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COMPONENTS OF MARKET PRICE PER SHARE

QUESTION NO.6A*(Exam Question)(12 Marks)* Following are the statement for A Ltd. and B Ltd. for the current year. **Both the company operate in the same industry**:

Balance Sheets

Particulars	A Ltd.	B Ltd.
Total Current Assets	14,00,000	10,00,000
Total Fixed Assets (net)	10,00,000	5,00,000
Total	24,00,000	15,00,000
Equity Capital (of ₹ 10 each)	10,00,000	8,00,000
Retained Earnings	2,00,000	
14% Long-term Debt	5,00,000	3,00,000
Total Current Liabilities	7,00,000	4,00,000
Total	24,00,000	15,00,000

INCOME STATEMENT

Particulars	A Ltd.	B Ltd.
Net sales	34,50,000	17,00,000
Less : Cost of Goods Sold	27,60,000	13,60,000
Gross Profit	6,90,000	3,40,000
Operating Expenses	2,00,000	1,00,000
Interest	70,000	42,000
Earnings Before Taxes	4,20,000	1,98,000
Taxes (50%)	2,10,000	99,000
Earnings after taxes (EAT)	2,10,000	99,000

Additional Information :

Number of Equity Shares	1,00,000	80,000
Dividend Payment Ratio (D/P)	40%	60%
Market Price Per Share (MPS)	₹ 40	₹ 15

Assume that the two company are in the process of negotiating a merger through an exchange of equity shares. You have been asked to assist in calculating equitable exchange terms, and are **required to**-

(i) Decompose share prices of both companies into EPS & P/E components, & also segregate their EPS figures into return on equity (ROE) & book value per share (BVPS) components.

(ii) Estimate future EPS growth rates for each firm.

(iii) Calculate the post-merger EPS based on an exchange ratio of 0.4:1 being offered by A Ltd. Indicate the immediate EPS accretion or dilution(i.e gain or loss), if any, that will occur for each group of shareholders.

(iv) Based on a 0.4:1 exchange ratio, and assuming that A's pre-merger P/E ratio will continue after the merger estimate the post-merger market price. Show the resulting accretion or dilution(i.e gain or loss) in pre-merger market price.

(v) Based on expected operating synergies A Ltd. estimates that the intrinsic value of B's equity share would be ₹ 20 per share on its acquisition . You are required to develop a range of justifiable equity share exchange ratio that can be offered by A Ltd. to B Ltd's shareholders.Based on your analysis in parts (i) and (ii) would you expect the negotiated terms to be closer to the upper, or the lower exchange ratio limits? Why?

or

Evaluate the justifiable equity share exchange ratios that can be offered by A Ltd. to the shareholder of B Ltd.

Hint: Assume A Ltd. Intrinsic Value to be equal to its Market Price.

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Hint: Use MPS and Intrinsic Value as base.

Solution:

(i) For A Ltd.

Market Price Per Share(MPS)

Rs. 40

Earning Per Share(EPS)

$$\frac{\text{Earning After Tax}}{\text{No. of Equity Share}} = \frac{2,10,000}{1,00,000} = 2.10$$

Price - Earning Ratio(PE Ratio)

$$\frac{\text{Market Price Per Share}}{\text{Earnings Per Share}} = \frac{40}{2.10} = 19.04$$

Return on Equity (ROE)

$$\frac{\text{Earning After Tax}}{\text{Equity Shareholder's Fund}}$$

$$= \frac{2,10,000}{\text{Equity Capital} + \text{Retained Earnings}}$$

$$= \frac{2,10,000}{10,00,000 + 2,00,000} = .175$$

Book Value / Intrinsic Value Per Share

$$\frac{\text{Equity Share holder's Fund}}{\text{No. of Equity Shares}}$$

$$= \frac{12,00,000}{100,000}$$

$$= 12$$

For B Ltd.

