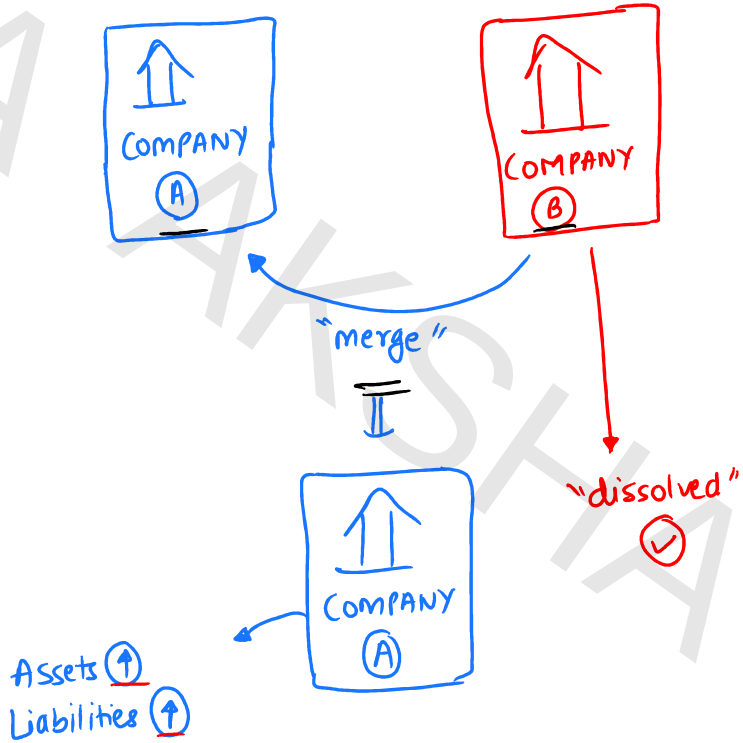
# MERGERS & ACQUISITIONS

# (M & A)

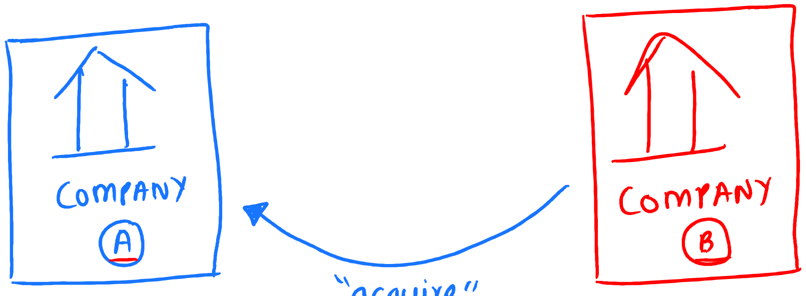
# MERGER



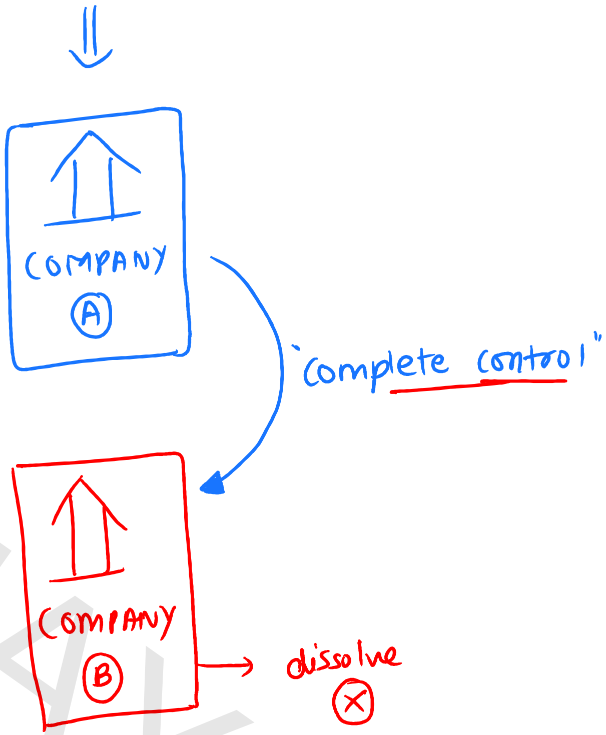

Note:-

MERGER is also called AMALGAMATION

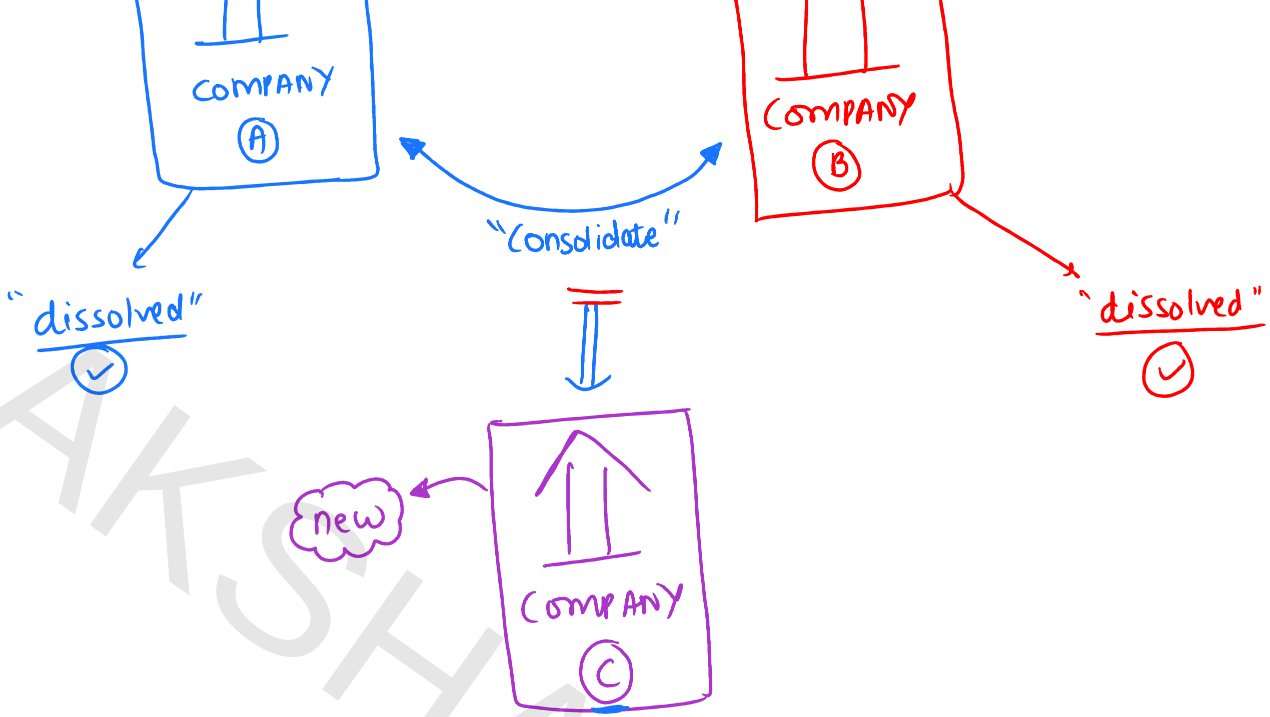
# ACQUISITION



acquire




## CONSOLIDATION




for simplicity in this chapter,

MERGER,
ACQUISITION,
CONSOLIDATION,
BUYOUT etc

⟹ "TAKEOVER"

Q Why Takeover?

