

CA-Final AFM Test 2

Topics Covered: Business Valuation and Mergers

Max Marks: 40

Time: 1 Hour

Question 1(6 Marks): T plc wants to acquire L plc. The balance sheet of L plc as on 31st March 2022 is as follows:

Liabilities	£	Assets	£
Equity Capital (35,00,000 shares)	35,00,000	Cash	2,50,000
Retained earnings	15,00,000	Debtors	3,50,000
12% Debentures	15,00,000	Inventories	10,00,000
Creditors and other liabilities	16,00,000	Plants & Eqpt.	65,00,000
	81,00,000		81,00,000

Additional Information:

(i) Shareholders of L plc will get one share in T plc for every two shares. External liabilities are expected to be settled at £ 2.50 Million. Shares of T plc would be issued at its current price of £ 1.50 per share. Debenture holders will get 13% convertible debentures in the purchasing company for the same amount. Debtors and inventories are expected to realize £ 1 Million.

(ii) T plc has decided to operate the business of L plc as a separate division. The division is likely to give cash flows (after tax) to the extent of £ 2.50 Million per year for 6 years. T plc has planned that, after 6 years, this division would be demerged and disposed of for £ 1 Million.

(iii) The company's cost of capital is 16%.

Advise the Board of the company about the financial feasibility of this acquisition.

Net present values for 16% for £ 1 are as follows:

Years	1	2	3	4	5	6
PV	0.862	0.743	0.641	0.552	0.476	0.410

Question 2(6 Marks): There is a privately held company X Pvt. Ltd that is operating into the retail space, and is now scouting for angel investors. The unleveraged beta based on the industry in which it operates is 1.8, and the average debt to equity ratio of X Pvt. Ltd. is hovering at 40:60. The rate of return provided by risk free GOI Bonds is 5%. The rate of market return for the industry is 11%. The FCFs for the next 3 years are as follows:

	Year 1	Year 2	Year 3
Free Cash Flows (Rs Crore)	10	12	15

The pre-tax cost of debt is 12%. Assume a tax regime of 30%.

Determine the potential value to be placed for X Pvt. Ltd, based on above-mentioned FCFs.

Note: Use PVF and round off calculations upto 3 decimal points.

Question 3(8 Marks): Eon Ltd. reported a profit of Rs 120 lakhs after 20% tax for the financial year 2019-20. An analysis of the accounts revealed that the income included extraordinary items of Rs 5 lakhs and an extraordinary loss of Rs 15 lakhs. The existing operations, except for the extraordinary items, are expected to continue in the future. In addition, the results of the launch of a new product are expected to be as follows:

	Rs In lakhs
Sales	100
Material costs	10

Labour costs	20
Fixed costs	20

You are required to:

- (i) CALCULATE the value of the business, given that the capitalization rate is 10%.
- (ii) DETERMINE the market price per equity share, with Eon Ltd.'s share capital being comprised of 1,00,000 13% preference shares of Rs 100 each and 50,00,000 equity shares of Rs 10 each and the P/E ratio being 10 times.

Question 4(10 Marks): The following information is provided relating to the acquiring company Efficient Ltd. and the target company Healthy Ltd.:

Particulars	Efficient Ltd.	Healthy Ltd.
No. of Shares (FV Rs 10 each)	20 Lakhs	15 Lakhs
Market Capitalization	Rs 800 Lakhs	Rs 1,200 Lakhs
P/E Ratio (times)	10	5
Reserves and Surplus	Rs 400 Lakhs	Rs 273 Lakhs
Promoter's Holding (No. of shares)	8.65 Lakhs	9 Lakhs

Board of Directors of both the companies have decided to give a fair deal to the shareholders and accordingly for swap ratio the weights are decided as 45%, 20% and 35% respectively for Earning, Book Value and Market Price of share of each company.

Required:

- (i) Calculate the swap ratio and also calculate Promoter's holding % after acquisition.
- (ii) What is the EPS of Efficient Ltd. after acquisition of Healthy Ltd.?
- (iii) What is the expected market price per share and market capitalization of Efficient Ltd. after acquisition, assuming P/E ratio of Efficient Ltd. remains unchanged?
- (iv) Calculate free float market capitalization of the merged firm.

