Business Valuation
Indian Valuation Standard
Synopsis – DCF, Intangibles, Start-up Valuation

Presentation at Anand Branch of WIRC of ICAI

4th November 2023

Business Valuation – Definition

Business Valuation

' An act or process of determining the value of a business, business ownership interest, security or intangible assets.'

{ The international glossary of Business Valuation Terms }

Alternative Definition

' Business valuation is a logical, defendable process of arriving at the opinion as to the worth of a business given the information available, assumption & limiting conditions as on the valuation date.'

VALUATION TRUTHS

'PRICE is what you pay & VALUE is what you get' [Warren Buffet]

Buyer's success: Value (-) Price   Seller's success: Price (-) Value

'Valuation is starting point of negotiation – Final price is only result of negotiation'.

" Cash is King – Consider cash flow and not net profits'.

'Wisdom begins with calling things by their right names'.

'Some men know the price of everything and the value of nothing'. [Oscar Wilde]

'It's better to be roughly right than to be precisely wrong' [J.M. Keynes]

'Appraisers have a value in mind before they start the process and try to back into it'. [Aswath Damaodaran]

'It's stupid the way people extrapolate the past and not slightly stupid, but massively stupid'. [Charlie Munger]

Value is future looking. **Investor buy tomorrow's cash flow**, not yesterday's or even today's

The **past performance is only relative** to the extent that it is indicative of the company's future performance

I am better investor because I am a businessman, and I am better businessman because I am an investor. [Warren Buffet]

INDIAN VALUATION STANDARDS

SYNOPSIS

INDIAN VALUATION STANDARDS 2018 (IVS 2018)

- ICAI formed Valuation Standard Board (VSB) on 28th Feb 2017 for having Consistent, Uniform and Transparent Valuation Policies and harmonies diverse valuation practices used in India.

- VSB Consist of representatives from MCA, CBDT, RBI, CAG, IRDA, SEBI, IBA, Industry & Eminent Professionals.

- Objective of VSB: 1) Identify and suggest Valuation Standard areas requires to be developed 2) Formulate Valuation Standard 3) Engage with ICAI RVO for adoption of valuation standard 4) Align Indian Valuation Standard with Global Valuation Practice 5) Time to time review and interpret valuation standard 6) To provide and give guidance of valuation standard 6) Interact with National and International bodies engaged in Valuation Standard Setting Process.

- Draft Valuation Standard to be approved by council of the ICAI.

- ICAI Valuation Standard is mandatory for ICAI members.

- IVS 2018 is mandatory for the valuation reports issued after 1st July 2018.

VALUATION STANDARD SYNOPSIS

IVS – 101: Definitions

IVS- 102: Valuation Bases

Valuation Bases: Type of Value being used in Engagement.
- Fair Value
- Participant Specific Value
- Liquidation Value

- **Premise of Value**: Conditions and circumstances how an asset is deployed.
  - Highest & Best Use
  - Going Concern Value
  - As-is-where-is Basis.
  - Orderly Liquidation
  - Forced Transaction

- **Other Consideration**:
  - Participate Specific Consideration
  - Synergies
  - Integration Costs
  - Transaction Costs

VALUATION STANDARD SYNOPSIS

IVS- 103: Valuation Approaches & Methods

Valuation Approaches : Appropriateness of Valuation Approach depends upon Valuation bases and premises

Valuation bases and premises.

- Market Approach
  - What is Market Approach
  - When to Apply
  - When not to Apply
  - Methods

- Income Approach
  - What is Income Approach
  - When to Apply
  - When not to Apply
  - Methods

- Cost Approach
  - What is Cost Approach
  - When to Apply
  - When not to Apply
  - Methods

MARKET APPROACH

What is Market Approach?

It is a valuation approach that uses prices and other relevant information generated by market transactions involving identical or comparable (i.e., similar) assets, liabilities or a group of assets and liabilities, such as a business.

When Market Approach should be applied?

- Where the asset to be valued or a comparable or identical asset is traded in the active market;
- There is a recent, orderly transaction in the asset to be valued; or
- There are recent comparable orderly transactions in identical or comparable asset(s) and information for the same is available and reliable.

When Market Approach should not be applied?

- Where the asset has fewer identical or comparable assets (market comparable);
- The asset to be valued or its market comparables are not traded in the active market;
- Sufficient information on the comparable transaction(s) is not available;
- There is no recent transaction either in the asset or in the market comparables; or
- There are material differences between the asset to be valued and the market comparables, which require significant adjustments.

Methods

- Market Price Method
- Comparable Companies Method (CCM)
- Comparable Transaction Method (CTM)

INCOME APPROACH

What is Income Approach?

It is valuation approach that converts maintainable or future amounts (i.e., cash flow or income and expenses) to as single current (i.e., discounted or capitalized) amount. The fair value measurement is determined on the basis of the value indicated by current market expectations about the future amounts. This approach involves discounting future amounts (cash flows / income / cost savings) to a single present value.

When Income Approach should be applied?

- Where the asset does not have any market comparable or comparable transaction;
- Where the asset has fewer relevant market comparable; or
- Where asset is an income producing asset for which the future cash flows are available and can be reasonably be projected.

When Income Approach should not be applied?

- The asset has not started generating income or cash flows
- There is significant uncertainty on the amount and timing of income / future cash flows; or
- The client does not have access to the information relating to the asset being valued.

Methods

- Discounted Cash Flow (DCF) Method
- Relief from Royalty (RRF) Method
- Multi Period Excess Earning (MEEM) Method
- With or Without (WWM) Method
- Option Pricing Method such as Black Scholes-Merton formula or Binomial (lattice) model

COST APPROACH

	What is Cost Approach ?	Cost approach is a valuation approach that reflects the amount that would be required currently to replace the service capacity of an asset (often referred to as current replacement cost). In certain situations, historical cost of the asset may be considered by the valuer where it has been prescribed by the applicable regulations / law / guidelines or is appropriate considering the nature of the assets.
	When Cost Approach should be applied?	▪ An asset can be quickly recreated with substantially the same utility as the asset to be valued; ▪ In case where the liquidation value is to be determined; or Income approach and / or market approach cannot be used.
	When Cost Approach should not be applied?	▪ The asset has not yet started generating income / cash flows (directly or indirectly); ▪ As asset of substantially same utility as the asset to be valued can be created by there are regulatory or legal restrictions and involves significant time for recreation; or ▪ the assets was recently created.
	Methods	▪ Replacement Cost Method ▪ Reproduction Cost Method

VALUATION STANDARD SYNOPSIS

IVS- 201: Scope of Work, Analyses and Evaluation

- **Scope of Work / Terms of Engagement**
  - Client Details
  - Users Details other than Clients, if any.
  - Valuer Details
  - Purpose of Valuation
  - Subject Matter of Valuation
  - Valuation Date
  - Basis & Premises of Valuation
  - Responsibilities of the Client & Valuer
  - Confidentiality obligation of the Client & Valuer.
  - Scope / Limitations.
  - Fees
  - Details of the third-party expert, their scope limitations, and responsibilities.
  - To mention that valuation report should not be used, reproduced, distributed, or circulated whether in whole or part, other than for the purpose agreed in the scope of work/ terms of engagement.

VALUATION STANDARD SYNOPSIS

IVS- 201: Scope of Work, Analyses and Evaluation (contd....)

- **Analysis and Evaluation**
  - Non-financial Information
  - Ownership Information
  - Financial Information
  - General Information
  - Subsequent Events
  - Reliance on the work of other Experts
  - Public Domain Information to be used from creditable/reliable source and source to be mentioned.

VALUATION STANDARD SYNOPSIS

IVS- 202: Valuation Report & Documentation

- ## Content of Valuation Report
  - o Background – Assets being Valued.
  - o Purpose of Valuation
  - o Identity of Valuer and other experts involved in valuation.
  - o Disclosure of Valuer Interest or conflict of interest, if any.
  - o Date of Appointment, Valuation Date & Date of Valuation Report.
  - o Inspection / Investigation undertaken.
  - o Nature and source of information relied on.
  - o Major factors considered for carrying out valuation.
  - o Procedure adopted in carrying out valuation.
  - o Valuation standard followed.
  - o Valuation methodology used. (Valuation Basis & Approaches Adopted along with reason)
  - o Restriction on use of valuation report, if any.
  - o Caveats, limitation & disclaimers.
  - o Conclusion.

- ## Management Representation
  - o Valuer may obtain MRL. It's valuers' judgement to obtain MRL.
  - o If basis of valuation is forming part of MRL, valuer shall mention such facts in valuation report.
  - o Representation in MRL do not preclude valuer to apply reasonable skill & care.

VALUATION STANDARD SYNOPSIS

IVS- 202: Valuation Report & Documentation (contd....)

- **Documentation**
  - Record of valuation procedure followed.
  - Relevant evidence obtained.
  - Conclusion that valuer has reached.
  - Engagement Letter.
  - List of documents & data obtained.
  - Copy of relevant circular, extract & legal provisions.
  - Copy of signed valuation report.
  - MRL received, if any.
  - Extent of documentation is professional judgement.
  - Retention period: As per need of applicable legal and regulatory requirement but not lesser than 8 years

VALUATION STANDARD SYNOPSIS

IVS- 301: Business Valuation

- Business Valuation is the act or process of determining the value of as business enterprise or ownership interest therein.
- Provides guidance to valuers who are performing business valuation.
- Requirement prescribed under any law, regulatory authority, court order will prevail over this standard.
- Value can be expressed in exact number or range of value.
- Valuation can be expressed in difference Benchmark like: Enterprise Value, Business Value, Equity Value.

- **Valuation Methodology**
  - Premise of Value [facts and circumstances underlying each valuation engagement)
  - Analysis of Assets to be valued like: Non-financial information, Financial information, Ownership details, General information.
  - Adjustment to information from financial statements.
  - Valuation Approaches & Methods
  - Value under liquidation.
  - Rule of Thumb of Benchmark Value.
  - Treatment of non-operating assets and inter-company investments.
  - Consideration of Capital Structure of the Business.
  - Selection of appropriate methods, procedure and its weightage depend upon judgement of the valuer.
  - Valuer shall provide rationale for particular-selection and its weightage.

