CA FINAL AFM

MERGERS & ACQUISITIONS

INTRODUCTION :-

IND AS → 103

Business Combination

Not Applicable

IP
Auction

Valuation :-

Alte → Acquiring Co.

Blte → Target Co.

1) Swap Ratio :- | Share Exchange Ratio :-

2:1

2) EPS_{A+B} | MPS_{A+B} | $BVPS_{A+B}$ |

P/E_{A+B} | MV_{A+B} | NAV_{A+B}

3) Gain/Loss of Merger

4) Maximum E/R & Minimum E/R

Acq. Co. Target Co.

5) Maximum MPS & Minimum MPS

6) True Cost & Benefit of Merger

7) Internal Reconstruction

8) De-merger

9) COA/PC → NPV Decision

10) Banking M&A

M&A

- **Merger** — A + B = A
- **Acquisition / Takeover**
  - **Hostile**
  - **Friendly**

  Acquisition
  - **Active** — 20% or more — who can influence the decision of the management
  - **Passive** — less than 20% — who cannot influence the decision of the management.
- **Amalgation** — A + B = C

Investment in Associates (20% - 50%)

Consolidation More than (50%)

Held to Maturity | Available for Sale | Held for trading

⇒ **Types of Merger:-**

1) **Horizontal Merger:-**

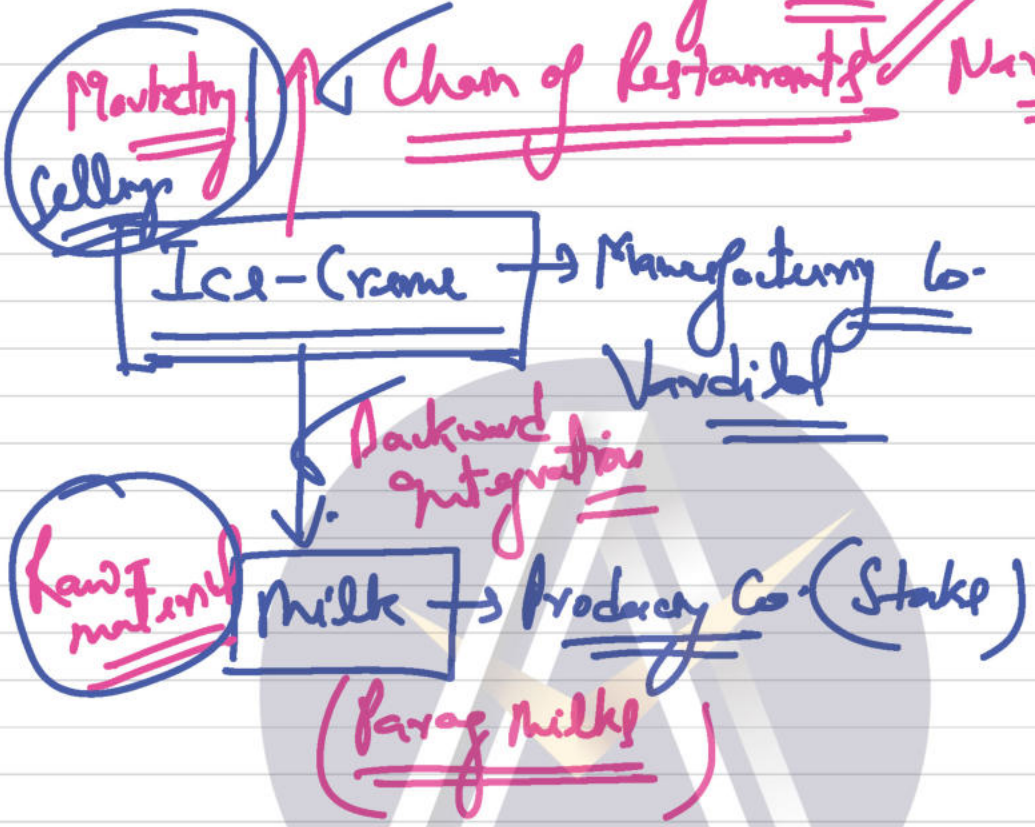
A Ltd — Same type of Co.'s (Same Industry) — B Ltd

Vodafone | IDEA

2) **Verticle Merger:-**

⇒ Forward Integration

⇒ Backward Integration



3) Conglomerate :-

Diversification

Reliance → Telecome + Sector

Jio

Jio finance + MF

4) Reverse Merger:-

Small Co. $\xrightarrow{\text{Acq.}}$ Large Co.

HDFC Bank $\longrightarrow$ HDFC

Benefits of Merger:-

1) Power of MKT. Share:-

IDEA & Vodafone

10% + 20% = 30%

Perfect Competition

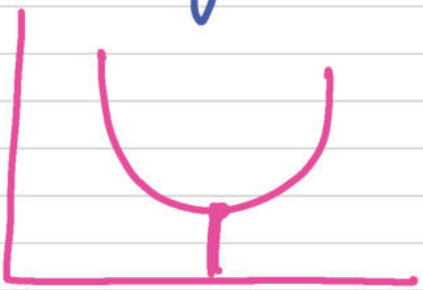
⇓

Monopolistic Competition

⇓

Monopoly.

2) Economies of Scale :—



(i) Operating

(a) Advertisement Cost

(b) Managerial Salaries

(c) Efficiency Improvement

(d) Tax Benefits

(e) Diversification Benefits

(ii) Financing

(a) Ratings ↑

(b) RoI ↓.

(c) Easily Availability of funds.

1) Swap Ratio:- (S/R) | Share-Exchange Ratio:- (E/R)

Meaning:- S/R

No. of equity shares

Share to Share Basis ⟷ Share to Cash Basis

No. of Eq. Shares issued by Acq. Co. to the Target Co. for each share held by the target Co.

S/R = 1:2 or 0.50:1

For 2 shares held by the target co., 1 share of Acq. Co. is issued.

Basis of Calculation:-

$$S/R = \frac{Ach.}{Target} \quad \text{or} \quad \frac{Target}{Achieving}$$

1) **Positive Parameters:-**

Higher the Better

$$S/R = \frac{Target \uparrow}{Achieving. \uparrow} \Rightarrow \frac{MPS \uparrow}{MPS \downarrow}$$

$\Rightarrow$

Note: **Practically:-**

$\Rightarrow$ S/R → EPS × weights

$\Rightarrow$ S/R → MPS × weights

$\Rightarrow$ S/R → DPS × weights

⇒ S/R → N/A ✗ wrong
⇒ S/R → P/E ✗ wrong

S/R ✓

⇒ Some Basic Concepts:-

Acq → Acq. Co.

Tgt → Target Co.

1) Total No. of eq. shares after Merger:

(N_{A+B})

Example.

	Acq	Tgt
No. of Eq. Shares	1,00,000	50,000

S/R = 0.50 : 1

No. of eq. shares $_{A+B}$ = ?

$\Rightarrow$ 1,00,000 + 50,000 × 0.50

$\Rightarrow$ 1,25,000 shares

$$N_{A+B} \Rightarrow N_A + N_B \times S/R$$

2) EPS_{A+B} $\Rightarrow$ EPS after Merger :-

$\Rightarrow$ $EPS_{A+B} \Rightarrow \frac{EFE}{\text{No. of eq. shares}}$

Ex.

	A Ltd	B Ltd
Earnings	5,00,000	2,50,000
No. of eq. Mkt	1,00,000	50,000

$S/R = 0.50 : 1$

EPS ₹/Share ₹/Share

$EPS_{A+B} \Rightarrow$ ~~$\frac{}{} =$~~

$$EPS_{A+B} \Rightarrow \frac{E_A + E_B + S_G}{N_A + N_B \times E_R}$$

OR

$$EPS_{A+B} = \frac{\text{Total Earnings } A+B + (S_G')}{\text{Total No. of Eq. Shares } A+B}$$

$$\Rightarrow \frac{5,00,000 + 2,00,000 + 0}{1,00,000 + 50,000 \times 0.5}$$

$EPS_{A+B} \Rightarrow$ ₹5.6/Share

3) Equivalent EPS :- E/L

Eg ✓

	A Ltd	B Ltd
EPS after Merger	5·6/Sh	5·6 × ·5 = 2·8/Sh
EPS before Merger	5/Sh	4/Sh
↳ ⇒	0·60/Sh	Exc = 2/Sh

Equivalent EPS ⇒ EPS A+B × E/R

4) MPS after Merger :- CMPS A+B

If P/E Ratio after Merger is given

If P/E Ratio after Merger is not given.

MPS ⇒ EPS × P/E Ratio

(P/E Valuation)

Case I: If P/E Ratio after Merger is given :-

P/E Valuation

$$MPS_{A+B} = EPS_{A+B} \times P/E\ Ratio_{A+B}$$

Case II: If P/E Ratio after Merger is not given :-

⇓

Total Mkt. Value Approach

$$MPS_{A+B} \Rightarrow \frac{\text{Total Mkt Value}_{A+B}}{\text{Total No of Shares}_{A+B}}$$

OR

$$MPS_{A+B} \Rightarrow \frac{MV_A + MV_B + SC}{NA + N_B \times E/R}$$

5) Equivalent MPS of Target Co. in the Merged Entity:-

Eg $EPS_{A+B} = 10/Sh \times P/E_{A+B} = 10$

$MPS_{A+B} = 100/Share$

G/L Based on MPS:-	A Ltd	SR = .50:1 B Ltd
MPS After Merger	100	100 × .50 = 50
MPS Before Merger	85	35
	G = 15/Sh	G = 15/Sh

Equivalent MPS = $MPS_{A+B} \times SR$

6) Mkt. Value after Merger:-

- If P/E Ratio after Merger is given
- If P/E Ratio after Merger is not given

P/E Valuation

$MPS_{A+B} = EPS_{A+B} \times P/E_{A+B}$

$MV_{A+B} = No.\ of\ shares_{A+B} \times MPS_{A+B}$

MV Approach

$MV_{A+B} = No.\ of\ shares_{A+B} \times MPS_{A+B}$

$MPS_{A+B} = \frac{MV_A + MV_B}{NA + N_B \times E}$

MV Approach

Concept: Gl. of C/L of Merger:-

	Actg.	A-tg
EPS/MPS/MV after Merger	XXX	Equivalent XXX
EPS/MPS/MV Before Mer	XXX	XXX
	G/L	G/L

Q.1A

(a) No. of eq. shares issued by A Ltd to B Ltd :-

S/R = 0.50 : 1

1,80,000 × .50

⇒ 90,000 shares ✓

NB × E/R ✓

(b) EPS A+B = ?

⇒ $\frac{EA + EB + S4}{NA + NB \times E/R}$

⇒ $\frac{18,20,000 + 3,60,000 + 0}{6,20,000 + 1,80,000 \times .50}$

$EPS_{A+B} \Rightarrow ₹\ 3.130$/share

(c) Equivalent EPS $\Rightarrow$ $EPS_{A+B} \times$ S/R

$\Rightarrow 3.13 \times .50$

$\Rightarrow 1.565$/share

(d) $MPS_{A+B} \Rightarrow EPS_{A+B} \times P/E_{A+B}$

P/E Valuation

$\Rightarrow 3.13 \times 10$

$\Rightarrow ₹31.30$/share

(e) $MV_{A+B} = ?$

$= N_{A+B} \times MPS_{A+B}$

$\Rightarrow [6,10,000 + 90,000] \times 31.30$

⇒ ₹ 215,97,000

Q 13

W.No.1 S/R based on MPS:-

$$\Rightarrow \frac{\text{MPS of Target}}{\text{MPS of Acq.}}$$

$$\Rightarrow \frac{15}{12} \Rightarrow 1.25:1$$

W.No.2 Cal. of EPS before Merger:-

	B Ltd	C Ltd
No of Shares	5,00,000	1,00,000
MPS	12	15
$PE = \frac{MPS}{EPS}$	17	10

$EPS \Rightarrow \frac{MPS}{P/E}$ 0.706/share 1.5/share

Total Earnings 353000 1,50,000

$EPS_{\text{After Merger}} \Rightarrow \frac{3,53,000 + 1,50,000 + 0}{5,00,000 + 1,00,000 \times 1.5}$

$EPS_{A+C} \Rightarrow$ 0.805/share

So, the EPS of A Ltd. will increase from 0.706 to ₹ 0.805/share as a result of merger.