Market Price Per Share

Rs. 15

Earning Per Share (EPS)

$$\frac{\text{Earning After Tax}}{\text{No. of Equity Share}} = \frac{99,000}{80,000} = 1.24$$

Price - Earning Ratio (PE Ratio)

$$\frac{\text{Market Price Per Share}}{\text{Earnings Per Share}} = \frac{15}{1.24} = 12.12$$

Return on Equity(ROE)

$$\frac{\text{Earning After Tax}}{\text{Equity Shareholder's Fund}}$$

$$= \frac{99,000}{8,00,000} = .1237$$

Book Value / Intrinsic Value Per Share

$$\frac{\text{Equity Share holder Fund}}{\text{No. of Equity Shares}}$$

$$= \frac{8,00,000}{80,000} = 10$$

(ii) Growth Rates in EPS	**A Ltd.**	**B Ltd.**
Retention Ratio (1 - D/P Ratio)	.6	.4
Growth Rate (ROE x Retention Ratio) i.e. b x r	.60 x .175	.40 x .1237
	= .105 = 10.5%	= .0495 = 4.95 %

(iii) Developing A Range Of Justifiable Equity Shares Exchange Ratio :

Exchange Ratio based on Market Price = $\frac{\text{Market Price Per Share of B Ltd.}}{\text{Market Price Per Share of A Ltd.}} = \frac{15}{40} = .375$ [Lower Limit]

Exchange Ratio based on Intrinsic Value = $\frac{\text{Intrinsic Value of B Ltd.}}{\text{Intrinsic Value of A Ltd.}} = \frac{20}{40} = .5$ [Upper Limit]

$\therefore$ Exchange Ratio (Lower to Upper Limit) = .375 to .50

	A Ltd.	**B. Ltd.**
Pre Merger EPS	Rs. 2.10	Rs. 1.2375
Return on Equity	17.5%	12.375%
Growth Rate	10.5%	4.95%

When B Ltd. is compared against A Ltd. from various angles, we find that comparative position of B Ltd. is poor. Hence, the shareholders of B will be offered an exchange ratio **nearer/closer to lower limit** i.e. .375.

(iv) Post Merger EPS when exchange ratio is .40:1 : $\frac{E_A + E_B}{N_A + N_B \times ER_B} = \frac{2{,}10{,}000 + 99{,}000}{1{,}00{,}000 + 80{,}000 \times .40} = 2.34$

Accretion or Dilution in Merger EPS:	A Ltd.	B Ltd.
Before Merger	2.10	1.24
After Merger	2.34	2.34 x .4 = .936
Gain / (Loss)	+ .24	- .304

(v) Post Merger Market Price when exchange ratio is 4:1 and when P/E Ratio after marger is given.
= P/E Ratio After Merger x EPS After Merger = 19.05 x 2.34 = 44.577

Accretion or Dilution in Pre-Merger Market Price

	A. Ltd.	B. Ltd.
MPS Before Merger	40	15
MPS After Merger	44.577	44.577 x .40= 17.84
Gain / (Loss)	+ 4.57	+ 2.84

DEMERGER

QUESTION NO.15*(Exam Question)(8 Marks)* The following information is relating to Fortune India Ltd. having two division, viz. Pharma Division and Fast Moving Consumer Goods Division (FMCG Division). Paid up share capital of Fortune India Ltd. is consisting of 3,000 Lakhs equity shares of ₹ 1 each. Fortune India Ltd. decided to de-merge Pharma Division as Fortune Pharma Ltd. w.e.f. 1.4.2005. **Details of Fortune India Ltd. as on 31.3.2005 and of Fortune Pharma Ltd. as on 1.4.2005 are given below :**

