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Valuation – Approach & application in debt and equity issue

Seminar on–
Corporate Compliance Management and Due Diligence
Institute of Company Secretaries of India

26 March 2011

Contents

Overview

What is Value?

- Generally an economic concept where what a buyer is willing to pay and what a seller is willing to take
  - Implies transferability
  - Implies agreeability

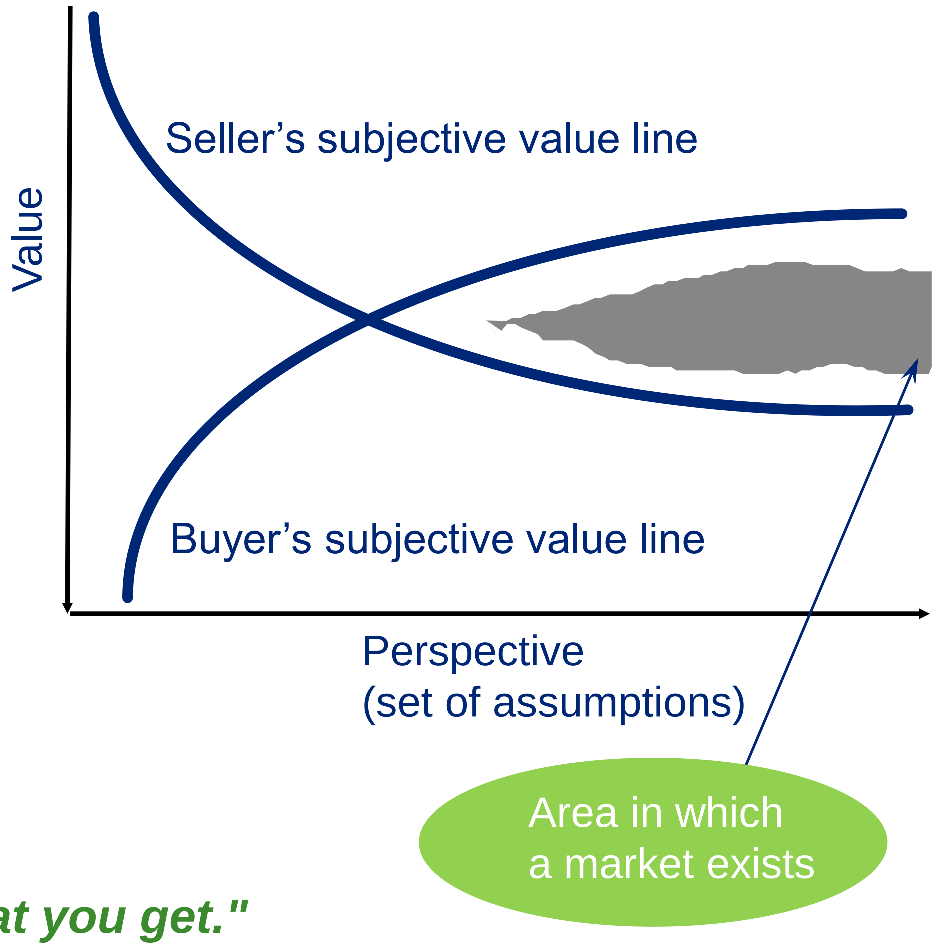
- In the real world it is a range, not a point

- Depends upon the objective
  - Acquisition
  - Merger
  - Privatization
  - Financing
  - FEMA compliance
  - ESOPs
  - Management buyouts
  - Bankruptcy, reorganization and restructuring
  - Allocation of purchase price
  - Litigation
  - Planning
  - Joint venture investments

What is a Valuation?

- Principles of valuation
  - Valuation v/s price
  - Fair value and negotiated price
  - Business value more than assets
  - Control premium

- 3 key points to remember:
  - Valuation involves "informed subjectivity"
  - Price is different from value
  - Deal is made at a Negotiated Price



"Price is what you pay. Value is what you get."

- Warren Buffett

What Creates Value?

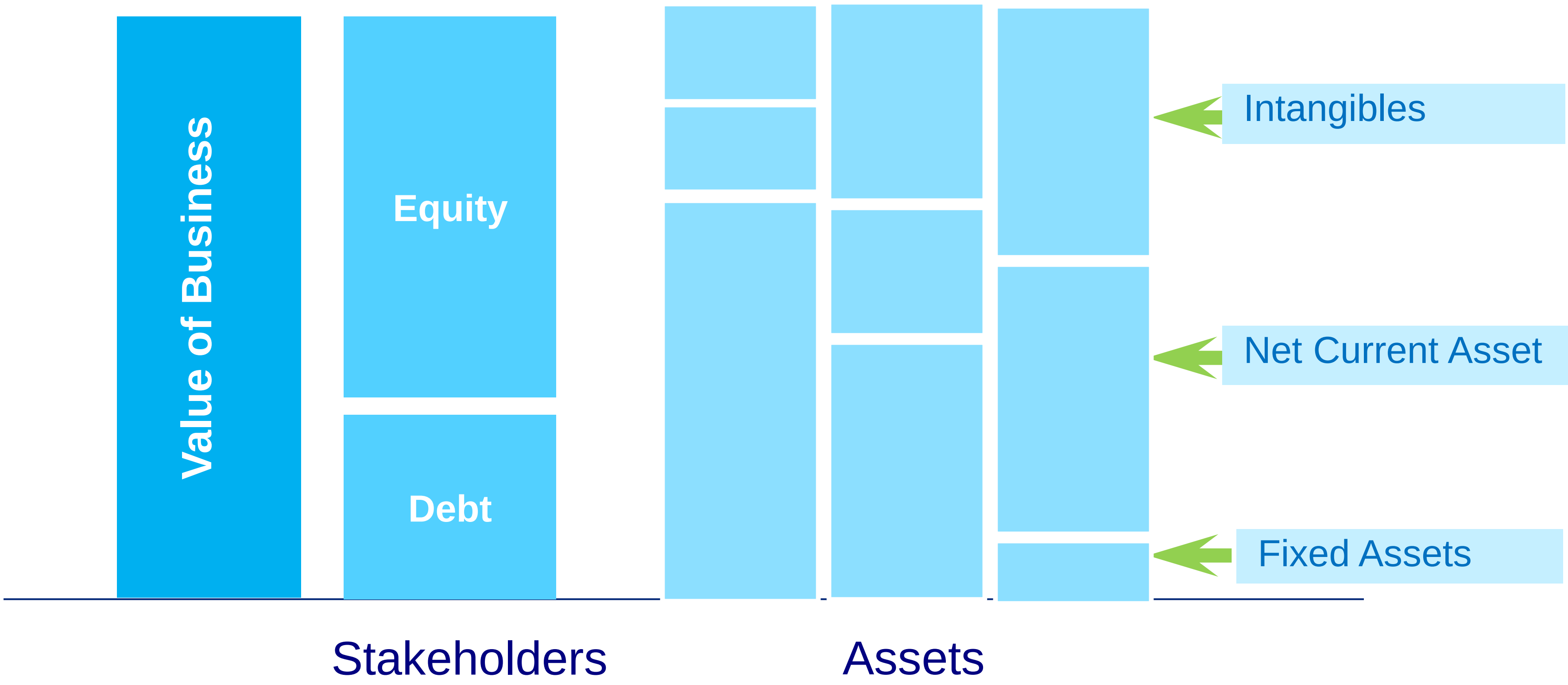
Cash Flow

- Investors assign value based on the cash flow they expect to receive in the future
  - Dividends/distributions
  - Sale or liquidation proceeds
- Value of a cash flow stream is a function of
  - Timing of cash receipts
  - Risk associated with the cash flow