→ Diversification ←

→ Growth (instant) ←

→ Eliminate competition leading to increased market share etc. ←

→ Taxation benefits etc. ←

⇓

imp → This leads to SYNERGY ← 9

↓

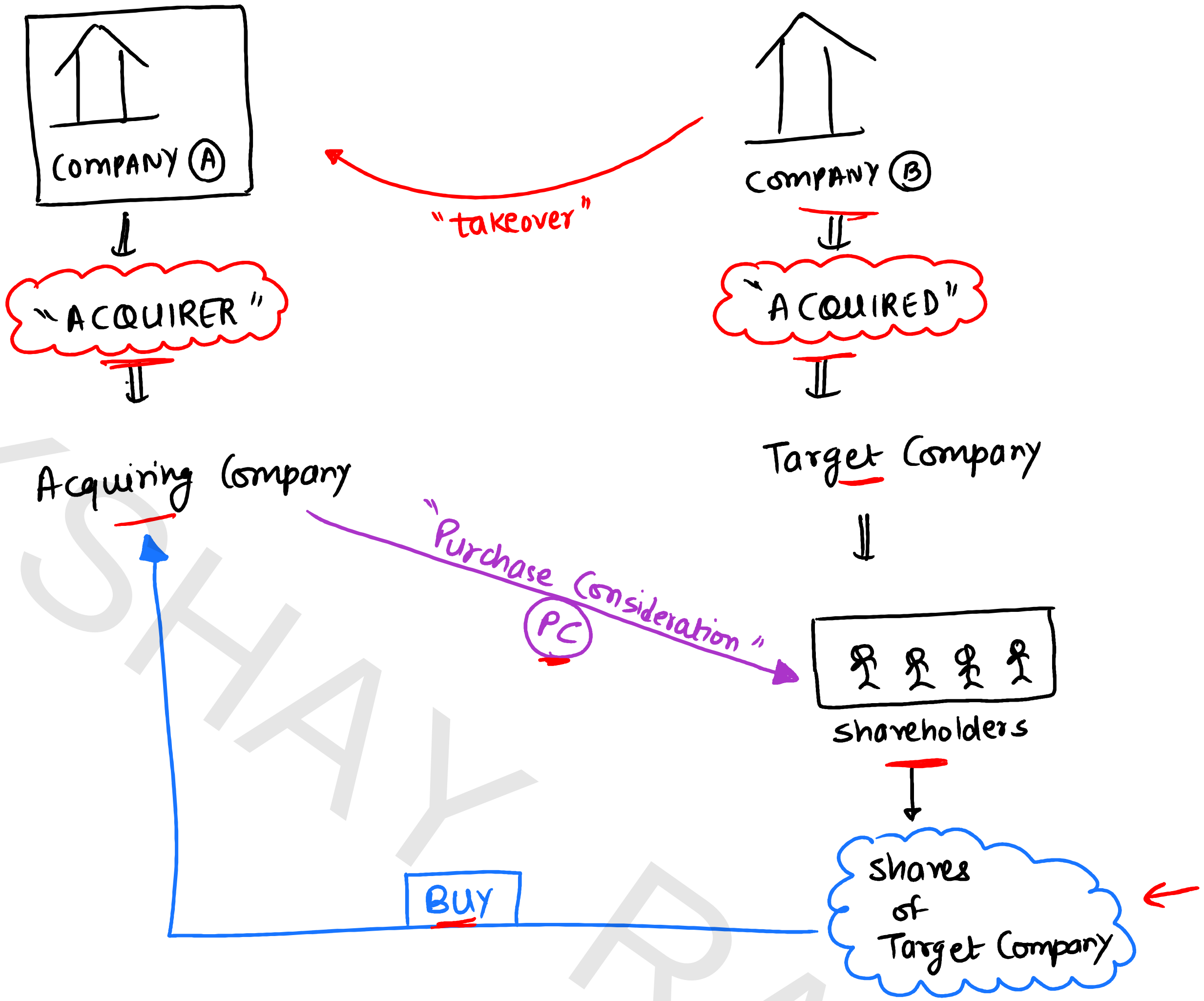
meaning:- Increase in Performance ←

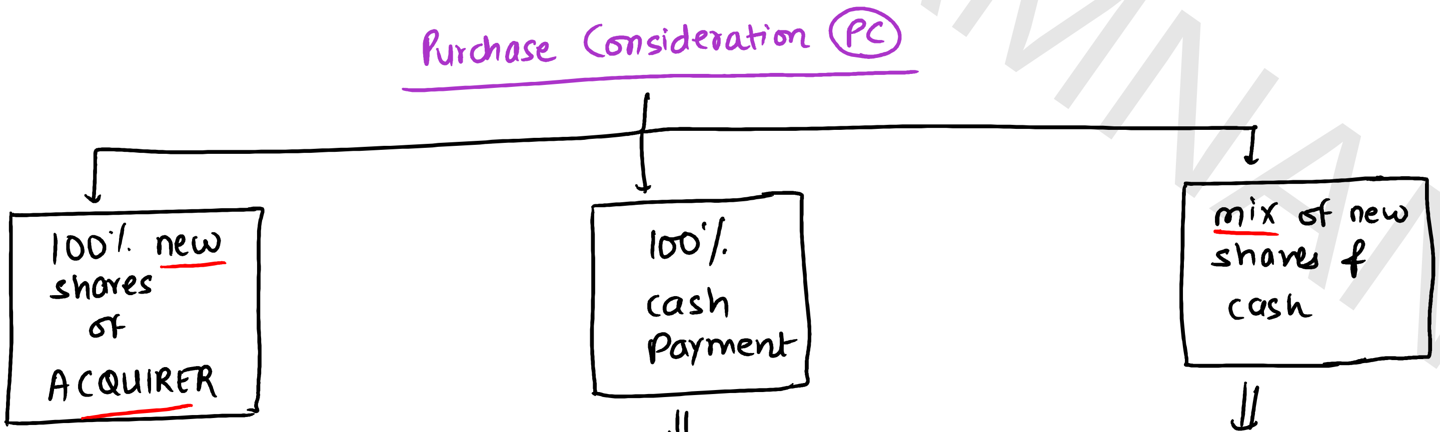
⇓

[Performance of combined Company] > [Performance of A] + [Performance of Company B]

⇓

$\boxed{\text{"ग्यारह"}}$ > "एक और एक"


COMPANY (A)
COMPANY (B)
"takeover"
"ACQUIRER"
"ACQUIRED"
Acquiring Company
Target Company
"Purchase Consideration"
PC
shareholders
shares of Target Company
BUY


Purchase Consideration (PC)
100% new shares of ACQUIRER
100% cash Payment
mix of new shares & cash