Particulars	Fortune Pharma Ltd. (₹)	Fortune India Ltd. (₹)
Outside Liabilities		
Secured Loans	400 lakh	3,000 lakh
Unsecured Loans	2,400 lakh	800 lakh
Current Liabilities & Provisions	1,300 lakh	21,200 lakh
Assets		
Fixed Assets	7,740 lakh	20,400 lakh
Investments	7,600 lakh	12,300 lakh
Current Assets	8,800 lakh	30,200 lakh
Loans & Advances	900 lakh	7,300 lakh
Deferred Tax Asset	60 lakh	-
Misc. Expenses Outstanding	-	(200) lakh
Hint:		
Total Asset	25,100	70,000
Total Liability	4,100 lakhs	25,000 lakhs
NET WORTH OR SHAREHOLDER'S WORTH	21,000	45,000

For that purpose following points are to be considered

1.Transfer of Liabilities & Assets at Book value.

2.Estimated Profit for the year 2005-06 is ₹ 11,400 Lakh for Fortune India Ltd. & ₹1,470 lakhs for Fortune Pharma Ltd.

3.Estimated Market Price of Fortune Pharma Ltd. is ₹ 24.50 per share.
4.Average P/E Ratio of FMCG sector is 42 & Pharma sector is 25, which is to be expected for both the companies.

Calculate:

1.How many new no. of shares to be issued to new Company created on account of Demerger. What is the required Exchange Ratio ?
2.Expected Market price of Fortune(FMCG Division) India Ltd. After Demerger
3.Book Value per share of both the Companies immediately after Demerger.

Solution:

Working Notes :

1.Shareholders' funds

Particulars	Fortune India Ltd.	Fortune Pharma Ltd.	Fortune India (FMCG) Ltd.
Assets	70,000	25,100	44,900 [bal. fig.]
Outside liabilties	25,000	4,100	20,900 [bal. fig.]
Net worth	45,000	21,000	24,000 [bal. fig.]

Note: Assets = Fixed Asset + Investments + Current Assets + loans & Advances - Deferred Tax /Misc. Expenses
Note: Outside Liability = Secured Loans + Unsecured Loans + Current Liabilities & Provision

1. Calculation of shares of Forutne Pharma Ltd. which are to be issued to shareholders of Fortune India Ltd.

Estimated Profit (Rs. in lakhs) [Given]	1,470
Estimated Market Price (Rs.) [Given]	24.5
Estimated P/E [Given]	25
Estimated EPS [Rs.]	.98

Total Number of shares which should be issued [in lakhs] $\frac{\text{Estimated Profit}}{\text{EPS}} = \frac{1470}{.98}$ 1,500

Hence 1 share should be issued to Fortune Pharma Ltd. for every 2 shares of Fortune India Ltd. Hence Ratio of Exchange is 1:2 i.e. 5

2.Expected Market Price of Fortune India Ltd.

Estimated Profit (Rs. in lakhs)	11,400
Number of Equity Shares (Rs. in lakhs)	3,000
Estimated EPS (Rs.)	3.8
Estimated P/E	42
Estimated Market Price (Rs.)	159.6

3.Book Value Per Share	Fortune Pharma Ltd.	Fortune India (FMCG) Ltd.
Net worth (Rs. in lakhs)	21,000	24,000
No. of shares (Rs. in lakhs)	1,500	3,000
Book Value of Shares	Rs. 14	Rs.8

CAPITAL ADEQUACY RATIO & GROSS NPA & PREPARATION OF BALANCE SHEET AFTER MERGER

QUESTION NO.20A*(Exam Question)(11 Marks)* Bank 'B' was established in 2005 and doing banking in India. The bank is facing DO OR DIE situation. There are problems of Gross NPA (Non Performing Assets) at 40% & CAR or CRAR (Capital Adequacy Ratio or Capital Risk Weight Asset Ratio) at 4%. The net worth of the bank is not good. Shares are not traded regularly. Last week, it was traded @₹ 8 per share. RBI Audit suggested that bank has either to liquidate or to merge with other bank.Bank 'A' is professionally managed bank with low gross NPA of 5%. It has Net NPA as 0% and CAR at 16%. Its share is quoted in the market @ ₹128 per share. The board of Directors of bank 'A' has submitted a proposal to RBI for take over of bank 'B' on the basis of share exchange ratio.

