14 MERGERS , ACQUISITION & CORPORATE RESTRUCTURING

Question 1

The Nishan Ltd. has 35,000 shares of equity stock outstanding with a book value of ₹ 20 per share. It owes debt ₹ 15,00,000 at an interest rate of 12%. Selected financial results are as follows.

Income and Cash Flow		Capital	
EBIT	₹ 80,000	Debt	₹ 15,00,000
Interest	1,80,000	Equity	₹ 7,00,000
EBT	(₹ 1,00,000)		₹ 22,00,000
Tax	0		
EAT	(₹ 1,00,000)		
Depreciation	50,000		
Principal repayment	(₹ 75,000)		
Cash Flow	(₹ 1,25,000)		

Evaluate and Restructure the financial line items shown assuming a composition in which creditors agree to convert two thirds of their debt into equity at book value. Assume Nishan will pay tax at a rate of 15% on income after the restructuring, and that principal repayments are reduced proportionately with debt. Demonstrate as to who will control the company and by how big a margin after the restructuring?

(MTP Marks March '19)

Answer:

Creditors would convert ₹ 10,00,000 in debt to equity by accepting

$\frac{₹\ 1,000,000}{₹\ 20}$ = 50,000 shares of stock.

The remaining ₹ 500,000 of debt would generate interest of ₹500,000 x 0.12 = ₹ 60,000

Repayment of principal would be reduced by two thirds to ₹ 25,000 per year. The result is as follows:

Income and Cash Flow		Capital	
EBIT	₹ 80,000	Debt	₹ 5,00,000
Interest	60,000	Equity	₹ 17,00,000
EBT	₹ 20,000		₹ 22,00,000
Tax	3,000		
EAT	₹ 17,000		
Depreciation	50,000		
Principal repayment	(25,000)		
Cash Flow	₹ 42,000		

After the restructuring there will be a total of (35,000 + 50,000) 85,000 shares of equity stock outstanding. The original shareholders will still own 35,000 shares (approximately 41%), while the creditors will own 50,000 shares (59%). Hence the creditors will control the company by a substantial majority.

Question 2

X Ltd. is studying the possible acquisition of Y Ltd. by way of merger. The following data are available in respect of both the companies.

Particulars	X Ltd.	Y Ltd.
Market Capitalization (₹)	75,00,000	90,00,000
Gross Profit Ratio	20%	20%
Inventory Turnover Ratio	5 times	4 times
Debtor Turnover Ratio	3 times	5 times
12% Debenture (₹)	10,00,000	-
10% Debenture (₹)	-	14,40,000
No. of Equity Shares	1,00,000	60,000
Operating Expenses	86%	78%
Corporate Tax Rate	30%	30%
Closing Stock (₹)	15,00,000	5,00,000
Debtors (₹)	10,00,000	8,00,000

You are required to calculate:

(i) Swap ratio based on EPS & MPS respectively as weightage of 40% and 60%.

(ii) Post Merger EPS

(ii) Post Merger market price assuming same PE Ratio of X Ltd.

(iv) Post Merger gain or loss in EPS. **(MTP 12 Mark May '20)**

Answer:

Working Notes:

(1) Inventory Turnover Ratio = $\frac{\text{COGS}}{\text{Closing Stock}}$

X.LTD. | **Y.LTD.**

X Ltd.: $5 = \frac{\text{COGS}}{15,00,000}$

Y Ltd.: $4 = \frac{\text{COGS}}{5,00,000}$

COGS = ₹ 75,00,000 | COGS = ₹ 20,00,000

Gross Profit Ratio = 20% means COGS is 80% of Sales, then

X Ltd.: Sales = $\frac{75,00,000 \times 100}{80}$ = ₹ 93,75,000

Y Ltd.: Sales = $\frac{75,00,000 \times 100}{80}$ = ₹ 25,00,000

Statement of Profit

	X Ltd.	Y Ltd.
Sales	93,75,000	25,00,000
Less: Operating Exp.	80,62,500	19,50,000
EBIT	13,12,500	5,50,000
Less: Interest	1,20,000	1,44,000
EBT	11,92,500	4,06,000
Less: Tax@30%	3,57,750	1,21,800
EAT	8,34,750	2,84,200

	X Ltd.	Y Ltd.
No. of Shares	1,00,000	60,000
EPS $\left(\frac{\text{EAT}}{\text{No. of Shares}}\right)$	$\frac{8,34,750}{1,00,000}$ = ₹ 8.34	$\frac{2,84,200}{60,000}$ = ₹ 4.74
Market Price Share $\left(\frac{\text{Market Capitalisation}}{\text{No. of Shares}}\right)$	$\frac{75,00,000}{1,00,000}$ = ₹ 75	$\frac{90,00,000}{60,00,000}$ = ₹ 150
PE Ratio $\left(\frac{\text{MPS}}{\text{EPS}}\right)$	$\frac{75}{8.34}$ = 8.99	$\frac{150}{4.44}$ = 31.65