Q.2A

W. No. 1	A Ltd.	B Ltd.
EAT	2000 lakhs	400 lakhs
No of shares	200 lakhs	100 lakhs
EPS	10/share	4/share
P/E Ratio	10 times	5 times
MPS	100/share	20/share

(a) S/R based on CMP:-

$$\frac{\text{MPS of B Ltd.}}{\text{MPS of A Ltd.}} = \frac{20}{100}$$

$$= 0.20 : 1$$

(b) $EPS_{A+B} \Rightarrow \frac{2000 + 400 + 0}{200 + 100 \times .2}$

$\Rightarrow 10.91$ /share

(c) $MPS_{A+B} \Rightarrow EPS_{A+B} \times P/E_{A+B}$

$\Rightarrow 10.91 \times 10$

$= 109.10$ /share

(d) $MV_{A+B} \Rightarrow N_{A+B} \times MPS_{A+B}$

$\Rightarrow [220 + 100 \times .20] \times 109.$

$\Rightarrow ₹ 24002$ Lakh

(e) Rule of Continuity

G/L Based on Mkt. Value:-

	Alta	Blta
MV after the Merger	200 l × 109.10 ⇒ ₹21820 l.	100 l × .20 ⇒ 20 l × 109.10 ⇒ ₹2182 l
MV before Merger	200 l × 100 ⇒ 20,000 l	100 l × 20 ⇒ ₹2000 l.
	G = 1820 l	G = 182 l.

Q.28

W.No.1

	Xco	Yco
No. of Shares	3,00,000	2,00,000
MPS	30	20
EPS	4	2.25
Total Earnings	12,00,000	4,50,000

Ans.1 S/R based on EPS:-

$$\Rightarrow \frac{\text{EPS of Yco.}}{\text{EPS of Xco.}} \Rightarrow \frac{2.25}{4}$$

$$\Rightarrow 0.5625 : 1$$

(a) EPS after Merger:-

$$\Rightarrow \frac{12,00,000 + 4,50,000 + 0}{3,00,000 + 2,00,000 \times .5625}$$

$$\Rightarrow 4/\text{Share}$$

(b) Cal. of G/L (Based on EPS):-

	X Co.	Y Co.
EPS after Merger	4/Share	$4 \times .5625 = 2.25/\text{Sh}$
EPS before Merger	4/Share	2.25/Sh
G/L	0	0

Alt 2 S/R = 0.50 : 1

EPS after Merger ⇒ $\frac{12,50,000 + 4,50,000 + 0}{3,00,000 + 2,00,000 \times .5}$

⇒ ₹ 4.125/Share

(ii) G/L (Based on EPS) :-

	X Co.	Y Co.
EPS after Merger	4.125	4.125 × .5 ⇒ 2.0625
EPS before Merger	4	2.25
	G = 0.125	Loss = 0.1875

Q.2C

(i) Calculation of S/R (Based on MPS)

$$S/R \Rightarrow \frac{\text{MPS of Krishna Ltd.}}{\text{MPS of Rama Ltd.}}$$

$$= \frac{25}{35} = 10:7$$

(i) EPS after Merger:

$$\Rightarrow \frac{10,00,000 + 7,00,000 + 0}{4,00,000 + 2,00,000 \times \frac{7}{10}}$$

EPS after Merger $\Rightarrow$ 2.83/Share

(ii) Change in EPS :- G/L (Based on EPS)

	Ram (A)	Krishna (Target)
EPS after Merger	2.83	2.83 × 1 = 2.83
EPS before Merger	2.50	3.50
	Increase = 0.33	Decrease ⇒ 0.67

(iii) Mkt. Value of Merged Entity :-

(P/E ratio remain same)

$MV_{R+K} \Rightarrow N_{R+K} \times MPS_{R+K}$

$\Rightarrow [4,00,000 + 2,00,000 \times 1] \times EPS_{R+K} \times PE_{R+K}$

$\Rightarrow [6,00,000] \times [2.83 \times 14]$

$MV_{R+K} \Rightarrow 237,72,000$ (39.62)

(iv) G/L → Based on MV:-

	Rang	Krishna
MV after Merger	4,00,000 × 39.62 ⇒ 1584,000	2,00,000 × 39.62 ⇒ 79,24,000
MV before Merger	4,00,000 × 35 ⇒ 140,00,000	2,00,000 × 35 ⇒ 70,00,000
G =	18,48,000	G ⇒ 9240

Concept :- Purchase Price Premium :- (PPP)

Premium ⇒ 120 − 100 = ₹20

% Premium :- $\frac{\text{Change}}{\text{Base}} \times 100$

$\Rightarrow \frac{120-100}{100} \times 100 = 20\%$

Input :- S/R (Based on MPS)

$S/R = \frac{\text{MPS of Target Co}}{\text{MPS of Acq. Co.}} \rightarrow$ Offer Rmp

Q.2D

	ABC	XYZ
W.No.1		
EAT	9,00,000	2,40,000
No. of Shares	1,50,000	60,000
EPS	6/Sh.	4/Sh.
P/E	14 times	10 times
MPS	84/Share	40/Share

Offer Price ⇒ 40 + 25%

⇒ 50/Share

(i) Cal. of S/R! - (Random MPS)

$$S/R = \frac{\text{Offer Rate}}{\text{MPS of ABC Ltd}}$$

$$\Rightarrow \frac{50}{84} \Rightarrow 0.60 : 1$$

(ii) No. of eq. shares to be issued by ABC to XYZ Ltd.:-

$$= 60,000 \times .60 \Rightarrow 36000 \text{ shares}$$

(iii) EPS after Merger:-

$$\Rightarrow \frac{9,00,000 + 2,40,000 + 0}{1,50,000 + 60,000 \times .60}$$

$$\Rightarrow 6.13/\text{share}$$

Impact: E/L (Based on EPS) :-

	ABC Ltd.	XYZ Ltd.
EPS after Merger	6·13	6·13 × ·6 ⇒ 3·68
EPS before Merger	6	4
	Gain = ·13	Loss = 0·32

Thus, with the proposed Merger, the EPS for SH's of ABC Ltd. will increase & EPS of XYZ Ltd. SH's will be decreased.

(iv) MPS after Merger:-

$= EPS_{ABC/XYZ} \times P/E_{ABC/XYZ}$

$\Rightarrow 6.13 \times 14 \Rightarrow ₹ 85.82$/Sh

(v) If P/E = 12 times

MPS after Merger $= 6.13 \times 12$

$\Rightarrow 73.56$/Share

C/L (Based on MPS) :-

	ABC Ltd	XYZ Ltd
MPS After Merger	73.56	$73.56 \times .60$ $\Rightarrow 44.14$
MPS before Merg	84	40

Loss = 10.44 Gain = 4.14

With the merger, there is a decrease in the EPS for Sh.'s of ABC Ltd. & gain for Sh.'s of XYZ Ltd

Q.2F (Jan 2018)

S/R = 2:3

(i) No. of equity shares to be issued by A Ltd.:-

$= 1,80,000 \times \frac{2}{3} = 1,20,000$ shares

(ii) EPS after acq.:

$\Rightarrow \frac{21,00,000 + 4,50,000 \text{ to}}{6,00,000 + 1,20,000}$

EPS $\Rightarrow$ ₹ 3.54/share

(iii) Equivalent EPS of S Ltd.:

$= 3.54 \times 2/3 \Rightarrow 2.36$/Share

4/L for SLTD.

Eq. EPS after Merger $\Rightarrow$ **2.36**

EPS before Merge $\Rightarrow$ 2.50

Loss = 0.14

(iv) **MPS after Merger:-**

$EPS_{M+S} \times P/E_{M+S}$

$\Rightarrow 3.54 \times 10 \Rightarrow$ ₹ **35.40/Share**

(v) **MKT. Value of the Merged Firm:**

$\Rightarrow [6,00,000 + 1,20,000 \text{ Shares}] \times 35.40$

⇒ ₹ 254,88,000 /-

(VI) Equivalent EPS of SLtd = ₹2.25/Sh

MPS before Merger = 17.50/Sh

After Merger Announcement = 17.50 × 1.10

10% Increase in Rate = 19.25/Sh

Return ⇒ $\frac{2.26}{19.25} \times 100$ ⇒ 12.26% p.a.

As Mr. 'X' is having another opp. to earn 14% p.a. return on SLtd. Share will be 12.26% only, it is advisable to off load in the Mkt.

MERGER & ACQUISITION

Concept:- Maximum EIR & Minimum EIR

Cal. EIR | SIR

Acq. Co

Target Co.

BEP Break-even point

Basis of Cal.

EPS

MPS

% of E Ratio after Merger

% of E Ratio after Merger

is given → P/E Val

is not given → NV Approach

1) Based on EPS:-

Acte → Acq. Co.
Bkte. → Target Co

(a) Max. EIR :- (Acq. Co.)

↓

DEP → Acq. Co.

EPS before Merger = EPS after Merger

EPS_{Acte} (11) $= EPS_{A+B}$ (10)

$= \frac{E_A + E_B + SG}{N_A + N_B \times EIR}$?

ΔEPS = ? Solve for EIR

(b) Minimum EIR :- Target Co.

ΔEPS = ? Target Co

EPS before Merger = Equivalent EPS after Merger

OR

$EPS_{Merger} \Rightarrow EPS_{A+B} \times EIR$

$\Rightarrow \frac{EA + EB + SH}{NA + NB \times EIR} \times EIR$

Solve for EIR

ΔEPS = Target Co.

Q.3A

(i)

	Alta	Bltd.
EAT	5,10,000	12,500
÷ No. of eq. Shares	2,50,000	1,25,000
EPS	2/Share	4/Share
MPS	20/Share	10/Share
P/E Ratio	10 times	10 times

(ii) If Alta. P/E Ratio = 6.4 times

MPS Alta = EPS × P/E Ratio

= 1 × 6.4

⇒ 6.4/Share

S/R (Based on MPS):-

$$= \frac{\text{MPS of Alta.}}{\text{MPS of Acta.}} \Rightarrow \frac{6.4}{20}$$

$$\Rightarrow 0.32 : 1$$

EPS after Merger:-

$$\Rightarrow \frac{5,00,000 + 12500 + 0}{2,50,000 + 12500 \times 0.32}$$

$$\Rightarrow 2.155/\text{share}$$

(iii) Alta → Maximum E/R → Acq.-Co

(Ratio of Cal. is E/S)

EPS before merger = EPS after merger

$$EPS_{A+B} = EPS_{A+B}$$

$$2 = \frac{E_A + E_B + S_4}{N_A + N_B \times ER}$$

$$2 \Rightarrow \frac{5,00,000 + 125000 + D}{2,50,000 + 12500 \times ER}$$

$$5,00,000 + 2,50,000\,ER = 625000$$

$$ER = \frac{125000}{2,50,000}$$

$$\Rightarrow \underline{0.50:1}$$

Max. ER = $\underline{0.50:1}$

Q.3B

	MCo	Neo.
EAT	80,00,000	24,00,000
No. of eq. shares	16,00,000	4,00,000
EPS	5/Sha	6/Share
MPS	200/Sha	160/Share

(a) Cal. of S/R :- (Based on MPS)

$$\Rightarrow \frac{\text{MPS of N Co.}}{\text{MPS of M Co.}} = \frac{160}{200}$$

$$= 0.80 : 1$$

EPS after Merger :-

$$\Rightarrow \frac{80,00,000 + 24,00,000 + 0}{16,00,000 + 4,00,000 \times 0.80}$$

$\Rightarrow$ 5.417/Share

(b) Minimum ER → Target N Co.