VALUATION STANDARD SYNOPSIS

IVS- 302: Intangible Assets

- Intangible asset is an Identifiable, Non-monetary Assets, Without Physical Substance.
- Prescribe specific guidance and principle applicable to valuation of Intangible Assets, that are not dealt specifically in another standard.
- Certain area where Intangible Assets required to be valued are:
  - Ind AS 103 – Business Combination.
  - Ind As 36 – Impairment Testing.
  - Transfer Pricing.
  - Purchase Price Allocation in case of Slump Sale / M & A transaction.
  - Financing, where intangible is used as collateral.
  - Litigation.
  - Bankruptcy / Restructuring.
  - Insurance of personal worth by celebrity / sports persons.
  - Issuance of sweat equity against Technical-know how / IP.

  Categories of Intangible Assets
  - Customer-based Intangible Assets.
  - Marketing-based Intangible Assets.
  - Contract-based Intangible Assets.
  - Technology-based Intangible Assets.
  - Artistic-based Intangible Assets.

VALUATION STANDARD SYNOPSIS

IVS- 302: Intangible Assets (contd…..)

Significant Consideration
- Purpose and objective of valuation assignment.
- Legal rights of the intangible asset to be valued.
- Specific laws and regulations governing respective Intangible Asset to be Valued.
- Highest & best use consideration.
- Economic useful life of the Intangible Asset
- Discount Rates
- Tax Amortization Benefits (TAB)

Valuation Approached & Methods
- **Market Approach**
  - Price / Valuation Multiples / Capitalization Rates
  - Guidelines Pricing Method (for comparable intangibles)
- **Income Approach**
  - Relief from Royalty (RRF) Method
  - Multi Period Excess Earning (MEEM) Method
  - With or Without (WWM) Method
  - Greenfield Method
  - Distributor Method
- **Cost Approach**
  - Replacement Cost Method
  - Reproduction Cost Method

VALUATION STANDARD SYNOPSIS

IVS- 303: Financial Instruments

- **Financial instrument** is any contract that gives rise to: Financial Assets, Financial Liability of one entity OR equity instrument of another entity.

- Equity instruments, derivatives, debt instruments, fixed income and structured products, compound instruments etc. are example of financial instruments.

- Valuation of financial instrument is required for Transaction Pricing (buys or sell), Financial reporting, Business Combination, Share based payments, Off-market transaction, Risk Management, Tax Allocation, Dispute Resolution, Purchase-price allocation, Liquidation etc.

Valuation Approaches & Methods

- Usage of market linked methods with observable input is usually the preferred approach.

- Valuation Standard 301 Business Valuation to be also considered while valuation of financial instruments.

- Key factors to be considered are:

    - Valuation bases, terms, and conditions of instruments to be valued.

    - Purpose of valuation.

    - Control framework of the entity and input data sets.

VALUATION STANDARD SYNOPSIS

IVS- 303: Financial Instruments (contd.....)

o **Market Approach**

- By Using prices and other relevant information generated by market transaction involving identical of comparable assets / liabilities for such a business.

- By Using traded price of such instrument in active market.

- By Using market benchmark for a set of comparable financial instrument operating in similar framework.

- Adjust the comparable price to reflect the different terms and characteristic.

o **Income Approach**

- Black-Scholes-Merton formula OR Binomial Model AND Similar Pricing Models are example of Income Approach, which covers time value and the intrinsic value of option.

- Terms of financial instruments to be analyzed for timing expected to realize the cash flow.

- Basis of calculation of cashflow i.e. interest rate, coupon rate, underlying index of indices etc.

- Terms and conditions associated with contract i.e. put or call option, lock-in, prepayment, extension, conversion, residuary right.

o **Cost Approach**

- Current Replacement Cost Method

DCF VALUATION

DCF INTRODUCTION

DCF valuation is the <u>present value of future free cash flows</u> discounted at a specific risk adjusted rate.

- Value derived from future earnings.

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

- Assumes the business as a 'going concern'.

- Impact of financial gearing is captured.

- Useful for asset and non-asset based companies where projection is possible.

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

- Factors 'Risk' in discount rate.

DCF STEPS

Review Business & Business Plan
- Analyse Historical Performance of the business. Understand the business & its business plan. Identify the value drivers.

Projections / FCF
- Project the operating result & Free Cash Flow over the forecast period (which can be typically 3 years to 10 years).

Discount Rate
- Estimate the cost of capital to the company by determining present cost of funding & targeted cost of funding. Apply discount & premium.

Present Value
- Determine the present value of enterprise by discounting the projected cash flow at their present value.

Terminal Value
- Estimate perpetual growth rate / exit multiple at the end of forecast period & determine its present value by discounting at cost of capital.

Adjustments
- Adjust for all the surplus assets & liabilities (other than business assets) which are used in cash flow projections. Apply discount & premium.

DCF WACC COMPUTATION

Cost of debt

12% — **Cost of debt** X (1- 25% **Tax rate**) = 9% **Net cost of debt**

say, 25%
x [Debt/Total capital]%

Target capital structure = 13.5% **Cost of Capital**

Cost of equity

7% — **Risk-free rate** + 8% **Market equity risk premium** = 15% **Cost of equity**

say, 75%
x [Equity/Total capital]%

DISCOUNT & PREMIUMS

	Strategic Value		Synergic Value

Strategic Premium

Control Premium

	Control Value		Listed Entity control value

DLOC

Marketable minority value (MMV)		Listed Entity minority value

DLOM

Non- Marketability Value (NMV)
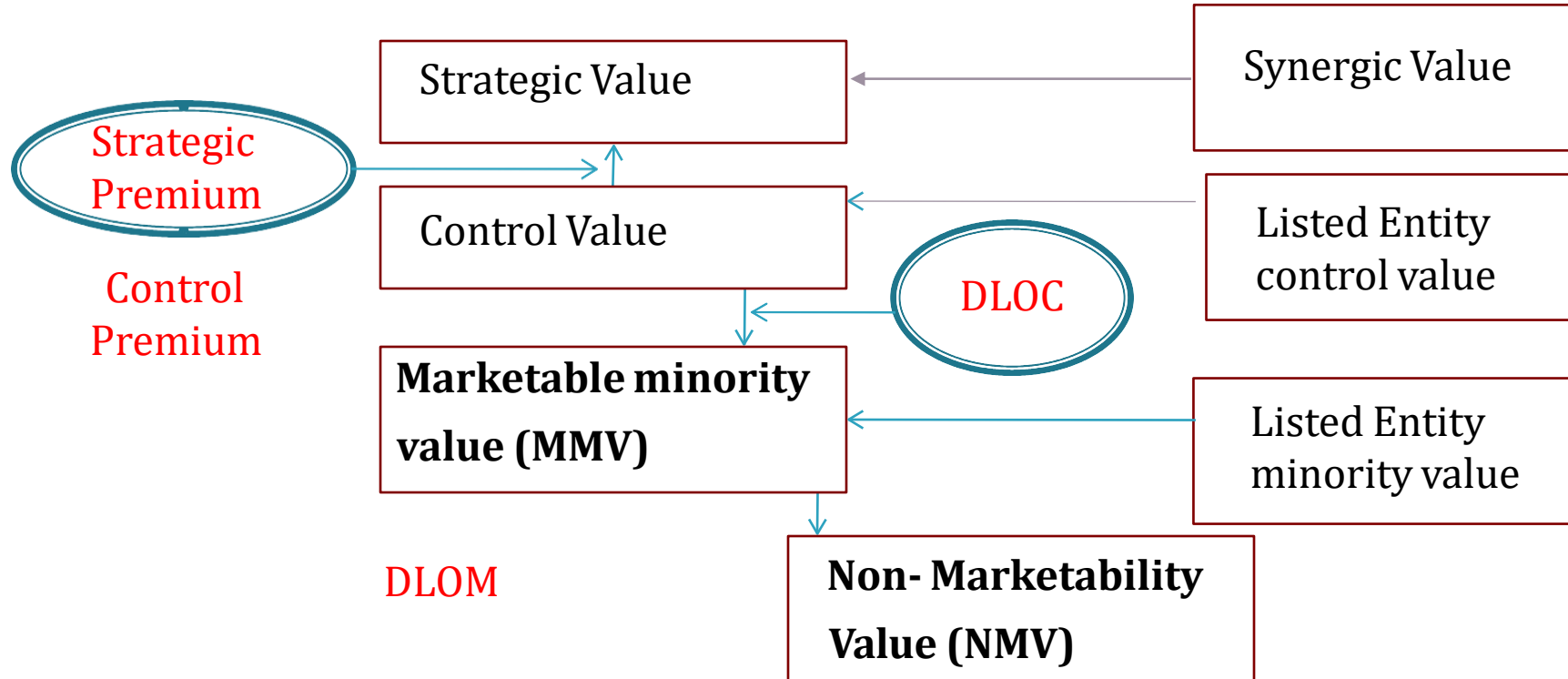
DCF – COST OF EQUITY

- Cost of equity is calculated using the Capital Asset Pricing Model ('CAPM'):

- **Cost of Equity = Rf + (Rm – Rf)* ß**

  Where: Rf   = Risk Free Rate

  Rm   = Market Return

  (Rm – Rf)   = Equity Risk Premium

  ß   = Beta

Risk free rate of return (Rf) :
- Return on government securities with long term horizon generally considered such as
    - 10 Year Zero Coupon Bonds
    - 10 Year Govt. Bonds
    - 10-Year G-Sec (Par Yield)

Market Return (Rm) :
- Returns delivered by markets over long period of Equity Investments, specific to the country.
- Returns of BSE Sensex, S & P, NSE , over 10 to 20 years generally considered

Risk Premium (Rm-Rf)
- Considered as specified from the specified sources, specific to the country.
- It signifies extra return expected by investors for investing in risky investments.