(i) Swap Ratio $= \dfrac{\text{Target Co}}{\text{Acquirer Co.}}$

	Acquirer Co. X Ltd.	Target Co. Y Ltd.	Weight
EPS	0.34	4.74	0.40
MPS	75	150	0.60

EPS	$\dfrac{4.74}{8.34} \times 0.40$	0.227
MPS	$\dfrac{150}{75} \times 0.60$	1.200
		1.427

(ii) **Post Merger EPS**

$$= \frac{EAT_X + EAT_Y}{\text{No. of Shares of Both Cos.}} = \frac{8,34,750 + 2,84,200}{1,00,000 + (60,000 \times 1.227)}$$

$$= \frac{11,18,950}{1,85,620} = 6.03$$

(iii) **Post Merger market price assuming same PE of X Ltd.**

MPS = PE x EPS = 8.99 x 6.03 = ₹ 54.21

(iv) **Gain or Loss to the share holders**

	Pre-Merger EPS	Post Merger EPS
X Ltd.	₹ 8.34	₹ 6.99
Y Ltd.	₹ 4.74	₹ 6.99 x 1.427 = ₹ 9.97

While Shareholders of X Ltd. will lose EPS of ₹ 1.35 (₹ 8.34 - ₹ 6.99) per share the shareholders of Y stands to gain EPS of ₹ 5.23 (₹ 9.97 - ₹ 4.74) per share.

Question 3

C Ltd. and P Ltd. both companies operating in the same industry decided to merge and form a new entity S Ltd. The relevant financial details of the two companies prior to merger announcement are as follows:

	C Ltd.	P Ltd.
Annual Earnings after Tax (₹ lakh)	10000	5800
No. Shares Outstanding (lakh)	4000	1000
PE Ratio (No. of Times)	8	10

The merger will be affected by means of stock swap (exchange) of 3 shares of C Ltd. for 1 share of P Ltd. After the merger it is expected that due to synergy effects, Annual Earnings (Post Tax) are expected to be 8% higher than sum of the earnings of the two companies individually. Further, it is expected that P/E Ratio of S Ltd. shall be average of P/E Ratios of two companies before the merger.

Evaluate the extent to which shareholders of P Ltd. will be benefitted per share from the proposed merger. **(MTP 8 Marks April '21)**

Answer:

Working Notes:

(i) **The Earnings of S Ltd.**

	₹ lakh
Earnings of C Ltd.	10000
Earnings of D Ltd.	5800
	15800
Growth	0.08
Earnings of S Ltd. (15800 x 1.08)	17064

(ii) **Market Value of S Ltd.**

	₹ lakh
Earnings of S Ltd.	17064
P/E Ratio (10+8)/2	9
Market Value of S Ltd.	153576

(iii) **No. of shares in S Ltd.**

Gain to Shareholders of P Ltd.

Share of Shareholders of P Ltd. in S Ltd. (3000/7000) x 153576	₹ 65818.29 lakh
Market Value of P Ltd. before merger (5800 x 10)	₹ 58000.00 lakh
Gains to Shareholders	₹ 7818.29 lakh
No. of Shares (before merger)	1000 lakh
Gain Per Share	₹ 7.82

Question 4

Following is the Balance Sheet of M/s. PK Ltd. as on 31-03-2015:

	Particulars	₹ in Lacs
I.	**Equity & Liabilities**	
	Shareholders' Fund	
	Equity Share Capital (₹ 10 each)	900.00
	10% Preference Share Capital (₹ 100 each)	300.00
	Reserves & Surplus	(500.00)
	Non-Current Liabilities	
	Term Loan	400.00
	Current Liabilities	
	Trade Payables	400.00
	Total (I)	**1500.00**
II.	**Assets**	
	Non-Current Assets	1000.00
	Current Assets:	
	Inventory	300.00
	Trade Receivables	100.00
	Cash & Bank Balance	100.00
	Total (II)	**1500.00**

M/s PK Ltd. did not perform well and has suffered sizeable losses during the last few years. However, it is now felt that the company can be nursed back to health by proper financial restructuring and consequently the following scheme of reconstruction have been designed:

(i) Equity shares are to be reduced to ₹ 2 per share fully paid.

(ii) Preference shares are to be reduced by ₹ 50 per share and rate of dividend on Preference shares is also reduced by 2%.

(iii) Trade Payables have agreed to forego 40% of their existing claims and for the balance 50% they have agreed to convert their claims into equity shares of ₹ 2 each, fully paid.