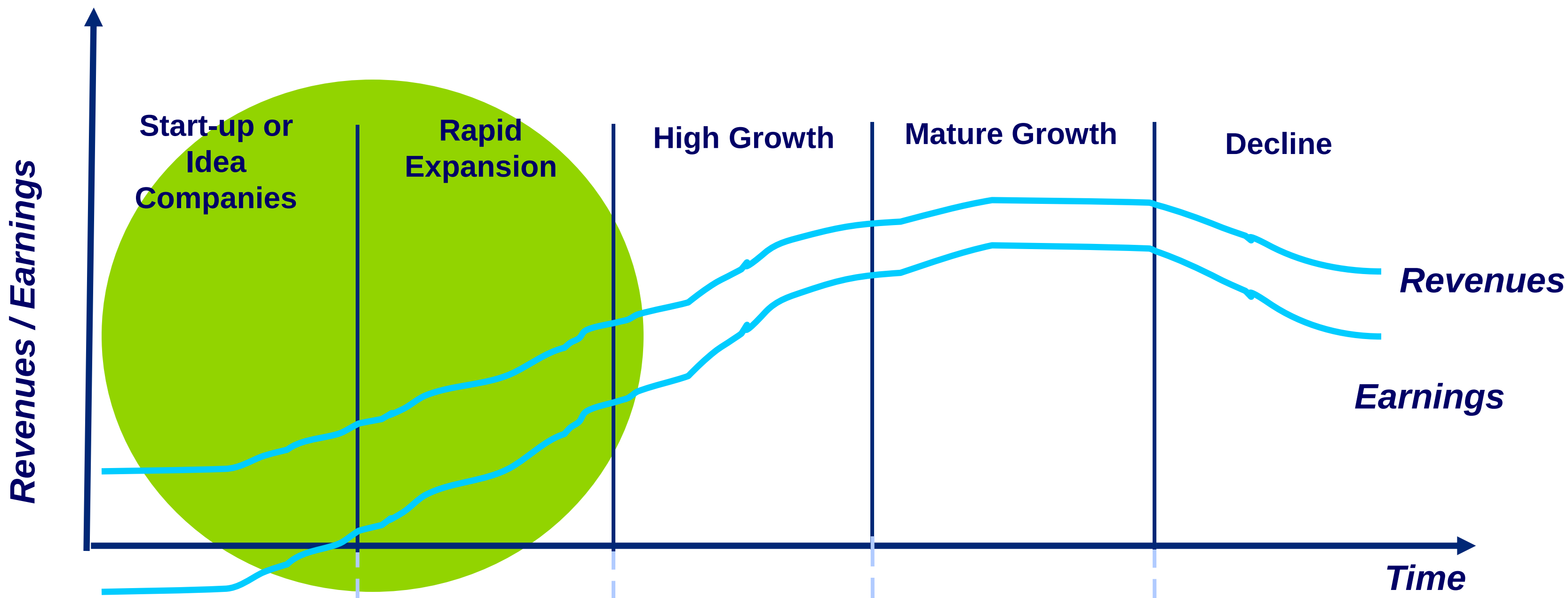
Assets

- Operating assets
  - Assets used in the operation of the business including working capital, property, plant and equipment and intangible assets
  - Value 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 and securities
  - Non-operating assets are generally valued separately and added to the value of the operations

What is Being Valued?



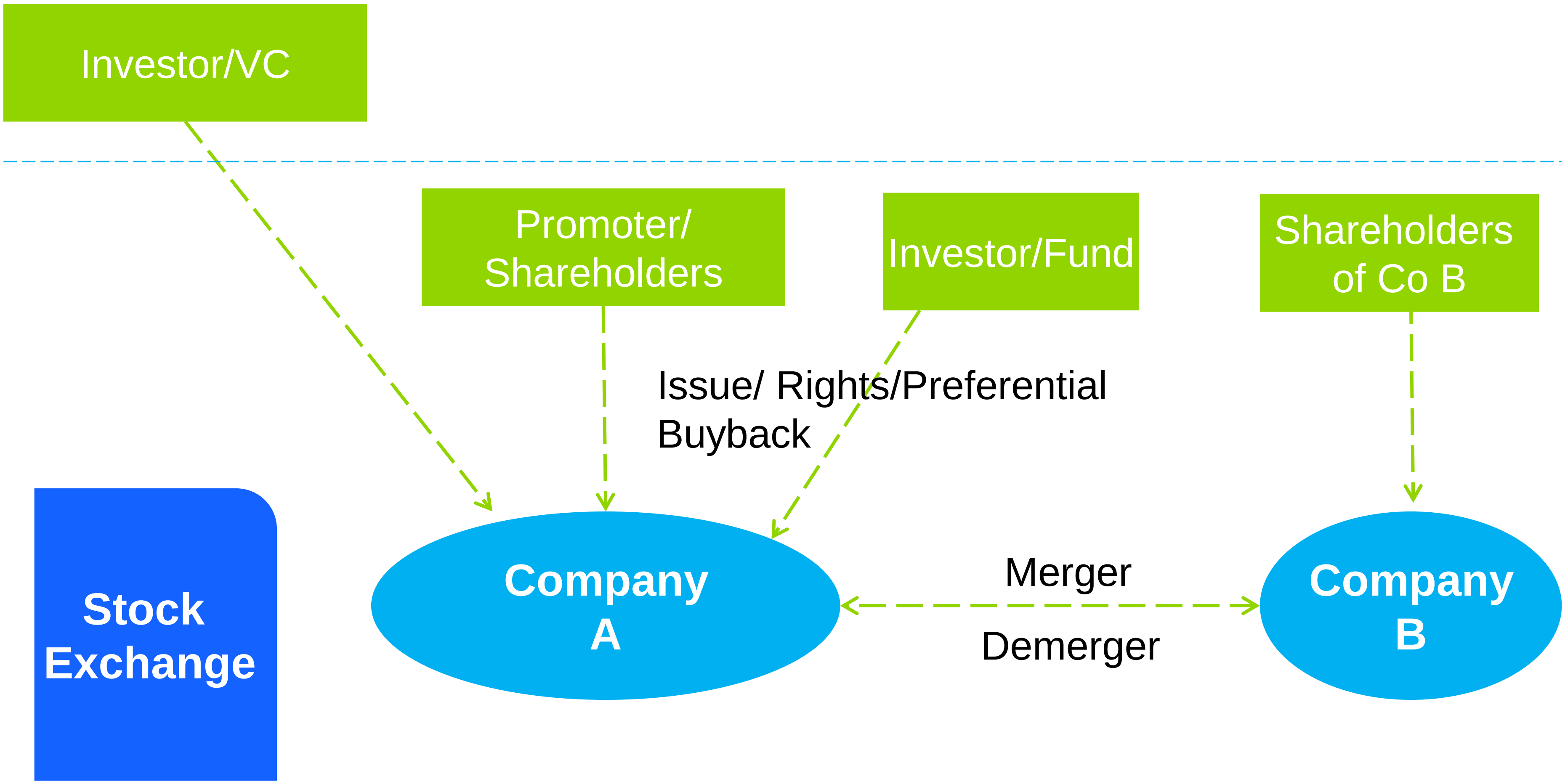
Valuation in Real life



	Start-up or Idea Companies	Rapid Expansion	High Growth	Mature Growth	Decline
Revenue/Current Operations	Non-existent or low revenue/negative operating income	Revenue increasing/Income still low or negative	Revenue in high growth/Operating income also growing	Revenue growth slows/Operating income still growing	Revenue and operating income growth drop
Operating History	None	Very limited	Some operating history	Operating history can be used in valuation	Substantial operating history
Comparable Firms	None	Some, but in same stage of growth	More comparables, at different stages	Large number of comparables, at different stages	Declining number of comparables, mostly mature
Source of Value	Entirely future growth	Mostly future growth	Portion from existing assets/Growth still dominates	More from existing assets than growth	Entirely from existing assets