Question 5(10 Marks): M/s KPMS Ltd. wants to purchase M/s. BRB Ltd., by exchanging 0.7 of its share for each share of M/s BRB Ltd., relevant financial data are as follows:

	M/s KPMS Ltd.	M/s BRB Ltd.
Equity shares outstanding	20,00,000	8,00,000
EPS (Rs)	40	28
Market price per Share (Rs)	250	160

- (i) Illustrate the impact of merger on EPS of both companies
- (ii) The management of M/s. BRB Ltd., has quoted share exchange ratio of 1:1 for the merger. Assuming that P/E ratio of M/s. KPMS Ltd. will remain unchanged after the merger, what will be gain from merger for M/s. BRB Ltd.?
- (iii) Find out the gain/loss to the shareholders of M/s. KPMS Ltd. if the exchange ratio is 1:1?
- (iv) Determine the maximum exchange ratio acceptable to shareholders of M/s/ KPMS Ltd.

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	81,00,000		81,00,000

Additional Information:

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(ii) T plc has decided to operate the business of L plc as a separate division. The division is likely to give cash flows (after tax) to the extent of £ 2.50 Million per year for 6 years. T plc has planned that, after 6 years, this division would be demerged and disposed of for £ 1 Million.

(iii) The company's cost of capital is 16%.

Advise the Board of the company about the financial feasibility of this acquisition.

Net present values for 16% for £ 1 are as follows:

Years	1	2	3	4	5	6
PV	0.862	0.743	0.641	0.552	0.476	0.410

Answer:

Calculation of Purchase Consideration

	£
Issue of Share 17,50,000 x £1.50	26,25,000
External Liabilities settled	25,00,000
13% Debentures	15,00,000
	66,25,000
Less: Realization of Debtors and Inventories	10,00,000
Cash	2,50,000
	53,75,000

Net Present Value = PV of Cash Inflow + PV of Demerger of L plc – Cash Outflow

= £ 25,00,000 PVAF(16%,6) + £ 10,00,000 PVF(16%, 6) – £ 53,75,000

= £ 25,00,000 x 3.684 + £ 10,00,000 x 0.410 – £ 53,75,000

= £ 92,10,000 + £ 4,10,000 – £ 53,75,000

= £ 42,45,000

Since NPV of the decision is positive it is advantageous to acquire L plc.

Question 2(6 Marks): There is a privately held company X Pvt. Ltd that is operating into the retail space, and is now scouting for angel investors. The unleveraged beta based on the industry in which it operates is 1.8, and the average debt to equity ratio of X Pvt. Ltd. is hovering at 40:60. The rate of

return provided by risk free GOI Bonds is 5%. The rate of market return for the industry is 11%. The FCFs for the next 3 years are as follows:

	Year 1	Year 2	Year 3
Free Cash Flows (Rs Crore)	10	12	15

The pre-tax cost of debt is 12%. Assume a tax regime of 30%.

Determine the potential value to be placed for X Pvt. Ltd, based on above-mentioned FCFs.

Note: Use PVF and round off calculations upto 3 decimal points.

Answer:

To compute the value of A Ltd. first, we shall calculate WACC of the company. Since its share is not trading in the market, we shall use proxy beta to calculate the cost of equity. Since the unlevered beta of the industry is 1.8 the levered beta of the company will be:

$$1.8[1+(1-0.3)*40/60] = 2.64$$

$$\begin{aligned} \text{The Cost of equity in accordance with CAPM} &= r(f) + \beta(R_m - R_f) \\ &= 5\% + 2.64(11\% - 5\%) = 20.84\% \end{aligned}$$

$$\begin{aligned} \text{The WACC} &= \text{Cost of Equity} + \text{Cost of Debt} \\ &= 20.84(60/100) + 12.0(1-0.3)(40/100) = 15.864 \end{aligned}$$

Finally, the free cash flows can be discounted at the WACC obtained above as under –

	Year 1	Year 2	Year 3
Free Cash Flows	10	12	15
Discount factor	0.863	0.745	0.643
PVs of cash flows	8.63	8.94	9.645
Value of X Pvt. Ltd. (Rs Crore)			27.215

Question 3(8 Marks): Eon Ltd. reported a profit of Rs 120 lakhs after 20% tax for the financial year 2019-20. An analysis of the accounts revealed that the income included extraordinary items of Rs 5 lakhs and an extraordinary loss of Rs 15 lakhs. The existing operations, except for the extraordinary items, are expected to continue in the future. In addition, the results of the launch of a new product are expected to be as follows:

	Rs In lakhs
Sales	100
Material costs	10
Labour costs	20
Fixed costs	20

You are required to:

- CALCULATE the value of the business, given that the capitalization rate is 10%.
- DETERMINE the market price per equity share, with Eon Ltd.'s share capital being comprised of 1,00,000 13% preference shares of Rs 100 each and 50,00,000 equity shares of Rs 10 each and the P/E ratio being 10 times.