(iv) In order to make payment for Term Loan, the company issues 200 Lacs equity shares of ₹ 2 each at par. Entire sum is required to be paid on application.

(v) Non-Current Assets is to be revalued at ₹ 500 Lacs. You are required:

(1) To show the impact of financial restructuring.

(2) To prepare Balance Sheet assuming the scheme of restructuring is implemented.

(MTP 10 Marks April '23)

Answer:

(1) Impact of Financial Restructuring

Particulars	₹ in Lac
Benefits to PK Ltd.	
1. Reduction in Equity Share capital (90 × 8)	720
2. Reduction in Preference Share Capital (3 x 50)	150
3. Waiver of Trade payables (400 @ 40%)	160
(A) Total (1 + 2 + 3)	**1030**
Amount of ₹ 1030 Lacs utilised to write off losses & overvalued assets	
1. Lasses	500
2. Over valued Non Current Assets (1000 - 500)	500
(B) Total (1 + 2)	**1000**
Amount unutilized transfer to Capital Reserve (A - B)	**30**

(2) Balance Sheet of PK Ltd. as on 31.03.2015 (after reconstruction)

	Particulars	₹ in Lac
I.	**EQUITY & LIABILITIES**	
	Shareholder's Fund	
	Equity Share Capital (₹ 2 each)	700.00
	8% Preference Share Capital (₹ 50 each)	150.00
	Reserves & Surplus (Capital Reserve)	30.00
	Current Liabilities	
	Trade Payable	120.00
	Total (I)	**1000.00**
II.	**ASSETS**	
	Non-Current Asset	500.00
	Current Assets	
	Inventory	300.00
	Trade Receivables	100.00
	Cash & Bank balance	100.00
	Total (II)	**1000.00**

Calculation of Equity Share Capital

1. Equity share capital after reconstruction	180.00
2. Issued in Cash (200 x 2)	400.00
3. Issued to Trade payables (50% of (60% of ₹ 400 Lacs)]	120.00
Total (1 + 2 + 3)	**700.00**

Question 5

B Ltd. Wants to acquire S Ltd. and has offered a swap ratio of 2:3 (2 shares for every 3 share of S Ltd.).

Following information is available:

Particulars	B Ltd.	S Ltd.
Profit after tax (in ₹)	21,00,000	4,50,000
Equity shares outstanding (Nos.)	6,00,000	1,80,000
EPS (₹)	3.5	2.5
PE Ratio	10 Times	7 Times
Price quoting per share on BSE before the erger announcement (₹)	35.00	17.50

Required:

(i) The number of equity shares to be issued by B Ltd. for acquisition of S Ltd.

(ii) What is the EPS of B Ltd. after the acquisition?

(iii) Determine the equivalent earnings per share of S Ltd. and calculate per share gain or loss to shareholders of S Ltd.

(iv) What is the expected market price per share of B Ltd. after the acquisition, assuming its PE Multiple remains unchanged?

(v) Determine the market value of the merged firm.

(vi) After the announcement of merger, price of shares of S Ltd. rose by 10% on BSE. Mr. X, an investor, having 10,000 shares of S Ltd. is having another investment opportunity, which yields annual return of 14% is seeking your advice whether he needs to offload the shares in the market or accept the shares from B Ltd.

(RTP May 22)

Answer:

(i) The number of shares to be issued by B Ltd.:

The Exchange ratio is 2:3

So, new Shares = 1,80,000 x $\frac{2}{3}$ = 1,20,000 shares.

(ii) EPS of B Ltd. after acquisition:

Total Earnings	(₹ 21,00,000 + ₹ 4,50,000)	₹ 25,50,000
No. of Shares	(6,00,000 + 1,20,000)	7,20,000
EPS	$\left(\frac{₹\ 25,50,000}{7,20,000}\right)$	₹ 3.5416 or 3.54

(iii) Equivalent EPS of 5 Ltd. and gain/loss to shareholders:

Equivalent EPS of S Ltd. (₹ 3.54 x 2/3)	₹ 2.36
Less: EPS before merger	2.50
Loss	(0.14)

(iv) New Market Price of B Ltd. (P/E remaining unchanged):

Present P/E Ratio of B Ltd.	10 times
Expected EPS after merger	₹ 3,54
Expected Market Price (₹3.54 x 10)	₹ 35.40

(v) Market Value of merged firm:

Total number of Shares	7,20,000
Expected Market Price	₹ 35.40
Total value (7,20,000 x 35.40)	₹ 2,54,88,000
(a) Equivalent EP5 of 5 Ltd.	₹ 2.36
(b) BSE price per share before merger announcement	₹ 17.50
(c) After the merger announcement 10% increase in price of share	₹ 1.75
(d) Present Market Price of share (b + c)	₹ 19.25
(e) Return on Market Price per share (a/d)	12.26

As Mr. X is having another opportunity to earn 14% and expected return on S Ltd's share is 12.26%, it is advisable to offload in market.