Objective

Objective


Investor/VC
Promoter/ Shareholders
Investor/Fund
Shareholders of Co B
Issue/ Rights/Preferential
Buyback
Stock Exchange
Company A
Merger
Demerger
Company B

Objective

	Listed	**Unlisted**
• Issue		
• Merger	**Swap ratio**	**Swap ratio**
• Fresh	**Intrinsic valuation/CCI**	**Intrinsic valuation/CCI**
• Rights	SEBI Guidelines	**Intrinsic valuation/CCI**
• Preferential	SEBI Guidelines	**Intrinsic valuation/CCI**
• Sweat equity	SEBI Guidelines	**Intrinsic valuation**
• ESOPs	SEBI Guidelines	**Intrinsic valuation**
• Purchase / Sale of shares (Overseas)	FEMA Guidelines	FEMA Guidelines
• Sale of shares (Indian)		**Intrinsic valuation/CCI**
• Acquisition of business (PPA)	**Intrinsic**	
• Buyback	SEBI Guidelines	MCA Guidelines/ FEMA
• Funds		

FEMA guidelines

Objective

Intrinsic

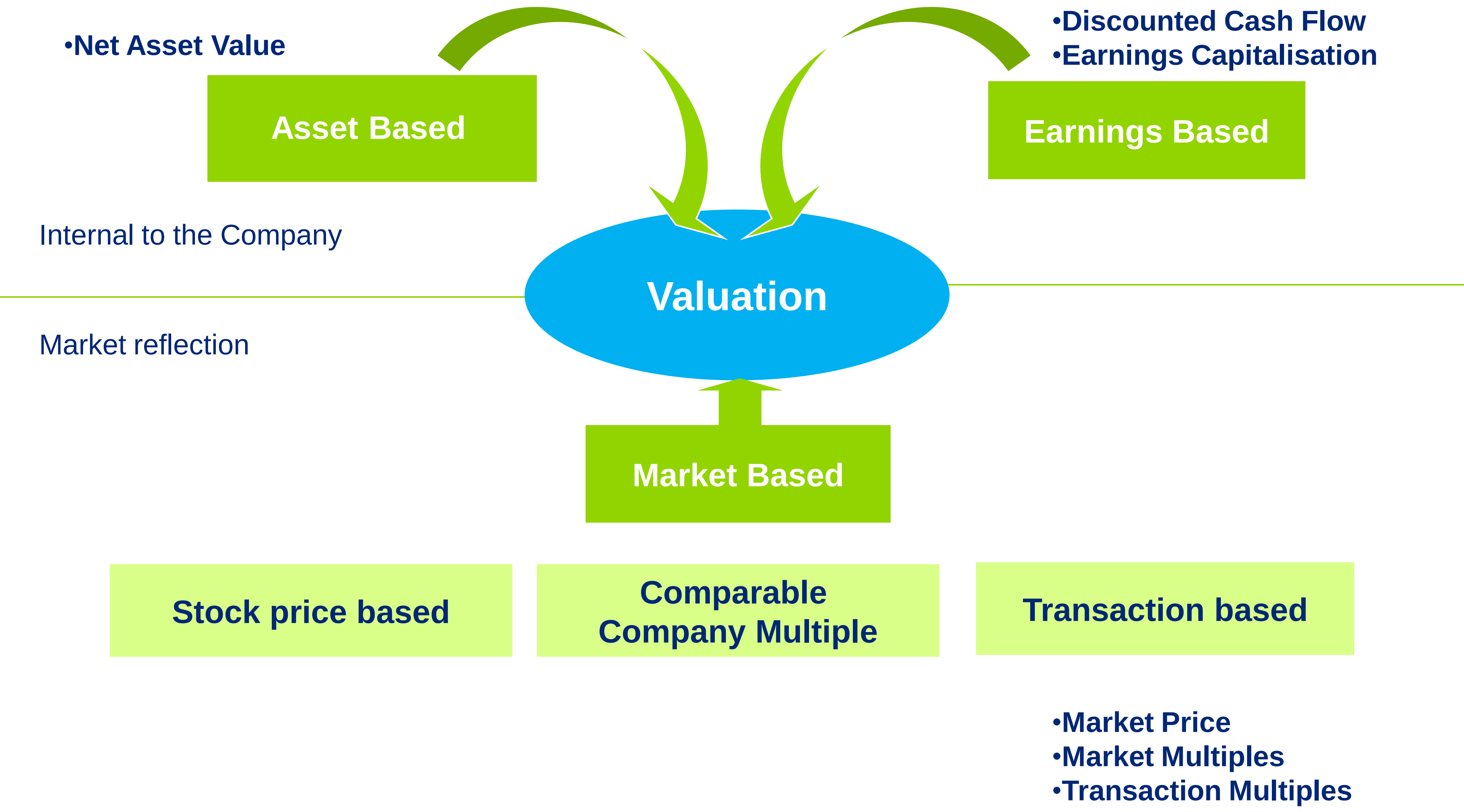
- Business
- Intangible (PPA, Sweat Equity)
- Assets (liquidation/bank finance)

Regulatory

- FEMA
- SEBI
- IT
- Accounting
- Fund reporting

Valuation Methodologies

Valuation Methodology



Income Approach

Income Approach
DCF methodology

- Projected cash flow available to investors discounted to present value using an appropriate rate of return
- Calculating Net Free Cash Flow of the Firm
  - Projected Profit After Tax

  PLUS
  - Interest paid net of Tax shield on Interest
  - Depreciation

  LESS
  - Capital Expenditure
  - Increase / decrease in Net Working Capital
  - (excluding cash and bank balance)
- Estimating value
  - Value of Firm = ∑ FCFFt /(1+WACC)t + Terminal Value of firm
- Terminal value
  - Growth formula: Continuity Value = [FCFFt+1 * (1-g/r)] / (WACC – g)
  - Convergence formula: Continuity Value = FCFFt+1 / WACC

  g = expected growth rate in FCFF in perpetuity

  r = expected rate of return on net new investments

Discount factor:

WACC = Ke (% equity) + Kd (1-t)(% debt)

Ke = Rf + (Beta)x(Rm-Rf)

Income approach
Real life Challenges

- Projections
  - Nil or limited history
  - Loss making company
- Real/nominal
- Estimating beta of (1) unlisted company (2) sector with no listed company
- Rm-Rf
- Rf : 10 yr or 5 yr
- Quasi debt
  - Preference capital : debt; coupon rate grossed for dividend distribution tax to arrive at interest cost
  - NCD: debt
  - Compulsory/optionally convertible and “in the money” considered as equity

Income approach
DCF Methodology - Real life Challenges

- Projection period

  Usually 3-5 years except incase of
  - Depleting resources : full life cycle
  - Project /agreement based businesses: entire period of agreement
  - Commodity: 5-7 year to cover 1 average cycle

- Time duration: end of the year cashflow (1,2,3 …) or mid year cashflow (0.5,1.5,2.5..)

