



# Vadodara Chapter of WIRC of The Institute of Company Secretaries of India Valuation under Companies Act, 2013



## About Valuation

- Valuation is more of an art based on the professional experience rather than a science based on empirical studies and logics.
- Internationally Business Valuations are governed by broadly various standards like:
  - Valuation Standards of American Institute of CPAs (AICPA),
  - American Society of Appraisers (ASA)
  - Institute of Business Appraisers (IBA)
  - National Association of Certified Valuation Analysts (NACVA)
  - The Canadian Institute of Chartered Business Valuators (CICBV)
  - Revenue Ruling 59- 60 (USA),
  - ICAI Valuation Standard (recommendatory)
- Keeping in view the growing relevance and complex financial structures importance of valuation in business and investment decisions as well as in regulatory compliance processes the development of practice of valuation as a discipline and profession in the present context has become a necessity

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# Why valuation ?



## Mergers & Acquisitions

Investment  
Fund raising  
Dispute resolution

1

2

## Regulatory

RBI/FEMA  
Income Tax  
Companies Act



3



## Special Purposes

ESOP  
PPA

4

## Financial Reporting & Ind AS

Financial Instruments  
Impairment



5



## Valuation Support

Financial modelling

# History of valuations in India

1957

1992

1993

1994

1999

2007

2008

2010

2012

2013

2016

2017

## Wealth tax rules

Emphasis given to book value method (adjusted) for lack of discounts, marketability & dividends

## Controller & capital issue

Fixed pricing guidelines for valuation of shares, prescribing NAV Method, Profit earning capacity value and market value method

Since 1992 – SEBI announced that companies are free to price the issue in consultation with Merchant bankers

1994 – ICAI announced its valuation standards

## ICAI Technical Guide on Share Valuation - 1999

Guidance note issued by ICAI

**DFCF Method** was prescribed by RBI (2007) ICAI Valuation Standard – CAS 1 (2010)

## Income tax law on valuation – 2000 - 2010

Income tax prescribed valuation for transfer of shares

ESOP tax issued as perquisites

## Registered Valuer 2013 - 2017

RVs governing technical and financial valuer brought in Co. Act 2013 w.r.f 18.10.2017



# Registered valuers

## Registered valuers

- **Starting Point – Section 247 of Companies Act, 2013**
- **Applicable Rules – Companies (Registered Valuers and Valuation) Rules 2017**
- **Regulating the profession of Valuation in India for Standardization and Transparency**
- **As of now, covers Companies Act and Insolvency and Bankruptcy Code (IBC)**

**Section 247 of the Companies Act, 2013 states that a Registered Valuer would carry out valuation in respect of any property, stocks, shares, debentures, securities or goodwill or any other assets or net worth of a company or its liabilities and that the valuer shall have such qualifications and experience and *being a member of an organisation recognised*, on such terms and conditions as may be prescribed.**

The Registered Valuer shall be appointed by the audit committee or in its absence by the Board of Directors of that company.

**Regarding the functioning and duties of the Registered Valuer, it is stated that the registered valuer shall:**

- **make an impartial, true and fair valuation** of any assets that may be required to be valued;
- **exercise due diligence** while performing the functions as valuer;
- **make the valuation in accordance with such rules** as may be prescribed; and
- **not undertake valuation of any assets in which he has a direct or indirect interest** or becomes so interested at any time during 3 years prior to his appointment as valuer or 3 years after valuation of assets was conducted by him.

## Registered valuers

Sl. No.	Section	Particulars
1	62(1)C	Valuation report for further issue of shares
2	192(2)	Valuation of assets involved in arrangement of non-cash transactions involving directors
3	230(2)(c)(v)	Valuation of shares, property and assets of the company under a scheme of corporate debt restructuring
4	230(3)	Valuation report along with notice of creditors/shareholders meeting –under scheme of compromise/arrangement
5	232(2)(d)	The report of the expert with regard to valuation, if any, would be circulated for meeting of creditors/members
6	232(3)(h)	The valuation report to be made by the tribunal for exit opportunity to the shareholders of transferor company – under the scheme of compromise/arrangement in case the transferor company is listed company and the transferee company is an unlisted company
7	236(2)	Valuation of equity shares held by the minority shareholders
8	281(1)	Valuing assets for submission of report by liquidator



## Registered valuers

### **Specific Provisions under the Insolvency and Bankruptcy Code, 2016 which Require Valuation Report from a Registered Valuer**

Regulation 27 of the Insolvency and Bankruptcy Board of India (Insolvency Resolution Process for Corporate Persons) Regulations, 2016 deals with the appointment of registered valuers. It states, “the resolution professional shall within seven days of his appointment, appoint two registered valuers to determine the fair value and the liquidation value of the corporate debtor in accordance with Regulation 35”.

Under the Insolvency and Bankruptcy Board of India (Insolvency Resolution Process for Corporate Persons) Regulations, 2016, registered valuer means a person registered as such in accordance with the Companies Act, 2013 and rules made thereunder.

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# **Financial Reporting & Ind AS**

## Financial Reporting & Ind AS

- **Growing importance of Fair values in financial reporting globally and in India**
- Role of management in preparing financial statements according to recognized standards – IFRS
- Role of auditors and regulator
- Need for qualified expert business valuer
- Public Trust

# Financial Reporting & Ind AS

01

## Ind AS 113

- Dedicated standard on “Fair Values”
- In line with global equivalents – IFRS 13 and ASC 820 (USGAAP)



04

## Market Based

Fair Value is a market based measurement  
, NOT entity specific measurement



02

## Observation inputs

Gives preference to observable inputs



03

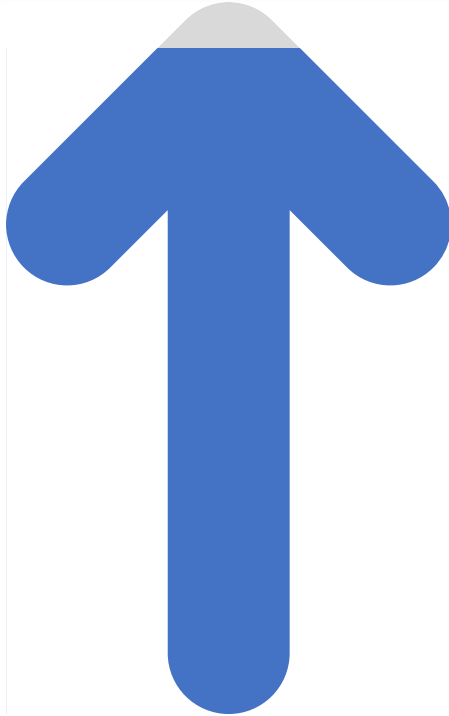
## Standards

- Ind AS - 109, 107 and 32 : Financial Instruments
- Ind AS - 102 : Share based payment
- Ind AS - 103 : Business Combination
- Ind AS - 38 : Intangible Assets
- Ind AS - 16 : Property Plant & Equipment
- Ind AS - 36 : Impairment of Assets



# Financial Reporting & Ind AS

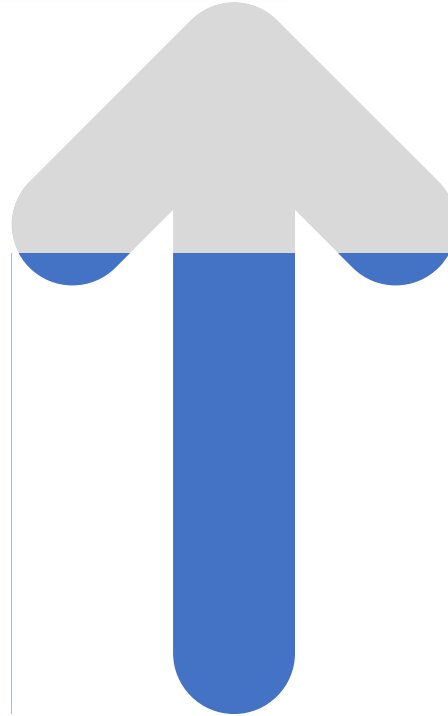
## Ind AS 113 – Fair Values



### Level – 1

If there is a principle market for asset or liability with Quoted Price

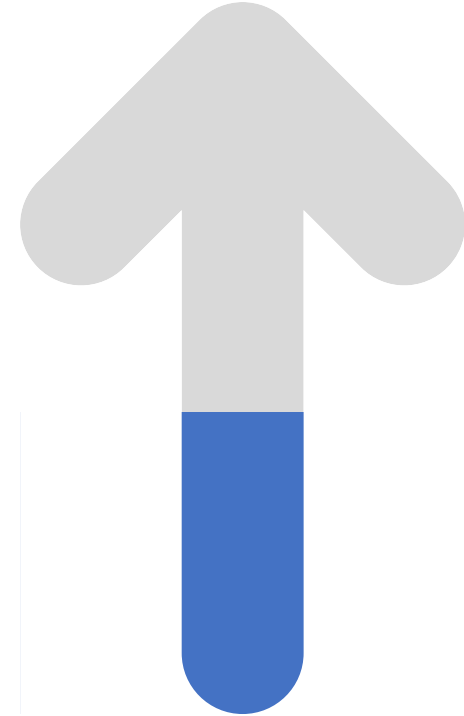
(Whether that price is directly observable or estimated using another valuation technique)



### Level – 2

If there is a principle market for asset or liability but Quoted Price is not available

Quoted price for comparable companies (CCM)  
Adjustments to Level – 2 (Valuation)



### Level – 3

Unobservable inputs shall be used where little, market activity for the asset/ liability at the measurement date.