Question 6

Given is the following information:

	Day Ltd.	Night Ltd.
Net Earnings	₹ 5 crores	₹ 3.5 crores
No. of Equity Shares	10,00,000	7,00,000

The shares of Day Ltd. and Night Ltd. trade at 20 and 15 times their respective P/E ratios. Day Ltd. considers taking over Night Ltd. By paying ₹ 55 crores considering that the market price of Night Ltd. reflects its true value. It is considering both the following options:

(i) Takeover is funded entirely in cash.

(ii) Takeover is funded entirely in stock.

You are required to calculate the cost of the takeover and advise Day Ltd. on the best alternative.

(PYP 8 Marks May '19)

Answer:

Working Notes:

	Day Ltd.	Night Ltd.
Net Earnings	₹ 5 crores	₹ 3.5 crores
No. of Equity Shares	10,00,000	7,00,000
EPS	50	50
P/E	20 times	15 times
MPS	₹ 1000	₹ 750
Market Value	1,00,00,00,000	52,50,00,000

(i) If takeover is funded by Cash

Since Market Price of Night Ltd. reflects its full value, cost of takeover to Day Ltd is 55 crore - 52.50 crore = ₹ 2.5 crore.

(ii) If the takeover is funded by stock

Number of shares to be issued to Night Ltd.

$$\frac{₹\ 55\ \text{Crore}}{₹\ 1000} = 5{,}50{,}000\ \text{Lakhs}$$

Market Value of Merged Firm = ₹ 1,00,00,00,000 + ₹ 52,50,00,000

= ₹ 1,52,50,00,000 i.e. ₹ 152.50 Crore

Proportion that Night Ltd.'s shareholders get in Day Ltd.'s Capital Structure will be:

$$\frac{5.5\ \text{Lakhs}}{5.5\ \text{Lakhs} + 10\ \text{Lakhs}} = 0.3548$$

True Cost of Merger = ₹ 152.50 Crore x 0.3548 - ₹ 55 Crore

= -₹ 0.893 Crore

Since true cost is negative in case of funding from stock, Day Ltd. would better off by funding the takeover by stock.

EXAMINERS' COMMENTS ON THE PERFORMANCE OF EXAMINEES:

The performance of the examinees on takeover problem was average. Some examinees could not calculate market value of acquired firm and proportion of shareholding by its shareholders in merged firm correctly. Further, cost of takeover in stock has not been calculated correctly by many examinees.

Question 7

ICL is proposing to take over SVL with an objective to diversify. ICL's profit after tax (PAT) has grown @18 per cent per annum and SVL's PAT is grown 15 per cent per annum. Both the companies pay dividend regularly. The summarised Profit & Loss Account of both the companies are as follows: ₹ in Crores

Particulars	ICL	SVL
Net Sales	4,545	1,500
PBIT	2,980	720
Interest	750	25
Provision for Tax	1,440	445
PAT	790	250
Dividends	235	125

	ICL		SVL	
Fixed Assets				
Land & Building (Net)	720		190	
Plant & Machinery (Net)	900		350	
Furniture & Fixtures (Net)	30	1,650	10	550
Current Assets		775		580
Less: Current Liabilities				
Creditors	230		130	
Overdrafts	35		10	
Provision for Tax	145		50	
Provision for dividends	60	470	50	240
Net Assets		1,955		890
Paid up Share Capital (₹ 10 per share)	250		125	
Reserves and Surplus	1,050	1,300	660	785
Borrowing		655		105
Capital Employed		1,955		890
Market Price Share (₹)	52		75	

ICL's Land & Buildings are stated at current prices. SVL's Land & Buildings are revalued three years ago.

There has been an increase of 30 per cent per year in the value of Land & Buildings.

SVL is expected to grow @ 18 per cent each year, after merger.

ICL's Management wants to determine the premium on the shares over the current market price which can be paid on the acquisition of SVL. You are required to determine the premium using:

(i) Net Worth adjusted for the current value of Land & Buildings plus the estimated average profit after tax (PAT) for the next five years.

(ii) The dividend growth formula.

(iii) ICL will push forward which method during the course of negotiations?

