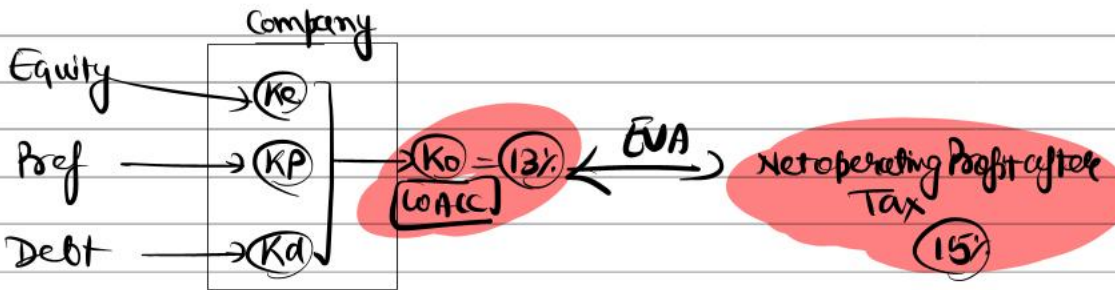


Business Valuation

Concept ① Economic Value Added. (Spen Steward & Co)



EVA = Excess return over minimum expected return.

$$EVA = \text{Net operating Profit after Tax} - Ko \times \text{Capital employed (Capital charge)}$$

Kya Kamchaya?

— Kya ummed thi logo ko.

$$EVA = \frac{NOPAT}{EBIT(1-t)} - Ko \times \frac{\text{Capital employed}}{(ESHF + PSC + Debt)}$$

Note ① Adjustments for calculating EVA.

Adjustment to EBIT

Adjustment to Capital employed

$$\begin{array}{r} EBIT \\ - \text{Tax} \\ \hline NOPAT \end{array}$$

$$\begin{array}{r} \text{Capital Employed (ESHF + PSC + Debt)} \\ + \text{Self Generated Intangible Assets} \\ \text{ex: Goodwill, Patent} \\ + \text{Provision for Bad Debt} \\ \text{(Added back to CA)} \\ \hline \text{operating Capital employed} \end{array}$$

+ Non-cash Expenses
Provision for Bad Debt +

Adjusted NOPAT

+ Provision for Bad Debt +
(Added back to CA)

operating Capital employed

Note: we will have to reverse impact of Provision of B.D.

→ Add back to Profit α

⇒ Add back to CA (i.e. to Capital employed)

Note

EVA Dividend = EVA (Additive)
No of equity shares
if company distributes this dividend amount, the value of firm will not decrease

Concept ②

leverages

operating leverage

$$DOL = \frac{\text{Contribution}}{EBIT}$$

Financial leverage

$$DFL = \frac{EBIT}{EBIT - \text{Int} - \frac{\text{Pref Div}}{(1-t)}}$$

$$DFL = \frac{EBIT}{EBT} \quad (\text{if No Pref share})$$

Combined leverage

$$DCL = \frac{\text{Contribution}}{EBIT - \text{Int} - \frac{\text{Pref Div}}{(1-t)}}$$

$$DCL = DOL \times DFL$$

$$DOL = \frac{\% \text{ change in EBIT}}{\% \text{ change in Sales}}$$

$$DFL = \frac{\% \text{ change in EPS}}{\% \text{ change in EBIT}}$$

$$DCL = \frac{\% \text{ change in EPS}}{\% \text{ change in Sales}}$$

Concept (3) How to Calculate Capital Employed

B/S

ESHF	✓	FA	*
PSC	✓		
Debt	✓	CA	*
CL	*		
	<u>✓</u>	<u>✓</u>	

$$CE = ESHF + PSC + Debt$$

$$CE = FA + CA - CL$$

$$CE = FA + WC$$

Concept (4) Market Value Added.

Concept

$$MVA = \text{MV of funds provided} - \text{Actual funds provided}$$

$$(i) MVA \text{ for Equity} = \text{Market Value of Equity} - \text{Book Value of Equity}$$

$$(ii) MVA \text{ for firm} = \text{Current MV of firm} - \text{Invested Capital (E+P+D)}$$

Note: If question does not mention type of MVA, we will solve by both formulae (if we have sufficient data in the question)

Concept (5) Future Maintainable Profit.

