Art'o'val Advisors

True Art of Valuation

Valuation Compendium

January 2024

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Overview of Valuation

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Introduction to Valuation

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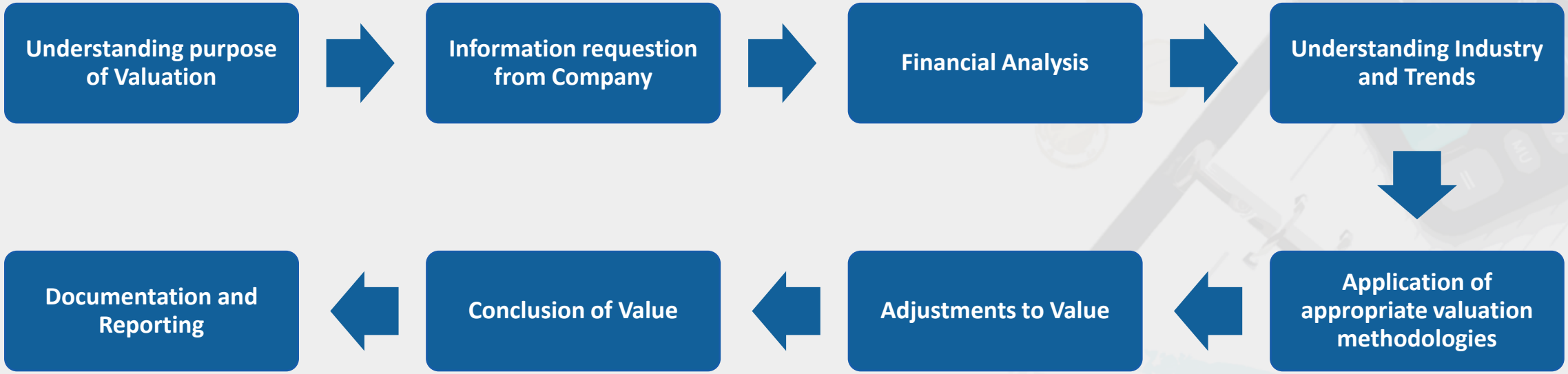
Introduction to Valuation

- Valuation is the process of determining the worth of an asset.
- To do this, it is important to understand what factors contribute to its value.
- While some assets are easier to value than others, the basic principles remain the same.
- When valuing financial assets, three primary approaches can be utilized.
- Steps to follow for a valuation assignment :



Difference between Price and Value

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As legendary investor, Warren Buffet once said, ***"Price is what you pay; value is what you get"***

We often come across two types of statements

An investor does not pay more for an asset than it is worth

The value lies in the eyes of the beholder and any price can be justified if investors are willing to pay the price

Though the above statements may hold some ground while buying art/design where decisions are driven by sentiment or emotion, for financial assets value is to be backed up by reality by estimating the cash flows an asset is expected to generate.

Meaning	Price is the amount paid for the acquisition of a product / service	Value is the utility value/worth of product / service to a consumer
Meaning in short	What you pay	What you get
Determination	Determined from the customer's or marketer's perspective	Determined from the consumer's perspective
Estimation	By policy pricing	By usefulness
Monetary Measurement	Yes	No
	Price is the same for all	Value to each person varies

Valuation Standards (1/2)

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- Standards bring the uniformity in valuation exercise; the International Valuation Standards Council is the body responsible for setting the International Valuation Standards.
- It has issued various valuation standards. In India, ICAI has issued ICAI Valuation Standards 2018 as a benchmark for Valuation Practices applicable for Chartered Accountants for valuation of Securities and Financial Assets.
- The Valuation Standards have been issued by the ICAI to set up concepts, principles and procedures which are generally accepted internationally having regard to legal framework and practices prevalent in India.
- Valuation standards are introduced so that valuation is carried on basis of established principles. ICAI Valuation Standards covers the valuation of financial assets. In India, no other body has issued valuation standards.
- Some of the Registered Valuers Organization has adopted International Valuation Standards (IVS).