Beta (ß)
- Beta (β) is a measure of the volatility—or systematic risk—of a security or portfolio compared to the market as a whole (source of Beta from various market index/ research website for the same)
- Levered Beta calculated as above needs to be unlevered & re-levered as per the target co. debt

FCFE vs. FCFF

	Free Cash Flow to Equity		Free Cash Flow to Firm
	Free Cash Flow to Equity		**Free Cash Flow to Firm**
	Revenues		Revenues
Less	Cost of Sales	Less	Cost of Sales
Less	Operating Expense	Less	Operating Expense
=	**EBITDA**	=	**EBITDA**
Less	Tax Depreciation & Amortization	Less	Tax Depreciation & Amortization
=	**EBIT**	=	**EBIT**
Less	Interest Expense		
=	**Pretax Income**		
Less	Income Tax (Using Marginal tax rate)	Less	Income Tax (Using Marginal tax rate)
=	**Net Income**	=	**Net Operating Profit after Tax (NOPAT)**
Plus	Tax Depreciation & Amortization	Plus	Tax Depreciation & Amortization
=	**Gross Cash Flow**	=	**Gross Cash Flow**
Less/(Plus)	Increase / (Decrease) in working capital	Less/(Plus)	Increase / (Decrease) in working capital
Less	Capital Expenditures	Less	Capital Expenditures
Less/(Plus)	Decrease / (Increase) in Debt principal		
=	**Free Cash Flow to Equity**	=	**Free Cash Flow to Firm**
Discounting Factor used is the Cost of Equity (Ke)		Discounting Factor used is the Weighted Average Cost of Capital (WACC)	

ADVANTAGES OF DCF VALUATION

- It is based upon an asset's fundamentals, it is comparatively <u>less exposed to market moods</u> and perceptions.

- Good investors <u>buy businesses</u>, rather than stocks (Warren Buffet), DCF valuation is the right way to think about what you are getting when you buy an asset.

- DCF valuation makes you understand <u>underlying characteristics of the firm</u>, and understand its business & assumptions you are making.

LIMITATIONS OF DCF VALUATION

- It <u>requires far more inputs</u> and information than other valuation approaches.

- Inputs are difficult to estimate and can be manipulated.

- For Analysts, every stock may find undervalued / overvalued in comparison to market stock.

SPECIFIC ASPECTS – LONG TERM DEBT

- Interest NOT considered as cost/ outflow
- Interest considered for WACC computation, net of tax
- LT debt outstanding reduced from EV

SPECIFIC ASPECTS – SHORT TERM DEBT

- Interest considered as cost/ outflow
- Interest NOT considered for WACC computation
- Movement in Bank O/D considered as part of Working Capital movement

SPECIFIC ASPECTS – SHARE APPLICATION MONEY

- Outstanding share application money to be considered as debt
- To be reduced from EV
- Above treatment suggested, since number of shares that would be allotted is not known

SPECIFIC ASPECTS – ALLOTMENT OF SHARES

- PV of such allotments to be reduced from EV
- Similar treatment for Long Term debt raised during Explicit Period
- Above treatment suggested, since number of shares that would be allotted is not known

SPECIFIC ASPECTS – PRE & POST MONEY

- DCF Valuation to be based on Pre Money terms
- However, Post Money cash flows to be considered
- Amount obtained on allotment of shares to be considered as Debt
- Similar treatment as Allotment of Shares during Explicit Period
- Pre allotment number of shares to be considered

SPECIFIC ASPECTS – PREFERENCE SHARES

- Considered on par with Long Term Debt
- Preference dividend rate with DDT to be considered for WACC purposes
- To be reduced from Enterprise Value along with Debt for Equity Shareholders Value

SPECIFIC ASPECTS – BUSINESS ASSETS

- DCF method is based on Cash Flows
- Income from Business Assets included in Cash Flows
- Value of Business Assets implicitly captured in Cash Flows
- Fair Value of Assets used for the purpose of business not relevant
- Disposals and acquisitions to be reflected in Cash Flows

SPECIFIC ASPECTS – SURPLUS ASSETS

- Refers to assets not actively used for the purpose of business
- Income from such assets NOT to be considered for Cash Flows
- Disposals and acquisitions NOT to be reflected in Cash Flows
- Fair value of such assets to be added to EV

SPECIFIC ASPECTS – CASH & CASH EQUIVALENTS

- Operating cash requirements to be considered
- Current cash and bank balance beyond requirement to be considered as Surplus Assets

SPECIFIC ASPECTS – TRADE INVESTMENTS

- Income from such investments to be considered for Cash Flows
- Disposals and acquisitions to be reflected in Cash Flows
- Generally, consolidated Cash Flows can be considered in case of subsidiary companies
- Alternatively, DCF value of subsidiary companies can be added to DCF value of parent company

SPECIFIC ASPECTS – NON TRADE INVESTMENTS

- Income from such investments NOT to be considered for Cash Flows
- Disposals and acquisitions NOT to be reflected in Cash Flows
- Fair value of investments to be added to EV
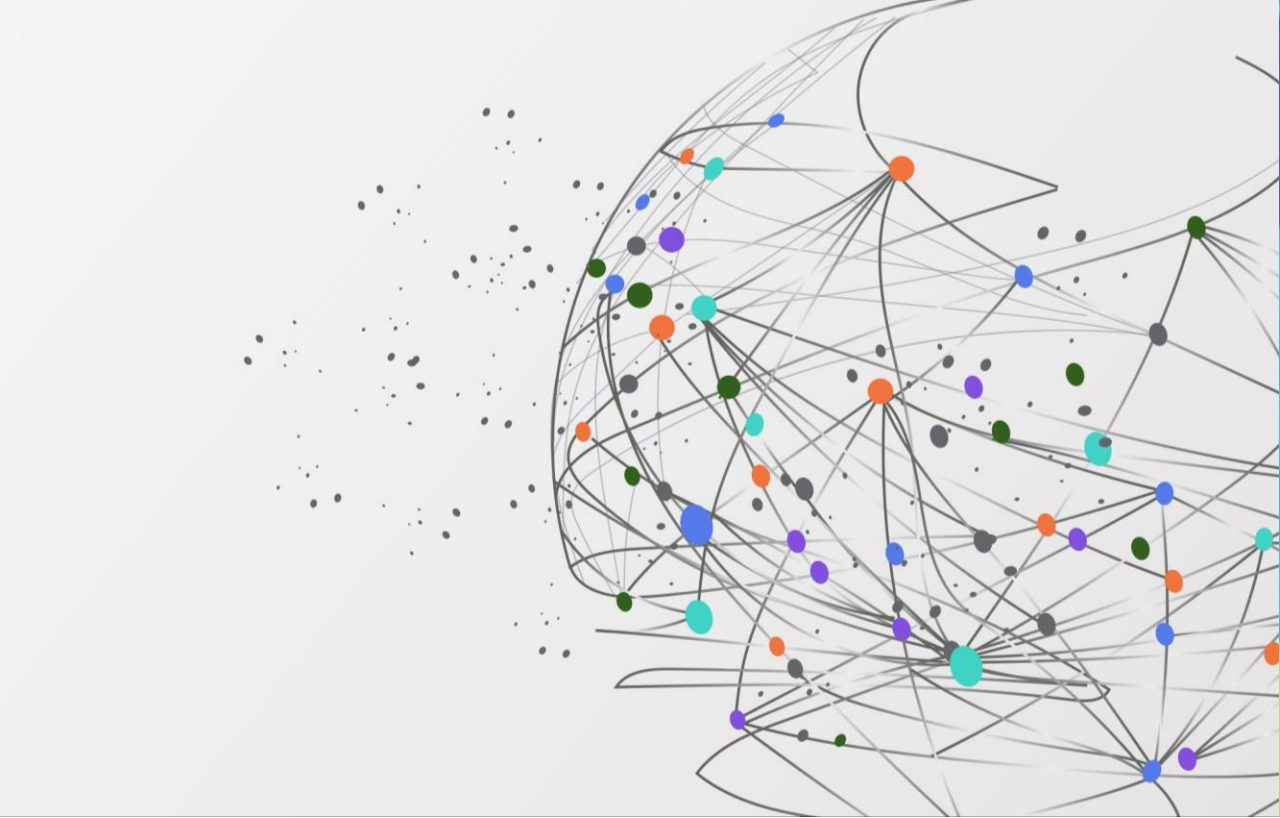
START UP VALUATION

WHAT IS START UP ?

IDEAS / TECHNOLOGY / RESEARCH WHICH COULD BE SCALABLE BUSINESS MODEL

OWNER OF BUSINESS HAS AN IDEA THAT CAN BE FILL UP THE UNFILLED NEEDS OF THE CONSUMERS.

