VIRTUAL COACHING CLASSES
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FINAL LEVEL
PAPER 2: STRATEGIC FINANCIAL MANAGEMENT

Faculty: CA SUUSHANT ARORA

CORPORATE VALUATION

Chapter 12

APPROACHES/ METHODS OF VALUATION

Assets Based Valuation Model

Earning Based Models

Cash Flow Based Models

1 Asset Based Approach

$$
\boxed{\text{Total Assets}} \quad = \quad \boxed{\begin{array}{l} \text{Fixed Assets} \\ + \text{ Intangible Assets} \\ + \text{ (Current Assets } \textit{minus} \text{ Current} \\ \quad \text{Liabilities)} \end{array}}
$$

From the 'Total Assets' derived, the value of debt should be subtracted as these are to be repaid off. The net result arrived at will be the book value of the enterprise. Book Value can be depicted as follows:

Book Value   =   Total Assets minus Long Term Debt

This can also be equated to share capital plus free reserves.

1 Asset Based Approach Contd.

However, the book value approach will not essentially represent the true price of the assets because:

(a) Tangible assets may be undervalued or even overvalued

(b) Intangible assets may no longer be of actual saleable worth in the market

(c) Long term debt may have a terminal payout that needs to be catered to

So, in reality, the book value is always adjusted to such factors to assess the 'net realizable value' of the assets and hence is called as the 'Adjusted Book Value' approach.

		Book Values	Net Realizable Values
Share Capital			
5000 equity shares of ₹ 10 each		50,000	50,000
Reserves and Surplus			
Free Reserves	30,000		
Revaluation Reserves	20,000	50,000	25,000
Long Term Debt			
(Term Loan from ZB Bank)		10,000	10,000
Current Liabilities		10,000	15,000
Total		120,000	100,000
Non Current Assets			
PPE	50,000		
Licenses	10,000	60,000	50,000
Current Assets			
Sundry Debtors	50,000		40,000
Cash	10,000	60,000	10,000
Total		120,000	100,000

1 Asset Based Approach Contd.

Conclusions: The asset based approach can depict the enterprise's net worth fairly correctly using the fundamental principle of 'going concern'. However, it suffers from a major drawback – It fails to consider the ability of the enterprise to generate future revenues and how the market dynamics will affect the future operations and cash flow.

2 Income based Approach

This approach looks to overcome the drawbacks of using the asset-backed valuation approach by referring to the earning potential and using a multiplier - 'capitalization rate'. Earnings can best be depicted by EBITDA (Earnings before interest, taxes, depreciation and amortization), and capitalization rate will be computed either using the CAPM model discussed later in this chapter, or as multiples approach.

2 Income based Approach Contd.

Example: Suppose A Ltd. made a Gross Profit of Rs.1,000 000 and indirect expenses of Rs.400 000. You are required to determine the Earning Value of the company as well per share (assuming number of shares as 100000). You further assume as follow:

Risk Free Return	4.5%
Market Rate of Return	12%
Beta	0.9

3 Cash flow based approach

The cash flow approach takes into account the quantum of free cash that is available in future periods, and discounting the same appropriately to match to the flow's risk.

There are essentially five steps in performing DCF based valuation:

a) Arriving at the 'Free Cash Flow'

b) Forecasting of future cash flows (also called projected future cash flows)

c) Determining the discount rate based on the cost of capital

d) Finding out the Terminal Value (TV) of the enterprise

e) Finding out the present values of both the free cash flows and the TV, and interpretation of the results.

MEASURING COST OF EQUITY

1 Capital Assets Pricing Model (CAPM)

An alternative way to look at value of an investment or a portfolio is to view returns as a direct benefit of assuming risks. As discussed earlier the CAPM model is represented by the below formula:

$R = rf + \beta(rm-rf)$

2 Arbitrage Pricing Model

if a particular asset, say a stock, has its major influencers as the 'interest rate fluctuations' and the 'sectoral growth rate', then the stocks' return would be calculated by using the Arbitrage Pricing Theory (APT)in the following manner:

a) Calculate the risk premium for both these two risk factors (beta for the risk factor 1 – interest rate, and beta of the risk factor 2 – sector growth rate; and,

b) Adding the risk free rate of return.

Thus, the formula for APT is represented as – $Rf + \beta1(RP_1) + \beta2(RP_2) + ...\beta j(RP_n)$

MEASURING COST OF EQUITY Contd.