- Terminal value: estimating “g”

  Consideration
  - Natural limits(e.g. demographics, marketshare)
  - Product life cycle/market stage
  - GDP growth(cannot exceed longterm GDP growth indefinitely)
  - Capital expenditure–benefits not fully captured in the projections
  - Optimum Capacity/Potential utilisation

Income Approach
PECV Methodology

Past profit are assumed to be representable of future maintainable profits and accordingly capitalized as follows:

- Appropriate past period considered (usually 3 years)
- Normalised by adjustment for:
  - Non-recurring transactions
  - Changes in circumstances (product-market environment)
  - Income and expenses related to non-operational assets
- Appropriate weights assigned
- Adjusted for contingent liabilities, surplus assets, control premium
- Capitalisation factor
  - Security, risk
  - Market P/ E
  - Trends in earnings
  - Other factors (internal and external

Income Approach
PECV Methodology - Challenges

- Future maintainable earning
- Appropriate income tax rate
- Capitalisation rate

Capacity Utilisation		100%	110%
Normalised Sales		100,000	105,000
Normalised Other income		200	200
Total income	**A**	**100,200**	**105,200**
Normalised Expenses			
Raw materials		66,978	70,999
Employee costs		2,641	2,641
Total expenses	B	87,056	91,608
Normalised PBDIT	**C=A-B**	**13,144**	**13,592**
Capital Employed			
Fixed Assets (as on date)		30,000	30,000
Additional capex to ensure optimum capacity utilisation		3,000	3,000
Total fixed assets		**33,000**	**33,000**
Net current Assets		9,000	9,000
Total assets		**42,000**	**42,000**
Fixed asset		100%	100%
Net current asset as a percentage of fixed asset		27%	27%
Total asset as a percentage of fixed asset		127%	127%
Debt Equity ratio		1.0	1.0
Required return to the shareholders			
Debt charge as a percentage of fixed asset		7.64%	7.64%
Equity charge as a percentage of fixed asset		9.79%	9.79%
Depreciation charge		4.6%	4.6%
PBDIT as a percentage of fixed assets	**D**	**22.03%**	**22.03%**
Value of fixed assets to earn desired return	**E=C/D**	**59,673**	**61,706**
Less additional capex for optimal utilisation		3,000	3,000
Add : NCA		6,000	6,000
Less: Debt		36,691	36,691
Less: value of contingent liabilities		100	100
Value of equity		**22,918**	**22,918**

Asset Approach

Asset Approach

- Net Asset Value
- Adjusted Net Asset Value
- Revalued Net Asset Value – higher end – used by buyer as a ceiling; in case of property company,
- Liquidation Net Asset value – lower end – used by seller as a floor

Asset Approach
Adjusted NAV method

Estimating Adjusted NAV

- Book value of fixed assets and net current assets

Less

- Book value of debt

Less

- Contingent liabilities

Add

- Tax shield on accumulated losses

Adjust

- Auditors qualification /due diligence report (e.g. stock value over reported, over reporting on income, etc.)

Add

- Net appreciation of non –operating assets e.g land, strategic investments
- Money to be received from warrants, stock options, etc. (at the same time increase no of shares for dilution)

Asset Approach
Replacement Value based NAV Method

Need for Replacement NAV

- Networth (bookvalue) sometimes do not reflect true value of assets
- Assets of which the historical cost does not capture the real cost

Replacement Cost Calculation–a few pointers

- Cost of building a new asset of
  - Similar condition
  - Same utility
- Total life and Balance Life
  - Technical life
  - Economic life
- Inputs from certified engineer
- Capitalisation Cost of new asset

Asset Approach
Liquidation value based NAV Method

- Realisable value of all assets
  - Cost of disposal
  - Tax on sale (normal tax, LT/ST capital gain, sales tax)
  - Time required (discounting)

- Retrenchment cost

- Outstanding liabilities

- Environment liabilities (eg. Mining. Oil companies, shipping, etc.)

- Tax on distributed profit

Market Approach

Market Approach

- Price of share, if listed

- Comparable company multiples

  Value of an asset is derived from the pricing of 'comparable' assets, standardised using a common variable
  - Market multiples
  - Earnings multiple – P/E, EV/EBITDA
  - Book Value multiple – P/Net Worth, EV/Capital Employed
  - Revenue multiple – P/ Sales, EV/ Sales
  - Sector specific multiples – Price/ No. of hits on web site, EV/capacity, etc.

- Transaction multiples

Market Approach
Pointers

- Price to be considered
- Adjustments for cash and investments of comparable companies
- Time – 1 year , 6 months

Market Approach
Challenges

- Comparables
  - Check for revenue/profit and capital deployed
  - Geographies covered
  - Brand strength
  - Presence in value chain (how much control)
  - Single plant location/ multi plant location
  - Liquidity of stock

Arriving at valuation range

Arriving at Valuation range
Adjustments

- Continent liabilities
- Present value of tax shield
- Surplus assets
  - Surplus cash
  - Investments (current market price net of STT; estimate fair price net of capital gain tax)
  - Surplus land
- Minority discount/control premium (subjective, sector wise statistics provided by Mergerstat)
- Control premium – synergy, efficiency, taxes, etc.
- Illiquidity discount (generally 20%)
- Premoney/post money valuation

Arriving at Valuation range
Summarizing

- Weights to each approach

- Depends upon the objective
  - Merger
  - ESOP
  - Asset heavy
  - Services sector

- Arrive at range based on sensitivity
  - WACC
  - “g”

"The final test for any valuation is common sense and reasonableness"

Some specific cases

Some specific cases

Merger

- Asset approach
  - Adjust for revaluation, self generated intangible, amalgamation reserve
- Market approach
  - Price for 2 or 26 week
- Income approach
  - PECV
  - DCF based

CCI Based valuation

- NAV
- PECV
- Market price

ESOP

- Market based
  - Comparable market value
- Economic based
  - DCF method

Intangible valuation

- Cost based
  - Historical
  - Replacement
- Market based
  - Comparable market value
  - Comparable royalty
- Economic based
  Capitalisation of
  - net cash flow
  - actual royalty
  - premium profits
  - imputed royalty

Merger Valuation

Principle

- **Merger valuation** – attempt is not to arrive at absolute values of the shares of the companies but at their **comparative values** to facilitate determination of the exchange ratio.
- Past performance used only as a guide to estimate future profitability, thus adjustments required for items of non-recurring nature and events not likely to repeat in the future
- Future projections have limited relevance due to higher degree of uncertainty attached to them, as compared to estimation of profits based on past performance
- Value of operating assets best captured by the value of the income it generates
- Values of non-operating assets which can be easily disposed off without affecting the operations of the company to be based on net of tax, realisable net value of the asset
- Quoted investments to be valued based on market price
- Significant investments quoted or unquoted to be valued independently

Principle

- Certain assets which are not reflected in the balance sheet, but which have a value will be considered, e.g.; sales tax benefit, Income Tax benefit
- Certain liabilities not provided for in the balance sheet to be considered, eg; contingent liabilities, future VRS
- Valuation to be based on information in the public domain and confidential information made available by the management. Therefore, valuation report to discuss the methodology and the factors considered but will not disclose actual figures and workings.