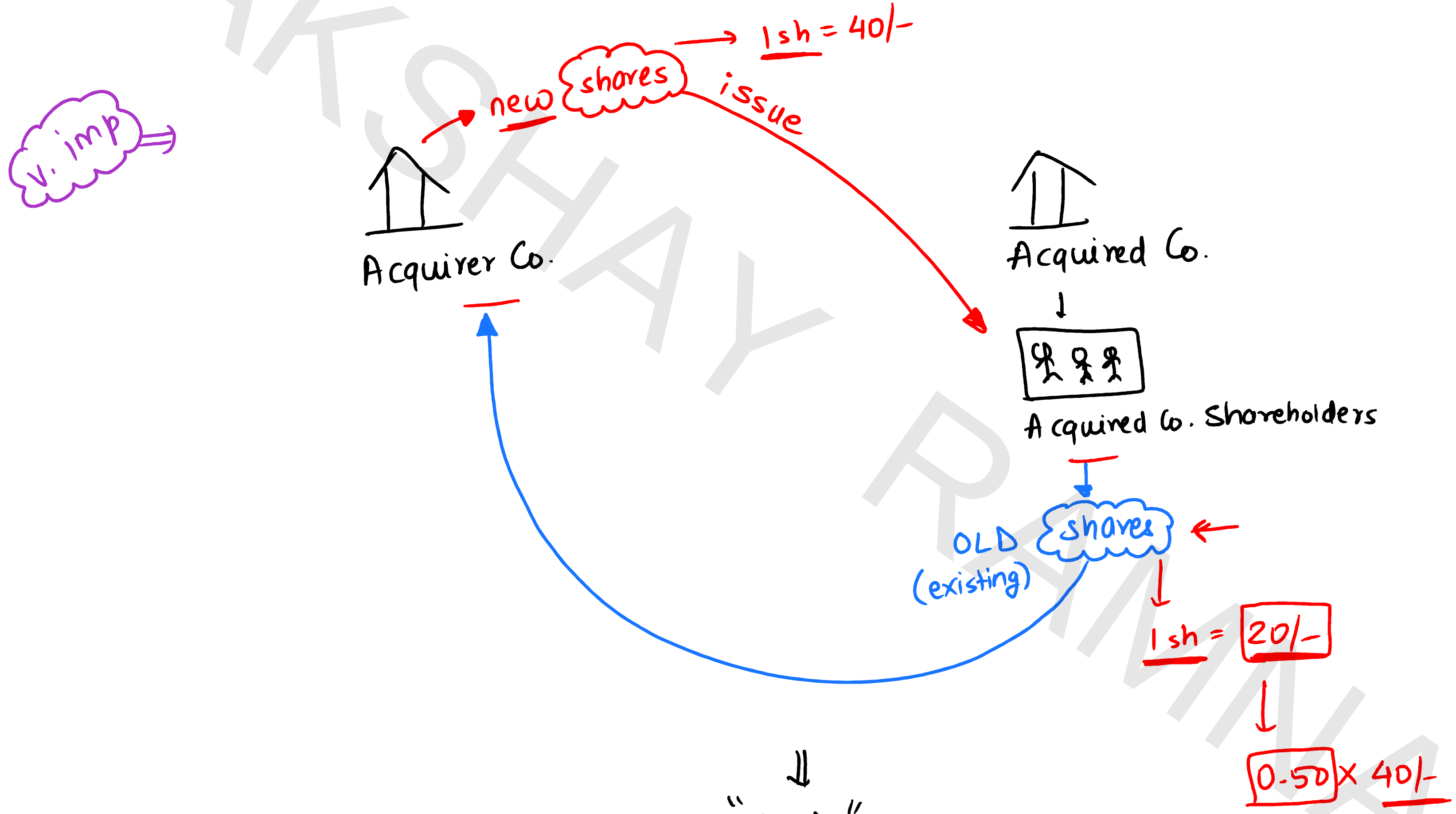
⇓

"all cash deal"

"cash & stock deal"

→ "all stock deal"

→ "all equity deal"




⇓

"Ratio"

⇓

EXCHANGE RATIO ← 0.50 : 1 ←

or

SWAP RATIO

⇓

we need $\boxed{\text{Value of shares}}$

⇓

Valuation

VALUATION ← Equity valuation chapter

↓

Share की PRESENT VALUE [PV] ←

↓

security analysis chapter

$\boxed{IV_0}$ → $\boxed{IV_0}$ × No. of shares = Intrinsic Value of Equity

(or)

$\boxed{P_0}$ → $\boxed{P_0}$ × No. of shares = Actual Value of Equity

Per share

Intrinsic Value of Equity + Intrinsic Value of Debt = Intrinsic Value of Business

Actual Value of Equity + Actual Value of Debt = Actual Value of Business

COMPANY VALUATION

BUSINESS VALUATION

CORPORATE VALUATION

helpful in

Mergers & Acquisition (M&A)

Chapter.

Value of Equity + Value of Debt = Value of firm / Value of Company / Value of Business

VOE + VOD = VOB

→ "Equity Value"

→ "Earning Value"

"Enterprise Value"

**Note:** Please revise the concepts of $\boxed{\text{EQUITY}}$, $\boxed{\text{VALUATION}}$, $\boxed{\text{EPS}}$ taught by me in equity valuation chapter.

BASICS $\Longrightarrow$

## T-Table :

### (PRE-MERGER) i.e. BEFORE MERGER

| Acquirer | Acquired |
| --- | --- |
| $\boxed{EPS} = \dfrac{\text{Acqr. EA for ESH}}{\text{Acqr. No. of eq. shares}}$ | $\boxed{EPS} = \dfrac{\text{Acqd. EA for ESH}}{\text{Acqd No. of eq. shares}}$ |