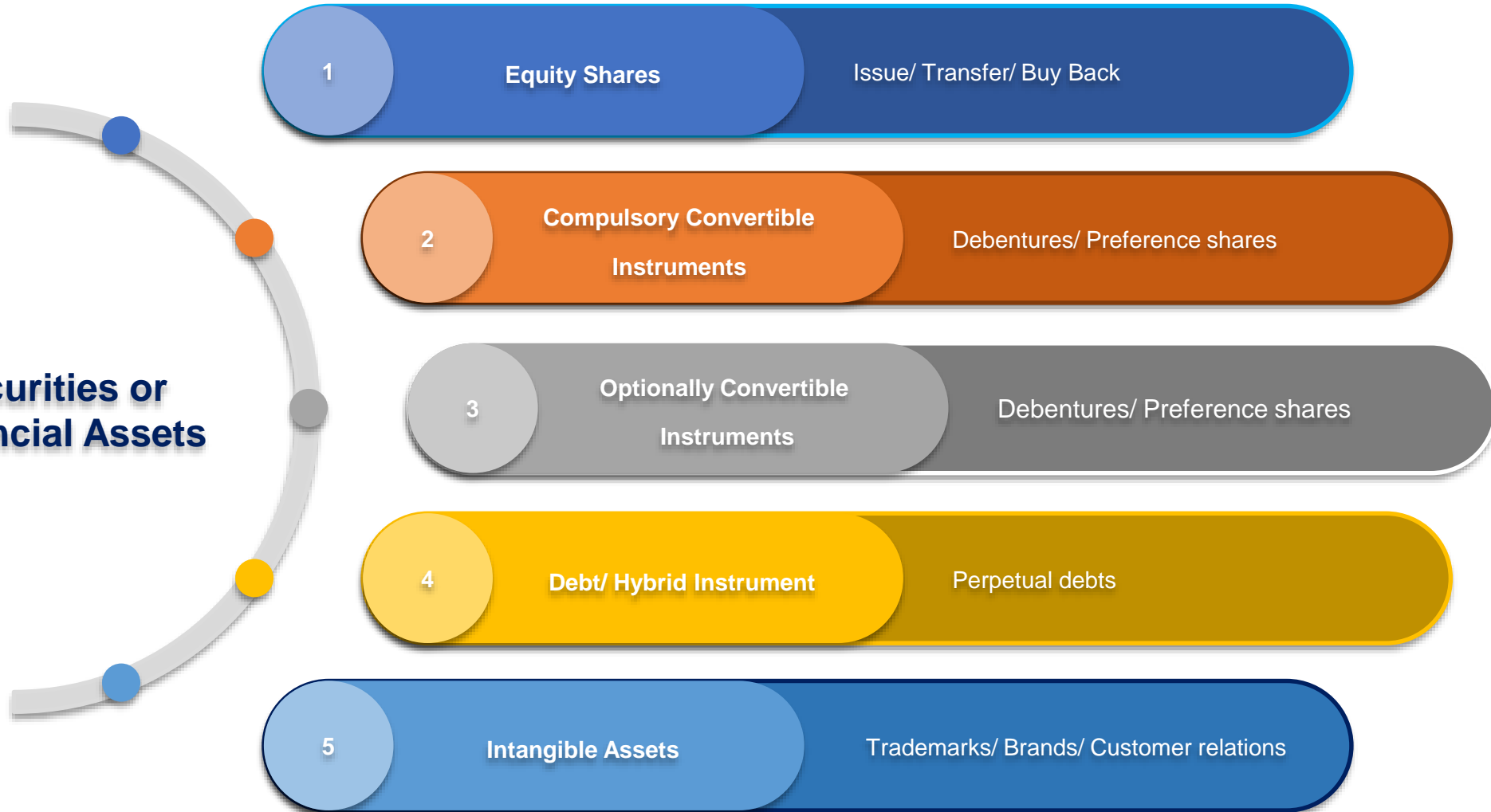
DFC, B&S and Other methods

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# **Securities or financial assets**

# Securities or Financial Assets

## Securities or Financial Assets





# Regulatory valuations



# Regulatory valuations

## Approaches

- **Asset approach:** The asset based approach views the business as a set of assets and liabilities that are used as building blocks to construct the business value. Since every operating business has assets and liabilities, a way to address this question is to determine the value of these assets and liabilities. The difference is the business value. However, it is used to evaluate the entry barrier that exists in a business and is considered viable for companies having reached the mature or declining growth cycle and also for property and investment companies having strong asset base.
- **Income approach:** The Income based approach of valuations are based on the premise that the current value of any business is a function of the future value that an investor can expect to receive from purchasing all or part of the business. It is generally used for valuing businesses that are expected to continue operating for the foreseeable future.
- **Market Approach:** In this approach, value is determined by comparing the subject, company or assets with its peers in the same industry of the same size and region. Most Valuations in stock markets are market based. This is also known as relative valuation approach

## Regulatory valuations

- Various regulatory bodies in India (RBI, Income Tax, SEBI, etc) have prescribed different and in some cases even conflicting valuation methodologies creating practical difficulties.
- In some cases, absolute discretion is given to valuers on one hand and in other cases strict adherence to practical method like NAV, DFCF, Market price etc is sought.
- In most cases, there is not much guidance on how to apply a particular method like DFCF; comparable companies market multiples method. A diagrammatic view for all regulatory valuations in India is provided on next page:

## Regulatory valuations – Issue

Scenario	Regulations	Statutory Provision	Valuation Method	Valuation by whom
<b>Listed Company</b>  Issue of Equity Shares/CCPS/CCDs/ Warrants on private placement basis	FEMA	Rule 21 of FEM(NDI) Rules, 2019	As per SEBI guidelines higher of 26/2 weeks – VWAMP, if freq traded. If not than valuation of shares	As per SEBI Guide Lines
	Companies Act & SEBI	Reg 164 & 165 of SEBI (ICDR) Regulations, 2018	Same as above	As per SEBI Guidelines
<b>Unlisted Company</b>  Issue of Equity Shares/ CCPS/ CCDs/ Warrants on private placement basis	FEMA	Rule 21 of FEM (NDI) Rule, 2019	Internationally accepted pricing model	Merchant Banker/ CA/ CoA
	Income tax	Section 56 (2) (viib) read with rule 11U/ 11UA	DCF	Merchant Banker
	Companies Act and SEBI	Section 42 and 62(1)(c ) of Companies Act, 2013 & Rule 13 of Companies (SCD) Rule, 2014	Not prescribed	Registered Valuer (IBBI)

\* SEBI ICDR 2018 – amended in January 2022, to include – Registered Valuer as per Companies Act, 2013

## Regulatory valuations – Transfer

Scenario	Regulations	Statutory Provision	Valuation Method	Valuation by whom
<b>Listed Company</b> Transfer/ Sale of Equity Shares/ CCPs/ CCDs/ Warrants	FEMA	Rule 21 of FEM(NDI) Rules, 2019	Preferential Allotment Guidelines of SEBI (ICDR) Regulations 2018	As per SEBI Guidelines
	Income Tax	Section 50CA & 56(2)(x) read with Rule 11U/ 11UA	Transaction value or Lowest Market Price on valuation date	Valuation not mandatory i.e Management valuation acceptable
<b>Unlisted Company</b> Transfer of Equity Shares/ CCPS/ CCDs/ Warrants on private placement basis	FEMA	Rule 21 of FEM (NDI) Rule, 2019	Internationally accepted pricing model	Merchant Banker/ CA/ CoA
	Income tax – for Equity shares	Section 50CA & 56(2)(x) read with Rule 11U/11UA	Adjusted NAV	Not mentioned
	Income Tax – other than equity shares	Section 50CA & 56(2)(x) read with Rule 11U/11UA	Not prescribed	Merchant Banker Chartered Accountant

## Regulatory valuations – ESOPs

Scenario	Regulations	Statutory Provision	Valuation Method	Valuation by whom
<b>Listed Company</b> ESOP allotted	FEMA	Rule 21 of FEM(NDI) Rules, 2019	As per SEBI Reg – Freedom to determine price subject to accounting policies	Valuation not mandatory
	Income Tax	Section 17(2)(vi) read with Rule 3(8)	Average of opening & closing prices on exercise date	Valuation not mandatory
	Companies Act and SEBI	Section 62(1)(b) of Companies Act, 2013 & Rule 17 of SEBI (SBEB) Regulations, 2014	Valuation not mandatory	Valuation not mandatory
<b>Unlisted Company</b> ESOP allotted	FEMA	Rule 21 of FEM(NDI) Rules, 2019	Internationally accepted pricing model	Merchant Banker Chartered Accountant/ CoA
	Income Tax	Section 17(2)(vi) read with Rule 3(8)	Not prescribed	Merchant Banker
	Companies Act	Section 62(1)(b) of Companies Act, 2013	Valuation not mandatory	Valuation not mandatory