Approaches

Income Approach | **Underlying Asset Approach** | **Market Approach**

For the purpose of recommending an exchange ratio, it is necessary to arrive at a single value of the share of the two companies by assigning appropriate weightage to the methods

Relative valuation of Co A

Relative valuation of Co B

Swap ratio for proposed merger of Co A with Co B

CCI Based Valuation

CCI Based Valuation

- Operating guidelines for valuation of equity shares of companies
- Purely for administrative instructions for internal official use
- Specifically, these guidelines will be applicable to the valuation of:
  - Equity shares of companies, private and public limited
  - Indian business/net assets of the sterling tea companies
  - Indian business/net assets of the braches of foreign companies

- Objective is to make *best reasonable judgment of value (Fair Value)*

- Methods to be adopted
  - Net asset value
  - Profit-earning capacity value
  - Market value

CCI Based Valuation
NAV

- Total assets less
  - Total liabilities
  - Preference capital
  - Contingent liabilities

- Adjust for:
  - Bonus of fresh issue
  - Ignore intangible assets
  - Ignore revalued fixed assets (unless carried out 15 years back)
  - Provision of gratuity
  - Past arrears for preference dividends, unclaimed dividends, etc.

- Idea is to estimate networth of the company

CCI Based Valuation
Profit Earning Capacity Value

- Average profit
  - Idea is to estimate future maintainable profit
  - Average profit
  - Average tax rate

- Capitalisation rate
  - 15%- manufacturing companies

    Can be reduced to 12%; great care and caution to be taken. E.g. higher profitability, market price performance, diversification
  - 20%- trading companies
  - 17.5%- intermediate companies turnover from trading >40% but <60%

CCI Based Valuation
Market Value

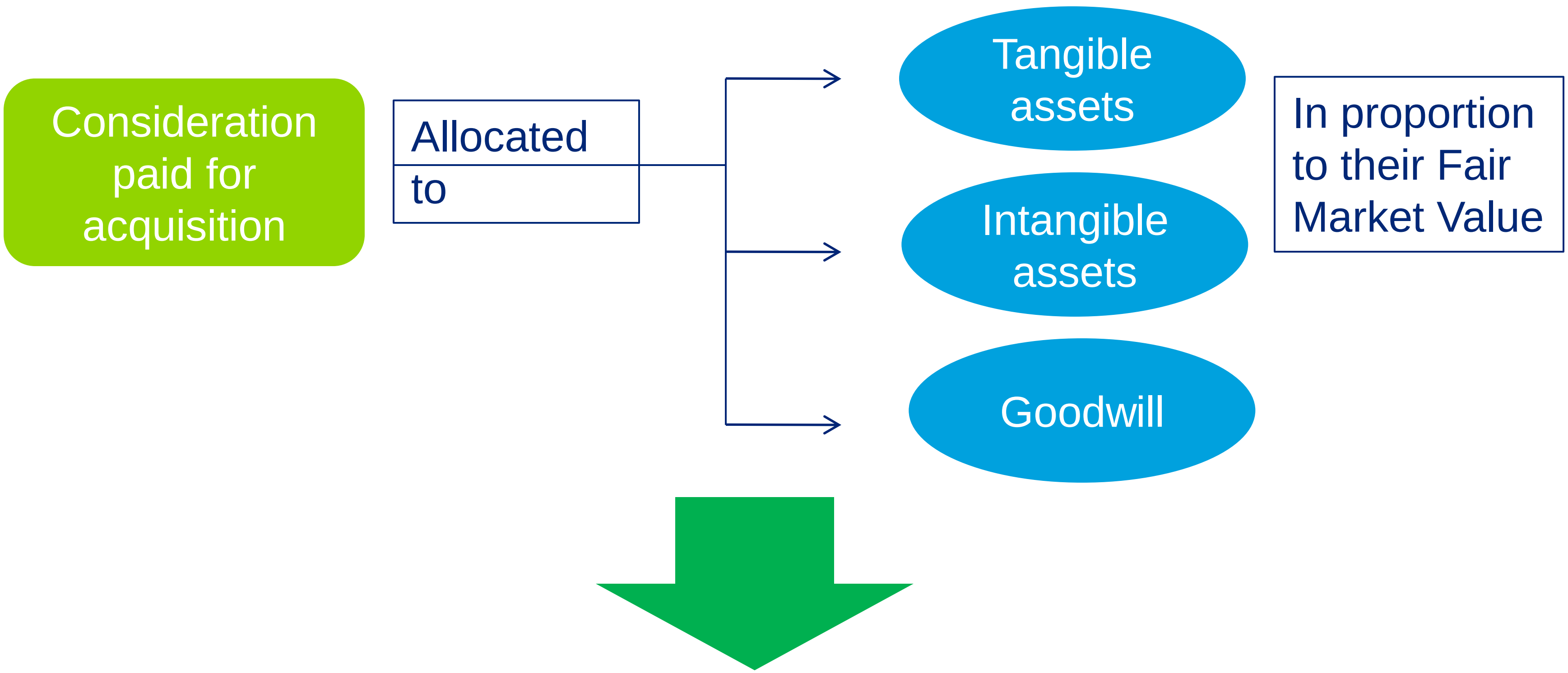
- Average market price for last 3 years
  - High and low of preceding 2 years
  - High and low of each months for preceding 12 months

- Consider average of NAV and PECV @15% if:
  - Average of NAV and PECV@15% < average market price by 20%
  - Else, revisit PECV

Purchase Price Allocation/ Intangible Valuation

Introduction

Accounting for business combination based on IFRS, US GAAP require allocation of consideration paid to tangible and intangible assets acquired



Such allocation requirement driven by Transparency to stakeholders for consideration paid for business combinations