| $\boxed{MPS}$ ie market Price of share $= \underset{(\text{Acqr})}{P/E} \times \boxed{EPS}$ | $\boxed{MPS} = \underset{(\text{Acqd.})}{P/E} \times \boxed{EPS}$ |

Exchange Ratio = $\left[\dfrac{\text{Acquired}}{\boxed{\text{Acquirer}}}\right]$ ← numerator ← denominator

⇓

[No. of shares of Acquirer] for [every 1 share of Acquired]

if Exchange Ratio given in Q

↓

Use that ←

if Exchange Ratio not given in Q

↓

then,

use Exchange Ratio based on current market prices

↓

V.imp

$$\frac{\text{Acquired MPS}}{\text{Acquirer MPS}}$$

# POST-MERGER i.e. AFTER MERGER

| Acquirer | Acquired ⓧ |
| --- | --- |
| $\text{EPS (Acqr)} = \dfrac{\text{Combined EA for ESH}}{\text{Combined No of Eq. shares}^{*}}$ | $\text{EPS (Acqd)} = \text{Exch. Ratio} \times \text{EPS (Acqr)}$ (Theoretical) |
| $\text{MPS (A cqr)} = \text{P/E (Acqr)} \times \text{EPS (A cqr)}$ | $\text{MPS (Acqd)} = \text{Exch. Ratio} \times \text{MPS (A cqr)}$ (Theoretical) |

Note :- If Q silent, then assume the P/E (A cqr) remains same after merger

① before and after merger

★ Combined No. of Equity shares = No. of Equity shares (Acquirer) + No. of Equity shares (Acquirer)

No. of Equity shares (Acquirer) → $\boxed{\text{OLD}}$

No. of Equity shares (Acquirer) → $\boxed{\text{NEW}}$ → issued to Acquired Co. S/Hs →