(Based on EPS)

| EPS before Merger = Equivalent EPS after Merger |

$6 = EPS_{M+N} \times ER$

$$6 = \frac{E_M + E_N + SG}{N_M + N_N \times ER} \times ER$$

Solve =!

$$6 = \frac{80,00,000 + 24,00,000 + 0}{16,00,000 + 4,00,000 \times ER} \times ER$$

$96,00,000 + 24,00,000 \text{ EAR} = 104,00,000 \text{ EAR}$

$$\text{EAR} = \frac{96,00,000}{80,00,000}$$

Minimum EAR ⇒ 1.2 : 1 ✓✓

Q. 3D (a):

(a) W. No. S/R = 0.70 : 1

EPS after Merger :-

$$\Rightarrow \frac{(10,00,000 \times 40) + (4,00,000 \times 28) + 0}{10,00,000 + 4,00,000 \times 0.70}$$

$\Rightarrow$ 40/Share

Impact :- Cal. of G/L (Based on EPS) :-

	XYZ	ABC
EPS after Merger	40	40 x .70 $\Rightarrow$ 28
EPS before Merger	40	28

G/L NIL NIL

(b) Since, P/E Adj. is given, Basis of Cal. is MPS:-

MPS after Merger ⇒ $EPS_{XYZ/Amc} \times P/E_{XYZ/Amc}$

$$\Rightarrow \frac{(101 \times 40) + (42 \times 25) + 0}{101 + 42 \times 1} \times \frac{250}{40}$$

MPS after Merger ⇒ ₹ 228.57 / Share

Cal. of G/L for Amc Ltd. (Based on MPS)

MPS after Merger ⇒ 228.57 × 1

MPS before Merger ⇒ 160

Gain ₹ 68.57/share

(c) Cal. of G/L for XYZ Ltd:

MPS after Merger = ₹28.57

MPS before Merger ⇒ ₹50.00

Loss ₹ 21.43/share

(d) Max. G/L → Acq. Co → XYZ Ltd.

(Based on MPS)

MPS before Merger = MPS after Merger

$MPS_{XYZ} = MPS_{XYZ, Adj}$

$\Rightarrow EPS_{XYZ, Adj} \times P/E\ Ratio$

$$250 = \frac{(10l \times 40) + (4l \times 28) + 0}{10l + 4l \times EIR} \times \frac{250}{40}$$

$$2500l + 1000l\,EIR = 3200$$

$$EIR = \frac{700}{1000} \Rightarrow 0.7081$$

Q.3E

(a) Max. EPR → Acq. Co. → Ctd

(Based on MPS)

MPS before Merger = MPS after Merger

$MPS_{Ctd} = MPS_{C+D}$

$38.40 = EPS_{C+D} \times P/E_{(+1)}$

$38.40 \Rightarrow \dfrac{96 + 30 + 0}{20 + 14 \times EPR} \times 7$

$768 + 537.6\,EPR \Rightarrow 882$

$EPR = \dfrac{114}{537.6} \Rightarrow$ **0.2121 : 1**

(b) Minimum E/R → Targeted → Debt.

(Based on MPS)

MPS before Merger = Equivalent MPS after Merger

$MPS_{Debt} = MPS_{C+D} \times E/R$

$15 = EPS_{C+D} \times P/E_{C+D} \times E/R$

$15 \Rightarrow \frac{E_C + E_D + S_H}{N_C + N_D \times E/R} \times PE \times E/R$

$15 \Rightarrow \frac{96 + 30 + 0}{20 + 14 \times E/R} \times 9 \times E/R$

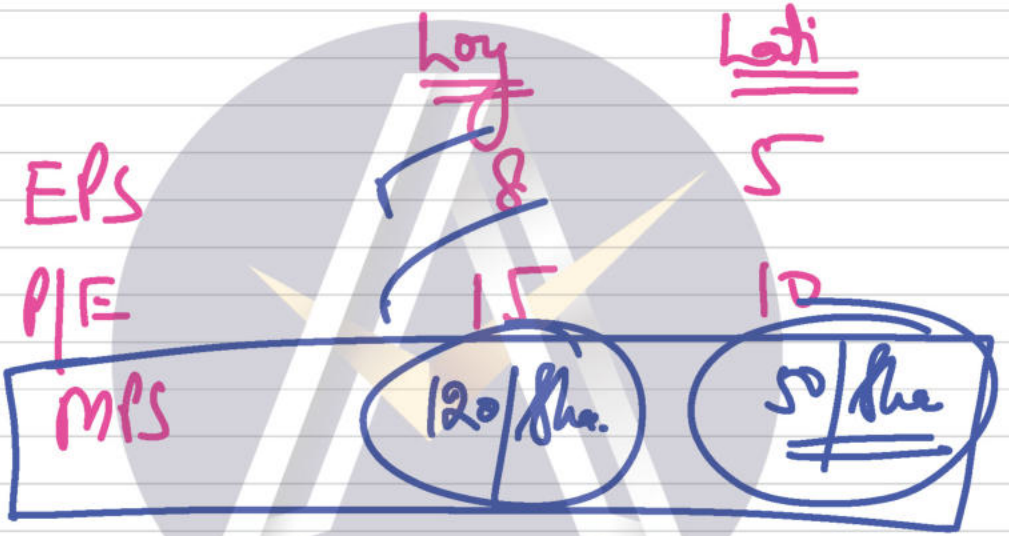
$300 + 210\ E/R \Rightarrow 1134\ E/R$

$E/R \Rightarrow 0.325 : 1$

Q.3C

(i) Pre-Merger MPS:-

MPS = EPS × P/E Ratio



(ii) (a) Max. EPS (Based on EPS)

↳ Acq. Co → Longitude Ltd.

EPS before Merger = EPS after Merger

$$EPS_{Lay} = EPS_{Lay+Lati}$$

$$8 \Rightarrow \frac{(15l \times 8) + (16l \times 5) + 0}{15l + 16l \times E/R}$$

$E/R \Rightarrow ?$

$$120l + 128l\, E/R = 200l$$

$$E/R \Rightarrow \frac{80l}{128l} \Rightarrow 0.6250:1$$

Max. $E/R \rightarrow 10:16$ or $5:8$

(b) Max. E/R :- (Based on MPS)

MPS before Merger = MPS after Merger

$$120 \Rightarrow \frac{MV_{Log} + MV_{Lath.} + SS}{N_{Log} + N_{Lath.} \times E/R}$$

$$120 \Rightarrow \frac{(15l \times 120) + (16l \times 5) + 0}{15l + 16l \times E/R}$$

$$1800l + 1920l\, E/R = 2600\,l.$$

$$E/R \Rightarrow \frac{800l}{1920l}$$

$$\text{Max. } E/R \Rightarrow 0.4167 : 1$$

Crux:

⇒ % of Holding → Attr → Merged

2,07,000 → 2,500
225000 / 2,25,000
% / %

⇒ Ft-Mkt. Cap.

⇒ [Total No. of shares
(−)
Promoter's Holding
Strategic Held
Manager Held
Credit.] × MPS

$$M/S \Rightarrow \frac{\text{Total MV}}{\text{Total No of eq shares}}$$

$$M/S = \frac{\text{FF MKT. Value}}{\text{FF No. of eq shares}}$$

(#) Answer will be same under both approach.

Q.4A V.V.Imp.

	A Ltd	B Ltd
ESC	200 l	120 l.
÷ PAR Value	100	10
No of eq. Shares	2 l	12 l.

Cal. of DVPS:-

	A Ltd	B Ltd
ESC	200 l	120 l.
RS	800 l	500 l
Book Value	1000 l	620 l.
÷ No. of eq Shs	2 l.	10 l
DVPS	500/Sha	62/Shares

② Cal. of MPS:-

	Acte	Bcte.
Method 1:-		
FF Mkt. Cap.	400 l	128 l
÷ FF No. of eq. Shares	2l - 50% → 1 l	10l - 60% = 4 l.
MPS	₹ 400/Share	₹ 32/Share

OR

Method 2		
Total Mkt. Cap.	400 / .50 ⇒ 800 l.	128 / .40 = 320 l.
÷ Total No. of eq. Shares	2l	10l

MPS 400/Shr 32/Share

① Cal. of EPS:-

	A Ltd	A Ltd.
P/E = MPS/EPS	10 times	4 times
MPS	400/Shr	32/Shr
EPS = MPS/P/E Rt.	400/10	32/4
	= 40/Share	8/Shr

(a) Cal. of S/K:- Target / Adv.

1) DVPS ⇒ $\frac{60}{500}$ ⇒ 0.12 × .25

2) MPS = $\frac{32}{400}$ ⇒ 0.08 × .25

3) EPS = $\frac{8}{40}$ ⇒ 0.20 × .75

P/E ⇒ 0.15 : 1

(b) (i) Calculation after Merger:-

DVPS$_{A+B}$ = ?

EPS

[21 + 10 × .15] × 10 (After value)

350 lakhs

RHS

[800l + 500l − 50l] 1250 lakh

Book Value ⊛ 1600 lakh

÷ No. of eq. shares 3.5 lakh

(2l + 10l × .15)

BVPS$_{A+B}$ ⇒ ₹ 457.14/share

BV → NW ⇒ Same

W. No

SFC	200l	150l	350l.
RHS	800l	500l.	800+500 − 50 = 1250l

Hemp Roved	1700	600	1600

(ii) EPS after Merger:

$$\Rightarrow \frac{(2l \times 40) + (10l \times 8) + 0}{2l + 10l \times 0.15}$$

EPS after Merger $\Rightarrow$ ₹45.714/Share

(iii) MPS after Merger:-

$= EPS_{A+B} \times P/E_{A+B}$

$\Rightarrow 45.714 \times 10$

MPS_{A+B}	$\Rightarrow$ 457.14	/Share

(c) (ii) Promoter's Revised Holding:-

Total No. of eq. shares after Merger:-

⇒ 2l + 10l × .15 = 3.5 lakh shares

Promoter Holding

A Ltd	B Ltd
50%	60%
2l × 50%	[10l × .15] × 60%
⇒ 1 l.	⇒ 0.90 lakh
1,90,000 shares	

% of Holding:

⇒ $\frac{1,90,000}{3,50,000} \times 100$

⇒ 54.286 %

(ii) FF MKT Cap:-

[Total No. of eq Shares (-) Promoter's Holdg.] × MPS of the Merger

⇒ [3.5 l − 1.90 l] × 457.14/Shr

⇒ 731.424 lakhs

(iii) (a) Bonus = 1:2

3.5 l + 3.5 l / 2 ⇒ 5,25,000 Shares

Split 100 — 5/Shr

20:1

Total No. of Eq. Shares after Bonus & Split :-

$\Rightarrow 5,25,000 \times 20 \Rightarrow 105,00,000$ Shares

(ii) EPS :- (after Bonus/Split)

$$\frac{(21 \times 40) + [10 \times 8] + 0}{105 \text{ lakhs}}$$

$\Rightarrow 1.524$/Share

(iii) AVP :- (after Bonus & Split)

ESC $[105 \times 5]$ 525 lakh

RR 1075 lakh

[800l + 500l − 50l]
= 1250 l — Bonus

$$1250l - \left[\frac{3.5l}{2}\right] \times 100 \text{ PAR Value}$$

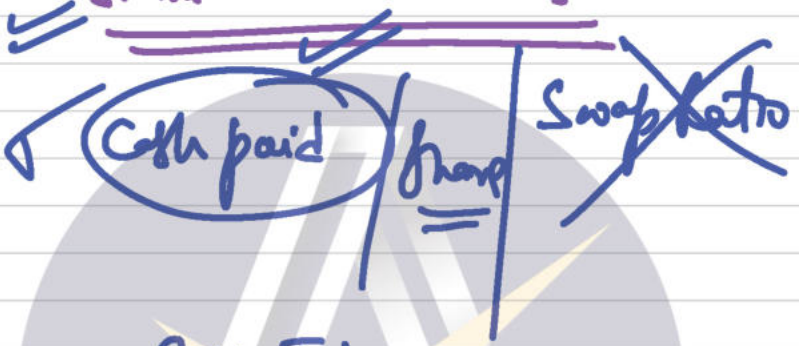
= 1250l − 175 l

Book Value	1600 l.
÷ No. of eq. sh.	105 l
BVPS after Bonus & split	₹15.24/Share

MERGER & ACQUISITION

Concept: Cash Take over: —

Share to Cash Basis



Cash Takeover

1) EPS_{A+B} [Cash Takeover]

