternatives can be ascertained as follows:

$$\frac{EBIT - I_1(1-t)}{N_1} = \frac{EBIT - I_2(1-t)}{N_2}$$

Where, EBIT = Earnings before interest and taxes
t = Corporate rate of tax
I_1 = Interest charges in Financing alternative 1
N_1 = Number of equity shares in Financing alternative 1
I_2 = Interest charges in Financing alternative 2
N_2 = Number of equity shares in Financing alternative 2

(d) Human Resource Accounting:

Human Resource Accounting (HRA) is defined as "the process of identifying and measuring data about human resources and communicating this information to interested parties". It involves measurement of all costs/ investments associated with recruitment, placement, training & development of employees, but also the quantification of the economic-value of the people in an organization. It is also defined as the "measurement and reporting of the cost and value of people in an organization".

The two main approaches employed for measurement of HRA are:

- The cost approach
- The economic value approach.

The first one involves methods based on costs incurred by the company and the second one is based on economic value of human resources and their contribution to company.

(e) Hostile Takeover Bid:

The acquiring firm, without the knowledge and consent of the management of the target firm, may unilaterally pursue the efforts to gain a controlling interest in the target firm, by purchasing shares of the latter firm at the stock exchanges. This is a technique for affecting either a takeover or an amalgamation. It may be defined as an offer to acquire shares of a company, whose shares are not closely held, addressed to the general body of shareholders with a view to obtaining at least sufficient shares to give the offer or voting control of the company. Takeover Bid is thus adopted by company for taking over the control and management affairs of listed company by acquiring its controlling interest.

While a takeover bid is used for affecting a takeover, it is frequently against the wishes of the management of Offeree Company when it becomes a hostile takeover bid. It may take the form of an offer to purchase shares for cash or for share for share exchange or a combination of these two. Such case of merger/acquisition is popularity known as 'raid'. The Caparo group of the U.K. made a hostile takeover bid to takeover DCM Ltd. and Escorts Ltd. Similarly, some other NRIs have also made hostile bid to takeover some other Indian companies. The new takeover code, as announced by SEBI deals with the hostile bids.