FMP

- This method calculates earning potential in future.
- Removes impact of abnormal (extraordinary) Profits & Losses.
- Include impact of future certain Profits & losses
(निश्चित)

Calculation of FMP

Particulars	Yr1	Yr2	Yr3
Last year Profit (Average PAT)	✓	✓	✓
+ Tax (added back)	+	+	+
Last year Profit before Tax	✓	✓	✓
Extraordinary items impact removed			
- Profits which will not occur in future	-	-	-
+ Expenses which will not be included in future	+	+	+
+ All Profits which will start arising in future	+	+	+
- All expenses which will start including in future	-	-	-
FMP before Tax	✓	✓	✓
- Tax	-	-	-
FMP after Tax	★	★	★

Concept ⑥ Concept of Asset Beta & Equity Beta

It is for whole firm
(for the company)
(not just equity)

It is for only
Equity shares
(not for Debt)
(not for whole company)

↓
To calculate K_e
we use Equity Beta

Asset Beta = Equity β $\times$ weight of E + Debt β $\times$ weight of Debt

$$\beta_a = \beta_e \times \frac{E}{E + D(1-t)} + \beta_d \times \frac{D(1-t)}{E + D(1-t)}$$

↓
If β_d is not given we
may assume it to be zero
(as Debt is risk free usually)
(Thus this fraction is usually
not shown in formulae.)

⇒ If two companies work in same business then
they have Same Asset Beta

(Comparable companies have same asset beta, not
same equity beta)

- Asset beta = unlevered Beta. (It is same for comparable Co's)
- Equity beta = levered Beta (It is different because of
different Debt: Equity
ratio.)

(Breakup Approach)

Concept (7) Chop-shop Method.

ABC Ltd.

A	B	C
Shoes	Hotel	Atta
\$1m	\$5m	\$10m

→ \$14m → Combined value of business is usually lower.

This method is used for a multidivision company.

Step 1 Calculate each divisions value separately.
(By comparing with same business competitors)

Step 2 Now add values of different divisions to get value of company as a whole.

Concept 8 Net Asset Method (NAM)

In this method we calculate what will equity receive if we

- Liquidate all assets
- Payoff all liabilities (even contingent liabilities)

(yani sab kuch bech do, Sabki Payments kardo toh end mei equity ko kya milega)

Valuation Method.

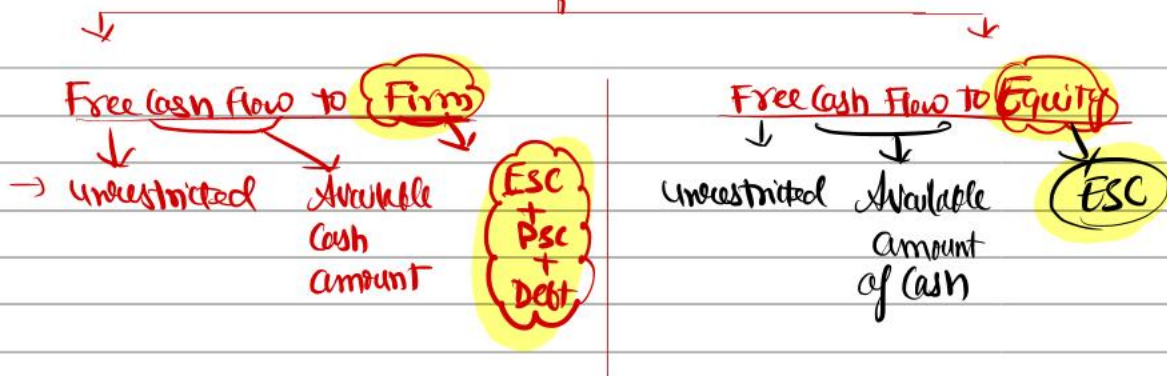
Total Asset Valuation (assume they are sold)	xxx
(Liquidation value / Market value / Book value)	
less External liabilities	
→ Debentures / Loans / Debt / Current liabilities	(-)
→ Pref Shares Paid back	
less Liquidation Expenses	(-)
less Deferred Tax liabilities	(-)
Add Depreciated Tax Asset	+
less Contingent liability	(-)
less Proposed Dividend on Equity / PSC	(-)
Net Asset Value (for Equity shares)	xxx
÷ No of equity shares	÷ n

NAV per share

✓

* Prefer Asset's sold value be $\left\{ \begin{array}{l} \text{Liquidation value} \\ \text{Market value} \\ \text{Book value} \end{array} \right\}$ or order of pref.

Concept 9 Cash Flow based Valuation Models.