PROVIDE SOLUTION TO NUMEROUS USERS

TO CONVERT IDEA INTO REAL LIFE BUSINESS CYCLE
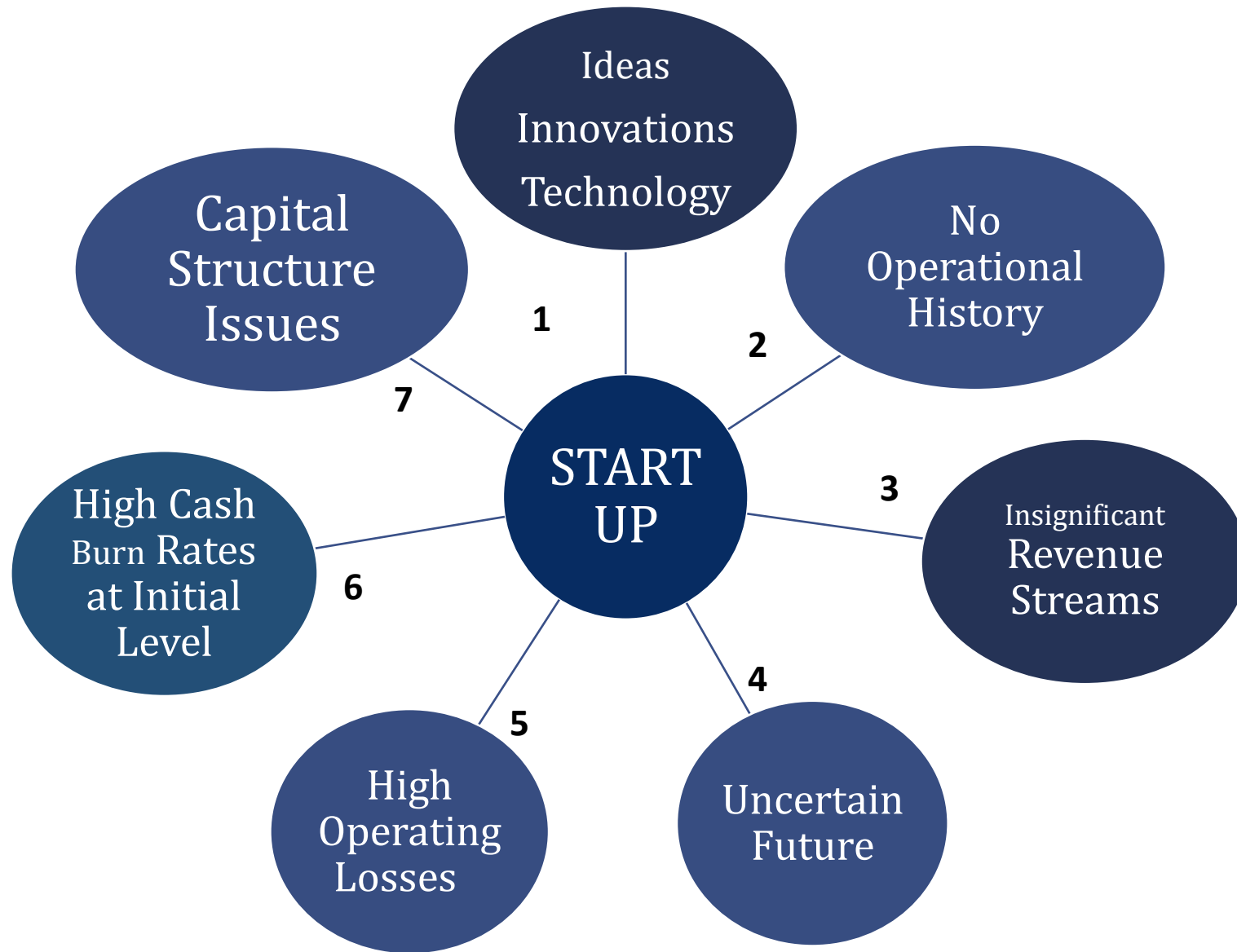
KEY ISSUES / DARK SIDE FOR STARTUP VALUATION

Understanding Innovations vis-à-vis Business Plan & Market Potential

Key Persons Association with this activities / Other Activities

Unclear Road map

STARTUP VALUATION Dark Side / Key Issues

Equity Required to be diluted Frequently

Future Uncertainty

Absence of Fund Clarity for Business Growth

Absence of Operating History
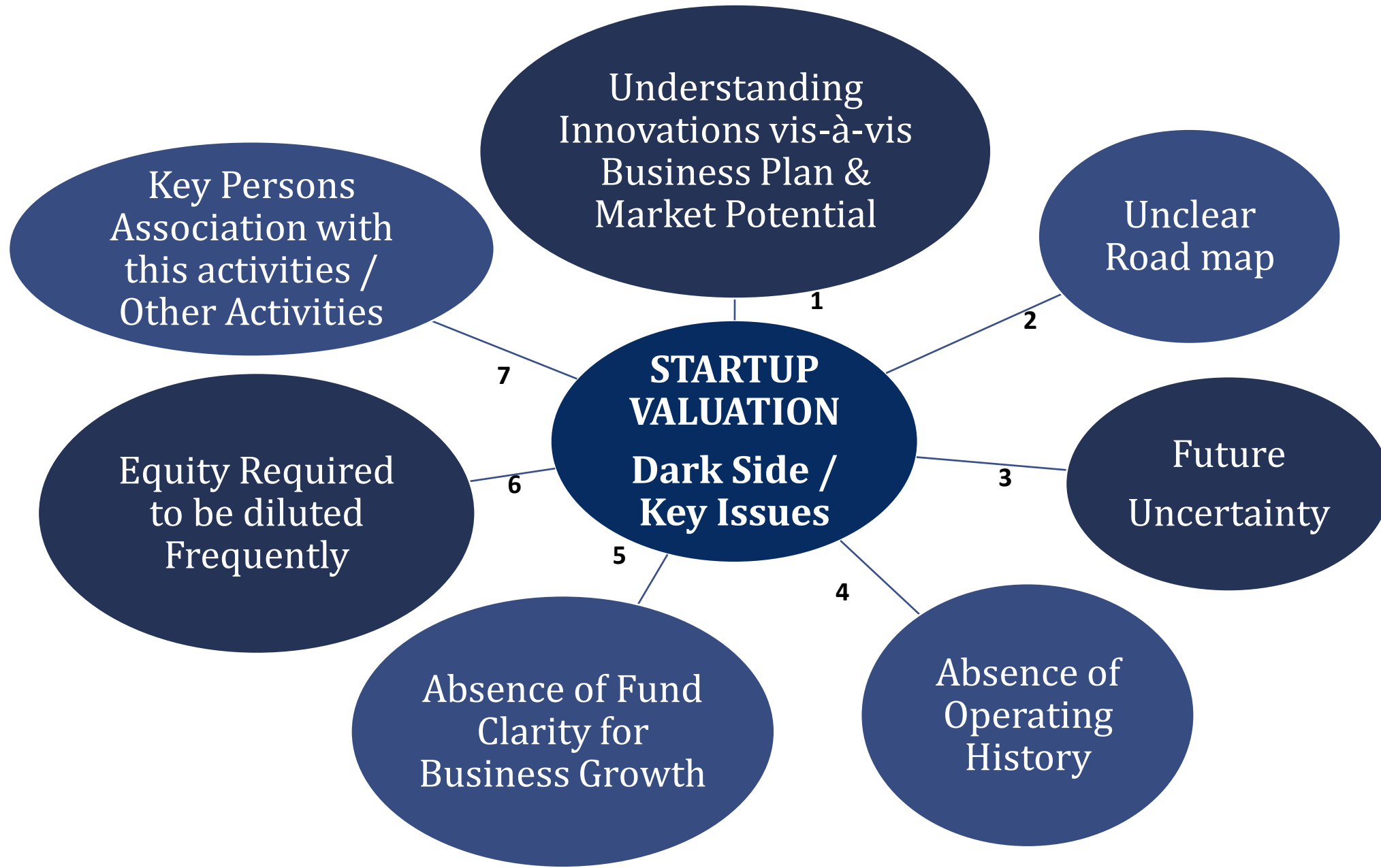
START-UP DUE-DILIGENCE POINTS FOR VALUATION

❑ **IDEA – INNOVATIONS – TECHNOLOGY:**
• Is it new? Or is it only shift from existing?
• Whether it can be separately identified / transferred / sold ?
• Whether it is patented? Or capable of being patented?
• Whether control & legal right can be exercised by the company over that ?
• Does it satisfy need of consumer?
• Is it a disruptive in market?
• Do they have an early mover advantage?
• Is the sector regulated? What are the risks?

❑ **PROMOTERS / FOUNDERS:**
• Are they trustworthy?
• Are they capable?
• Do they have relevant experience?
• Do they have other businesses to divide focus?
• Whether this is first business activity or they have any success or failure ratio in past?
• Do they have a good management team to support their vision?
• Do they have Long term commitment?
• Do they want to commit themselves contractually ?
• Do they want to sign non-competence agreement with company?
• Salary / benefit promoter / founder wants to draw till business can be converted into profit vis-à-vis their market worth.

START-UP DUE-DILIGENCE POINTS FOR VALUATION

❑ **BUSINESS & INDUSTRY:**
- Is the product prototype ready? Does it need further testing?
- By when commercial launch possible?
- What is progress of the product / project development?
- What are the Business Plans ? & what is progress vis-à-vis Business Plans?
- Whether all type of scenario & adverse situation if any covered in Business Plan?
- Are there any direct competitors? What are their size & capacity vis-à-vis our company?
- How will those competitors react to the product?
- How big is the addressable market? How start-up can place them in the market?

❑ **FUNDING:**
- Have the promoters put all that they have?
- How the funding pattern at each stage has been projected in Business Plan?
- What if those fund not received at later stage as per expectation of business?
- Whether promoter has any thought over potentially interested investors at each stage?
- What are the exit planning for investors ? M & A / IPO etc.

❑ **FINANCIAL PLANNING:**
- Is financial projections in line with Business Plan?
- Assumptions prepared for projections with management in-depth analysis or it is being prepared only by finance person?
- Visibility on revenue generation?
- Are in-depth forecasts prepared?
- By when and how much is the business likely to start making profits?
- Will the business require more funding going forward?
- How further funding need would be fulfilled?

VALUATION METHODS:

1. Discounted Cash Flow Method

2. Relative Method

3. Venture Capital Method

4. First Chicago Method

5. Scorecard Method

6. Berkus Method

7. Risk Factor Summation Method

8. Back solve Method

1. DISCOUNTED CASH FLOW METHOD:

Valuation based on Cash Flow Projections for Explicit Period, Capital Invested, Reinvestment Required, Discount Rate, Terminal Value. Exit Multiple etc.

Two Approaches can be used for DCF:

(a) Top line approach (Market size-Market Share-Margins-Investment Required-Tax).

(b) Bottom line approach (Investment-Capacity-Revenue-Margin-Tax-Reinvestment).

Key Factors

Existing Assets	It represents small portion of firm's overall value. Resources can't be deployed considering that value.
	Absence of historical data.
	Bifurcation of Accounting Balance Sheet and Valuation Balance Sheet.
Growth Assets	Past could not be base for estimation of future.
	Current operating loss make difficult to project future operating margin.
	Value is created only when return on capital is higher than cost of capital of growth assets.
Discount Rates	Difficult to have data of start up companies & comparable transactions.
	To apply Discount & Premiums on beta for making adjustment of liquidity & control.
	At Initial stage, generally cost of equity becomes cost of firm.
Terminal Value	It generally occupies major part of firm value.
	Difficult to identify explicit period of projection & Stable Growth thereafter.
	After explicit period, exit multiple of publicly traded firm can be used for terminal value.

2. RELATIVE VALUATION:

Valuation based on CCM (Comparable company method) & CTM (Comparable transaction method).

Key Factors

What are the comparable companies?

Young companies should be compared to young companies only in same business, however they are generally not publicly traded.

In absence of comparison with young companies, same business companies can be compared, however those firms are very different in size, risk, cash flow, growth, period of existence.