## Regulatory valuations – ESPPs

Scenario	Regulations	Statutory Provision	Valuation Method	Valuation by whom
<b>Listed Company</b> ESPP allotted	FEMA	Rule 21 of FEM(NDI) Rules, 2019	As per SEBI (SBEB) Regulations – determination of pricing subject to accounting policies	Valuation not mandatory
	Income Tax	Section 17(2)(vi) read with Rule 3(8)	Average of opening & closing prices on exercise date	Valuation not mandatory
	Companies Act and SEBI	Section 67 of Companies Act, 2013 & Rule 17 of SEBI (SBEB) Regulations, 2014	Valuation not mandatory	Valuation not mandatory
<b>Unlisted Company</b> ESPP allotted	FEMA	Rule 21 of FEM(NDI) Rules, 2019	Internationally accepted pricing model	Merchant Banker Chartered Accountant/ CoA
	Income Tax	Section 17(2)(vi) read with Rule 3(8)	Not prescribed	Merchant Banker
	Companies Act	Section 67 of Companies Act, 2013 & Rule 16 of Companies (SCD) Rules, 2014	Not prescribed	Registered Valuer

## Regulatory valuations – Buy Back

Scenario	Regulations	Statutory Provision	Valuation Method	Valuation by whom
Listed Company Buy Back of Shares	FEMA	Rule 21 of FEM(NDI) Rules, 2019	As per SEBI (SBEB) Regulations 2018– determination of pricing subject to accounting policies	Valuation not mandatory
	Companies Act and SEBI	Section 68 of Companies Act 2013 & SEBI (BuyBack of Securities) Regulations, 2018	Valuation not mandatory	Valuation not mandatory
Unlisted Company Buy Back of Shares	FEMA	Rule 21 of FEM(NDI) Rules, 2019	Internationally accepted pricing model	Merchant Banker Chartered Accountant/ CoA
	Companies Act	Section 68 of Companies Act, 2013 & Rule 17 of Companies (SCD) Rules, 2014	Valuation not mandatory	Valuation not mandatory

## Regulatory valuations – Right Issue

Scenario	Regulations	Statutory Provision	Valuation Method	Valuation by whom
<b>Listed Company</b> Right Issue	FEMA	Rule 7 & 21 of FEM(NDI) Rules, 2019	Freedom to determine pricing	Valuation not mandatory
	Companies Act and SEBI	SEBI (ICDR Regulations), 2018	Valuation not mandatory	Valuation not mandatory
<b>Unlisted Company</b> Right issue	FEMA	Rule 7 & 21 of FEM(NDI) Rules, 2019	Freedom to determine pricing – but lower than that offered to resident shareholders	Valuation not mandatory
	Companies Act	Section 62(1)(a) of Companies Act, 2013	Valuation not mandatory	Valuation not mandatory
	Income Tax	Section 56(2)(viib) read with Rule 11U/11UA	Discounted Cash Flow Method	Merchant Banker



## Regulatory valuations – Scheme

Scenario	Regulations	Statutory Provision	Valuation Method	Valuation by whom
<b>Listed Company</b> Scheme of Merger or Amalgamation	FEMA	Rule 7 & 21 of FEM(NDI) Rules, 2019	As per SEBI Guidelines	Chartered Accountant
	Companies Act and SEBI	SEBI Circular dated 10 March 2017 and SEBI Circular dated 3 January 2018	Not prescribed	Chartered Accountant
<b>Unlisted Company</b> Scheme of Merger or Amalgamation	FEMA	Rule 7 & 21 of FEM(NDI) Rules, 2019	Internationally accepted pricing method	Merchant Banker Chartered Accountant CoA
	Companies Act and SEBI	Section 230 of Companies Act 2013 & Rule 6(3) of Companies (Compromise, Arrangements, and Amalgamations) Rule 2016	Not prescribed	Registered Valuer

## Regulatory valuations – Miscellaneous

Scenario	Regulations	Statutory Provision	Valuation Method	Valuation by whom
Open offer	FEMA	Rule 7 & 21 of FEM(NDI) Rules, 2019	Pricing as per SEBI Guidelines – Generally followed VWAMP 60 days method	As per SEBI Guidelines
	SEBI	Reg 8 of SEBI (Substantial Acquisition of Shares & Takeover) Regulations, 2011	Valuation not mandatory	Not mentioned
Delisting of Equity Shares	FEMA	Rule 7 & 21 of FEM(NDI) Rules, 2019	Same as open offer – FEMA regulations	As per SEBI Guidelines
	SEBI	Reg 8 of SEBI (Substantial Acquisition of Shares & Takeover) Regulations, 2011	Valuation not mandatory	Not mentioned

## Regulatory valuations – Miscellaneous

Scenario	Regulations	Statutory Provision	Valuation Method	Valuation by whom
<b>Reverse Merger – Exit Price for Shareholders</b>	FEMA	Rule 21 of FEM(NDI) Rules, 2019	Price as per SEBI Guidelines	As per SEBI Guidelines
	Companies Act & SEBI	Section 232(3)(h) of Companies Act 2013 & Rule 3 of Companies (Compromise, Arrangements and Amalgamations) Rules 2016	Not prescribed	Registered Valuer
<b>Fairness Opinion on Scheme of Mergers or Amalgamations</b>	Companies Act & SEBI	SEBI Circular dated 10 March 2017 and SEBI circular dated 3 January 2018	Not prescribed	Merchant Banker

## Regulatory valuations – Miscellaneous

Scenario	Regulations	Statutory Provision	Valuation Method	Valuation by whom
<b>Listed Company</b> Scheme of Corporate Debt Restructuring	FEMA	Rule 21 of FEM(NDI) Rules, 2019	Price as per SEBI Guidelines	Chartered Accountant
	Companies Act & SEBI	Regulation 158 (7) of SEBI (ICDR) Regulation 2018	Not prescribed	Registered Valuer
<b>Unlisted Company</b> Scheme of Corporate Debt Restructuring	FEMA	Rule 21 of FEM(NDI) Rules, 2019	Internationally accepted pricing methodology	Chartered Accountant
	Companies Act & SEBI	Section 230(2)(c )(v) of Companies Act 2013	Not prescribed	Registered valuer
<b>Any Company</b> Investment in LLP	FEMA	Schedule VI of FEM(NDI) Rule, 2019	Internationally accepted pricing methodology	Chartered Accountant/ COA/ Approved Valuer
<b>Any Company</b> Swap of Equity Instruments	FEMA	Rule 21 of FEM(NDI) Rules, 2019	Not prescribed	Merchant Banker
	Companies Act	Section 62(1)(c ) of Companies Act 2013	Not prescribed	Registered Valuer

## Regulatory valuations – Miscellaneous

Scenario	Regulations	Statutory Provision	Valuation Method	Valuation by whom
<b>Listed Company</b> Conversion of Debt into Equity Shares	FEMA	Rule 21 of FEM(NDI) Rules, 2019	Price as per SEBI Guidelines	As per SEBI Guidelines
	Companies Act & SEBI	Regulation 158 (7) of SEBI (ICDR) Regulation 2018	Not prescribed	Registered Valuer
<b>Unlisted Company</b> Conversion of Debt into Equity Shares	FEMA	Rule 21 of FEM(NDI) Rules, 2019	Internationally accepted pricing methodology	Merchant Banker Chartered Accountant/ CoA
	Companies Act & SEBI	Section 62(3) of Companies Act 2013	Valuation not mandatory	Valuation not mandatory
<b>Any Company</b> Purchase of Minority Interest	FEMA	Rule 21 of FEM(NDI) Rule, 2019	Internationally accepted pricing methodology	Chartered Accountant/ COA/ Approved Valuer
	Companies Act and SEBI	Section 236 of Companies Act 2013 read with Rule 27 of Companies (Compromise, Arrangement and Amalgamation) Rules, 2016	As per accepted valuation methodologies	Registered Valuer

## Regulatory valuations – Miscellaneous

Scenario	Regulations	Statutory Provision	Valuation Method	Valuation by whom
<b>Any Company</b> Overseas investment in existing Foreign Company	FEMA	Regulation 6 of FEM(TIAFS) Regulations 2004 – ODI Regulations	Internationally accepted pricing methodology	Investment >=USD 5 mio then Merchant banker, else CA / CPA
Overseas Investment through Stock Swap	FEMA	Regulation 6 of FEM(TIAFS) Regulations 2004 – ODI Regulations	Internationally accepted pricing methodology	Merchant Banker Investment Banker
<b>Listed Company</b> Divestment – Transfer of shares of JV/ 100% Subsidiary	FEMA	Regulation 16 of FEM(TIAFS) regulation 2004 – ODI Regulations	Traded share prices	Not mentioned
<b>Unlisted Company</b> Disinvestment – Transfer of shares of JV/ 100% Subsidiary	FEMA	Regulation 16 of FEM(TIAFS) regulation 2004 – ODI Regulations	Internationally accepted prices methodologies	CA/ CPA

