Valuation of Companies, Shares and Assets

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VALUATION METHODOLOGIES

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INCOME APPROACH

- Discounted Cash Flow Method

MARKET APPROACH

- Market Price Method
- Comparable Companies Multiple Method
- Comparable Transactions Multiple Method

ASSET APPROACH

- Net Assets Value Method
- Replacement Value/ Realizable Value Method

INCOME APPROACH

DISCOUNTED CASH FLOW ('DCF') METHOD

1. Values a business based on the expected cash flows over a period of time

2. Considers cash flows and not accounting profit

3. Value of business is aggregate of discounted value of the cash flows for the explicit period and perpetuity

4. Involves determination of discount factor and growth rate for perpetuity

DCF - Parameters

Cash Flows

- Projections
- FCF to Firm or FCF to Equity
- Horizon (Explicit) period
- Growth rate for perpetuity

Discounting rate

- Cost of Equity
- Cost of Debt
- Debt Equity ratio

CASH FLOWS

Enterprise Value

- Gross operational cash flows (EBIDTA)
- Less: Tax
- Less: Working capital requirements
- Less: Capex requirements

FCFF

Discount rate: WACC

Equity Value

- Less: Interest payment & additions/ repayment for loans

FCFE

Discount rate: Cost of equity

COST OF EQUITY

CAPITAL ASSET PRICING MODEL

$$Ke = Rf + (Rm - Rf) * \beta + SCRP$$

- Risk Free Rate (Rf)
- Equity Market Risk Premium (Rm-Rf)*
- Beta (β)
- Specific Company Risk Premium (SCRP)

*Rm: Market Return

COST OF DEBT

Rate at which a firm can borrow money today and will depend on the default risk embedded in the firm

Possible sources of information:

- Cost of debt currently incurred
- Current market cost of borrowing incurred by comparable companies that have similar credit rating

DISCOUNTING FACTOR

Weighted Average Cost of Capital (WACC) =

$$\left\{\frac{D}{(D + E)} \times Kd\right\} + \left\{\frac{E}{(D + E)} \times Ke\right\}$$