Answer:

		(Rs Lakhs)
Profit before tax	120/(1- 0.20)	150
Less: Extraordinary income		(5)
Add: Extraordinary losses		15
Profit from new product	(Rs Lakhs)	160
Sales	100	
Less: Material costs	10	
Labour costs	20	

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Fixed costs	20	(50)	50
			210.00
Less: Taxes @20%			42.00
Future Maintainable Profit after taxes			168.00
Relevant Capitalisation Factor			0.10
Value of Business (Rs168/0.10)			1680

(ii) Determination of Market Price of Equity Share

Future maintainable profits (After Tax)	168,00,000
Less: Preference share dividends 1,00,000 shares of Rs 100 @ 13%	13,00,000
Earnings available for Equity Shareholders	155,00,000
No. of Equity Shares	50,00,000
Earning per share = 155,00,000 / 50,00,000	Rs 3.10
PE ratio	10
Market price per share	Rs 31

Question 4(10 Marks): The following information is provided relating to the acquiring company Efficient Ltd. and the target company Healthy Ltd.:

Particulars	Efficient Ltd.	Healthy Ltd.
No. of Shares (FV Rs 10 each)	20 Lakhs	15 Lakhs
Market Capitalization	Rs 800 Lakhs	Rs 1,200 Lakhs
P/E Ratio (times)	10	5
Reserves and Surplus	Rs 400 Lakhs	Rs 273 Lakhs
Promoter's Holding (No. of shares)	8.65 Lakhs	9 Lakhs

Board of Directors of both the companies have decided to give a fair deal to the shareholders and accordingly for swap ratio the weights are decided as 45%, 20% and 35% respectively for Earning, Book Value and Market Price of share of each company.

Required:

- Calculate the swap ratio and also calculate Promoter's holding % after acquisition.
- What is the EPS of Efficient Ltd. after acquisition of Healthy Ltd.?
- What is the expected market price per share and market capitalization of Efficient Ltd. after acquisition, assuming P/E ratio of Efficient Ltd. remains unchanged?
- Calculate free float market capitalization of the merged firm.

Answer:

Swap Ratio

	Efficient Ltd.	Healthy Ltd.
Market capitalisation	800 lakhs	1200 lakhs
No. of shares	20 lakhs	15 lakhs
Market Price per share	Rs 40	Rs 80
P/E ratio	10	5
EPS	Rs 4	Rs 16
Profit	Rs 80 lakh	Rs 240 lakh
Share capital	Rs 200 lakh	Rs 150 lakh

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Reserves and surplus	Rs 400 lakh	Rs 273 lakh
Total	Rs 600 lakh	Rs 423 lakh
Book Value per share	Rs 30	Rs 28.20

Calculation of Swap Ratio

Calculation of Swap Ratio			
EPS	1 : 4 i.e.	4.0 * 45%	1.80
Book value	1 : 0.94 i.e.	0.94 * 20%	0.188
Market price	1 : 2 i.e.	2.0 * 35%	0.70
		Total	2.688

Swap ratio is for every one share of Healthy Ltd., to issue 2.688 shares of Efficient Ltd.

Hence, total no. of shares to be issued 15 lakh * 2.688 = 40.32 lakh shares

Promoter's holding = 8.65 lakh shares + (9 * 2.688 = 24.192 lakh shares) = 32.842 lakh

i.e. Promoter's holding % is (32.842 lakh/60.32 lakh) * 100 = 54.45%.

Calculation of EPS, Market price, Market capitalization and free float market capitalization.

