

# Seminar on Valuation



## Discounted Cash Flow Method

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# Valuation - DCF Method

## DCF Meaning

Present value of future free cash flows discounted at a specific rate

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

Involves determination of discount factor and growth rate for perpetuity

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

# Valuation - DCF Method

## Why is it used

Most commonly used valuation methodology

Reflects the value derived from future earnings

Approach based on “Free Cash flows “after meeting capex and working capital

Assumes the business being valued to be a ‘going concern’

Captures impact of financial gearing

Approach can be used for asset and non asset based companies

Can be applied to companies with current negative earnings or net worth

# Valuation - DCF Method

## Projections

- Analyse the historical performance of the business for last 3 -5 years, past analysis, and expected future trend
- Prepare forecast financials for a period of 5-10 years.

Factors to be considered for reviewing projections:

- Appraisal by institutions and understanding of the Business
- Industry/Company Analysis
- Dependence on single customer/market
- Dependence on single supplier & Import dependence
- Installed capacity, Projected Volume, Capex Required
- Existing policy/ legal framework/ Tax structure

# Valuation - DCF Method

## Key factors / inputs

Cash Flows which can either be:

- Free cash flows to firm ('FCFF') or
- Free cash flows to equity holders ('FCFE') or – Dividends

Discount rate which can either be:

- Cost of capital ('WACC') or
- Cost of equity ('CoE')

Current level of earnings ie, historic, present & Forecast earnings ie, 4 to 10 years in the future

Current and targeted capital structure

Market view of riskiness of the business

# Valuation - DCF Method

FCFF

In FCFF, value of firm is obtained by discounting cash flows to firm (cash flows after meeting operating expenses and taxes, but prior to debt payments) at the weighted average cost of capital.

FCFE

FCFE, value of equity is obtained by discounting cash flows to equity (cash flows after meeting operating expenses, tax, interest and principal payments) at the cost of equity.