Requirement and identification

Tangible assets

- Net Current Assets
- Fixed assets

Intangible assets

- Identify intangible assets based on accounting standard requirements

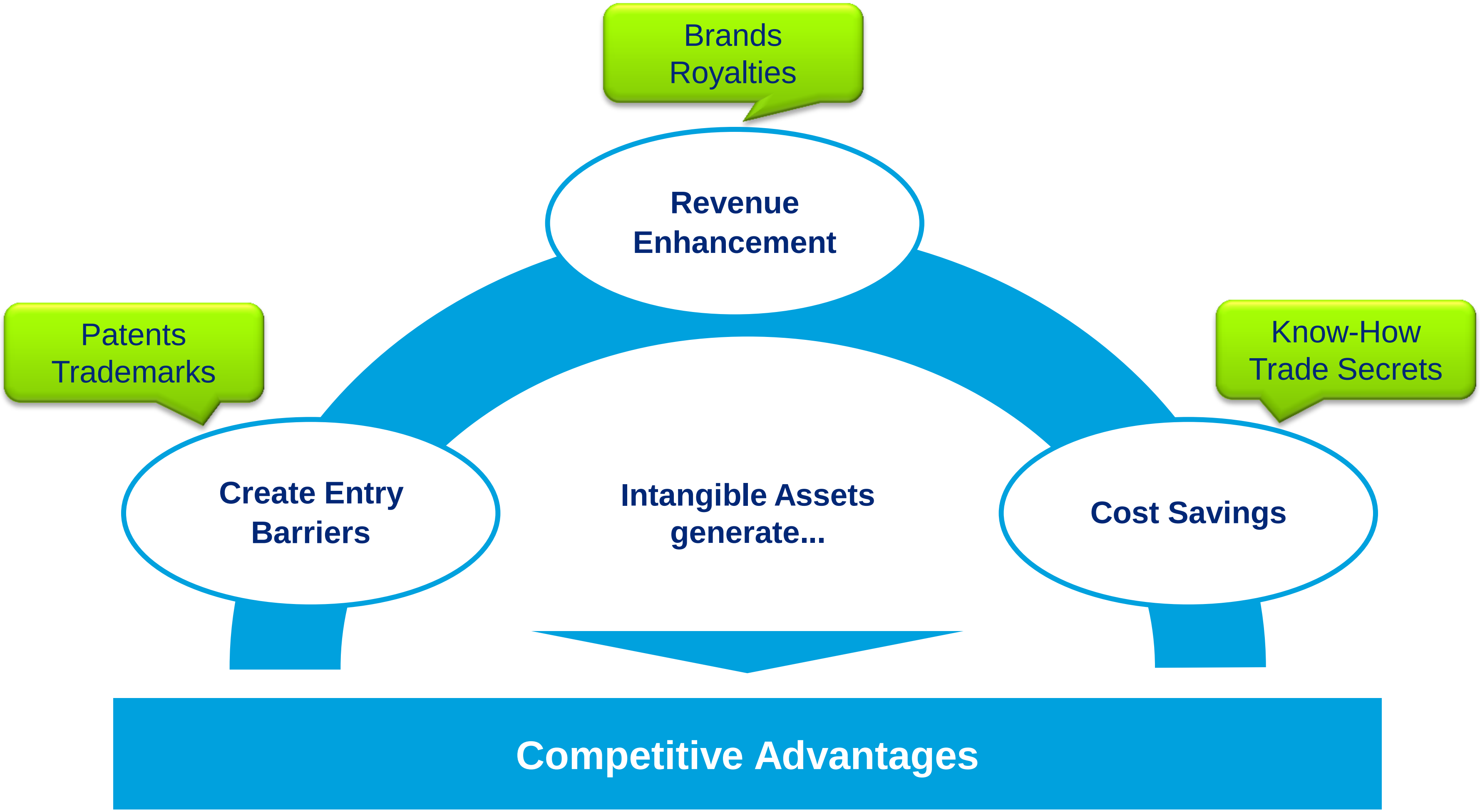
IFRS 3 & FAS 141R on Business Combinations

Critical attributes of an intangible:

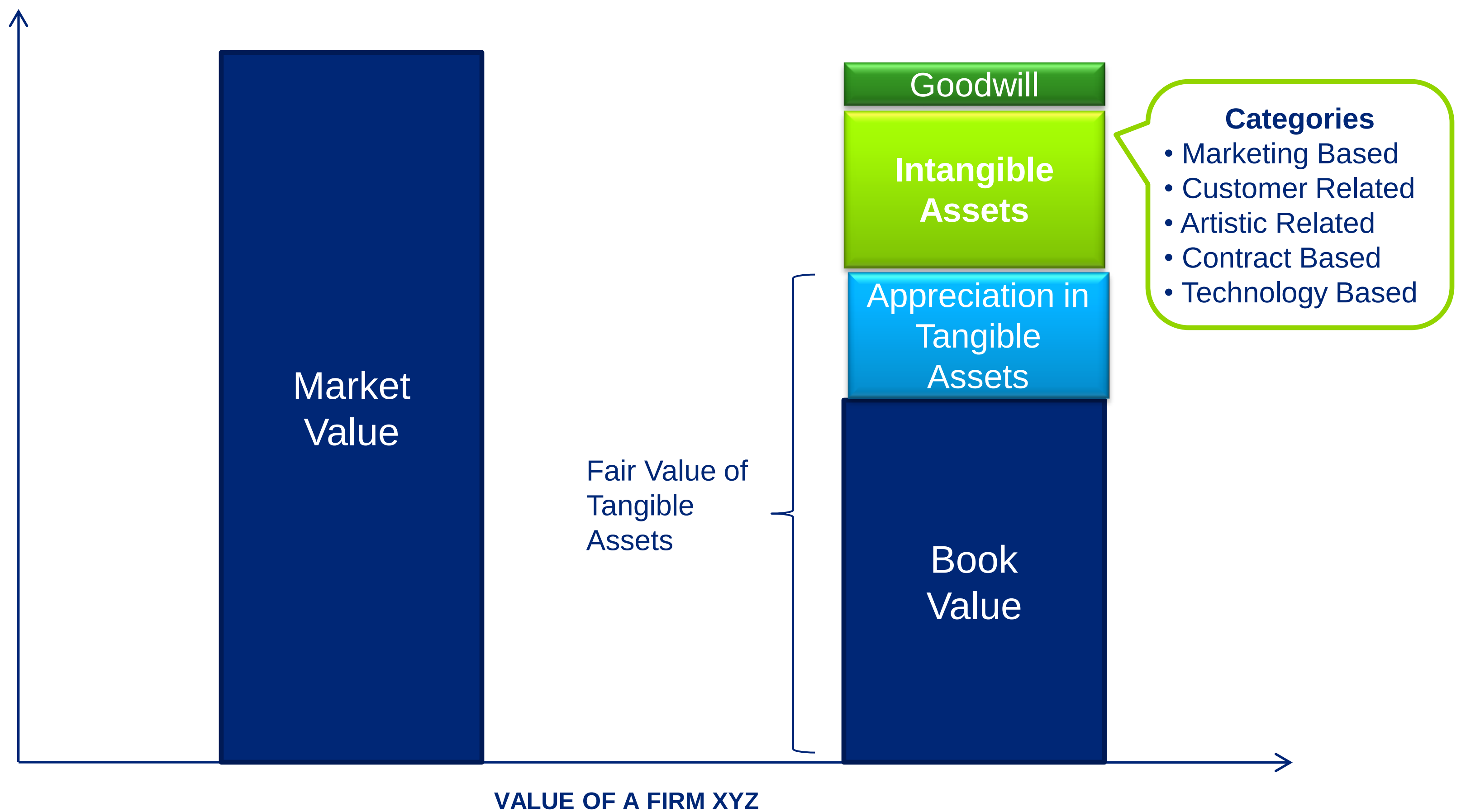
- Identifiability, which includes
  - **Separability** (or)
  - Contractual rights
- Measurability
- **Control**
- **Future economic benefits**

PPA mostly involve valuation of intangible assets since in many cases tangible assets considered at book value

Importance of Intangible Assets



Importance of Intangible Assets



What are implications?