Period (t)	1	2	3	4	5
FVIF (30%, t)	1.300	1.690	2.197	2.856	3.713
FVIF (15%, t)	1.15	2.4725	3.9938	5.7424	7.7537

(PYP 12 Marks Nov '20)

Answer:

(i) Computation of Premium (Net Worth Formula): **₹ in Crores**

Total Assets (Fixed assets + Current Assets) = (550 + 580)	1130
Less: Liabilities (Current Liabilities + Borrowings) = (240 + 105)	345
Net Assets Value	785
Current Value of Land after growing for three years @ 30% = 190 x 2.197	417.43
Less: Book Value	190.00
Increase in the Value of land	227,43
Adjusted NAV (785 + 227.43)	1012.43
Current Profit after Tax (@15 % for 5 years i.e. 250 x 7.7537	1938.43
Average Profit for 1 year = $\frac{1938.43}{5}$	387.69
Total Value of Firm (1012.43 + 387.69)	1400.12
Total Market Value = No of shares x MPS = 12.50 x 75	937.50
Premium (Total Value - Market Value)	462.62
Premium (%) = 462.62/937.50*100	49.35%

(ii) Computation of Premium (Dividend Growth Formula):

Existing Growth Rate	0.15
DPS = $\frac{125}{12.50}$	10
MPS	75
Cost of Equity $\frac{D1}{MP} + g$ $= \left[\left(10 \times \frac{1.15}{75}\right) + 0.15\right]$	0.3033

Expected growth rate after merger	0.18
Expected Market Price = $10 \times \left[\frac{1.18}{(0.3033-0.18)}\right]$	95.70
Premium over current market price $\frac{(95.70-75)}{75} \times 100$	27.60%

Alternatively, if given figure of dividend is considered as D1 then Premium over Current Market Price shall be computed as follows:

Cost of Equity $\left(\frac{D_1}{P} + g\right)$	$\left[\frac{10}{75} + 0.15\right]$	0.2833
Expected Growth Rate after Merger		0.18
Expected Market Price $\frac{10.00}{(0.2833-0.18)}$		96.81
Premium over Current Market Price $\frac{(96.81-75)}{75} \times 100$		29.08%

During the course of negotiations, ICL will push forward valuation based on Growth Rate Method as it will lead to least cash outflow.

Question 8

The following are the financial statements of A Ltd., and B Ltd. for the financial year ended 31st March, 2020. Both the companies are working in the same industry.

Balance Sheets (₹)

Particulars	A Ltd.	B Ltd.
Total Current Assets	15,00,000	12,00,000
Total Net Fixed Assets	12,00,000	6,00,000
Total Assets	27,00,000	18,00,000
Equity Capital (Face Value ₹10)	10,00,000	8,00,000
Retained Earnings	3,00,000	----
14% Long Term Debt	7,00,000	5,00,000
Total Current Liabilities	**7,00,000**	**5,00,000**
Total Liabilities	**27,00,000**	**18,00,000**

Income Statement (₹)

Particulars	A Ltd.	B Ltd.
Net Sales	33,10,000	16,60,000
Gross Profit	6,90,000	3,40,000
Operating Expenses	2,00,000	1,00,000
Interest	98,000	70,000
EBT	3,92,000	1,70,000
Tax @ 30%	1,17,600	51,000
PAT	2,74,400	1,19,000
Additional information:		
Dividend Pay-out Ratio	40%	60%
Market Price per Share	40	15

You are required to calculate:

(i) Earnings Per share (EPS), Profit Earning Ratio (PER), Return on Equity (ROE) and Book Value Per Share (BVPS) for both the firms.

(ii) Estimate future EPS growth rate for both the firms.

(iii) If on acquisition of B Ltd. by A Ltd., intrinsic value of B Ltd., will be ₹ 20 per share, develop range of justifiable Exchange Ratio (ER) that can be offered by A Ltd., to shareholders of B Ltd.

(iv) Based on your analysis in (i) and (ii) whether the negotiated ratio will be close to upper or lower range. Justify. (v) Post-merger EPS on an ER of 0.4: 1. What will be immediate accretion or dilution to EPS to the shareholders of both the firms?

(vi) Post-Merger MPS on the basis of ER of 0.4:1

(PYP 12 Marks Jan '21)

Answer:

Market price per share (MPS) EPS x P/E ratio or P/E ratio = $\frac{\text{MPS}}{\text{EPS}}$

(i) Determination of EPS, P/E ratio, ROE and BVPS of A Ltd. and B Ltd.

		A Ltd.	B Ltd.
Profit After Tax	(PAT)	₹ 2,74,400	₹ 1,19,000
No. of Shares	(N)	1,00,000	80,000
EPS	(PAT/N)	₹ 2.744	₹1.4875
Market price per share	(MPS)	40	15
P/E Ratio	$\frac{\text{MPS}}{\text{EPS}}$	14.58	10.08

Equity Funds	(EF)	₹ 13,00,000	₹ 8,00,000
BVPS	$\left(\frac{EF}{N}\right)$	13	10
ROE	$\left(\frac{EAT}{EF}\right) \times 100$	21.11%	14.88%

(ii) Estimation of growth rates in EPS for A Ltd. and B. Ltd.