Generally due to loss in early life cycle, profit multiple like PE ratio & EBIDTA multiple cannot be used.

Which Multiple to use for comparison?

Revenue & Book value multiple are difficult to compare if at early stage revenue & book value has also not start reflecting on your financials.

Relative Valuation is easy solution to value for start-up due to estimation challenges in DCF (intrinsic valuation).

3. VENTURE CAPITAL METHOD:

It was first described by Professor William Sahlman at Harvard Business School in 1987.
It's most common approach to value young companies. It is Valuation based on expectation of venture capital investor.

Step 1
- Forecast the revenue for the period venture capital wants to invest in start-up.

Step 2
- Find out Equity value at the end of forecast period
- a) by Expected Earning * Expected P/E
- b) Expected Revenue * Expected EV/Sales.
- Business model will decide to use revenue multiple or earning multiple.

Step 3
- Discount equity value arrived as above with targeted rate of return to arrive at present value.
- Targeted Rate of Return is rate expected by Venture Capital Investor.

Step 4
- Value arrived at above is pre-money value.
- Post Money Value = Pre-money value + New capital infusion by venture capital investor.

Step 5
- Proportion of share of venture capital investor = New Capital Provided / Post Money Valuation.

3. VENTURE CAPITAL METHOD:

Key Factors	
	Used largely by venture capital funds/early stage investors for valuing start-up ventures.
	Investor will try to obtain return on its investment commensurate with Risk it perceive.
	This method starts by defining return on investment
	Objective of investor is pre-determined exit date & pre-determined ROI.
	Generally investment are made in multiple tranches, but exit value will remain intact irrespective of investment is made in intervals.
	It focus on revenue & earning and ignore intermediate items like working capital requirements, Capex requirements, etc.
	It ignores cash flow, which is expected to earn after shorter period of projections.
	It considers only equity cost for discounting since venture capital expectation of return is on equity only. However when we value enterprise value by using revenue multiple, it should be discounted by cost of capital invested instead of cost of equity (venture capital investor expectation).

VENTURE CAPITAL METHOD:

Illustration:

				(Amt in INR)
Particulars	**Scenerio 1**	**Scenerio 2**	**Scenerio 3**	**Scenerio 4**
Annual Earning as on date	50,00,000	50,00,000	50,00,000	50,00,000
Growth in Earning	20%	20%	15%	18%
No. of Years to Exit Date	10	10	15	10
Initial Investment by Investor	20,00,000	20,00,000	20,00,000	20,00,000
Required Rate of Return	35%	40%	30%	35%
Annual Earning as on Exit Date	**309,58,682**	**309,58,682**	**406,85,308**	**261,69,178**
P/E Multiple	12	12	15	12
Future Value of Startup	3715,04,184	3715,04,184	6102,79,620	3140,30,136
Value of Firm	**184,76,769**	**128,43,499**	**119,22,809**	**156,18,296**
Equity Stake of Investor	10%	12%	14%	25%
Current Share Outstanding	10,00,000	10,00,000	10,00,000	10,00,000
Total Outstanding Shares	11,11,111	11,36,364	11,62,791	13,33,333
Number of Shares owned by Investor	1,11,111	1,36,364	1,62,791	3,33,333
Share Price	**16.63**	**11.30**	**10.25**	**11.71**
Pre Money Valuation	**166,29,092**	**113,02,279**	**102,53,616**	**117,13,722**
Post Money Valuation	**184,76,769**	**128,43,499**	**119,22,809**	**156,18,296**

4. FIRST CHICAGO METHOD:

- The First Chicago Method was developed by, and consequently named for, the venture capital arm of the First Chicago bank.
- It is a hybrid between Discounted Cash Flow and Multiple-based approach.

Step 1
- Prepare projected Financial statement of the company & arrive at future profit / cash flow under 3 various scenario as "Best case", "Worst case" and "Base case".

Step 2
- Find out present value under each scenario.

Step 3
- Find out Comparable Companies / Comparable Transactions based on their business model and Size and calculate their Market multiple to arrive EV.

Step 4
- Apply it to target company. (EV/ EBIDTA, Sales Multiple, PE Multiple, Non-financial multiple).

Step 5
- Assign Probability estimates to each scenario based on the stage of development and qualitative factors.

Step 6
- Carry out weighted average calculation based on NPV under each scenario & probability factor of each scenario.

Step 7
- Arrive at Enterprise value & Equity value of target company based on that.

4. FIRST CHICAGO METHOD:

Key Factors	It tries to capture the risk involved in projections of future cash flows at various scenarios being "Best case", "Worst case" and "Base case".
	Method requires lengthy calculation to calculate DCF value of all scenario & at end It arbitrarily put weighted average of all the scenario.

FIRST CHICAGO METHOD:

Illustration:

(Amt in Crore Rs.)			
Particulars	**Success (Best)**	**Survival (Base)**	**Failure (Worst)**
Projected sales of the Company for year ended 2020	100	75	50
Projected PAT of the Company for year ended 2020 (20% of Sales)	20	15	10
Present Value Factor [10%]	0.91	0.91	0.91
Adjusted Revenue of the company	18.18	13.64	9.09
Industry Adjusted Average (P/E Multiple)	12	12	12
Value of Operations of the company as per CCM	218.18	163.64	109.09
Probability of each scenerio	25%	50%	25%
Weighted Average Net Present Value	**163.64**		

5. SCORECARD METHOD:

- Scorecard method also known as Bill Payne's method.
- It is one of the most prevalent method used by angels to value an early stage start-up.

Step 1
- Identify the Value Driver (Strength of the Management, Team, Size of the Opportunity, Product/Technology, Competitive Environment, Marketing/Sales Channels/Partnerships, Need for Additional Investment, others if any) along with their weight %.

Step 2
- Assign Target Company score Between -2 to +2 (1 being average, <1 being below average and >1 being above average).

Step 3
- The said scores are multiplied with the corresponding weights to arrive at a weighted average factors (Adjusted factor).

Step 4
- Find out the comparable company across similar sectors for which pre-money valuation has already been arrived at & average out sector valuation.

Step 5
- Assign Adjusted Factor to Average valuation of comparable company arrived as above to arrive Pre-money valuation of Target Company.

5. SCORECARD METHOD:

Key Factors	
	This method gives more weightage to the quality of the startup as of today rather than the uncertain sales which it can generate in the future.
	However, it is not free from bias as the value is more or less dependent on the judgement of the valuer.
	The method requires one to first arrive at a range of comparable companies

SCORECARD METHOD:

Illustration:

Value Driver	Weight	Target Company's Score	Factor	Comment
Strength of the Management Team	30%	0.9	0.27	Improvement needed
Size of the Opportunity	25%	1.25	0.31	Achievable
Product/Technology	15%	1.25	0.19	Patented
Competitive Environment	10%	1.6	0.16	Less Competition
Marketing/Sales Channels/Partnerships	10%	0.3	0.03	Weak sales network
Need for Additional Investment	5%	0.12	0.01	High
Other	5%	1	0.05	Average
	100%		**1.02**	

Comparable Company	Pre-Money Valuation
A	230,00,000
B	420,00,000
C	120,00,000
D	60,00,000
E	130,00,000
Average	192,00,000
Adjusted Factor	1.02
Pre Money Valuation of your venture	**195,07,200**

6. BERKUS METHOD:

- Berkus method was first introduced by Mr. Dave Berkus, a renowned author and startup angel investor from California.
- This method supposes that once a company starts generating revenue, this method is no longer applicable, as everyone will use actual revenues to project the value of the startup.

Step 1
- The maximum value that can be attributed to the firm is $ 2.5 Million post rollout. The top line to be achieved in the 5th year is $ 20 Million. Maximum value attributable to the firm is 12.5% of its expected revenue in the 5th year.

Step 2
- As per Indian Scenario project the 5th year revenue of the startup. The maximum value that can adopted will be 12.5% of the said revenue.

Step 3
- The value so arrived can be divided by 5 to account for the parameters mentioned in the Berkus method as: a) Sound Idea b) Prototype c) Quality Management Team d) Strategic Relationship e) Product Rollout or Sales.

Step 4
- Bifurcate same into 0%, 20%, 40%, 60%, 80%, 100%.

Step 5
- Assign to maximum value of each parameters.

6. BERKUS METHOD:

Key Factors	Once a company starts generating revenue, this method is no longer applicable, as everyone will use actual revenues to project the value of the start-up.
	It arbitrarily projects maximum value can be assigned as 12.5% of the 5th year revenue, without considering, profitability margin, investment & re-investment required, cash-flow generation possible etc.

BERKUS METHOD:

Illustration:

Revenue expected in 5 years	3000,00,000
Maximum value @ 12.5% of Sales	375,00,000

If Exists	Parameter	Maximum value	0	1	2	3	4	5	Total
			0%	20%	40%	60%	80%	100%	
Sound Idea	Basic Idea	75,00,000			√				30,00,000
Prototype	Reducing Technology Risk	75,00,000				√			45,00,000
Quality Management Team	Reducing Execution Risk	75,00,000					√		60,00,000
Strategic Relationship	Reducing Market Risk	75,00,000		√					15,00,000
Product Rollout or Sales	Reducing Production Risk	75,00,000			√				30,00,000
Maximum value to be adopted		**375,00,000**							**180,00,000**

7. Risk Factor Summation Method:

- This method was first described by the Ohio TechAngels.
- It can be described as a combination of both Scorecard as well as the Berkus method.
- It considered a much wider set of risk factors in arriving at a pre-money valuation giving regard to qualitative factors intrinsic in the start-up.
- This method forces investors to think about various types of risks.

Step 1
- Find out pre-money valuation of the company. Say at pre-defined multiplier to total Revenue.

Step 2
- Put 12 Risk parameter (Management, Stage of the startup, Legislation/Political risk, Manufacturing risk, Sales and marketing risk, Funding/capital raising risk, Competition risk, Technology risk, Litigation risk, International risk, Reputation risk, Potential lucrative exit) in column.

Step 3
- Pre-decide value of 'Total Parameter' say at % of total Revenue for evaluation purpose.

Step 4
- Divide that Total Parameter with 12 Risk factor.