(ii) Total No. of shares 20 lakh + 40.32 lakh = 60.32 lakh

EPS after merger

Total Profit = 80 lakh + 240 lakh = 320 lakh

= Rs 5.305

(iii) Expected market price EPS * P/E Ratio

= Rs 5.305 * 10 = Rs 53.05

Market capitalization = Rs 53.05 per share * 60.32 lakh shares

= Rs 3,199.98 lakh

(iv) Free float of market capitalization = Rs 53.05 per share * (60.32 lakh * 45.55%)

= Rs 1457.59 lakh

Question 5(10 Marks): M/s KPMS Ltd. wants to purchase M/s. BRB Ltd., by exchanging 0.7 of its share for each share of M/s BRB Ltd., relevant financial data are as follows:

	M/s KPMS Ltd.	M/s BRB Ltd.
Equity shares outstanding	20,00,000	8,00,000
EPS (Rs)	40	28
Market price per Share (Rs)	250	160

(i) Illustrate the impact of merger on EPS of both companies

(ii) The management of M/s. BRB Ltd., has quoted share exchange ratio of 1:1 for the merger. Assuming that P/E ratio of M/s. KPMS Ltd. will remain unchanged after the merger, what will be gain from merger for M/s. BRB Ltd.?

(iii) Find out the gain/loss to the shareholders of M/s. KPMS Ltd. if the exchange ratio is 1:1?

(iv) Determine the maximum exchange ratio acceptable to shareholders of M/s/ KPMS Ltd.

Answers:

Working Notes:

(1) Market Price Per Share

	KPMS Ltd.	BRB Ltd.
Equity shares outstanding (Nos.)	20,00,000	8,00,000
EPS	Rs 40	Rs 28
Profit	Rs 800,00,000	Rs 224,00,000
P/E Ratio	6.25	5.71

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Market price per share	Rs 250	Rs 160
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(2) EPS after merger

No. of shares to be issued (8,00,000 x 0.70)	5,60,000
Exiting Equity shares outstanding	20,00,000
Equity shares outstanding after merger	25,60,000
Total Profit (Rs 800,00,000 + Rs 224,00,000)	Rs 1024,00,000
EPS	Rs 40

(i) Impact of merger on EPS of both the companies

	KPMS Ltd.	BRB Ltd.
EPS after Merger	Rs 40	Rs 28
EPS before Merger	Rs 40	(Rs40 x 0.70) = Rs 28
	Nil	Nil

(ii) Gain from the Merger if exchange ratio is 1 : 1

No. of shares to be issued	8,00,000
Exiting Equity shares outstanding	20,00,000
Equity shares outstanding after merger	28,00,000
Total Profit (Rs 800,00,000 + Rs 224,00,000)	Rs 1024,00,000
EPS	Rs 36.57
Market Price of Share (Rs 36.57 x 6.25)	Rs 228.56
Market Price of Share before Merger	Rs 160.00
Impact (Increase/ Gain)	Rs 68.56

(iii) Gain/ loss from the Merger to the shareholders of KPMS Ltd.

Market Price of Share	Rs 228.56
Market Price of Share before Merger	Rs 250.00
Loss from the merger (per share)	Rs 21.44

(iv) Maximum Exchange Ratio acceptable to KPMS Ltd. shareholders

	Rs Lakhs
Market Value of Merged Entity (Rs 228.56 x 2800000)	6,399.68
Less: Value acceptable to shareholders of KPMS Ltd.	5,000.00
Value of merged entity available to shareholders of BRB Ltd.	1,399.68
Market Price Per Share	Rs 250
No. of shares to be issued to the shareholders of BRB Ltd. (lakhs)	Rs 5.60

Thus maximum ratio of issue shall be 5.60 : 8.00 or 0.70 share of KPMS Ltd. for one share of BRB Ltd. Alternatively, it can also be computed as follows:

	Rs Lakhs
Earning after Merger (40 x 2000000 + 28 x 800000)	Rs 1,024
P/E Ratio of KPMS Ltd.	6.25
Market Value of Firm after Merger (1024 x 6.25)	Rs 6,400
Existing Value of Shareholders of KPMS Ltd.	Rs 5,000
Value of Merged entity available to Shareholders of BRB Ltd.	Rs 1,400
Market Price per Share	Rs 250
Total No. of shares to be issued	5.60

Thus, maximum acceptable ratio shall be 5.60 : 8.00 i.e. 0.70 share of KPMS Ltd. for one share of BRB Ltd.