$\Rightarrow E_A + E_B + SG - $ Cash ~~paid~~

⇓

[Opp cost]

- int (1 − tax) → K_d
- K_0 → already after tax

~~$N_A + N_B \times ER$~~

$$EPS_{A+B} = \frac{E_A + E_B + SG - \text{Cash paid} \times \text{int.}(1-\text{tax})}{N_A}$$

OR

Business itself:-

$$EPS_{A+B} = \frac{E_A + E_B + SG - \text{Cash paid} \times K_0}{N_A}$$

2) MPS_{A+B} = ? [Cash Takeover]

Case I: If P/E Ratio after Merger is given:-

↓

P/E Valuation

$MPS_{A+B} = EPS_{A+B} \times P/E_{A+B}$

↓

Borrow | Acquirer itself

Case II: If P/E Ratio after Merger is not given:-

↓

MV Approach

$$MPS_{A+B} \Rightarrow \frac{MV_A + MV_B + S_K - \text{Gift paid}}{NA + NB \times S/R}$$

Q.5A Imp. (SM)

	Acq. Co	Target Co
PAT	80 lakh	15.75 lakh
EPS	4/share	10.50/share
No. of eq. shares	20 lakh	1.5 lakh
MPS	42/share	85/share

(4) Max. E/R (Based on EPS) :-

EPS before Merger = EPS after Merger

$$EPS_{Acq.} = EPS_{Acq.} + Target$$

$$4 \Rightarrow \frac{80l + 15.75l + 0}{20l + 1.5l \times E/R}$$

$80L + 6 lakh \times E/R = 95.75 lakh$

$$E/R = \frac{15.75L}{6L} \Rightarrow \underline{2.625 : 1}$$

Max. E/R = 2.625 : 1

(b) (ref) **Maximum Cash paid per share:-**

EPS before Merger = EPS after Merger

$EPS_{Acq.} = EPS_{Acq.} + Target$

$4 \Rightarrow \frac{E_{Acq} + E_{Tar} + S_4 - Synth(1-tax)}{N_{Acq.}}$

$$4 = \frac{80L + 15.75L + 0 - [x \times 15\%\ (1-.52)]}{20 lakh}$$

80 lakh ⇒ 95.75 l — .15x × .48

$x \Rightarrow$ ₹ 218.75 lakhs

Cash paid / Share ⇒ $\frac{218.75 \text{ lakh}}{1.5 \text{ lakh}}$

Max. Cash paid / Share ⇒ 145.83 / Share

Acq. Co. should offer ₹ 145.83 / Share to maintain his EPS.

Q.5B (2-3 times)

(a) W.No.1 Cl.a K_e = ?

Gordon's :-

$$P_0 = \frac{D_1}{K_e - g_c}$$

$$90 = \frac{0.60}{K_e - .07}$$

$$\boxed{K_e \Rightarrow 10\%}$$

(#) K_e before & after remains same.

Revised $P_0 \Rightarrow \frac{D_1}{K_e - g_c}$

$$\Rightarrow \frac{.60}{.10 - .08} \Rightarrow ₹\ 30/\text{share}$$

Increase in the Value of Note:-

$\Rightarrow [₹30 - ₹25] \times 5,00,000$ shares

$\Rightarrow$ ₹ 50,00,000 $\longrightarrow$ SG

(in terms of MV)

(b) G/L (Based on MPS) :- [1:4]

$$MPS_{A+B} \Rightarrow \frac{MV_A + MV_B + SG}{N_A + N_B \times E/R}$$

$$\Rightarrow \frac{(10l \times 10) + (5l \times 20) + 50,00,000}{10,00,000 + 5,00,000 \times 0.25}$$

$$MPS_{A+B} \Rightarrow \frac{1150l}{11.25l} \Rightarrow 102.22/\text{share}$$

E/L (Based on MPS) :-

	A Ltd.	B Ltd.
MPS after Merger	102.22	102.22 x .25 = 25.555
MPS before Merger	100	20
	E = 2.22/Sh.	E = 5.555/Sh.

(c)

W/No.	A Ltd	B Ltd
E/S	8/Sh	2.50/Sh
MPS	100	20
P/E Ratio	12.5 times	8 times

$MPS_{A+B} \Rightarrow E/S_{A+B} \times P/E_{A+B}$

$$\Rightarrow \frac{E_A + E_B + S_4 - \text{Cash paid} \times K_e}{NA}$$

$$\Rightarrow \frac{101 \times 8 + 51 \times 2.5 + 0 - \left(51 \times 22\right) \times 10\%}{10,00,000} \times 12.5 \text{ time}$$

$\Rightarrow MPS_{A+B} \Rightarrow 8.15 \times 12.5$ time

$\Rightarrow 101.875$ /Share

Cal. E/L (Based on MPS) :-

	A Ltd	B Ltd.
MPS after Merger	101.875	22 ②
MPS before Merger	100	20

$\zeta = 1.875$ $\zeta = 2$

Concept: PC/ COA :-

MFA → Capital Budgeting Decision

⇓

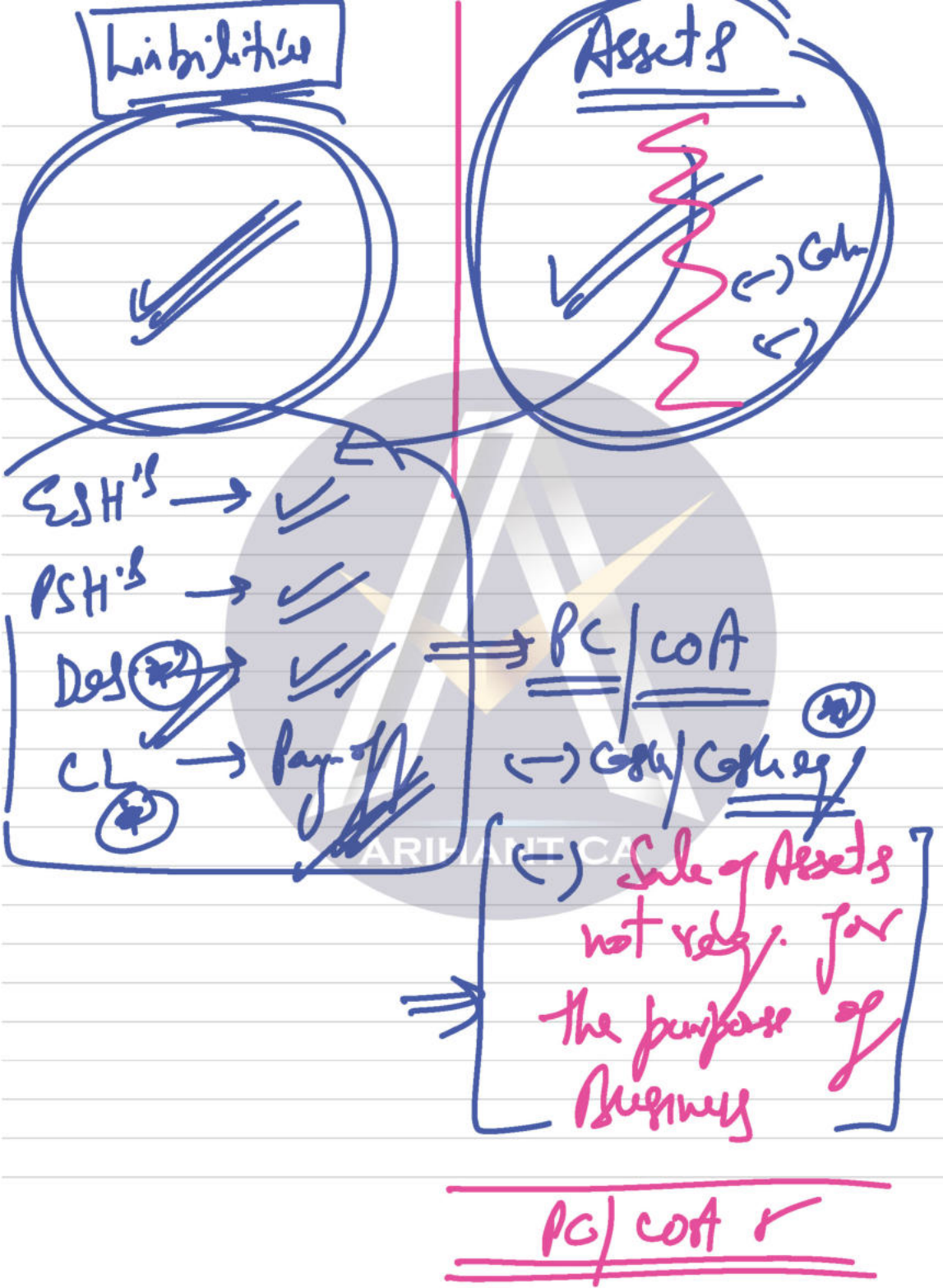
NPV Decision

(ROCE)

NPV = PV of CF's − Initial Investment

1) PC/ COA :-

B/S



Q.6A

1) Cal. of PC | CoA :-

⇒ MV of equity issued by Tigre to Leopard Ltd. $\left[\frac{70,000}{2}\right] \times 15$	5,25,000
⇒ 13% Convertible Def. issued by Tigre Ltd. to Leopard Ltd.	3,00,000
⇒ External liabilities	5,00,000
	13,25,000
Less: Cash & Bank	50,000
Less: Realization of Debtors & Inventories	2,00,000

PC | CoA ₹ 10,75,000

Cal. of NPV:-

NPV = PV of CI's − Initial Invt.

⇒ 5,00,000 [PVAF @16% for 6 yrs]

2,00,000 [PVF @16%, 6th year]

(−)

10,75,000

⇒ 5,00,000 [3.684] + 2,00,000 × .410

(−) 10,75,000

NPV ⇒ ₹ 8,49,000

The merger is financially viable since

NPV is positive, it is advisable to takeover Leopard Ltd.

Q.7 Inf. (Fdable)

W.N. 1

	Acta	Alita
EBIDT	400.86	115.71
Less: Intt	58	30
Acta (10% × 580 l)		
Alita (12.5% × 240 l)		
EBT	342.86	85.71
Less: Tax @ 30%	102.86	25.71
PAT	240.00	60.00
÷ No. of Shares	12 lakh	6 lakh
EPS	20/Share	10/Share
MPS	220	110

P/E Ltd. 11 times 11 times

Acts. offer

(i) Net Consideration Payable:-

7 x EBIDT less: O/S Debt

⇒ 7 x 115.71 lakh (–) 240 lakh

⇒ 569.97 lakhs

(ii) No. of Equity Shares to be issued by Acts:-

⇒ 569.97 / 220 ⇒ 2,59,000 Shares

(iii) EPS after Merger:-

$$\Rightarrow \frac{240l + 60l + 0}{12l + 2.5l}$$

EPS$_{A+B}$ ⇒ ₹20.58/Share

(iv) MPS after Acq:-

⇒ EPS$_{A+B}$ × P/E$_{A+B}$

= 20.56 × 11 ⇒ ₹226.16/Share

Alt. Plan:-

(i) Net Consideration Payable:-

S/R = 1:2

$\left[\frac{6,00,000}{2}\right]$ × 220 ⇒ ₹660 lakh

(ii) No. of eq. shares :-

$$\frac{6,00,000}{2} = 3,00,000 \text{ shares}$$

(iii) $EPS_{A+B} \rightarrow \frac{240l + 60l + 0}{12l + 6l \times .5}$

$\Rightarrow$ 20/share

(iv) $MPS_{A+B} \rightarrow 20 \times 11 = 220/\text{sha}$

Q.8

W.No Cal. of S/R:- (Based on P/E Ratio)

Best with Better:-

$$S/R = \frac{P/E \text{ of Better}}{P/E \text{ of Best}} = \frac{37}{30}$$

$$\Rightarrow 1.233 : 1$$

Best with good Ctr.

$$S/R = \frac{23}{30} \Rightarrow 0.767 : 1$$

No. of eq. Shares

Best → Better

$$36000 \times 1.233 \Rightarrow 44388 \text{ Shares}$$

Dept → Good

$18000 \times .767 \Rightarrow 13806$ Shares

1) EPS Dept + Better:-

$$\Rightarrow \frac{(90,000 \times 2) + (36000 \times 1) + 0}{90,000 + 44388}$$

$$\Rightarrow \frac{216000}{134388} \Rightarrow 1.607 \text{ / Share}$$

2) EPS Dept + Good:-

$$= \frac{(90,000 \times 2) + (18000 \times 2) + 0}{90,000 + 13806}$$

$$\Rightarrow 2.081 \text{ / Share}$$

3) EIS Best + Better + Good :-

$\Rightarrow (90,000 \times 2) + (36000 \times 1) + (18000 \times 2)$

$90000 + 44381 + 13806$

$\Rightarrow$ ₹1.70/Share

Decision :-

Existing EIS of Best Ltd. is ₹2/Share.