ICAI Valuation Standards

- ICAI VS 101 - Definitions
- ICAI VS 102 - Valuation Bases
- ICAI VS 103 - Valuation Approaches and Methods
- ICAI VS 201 - Scope of Work, Analyses and Evaluation
- ICAI VS 202 - Reporting and Documentation
- ICAI VS 301 - Business Valuation
- ICAI VS 302 - Intangible Assets
- ICAI VS 303 - Financial Instruments

International Valuation Standards

- IVS 101 Scope of Work
- IVS 102 Investigations and Compliance
- IVS 103 Reporting
- IVS 104 Bases of Value
- IVS 105 Valuation Approaches and Methods
- IVS 200 Business and Business Interests
- IVS 210 Intangible Assets
- IVS 220 Non-Financial Liabilities
- IVS 300 Plant and Equipment
- IVS 400 Real Property Interests
- IVS 410 Development Property
- IVS 500 Financial Instruments

Valuation Standards (2/2)

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Applicability of Indian Valuation Standards

These ICAI Valuation Standards will be applicable for all valuation engagements carried by Chartered Accountants on a mandatory basis under the Companies Act 2013.

In respect of Valuation engagements under other Statutes like Income Tax, SEBI, FEMA, etc., it will be on a recommendatory basis for the members of the Institute. These Valuation Standards are effective for the valuation reports issued on or after 1st July 2018.

These ICAI Valuation Standards will be effective till Valuation Standards are notified by the Central Government under Rule 18 of the Companies (Registered Valuers and Valuation) Rules, 2018. Till now no Standards has been notified by Central Government.

Purpose of Valuation (1/2)

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Valuation is required to be carried for various purposes. It can be classified broadly under 2 categories – Regulatory and non-regulatory. Valuations are usually carried out in India under various Indian laws :

Company Law	Income Tax Law	SEBI	FEMA – RBI	Insolvency and Bankruptcy Code	Financial Reporting (Ind AS)	Others
Fresh issue of securities	Fresh issue of securities	Fresh issue of securities	Fresh issue of securities – FDI / ODI	CIRP	Purchase Price Allocation	US IRS 409A
Transfer of securities	Transfer of securities	Transfer of securities	Transfer of securities – FDI / ODI	Liquidation	Impairment tests	Succession Planning
Business Combination / Scheme of Arrangement	Sale of business under slump sale	Buyback of shares	Infusion of capital in LLP/partnership firm		Intangible Asset Valuation	Family and Business Disputes
Issue of ESOP / sweat equity	Indirect transfer of shares	Delisting of shares			Financial Instruments	Self-assessment
Purchase Price Allocation	ESOP	Takeover Code			Valuation for Private Equity / Venture Capitalist	
Who can perform Valuation?						
Registered Valuer	Merchant Banker, Chartered Accountant	Registered Valuer, Chartered Accountant	Merchant Banker, Chartered Accountant	Registered Valuer	Registered Valuer	Merchant Banker, Chartered Accountant. Registered Valuer

Purpose of Valuation (2/2)

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Different professionals are required to undertake valuation depending upon the nature of the transaction and law.

E.g., in the case of valuation under 11UA Chartered Accountant is not entitled to carry valuation using Discounting Cash Flow Method.

The same transaction may require different valuation reports under different laws and such valuation may be required to be carried by the different persons.

E.g., Issue of shares - may require valuation by Chartered Accountant under FEMA, Registered Valuer under Companies Act and Merchant Banker under Income-tax Act.