D = Debt

E = Equity

Kd = Post tax cost of debt

Ke = Cost of equity

CALCULATION OF WACC

CALCULATION OF WACC

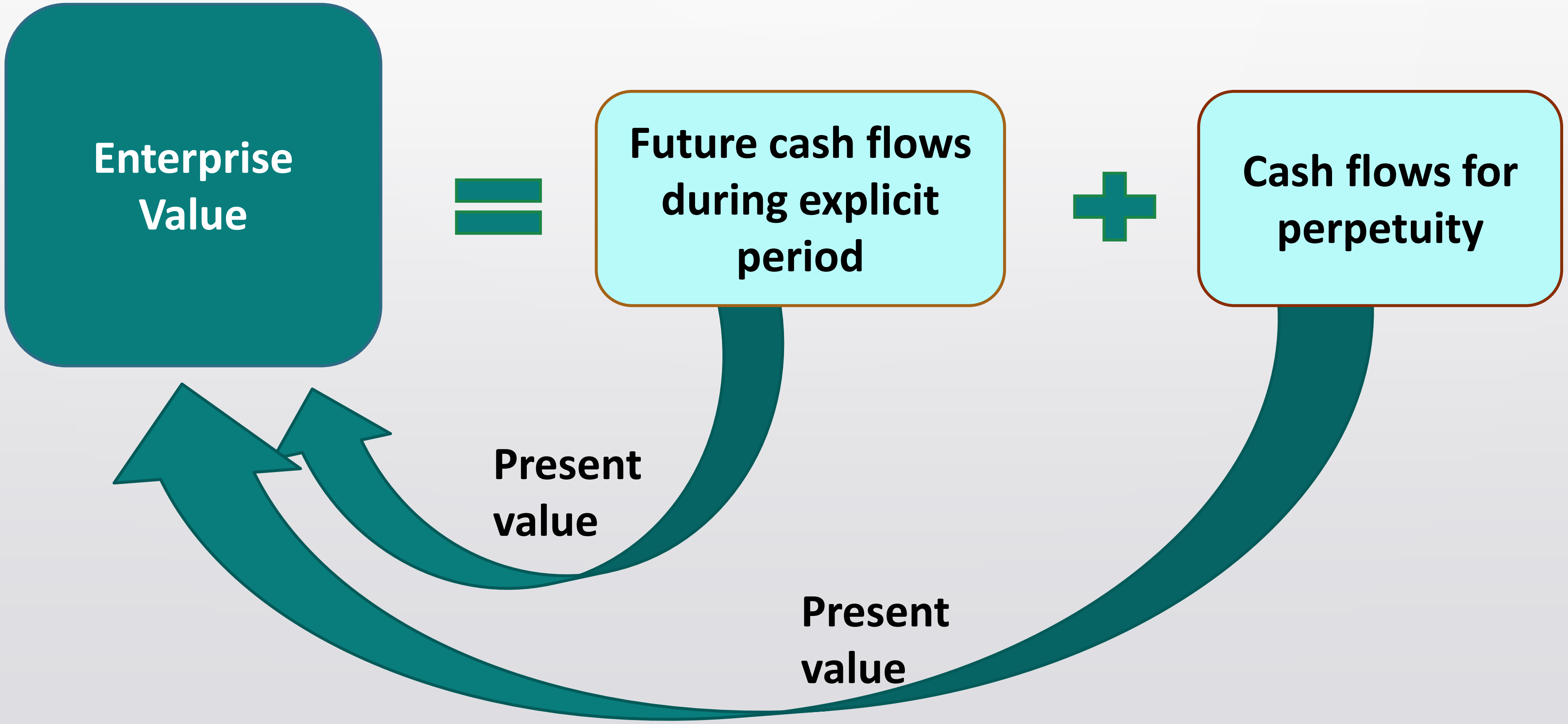
Cost of Equity			
	Risk Free Return	**Beta**	**Equity Risk Premium**
	7.00%	0.60	8.00%
Cost of Equity	**11.80%**		
SCRP	1.00%		
Adjusted Cost of Equity	**12.80%**		

Cost of Debt		
	Interest Rate	**Tax**
	10.50%	34.94%
Cost of Debt	**6.83%**	

Debt - Equity		
	Debt	**Equity**
	25%	75%

WACC	**11.31%**

DCF VALUE


Enterprise Value
Future cash flows during explicit period
Cash flows for perpetuity
Present value
Present value

EXAMPLE – FREE CASH FLOW TO FIRM

(INR Lacs)

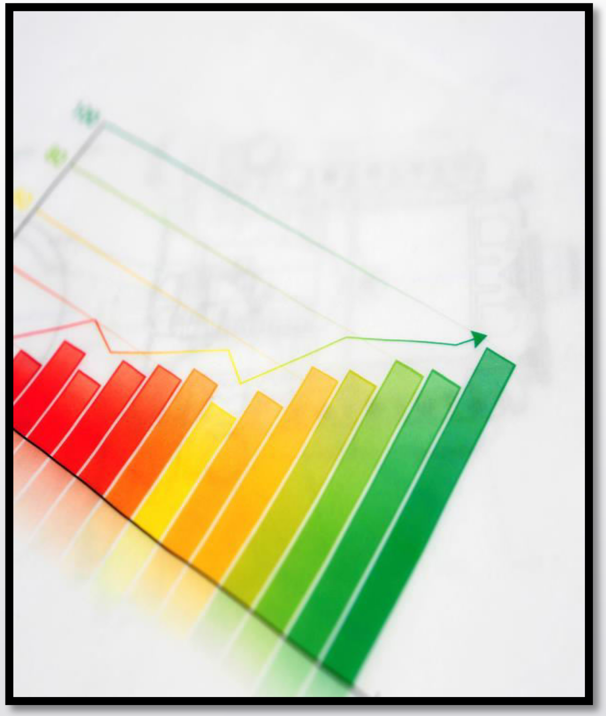
Particulars		2018-19	2019-20	2020-21	Perpetuity
Operating PBT		**430**	**518**	**596**	
Add:					
Interest		56	44	46	
Depreciation		70	80	86	
EBITDA		**556**	**642**	**728**	
Less: Outflows					
Capital Expenditure		45	45	45	
Incremental Working Capital		20	30	40	
Tax		158	182	208	
Total Outflow		**223**	**257**	**293**	
Free Cash Flow (FCF)		**333**	**385**	**435**	
Cash Flow for 2020-21					**435**
Growth Rate					5%
Capitalised Value for Perpetuity					**5,709**
Discounting Factor	13%	0.88	0.78	0.69	0.69
Net Present Value of Cash Flows		**295**	**302**	**301**	**3,957**
Enterprise Value					**4,855**
Less: Loan Funds					(930)
Less: Preference Share Capital					(150)
Add: Surplus Cash					150
Less: Contingent Liabilities					(20)
Add: Value of Investments					850
Adjusted Value For Equity Shareholders					**4,755**
No. of Equity Shares					9,00,000
Value per share (INR) (FV INR 10)					**528**