The Balance Sheet details of both the banks are as follows: Amt. In ₹

	Bank 'B'	Bank 'A'
Paid up share capital(Face Value ₹10)	140	500
Reserves & Surplus	70	5,500
Deposits	4,000	40,000
Other liabilities	890	2 500
Total Liabilities	**5,100**	**48,500**
Cash in hand & with RBI	400	2,500
Balance with other banks	-	2,000
Investments	1,100	15,000
Advances	3,500	27,000
Other Assets	100	2 000
Total Assets	**5,100**	**48,500**

It was decided to issue shares at Book Value of Bank 'A' to the shareholders of Bank 'B'. [Hint:This line is of no use in the solution].

All assets and liabilities are to be taken over at Book Value.

For the swap ratio, weights assigned to different parameters are as follows:

Gross NPA	30%	CAR	20%
Market price	40%	Book value	10%

(a) What is the swap ratio based on above weights? **(b)** How many shares are to be issued?

(c) Prepare Balance Sheet after merger. **(d)** Calculate CAR & Gross NPA % of Bank 'A' after merger.

Solution:

(a) Swap Ratio

Gross NPA [A and B]	5	40	i.e.	5/40 x 30% =	0.0375
CAR[B and A]	4	16	i.e.	4/16 x 20% =	0.0500
Market Price[B and A]	8	128	i.e.	8/128 x 40% =	0.025
Book Value[B and A]	15	120	i.e.	15/120 x 10% =	0.0125
					0.125

Thus for every share of Bank 'B' 0.125 share of Bank 'A' shall be issued.

(b) No. of equity shares to be issued: Rs. 140 lac/Rs.10 x 0.125 = 1.75 lakhs shares

(c) Balance Sheet after Merger

Calculation of Capital Reserve

Book Value of Shares	Rs. 210.00 lac
Value of Shares issued	Rs. 17.50 lac
Capital Reserve	Rs. 192.50 lac

Balance Sheet (Rs. lac)

Paid up Share Capital	517.50	Cash in Hand & RBI	2900.00
Reserves & Surplus	5500.00	Balance with other banks	2000.00
Capital Reserve	192.50	Investment	16100.00
Deposits	44000	Advances	30500.00
Other Liabilities	3390.00	Other Assets	2100.00
	53600.00		53600.00

(d) Calculation CAR & Gross NPA % of Bank 'A' after merger

CAR or CRWAR or Total Capital To Risk Weight Asset Ratio = $\frac{\text{Total Capital}}{\text{Risky Weighted Assets}}$

	Bank B	Bank A	Merged
CAR	4%	16%	
Total Capital	Rs. 210 lac	Rs. 6000 lac	Rs. 6210 lac
Risky Weighted Assets	Rs. 5250 lac	Rs. 37500 lac	Rs. 42750 lac

CAR After Merger = $\frac{\text{Rs.6210 Lakhs}}{\text{Rs.42750 Lakhs}}$ = 14.53%; GNPA Ratio = $\frac{\text{Gross NPA}}{\text{Gross Advance or Deposit Given By Bank}}$ x 100

	Bank B	Bank A	Merged
GNPA (Given)	0.40	0.05	
	$.40 = \frac{\text{Gross NPA}_R}{\text{Rs.3500 Lakhs}}$	$.05 = \frac{\text{Gross NPA}_P}{\text{Rs.27000 Lakhs}}$	
Gross NPA	Rs. 1400 lac	Rs. 1350 lac	Rs. 2750 lac

CONCEPT OF BONUS SHARE & SPLIT SHARE

QUESTION NO.27 ***(Exam Question)*** The following information relating to the acquiring Company A Ltd. and the target Company B Ltd. are available. Both the Companies are promoted by Multinational Company, Trident Ltd. **The promoter's holding is 50% and 60% respectively in A Ltd. and B Ltd.:**