Valuation Methodologies

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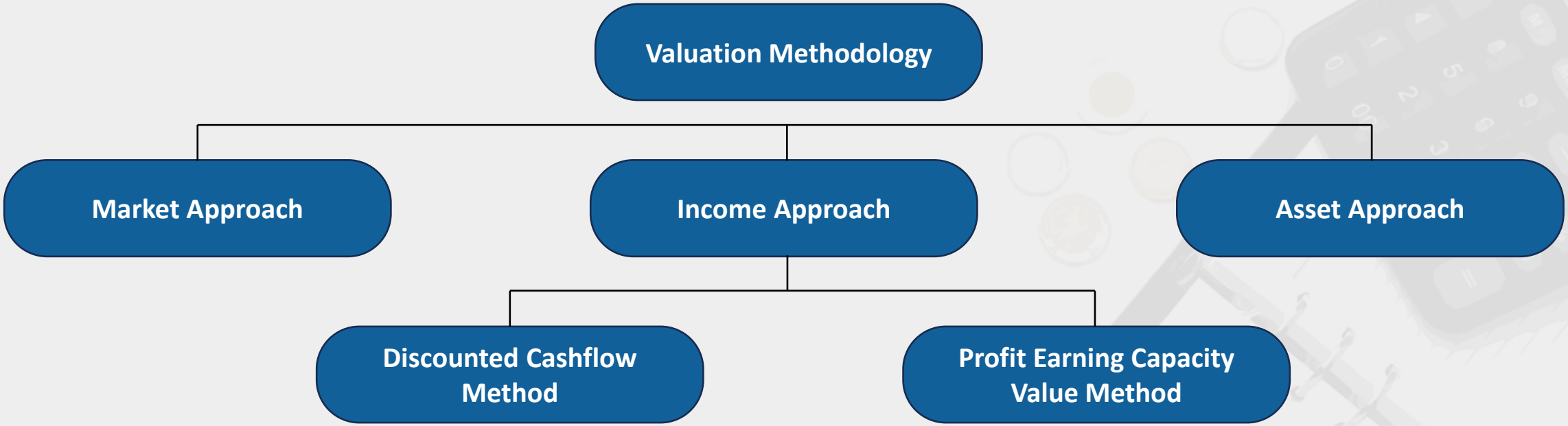
- To determine fair value, a valuer may, therefore, use any of the approaches as per the generally / internationally accepted valuation methodologies which in its opinion are most appropriate based on the facts of each valuation.
- The internationally / generally accepted valuation methodologies have been discussed hereinafter, along with the reasons for the choice of the approach used based on the facts of the company.



Market Approach (1/2)

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- Under this approach, the valuation is done based on the quoted market price of the company in case it is a publicly-traded company, or publicly traded comparable businesses/date is reviewed in order to identify a peer group similar to the subject company and then their multiples are applied to the entity being valued to determine the fair value.
- Types of Multiples widely used –

Enterprise Value (EV) Multiples

- EV/Revenue
- EV/EBITDAR
- EV/EBITDA
- EV/Invested Capital

Equity Multiples

- P/E Ratio
- Price / Book Ratio
- Dividend Yield
- Price / Sales

When to use :

- Where the comparable asset is traded actively in the market
- Existence of recent transactions pertaining to the asset
- Existence of recent transactions pertaining to the comparable assets which is reliable

Advantages

- Easy to use
- Less time consuming
- Easily understood by users
- Reflects current market trends

Limitations

- Difficulty in identification of comparable
- Completely dependent on the selection of comparable

Market Approach (2/2)

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Multiple	Sector	Rationale / Comments
EV/Revenue	Various	Early-stage companies
EV/Subscriber	Various	Subscriber based businesses
EV/EBITDA	Various	Many Industrial and Consumer industries, but not Banks, Insurance, Oil & Gas and Real Estate
EV/EBITA	Various	Commonly used in several Media industry sub-sectors, Gaming, Chemicals and Bus & Rail Industries.
EV/EBITDAX	Oil & Gas	Excludes exploration expenses
EV/EBITDAR	Retail, Airlines	Used when there are significant rental and lease expenses incurred by business operations
EV/Reserves	Oil & Gas	Used when looking at Oil & Gas fields and companies heavily involved in upstream. Gives an indication of how much the field is worth on a per-barrel basis
EV/Capacity	Oil & Gas	For refiners, gives a value metric in terms of barrel per day of refining capacity
Market Cap / Book Value ("P/BV")	Technology/ Banks/ Insurance	Used for the Semiconductor industry. Book value of equity is used since there can be significant earnings fluctuation in this sector.
EV/FFO	Real Estate	Principally used in the US
P/E	Various	Often using normalized cash earnings, excluding both exceptional items and goodwill amortization.
PEG ratio	High Tech, High Growth	Big differences in growth across companies.
(EV/EBITDA) / EBITDACAGR	High Growth	Used in Specialty Retail industry and when valuing emerging markets.