It can be increased by merging with Good Ltd. only.

So, Best Ltd. should take-over & merge with Good Ltd. only.

Q.9A 2-3 times

Alta

MPS = ₹40/Share

⇓

EPS ⇒ 21,000 / 1,20,000 ⇒ 2.10/Sh

P/E Ratio

40 / 2.10 ⇒ 19.05 times

DVPS

⇒ 10l+2l / 2l

⇒ 12/Sh

ROE

⇒ 21000 / 10l+2l

⇒ 17.5%

Alta.

MPS = 15/Share

⇓

EPS

⇒ 99000 / 80000

⇒ 1.2375/share

P/E Ratio

15 / 1.2375

⇒ 12.12 times

BVPS

⇒ 8,00,000 / 80,000

⇒ 10/share

ROE

99000 / 8,00,000

= 12.375%

(ii) g = RR × ROE

Alta ⇒ 60% × 17.5% ⇒ 10.5%

Delta ⇒ 40% × 12.375% ⇒ 4.95%

(iii) Range → Highest → Lowest

Upper — Lower

E/R based on IV:-

$$\Rightarrow \frac{\text{IV of Rltd.}}{\text{IV of Advt}} \Rightarrow \frac{20}{40} = 0.50:1$$

E/R based on MPS:-

$$= \frac{15}{40} \Rightarrow 0.375:1$$

Range of S/R = 0.375 to 0.50

lower — Upper

Advt	Rltd

MPS	40/Shr	15/Share
EPS	2.10/Shr	1.2375/Shr
P/E	19.05	12.12 times
DVPS	12/Shr	10/Shr
RoE	17.5%	12.375%
g	10.5%	4.95%

Decision:

When A Ltd. is compared against Alte. from various Angles, we find that the comparative position of A Ltd. is very poor.

Hence, Shareholder of A Ltd. will offer to B Ltd, the lowest range

i.e. 0.375 : 1

(iv) S/R 0.4 : 1 G/L → (Based on EPS)

$EPS_{A+B} \Rightarrow \frac{EA + EB + SG}{NA + NB \times E/R}$

$\Rightarrow \frac{2,10,000 + 99000 + 0}{1,00,000 + 80,000 \times 0.40}$

$EPS_{A+B} \Rightarrow 2.341$ /Rs

	Alt.	Alt.
EPS after Merger	2.341	2.341 × .40 ⇒ 0.9364
EPS before Merger	2.10	1.2375
	G = 0.241	L = 0.3011

(v) S/R 0.4:1

$MPS_{A+B} \Rightarrow EPS_{A+B} \times P/E_{A+B}$

$\Rightarrow 2.341 \times 19.05$ times

$\Rightarrow ₹44.60$/Sh

G/L (Based on MPS)

	A Ltd	B Ltd
MPS after Merger	44.60	44.60 × .40
		⇒ 17.84
MPS before Merger	40	15
	G = 4.60	G = 2.84

Concept: Maximum MPS & Minimum MPS

[Acq. Co] (Point of view)

1) Minimum MPS:- (Offered by Acq. Co to Target Co.)

⇒ Value of Equity of Target Co. / No. of eq. Shares of Target Co.

2) Maximum MPS:- (Offered by Acq Co to Target Co.)

⇒ (Value of Equity Target Co. + Value of Synergy) / No. of eq. Shares of Target Co.

Q.10A

W.No.1 Cal. of WACC:-

Actt. $K_e W_e + K_d W_d$

$\Rightarrow 14.23\% \times .79 + 5.4\% \times .21$

$\Rightarrow 12.37\%$

NLtd $= 15.33\% \times .91 + 6\% \times .09$

$\Rightarrow 14.49\%$

Combined $\Rightarrow 14.49 \times .80 + 5.42\% \times .20$

$\Rightarrow 12.57\%$

Vo for Actt. — 1 million

Year	CFs	PVF@12.37%	PV

1	4684	.8899	4168.29
2	4918	.7919	3894.56
3	5164	.7348	3639.59
4	5422	.6272	3400.68
5	5693	.5581	3177.26
5	82756	.5581	46186.12

$V_B \rightarrow$ Alt. 64466.50

family

$V_\eta \rightarrow$ Blitz

Year	CF's	PVF@14.49%	PV
1	471	.8734	411.37
2	509	.7629	388.32
3	550	.6663	366.47
4	594	.5820	345.71

5	641	.5083	325.82
5	8102	.5083	4118.25
		QLtd.	5955.94
			$ million

Value of Combined Entity:-

Year	CF's	PVF@12.5%	PV
1	5195	.8884	4615.24
2	5558	.7893	4386.93
3	5948	.7012	4170.74
4	6364	.6230	3964.77
5	6809	.5534	3768.10
5	97672	.5534	54051.68
		Combined Entity	74957.46
			$ million

Value of Synergy:-

$V_{combined} - [V_{A Ltd} + V_{B Ltd.}]$

$\Rightarrow 79957.46 - [64466.50 + 5955.9$

$\Rightarrow$ 4535.02 \$ million → SG

(In terms of MV)

(ii) Minimum MPS offered by A Ltd. to B Ltd:-

$V_B - V_D$

$$\Rightarrow \frac{\text{Value of Equity of B Ltd.}}{\text{No. of eq. shares}}$$

$\Rightarrow$ 5955.94 − 537 \$ million

70.6 million shs

⇒ $76.76 / Share

(iii) Maximum MPS offered by Acto. to Bltd.

⇒ $\frac{\text{V of Eq. of Bltd} + \text{Value of Synergy}}{\text{No. of Eq. Shs}}$

⇒ $\frac{(595.94 - 537) + 453.5}{70.60}$

⇒ $141 / Share

The price of $110 is justified as it is between minimum & maximum MPS.

Q.10B V.V. Imp.

(i) Maximum price per eq. share which POR Ltd. can offer to XYZ Ltd.

$$\Rightarrow \frac{V_E \text{ of XYZ} + \text{Value of Synergy}}{\text{No. of eq. share of XYZ Ltd.}}$$

$$\Rightarrow \frac{(10,00,000 \times 24) + 80l + 30l}{10,00,000}$$

$\Rightarrow$ 35/share ✓

(ii) Minimum Price:-

$[V_E \rightarrow 40\%] + 30,00,000$ ✓

Ve of Management Holding. 96,00,000

[10,00,000 × 40%] × 24

(+) Savings due to lesser salaries & perks of Top Management 30,00,000

126,00,000

÷ No. of eq. Shares 4,00,000

= ₹ 31.50 / Share

Q-10C

FCV.

Year	OPCF	CF	SV	TV	Total	PVF @ 12%	PV
0	—	20	—	—	20	1/-	20
1	10	—	2	—	12	.893	9.196
2	10	—	2	—	12	.694	8.328
3	10	—	2	—	12	.579	6.948
4	10	—	2	—	12	.482	5.784
5	10	—	2	10×5 = 50	62	.402	24.924
							75.98

Total Value + Synergy. 75.98

Less: MV of Debt. 15.00

60.98 cr

Thus, the maximum price to be paid for acquisition of Nirmana Ltd. 60.98 cr

MERGER & ACQUISITION

Q.10D (May 2019)

(i) Minimum price per share S Ltd. should accept from K Ltd:-

$$\Rightarrow \frac{\text{Value of Equity of S Ltd.}}{\text{No. of eq. share of S Ltd.}}$$

$$\Rightarrow \frac{420,45,977}{80,00,000}$$

$\Rightarrow$ ₹ 5.26 / share

W No. 1 Value of Equity of S Ltd:-

$$\frac{54,87,000}{.1305} \text{ - - - - } \text{₹}$$

$\Rightarrow$ ₹ 420, 45, 977

Therefore, the Minimum MPS Ltd. should accept from RLtd is ₹ 5.26/share

(ii) Cal. of Maximum MPS Rltd. shall be willing to offer to SLtd:-

$\Rightarrow$ Value of Eq. of SLtd + Value of Synergy / No. of eq. shares of SLtd.

$\Rightarrow$ 420, 45, 977 + 404, 26, 750 / 80, 00, 000

$\Rightarrow$ ₹ 10.31/share

W.No.2 **Value of Synergy:-**

$$V_{\text{Combined Entity (Equity)}} - \left[V_{\text{RLtd Equity}} - V_{\text{SLtd. Equity}}\right]$$

$$\Rightarrow 1480,00,000 - \left[655,27,273 + 420,45,977\right]$$

$$\Rightarrow V_{\text{Synergy}} \Rightarrow ₹\ 404,26,750$$

W.No. **$V_{\text{Combined Entity}}$:-**

$$\frac{185,00,000}{.125} \quad \text{---} g$$

$$\Rightarrow ₹\ 1480,00,000$$

V_{equity} R Ltd:-

$\Rightarrow \frac{90,10,000}{\cdot 1375}$ ---₹

$\Rightarrow$ ₹ 655,27,273

(iii) Floor Value:-

↓

Minimum Value:-

[MPS, Valuation & NVPS] Minimum

↓

Floor Value

MPS Val. NVPS

[3.20/share, 5.25/Sha, 5/Share] Minimum

Floor Value ⇒ 3.20/share

W.No:- DVPS:-

ESC	120,00,000
RS	279,95,000
DV	399,95,000
÷ No. of eq. shares	80,000
DVPS	5/share

Decision: Flow Value/share of SCtd. shall be ₹ 3.20/share & it shall not play any role in decision for the acquisition of SCtd. as it is lower than its Book Value & Valuation as per DCF Approach.

Q.10E

(i) Existing Share Price:-

(a) Existing Share Price of Hanky Ltd:-

W.N.

$g = RR \times RoE$

$\Rightarrow (20\%) \times 15\% \Rightarrow 3\%$

Earnings $\Rightarrow$ ₹50,00,000

$D_0 \Rightarrow$ ₹50,00,000 × 80%

$\Rightarrow$ ₹40,00,000

$D_0 = \frac{₹40,00,000}{5,00,000} \Rightarrow 10.40$/Share

$P_0 = \frac{D_0(1+g)}{K_e - g} \Rightarrow \frac{10.40(1+.03)}{.21-.03}$

$\Rightarrow$ ₹ 59.51 / Share

(b) Existing Share Price of Shanky Ltd.