	A Ltd.	B Ltd.
Share Capital (₹)	200 lakh	100 lakh
Free Reserves and Surplus (₹)	800 lakh	500 lakh
Paid up Value per share (₹)	100	10
Free Float Market Capitalisation (₹)	400 lakh	128 lakh
P/E Ratio (times)	10	4

Trident Ltd. is interested to do justice to the shareholders of both the Companies. **For the swap ratio weights are assigned to different parameters by the Board of Directors as follows** :

Book Value: 25%; EPS (Earning per share): 50%; Market Price: 25%

(a) What is the swap ratio based on above weights ?

(b) What is the Book Value, EPS and expected Market price of A Ltd. after acquisition of B Ltd. (assuming P.E. ratio of A Ltd. remains unchanged and all assets and liabilities of B Ltd. are taken over at book value).

(c)Calculate: (i) Promoter's revised holding in the A Ltd. **(ii)**Free float market capitalization. **(iii)**Also calculate No. of Shares, Earning per Share (EPS) and Book Value (B.V.), if after acquisition of B Ltd., A Ltd. decided to: **(1)**Issue Bonus shares in the ratio of 1: 2; and **(2)**Split the stock (share) as ₹5 each fully paid.

Solution:

(a)Calculation Of Swap Ratio	A Ltd.	B Ltd.
Share Capital	200 Lakh	100 Lakh
Free Reserves	800 Lakh	500 Lakh
Total	1000 Lakh	600 Lakh
No. of Shares	$\frac{200}{100}$ = 2 Lakh	$\frac{100}{10}$ = 10 Lakh

Book Value per share	**₹ 500**	**₹ 60**
Promoter's holding	50%	60%
Non promoter's holding [i.e. Public Holding]	50%	40%
Free Float Market Cap. i.e. relating to Public's holding	400 Lakh	128 Lakh
Hence Total market Cap.	$\frac{400}{50\%}$ = 800 Lakh	$\frac{128}{40\%}$ = 320 Lakh
No. of Shares	2 Lakh	10 Lakh
Market Price	**₹ 400**	**₹ 32**
P/E Ratio	10	4
EPS	**40**	**8**

Calculation of Swap Ratio

Book Value	$\frac{60}{500}$ = 0.12	0.12 x 25% = 0.03
EPS	$\frac{8}{40}$ = 0.2	0.20 x 50% = 0.10
Market Price	$\frac{32}{400}$ = 0.08	0.08 x 25% = 0.02
Total		0.15

Swap ratio is for every one share of B Ltd., to issue 0.15 shares of A Ltd.
Hence total no. of shares to be issued = 10 Lakh x 0.15 = 1.50 lakh shares

(b) Calculation Of Book Value , EPS & Market Price After Merger

Book Value

Total No of Shares	2 Lakh + 1.5 Lakh = 3.5 Lakh
Total Capital	2 Lakhs x 100 + 1.5 Lakhs x 100 = ₹ 200 Lakh + ₹ 150 Lakh = ₹ 350 Lakh
Reserves	₹ 1,250 Lakh (see working notes)
Book Value Per Share	(₹ 350 Lakh + ₹ 1250 Lakh)/3.5 Lakh = **₹ 457.14 per share**

EPS: Total No.of Share = 3.5 Lakh; Total Profit = ₹ 80 Lakh + ₹ 80 Lakh = ₹ 160Lakh; Therefore EPS = **₹ 45.71**

Market Price: Expected Market Price = EPS (₹ 45.71) x P/E Ratio (10) = **₹ 457.10**

[Note: It is written that PE Ratio after merger will remain same]

(c)(1)Promoter's Revised Holding

A	50% i.e.	1.00 Lakh shares (2 lakhs x 50%)
B	60% i.e.	0.90 Lakh shares (1.5 lakhs x 60%)
Total		1.90 Lakh shares
Promoter's % =		1.90/3.5 x 100 = 54.29%