Income Approach (1/2)

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- The income Approach of valuation methods is based on the premise that the current value of any business is an output of future value that an investor can expect to receive by way of cash flows.
- It is an approach that converts maintainable or future amounts to a single current value.
- The fair value is determined based on the value indicated by current market expectations about those future amounts.

Discounted Cashflow Method

- The Discounted Cash Flow ("DCF") method, an application of the Income Approach, is arguably one of the most recognized tools to determine the value of a business.
- The Discounted Cash Flow method indicates the Fair Value of a business based on the value of cash flows that the business is expected to generate in future.
- These cash flows are then discounted at a cost of capital that reflects the risks of the business and the capital structure of the entity.
- **When to use :**
  - Cash flows are currently positive
  - Cash flows can be estimated with some reliability for future

Advantages

- Based on performance expectations of the business
- Not vulnerable to accounting conventions like depreciation and inventory valuation

Limitations

- Only as good as the input assumptions
- Does not consider investment risk associated with opportunity cost

Income Approach (2/2)

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Profit Earning Capacity Value (PECV) Method

- It involves determining the future maintainable earning level of the entity from its normal operations.
- The valuer must give optimal weights to each financial year considering the profit trend and cyclical nature of business.
- This maintainable profit, considered on a post-tax basis, is then capitalized at a rate, which in the opinion of the valuer, combines an adequate expectation of reward from enterprise and risk, to arrive at the business value.
- The selection of the Capitalization Rate, the inverse of the Price Earning ('PE') Multiple, is a judgment of the valuer considering strengths and weaknesses of the company as well as market situations prevailing at the time of valuation.
- When to use :
  - The future cash flows cannot be reasonably estimated
  - Historical earnings represent a fair business situation

Advantages

- Easy to use

Limitations

- Based on historical earnings

Asset Approach

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- A 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, the historical cost of the asset may be considered by the valuer where it has been prescribed by the applicable regulation.
- The cost approach is based on the inherent assumption that the value of a business or investment can be determined based on the cost to rebuild or replace the business.

When to use

- Specifically used for asset-intensive firms, holding companies, distressed entities
- Can be quickly recreated with substantially the same utility as the asset to be valued
- The liquidation value is to be determined
- Income approach and/or market approach cannot be used

Advantages

- An easy and quick method of valuation
- Useful for asset-intensive assets

Limitations

- Ignores the amount, duration and timing of future economic benefit arising from the asset
- Does not consider the risk characteristics of the asset
- Intangible assets, contingent liabilities are not accounted for
- Not the most preferred method for estimating enterprise value of going concerns

Bias in Valuation

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Sources of Bias

- We rarely start a valuation assignment with a clean slate.
- We usually tend to form views on the value of an asset even before inputting the numbers in the models as a result of which our value conclusions tend to be closer to our biases.
- Hence, we already begin with a perception about the asset being valued.
- Some of the sources of bias are -
    - Read something in the press / news (good or bad) about the company;
    - Heard from an expert that it was under or overvalued
    - Management discussions of performance
    - Summaries of how many analysts are bullish and bearish about the stock

How to reduce biases

- At the end of the day, valuation is not performed by analysts in a vacuum.
- These could be some ways to reduce biases –
    - Reduction of institutional pressures
    - De-link valuations from reward/punishment
    - No pre-commitments
    - Self-Awareness
    - Honest reporting

Valuation is an Estimate: Imprecision and Uncertainties

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Undertaking a valuation is unique for every transaction and requires efforts, application of mind and thought for each assignment separately. Only guiding principles can be adopted and considered by the valuer while undertaking each assignment.