MARKET APPROACH

MARKET PRICE METHOD

MARKET PRICE METHOD

- Evaluates the value on the basis of prices quoted on the stock exchange
- It is prudent to take weighted average of quoted price over a reasonable period
  - Significant and Unusual fluctuations in the market price
- Thinly traded / Dormant Scrip – Low Floating Stock
- Regulatory bodies often consider market price as important basis – Preferential allotment, Takeover code



EXAMPLE - MARKET PRICE METHOD

Months	Volume	Turnover (INR)
Feb-18	3,07,47,812	4,60,99,75,753
Mar-18	1,20,40,227	2,69,78,68,740
Apr-18	1,96,03,244	3,97,62,64,011
May-18	1,61,08,953	3,57,32,16,654
Jun-18	1,81,15,567	4,93,70,62,216
Jul-18	2,99,08,604	6,73,54,15,743
Total	**12,65,24,407**	**26,52,98,03,117**
Value per Share (INR)		**210**

COMPARABLE COMPANIES MULTIPLE METHOD

COMPARABLE COMPANIES MULTIPLE METHOD

Earnings Based

- EBITDA Multiple (EV / EBITDA)
- Revenue multiple (EV / Revenue)

Enterprise Value

- PE Multiple

Equity Value

Asset Based

- Book Value Multiple

Equity Value

MARKET MULTIPLES

- Generally applied in case of unlisted entities
- Estimates value by relating an element with underlying element of similar listed companies
- Based on market multiples of Listed Comparable Companies
  - PE Multiple
  - EV/EBITDA Multiple
  - Revenue Multiple
  - Book Value Multiple
  - Industry Specific Multiple
    - EV/ Tonne – Cement Manufacturing Companies
    - EV/ Bed – Hospital Business
    - EV/ Room Keys – Hotel Business
    - EV/ Tower – Telecom Tower Companies
    - % of AUM – Asset Management Companies

MAINTAINABLE PROFITS

Based on past performance and / or estimates

Elimination of material non-recurring/ non operational items

Adjustment for capacity recently added

Profits of various years averaged (simple or weighted)

MULTIPLE

1. • Past and Expected Growth of the Earnings
2. • Performance vis-à-vis Peers
3. • Size, Location & Market Share
4. • Historical multiples enjoyed on the Stock Exchange by listed comparable companies

ADJUSTMENTS

- Market value of the investments
- Other non-operating surplus assets
- Surplus cash
- Contingent liabilities / assets
- Loan Funds
- Preference Share Capital

EXAMPLE – EV/EBITDA MULTIPLE

XYZ LTD

CALCULATION OF ADJUSTED PBT & EBITDA

(INR Lacs)