Step 5
- As Risk parameters provided to assess the start-up. The parameter needs to be given range of point from -2 to +2, based on start-up evaluation where it stands.

Step 6
- Give weightage of total parameter value for particular Risk to point given.

Step 7
- Make total of all such Risk Parameter weightage.

Step 8
- Reduce / Add to Pre-Money Valuation.
- Pre-money valuation is adjusted for such evaluation of risk factors.

7. Risk Factor Summation Method:

Illustration:

Particulars	Value (INR)
Revenue of the 5th year (Assumed)	25,00,000
Multiplier (P/E Ratio assumed for Valuation)	12
Pre-Money valuation	**300,00,000**

Risk Parameter Value Assumed 1.25% of Revenue	**31,250**

Pre-Money Valuation	**300,00,000**
Less: Risk Summation	**1,25,000**
Risk Adjusted Pre-Money valuation of the startup	**298,75,000**

Risk Factor	Rating [A]	Risk Parameter Value [B]	Risk Weighted Value (INR) [C=A*B]	Comment
Management	2	31,250	62,500	Very Efficient
Stage of the startup	1	31,250	31,250	Prototype functions
Legislation/Political risk	1	31,250	31,250	Low
Manufacturing risk	-2	31,250	-62,500	Subject to Government Norms
Sales and marketing risk	1	31,250	31,250	Good sales team in place
Funding/capital raising risk	2	31,250	62,500	Low
Competition risk	0	31,250	-	Average
Technology risk	-1	31,250	-31,250	Subject to technological obsolescence
Litigation risk	-1	31,250	-31,250	Alternative of Patented technology exists
International risk	1	31,250	31,250	Low
Reputation risk	-2	31,250	-62,500	Individual entity
Potential lucrative exit	2	31,250	62,500	Buyers in the market exist
Risk Summation	**4**		**1,25,000**	

8. Backsolve Method:

- Backsolve method which is a variant of Option Pricing Model.
- The Backsolve method uses Black-Scholes-Merton option pricing equation to estimate the value of the start-up.
- One of the lesser known valuation methodology used in startup valuation.
- The first step involves determining the claims on the equity value and the resulting "breakpoint" at which different securities would benefit.
- It is presumed that preference share will exercise at particular price breaches only.
- The Risk Free Rate, Volatility of comparable companies & expected time to exit are used as input Black-Scholes-Merton Model. This is the method generally used for option valuation.

Formula:

$$C = SN(d_1) - N(d_2)Ke^{-rt}$$

C = Call premium
S = Current stock price
t = Time until option exercise
K = Option striking price
r = Risk-free interest rate
N = Cumulative standard normal distribution
e = Exponential term

s = St. Deviation
ln = Natural Log

$$d_1 = \frac{\ln\left(S/K\right) + \left(r + s^2/2\right)t}{s \cdot \sqrt{t}}$$
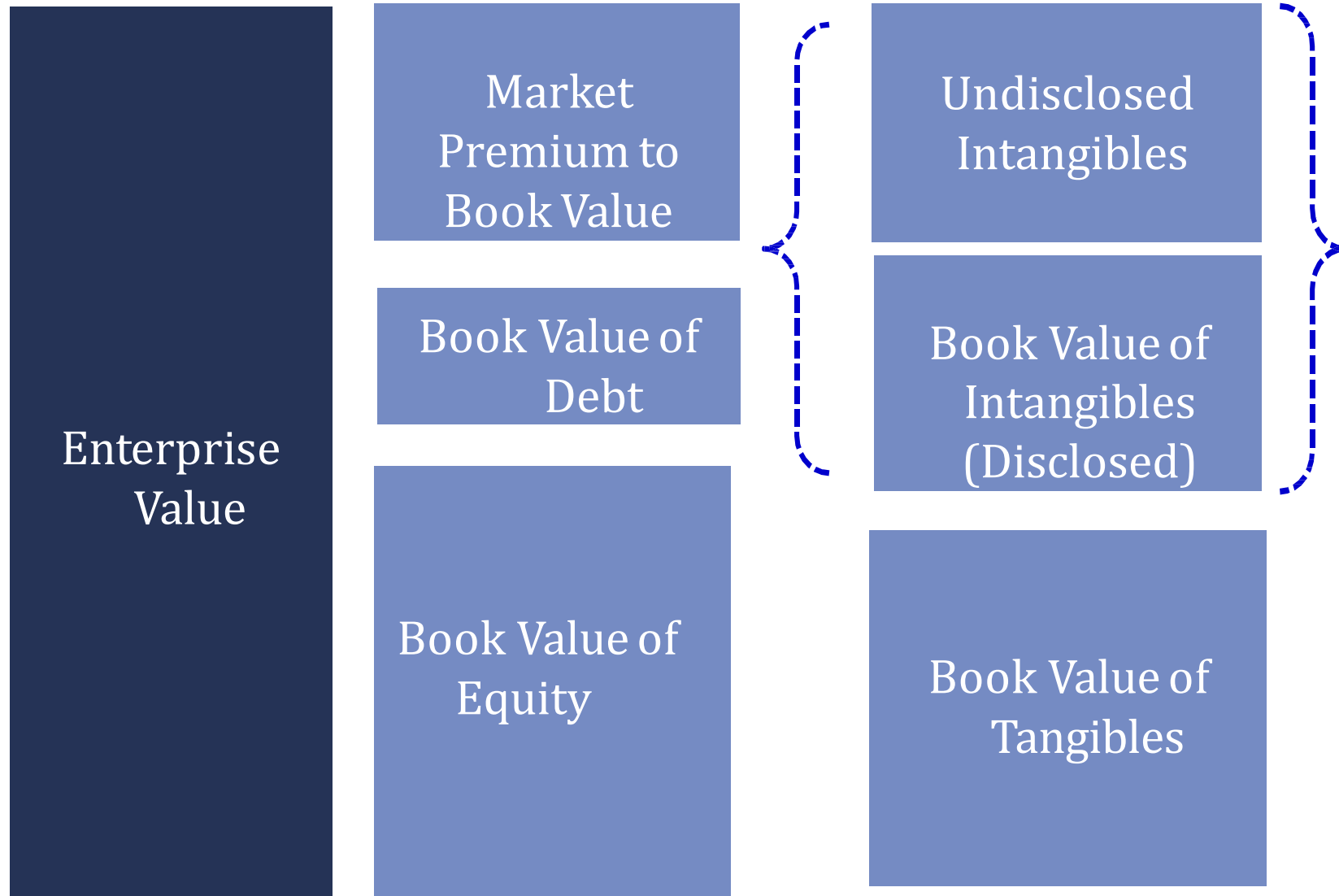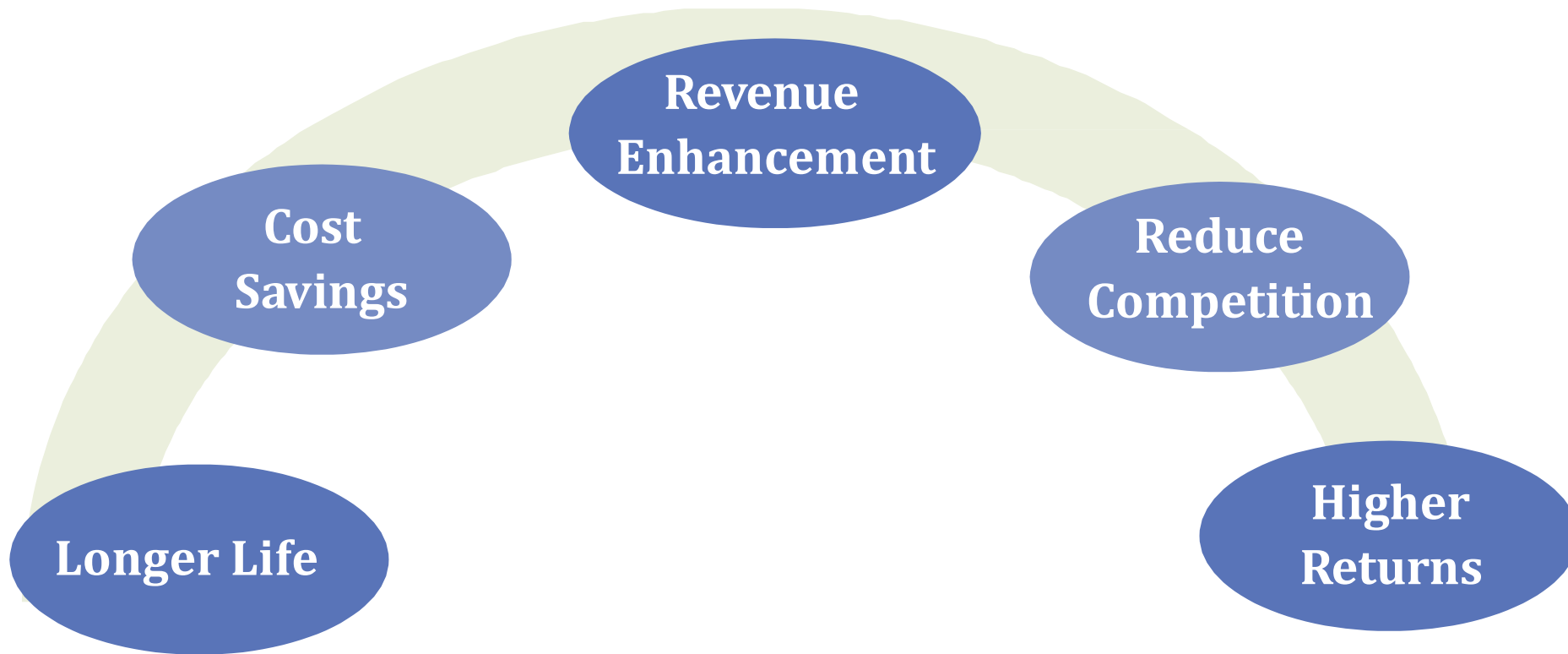
$$d_2 = d_1 - s \cdot \sqrt{t}$$

VALUATION OF INTANGIBLES

INTANGIBLE VALUE PERSPECTIVE:

WHAT INTANGIBLE ASSET IS IMPORTANT? – A BUSINESS PERSPECTIVE

Revenue Enhancement

Cost Savings

Reduce Competition

Longer Life

Higher Returns

Why are Intangibles Important?