$g = 80\% \times 15\% \Rightarrow 12\%$

$E_0 \Rightarrow 24,00,000$

$D_0 \Rightarrow \frac{24,00,000 \times 20\%}{15,00,000}$

$D_0 \Rightarrow 3.2$ / Share

$P_0 \Rightarrow \frac{D_0(1+g)}{K_e - g} \Rightarrow \frac{3.2(1+.12)}{.24-.12}$

$P_0 \Rightarrow$ ₹ 29.87 / Share

(ii) $g = RR \times ROE$

$= 35\% \times 17\% \Rightarrow 5.95\%$

Next year Earnings of Combined Entity:-

$\Rightarrow [650 \times 1.03] + [240 \times 1.12] + 85,00,000$ (Sh)

$\Rightarrow 1023.30$ lakh (It includes growth)

Next year Dividend

$= 1023.30 \times 65\%$

$\Rightarrow 665.145$ lakh

Value of Hardy Ltd. after Merger:-

(ICAI)

$\Rightarrow \frac{D_1}{K_e - g} \Rightarrow \frac{665.145}{.20 - .0575}$ ~~(H=.0595)~~

$\Rightarrow$ £4734.128 lakh

(c) Maximum price paid for Shanky Ltd:

$\Rightarrow$ Value of Shanky + Value of Synergy

$\Rightarrow [29.87/\text{Sh} \times 15\text{l}] + 1310.57$ lakh

$\Rightarrow$ Max. Value of 448.05l + 1310.57 lakh

$\Rightarrow$ ₹ 1758.628 lakh

Max. Price/Sh $\Rightarrow \frac{1758.628 \text{ lakh}}{15\text{l shs}} \Rightarrow 117.24$/Sh

W.Nr Value of Synergy

$= V_{\text{Merged Entity}} - [V_{E\,\text{Hawk}} + V_{E\,\text{Shaky}}]$

$\Rightarrow 4794.128 \text{ lakh} - [59.21 \times 50 + 27.87 \times 15]$

$\rightarrow 1310.578$ lakh

Q11A

Method 1:- Net Asset Value Method:-

$$\frac{\text{Total Assets} - \text{Total External liab.}}{\text{Total No. of eq. shares}}$$

HLtd $\frac{1300 \text{ cr.} - 300 \text{ cr.}}{3.5 \text{ cr.}} \Rightarrow 285.71/\text{sh}$

DLtd $\frac{31.50 \text{ cr.} - 0}{.65 \text{ cr.}} \Rightarrow ₹\, 48.46/\text{sh}$

Method 2: Earning Capitalization Method:-

$$\sqrt{V_0} \Rightarrow \frac{\text{FMP's} - - - - \text{f}}{\text{Capitalization Rate}}$$

Htd. ⇒ 300 cr / .08 ⇒ ₹ 3750 cr.

V_E Htd = (3750 cr − 300 cr (d)) / 3.5 cr.

⇒ 985.71/sh

Btd. ⇒ 10 cr / .08 ⇒ 125 cr. / .65 cr.

⇒ ₹ 192.31/sh

Cal. of Fair Value/share:-

Htd. [285.71 × 1/4] + [985.71 × 3/4]

⇒ ₹ 810.71/sh → Fair Value of Htd

Δ Ltd $\left[48.46 \times \frac{1}{4}\right] + \left[192.31 \times \frac{3}{4}\right]$

$\Rightarrow$ ₹ 156.35 / Share

Final Answer :-

$S/R = \frac{\text{FAIR Value of Δ Ltd.}}{\text{Fair Value of H Ltd.}}$

$\Rightarrow \frac{156.35}{810.71} \Rightarrow 0.1927 : 1$

Note: It is assumed that the Contingent Liability will be materialized at its full & fair value.

Q11B V. Imp.

(i) Method 1:-

[Net worth + Avg. of 5 yrs Profit]

Net worth of SUL:-

[Total Assets — Total External Liab.]

	FCV.
Land & Building.	
190 x 2.197	417.43
[FVIF @ 30% for 3 yrs]	
(+) Plant & Machinery	350.00
(+) Furniture & fixtures	10.00
(+) Current Assets	580.00

(−) Current liabilities 240.00

(−) Borrowings 105.00

Net Worth → 1012.43

(+) Avg. Profit of 5 years 387.69

$$\left[\frac{250 \text{ cr.} \times 7.7537}{5}\right]$$

Total Value 1400.12

Total Current Mkt. Value 937.50

$$\frac{\text{Total Current Mkt. Value}}{(75/\text{Sh} \times 12.5 \text{ cr})}$$

Premium 462.62 cr.

% Premium $\Rightarrow \frac{462.62}{937.50} \times 100$

⇒ 49.35% ✓

(ii) Method 2 :- Dividend growth Model

$$P_0 \Rightarrow \frac{D_0(1+g)}{K_e - g}$$

D/S ⇒ 125 cr ⇒ 10/Share
12.5 cr

M/S = 75/Share

Equity 'g' ⇒ 15%

New 'g' ⇒ 18%
(after merger)

Cal. of K_e = ?

$$75 = \frac{10(1+.15)}{K_e - .15}$$

$$K_e = \frac{11.5}{75} + .15 \Rightarrow 30.33\%$$

Revised P.:

$$= \frac{10(1+.18)}{.3033 - .18} \Rightarrow ₹ 95.70$$

Premium/Sh = [95.70 − 75] / Share

$\Rightarrow$ 20.70 / Share

∴ Premium $\Rightarrow \frac{20.70}{75} \times 100$

$\Rightarrow 27.60\%$

(iii) During the course of negotiations, ICL will push forward valuation based on growth rate method as it will lead to least cash outflow

Q11C

(i) Value of Yes Ltd. before Merger:- (₹ lakh)

Year	CF's	PVF@15%	PV
1	175	0.870	152.25
2	200	0.756	151.20
3	320	0.658	210.56
4	340	0.572	194.48
5	350	0.497	173.95
5(TV)	$350(1+.05)/(.15-.05)$		
	⇒ 3675	0.497	1826.475

Value of Yes Ltd. before Merger ₹ 2708.92

Value of Yes Ltd. after Merger:-

(Combined Entity)

Year	CFs	PVF@15%	PV
1	400	0.870	348
2	450	0.756	340.20
3	525	0.658	345.45
4	590	0.572	337.48
5	620	0.497	308.14
5 (TV)	$\frac{620(1+.06)}{.15-.06}$		
	⇒ 7302.22	0.497	3629.20
			∑ 5308.47 lakh

(ii) Value of Acquisition:-

Value of Yes Ltd. after Merger (–) Value of Yes Ltd. Before Merger

⇒ ₹ 5308.47 lakh (–) ₹ 2708.92 lakh

⇒ ₹ 2599.55 lakhs

(iii) Gain to the SH's Yes Ltd:-

Yes	No
1	1
.50	
1.50	

S/R = 0.50

(*) Share of Yes Ltd SH's ⇒ $\frac{1}{1.50}$

Share of Yes Ltd. SH's in Merged Entity

$5308.47 \times \frac{1}{1.50}$ ⇒ 3538.98

Value of Yes Ltd. before Merger. ⇒ 2708.92

Gain to the SH's of Yes Ltd. ⇒ 830.06

Q.11D (a)

(i) Value of firm:-

W.No:- Cal. of TV:- $g = 8\%$

$CF_5 \Rightarrow 10260 \rightarrow TV$

$$\frac{CF_5(1+g)}{K_o - g_c} \Rightarrow \frac{10260(1+.08)}{.20 - .08}$$

$TV_5 \Rightarrow 92,340$ lakhs ✓

$V_F = ?$ (₹ lakhs)

Year	CF's	PVF@20%	PV
1	1760	0.833	1466.08
2	480	0.694	333.12

3	640	0.579	370.56
4	860	0.482	414.52
5	1170	0.402	470.34
5	92340	0.402	37120.68

V_F as on today ₹ 40175.30 lakhs

(ii) Value per share:-

$$= \frac{V_F - V_D = V_E}{\text{No. of eqy shares}}$$

$$\Rightarrow \frac{40175.30 \text{ lakh} - 3120 \text{ lakh}}{157.50 \text{ lakh}}$$

Value/share ⇒ 241.29/share

(iii) Takeover bid of ₹225/share seems to be not a good offer, as it is lesser than the Intrinsic Value i.e. Value per share as per DCF i.e. ₹241.29/share

Q.12A (2) 2.3 Time

W.No.1 Cal. of EPS & MPS:-

Total No. of eq. shares before Bonus:-

Promoters	84%	63 lakh
Public	16%	12 lakh
	100%	75 lakh

Total No. of eq. shares $\Rightarrow \frac{63 \text{ lakh}}{84\%} \times 100\%$

$\Rightarrow$ 75 lakh

EPS $\Rightarrow \frac{4.8 \text{ Cr.}}{75 \text{ lakh}} \Rightarrow$ 6.40 / share

MPS ⇒ $\frac{\text{FF MKT. Cap.}}{\text{FF No. of Eq. Shares}}$

⇒ $\frac{19.20 \text{ cr}}{(75\text{L} - 63\text{L}) = 12\text{L}}$

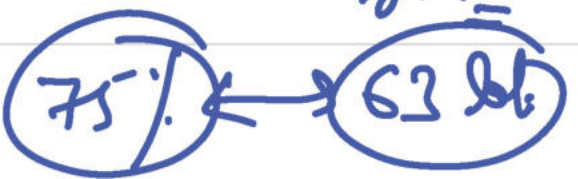
MPS before Bonus ⇒ 160/Share

(i) PE Ratio ⇒ $\frac{\text{MPS}}{\text{EPS}}$ ⇒ $\frac{160}{6.40}$

⇒ 25 times

(ii) Bonus Ratio:-

Promoter ⇒ Holdy ⇒ 84% = 63 lakh shares



Shares will remain same but %

of Holding will be 75%

Total No. of eq. Shares ⇒ $\frac{63 \text{ lakh}}{75\%} \times 100$

⇒ 84 lakhs

Promoters	75%	63 lakh
Minority	25%	21 lakh
	100%	84 lakh

Bonus Ratio:-

Bonus Share ⇒ Total Shares after Bonus (−) Existing No. of Shares

⇒ 21 lakh − 12 lakh

⇒ 9 lakh (Bonus Shares)

Bonus Ratio:-

9 : 12 ⇒ 21 lakh

or 3 : 4

⇒ Bonus Shares of 9 lakh & 12 lakh.

i.e. 3 : 4. Hint. 3 Bonus Shares for 4 Shares held. ✓

(iii) MPS before Bonus = 160/Share

MPS after Bonus:-

⇒ EPS × P/E Ratio

= 5.714 × 25 times

⇒ 142.85/Share ✓

EPS after Bonus:-

$\Rightarrow \frac{4.80 \text{ cr.}}{84 \text{ lakh}} \Rightarrow ₹ 5.714/\text{Sh}$

(iv) FF Mkt. Capitalization:- (after Bonus)

$\Rightarrow [\text{FF Mkt. No. of eq. shares}] \times \text{EPS after Bonus}$

$\Rightarrow [84 \text{ lakh} - 63 \text{ lakh}] \times 142.85/\text{Sh}$

$\Rightarrow ₹ 3000 \text{ lakh or } 30 \text{ cr.}$

Concept of SG :-

- In terms of Earnings
- In terms of Mkt. Value

(i) SG in terms of Earnings

$E_A = 10$ $E_B = 20$ $E_{A+B} = 75$

$S_G \Rightarrow 75 - [10 + 20]$

$\Rightarrow 45$.

(ii) SG in terms of Mkt. Value

$MV_A = 50$ $MV_B = 25$ lac

MV A+B → 110 lakh

SG → MV A+M = 110 lakh − [50 L + 25 L]

SG → 35 lakh

Q.13A

W.No.1

	C Ltd.	F Ltd.
PAT	10,000	580
÷ No. of eq. Shares	4000	1000
EPS	2.5/Share	5.8/Share
P/E	8	10
MPS before Merger	20/Share	58/Share

W.No.2 Total Earnings of Sch. Co. after (F Ltd. Merger)

Earnings of C Ltd.	10,000
Earnings of P Ltd.	5800
	15800

Growth 8%

Group of SLTd.