Retention Ratio	(1 - D/P ratio)	0.6	0.4
Growth Rate	(ROE x Retention Ratio)	12.67%	5.95%

(iii) Range of Justifiable exchange ratio

(a) Intrinsic value based		$\frac{₹20}{₹40}$	= 0.5:1 (upper limit)
(b) Market price based	$\frac{MPS_{DA}}{MPS_{BA}}$	$\frac{₹15}{₹40}$	= 0.375:1(lower limit)

(iv) Since, A Ltd. has a higher EPS, ROE, P/E ratio and even higher EPS growth expectations, the negotiable terms would be expected to be closer to the lower limit, based on the existing share prices.

(v) Calculation of Post-merger EPS and its effects

Particulars			A Ltd.	B Ltd.	Combined
EAT	(₹)	(i)	2,74,400	1,19,000	3,93,400
Share outstanding		(ii)	1,00,000	80,000	1,32,000*
EPS	(₹)	(i)/(ii)	2.744	1.4875	2.980
EPS Accretion (Dilution)	(₹)		0.236	(0.296***)	

(vi) Estimation of Post-merger MPS

Particulars			A Ltd.	B Ltd.	Combined
EPS	(₹)	(i)	2.744	1.4875	2.980
P/E Ratio		(ii)	14.58	10.08	14.58
MPS	(₹)	(i) x (ii)	40	15	43.45

Shares outstanding (combined) = 1,00,000 shares (40 x 80,000) = 1,32,000 shares

**EPS claim per old share = ₹ 2.98 x 0.4 ₹ 1.192

***EPS dilution = ₹ 1.4875 - ₹ 1.192 ₹ 0.296

Question 9

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 (₹)	40	28
Market price per Share (₹)	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.

(PYP & Marks Dec'21, Old & New SM)

Answer:

Working Notes:

(1) Market Price Per Share

	KPMS Ltd.	BRB Ltd.
Equity shares outstanding (Nos.)	20,00,000	8,00,000
EPS	₹ 40	₹ 28
Profit	₹ 800,00,000	₹ 224,00,000
P/E Ratio	6.25	5.71
Market price per share	₹ 250	₹ 160

(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 (₹ 800,00,000 + ₹ 224,00,000)	₹ 1024,00,000
EPS	₹ 40

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

	KPMS Ltd.	BRB Ltd.
EPS after Merger	₹ 40	₹ 28
EPS before Merger	₹ 40	(₹40 × 0.70) = ₹ 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 (₹ 800,00,000 + ₹ 224,00,000)	₹ 1024,00,000
EPS	₹ 36.57
Market Price of Share (₹ 36.57 x 6.25)	₹ 228.56
Market Price of Share before Merger	₹ 160.00
Impact (Increase/Gain)	₹ 68.56

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

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

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

	₹ Lakhs
Market Value of Merged Entity (₹ 228.56 × 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	₹ 250
No. of shares to be issued to the shareholders of BRB Ltd. (lakhs)	₹ 5.60

Thus maximurn 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:

	₹ Lakhs
Earning after Merger (40 x 2000000 + 28 x 800000)	₹ 1,024
P/E Ratio of KPMS Ltd.	6.25
Market Value of Firm after Merger (1024 x 6.25)	₹ 6,400
Existing Value of Shareholders of KPMS Ltd.	₹ 5,000
Value of Merged entity available to Shareholders of BRB Ltd.	₹ 1,400
Market Price per Share	₹ 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.

EXAMINERS' COMMENTS ON THE PERFORMANCE OF EXAMINEES:

Good performance has been observed in this question on Mergers & Acquisitions though some students committed mistakes in calculating exchange ratio in the last step.

Question 10

Following information is available of M/s. TS Ltd.

(₹ in crores)

PBIT	5.00
Less: Interest on Debt (10%)	1.00
PBT	4.00
Less: Tax @ 25%	1.00
PAT	3.00
No. of outstanding shares of ₹ 10 each	40 lakh
EPS (₹)	7.5
Market price of share (₹)	75
P/E ratio	10 Times

TS Ltd. has an undistributed reserves of ₹ 8 crores. The company requires ₹ 3 crores for the purpose of expansion which is expected to earn the same rate of return on capital employed as present. However, if the debt to capital employed ratio is higher than 35%, then P/E ratio is expected to decline to 8 Times and rise in the cost of additional debt to 14%, Given this data which of the following options the company would prefer, and why?