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# **Interplay of FEMA with Income Tax Act, 1961 and Companies Act, 2013**

## Interplay of FEMA with Income Tax Act, 1961 and Companies Act, 2013

### Interplay of Valuation

- The transactions of issue / transfer of equity instruments of a company would involve valuation to be carried out by a valuer in order to comply with the regulatory requirements under the Companies Act 2013, Securities and Exchange Board of India Act 1992, Income-tax Act 1961 and FEMA Act 1999 and the regulations framed thereunder
- Each of these Acts read with its underlying regulations have laid down specific provisions dealing with valuation requirements in terms of the person eligible to carry out valuation, pricing guidelines / formulae, etc.
- **Though under each of these regulations, the objective is to ensure that transactions are done at an arms-length pricing, different guidelines / formulae have been laid down by different regulations and therefore sometimes result in arriving at different fair values for the same transaction.**

### Interplay of Valuation under FEMA with Companies Act, 2013

- The requirement of valuation by a 'Registered Valuer' under the Co Act 2013 is a welcome change as it ensures consistency in valuation process being followed by the valuers and to arrive at an independent bias-free value
- **Since the objective of FEMA regulations is to ensure that transactions in shares of companies between resident and non-resident are carried out based on determination of an arms-length price, it is imperative to bring FEMA regulations at par with Co Act 2013 with regards to valuation being carried out by a Registered Valuer**

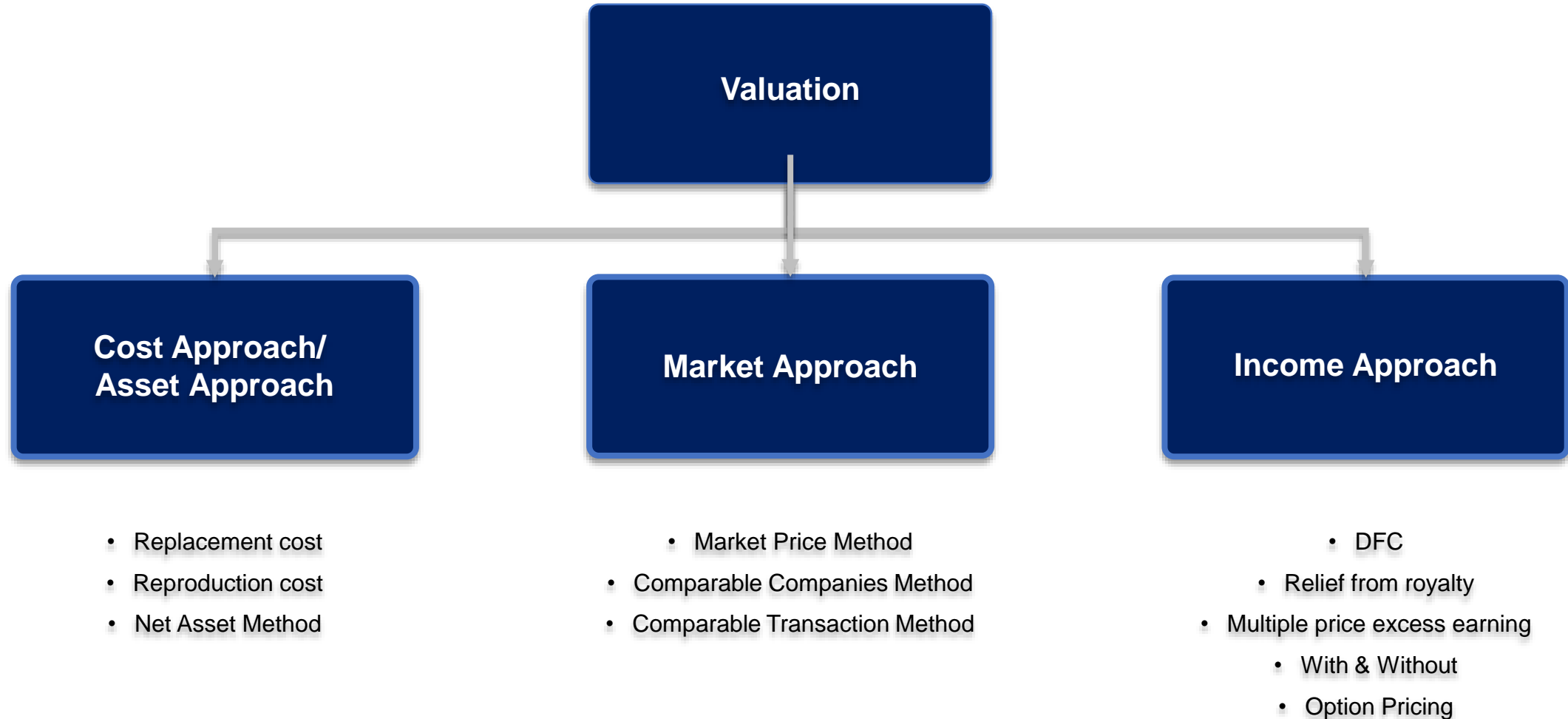
### Interplay of Valuation under FEMA with Income Tax Act, 1961

- Section 56(2)(x) and section 50CA of the Income-tax Act, 1961 ('IT Act') deals with taxability of income arising as a result of transfer of shares or securities of company at less than fair market value
- Rule 11UA(1)(c) of Income-tax Rules, 1962 ('IT Rules') prescribes the methodology for determining the FMV of shares / securities of listed and unlisted companies for the purpose of section 56(2)(x) and section 50CA
- **Under FEMA NDI Rules, the pricing for unquoted equity shares needs to be determined based on internationally accepted valuation methodologies of valuation on an arm's length basis and therefore the fair value of unquoted equity shares under FEMA NDI Rules and under aforesaid rule of IT Rules would generally differ**

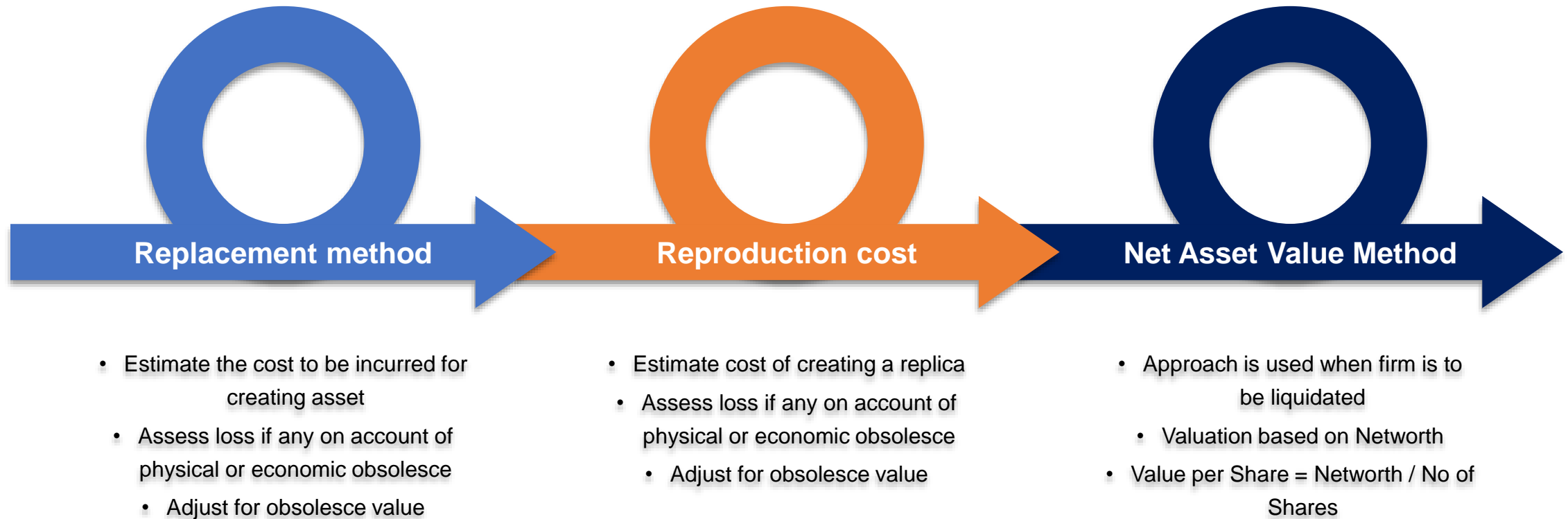


# Approach & methodology

## Approach & Methodology



## Approach & Methodology – Cost approach



## Approach & Methodology – Market Approach



# Approach & Methodology

## Net Asset Value

<b>Net Asset Value (Book Value)</b>	Minority Value	Equity Value
<b>Net Asset Value (Fair Value)</b>	Control Value	

## Comparable Transaction Multiples (CTM) Method

<b>Price to Earning , Book Value Multiple</b>	Control Value	Equity Value
<b>EBIT , EBITDA Multiple</b>		Enterprise Value

## Comparable Companies Multiples (CCM) Method

<b>Price to Earning , Book Value Multiple</b>	Minority Value	Equity Value
<b>EBIT , EBITDA Multiple</b>		Enterprise Value

## Discounted Cash Flow (DCF)

<b>Equity</b>	Control Value	Equity Value
<b>Firm</b>		Enterprise Value

## Approach & Methodology

Discounts and Premiums come into picture when there exists difference between the subject being valued and the methodologies applied. As this can translate control value to non-control and vice-versa, so these should be judiciously applied.