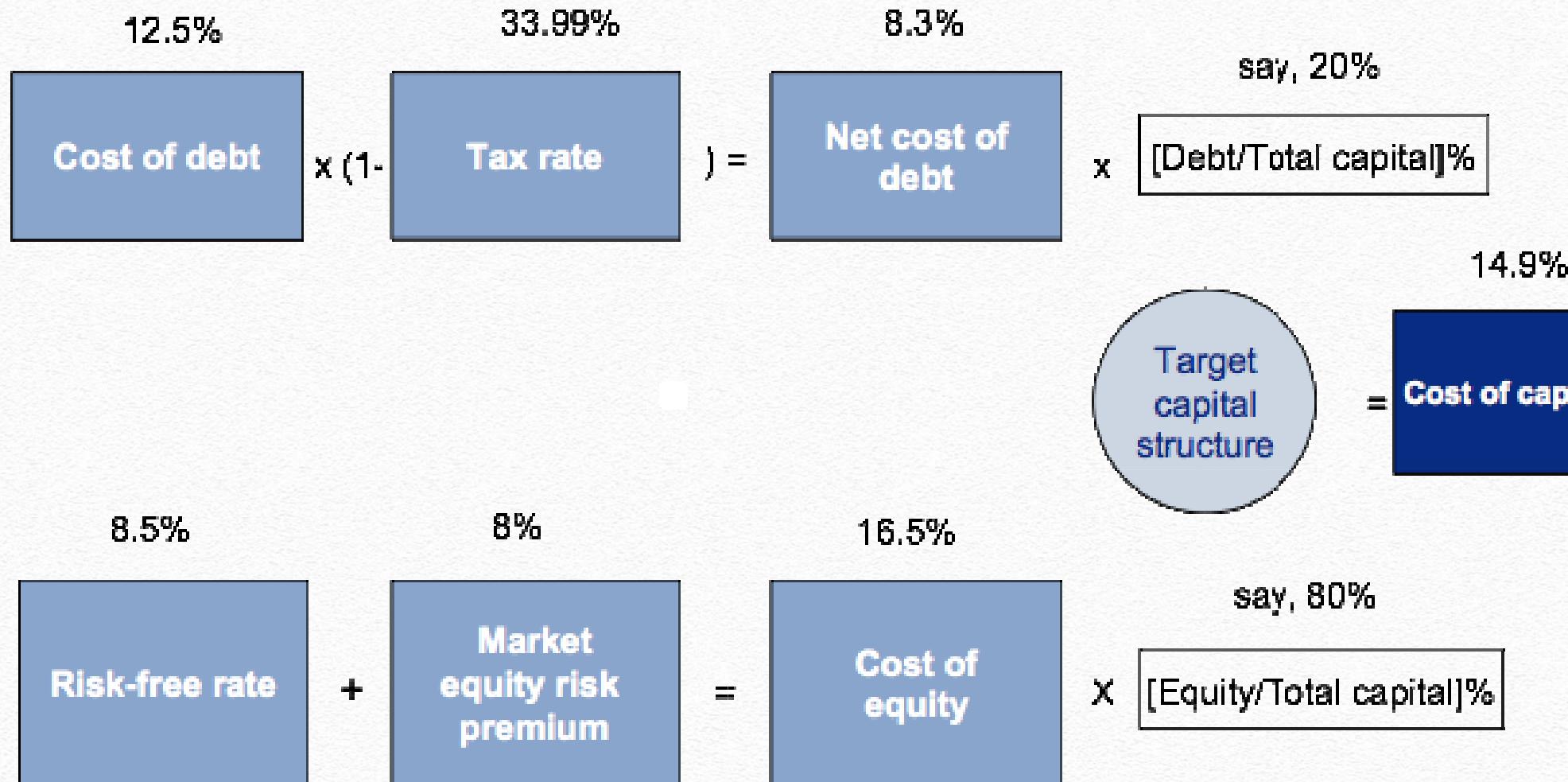
# Valuation - DCF Method

## Steps Involved - DCF

- Projections / forecast financials for a period of 5-10 years.
- Determining the required 'free cash flows' for the explicit period
- Calculate the discount factor - WACC or CoE used to discount cash flows. Discount the above cash flows by the appropriate factor.
- The sum of these discounted cash flows is termed the 'primary value'
- Estimate the terminal growth rate and calculate the terminal value
- The sum of the primary and terminal values is the 'Business' or 'Enterprise' value (EV). EV deduct the market value of outstanding debt to arrive at the Equity Value

# Valuation - DCF Method

WACC /  $K_e$





# Valuation - DCF Method

**Cost of Equity = Risk free rate ( $R_f$ ) + Equity Risk Premium x Beta**

## Risk Free Rate

It is the rate where investor knows the expected return with certainty- Govt Sec.

For an investment to be risk free, two conditions have to be met :-

- (a) No default risk
- (b) No uncertainty about reinvestment rates

## Risk Premium

It measures the extra return that would be demanded by investors for shifting their money from riskless investment to an average risk investment

## Beta

A measure of the volatility, or systematic risk, of a security or a portfolio in comparison to the market as a whole

# Valuation - DCF Method

## Terminal Value

The terminal value measures the value of a business after the projected cash flow period, i.e., cash flows in perpetuity

The terminal value is calculated as :

$$\frac{FCF_t \times (1 + \text{growth rate})}{\text{WACC} - \text{growth rate}}$$

Estimation of the growth rate is critical - it is a valuation call

In cases of stabilised business, or if a longer forecast horizon is made, the terminal growth rate is generally taken at 2%

For new companies or companies achieving high growth (eg technology companies) or if a short forecast horizon is made, the terminal growth rate may be taken as 3-4%

# Valuation - DCF Method

Most appropriate for valuing firms

- Limited life projects
- Large initial investments and predictable cash flows
- Regulated business
- Start-up companies

Advantages of DCF

- sophisticated & reliable picture of company's value than the accounting approach
- Helpful to all stakeholders
- Reduces subjectivity to valuation

Disadvantages

- Projections are highly subjective hence could be inaccurate
- Inapplicable where projections cannot be made for the horizon period
- Difficulties in measuring risks (calculation of  $\beta$ )

DCF may not be the right method in following scenarios

- Firms in trouble / process of restructuring
- Cyclical firms
- Firms with unutilized / under utilized assets.
- Firms with Patents or product options

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