Option (i): If the required amount is raised through debt, and

Option (ii): If the required amount is raised through equity and the new shares will be issued at a price of ₹ 25 each. **(PYP 8 Marks Nov'19)**

Answer:

Working Notes:

(1) Calculation of Return on Capital Employed (ROCE)

	(₹ in crores)
Capital Employed:	
Share Capital (₹ 10 x 40 lakhs)	4
Reserves	8
Debt (₹ 1 cr. x 100/10)	10
	22
PBIT	5
ROCE	22.73%

(2) Revised PBIT

Existing Capital Employed	22
Additional	3
ROI	22.73%
Revised PBIT	5.6825

(3) New Debt/Equity

Existing Debt	10
Additional Under Option (i)	3
Total Debt	13
Total Equity	12

New Debt to Capital Employed Ratio = $\frac{13}{25}$ = 0.52

So, P/E Ratio to be reduced to 8 times

(4) Debt to Capital Employed Ratio in Option (ii)

= $\frac{10}{25}$ = 0.40

So, P/E Ratio to be reduced to 8 times in this case also

(5) Number of additional shares to be issued in case of Option (ii) Funds to be raise ₹ 3 crore

Price per share = ₹ 25

No. of additional shares to be issued $\frac{₹\ 3\ \text{crore}}{₹\ 25}$ = 12 lakhs

Particulars	Option (i)	Option (ii)
PBIT (Revised) (₹ Crore)	5.6825	5.6825
Less: Interest on Debt	1.42	1.00
PBT (₹ Crore)	4.2625	4.6825
Tax@ 25% (₹ Crore)	1.0656	1.1706
PAT (₹ Crore)	3.1969	3.5119
No. of shares outstanding	40 Lakhs	52 Lakhs
EPS	₹ 7.99	₹ 6.75
P/E Ratio	8	8
New Share Price	₹ 63.92	₹ 54.00

Decision:

Since the MPS is expected to be more in the case of additional financing done through debt (Option-I) Option-I is preferred.

EXAMINERS COMMENTS ON THE PERFORMANCE OF EXAMINEES:

Overall performance in this question was below average as the majority of the examinees have not been able to appreciate the impact of increase in Capital Employed either by Debt or Equity on increase in Profitability (PBIT) and on expected P/E Ratio depending on the proportion of Debt to Capital Emoloved.

Question 11

M/s. Roly Ltd. wants to acquire M/s. Poly Ltd. The following is the Balance Sheet of Poly Ltd, as on 31st March, 2020:

Liabilities	₹	Assets	₹
Equity Capital (₹ 10 per share)	10,00,000	Cash	20,000
Retained Earnings	3,00,000	Debtors	50,000
12% Debentures	3,00,000	Inventories	2,00,000
Creditors and other liability	3,20,000	Plant & Machinery	16,50,000
Total	**19,20,000**	**Total**	**19,20,000**

Shareholders of Poly Ltd. will get one share of Roly Ltd. at current Market price of ₹ 20 for every two shares. External liabilities are expected to be settled at a discount of ₹ 20,000. Sundry debtors and Inventories are expected to realise ₹ 2,00,000.

Poly Ltd. will run as an independent unit. Cash Flow After Tax is expected to be ₹ 4,00,000 per annum for next 6 years. Assume the disposal value of the plant after 6 years will be ₹ 1,50,000.

Poly Ltd. requires a return of 14%

n	1	2	3	4	5	6
PVIF (14%, n)	0.877	0.769	0.675	0.592	0.519	0.456

Advise the Board of Directors on the financial feasibility of the Proposal.

(PYP 6 Marks Jan'21)

Answer:

Calculation of Purchase Consideration

	₹
Issue of Share 50000 x ₹ 20	10,00,000
External Liabilities settled	3,00,000
12% Debentures	3,00,000
	16,00,000
Less: Realization of Debtors and Inventories	2,00,000
Cash	20,000
	13,80,000

Net Present Value = PV of Cash Inflow + PV of Demerger of Roly Ltd. - Cash Outflow

= ₹ 4,00,000 PVAF(14%,6) + ₹ 1,50,000 PVF (14%, 6) – ₹ 13,80,000

= ₹ 4,00,000 x 3.888 + ₹ 1,50,000 x 0.456 – ₹ 13,80,000

= ₹ 15,55,200 + ₹ 68,400 – ₹ 13,80,000

= ₹ 2,43,600

Since NPV of the decision is positive it is advantageous to acquire Poly Ltd.

Question 12

Alfa Ltd. wants to acquire Beta Ltd. and has offered a swap ratio of 1 : 2 (0.5 shares for every one share of Beta Ltd.). Following information is provided:

	Alfa Ltd.	Beta Ltd.
Profit after tax (₹)	18,00,000	3,60,000
Equity shares outstanding (Nos.)	6,00,000	1,80,000
EPS (₹)	3	2
PE Ratio	10 times	7 times
Market price per share (₹)	30	14

(i) You are required to determine:

(a) the number of equity shares to be issued by Alfa Ltd. for acquisition of Beta Ltd.