### ***Discount at Company Level***

The company level discounts affect the equity value of the company and are applied before any apportionment is made to the shareholders. Major types of company level discounts include the following:

- Key Person Discount
- Discount for Contingent Liabilities
- Diversified Company Discount
- Holding Company Discount
- Liquidation Discount (Tax Payout on Appreciation of Assets)

### ***Discounts and Premium at Shareholder Level***

The shareholder level discounts affect the value of specific shareholders and are applied after distribution of the equity value to the respective shareholders. Major types of shareholder level discounts include the following:

- Discount for Lack of Control (DLOC)
- Discount for Lack of Marketability (DLOM)
- Control Premium

# Approach & Methodology

## **Operating Assets**

- Assets used in the operation of the business including working capital, Property, Plant & Equipment & Intangible assets
- Valuing of operating assets is generally reflected in the cash flow generated by the business

## **Non - Operating Assets**

- Assets not used in the operations including excess cash balances, and assets held for investment purposes, such as vacant land & Securities (which are not generating any operational income) are the non-operating assets.
- Investors generally do not give much value to such assets and Structure modification may be necessary

## ***Treatment of Non-operating Assets***

The value of such non-operating asset should be added separately to arrive at the enterprise value.



# **Discounted cashflow method**



# Discounted cashflow method

## Discounted Cash Flow –The Prominent income approach to valuation

- While undertaking the valuation of any company there are three broad approaches to valuation namely Asset approach, Income approach and Market approach. Discounted cash flow (DCF) is one of the prominent income approaches to valuation and is used to estimate the attractiveness of any investment opportunity on the basis of future cash flow projections of business. So far DCF is considered as the most scientific financial tool to derive the value of any company based on parameters like projected cash flows, cost of capital, growth cycle of business, perpetual growth rate etc. This method mostly yields control valuation result and is sensitive to even minor changes in these parameters.
- “The Discounted Cash Flow method expresses the present value of the business attributable to its stakeholders as a function of its future cash earnings capacity. This methodology works on the premise that the value of a business is measured in terms of future cash flow streams, discounted to the present time at an appropriate discount rate”. Discounted Cash Flow can be used to derive the value of equity shareholders of company and also the value of the firm/company.

## Discounted Cash Flow to equity

This method uses the Free Cash Flows to Equity (FCFE) and values the benefits that accrue to the equity shareholders of the company. The value of the equity is arrived at by estimating the FCFE and discounting it at the cost of equity ( $K_e$ ). This methodology is considered to be the most appropriate basis for determining the earning capability of a business. It expresses the value of a business as a function of expected future cash earnings in present value terms.

**FCFE = Net Income - Net Capital Expenditure - Change in Non Cash Working Capital + New Debt – Debt Repayment**

# Discounted cashflow method

## Discounted Cash Flow – to firm

Discounted Free Cash Flow to Firm (FCFF) measures the enterprise value of a company i.e. (Value of Equity + Value of Debt), no adjustment is separately needed for debt (inflows and outflows) for arriving at the FCFF. Here the discounting of free cash flow to firm is made by weighted average cost of capital ('WACC') to arrive at the enterprise value.

**FCFF = EBITDA – Taxes- Change in Non Cash Working Capital- Capital Expenditure**

## Key Issues and challenges in Discounted Cash Flow Methodology

- Cost of equity calculation
- Weighted average cost of capital calculation
- What should be the terminal growth rate

## Calculation of Cost of Equity (Ke)

- Cost of equity (Ke) is the required rate of return of a shareholder who invests in the equity of a company. Cost of equity is generally calculated using the Capital Asset Pricing Model (CAPM)
- **According to CAPM** Cost of equity = Risk free rate + Beta\*(Market return – Risk free rate)

# Discounted cashflow method

## Why to account for Small Company Risk & Company Specific

Small Companies are generally more risky than big companies. CAPM model does not take into consideration the size risk and specific company risk (management quality, forex risk etc.) as Beta measures only systematic risk and Market Risk Premium. These risks should also be taken into account while computing the cost of equity.

Therefore instead of CAPM, modified CAPM should preferably be used for calculating the Cost of Equity.

## How is weighted average cost of capital calculated?

Weighted average cost of capital is the cost of capital of the firm i.e. the providers of finance of a firm including equity share holders, preference share holders & providers of long term debt.

## WACC

WACC is calculated using the Proportionate cost of Equity & Cost of Debt (after tax)

$$WACC = \frac{MV_e}{MV_d + MV_e} \cdot R_e + \frac{MV_d}{MV_d + MV_e} \cdot R_d \cdot (1 - t)$$

**MVe** = Total market value of equity,

**Re** = cost of equity,

**MVd** = The Total market value of debt,

**Rd** = cost of debt,

**T** = tax rate

# Discounted cashflow method

## Issue 1:- Market Value or book value of equity

The important point to note in the calculation of WACC is it **requires the market value of equity**, rather than its book value. Taking the book value might result in heavy overestimation of the value derived through DCF since book value of equity might lead to a lower WACC and in turn a low discounting rate. Here Market value of equity can be estimated through Comparable Company Analysis.

## Issue 2:- Does change in Debt have any Impact on calculation of DCF to Firm?

A big misconception while computing Discounted Cash Flow to Firm is that it does not get affected due to change in debt in the projected years.

Yes, it is true that change in debt does not change the cash flow for a firm. But a change in capital structure due to increase or decrease in debt in projected years changes the WACC in the projected years. Therefore a major change in capital structure of a company in future projections must be taken into account by changing the WACC for the projected years.

## What should be the terminal growth rate?

The terminal growth rate is long term average growth rate of a company which estimates the rate at which a company would perpetually grow when its business stabilizes. Since it is tough to estimate the perpetual growth rate of a company, it is preferred to take the perpetuity growth rate factoring in long term estimated GDP of the country, which assumes that the company would grow at pace with economy. The terminal growth rate should also factor in the type of industry as well as the number of years for which discount period has been considered.

## Conclusion

Discounted Cash Flow (DCF) method is one of the most important finance tools to derive value of a company based on the future cash flows of business. However it needs to be used with great care as it's a very sensitive model where the values get affected significantly with a small change in assumption like beta value, terminal growth rate, risk free rate of return and market return. It is strongly recommended to do sanity check with the market approach to valuation like CCM and asset approach i.e. net asset value before concluding the DCF value.

.....

# **Valuation of Corporate Debt Instrument (Corporate Bond, Guarantees & Preference Shares)**

# Valuation of Corporate Debt Instrument

- Corporate Debt Instruments are not valued as equity since there may not be a conversion attached to it.
- Valuation of such bonds/ debt is carried out considering they are fixed income securities
- Cashflows (Principle + Interest) is valued on net present value basis by discounting interest payment and redemption amount at defined period agreed between parties

**Credit Rating** – issued by organizations like CRISIL, ICRA, CARE and etc. Help determine the credit worthiness of the concerned party. Ratings flow from AAA to D category

**FIMMDA Corporate Bond Valuation Methodology** – voluntary body also prescribing methodology for the bond / debt valuation

**Method : Dividend discount model**

E.G

<b>Name of the Company*</b>	<b>ABC Limited</b>
<b>Business</b>	<b>Manufacturing of Cement</b>
<b>Transaction</b>	<b>The Company has issued 15 lacs, 9% Non – Cumulative Non Convertible Redeemable Bonds for 20 years at INR 100 each. The investor wants to know the fair value of the bonds at the end of 20<sup>th</sup> year</b>
<b>Valuation date</b>	<b>31 March 2019</b>
<b>Method</b>	<b>Dividend Discount Model</b>

\* Source : Wolter Kluwers "Business Valuation In India"

## Valuation of Corporate Debt Instrument

Key Facts	
Date of valuation	31 March 2019
Issue price of the Bonds	INR 100
Coupon Rate	9%
Date of Grant	31 March 2019
Date of expiry	31 March 2039
Term of investment	20 years
YTM of Comparable Bond/ Preference Share (A)	8.51%
Amount of Interest Payable	13.50%
Compounding period (B)	1
Effective Coupon Rate $((1+A/B)^B-1)$	8.51%

## Valuation of Corporate Debt Instrument

All amounts in INR Million

Year	Dividend	Ended	PV Factor	Fair Value
1	13.50	31 March 2019	0.92	12.44
2	13.50	31 March 2020	0.85	11.47
3	13.50	31 March 2021	0.78	10.57
4	13.50	31 March 2022	0.72	9.74
5	13.50	31 March 2023	0.66	8.97
6 – 20	202.50	2024 – 2039 (15 years)	PV factors of 15 years	
	Principle Amount 150 mio	2039	0.20	29.29
	<b>Fair Value of Bonds/ Preference Shares</b>			<b>INR 156 mio</b>
	<b>No. Non Cumulative Non Convertible Bonds</b>			<b>1,500,000</b>
	<b>Fari Value per Bond/ Preference Share</b>			<b>INR 104.63</b>