$\boxed{\text{No. of Eq. shares of Acquired Co.} \times \text{Exchange Ratio}}$

10 shares × $\frac{0.50}{1}$

= 5 shares

Loss of EARNINGS

# GAIN / LOSS DUE TO MERGER

Gain / Loss of EARNINGS due to merger :-
↓
EA for ESH

| Particulars | Acquirer Co. | Acquired Co. |
|---|---|---|
| ① EA for ESH (before merger) | ₹ ✓ | ₹ ✓ |
| ② No. of Equity shares (before merger) | ✓ eq. sh. | ✓ eq. sh. (acquired) |
| ③ EPS (before merger) [①/②] | ₹ ✓ / eq. sh. | ₹ ✓ / eq. sh. |
| ④ No. of Equity shares (after merger) | ✓ eq. sh. | new Acquirer Eq. shares |
| ⑤ EPS (after merger) → T-Table | $\boxed{₹ ✓ / \text{eq.sh}}$ = | $\boxed{₹ ✓ / \text{eq.sh.}}$ (Actual) |
| ⑥ EA for ESH (after merger) | ₹ ✓ | ₹ ✓ |

| | | |
|---|---|---|
| [ ④ x ⑤ ] | | |
| ⑦ Gain / Loss to Shareholders [ ⑥ - ① ] | ₹ ✓ | ₹ ✓ 0 |

IMPACT ON EPS

Here, use "Theoretical" EPS in case of Acquired Co.

| Particulars | Acquirer Co. | Acquired Co. |
| --- | --- | --- |
| ① EA for ESH ( before merger)<br>② NO. of Equity shares (before merger) | ₹ ✓<br>✓ eq. sh. | ₹ ✓<br>✓ eq. sh. (acquired) |
| ③ EPS (before merger) [① / ②] | ₹ ✓ / eq. sh. | ₹ ✓ / eq. sh. |
| ④ EPS (after merger) – T-Table | ₹ ✓ / eq. sh. | ₹ ✓ / eq. sh. (Theoretical) |
| ⑤ Impact on EPS :– Increase/(Decrease) in EPS<br>[④ – ③] | ₹ ✓ / eq. sh. | ₹ ✓ / eq. sh. |

Therefore, imp

| GAIN / LOSS DUE TO MERGER | Impact on EPS |
| --- | --- |
| ⇓ use Actual EPS for Acquired Co. (after merger) ⇓ Actual EPS for Acquirer Co. (after merger) | ⇓ use Theoretical EPS for Acquired Co. (after merger) |

(v) Gain/(Loss) to the shareholders due to merger

⇓

P/E Ratio given ←

⇓

Gain/(Loss) of market capitalisation (or) market value to the shareholders due to merger

⇓

| Particulars | Acquirer Co. | Acquired Co. |
|---|---|---|
| (1) Market Value (before merger)<br>(2) No. of Equity shares (before merger) | ₹ ✓<br>$\boxed{\text{✓ eq. sh.}}$ | ₹ ✓<br>$\boxed{\text{✓ eq. sh. (acquired)}}$ |
| (3) MPS (before merger) [(1)/(2)] | ₹ ✓ / eq. sh. | ₹ ✓ / eq. sh. |
| (4) No. of Equity shares (after merger)<br>(5) MPS (after merger) → T-Table | ✓ eq. sh.<br>₹ ✓ / eq. sh. = | $\boxed{\text{new}}$ Acquirer Eq. shares<br>₹ ✓ / eq. sh. (Actual) |
| (6) Market Value (after merger) [(4) × (5)] | ₹ ✓ | ₹ ✓ |
| (7) Gain / (Loss) to Shareholders [(6) − (1)] | $\boxed{₹ ✓}$ | $\boxed{₹ ✓}$ |
| (8) No. of Eq. shares (before merger) = (2) imp | ✓ eq. sh. | ✓ eq. sh. |

| | | |
|---|---|---|
| 9 Gain/ (loss) per share $\left[\frac{7}{8}\right]$ | $\boxed{₹ \checkmark / \text{eq. sh}}$ | $\boxed{₹ \checkmark / \text{eq. sh.}}$ |

To summarise,

**GAIN / (LOSS) DUE TO MERGER**

- **P/E Ratio given** ✓
  - use MPS and market values to calculate gain / (loss)
  - use actual MPS of the acquired Co. (after merger)
- **P/E Ratio not given** ✗
  - use EPS and EA for ESH to calculate gain / (loss)
  - Use Actual EPS of the Acquired Co. (after merger)

Actual MPS of the

Acquirer Co.

(after merger)

Actual EPS of the

acquirer Co.

(after merger)

Impact on EPS

↓

use $\boxed{\text{theoretical EPS}}$ of Acquired Co. (after merger)

# MAXIMUM EXCHANGE RATIO

↓

Acquirer point of view → "Acquirer should offer"
→ Acceptable to Acquirer Co's shareholders

↓

"without dilution of"

↓

without decrease in

↓ EPS → EPS Ratio → [ Acquired EPS ]

↓ MPS → MPS Ratio → [ Acquired MPS ]

Acquirer EPS

Acquirer MPS

{If Q silent, then use this}

BOOK VALUE

↓

Value at which an item is appearing in books of account.

↓

{ जिस value पर $\boxed{\text{accounting entry}}$ pass की थी }

NOW

$$\text{Book Value Per share (BVPS)} = \frac{\text{Net Worth}}{\text{No. of shares}}$$

$$\Downarrow$$

$$\frac{\text{Equity}}{\text{No. of shares}}$$

$$\Downarrow$$

$$\frac{\text{ESC + PSC + RFS}}{\text{No. of shares}}$$

⇓

$$\boxed{\frac{\text{Shareholder's funds}}{\text{No. of shares}}}$$

# NPA IN BANKS

Terminologies

① NPA :- [Non Performing Asset] of Bank

"Perform"