Internally Generated Assets	Acquired Intangible Assets: Goodwill	Acquired Intangible Assets: Arising from Contractual or Legal Rights – Finite Lives	Acquired Intangible Assets: Arising from Contractual or Legal Rights – Indefinite Lives
Not Recognised	Not Amortised Impairment Test	Amortised Impairment Test	Not Amortised Impairment Test

Identification of Intangible Assets

Customer Related	**Intangible assets that relate to customer structure or customer relationships of the business** • **Customer relationships** • **Order or production backlog** • **Customer list**
Technology Based	Technology-based intangible assets relate to innovations or technological advances • Patents • Software • Know-how • Developer technology
Contract Based	Intangible assets that have a fixed or definite term which is agreed upon by both parties and written in the contract Contractual rights to receive money or contractual obligations to pay money on fixed or determinable dates • Licensing, royalty, standstill agreements • Advertising, construction, management, service or supply contracts • Lease agreements • Construction permits • Franchise agreements

Identification of Intangible Assets

Marketing Related	**Marketing-related intangible assets are those assets that are primarily used in the marketing or promotion of products or services** • **Trademarks** • **Brands** • **Internet domain names** • **Non-compete agreement**
Artistic Related	Artistic-related intangible assets meet the criteria for recognition apart from goodwill if the assets arise from contractual rights or legal rights such as those provided by copyright • Plays, operas, ballets • Books, magazines, newspapers, other literary works • Musical works such as compositions, song lyrics, advertising jingles • Pictures, photographs • Video and audiovisual material, including motion pictures, music videos, television programs

Valuation Approaches

Income / Economic Value Approach

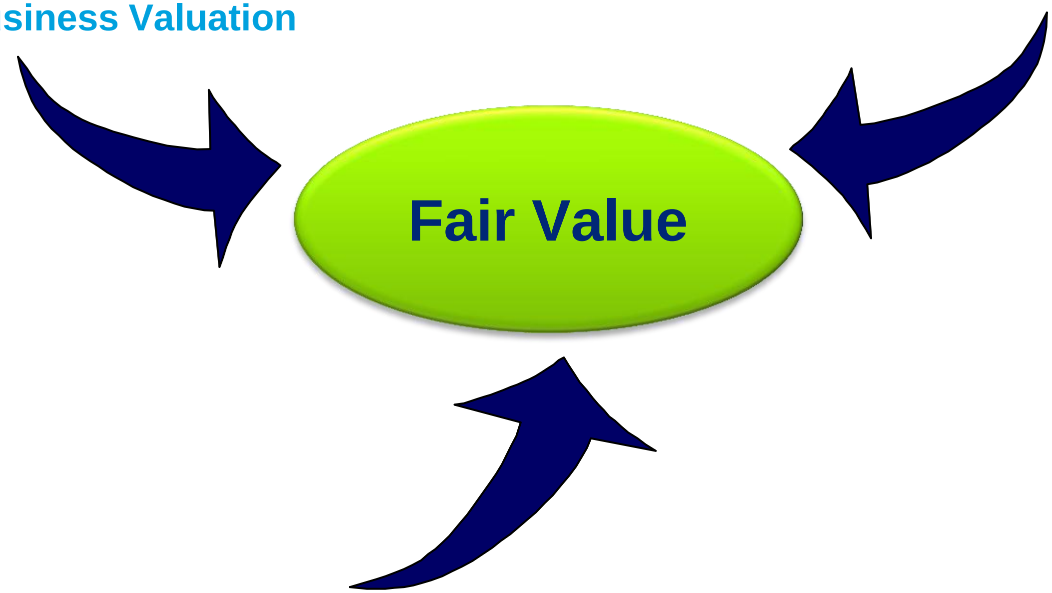
Based on the present value of expected future earnings / cash flows to be derived from ownership of the asset

- **Excess Earnings**
- **Relief from Royalty**
- **Discounted Cash Flow**
- **Comparative Business Valuation**

Cost Approach

Based on the cost to reproduce or replace the asset

- **Historical Cost**
- **Replacement Cost**



Market Approach

Based on transactions involving the sale or license of similar intangible assets in the marketplace

ESOP & Sweat Equity

ESOS & Sweat Equity - Definition

(Employee Stock Option Scheme) ESOS

ESOS is a scheme, where the employees are granted options which are:

- A right but not an obligation (option)
- Granted to an employee
- To buy a specified number of shares
- Of the employer company or its holding/ subsidiary
- At a pre-determined price
- With in a predetermined period

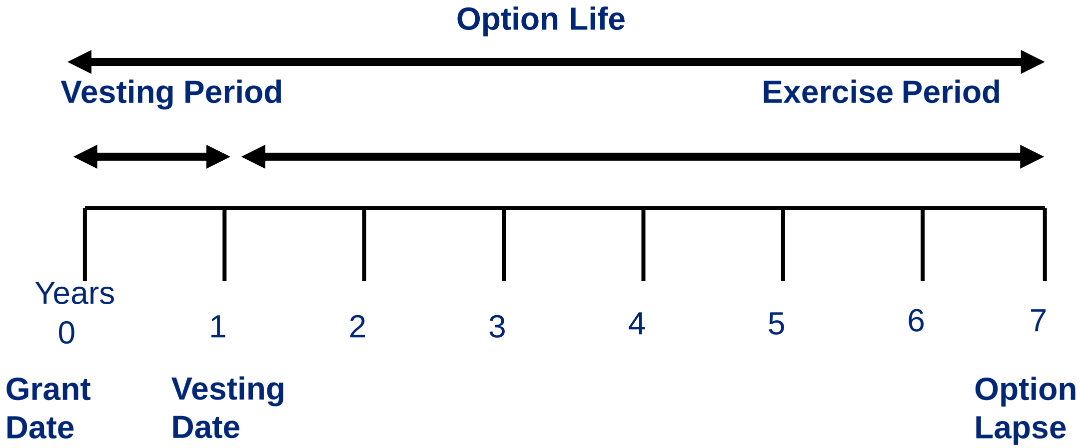
Objectives:
- Creating Ownership interest
- Aligning interests - Company & Shareholders Vs Employees
- Attract, motivate, retain and reward best talent

Sweat Equity

"Sweat Equity Shares" mean equity shares issued by the company to employees or directors at a discount or for consideration other than cash for providing know-how or making available rights in the nature of intellectual property rights or value additions, by whatever name called.

ESOP - Basics

- **Grant:** Options granted pursuant to an option plan
- **Vesting:** Process by which an employee becomes eligible to exercise rights under the options. Can be time based or performance based
- **Vesting Date:** Earliest date on which rights under an option can be exercised
- **Exercise Period:** Period commencing from the vesting of options and ending on the date after which options cannot be exercised
- **Exercise Date:** Date on which options are exercised
- **Exercise Price:** Price payable for obtaining a share of the Company on exercise of an option



ESOP - Valuation

Listed Company

- Intrinsic Value Method (Using latest available market price)
- Fair Value Method
  - Black Scholes
  - Binomial

Unlisted Company

- Independent Valuer

Sweat Equity – Listed Companies

As per SEBI in accordance of provisions of Section 79A of Companies Act, 1956:

- Issued to employees and directors
- Special resolution to be passed at the general meeting of the shareholders
- Pricing at higher of:
  - Average of the weekly high and low of the closing prices of the related equity shares during last six months preceding the relevant date; or
  - Average of the weekly high and low of the closing prices of the related equity shares during the two weeks preceding the relevant date
- Accounting treatment: - AS-26
  - Issued for non – cash consideration
    - Taking a form of a depreciable asset – carried to the balance sheet
    - Not taking the form of a depreciable asset – expensed
- Lock-in period: 3 years

Sweat Equity – Unlisted Companies

As per Department of Company Affairs in accordance of provisions of Section 79A of Companies Act, 1956:

- **Cap -** 15% of total paid up equity share capital or Rs. 5 crores of rupees
- Approval of members through a special resolution
- A separate resolution in case shares issued =>1% of issued capital
- Pricing at fair price calculated by an independent valuer
- Accounting treatment:
  - Issued for non – cash consideration
    - taking a form of a depreciable asset – carried to the balance sheet
    - not taking the form of a depreciable asset – expensed (regarded as managerial remuneration)
- Lock-in period: 3 years

Sweat Equity - Valuation

Listed Company

- Valuation of the Company – Not required, as we only take market price
- Valuation of the IPR/ VA/ Know-how
  - › Independent Valuer

Unlisted Company

- Valuation of the Company Valuation of the IPR/ VA/ Know-how
  - › Independent Valuer

FEMA Guidelines on Valuation

Recent Amendments

As per Notification No FEMA 205 / 2000-RB dated April 7, 2010 the pricing guidelines applicable incase an Indian company issues equity shares, compulsorily convertible preference shares/ debentures to a person resident outside India are revised.