WHAT IS INTANGIBLE ASSETS?

IND AS - 38 → Identifiable
Non-Monetary **asset**
Without Physical substance.
It is a Resource:

- _**controlled**_ by an entity as a result of past events
- from which _**future economic benefits**_ are expected to flow to the entity

Indian Valuation Standard - 302 → Identifiable
Non-Monetary **asset**
Without Physical substance.

International Valuation Standard - 210 → **Non-monetary _asset_**
that manifests itself by its economic properties.

- It **does not have physical substance**
- **grants rights and/or economic benefits to its owner**.

HOW TO IDENTIFY INTANGIBLE ASSETS:

Identify Intangible assets that may qualify for Separate recognition

Does the Intangible asset meet the contractual-legal criterion?

Yes

No

Does the Intangible asset meet the separability criterion?

Yes

Is there as restriction on the transfer or sale of the asset?

No

Recognize separate intangible asset at fair value

No

Yes

Do not recognize a separate intangible Asset

CHARACTERISTICS OF INTANGIBLE ASSETS:

Identifiable

Capable of Sold / transferred / licensed / rented / exchanged / along with related contract, assets & liabilities

e.g. Key person expertise in consulting business is not identifiable.

Non-Monetary

No right to receive a fixed / determinable amount of money.

e.g. Financial Investments are monetary. Hence, not intangible asset.

Without Physical Substance

Which is not tangibles.

e.g. Control, Goodwill, etc.

Non-monetary *asset* that manifests itself by its economic properties.

Does not have physical substance

Grants rights and/or economic benefits to its owner.

PURPOSE OF VALUATION OF INTANGIBLE ASSETS:

Purchase Price Allocation - for accounting and financial reporting
[Ind AS 103 *Business Combination*]

Intangible as collateral – for financing purpose

Impairment Testing [Ind AS 36 *Impairment of Assets*]

Litigation – to determine compensation in case of dispute / breach of contract / agreement / rights.

Transfer Pricing – for transfer / license in/out between companies / geographies location.

Bankruptcy / Restructuring.

Slump Sale – Purchase price allocation for tax deduction.

Insurance – to determine Personal worth of celebrity

Merger & Acquisition Transaction – Purchase price allocation to brand / license / patent / technical know-how etc.

Issue Sweat Equity Shares – Issue of shares against technical know-how/ technical expertise / intellectual property.

RECOGNITION OF INTANGIBLE ASSETS:

Purpose	Separately Acquired	Part of Business Combination	Government Grant
Which Value?	Cost	Fair Value at the acquisition date	Fair Value OR Nominal Amount + directly attributable expenditure
Example	Software for its Internal Use	Distribution rights along with Business acquisition	-Government Grant for Capital Assets -Drug License received from Government free of cost
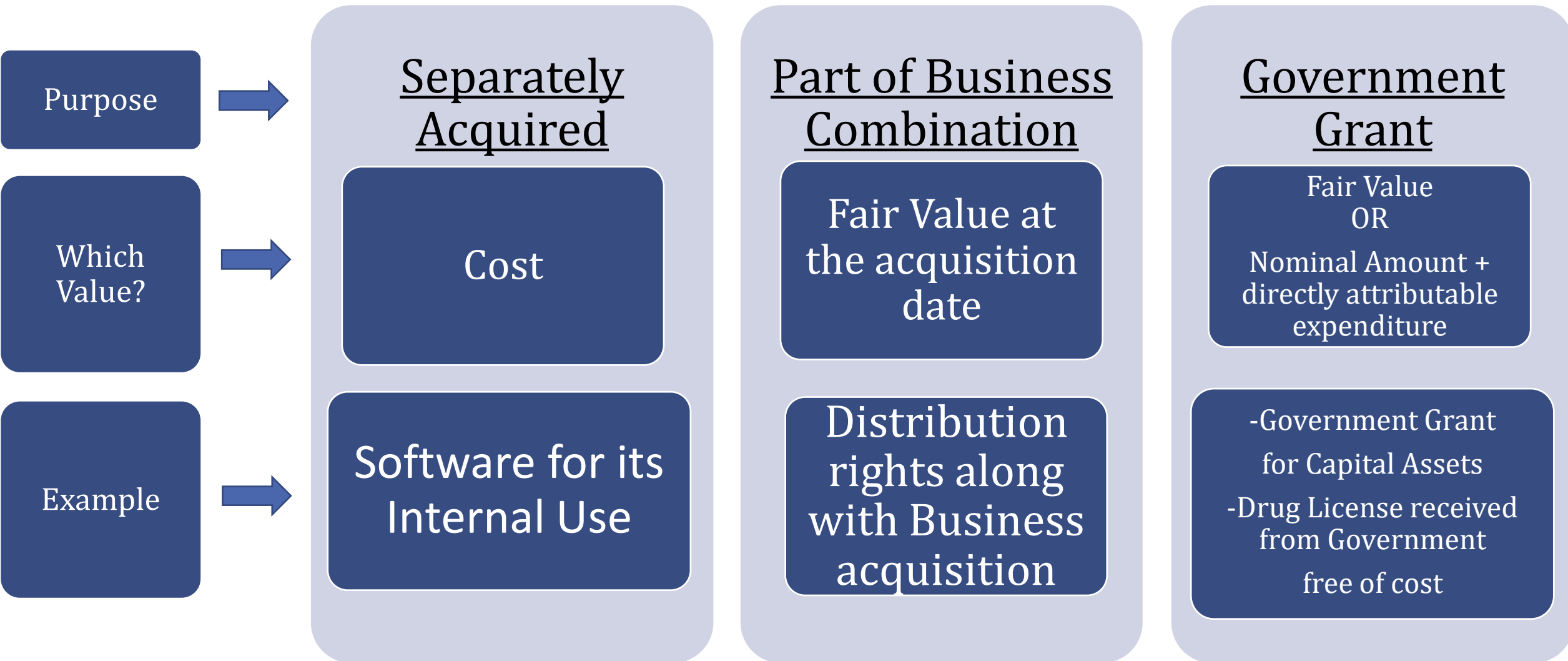
RECOGNITION OF INTANGIBLE ASSETS:

Purpose → **Exchange of Intangible Assets**

Which Value? →

Example →

Exchange of Intangible Assets

Fair Value

If Fair Value not possible, then carrying amount of asset given up

Software in exchange of License

Internally generated intangible assets

Directly attributable costs

Cost incurred to develop new product

Internally generated goodwill

Not to be recognized as an asset

BROAD CATEGORIES OF INTANGIBLE ASSETS: (Not Exhaustive):

Customer-based

- Customer Contracts
- Customer Relationships
- Order Backlog
- Customer Lists

Marketing-based

- Trademark
- Brand
- Trade name
- Internet Domain name
- Trade Design

Contract-based

- Lease Agreements
- Non-compete Agreements
- Licensing Agreements
- Royalty Agreements
- Employment Contracts

Technology-based

- Patents
- Know-how
- Trade secrets
- Copyrights
- Processes
- Software
- Designs
- Formulae

Artistic-based

- Films and music
- Books
- Plays
- Copyright (non-contractual)

VALUATION APPROACHES:

Indian Valuation Standard 103 *Valuation Approaches and Methods*

International Valuation Standard 105 *Valuation Approaches and Methods*

Market Approach — Not Commonly Used

- Price / Valuation Multiples / Capitalisation Rates
- Guideline Pricing Method

Income Approach — Preferred Approach

- Multi Period Excess Earning Method
- Relief from Royalty Method
- With or Without Method or Premium Profit Method
- Distributor Method
- Greenfield Method

Cost Approach — No Connection to Future Financial Benefits

- Reproduction Cost Method
- Replacement Cost Method

RELIEF FROM ROYALTY METHOD

The value of total costs saved in form of Royalty payment by owing & operating Intangible assets.

Description

Determines value by reference to the hypothetical royalty payments that would be saved through owning the asset, as compared with licensing the asset from a third party.

Frequent Applications

- Brand (most common);
- Technology; and,
- Know-how.

$$FV = PV(r) \sum_{t=0}^{t} \left\{ \begin{array}{c} \text{Revenue} \\ X \\ \text{Royalty(1-Tax)} \end{array} \right\}$$

(1) Revenue
(2) $\sum$
(3) Royalty(1-Tax)
(4) PV(r)

Key Inputs

1. Revenue forecast associated with the intangible asset being valued
2. Expected life of the intangible
3. Notional royalty rate applicable to the intangible
4. Discount rate

Diligence Matters

- Revenues that are not attributable to the intangible (i.e. non-brand product revenues)
- Length of economic benefit of the asset
- Appropriateness of observable comparable used to derive a notional royalty rate
- Risk premiums included in the discount rate

Relief from Royalty (RFR) – Royalty Rate Determination

Determination of royalty rates involves assessment of market licensing transactions. However, the RFR Method is an Income Approach to value. There are several different methods for estimating a royalty rate. These include:

Transaction based royalty rate	• Royalty rate based on market transaction
	  ○ *Existing licenses of subject*
	  ○ *Guideline licenses*
	  ○ *Most commonly used*

Excess Earning (MPEEM)	• Royalty rate based on a residual income analysis similar to that applied in applying the MPEEM
Profit Split Method	• Profitability of subject operations relative to competitors – • i.e. With or Without Intangible

Estimate of royalty rate from a meaningful market transaction is preferred, if feasible

Probable Sources for Royalty Rates	https://www.royaltyrange.com, https://www.royaltystat.com, https://www.royaltysource.com, https://www.sectilis.com, https://www.ipscio.com, https://www.bvresources.com, https://www.markables.net, https://www.ibm.gov.in, https://www.iimb.ac.in, https://www.indexmundi.com

Average Royalty Rates are ranging from 2% to 10% of Total Revenue OR say 25% to 33% of Margin. This is just Thumb Rule.