15800 × 1.08

17064 lakhs

EPS after Merger:-

$$\Rightarrow \frac{17064 \text{ lakh}}{4000 + 1000 \times 3}$$

$$\Rightarrow \frac{17064 \text{ lakh}}{7000 \text{ lakh}}$$

EPS after Merger $\Rightarrow$ 2.438/Share

W.N.3 MPS after Merger = EPS after Merger × P/E after Merger

$\Rightarrow 2.438 \times 9$

$\Rightarrow$ ₹ 21.94/share

Avg. P/E = $\frac{8+10}{2}$

= 9 times

Main Sol^{n}:. Gain to the SH^{rs} of PLtd:

(Based on MPS)

Equivalent MPS of PLtd $\Rightarrow$ 21.94 × 3

Merger $\Rightarrow$ 65.82

MPS before Merger $\Rightarrow$ 58.0

Gain/share ₹ 7.82/share

Q.13

(a) Expected Return Using CAPM:-

Before Merger

Null Ltd. $E(R) = R_F + \beta [R_m - R_F]$

$= 8\% + 1.5 [13\% - 8\%]$

$\Rightarrow 15.5\%$

Dear Ltd: $8\% + 0.60 [13\% - 8\%]$

$\Rightarrow 11\%$

After Merger:-

Beta of merged Entity:-

Weighted Avg. Beta:- [2:1]

$\Rightarrow 1.5 \times \frac{2}{3} + 0.60 \times \frac{1}{3} \Rightarrow 1.2$ times

$E(R) = 8\% + 1.20\,[13\% - 8\%]$

$\Rightarrow 14\%$

(b) (wf.) Impact of Merger on Mr. 'X' :-

% of Holding before Merger :-

Bull Ltd. 4% of 1000 cr. ⇒ 40 cr.

Bear Ltd 2% of 500 cr. ⇒ 10 cr.

50 cr.

Value of Holding of Mr. 'X' after Merger :-

After Merger % of Holding:- 2:1

$4\% \times \frac{2}{3} + 2\% \times \frac{1}{3} \Rightarrow 3.33\%$

MKt. Value after Merger:-

Bull Ltd. 1000 cr × 15.5% ⇒ 155 cr.

Bear Ltd 500 cr × 11% ⇒ 55 cr.

S4 ⇒ 7 cr.

Earnings after Merger → 217 cr.

K_o after Merger → 14%

MKt. Capitalization after Merger:

$$\frac{217 \text{ cr.}}{\cdot 14} \Rightarrow 1550 \text{ cr.}$$

Value of Mr. X Holding after Merger:-

$$\Rightarrow 1550 \text{ cr} \times 3.33\%$$

$$\Rightarrow 51.62 \text{ cr.}$$

Gain to Mr. X :-

Holding after Merger = 51.62 cr.

before Merger

Gain ⇒ 50.00 cr.

1.62 cr.

Concept: True Cost & Benefit of Merger:-

If Merger is financed by Cash → Cash Takeover

If Merger is financed by Stock → Stock Takeover

Case I:- If Merger is financed by Cash:-

Acq. Co. → Alta.

Target Co → Blta.

1) True Cost to Alta:-

⇒ (Cash paid to Blta.) (−) MV of Blta.

(Target Co)

reserved

2) Benefit to Acq. (Acq Co)

Sh = Synergic Gain ⇒ In terms of MV

Sh ⇒ $MV_{A+B} - [MV_A + MV_B]$

3) Net Benefit ⇒ Benefit − Cost (NPV)

→ Target Co [B Ltd.]

Cost to Acq Co = Benefit / Net Benefit to B Ltd.

Benefit to B Ltd.

Cash Received from A Ltd (–) MV of B Ltd sacrificed

Case II: If Merger is financed by Shares:

1) Cost to A Ltd.

$$MV_{A\ Ltd} \times \%\ of\ Holding - MV_{B\ received}$$

OR

$$(No.\ of\ shares \times MPS_{A\ Ltd})$$

2) Benefit = SG → in terms of MV

3) Net Benefit = Benefit – Cost

Q.14A

Cost to Elrond Ltd.:- (Acq. Co.)

$\Rightarrow MV_{El+Doom} \times \%\text{ of Holding} - MV_{Doom\ Ltd.}$ reserved

$\Rightarrow 1450 \times 20\% - (25 \times 10)$

$\Rightarrow 290 - 250$

$\Rightarrow$ 40 Lakhs ✓

W.N.1 $MV_{Elrond+Doom\ Ltd.}$:-

$= MV_E + MV_D + SG$

$= (50 \times 20) + (25 \times 10 + 200)$

$\Rightarrow$ 1000 + 250 + 200

$\Rightarrow$ ₹ 1450 lakhs ✓

W.N.2 % of Holding :-

S/R = 0.50 : 1

% of Holding of Down Ltd. Shr. in Merged Entity :

$$\frac{10,00,000 \times .50}{20,00,000 + 10,00,000 \times .50}$$

$\Rightarrow \frac{5}{25} \Rightarrow$ 20% ✓

Extra: PART:-

True Cost to Edmond Ltd = 40 lakh

Benefit (SH) ⇒ 200 lakh

Net Benefit ⇒ Benefit − Cost

⇒ 200 l − 40 l

⇒ 160 lakhs

Benefit to Doom Ltd = 40 lakh

Q14 (a) (4-5 marks)

	Day Ltd.	Night Ltd.
Net Earnings	5 cr.	3.5 cr.
No. of eq. shares	10,50,000	7,00,000
EPS	50/share	50/share
P/E Ratio	20 times	15 times
M/S	1000/share	750/share
Mkt. Value	100 cr.	52.50 cr.

Case I: If the merger is funded by

Case:-

Cost to Day Ltd:

Cash paid to Night Ltd (–) MV of Night Ltd received

⇒ 55 cr. — 52.50 cr.

⇒ ₹ 2.5 cr.

Case II: If the takeover is funded by Stock:-

No. of eq. shares issued by Day Ltd. to Night Ltd:-

⇒ 55 cr. / 1000 /share ⇒ 5,50,000 shares

% of Holding in Merged Entity:

$$\Rightarrow \frac{5,50,000}{10,00,000 + 5,50,000} \times 100$$

$\Rightarrow$ 35.484%

True Cost of Merger to Day Ltd:-

$\Rightarrow MV_{D+N} \times$ % of Holding $-$ MV_{N} received

$\Rightarrow$ [100 cr. + 52.5 cr.] × 35.484%

(−)

52.5 cr.

$\Rightarrow$ 1.6131 cr.

Thus, True Cost to Day Ltd. is least in case of takeover is funded by stock. So, it is advisable to Day Ltd that it should go for funding the takeover by stock.

Q.14C V.V.Imp July 2021

(i) Net Cost of Acquisition:-

(If Merger is financed by Cash)

⇒ Cash paid to Tall Ltd — NV of Tall Ltd. Acquired

⇒ [60 × 18,00,000] − [50 × 18,00,000]

⇒ 1080,00,000 − 900,00,000

⇒ 180 lakhs

(ii) Net Cost of Acquisition:-

(If Merger is financed by Stock)

S/R = 1:3

No. of eq. shares issued

$= \frac{18,00,000}{3} = 6,00,000$ shares

Total No. of eq. shares after Merger :-

$\Rightarrow 30,00,000 + 6,00,000$

$= 36,00,000$

% of Holdy $= \left[\frac{6,00,000}{36,00,000}\right]$

W.No Cal. of K_e = ?

$P_0 = \frac{D_1}{K_e - g} \Rightarrow 50 = \frac{3}{K_e - .06}$

$k_e \Rightarrow \frac{3}{50} + .06 \Rightarrow 12\%$

New $g' \Rightarrow 8\%$

Revised $P_0 \Rightarrow \frac{D_1}{k_e - g_L} \Rightarrow \frac{3}{.12 - .08}$

(Tall Ltd.)

$\Rightarrow ₹75$/Share

W.No.2 Gl. of MV Long + Tall :-

$MV_L + MV_T + SG$

$\Rightarrow [30l \times 180] + [18l \times 75^{②}] + 0$

$\Rightarrow$ 6750 lakhs

Value / Share ⇒ $\frac{675 \text{ lakh}}{36 \text{ lakh}}$ ⇒ 187.5 ✓

Net Cost of Acq. [Stock Takeover]

⇒ $675l \times \left[\frac{60l}{360l}\right] - (50 \times 18l)$ *

⇒ 112.5 l — 90 l

⇒ 22.5 lakhs ✓

(iii) Gain from Acquisition (SG)

(SG in terms of MV)

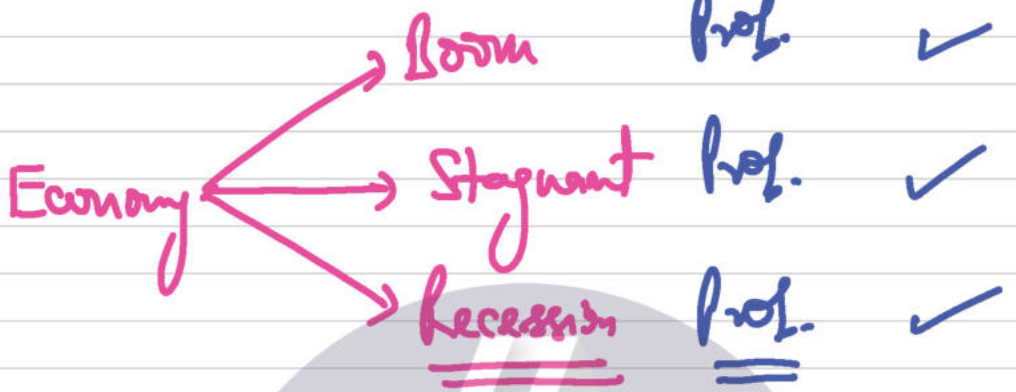
⇒ $V_{L+T} - [V_L + V_T]$

$\Rightarrow$ 6750 lbh $-$ [(180 x 30l) + (50 x 18l)]

$\Rightarrow$ 6750 lbl $-$ [5400l + 900l]

(54) 450 lbh $\longrightarrow$ or (25/h x 18l)

Concept: Scenario Analysis:- Exp. Value



Expected Value:-

1) Value x Prob.
2) Value x Prob.
3) Value x Prob.

$\Sigma \Rightarrow$ Expected Value ✓

Q.15 (SM)

Simple Ltd:-

($ Lakhs)

Business Condition	Prob	V_D	V_D	V_E ($V_D - V_D$)
High Growth	.20	820	460	360
Medium Growth	.60	550	460	90
Slow Growth	.20	410	~~460~~ 410	~~0~~ 0
	1			

Note:- In case of Company form of organisation there is a limited liability, the value of equity can never be negative.