Pricing Guidelines

Particulars	Pricing Guidelines
Transfer by Resident to Non-Resident (minimum price)	Incase of listed companies: Price at which a preferential allotment of shares can be made as per applicable SEBI Guidelines Incase of unlisted companies: Fair value to be determined by a SEBI registered Category-I merchant banker or a Chartered Accountant as per Discounted Cash Flow method.
Transfer by Non-Resident to Resident (maximum price)	Price of shares shall not be more than the minimum price at which the transfer of shares can be made from resident to non-resident.

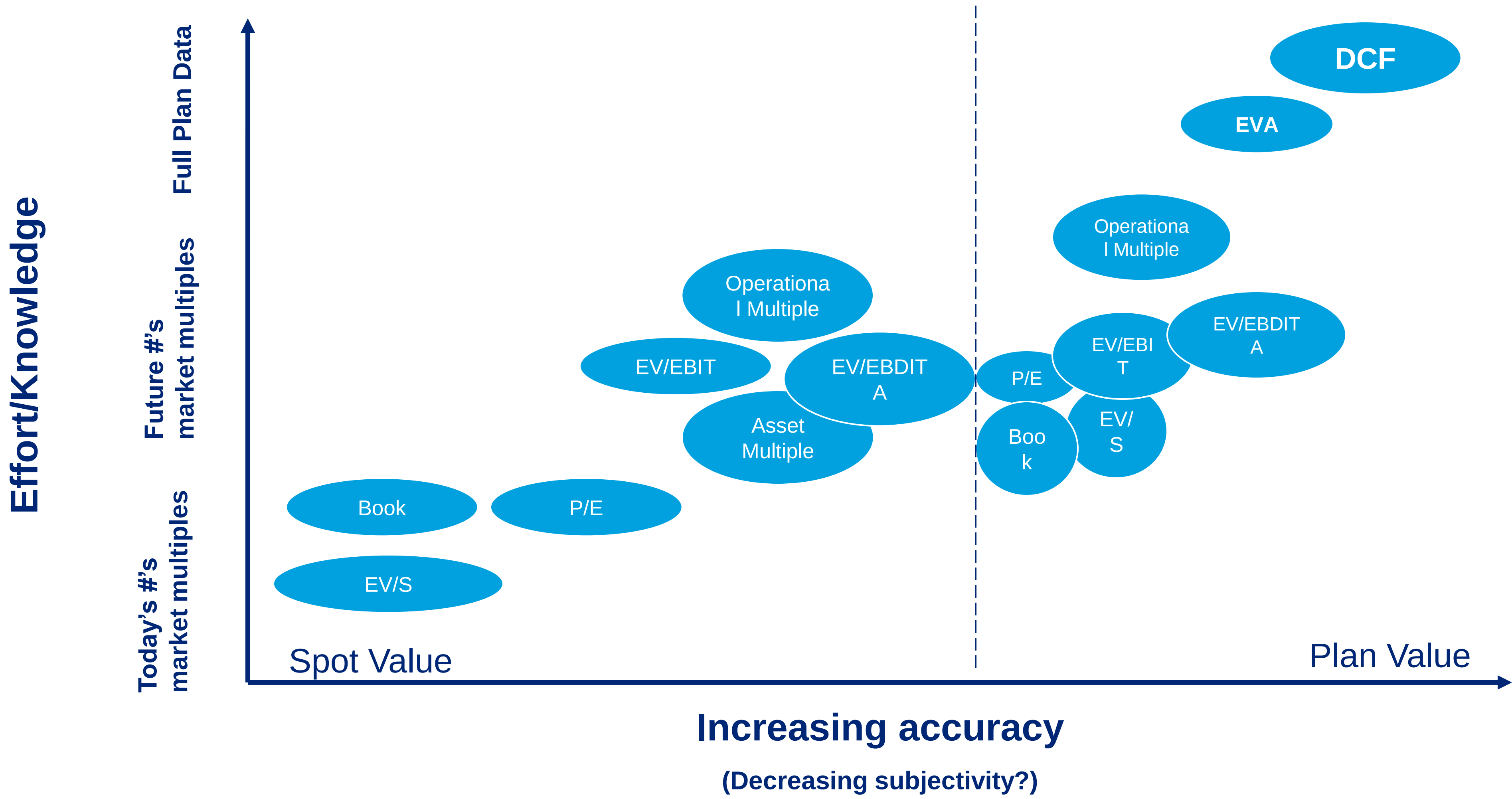
Valuation guidelines do not apply to SEBI registered venture capital

In Summary

In Summary
Choosing the Methodology

Marketability	Asset valuation Marketable, Separable		Other approach Non-Marketable, Non-separable
Ability to generate cashflow	DCF/Relative Generates cash	Contingent Claim Maybe	Relative Cannot
Uniqueness	DCF/Option Unique		Relative Common
Time horizon	DCF Long	Option · Relative	Liquidation Short

In Summary
Choosing Methodologies



In Summary

- Of late, valuations have been soft targets for dispute / litigation of listed companies

- Valuer to keep in mind fairness to all stakeholders

- Instances of minority shareholders delaying the merger process

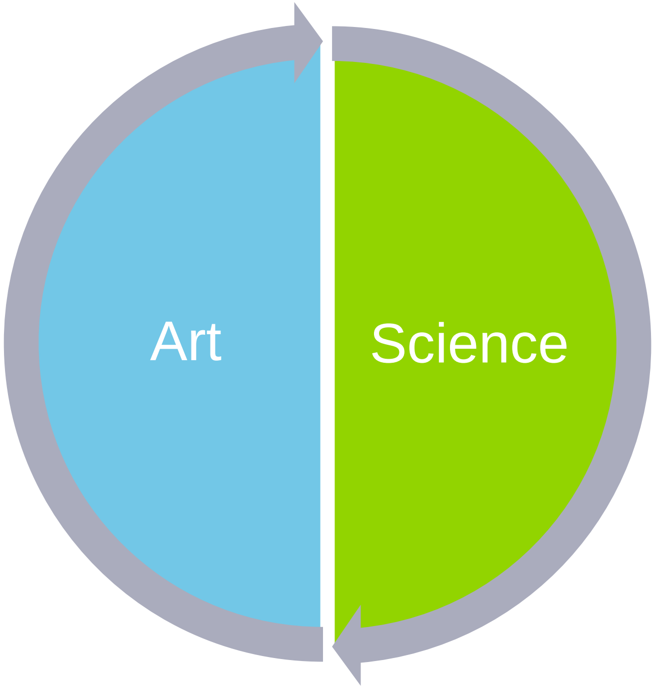
- Balance needs to be achieved through transparency, fairness and best Corporate Governance practices

"All in all, its hard to build assets competitively , but its harder to value them..."

In Summary
Valuation – Science or Art

Valuation is not just a SCIENCE, but an ART. Though quantitative in nature, the Valuation Methods require inputs that are based on subjective judgement. Hence, any preconception or bias of the valuer gets reflected in the value.

Fusion of Art & Science



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