RELIEF FROM ROYALTY METHOD

ILLUSTRATIONS:

					(Rs. In Crores)
	Projected				
Particulars	**1**	**2**	**3**	**4**	**5**
Total Revenue	100.00	105.00	110.25	115.76	121.55
Probability of continuing trade name in respective year	100%	100%	100%	100%	100%
Relief from Royalty % to turnover	8%	8%	8%	8%	8%
Relief from Royalty in Amount	8.00	8.40	8.82	9.26	9.72
Taxes %	25.168%	25.168%	25.168%	25.168%	25.168%
Taxes Amount	2.01	2.11	2.22	2.33	2.45
Royalty Cash Flows (post tax)	**5.99**	**6.29**	**6.60**	**6.93**	**7.28**
PV Factor (As per Average WACC)	0.93	0.80	0.69	0.59	0.51
Present Value of Cash Flows	5.55	5.02	4.53	4.10	3.70
Terminal Value	26.60				
Sum of the present value of cash flows (including Terminal Value)	**32.15**				
Tax amortisation Benefit Factor	1.20				
Tax amortisation Benefit	6.31				
Fair Value of Brand	**38.46**				
WACC Considered for Terminal Value	16.20%				
Perpetual Growth Rate Considered for Terminal Value	2.00%				

MULTI-PERIOD-EXCESS-EARNING-METHOD (MPEEM)

The present value of Incremental after-tax cash flow (excess earning) attributable to the intangible asset to be valued over its remaining useful life. (Generally Used for Primary Intangible Assets)

Description

The present value of the earnings attributable to the subject intangible asset after providing for the proportion of the earnings that attribute to returns for contributory assets. In order to determine a fair return on and/or of these contributory assets, their value must be capable of being determined in priority.

Frequent Applications

- Customer relationships
- Vendor relationships
- Technology
- IP and R&D
- Order backlog
- Licenses

$$FV= PV(r) \sum_{t=0}^{t} \left\{ \begin{array}{c} \text{Revenue} \\ - \\ \text{Expenses} \\ - \\ \text{CAC's} \\ - \\ \text{Tax} \end{array} \right\} + \begin{array}{c} PV(r) \\ \text{Tax} \\ \text{Benefit} \end{array}$$

Key Inputs

1. Applicable revenue forecast
2. Applicable expenses
3. Contributory asset charges ("CAC")
4. Expected future tax rates
5. Expected life
6. Discount rate
7. Tax amortization benefit(asset values, tax rates, tax amortization rates)

Diligence Matters

- Revenue migration/attrition rate
- Expenses saved or to be excluded from the earnings attributable to the asset (i.e. S&M)
- Valuation/selection of the contributory assets and the rates of return used in calculation
- Consistency of expenses and CAC"s
- Risk premiums included in the discount rate

MULTI-PERIOD-EXCESS-EARNING-METHOD (MPEEM)

ILLUSTRATIONS:

					(Rs. In Crores)
		Projected			
Particulars	**Mar-20**	**Mar-21**	**Mar-22**	**Mar-23**	**Mar-24**
Revenue from Customer Relationship	**1,000**	**800**	**600**	**400**	**200**
EBIT Margin	15%	16%	17%	17%	17%
Earning before Tax	**150**	**128**	**102**	**68**	**34**
Less : Tax @ 25.168%	37.75	32.22	25.67	17.11	8.56
Earning after Tax	**112.25**	**95.78**	**76.33**	**50.89**	**25.44**
Contributory Asset Charges					
Tangible (1%)	10	8	6	4	2
Intangible (2.5%)	25	20	15	10	5
Excess Earnings	**77.25**	**67.78**	**55.33**	**36.89**	**18.44**
Discounting Factor (14%)	0.88	0.77	0.67	0.59	0.52
PV of Excess Earning	**67.76**	**52.16**	**37.35**	**21.84**	**9.58**
Total Present Value	**188.68**				
Tax Amortisation Benefit Factor	1.20				
Tax Amortisation Benefit	37.03				
Value of Intangibles	**225.71**				

WITH-AND-WITHOUT METHOD

The value of intangible asset computed by comparing 'With Intangible Scenario' & 'Without Intangible Scenario'.

Description	Frequent Applications
Estimates the fair value of an asset by comparing the value of the business inclusive of the asset, to the hypothetical value of the same business excluding the asset.	• Non-competition agreements; • Franchises; and • Processes and technologies.

$$FV = PV_1(r) \sum_{t=0}^{t} \left\{ \begin{array}{c} \text{Revenue} \\ - \\ \text{Expenses} \\ - \\ \text{CapEX/WC} \\ - \\ \text{Taxes} \end{array} \right\} - PV_2(r) \sum_{t=0}^{t} \left\{ \begin{array}{c} \text{Revenue} \\ - \\ \text{Expenses} \\ - \\ \text{CapEX/WC} \\ - \\ \text{Taxes} \end{array} \right\} + PV_3(r) \quad \text{Tax Benefit}$$

Key Inputs

1. Free cash flow forecast for business 'with' asset
2. Enterprise-wide discount rate
3. Expected life of business
4. Free cash flow forecast excluding subject asset
5. Enterprise-wide discount rate excluding asset
6. Expected period to replace asset + costs
7. Tax amortization benefit (asset values, tax rates, tax amortization rates)

Diligence Matters

• Identification of incremental income
• Length of recreation period and pattern of ramp-up
• Assumption around competition and market share
• Cost of recreation
• Incremental risk to business cost of capital excluding asset

WITH-AND-WITHOUT METHOD

			Projected			(Rs. In Crores)
Particulars		**1**	**2**	**3**	**4**	**5**
Total Revenue (Branded)		100.00	105.00	110.25	115.76	121.55
Total Revenue (Non-Branded / Generic) with equivalent Qty. (90%)		90.00	94.50	99.23	104.19	109.40
Difference in Revenue Due to Brand		**10.00**	**10.50**	**11.03**	**11.58**	**12.16**
Branding Expenses (2%)		2.00	2.10	2.21	2.32	2.43
Incremental Cash Flow due to Brand (PreTax)		**8.00**	**8.40**	**8.82**	**9.26**	**9.72**
Taxes %		25.168%	25.168%	25.168%	25.168%	25.168%
Taxes Amount		2.01	2.11	2.22	2.33	2.45
Incremental Cash Flow due to Brand (Post Tax)		**5.99**	**6.29**	**6.60**	**6.93**	**7.28**
PV Factor (As per Average WACC)		0.93	0.80	0.69	0.59	0.51
Present Value of Cash Flows		5.55	5.02	4.53	4.10	3.70
Terminal Value		26.60				
Sum of the present value of cash flows (including Terminal Value)		**32.15**				
Tax amortisation Benefit Factor		1.20				
Tax amortisation Benefit		6.31				
Fair Value of Brand		**38.46**				
WACC Considered for Terminal Value		16.20%				
Perpetual Growth Rate Considered for Terminal Value		2.00%				

GREENFIELD METHOD

It is assumed that Intangible Assets to be valued in only assets with all other tangible & intangible assets to be created, leased or acquired. Replacement cost of those other assets required to be built or brought is subtracted.

Description	Frequent Applications
Estimates the value of the asset based on the discounted cash flows of a notional start-up business with no assets but the subject intangible.	• Non primary income generating assets • Licenses and permits; • Rights • Franchise agreements

$$FV= PV(r) \sum_{t=0}^{t} \left\{ \begin{array}{c} \text{Revenue} \\ - \\ \text{Expenses} \\ - \\ \text{CapEX / WC} \\ - \\ \text{Tax} \end{array} \right\} + \begin{array}{c} PV(r) \\ \text{Tax} \\ \text{Benefit} \end{array}$$

(1) Revenue
(2) Expenses
(3) t=0
(4) PV(r) Tax Benefit

Key Inputs	Diligence Matters
(1) Start-up cashflow forecast, including capital costs (2) Expected explicit period and pattern (3) Start-up-type discount rate (4) Tax amortization benefit (asset values, tax rates, tax amortization rates)	• Support for start-up levels of income and capital costs • Support for length and pattern of explicit period • Assumption around competition and market share • Incremental risk premiums in discount rate to reflect start-up nature of cash flows

DISTRIBUTOR METHOD

Description

This is variant of MEEM. The fundamental assumption is that cash flow of each segment of a particular businesses are expected to generate profits.

Frequent Applications

- Valuation of Customer based Intangible Assets

$$FV= PV(r) \sum_{t=0}^{t} \left\{ \begin{array}{c} \text{Revenue} \\ \text{X} \\ \text{Distributor} \\ \text{Margin} \\ - \\ \text{D CAC's} \\ - \\ \text{Tax} \end{array} \right\} + \begin{array}{c} \text{PV(r)} \\ \text{Tax} \\ \text{Benefit} \end{array}$$

Markers: 1 Revenue, 5, t, 2 Distributor Margin, 7 PV(r) Tax Benefit, 3 D CAC's, 6 t=0, 4 Tax

Key Inputs

1. Applicable revenue forecast
2. Comparable Distributor Profit Margin
3. Distributor Contributory asset charges
4. Expected future tax rates
5. Expected life
6. Discount rate
7. Tax amortization benefit (asset values, tax rates, tax amortization rates)

Diligence Matters

- Revenue migration/attrition rate
- Comparable Business Distributor Margin Rate
- Valuation/selection of the contributory assets and the rates of return used in calculation

COST APPROACH (REPRODUCTION/ REPLACEMENT COST)

Description	Frequent Applications
Recreate replica of the asset to be valued, adjusted for obsolescence. **Recreate an asset with substantially same utility (comparable utility)** as that of asset to be valued, adjusted for obsolescence. Estimates the fair value of an asset by approximating its depreciated replacement cost, which would include all costs necessary to construct a similar asset of equivalent utility at prices applicable at the time of reconstruction. The cost approach is based on the premise that a prudent third-party purchaser would pay no more for an asset than its replacement cost.	• Licenses and permits; • Certifications; • Internally-generated software; and • Workforce.

① Replacement / Reproduction Cost New ② (-) Obsolescence Factors

Key Inputs	Diligence Matters
① All hypothetical costs that are needed to recreate the asset including materials and labour ② Adjustment factors to reduce the replacement cost to the functional and technological condition of the subject asset	• Inclusion/exclusion of any overhead costs and the allocation rate used; • Inclusion of opportunity costs; • Functional and technological adjustment factor assumptions. • Inclusion of taxes or tax shield

I value your patience!
I value your listening!

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