It can be Zero or greater than Zero

In this case, V_E is Zero & V_D

is equal to ₹410 lakhs

Expected Value of Equity:-

$\Rightarrow [360 \times .20 + 90 \times .60 + 0 \times .20]$

$\Rightarrow$ ₹ 126 lakhs

Expected Value of Debt:-

$= (460 \times .20) + (460 \times .60) + (410 \times .20)$

$\Rightarrow$ ₹ 450 lakhs

Dimple Ltd:-

Business Condition	Prob	V_A	V_D	V_E
High	.20	1050	65	985
Medium	.60	825	65	760

how ·20 590 65 525

1

Expected Value of Equity:-

⇒ [985 x ·20] + [760 x ·60] + [525 x ·20]

⇒ 758 lakhs ✓

Expected Value of Debt:-

⇒ 65 x ·20 + 65 x ·60 + 65 x ·20

⇒ ₹65 lakhs ✓

Final Sol^{n}:-

Expected Value of Equity for Merged Entity:-

$V_S + V_J$ (Equity)

$\Rightarrow$ 126 + 758 lakhs

$\Rightarrow$ 884 lakhs

Expected Value of Debt for Merged Entity:

$= V_S + V_J$ (Debt)

$= 450 + 65 \Rightarrow ₹ 515$ lakhs

Concept:- Financial Re-structuring:- / Internal Reconstruction

Q.16

(i) Impact of Financial Restructuring:-

(a) Benefits to Grape fruit Ltd:-

(i) Reduction in liabilities:- (Flabby)

⇒ Reduction in Equity Share Capital (6 lakhs shares × 75/share) 450

⇒ Reduction in Pref. Share Capital (2 lakhs × 50/share) 100

⇒ Waiver of O/s Interest 26

⇒ Waiver from Trade Creditors 85

(340 lakh × 25%)

661

(ii) Revaluation of Assets

Appreciation of L&B 250

[450 − 200] lakh

Total (A) ₹911 lakh

(1) Amt of ₹911 lakh utilized to written-off losses, fictitious assets & over-valued Assets:-

Written-off P/L A/c	525
Cost of Issue of Deb.	5
Preliminary Expenses	10
Provision for Bad & Doubtful Debts	15
Revaluation of Plant & Machinery [300 − 120]	180
Total (A)	735
Capital Reserve [A − B] [911 − 735]	176 Lakhs

B/S of Grape Fruit Co.

as at 31st March, 2011

Liabilities	Amt.	Assets	Amount
12 lakh Equity shares @ 25 each	300	Land & Building	450
10% Pref. Share of ₹ 50 each (2 l × 50)	100	Plant & Mac.	120
		Furniture & fix.	50
		Inventory	150
9% Deb.	200	Sundry Deb. (70 − 15)	55
Capital Reserve (W.No 1)	176	Prov. for DD	
Loan from Bank	74	Cash at Bank (Bal fig.)	280
Creditors	255		
	1105		1105

(7) Cash at Bank :-

	₹ lakh
Op Bal.	130
+ Sale Proceeds (New Eq.) (6 lakh × 25)	150
	(8) 280 lakh ✓

Q.16C (MTP)

1) Debt/Creditors will amount into equity:-

⇒ ₹ 1500,000 × 2/3 ⇒ ₹ 10,00,000

No. of eq. shares issued = 10,00,000 / 20

⇒ 50,000 shares

2) The remaining ₹ 5,00,000 of Debt would generate interest of:-

5,00,000 × 12% ⇒ ₹ 60,000

(3) Repayment of Debt would be reduced by:-

$7500 \times 2/3 \Rightarrow$ ₹ 5,000 p.a

OR

$\frac{7500}{15,00,000} \times 100 \Rightarrow 5\%$

$5,00,000 \times 5\% \Rightarrow$ ₹ 25000 p.a

Income Statement & Cash flow Statement:-

EBIT	80,000
(–) Interest	60,000
EBT	20,000
(–) Tax @ 15%	3000
PAT	17000
+ Dep^n	50,000

(-) Annual Ref. 25000 (2)

Cashflows ₹ 42000

Capital:

Debt 5,00,000

Equity [7L + 10L] 17,00,000

22,00,000

After the restructuring, there will be total No. of eq. shares as! -

350000 + 50,000 ⇒ 8500 shares

% of Holding of original shareholders

$$\Rightarrow \frac{35000}{85000} \times 100$$

$$\Rightarrow 41.18\%$$

Creditors / Debt Holder's % of Holding :-

$$\frac{50,000}{85000} \times 100 \Rightarrow 58.82\%$$

Hence, Creditors will control by a substancial margin.

Q.17 (SM) Imp.

FMCG	
Fortune INDIA Ltd.	**Fortune Pharma**
PAT = 11400 lakh	PAT = 1470 lakh
P/E → 42 times	P/E = 25 times
No. of eq. shares :- 3000 lakh	MPS = 24.50/sh
2) MPS = ?	1) No. of eq. share = ?
3) AVPS = ?	3) AVPS = ?

1) Cal. of S/R :-

$$P/E\ Ratio = \frac{MPS}{EPS}$$

$$EPS = \frac{MPS}{P/E\ Ratio} = \frac{24.50}{25}$$

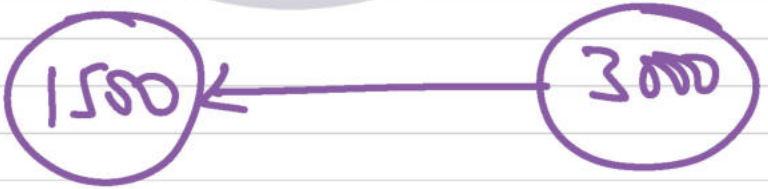
$$\Rightarrow 0.98/share$$

$$EPS \Rightarrow \frac{PAT \mid EFE}{No.\ of\ eq.\ shares = ?}$$

$$No.\ of\ eq.\ shares = \frac{147\ lakh}{0.98}$$

$$\Rightarrow 150\ lakh\ shares$$

S/R



$$1 : 2$$

$$i.e.\ 0.5 : 1$$

0.50 shares issued to the shareholders of Fortune INDIA Ltd. for each share held.

(ii) MPS of Fortune INDIA Ltd. (FMCG)

$$EPS \Rightarrow \frac{11400}{3000} \Rightarrow 3.8/\text{share}$$

$$P/E\ Ratio = \frac{MPS}{EPS}$$

$$MPS \Rightarrow EPS \times P/E\ Ratio$$

$$= 3.8 \times 42 \Rightarrow ₹ 159.60/\text{share}$$

(iii) DVPS:-

(Flexible)

Fortune INDIA	Pharma	FMCG
Total = FMCG + Pharma	(–)	(Bal fig.)
Total Assets	70,000	25100	44900
(–) Ext-liab.	25000	4100	20900
BV/Net Worth	45000	21000	24000
÷ No of Shs.		1500	3000
BVPS		14/Shs	8/Shs

Q.18 A.V. Imp.

(a) Cal. of Swap Ratio:-

W.No.1 Cal. BVPS:-

	'R'	'P'
ESC	140	500
RPS	70	500
Total BV →	210	6000
÷ No of eq. Shares	14 lakh	50 lakh
BVPS	15/Share	120/Share

(i) Based on Gross NPA's:-

(Negative Parameter)

$$\Rightarrow \frac{\text{Gross N/A's Acq. Co. (T)}}{\text{Gross N/A's Target Co. (R)}}$$

$$\Rightarrow \frac{5}{40} \Rightarrow 0.125 \times .30$$

$$= 0.0375$$

(ii) Band on CAR:-

$$\frac{\text{CAR of Target}}{\text{CAR of Acq.}} \Rightarrow \frac{4}{16} = 0.25 \times .20$$

$$= 0.05$$

(iii) Band on MIS

$$= \frac{8}{128} \Rightarrow 0.0625 \times .40$$

$$= 0.025$$

(iv) Band on DUPS

$\Rightarrow \frac{15}{120} \Rightarrow 0.125 \times .10$

$= 0.0125$

Swap Ratio — 0.125 : 1

(b) No. of eq. shares to be issued :-

$\Rightarrow \frac{140 \text{ lakh}}{10} \Rightarrow 14 \text{ lakh shares}$

$\Rightarrow 14 \text{ lakh} \times 0.125$

$\Rightarrow 1.75$ lakh shares issued to Rita by PLtd

(c) Balance sheet as at ..... (after Merger) (₹ lakh)

Liabilities	Amt.	Assets	Amt
Equity Share Capital [(50 + 1.75)] × 10	517.50	Cash in hand & with RBI (400 + 2500)	2900
RHS	5500	Bal. with other Bank	2000
② Capital Reserve	192.50	Investments (1100 + 15000)	16100
Deposits (4000 + 40,000)	44000	Advance (3500 + 27000)	30500
Other Liab (890 + 2500)	3390	Other Assets (100 + 2000)	2100
	53600		53600

W.No.1 Eq. Share Capital

[50 lakh + 1.75 L] × 10 = 517.5 lakh

W.No.2 Book Value of R Ltd.

[140 + 70]
ESC RR

210 lakh

(–) Value of Shares issued 17.5 lakh

Capital Reserves. 192.50 lakh

(d) (i) CAR = Total Capital / Risk Weighted Assets

Bank 'R'

CAR 4%.

Bank 'P'

16%.

Capital 210 lakh | 6000 lakh

RWA 5250 lakh | 37500 lakh

Merged Entity:-

Total Capital = [6000 + 210] = 6210

RWA = [5250 + 37500] = 42750

$$CAR = \frac{TC}{RWA} \Rightarrow \frac{6210}{42750} \Rightarrow 14.53\%$$

(ii) Gross NPA:-

Bank 'R'	Bank 'P'
Gross NPA % = 40%	5%

Advances	3500	27000
Gross NPA (Amt.)	1400 lakh	1350 lakh

Merged Entity:-

Advances = [3500 + 27000] = 30500

Gross NPA = [1400 + 1350] ⇒ 2750

Gross NPA Ratio ⇒ $\frac{\text{GNPA}}{\text{Advances}} \times 100$

⇒ $\frac{2750}{30500} \times 100$

⇒ 9.02%

Q-19 (9M)

W.No 1 Cal. of Instalment:-

Equated Annual Instalment:-

Amt. of Debentures = 22.50 cr.

Int. rate = 9% p.a.

t = 6 years

Inflow = outflow

$$\frac{x}{(1+.09)^1} + \frac{x}{(1+.09)^2} + \frac{x}{(1+.09)^3} + \frac{x}{(1+.09)^4} + \frac{x}{(1+.09)^5} + \frac{x}{(1+.09)^6} = 22.5\text{ cr}$$

$x\,[\text{PVAF @ } 9\%, 6 \text{ years}] = 22.5$ cr.

(9% = ROI)

$$x = \frac{\text{Amt of Loan}}{\text{PVAF @ r\% (ROI), n years}}$$

EAI

$$\text{EAI} \Rightarrow \frac{22.50 \text{ cr.}}{\text{PVAF @ 9\%, 6 years}}$$

4.486

EAI ⇒ 5.0156 cr. p.a.

Intt. / Principal

Cal. of Interest & Principal:- (₹ cr.)

Year	Op. Bal (A)	Intt @ 9% (B)	Instal (C)	Principal (D) (C − B)	Cl. Bal (A − D)
1	22.50	2.025	5.0156	2.9906	19.5094
2	19.5094	1.756	5.0156	3.2596	16.2498

3	16.2498	1.462	5.0156	3.5536	12.6962
4	12.6962	1.143	5.0156	3.8721	8.8241

Statement showing the Value of Equity:-

	2013-14	2014-15	2015-16	2016-17
EBIT	48	57	68	82
↳ PVIF@9%	2.025	1.756	1.462	1.143
↳ PVIF@8%	12.80	12.80	12.80	12.80
EBT	33.175	42.444	53.738	68.057
↳ Tax@35%	11.611	14.855	18.808	23.82
PAT	21.564	27.589	34.93	44.237
↳ PV of DW	2.6955	3.4490	4.366	5.530

12.5%

RE	18.8685	24.1400	30.5640	38.7070
Bal b/f	0	18.8685	43.0085	73.5725
Cl. B	18.8685	43.0085	73.5725	112.279
+ Eq	82.50	82.50	82.50	82.50
V_E	101.3685	125.5085	156.0725	194.779

CAGR

Year 0	82.50
Year 1	101.3685
Year 2	125.5085
Year 3	156.0725
Year 4	194.7791

$$FV = PV(1+g)^{n-1}$$

$$194.7795 = 82.50(1+g)^{5-1}$$

$$\left[\frac{194.7795}{82.50}\right]^{1/4} - 1 \Rightarrow g$$

$$g = 23.96\% \quad \text{p.a.}$$

This growth rate is higher than 20% as projected by Mr. Smith.

(b) If the condition of VC for 18 shares is accepted, the expected Shareholding after 4 years shall be as follows:

1) No. of shares held by management

$\left[\frac{60 \text{ cr.}}{10}\right]$ → 6 cr

2) No. of eq. shares held by Venture Cp.

$\frac{22.5\text{ cr}}{10} = 2.25 \text{ cr.}$

(+)

No. of shares held by VC after 4 years from warrants

$\left[\frac{22.5}{100}\right] \times 18$ → 4.05 cr shares

Total Holding of VC after 4 years — 6.30 cr

⇒ It is likely that Mr. Smith may not accept this condition of VC as it may result in losing their majority ownership & control.