FCFF

Sales
 - VC
 Contribution
 - FC
 EBITDA
 - Dep & Amortization
 EBIT
~~Interest~~
 - Tax
 NOPAT
~~Pref Div~~
 - Net Investment
 + Dep & Amortization
 - Increase in FA
 - Increase in WC

FCFF

FCFE

% of Equity is given

Sales
 - VC
 Contribution
 - FC
 EBITDA
 - Dep & Amortization
 EBIT
~~Interest~~
 EBT
 - Tax
 EAT
~~Pref Dividend~~
 EAFS

+ Dep & Amortization $\times$ % of E
 - Increase in FA $\times$ % of E
 - Increase in WC $\times$ % of E

FCFE

If % of Equity not specified

Sales
 - VC
 Contribution
 - FC
 EBITDA
 - Dep & Amortization
 EBIT
~~Interest~~
 EBT
 - Tax
 EAT
~~Pref Div~~
 EAFS

+ Dep & Amortization
 - Increase in FA

- Increase in WC
 + Net Borrowing
 FCFE

Capex → Capital expenditure

Note ①

+ Dep - Increase in FA

$$\Rightarrow - (-\text{Dep} + \text{Increase in FA})$$

$$\Rightarrow - (\text{Increase in FA} - \text{Dep})$$

$$\Rightarrow - (\text{Net Investments})$$

$$- (\text{Net Capex})$$

Same

Note ②

$$\text{Net Borrowing} = \left(\begin{array}{l} \text{Issue of Pref Shares} - \text{Redemption of Pref} \\ \text{\& Debt} \quad \quad \quad \text{Shares \& Debt} \end{array} \right)$$

Note ③

Discounting factor

For FCFF

↓

K_0

For FCFE

↓

K_E

Note ④

If Asset Turnover ratio is Constant
→ It means assets will increase in same ratio
as increase in sales.

Concept ⑩ Calculating Fair Value in case of multiple values calculated.

- If we have solved multiple methods in a question.
- Then we have Multiple Values available.
- Then we have to calculate Average Value to get Fair Value.



If question is silent

⇒ we will calculate Simple Average

$$\frac{V_1 + V_2 + V_3}{3} = \text{Average Value (Fair Value)}$$

If question provides weights

⇒ we will calculate weighted average

① NM, ② FMP, ③ FCFE
✓ ✓ ✓

Ave $\frac{V_1 + V_2 + V_3}{3}$

Concept (II) Relative Valuation.

→ Here we value Shares or Business by using some values of comparable business (Industry)

$$\begin{array}{c} \text{Comparable Company} \\ \downarrow \end{array} \times \frac{\text{— of Subject}}{\text{Company}} = \frac{\text{Value of Subject}}{\text{Company/Shares}}$$

$$\textcircled{1} \quad \text{P/E ratio}_C \times \text{EPS}_A = \text{MPS}_A$$

$$\textcircled{2} \quad \text{P/S ratio}_C \times \text{Sales per share}_A = \text{MPS}_A$$

$$\left(\frac{\text{Price}}{\text{Sale}} \right) \text{ of comparable company}$$

$$\textcircled{3} \quad \left(\frac{\text{EV}}{\text{Sales}} \right)_C \times \text{Sales}_A = \text{EV}_A$$

$$\textcircled{4} \quad \left(\frac{\text{EV}}{\text{EBITDA}} \right)_C \times \text{EBITDA}_A = \text{EV}_A$$

$$\textcircled{5} \quad \left(\frac{\text{Price}}{\text{BV}} \right)_C \times \text{BV per share}_A = \text{MPS}_A$$

Note: How to Calculate Book Value per Share →

$$\text{Book Value per Share} = \frac{\left(\text{Equity share Capital} + \text{Res + Profit} - \begin{array}{l} \text{Loss on Sale of Asset} \\ \text{Miscellaneous Exp} \\ \text{Discount on issuing} \end{array} \right)}{\text{No of equity share}}$$

Concept (12) Enterprise Value.

Generally used formulae. (Default formulae)

Market Value of Equity	xxx (a)
+ Market Value of Debt	xxx (b)
+ Market Value of PSC	xxx (c)
+ Minority Interest	xxx (d)

- Investment in other Companies (-) (e)
 - Investment in long term Investments (-) (f)
 - Investment in Associates (-) (g)
 - Investment in Subsidiaries (-) (h)
 - Cash & Cash Equivalents (-) (i)
- Non use x
Non operating assets.
are subtracted.

Core Enterprise value EV

As per IIAI Definition -

$$(a) + (b) + (c) + (d) - (e)$$

① Total EV = Market Value of Equity + MV of PSC + MV of Debt + Minority Interest - Cash.

② operating EV = Total EV - Market value of non operating assets
(Investment in associates
Investment in long term Investments)

③ Core EV = operating EV - Non use assets.