(b) the EPS of Alfa Ltd. after the acquisition.

(c) the equivalent earnings per share of Beta Ltd.

(d) the expected market price per share of Alfa Ltd. after the acquisition, if PE increases to 12 times.

(e) the market value of the merged firm.

(ii) If you are the shareholder of Beta Ltd and holding 100 shares, will you be interested to sell your stake ? Why ?

(PYP 8 Marks Nov'22) (Same concept different figures PYP 8 Marks May'18, Old & New SM)

Answer:

(i)

(a) The number of shares to be issued by Alfa Ltd.:

The Exchange ratio is 0.5

So, new Shares = 1,80,000 x 0.5 = 90,000 shares.

(b) EPS of Alfa Ltd. after acquisition:

Total Earnings	(₹ 18,00,000 + ₹ 3,60,000)	₹ 21,60,000
No. of Shares	(₹ 6,00,000 + ₹ 90,000)	₹ 6,90,000
EPS	(₹ 21,60,000 / ₹ 6,90,000)	₹ 3.13

(c) Equivalent EPS of Beta Ltd.:

No. of Shares	0.5
EPS	₹ 3.13
Equivalent EPS (₹ 3.13 x 0.5)	₹ 1.57 or ₹ 1.56

(d) New Market Price of Alfa Ltd. (P/E = 12):

Revised P/E Ratio of Alfa Ltd.	12 times
Expected EPS after merger	₹ 3.13
Expected Market Price (₹ 3.13 x 12)	₹ 37.56

(e) Market Value of merged firm:

Total number of shares	6,90,000
Expected Market Price	₹ 37.56
Total Value (6,90,000 x 37.56)	₹ 2,59,16,400

(ii)

Present Market Value of Share of Beta Ltd. (100 x ₹ 14)	₹ 1,400
Revised Market Price of each share of Alfa Ltd. after merger	₹ 37.56
Equivalent No. of Alfa Ltd. share in exchange of Beta Ltd. (0.50 x 100)	50
Equivalent No. of Alfa Ltd, share in exchange of Beta Ltd. (100 x 0.50 x ₹37.56)	₹ 1,878
Increase in Market Value (₹ 1,878 – ₹ 1,400)	₹ 478

No, I am not agreed to sell the stake as there is increase in market value.

Question 13

Big Ltd. (BL), a listed company, is enjoying a price earnings ratio (PER) of 15 on an Earnings Per Share (EPS) of ₹ 5. The Total number of outstanding shares are 2,00,000.

BL is proposing to acquire Small Pvt. Ltd. (SPL) an unlisted company by issuing shares in the ratio 4:5 i.e. for 5 shares of SPL 4 shares of BL will be issued. The outstanding shares of SPL are 50,000, SPL will be listed before the actual merger to discover its value. The EPS of the merged entity will be 5.5.

No other information. is available for SPL. You are required to calculate:

(i) Pre-merger EPS of SPL.

(ii) Expected Market Price per Share of SPL at the time of listing, if it expects a PER of 10 and,

(iii) Number of shares of BL to be issued to SPL if pre-merger EPS of BL is to be maintained.

(PYP 8 Marks May'23)

Answer:

(i) Pre Merger EPS

No. of shares to be issued by BL to SPL (50,000 x 4/5)	40,000
Existing number of shares of BL	2,00,000
Total no. of shares Post Merger	2,40,000
EPS (Post Merger)	₹ 5.50
Post-Merger (Total Earning)	₹ 13,20,000
Less: Pre-Merger Earning of BL (2,00,000 x 5)	₹ 10,00,000
Pre-Merger Earning of SPL	₹ 3,20,000
Number of shares of SPL (Existing)	50,000
EPS (₹ 3,20,000/50,000)	₹ 6.40

(ii) Expected Market Price of SPL share at the day of listing

EPS x PE Ratio (6.40 x 10) = ₹ 64.00

(iii) Number of shares to be issued to SPL to maintain Pre-Merger EPS

5.00 = 13,20,000/(2,00,000 + X)

10,00,000 + 5X = 13,20,000

X = 64,000

Thus, 64,000 shares to be issued by BL to SPL to maintain pre-merger EPS.

Alternatively, it can also be computed as follow:

Swap ratio if EPS before merger is maintained by BL

Then, Swap ratio = 6.4 / 5 = 1.28

Number of shares of BL is to be issued to SPL is 50000 shares × 1.28 = 64000 shares

Question 14

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	Plant & 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

(MTP 6 Marks April'24)

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.