- INR 100 being the Amortized Cost
- INR 4.63 is the gain on fair valuation of the Bonds/ Preference Shares
- It can be either be classified to FVTPL or FVOCI basis the designation of the father bond

Technically, the valuation of the bonds have to be basis the comparable similar listed bond. However, in the Indian Bond Market, there are no enough bonds that are traded and hence, the dividend payout the similar bond is usually used

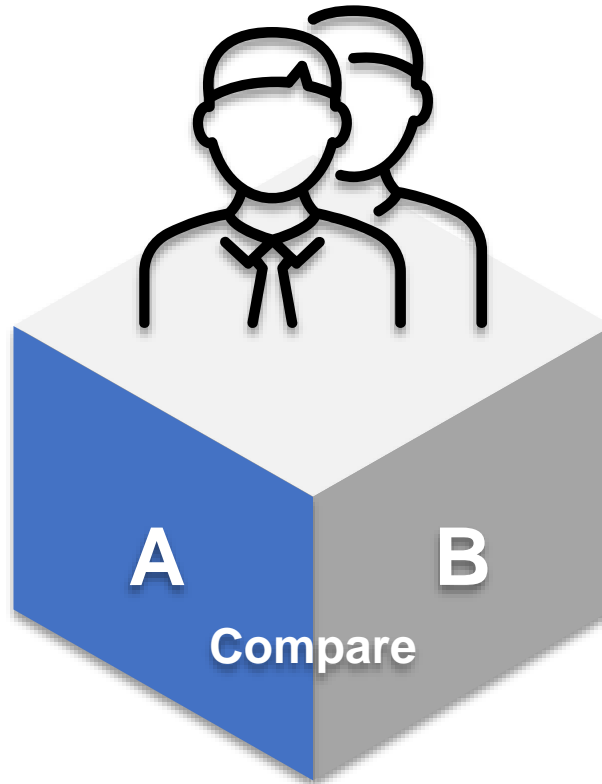
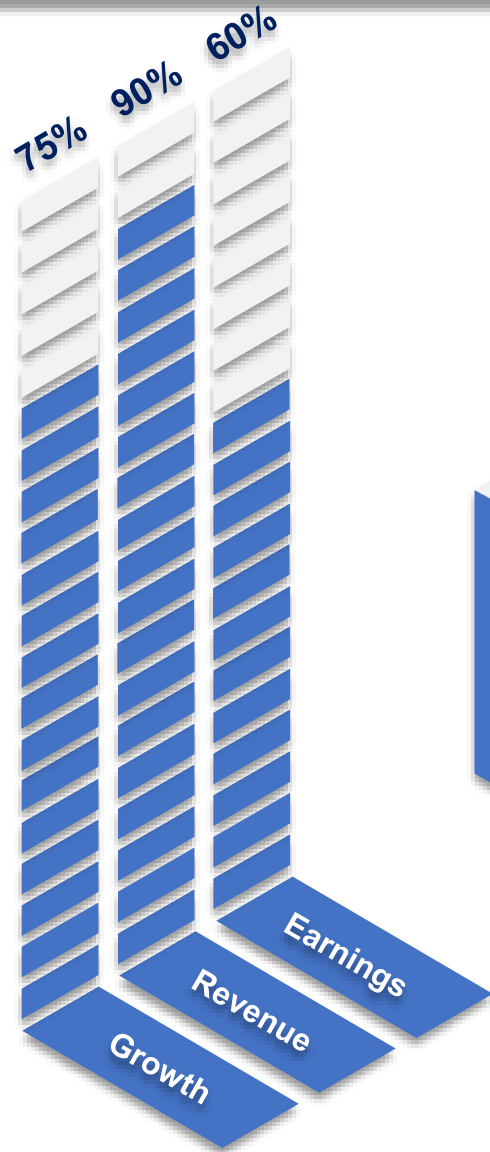




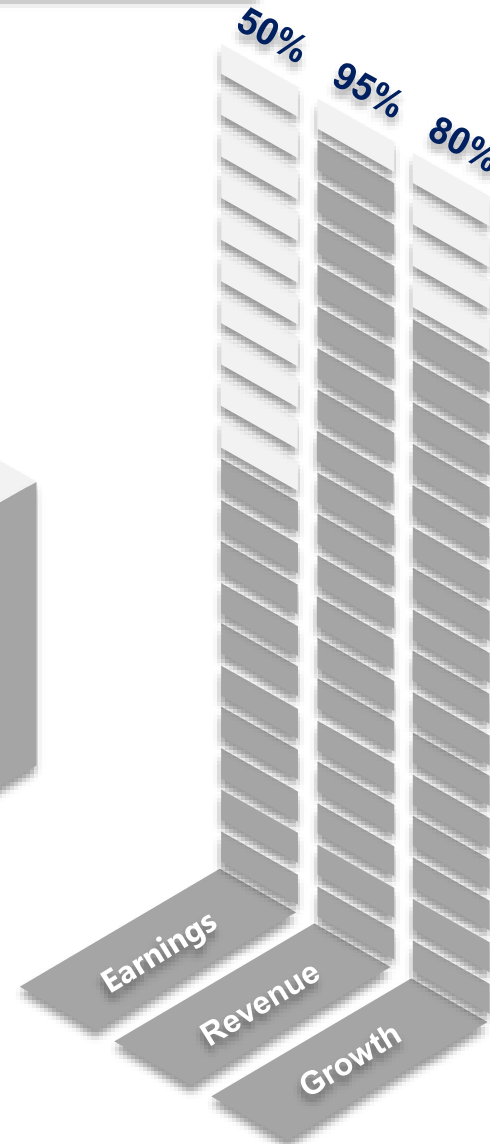
# Relative valuation

# Relative valuation

**Identify**  
Comparable assets &  
Market value



**Convert**  
Market value in  
Standard values



# Relative valuation



# Relative valuation

- Comparable Companies Market Multiple
- Comparable Transaction Multiple
- Market Value Method



## Market Based Approach

Business Model  
Growth Pattern  
Accounting Policies  
Return on Capital

A

B



## Relative

In case peers in the domestic country are not available, then global peers can also be taken but subject to certain adjustments which are discussed in Issues.

## Relative valuation

- **Current Forward Multiples** Generally to the latest financials of the company a prevailing market multiple of the comparable companies is applied to arrive at the value of the company being valued. However while valuing early stage companies whose values of financials in future years provide a much better picture of the true value potential of the firm, forward financials may be more appropriate to consider.
- **Current multiple of peer companies** – In case the peer companies are mature as on the valuation date, their prevailing valuation multiple may be applied to the forward stabilized financials of the company being valued. This will yield value of the company for the year for which earnings are taken. Therefore this value has to be discounted back to get the forward present value of the company. (*Discounting can be done using the cost of capital of the company or the cost of equity for the time period for which forward earnings are taken.*)
- **Forward multiple of peer companies**-Forward multiple of peer companies is applied when the entire industry is in evolving stage and no comparable mature company exist on the valuation date. In this case there is no need for discounting. Forward looking Earnings are generally preferred for valuation purposes. Valuation is generally done with a forward looking view and the value of a company depends more upon how much in the future could the company/business earn than how much it has earned till date. Therefore forward multiples are preferred more than current multiples, though difficult to get.
- Valuation derived from relative valuation method is based on a certain multiples like EBITDA/Sales or Profit etc. It does not take into consideration other factors which are not reflected by the earnings such as:-
- **Surplus/Non operating assets** Surplus assets/ Non operating assets does not reflect its value in the operating earnings of the company. Therefore the fair market value of such Assets should be separately added to the value derived through other valuation methodologies to arrive at the value of the company. However it is pertinent to mention herein that the investors may not be willing to pay for these surplus/ non operating assets which may call for reorganization of the company.
- **Adjustments for global peers** If the valuation of a company is based on comparison with the global peers, then it should be adjusted for some differences such as:-
  - Difference of tax rate in the 2 countries.
  - Difference in growth & Inflation rate of the 2 countries
  - Difference between the levels of competition in the 2 countries.
  - Difference in the country risk of the 2 companies
  - Difference of accounting treatment in the 2 companies

Thus there are many changes that are required to be made when choosing global peers & therefore domestic peers are always preferred for relative valuations since they are more comparable.