'Value' is an estimate of the value of a business or assets, arrived at by applying the valuation procedures appropriate for a valuation engagement and using professional judgment.

Value for the same assets at the same point in time could differ from person to person based on each individual's perception.

Valuation by its very nature, cannot be regarded as an exact science and the conclusions arrived at in many cases will be subjective and dependent on the exercise of individual judgment.

Given the same set of facts and using the same assumptions, expert opinions may differ due to the number of separate judgment decisions. A valuation cannot be judged by its precision.

We can value a mature company with relatively few assumptions and be reasonably comfortable with the estimated value.

Valuation is an Estimate: Imprecision and Uncertainties

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Causes of Uncertainties

- Certain uncertainties cannot be avoided during valuation. Since no one knows what the future holds, we make our best estimates with what information we have at the time of valuation.
  - Estimation Uncertainty
  - Firm-specific Uncertainty
  - Macroeconomic Uncertainty

Responses to Uncertainties

- The advantage of breaking down the uncertainties into the above categories gives us an idea of what we can control, what we can manage and what we can pass through into the valuation.
- The idea is not to be completely hopeless because of uncertainties but mitigates them.
- Simulations, Decision Trees and Sensitivity Analyses are tools that help us mitigate uncertainty but not eliminate it.
- The primary focus of the analysts should be on making their best estimates of firm-specific information and steer away from bringing in their views on macroeconomic variables.

Valuation Complexities

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- Valuation models have become complex over time majorly because of two reasons - computers have become more powerful and information is available in plenty along with ease of access to such information.
- More detailed and complex models mean more inputs for details to be built into the model which also results in chances of potential errors. Some of the Costs of Complexity are

Overload of Information	Contrary to popular belief, it's not always true that more information leads to accurate valuations. Valuation models follow the 'Garbage in – Garbage out' principle meaning the quality of output is only as good as the quality of inputs.
Black Box Syndrome	As the models are more complex nowadays, it is becoming more common that the valuation models are often looked at as the black box which gives out values by the input of certain pre-defined parameters.
Big vs Small Assumptions	Complex models usually have sections for all types of inputs based on which the model is run. It is a common occurrence that the valuer fails to comprehend the complete impact of the input assumptions on the overall value.

Specific Valuation Methodologies

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1 Valuation of Intangibles

- Relief from Royalty Method
- Multiperiod Excess Earnings Method (MPEEM)
- With and Without Method (WWM)

2 Valuation of Startups

- Berkus Method
- Scorecard Valuation Method
- Risk Factor Summation Method
- Venture Capital Method

3 Contingent Claim Valuation

- A contingent claim or option is an asset that pays off only under certain contingencies - if the value of the underlying asset exceeds a pre-specified value for a call option, or is less than a pre-specified value for a put option.
- Option Pricing Models are mathematical models that use certain variables to calculate the theoretical value of an option.

Contingent Claim Valuation

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Black-Scholes Model

- The Black-Scholes model is the most widely used method of Option valuation.
- The Black-Scholes model makes certain assumptions:
- The option is European and can only be exercised at expiration.
- Markets are efficient (i.e., market movements cannot be predicted).
- There are no transaction costs in buying the option.
- The risk-free rate and volatility of the underlying are known and constant.
- The returns on the underlying are normally distributed.

Binomial Model

- The binomial option pricing model is based on the concept of no-arbitrage and assumes only two possible prices for the underlying asset on the next day, hence the name "binomial" (meaning two).
- The two possible prices are the up-price and down-price
- The underlying asset does not pay any dividends
- The rate of interest (r) is constant throughout the life of the option
- Markets are frictionless i.e. there are no taxes and no transaction cost
- Investors are risk-neutral i.e. investors are indifferent towards risk

Monte Carlo Simulation Model

- Monte Carlo methods are a class of computational algorithms that are based on repeated computation and random sampling.
- Since the option is priced under risk-neutral measure, the discount rate is the risk-free interest rate.
- In order to get a good estimate from simulation, the variance of the estimator should go to zero and thus the number of samples should go to infinity, which is computationally not feasible.