Particulars	2016-17 Audited	2017-18 Audited	2018-19 Budgeted
Reported Profit before tax	540	780	910
Less: Non-operating/non-recurring income			
Dividend Income	340	300	300
Profit on sale of Fixed Assets	10	-	120
Profit on sale of Investments	50	100	-
Interest on Income tax refund	-	40	50
Interest Income	10	18	30
Total non-operating/non-recurring income	**410**	**458**	**500**
Add: Non-recurring expenses			
Loss on sale of fixed assets	-	10	-
VRS Paid	10	15	20
Total non recurring expenses	**10**	**25**	**20**
Adjusted PBT	**140**	**347**	**430**
Add: Interest	165	113	56
Add: Depreciation	79	75	70
Adjusted EBITDA	**384**	**535**	**556**

EXAMPLE – EV/EBITDA MULTIPLE

(INR Lacs)

Particulars	XYZ Ltd		
	Adj.EBITDA	Weight	Product
2016-17	384	0	-
2017-18	535	1	535
2018-19	556	1	556
TOTAL		**2**	**1,091**
Maintable EBITDA			**546**
EV/EBITDA Multiple			9
ENTERPRISE VALUE			4,910
Adjustments			
Add: Value of Investments			850
Less: Contingent Liabilities			(20)
Add: Surplus Cash			150
Less: Loan Funds			(930)
Less:Preference Share Capital			(150)
Adjusted Equity Value			**4,810**
No. of Equity Shares (FV - INR 10 each)			9,00,000
Value per share (INR)			**534**

COMPARABLE TRANSACTION MULTIPLE METHOD

COMPARABLE TRANSACTION MULTIPLE METHOD

- Determines the value based on any recent transaction in the Comparable Companies
- Multiples derived from recent M&A transactions are considered
  - EV/EBITDA
  - EV/Sales
  - Book Value Multiple
  - Industry Specific Multiple
- Generally, used as a cross check

ASSET APPROACH

NET ASSETS VALUE ('NAV') METHOD

Total Assets (excluding Miscellaneous Expenditure and debit balance in Profit & Loss Account)
Less: Total Liabilities
NET ASSET VALUE

OR

Share Capital
Add: Reserves
Less: Miscellaneous Expenditure
Less: Debit Balance in Profit & Loss Account
NET ASSET VALUE

REPLACEMENT / REALISABLE VALUE METHOD

Replacement value of assets	Realisable value of assets
• Cost of new asset • Similar condition • Equivalent utility • Depreciation for obsolescence	• Cost of disposal • Tax on sale (STCG, LTCG etc.) • Time required

EXAMPLE – NAV METHOD

(INR Lacs)

Particulars	XYZ Ltd	
Net Fixed Assets		1,000
Current Assets	2,450	
Current Liabilities	(1,565)	
Net Current Assets		885
Investments		500
Deferred Tax Liabilities		(100)
Loan Funds		(930)
Net Assets Value		**1,355**
Adjustments:		
Add: Appreciation in the value of investments		350
Less: Preference Share Capital		(150)
Less: Contingent Liabilities		(20)
Adjusted Net Assets Value		**1,535**
No. of Equity Shares (FV - INR 10 each)		9,00,000
Value per share (INR)		**171**

PRACTICAL ISSUES IN VALUATION

PRACTICAL ISSUES IN VALUATION

- Selection of methods
  - Merger of unlisted company / Demerger of division of a company into listed company
  - Different businesses of transferor co and transferee co
- Valuation of conglomerates
- Consideration for merger by way of issue of redeemable preference shares
- Synergies of restructuring - whether to be captured in valuation?
- Valuation of Investments
- Identification of surplus assets
- Valuation of Fixed Assets / Surplus Assets – reliance on third party valuers
- Tax benefits
- Contingent liabilities / assets

PRACTICAL ISSUES IN VALUATION

- ESOPs/Convertible instruments
- Infrequently traded shares
- Cut - off date for determining market price
- Accounting – different GAAPs
- Impact of bonus/stock-split while determining swap ratio
- Inter-company holdings in merging companies
- Joint valuation report
- Sharing of information with Merchant Bankers for obtaining fairness opinion
- Sharing of report with the client
- Availability of information from client and timelines
- Change in scope of work

Thank You