# **Intangible Assets**

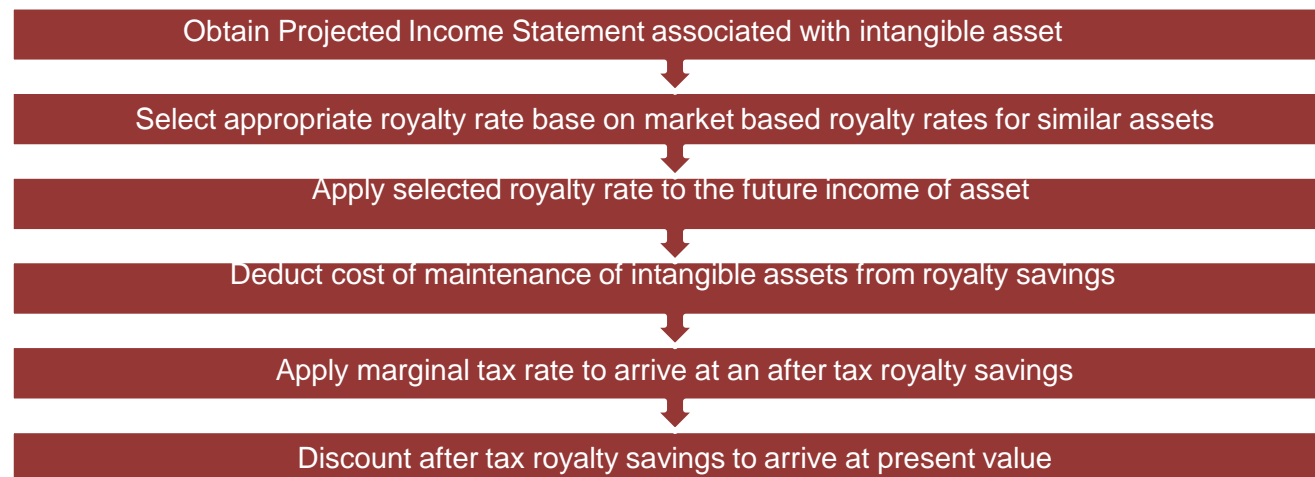
## Approach & Methodology – Intangible assets



# Intangible Assets

## Relief From Royalty Method

- Value of the asset is estimated based on the **present value of royalty payments saved** by owning the asset instead of taking it on lease
- The key input into this method is **the 'royalty rate', which is then applied to the 'royalty base'** to estimate the amount of theoretical royalty payments. This royalty stream, which the owner does not have to pay since the intangible asset is already owned, is discounted
- **Estimating the royalty rate:**
  - Royalty rates are usually estimated on the basis of **information available for recent market transaction**
  - In the absence of any information on the royalty rates, a commonly used rule of thumb is used
- Steps in deriving a value using RFR method:

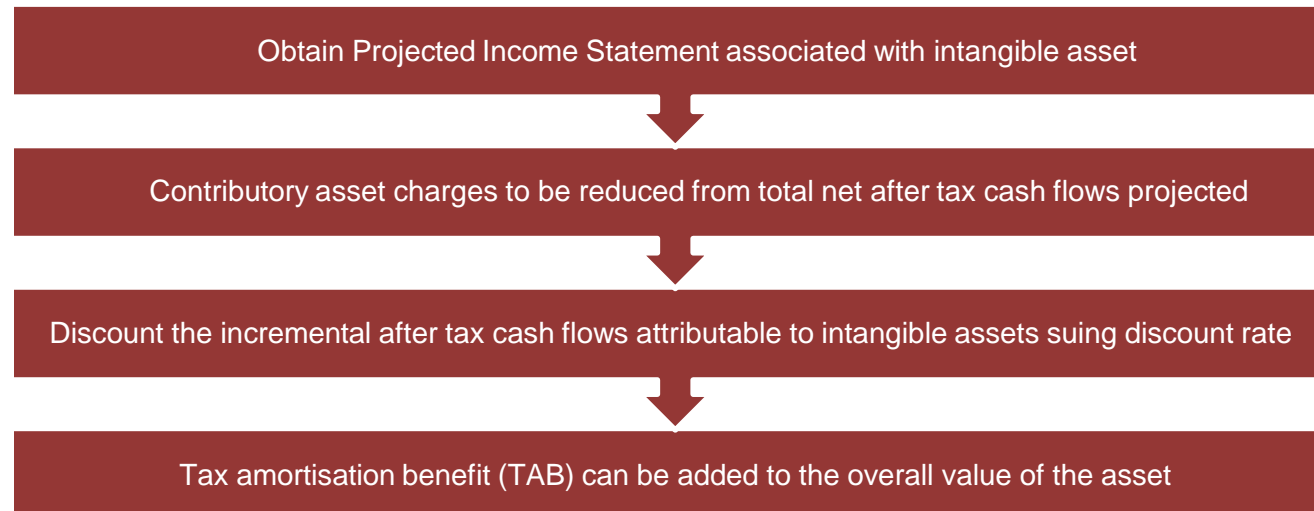




# Intangible Assets

## Multi-Period Excess Earnings Methods (MEEM)

- Used for valuing intangible asset that is leading or the most significant intangible asset out of group of intangible asset being valued
- Intangible **assets which have a finite life** can only be used to valuing using MEEM
- **Contributory assets** are assets **that assist/supports the intangible asset** to be valued to generate cash flows and are used in combination with the intangible asset to be valued
- Contributory asset could be in the form of working capital, fixed assets, assembled workforce and any other intangible asset so considered and valued
- Steps in deriving a value using MEEM:





# **Tax Amortization Benefit**

## Tax Amortization Benefits (TAB)

- In many tax jurisdictions, intangible assets can be amortised for tax purposes, reducing a taxpayer's tax burden and effectively increasing cash flows. Depending on the purpose of a valuation and the valuation method used, it may be appropriate **to include the value of TAB in the value** of the intangible.
- If the market or cost approach is used to value an intangible asset, the price paid to create or purchase the asset would already reflect the ability to amortise the asset. However, in the income approach, **a TAB needs to be explicitly calculated and included**, if appropriate.
- For some valuation purposes, such as financial reporting, the appropriate basis of value assumes a hypothetical sale of the subject intangible asset. Generally, for those purposes, a TAB should be included when the income approach is used because a typical participant would be able to amortise an intangible asset acquired in such a hypothetical transaction. For other valuation purposes, the **assumed transaction might be of a business or group of assets**. For those bases of value, it may be appropriate to include a TAB only if the **transaction would result in a step-up in basis for the intangible assets**
- There is some diversity in practice related to the appropriate discount rate to be used in calculating a TAB. Valuers may use either of the following:
  - a discount rate appropriate for a business utilising the subject asset, such as a weighted average cost of capital. Proponents of this view believe that, since amortization can be used to offset the taxes on any income produced by the business, a discount rate appropriate for the business as a whole should be used, or
  - a discount rate appropriate for the subject asset (i.e., the one used in the valuation of the asset). Proponents of this view believe that the valuation should not assume the owner of the subject asset has operations and income separate from the subject asset and that the discount rate used in the TAB calculation should be the same as that used in the valuation of the subject asset.



# Option Pricing

# Option Pricing

- ❑ It provides an estimation of an **option's fair value**.
- ❑ Option pricing theory uses variables (**stock price, exercise price, volatility, interest rate, time to expiration**) to theoretically value an option
- ❑ Some commonly used models to value options are **Black-Scholes, binomial option pricing, and Monte-Carlo simulation**.
- ❑ The primary goal of option pricing theory is to calculate the probability that an option will be exercised, or be **in-the-money (ITM), at expiration**.
- ❑ The most commonly used model to value options are **Black-Scholes** which is given below

## Black Scholes Model:

$$C = S_0 e^{-qt} * N(d_1) - X e^{-rt} * N(d_2)$$

$$d_1 = \frac{\ln\left(\frac{S_0}{X}\right) + t\left(r - q + \frac{\sigma^2}{2}\right)}{\sigma\sqrt{t}} \quad d_2 = d_1 - \sigma\sqrt{t}$$

*C = Call option value*

*S<sub>0</sub> = Stock Fair Value (Rs. per share)*

*X = Strike Price (Rs. per share)*

*σ = Volatility (% p.a.)*

*r = Risk-free interest rate (% p.a.)*

*q = Dividend yield (% p.a.)*

*t = Time until option exercise (% of year)*

*N = Cumulative normal Standard deviation    e = Exponential term    ln = Natural log*