3 Estimating Beta and Valuation of Unlisted Companies

The procedure is as follows:

Step I: Take the industry beta - the beta of similar listed companies would be good starting point. As stated above, the levered beta should be converted into unlevered to remove the impact of debt. The formula to be used is:

Unlevered beta = levered beta / 1 + (1 - tax rate) x (debt / equity)

Step II: adjustment of accounting policies and accounting estimates

Step III: The next step is to find out the Cost of equity –This can be done using the CAPM technique.

Step IV: Calculating cost of borrowing using rate of peers or WACC.

Step V: Since this is a private company, the owners will demand a return towards 'goodwill'.

Step VI: Finally, the future cash flows of the private company will be treated (discounted) using the WACC rate obtained above as the discount factor

Step VII: The sum of the PV of the cash flows generated by the DCF will be the value of the firm.

MEASURING COST OF EQUITY Contd.

There is a privately held company X Pvt. Ltd that is operating into the retail space, and is now scouting for angel investors. The details pertinent to valuing X Pvt. Ltd are as follows –

The company has achieved break even this year and has an EBITDA of 90. The unleveraged beta based on the industry in which it operates is 1.8, and the average debt to equity ratio is hovering at 40:60. The rate of return provided by liquid bonds is 5%. The EV is to be taken at a multiple of 5 on EBITDA. The accountant has informed that the EBITDA of 90 includes an extraordinary gain of 10 for the year, and a potential write off of preliminary sales promotion costs of 20 are still pending. The internal assessment of rate of market return for the industry is 11%. The FCFs for the next 3 years are as follows:

Particulars	Y1	Y2	Y3
Future Cash flows	100	120	150

The pre-tax cost of debt will be 12%. Assume a tax regime of 30%. What is the potential value to be placed on X Pvt. Ltd?

RELATIVE VALUATION

Relative Valuation is the method to arrive at a 'relative' value using a 'comparative' analysis to its peers or similar enterprises.

The Relative valuation, also referred to as 'Valuation by multiples,' uses financial ratios to derive at the desired metric (referred to as the 'multiple') and then compares the same to that of comparable firms.

RELATIVE VALUATION Contd.

The steps are as follows:

Step 1. Find out the 'drivers' that will be the best representative for deriving at the multiple. Thereby, one can have two sets of multiple based approaches depending on the tilt of the drivers –
a) Enterprise value based multiples, which would consist primarily of EV/EBITDA, EV/Invested Capital, and EV/Sales.

b) Equity value based multiples, which would comprise of P/E ratio and PEG.

Step 2: Choosing the right financial ratio is a vital part of success of this model.

Step 3: Arriving at the right mix of comparable firms which can be most challenging.

Step 4: Extrapolate the results obtained to arrive at the correct estimate of the value of the firm.

OTHER APPROACHES TO VALUE MEASUREMENT

1 Contemporary Approaches to Valuation

Using terminologies like the 'PEs' and 'Exit Multiples', and to 'LBOs' and 'Brand Value'. Or we can say Goodwill based approach

2 Economic Value Added (EVA) and Market Value Added (MVA)

EVA = NOPAT − (Invested Capital * WACC)

And NOPAT (net operating profit after tax) is EBIT minus tax expense

After arriving at the correct NOPAT, the next step would be finding the capital charge. This would involve finding out

(a) Invested Capital

(b) Applying the company's WACC on the invested capital arrived in step (a)

OTHER APPROACHES TO VALUE MEASUREMENT

Compute EVA of A Ltd. with the following information:

Profit and Loss Statement		Balance Sheet	
Revenue	1000	PPE	1000
Direct Costs	-490	Current Assets	300
SGA	-200		**1300**
EBIT	**310**	Equity	700
Interest	-10	Reserves	100
EBT	**300**	Non Current Borrowings	100
Tax Expense	-100	Current Liabilities & Provisions	400
EAT	**200**		**1300**

Assume bad debts provision of 20 is included in the SGA, and 20 reduced from the trade receivables in current assets.

Also assume that the pre-tax Cost of Debt is 12%, Tax Rate is 33.33% and Cost of Equity (i.e. the expected shareholder's return) is 8.45%.

OTHER APPROACHES TO VALUE MEASUREMENT Contd.

3 Shareholder Value Analysis (SVA)

The following are the steps involved in SVA computation:

(a) Arrive at the Future Cash Flows (FCFs) by using a judicious mix of the 'value drivers'

(b) Discount these FCFs using the WACC

(c) Add the terminal value to the present values computed in step (b)

(d) Add the market value of non-core assets

(e) Reduce the value of debt from the result in step (d) to arrive at value of equity.

THANK YOU