Loan/Advance given by Bank

Payment of Intt or Principal to Bank by customer

"Non-Performing"

non-payment of Interest or Principal Amount for $\boxed{> 90 \text{ DAYS}}$ from due date

$$\text{Gross NPA}(\%) = \frac{\text{Gross NPA}}{\text{Gross Advances/Loan given by Bank}} \times 100$$

lower the better

numerator :- NPA ↓

denominator :- Advances ↑

## ② Capital Adequacy Ratio :

⇓

Capital should be adequate to face losses

⇓

when there is NPA and loan cannot be recovered, then

⇓

Asset = loss/expense (Bad debt)

$$\text{Capital Adequacy Ratio (CAR)} = \boxed{\frac{\text{Tier 1 Capital} + \text{Tier 2 Capital}}{\text{Risk weighted Assets}} \times 100}$$

(%)

where

where,

Tier 1 Capital = [ESC + RPS − Preliminary Exp] etc [core capital]

Tier 2 Capital = Revaluation Reserve + Hybrid securities etc [supplementary capital]

Risk weighted Assets =

| Assets | Risk | weight | Risk weighted Asset |
|---|---|---|---|
| ✓ | high | 90% | ✓ |
| ✓ | medium | 50% | ✓ |
| ✓ | Low | 10% | ✓ |
| | | | Σ = ✓ |

CAR → higher the better
- → numerator : capital ↑
- → denominator : Risk Weighted Assets ↓

## Question :-

Strong Bank — Acquirer $\xrightarrow{\text{takeover}}$ Weak Bank — Acquired

(a) $\boxed{\text{Swap Ratio}}$ :-

Gross NPA $= \dfrac{\text{Acquired GNPA (\%)}}{\text{Acquirer GNPA (\%)}} = \dfrac{40\%}{5\%} = \boxed{8:1} \Rightarrow \boxed{1:8}$ imp

CAR (%) $= \dfrac{\text{Acquired CAR (\%)}}{\text{Acquirer CAR (\%)}} = \dfrac{5\%}{16\%} = \boxed{0.3125:1}$

$$MPS = \frac{\text{Acquired MPS}}{\text{Acquirer MPS}} = \frac{₹ 12/sh}{₹ 96/sh} = \boxed{0.125 : 1}$$

$$BVPS = \frac{\text{Acquired BVPS}}{\text{Acquirer BVPS}} = \frac{₹ 12/sh}{₹ 120/sh} = \boxed{0.10 : 1}$$

WN :-

| | Particulars | Weak Bank (W) | Strong Bank (S) |
|---|---|---|---|
| 1 | Share Capital (₹ Lakhs) | 150 | 500 |
| 2 | Reserves & Surplus (₹ Lakhs) | 80 | 5,500 |
| | | 230 | 6,000 |
| 3 | *Less:* Preliminary Expenses (₹ Lakhs) | 50 | -- |
| 4 | Net Worth or Book Value (₹ Lakhs) | 180 | 6,000 |
| 5 | No. of Outstanding Shares (Lakhs) | 15 | 50 |
| 6 | Book Value Per Share (₹) [ 4/5 ] | 12 | 120 |

CASH FLOW

↓

use concept of MULTIPLE GROWTH DDM ⇒ "Table + formula"

constant growth DDM

↓

discussed in equity valuation chapter.

↓

Here, discount the cash flows

Question :-

| Given | (Before) without merger | (after) with merger |
|---|---|---|
| g = constant after $\boxed{t=5}$ | 5% | 6% |
| CoC = $\boxed{Kc}$ | 15% | 15% |

TABLE:

# ECONOMIC VALUE ADDED [EVA]

↓

Whether Company is generating $\boxed{\text{VALUE}}$ from $\boxed{\text{funds invested in business?}}$

"wealth"

↓

Returns

Profit > Cost of funds

investment

Business

EVA = +ve

⇓

Yes, Company is generating $\boxed{\text{VALUE}}$ from funds invested.

EVA = −ve

⇓

No. Company is not generating $\boxed{\text{VALUE}}$ from funds invested

**Steps :**

1. NOPAT [ Net Operating PAT ]

2. WACC [ weighted Avg. Cost of Capital = $K_0$ = $K_c$ ]

3. Total Capital Employed

4. $\boxed{\text{EVA}}$

## 1. NOPAT :-

$$\boxed{NOPAT = PBIT\,(1 - \text{tax rate})}$$

Imp. Note :-

Imp Note:

Only when interest expense = 0, then

$$\boxed{PAT = NOPAT}$$

$= \$117m - \$72.60m$

12K    10K

$\boxed{EVA} = \boxed{+\$44.40m}$

## MARKET VALUE ADDED (MVA)

① Market Value of Equity [MPS ($P_0$) x No. of sh] [MVDE] ✓

(+) ② Mkt value of Debt [MVDD] + ✓

(−) ③ Book value of Equity [ESC + PSC + RFS − PExp] [BVDE] (✓)

(−) ④ Book value of Debt [BVDD] (✓)

Market Value Added (MVA) ✓

if Q silent, assume ② = ④

| | | |
|---|---|---|
| ① | MVDE | [market Value = MPS ($P_0$) x No. of sh.] |

# FINANCIAL RESTRUCTURING

↓

Company is facing "huge losses"