(2)Free Float Market Capitalisation: = (3.5 Lakh – 1.9 Lakh) x ₹ 457.10 = ₹ 731.36 Lakh

(3)Two activities are happening one by one:

First Issue Of Bonus Shares: Existing No. Of Shares After Merger = 3.50,000 shares

No. of Shares After Bonus = 3,50,000 + 3,50,000 x $\frac{1}{2}$ = 525000 shares

Next: Split Share [Face Value ₹ 5 each]...It means that for every 1 share of 100 Face Value, Company will issue 20 shares of ₹ 5 each.

No. Of Shares After Split = 525000 x 20 = 105,00,000 shares; Therefore Now Revised EPS = $\frac{160,00,000}{105,00,000}$ = **1.523**

Revised Book Value Per Share = $\frac{\text{Revised Equity Share Capital} + \text{Revised Reserve (Refer Working Notes)}}{\text{Revised No. Of Equity Shares}}$

= $\frac{105,00,000 \times 5 + (1250,00,000 + 175,00,000)}{105,00,000}$ = **15.238 per share**

Note: It may be noted that when Bonus Shares are issued Reserve are decreased and Equity Share Capital is increased. Decrease in Reserve 3,50,000 x 1/2 x 100]

Working Note: Calculation Of Reserve After Merger

Before Merger:

A Ltd.

Liability		**Asset**	
Equity Share Capital	200 Lakhs	Assets	1000 Lakhs
Reserves	800 Lakhs		
Total	11000 Lakhs		1000 Lakhs

B Ltd.

Liability		**Asset**	
Equity Share Capital	100 Lakhs	Assets	600 Lakhs
Reserves	500 Lakhs		
Total	600 Lakhs		600 Lakhs

After Merger:

Liability		**Asset**	
Equity Share Capital ₹ 200 lakhs + 150 lakhs	350 Lakhs	Assets	1600 Lakhs
Reserves (Bal Fig)	1250.00 Lakhs		
Total	1600 Lakhs		1600 Lakhs

DIVESTITURE

The Divestiture means the sale or disposition of certain company's assets or a business unit which is not performing well and is disposed of either through closure, sale or bankruptcy.

QUESTION NO.32 The Managing Director of MS Stones divisions of home interiors products,recently, due to economic slowdown, expressed it desire to divest its ceramic tile business. **The relevant details of this business are as follows:** Estimated Pre Tax Cash Flow Next Year = ₹ 200 Crore; Book Value of Liabilities = ₹ 780 Crore

In an order to increase its share in the ceramic tile market, the **Tripati Tiles Ltd.[A Ltd.]** showed its interest in the acquisition of this unit and **offered** a proceed of ₹ 950 Crore for the same to MS Stones.

The other data pertaining to the business are as follows: **Tax Rate** 30%; **Growth Rate** 4%; **Applicable Discount Rate for Tile Business** 12% ; If market value of liabilities are ₹ 40 Crore more than book value, **you are required to** advice MD whether she should go for divestiture of the tile business or not.

Solution:

Hint: MS Stones is B Ltd. i.e Target Firm & Tripati Tiles Ltd. is A Ltd. i.e Acquiring Firm

(a)First of all we shall compute PV of Cash Inflows as follows:

Present Value Of Cash Inflow = 200 crore (1 - 0.30)/ 0.12-0.04 = ₹ 1750 Crore

Market Value of Liabilities(Present Value Of Cash Outflow) = ₹ 780 Crore + ₹ 40 Crore = ₹ 820 Crore

Net Asset (Present) Value = ₹ 1750 Crore - ₹ 820 Crore = ₹ 930

Decision:Since, the Tripati Tiles is offering ₹ 950 Crore, more than Net Asset (Present) Value of ₹ 930 Crore, the company should go further with decision of divesture of tile business.