# **Enterprise valuation vs. Equity valuation**

# Enterprise valuation vs Equity valuation

## Equity value

Based on market approach

## Net debt

Based on market value approach

## Other debts instruments

Based on market value approach

## Enterprise value

## Fixed assets

Usual PPE at Fair value

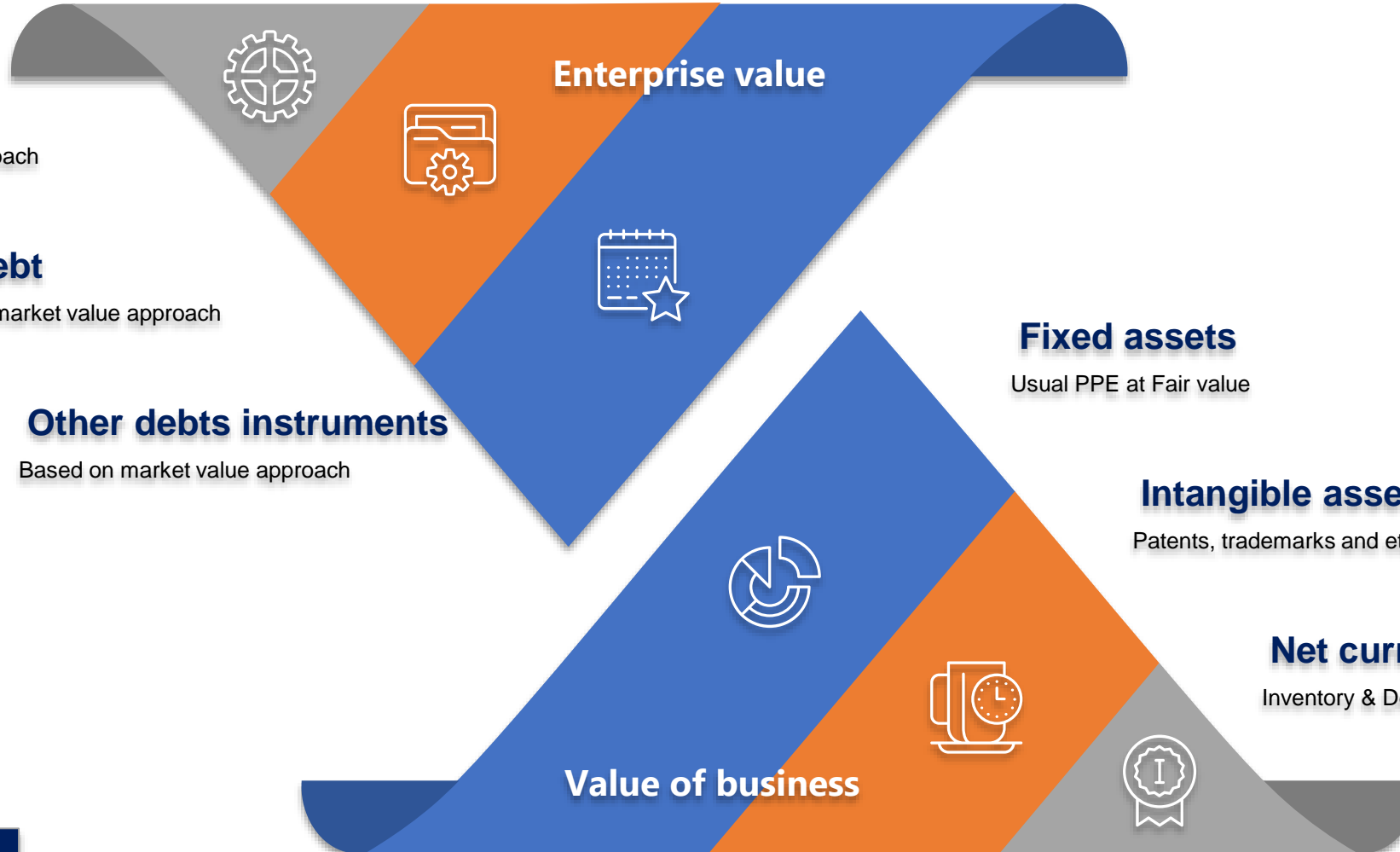
## Intangible assets

Patents, trademarks and etc

## Net current assets

Inventory & Debtors

## Value of business





# **Financial Modelling**



# Financial Modeling



# Financial Modeling

FINANCIAL STATEMENTS	Historical Results					Forecast Period				
	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028
Balance Sheet Check	OK	OK	OK	OK	OK	OK	OK	OK	OK	OK
<b>Assumptions</b>										
<b>Income Statement</b>										
Revenue	102,007	118,086	131,345	142,341	150,772	158,311	165,435	172,052	178,074	183,416
Cost of Goods Sold (COGS)	39,023	48,004	49,123	53,254	57,310	58,575	61,211	61,939	64,107	64,196
<b>Gross Profit</b>	<b>62,984</b>	<b>70,082</b>	<b>82,222</b>	<b>89,087</b>	<b>93,462</b>	<b>99,736</b>	<b>104,224</b>	<b>110,113</b>	<b>113,967</b>	<b>119,220</b>
<b>Expenses</b>										
Salaries and Benefits	26,427	22,658	23,872	23,002	25,245	25,000	25,000	25,000	25,000	25,000
Rent and Overhead	10,963	10,125	10,087	11,020	11,412	10,000	10,000	10,000	10,000	10,000
Depreciation & Amortization	19,500	18,150	17,205	16,544	16,080	15,008	15,005	13,003	17,802	14,681
Interest	2,500	2,500	1,500	900	900	900	900	900	300	300
<b>Total Expenses</b>	<b>59,390</b>	<b>53,433</b>	<b>52,664</b>	<b>51,466</b>	<b>53,637</b>	<b>50,908</b>	<b>50,905</b>	<b>48,903</b>	<b>53,102</b>	<b>49,981</b>
<b>Earnings Before Tax</b>	<b>3,594</b>	<b>16,649</b>	<b>29,558</b>	<b>37,622</b>	<b>39,825</b>	<b>48,827</b>	<b>53,319</b>	<b>61,210</b>	<b>60,865</b>	<b>69,239</b>
Taxes	1,120	4,858	8,483	10,908	11,598	13,672	14,929	17,139	17,042	19,387
<b>Net Earnings</b>	<b>2,474</b>	<b>11,791</b>	<b>21,075</b>	<b>26,713</b>	<b>28,227</b>	<b>35,156</b>	<b>38,389</b>	<b>44,071</b>	<b>43,823</b>	<b>49,852</b>
<b>Balance Sheet</b>										
<b>Assets</b>										
Cash	167,971	181,210	183,715	211,069	239,550	274,339	317,122	328,798	229,912	279,174
Accounts Receivable	5,100	5,904	6,567	7,117	7,539	7,807	8,158	8,485	8,782	9,045
Inventory	7,805	9,601	9,825	10,531	11,342	11,715	12,242	12,388	12,821	12,839
Property & Equipment	45,500	42,350	40,145	38,602	37,521	37,513	32,508	44,505	36,703	37,022
<b>Total Assets</b>	<b>226,376</b>	<b>239,065</b>	<b>240,252</b>	<b>267,319</b>	<b>295,951</b>	<b>331,374</b>	<b>370,030</b>	<b>394,175</b>	<b>288,218</b>	<b>338,080</b>
<b>Liabilities</b>										
Accounts Payable	3,902	4,800	4,912	5,265	5,671	5,938	6,205	6,279	6,498	6,507
Debt	50,000	50,000	30,000	30,000	30,000	30,000	30,000	10,000	10,000	10,000
<b>Total Liabilities</b>	<b>53,902</b>	<b>54,800</b>	<b>34,912</b>	<b>35,265</b>	<b>35,671</b>	<b>35,938</b>	<b>36,205</b>	<b>16,279</b>	<b>16,498</b>	<b>16,507</b>
<b>Shareholder's Equity</b>										
Equity Capital	170,000	170,000	170,000	170,000	170,000	170,000	170,000	170,000	20,000	20,000
Retained Earnings	2,474	14,265	35,340	62,053	90,280	125,436	163,825	207,897	251,720	301,572
<b>Shareholder's Equity</b>	<b>172,474</b>	<b>184,265</b>	<b>205,340</b>	<b>232,053</b>	<b>260,280</b>	<b>295,436</b>	<b>333,825</b>	<b>377,897</b>	<b>271,720</b>	<b>321,572</b>
<b>Total Liabilities &amp; Shareholder's Equity</b>	<b>226,376</b>	<b>239,065</b>	<b>240,252</b>	<b>267,319</b>	<b>295,951</b>	<b>331,374</b>	<b>370,030</b>	<b>394,175</b>	<b>288,218</b>	<b>338,080</b>
Check	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000

# Financial Modeling

## Discounted Cash Flow Analysis

Company Name  
(000s)

FREE CASH FLOW (FCF)	20X3	20X4	20X5	20X6	20X7
EBIT	4,667	5,134	5,647	6,212	6,833
Tax	1,634	1,797	1,977	2,174	2,392
Tax Rate	35.0%	35.0%	35.0%	35.0%	35.0%
Tax-Effectuated EBIT	3,034	3,337	3,671	4,038	4,442
Plus:					
Depreciation	818	900	990	1,089	1,198
Amortization	0	0	0	0	0
Less:					
Capital Expenditures	-900	-975	-1,050	-1,125	-1,200
Change in Working Capital	-693	-859	-945	-1,039	-1,143
Free Cash Flow	2,259	2,403	2,666	2,963	3,296

### WEIGHTED AVERAGE COST OF CAPITAL (WACC)

Weighted Average Cost of Capital

Cost of Equity		Cost of Debt	
Risk Free Rate		Cost of Debt	
Expected Market Return		Tax Rate	
Beta		After Tax Cost of Debt	
Cost of Equity			
E / (D+E)		D / (D+E)	

### PRESENT VALUE OF CASH FLOWS (PV of CF)

	20X3	20X4	20X5	20X6	20X7
	Year 1	Year 2	Year 3	Year 4	Year 5

Discount Factor

Present Value of Cash Flows

### FIRM VALUE: PERPETUITY GROWTH RATE METHOD

Growth Rate in Perpetuity

WACC		PV of CF	+	PV of Terminal Value	=	Firm Value
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### FIRM VALUE: EBITDA MULTIPLE METHOD

EBITDA Multiple

WACC		PV of CF	+	PV of Terminal Value	=	Firm Value
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**Thank You**

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