Adjustments in Valuation

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Discount for Lack of Marketability (DLOM)	• DLOM is based on the premise that an asset that is readily marketable commands a higher value than an asset that requires a longer period / more efforts to be sold or an asset having a restriction on its ability to sell. • An investor will always pay less for an illiquid asset when compared with a similar asset with higher liquidity.
Control Premium and Discount for Lack of Control (DLOC)	• Control Premium generally represents the amount paid by the acquirer for the benefits it would derive by controlling the acquiree's assets and cash flows. • In converse situations, DLOC would be applied to derive the value of minority shareholding from the value of control stake.
Synergy	• Synergy is a concept which indicates that the combining effect of two or more assets or group of assets and liabilities or two or more entities in terms of their value and benefits will be or is likely to be, greater than that of their individual values on a standalone basis. • Synergy is a term that is most commonly used in the context of mergers and acquisitions.

Rules of Thumb

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Rule of Thumb for certain valuation assumptions and inputs

Risk-Free Rate	Risk-free rate is usually considered as 10-year Government Bond Yield or higher tenure Government Bond Yield.
Illiquidity discount	As Prof. Damodaran suggests in his paper, illiquidity discount is usually applied in the range of 20-30%.
Beta	In case of unavailability of listed comparable peer companies, beta is usually considered as 1.
Terminal Growth Rate	Terminal growth rate for a company is usually considered slightly higher than the country's GDP growth rate.

For most companies, the Cost of Equity is usually higher than the Cost of Debt.

Cash flows of mature companies are usually in an increasing trend.

Conclusion

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- In the ultimate analysis, the valuation will have to involve the exercise of judicious discretion and judgment taking into account all the relevant factors. There will always be several factors.
- E.g. present and prospective competition, the yield on comparable securities and market sentiments, etc. which are not evident from the face of balance sheets, but which will strongly influence the worth of a share.
- This concept is also recognized in judicial decisions. For example, Viscount Simon Bd in Gold Coast Selection Trust Ltd. vs. Humphrey reported in 30 TC 2019 (House of Lords) as quoted by the Supreme Court of India in the case reported in 176 ITR 417 as under:

"If the asset takes the form of fully paid shares, the valuation will take into account not only the terms of agreement but a number of other factors, such as prospective yield, marketability, the general outlook for the type of business of the company which has allotted the share, the result of a contemporary prospectus offering similar shares for subscription, the capital position of the company, so forth. There may also be an element of value in the fact that the holding of the shares gives control of the company. If the asset is difficult to value, but is nonetheless of a money value, the best valuation possible must be made. Valuation is art, not an exact science. Mathematical certainty is not demanded nor indeed is it possible."

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Relative Valuation

What is Relative Valuation?

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What is Relative Valuation?

- Relative valuation is one of the business valuation methods. The Company's value is derived by comparing the market value of the publicly listed companies or implied value of transactions operating in a similar space.
- The comparison is based on certain financial ratios or multiples, such as the price to book value, price to earnings, EV/EBITDA, etc., of the target company and its comparable companies.
- In other words, to value the target company, valuation metrics such as EV/EBITDA, EV/Revenue, PE, PB etc, and recent M&A transactions of listed companies operating in the same industry are considered.
- Based on the principle of substitution i.e. a prudent buyer will pay no more for an asset than the cost to acquire a substitute asset with the same utility.

Below are the sources to find the information:

Database	Scope
Bloomberg/ S&P Capital IQ	Information on the publicly listed companies including deal details, news and filings
Factiva	News database
Company Website	Company filings, investor report, annual report etc. of private and public companies.
Stock Exchange Website	Public target and acquirer listed on national stock exchange websites such as NSE, BSE, NYSE, NASDAQ, AXS, SSE, JPX, LSE, Euronext, etc.