↓

Restructure the financial items

Restructure → Revalue → value ↑ or ↓

financial items → Assets, Liabilities

Assets ↑ or ↓

Liabilities ↑ or ↓

⇓

imp

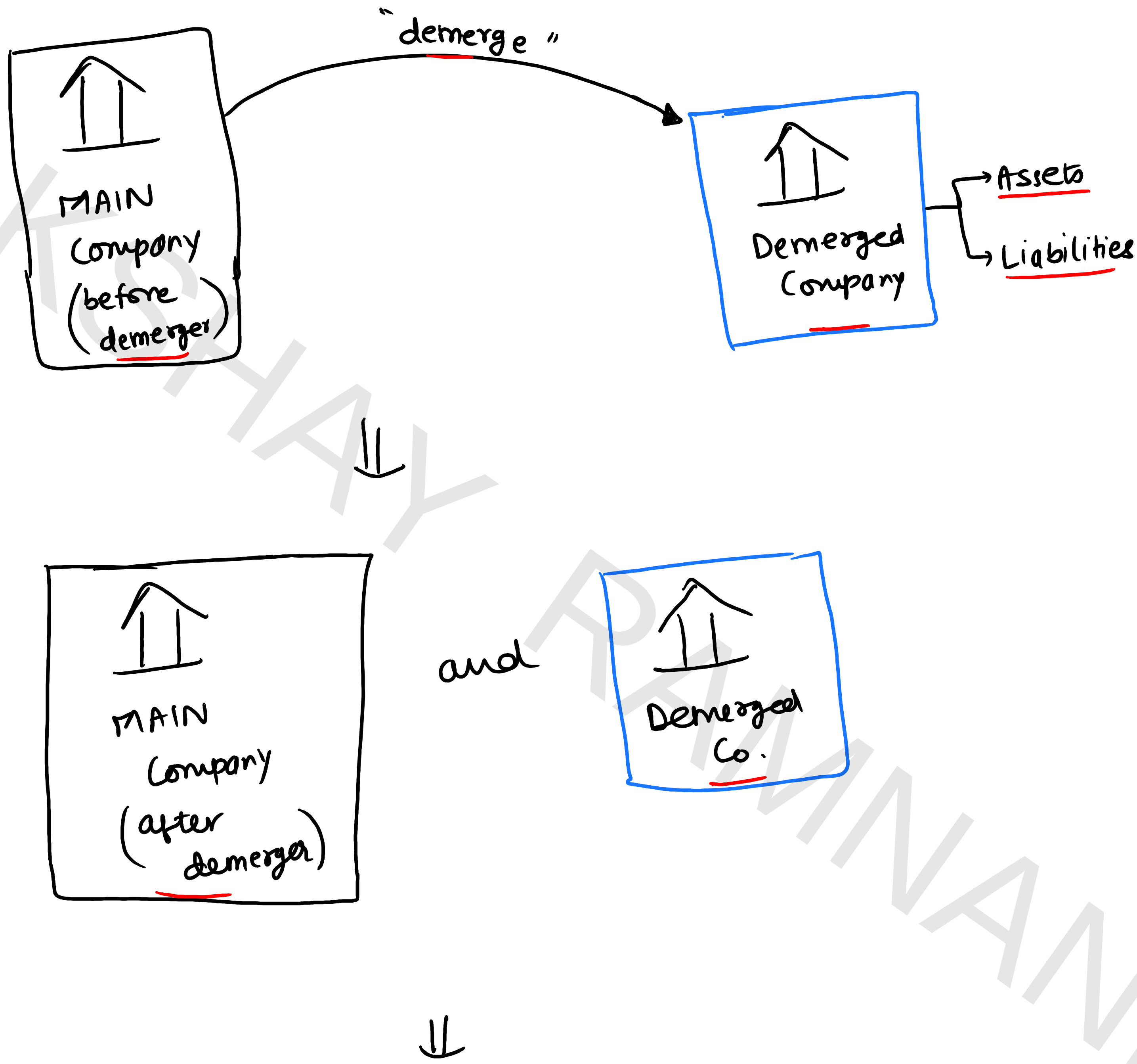
Use Accountancy approach

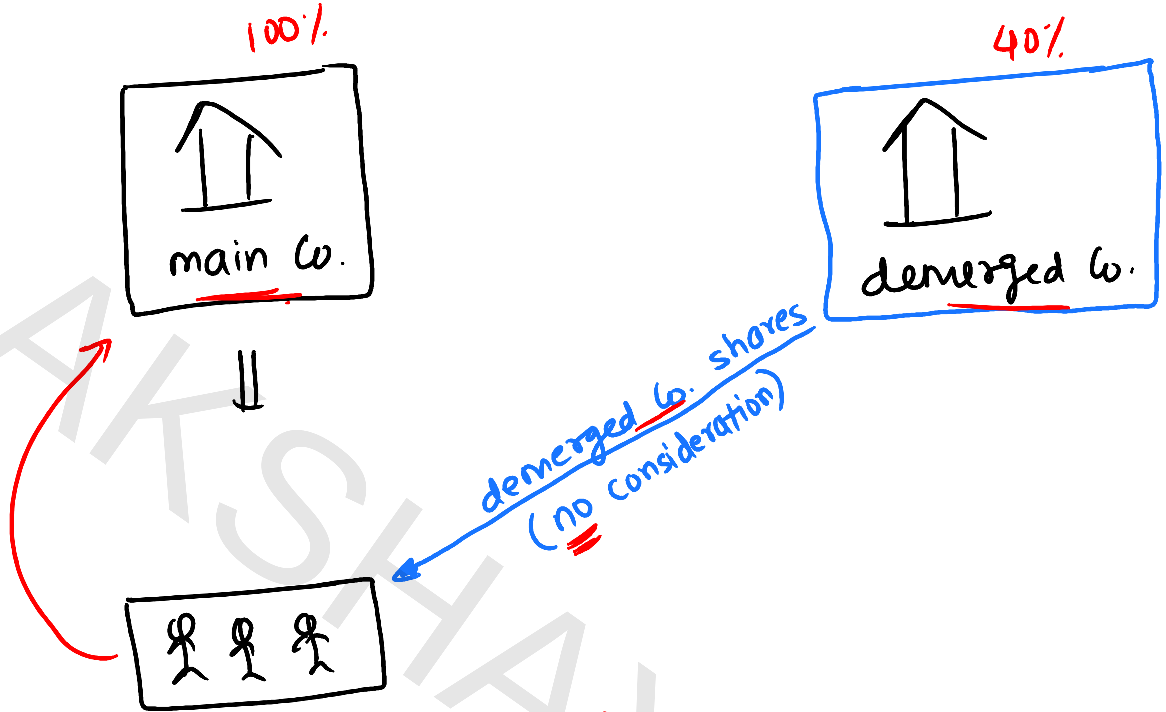
$\Downarrow$

Working Note

1. Open Restructuring / Reconstruction A/C
2. Pass Journal Entries
3. Prepare Restructuring A/C
4. Prepare statement (for SFM purpose)

# DEMERGER


"demerge"
MAIN Company (before demerger)
Demerged Company
Assets
Liabilities
MAIN Company (after demerger)
and
Demerged Co.




→ main Co. shareholders ←

→ Demerged Co. shareholders ←

STANDALONE QUESTIONS

" independent topics "

**Question :-**

Elrond ltd (Acquirer) $\xrightarrow{\text{takeover}}$ Doom ltd (Acquired)

Synergy ⇒ PV of gains = ₹ 200 L

Exchange Ratio = $\boxed{0.50 : 1}$

$\boxed{0.50}$ share of acquirer, for every $\boxed{1}$ share of Acquired

acquirer → Elrond ltd

Acquired → Doom ltd.

No. of new acquirer shares = $\left[\dfrac{0.50}{1}\right] \times \left[\text{10 L shares (acqd)}\right]$

$= \boxed{\text{5 L Shares (acqr)}}$

Combined No. of Acqr shares = 20L + 5L

= $\boxed{\text{25L shares}}$

↓

shareholders

**Elrond Ltd shareholders**

↓

Percentage (%)

↓

$$\boxed{\frac{20L}{25L}} \times 100$$

⇓

80%

**Doom ltd shareholders**

↓

Percentage (%)

↓

$$\boxed{\frac{5L}{25L}} \times 100$$

⇓

20%

$\boxed{\text{Market Value of Merged Co. = (mkt value of Acqr) + (mkt value of Acqd) + Synergy}}$

⇓

(₹ 50/sh × 20 L sh) + (₹ 25/sh × 10 L sh) + ₹ 200 L

= $\boxed{₹ 1000 L}$ + $\boxed{₹ 250 L}$ + $\boxed{₹ 200 L}$

= ₹ 1450 L

NOW :-

Market Value of merged Co. held by Doom ltd shareholders

[ 20% × ₹ 1450 L ]  ₹ 290 L

Doom ltd.

market value of $\boxed{\text{Acquired Co.}}$ held by Doom ltd Shareholders

[ 100% × ₹ 250 L ]  (₹ 250 L)