Market Vs Income Vs Cost Approach

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Market Approach

Market approach determines the value by comparing subject companies and transactions with similar companies or transactions present in the market.

This method is applicable under the following situations:

- The subject company or a comparable or identical asset is traded in the active market
- Recent transaction comparable are available
- Both listed transaction and companies comparable information is available and reliable

There are two methods for market approach: comparable company analysis and precedent transaction analysis.

Income Approach

Income approach is a valuation method that discounts companies future cash flows at the present value

This method is applicable under the following situations:

- Subject company does not have similar listed companies or transactions.
- Subject company distinct from the selected listed comparable
- Future cashflows are available and reasonably projected

There are five methods for income approach: DCF, RFR, MEEM, WWM and option pricing models.

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

This method is applicable under the following situations:

- Liquidation value is to be determine
- Market and income approach cannot be used
- asset can be quickly recreated with substantially the same utility as the asset to be value

There are two methods for Cost approach: replacement cost method and reproduction cost method.

Types of Relative Valuation (1/4)

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1 Comparable Company Analysis Method

- Comparable company analysis method, determine the enterprise value of a company by comparing listed companies based on similar market metrics operating in the same industry.
- Selection of comparable companies is based on various factors such as operational processes, cash flows, growth potential, risk, etc.
- Provides a market benchmark that can be used to establish a valuation for the company. The method assumes, that the companies similar in size, industry, and stature are valued in the same way.
- Seeks to identify how the public market currently values a specific group of companies with similar characteristics. The valuation is evaluated in the form of multiples of underlying earnings
- Comparable public companies analysis implied multiples helps in calculating the theoretical value that a business would likely to trade as a public company on a "fully distributed" basis

Following are the characteristics for identifying or selecting comparable companies

The comparable companies should possess operation and financial characteristics similar to subject company

- **Industry**
- **Geographic Location**
- **Line of Business**
- **Target Customers**
- **Growth Prospects**
- **Profitability**
- **Company Size**
- **Leverage**

Types of Relative Valuation (2/4)

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Steps for Comparable Company Analysis

1. Analyse target company industry, operation, size, growth and risk factor etc.
2. Identifying, selecting, and classifying comparable companies
3. Determining key financial metrics of comparable companies
4. Calculating market multiples of comparable companies
5. Applying market multiple to target company
6. Determine subject company valuation by applying median or mean of the market multiples

Key Considerations

Comparable must be publicly listed companies

While identifying and selecting comparable companies operational and financial factors such as geographic region, company size, growth and risk profile, business segment, profitability, capital structure etc should be considered.

The market multiples of selected comparable companies are analysed and any outlier are excluded from the list.

Comparable companies that nature of operations is similar to the subject company should be taken into consideration.

Types of Relative Valuation (3/4)

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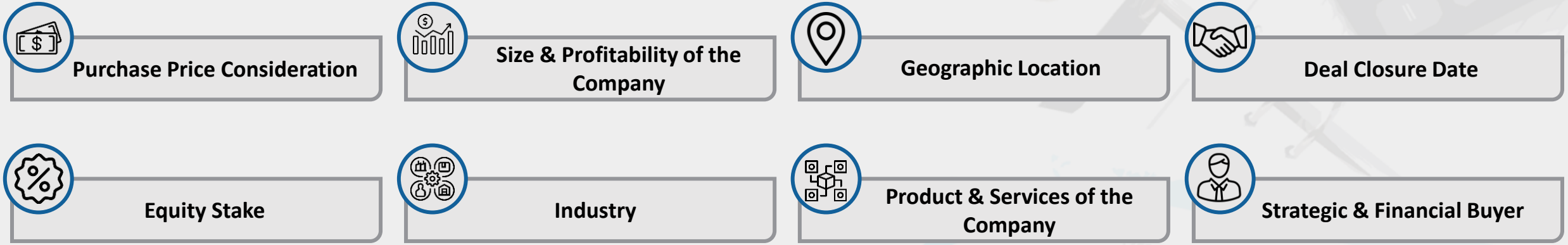
2 Precedent Transaction Analysis Method