True Cost of Merger for Ehrond ltd  $\boxed{+ ₹ 40 L}$

## Question:

PQR ltd (Acquirer) $\xrightarrow{\text{takeover}}$ XYZ ltd (Acquired)

| | PQR ltd (Acqr) | XYZ ltd (Acqd) |
|---|---|---|
| → mps | ₹ 40/sh | ₹24/sh |
| → No. of sh. | 15,00,000 sh | 10,00,000 sh. |
| Top Mgt ⇒ → Promoter holding (%) | — | 40% |
| → EPS | ₹ 4/sh | — |

(Q) maximum price per sh. that Acqr can offer :-

(i) maximum price p

| | |
|---|---|
| Market Value (10,00,000 x ₹ 24) [Acquired] [Before merger] | ₹ 2,40,00,000 |
| Synergy Gain | + ₹ 80,00,000 |
| Saving of Overpayment | + ₹ 30,00,000 |
| Maximum Market Value of Acquired = XYZ after merger | ₹ 3,50,00,000 |
| Maximum Price (₹ 3,50,00,000/10,00,000) | ₹ 35 |

(ii) minimum price per share that "Acquired management" can accept :-

| | |
|---|---|
| Value of XYZ Ltd.'s Management Holding [Acquired] [Before merger] (40% of 10,00,000 x ₹ 24) | ₹ 96,00,000 |
| Add: PV of loss of remuneration to top management | + ₹ 30,00,000 |
| Minimum Value of Acquired = XYZ Co's mgt shares | ₹ 1,26,00,000 |
| No. of Shares with management [ 40% x 10,00,000 sh ] | 4,00,000 sh |
| Minimum Price (₹ 1,26,00,000/4,00,000) | ₹ 31.50 |

INDEX — Mergers & Acquisitions (M&A)

① Basics

- Merger
- Acquisition
- Consolidation

} "TAKEOVER"

② Synergy

③ Purchase Consideration (PC)

④ Exchange Ratio

⑤ Valuation

Security analysis chapter ⟷ Equity Valuation chapter ⟷ M&A chapter

6. T-Table
   - Pre-merger
   - Post merger

7. Gain/(Loss) of Earnings due to merger

8. Impact on EPS

9. Gain/(loss) of market value due to merger

10. Maximum Exchange Ratio

11. Book Value

12. M & A in Banks

13. Cash flow

14. Dividend

15. Economic Value Added [EVA] ⇒ {4} steps

16. Market Value Added [MVA]

17. EVA Dividend

18. Financial Restructuring → "w/off losses" → P/L (Dr bal) ⇒ B/s

19. Demerger

20. Standalone questions