- The precedent transaction analysis is essentially a study of historical M&A transactions in an industry and is based on a few commonly used valuation multiples such as EV/Revenue, EV/EBITDA, and PE. It is an integral part of a pitch book and has a wide application in the preparation of a fairness opinion for a deal.
- These historical transaction multiples are analysed to arrive at an appropriate purchase price for the target company.
- Transaction comps are based on the final offer price therefore, gives an idea of the M&A transactions happened in the past. The deal consideration may be of cash, stock or both cash & stock.
- The price paid in comparable transactions generally includes control premium, except where the transaction involves acquisition of a non-controlling/minority stake.
- This method suffers from the limitation of data availability, transaction-related information is difficult to obtain.

Following are the characteristics for identifying or selecting the comparable transaction

- The comparable transactions should possess following characteristics:



Types of Relative Valuation (4/4)

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Steps for Precedent Transaction Analysis

Step: 1	Identify transaction comparable.
Step: 2	Determine key transaction multiple.
Step: 3	Select and adjust transaction multiple.
Step: 4	Apply discount or premium to selected multiples.
Step: 5	Apply the adjusted transaction multiple to the subject company to arrive at the value.

Key Considerations

- Any multiples outliers in the comparable transaction should be analysed and excluded from the data set.
- Ensures appropriate valuation multiple such as EV or Equity Value are considered.
- Selected comparable transaction companies should have similar operation to the subject company.
- While selecting comparable transactions emphasis should be given to most recent transaction, subject to impact of economic factors on transaction multiple.

Relative Valuation Multiples

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Following multiples are used to standardize relative value of the company:

Earnings Multiples

- When buying an equity, price is paid, as a multiple of earnings per share generated by the company. When buying a business, it is common to examine the value of the firm as a multiple of the operating income.
- A lower multiple is better than a higher one, these multiples will be affected by the growth potential and risk of the business being acquired.

Book Value Multiples

- To estimate the fair value of the business, investors often considers the relationship between the price they pay for a stock and the net worth of the business.
- When valuing businesses, we estimate this ratio using the value of the firm and the book value of all assets or capital.

Revenue Multiples

- Price paid by the investor or acquirer as a multiple of the revenue generated by the company.
- For equity investor price to revenue ratio is determined as market value of equity divided by revenue generated by the company.
- For firm value the ratio is determined as enterprise value divided by revenue generated by the company.

Cash Flow Multiples

- Cashflow multiples measures how much a company generates cash relative to its enterprise or equity value.
- Reflects actual cash generating abilities of the company by considering cash transaction and adding back non cash transactions such as depreciation & amortization.
- A higher ratio generates the premium over the price.

When Relative Valuation is Used?

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Following are some of the financial market activities where relative valuation is applicable:

Restructuring

M&A Advisory

Share Buybacks

Fair Opinion

Terminal Value

Start-Ups

IPO / Follow on Offerings

Succession planning

Divesture

Pros & Cons of Relative Valuation

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Pros of Relative Valuation

Easy to Use

Relative valuation method is easy to use, simple to comprehend, less time consuming and easily understood by users.

Simple Calculations

The method incorporates information from comparable in a simple way and provides consistency in the valuation process by ensuring that valuation is in line with other comparative valuations.

Current Market Trends

It relies upon market information and implicitly embodies current market consensus about assumptions such as the discount rate and growth rate. Hence, it reflects the current mood of the market.

Cons of Relative Valuation

Distorted Valuation

Relative valuation consider market value of comparable company. Due to market volatility, if comparable company is overvalued or undervalued by the market, in that case considering such comparable market value can distort target company's valuation.

Difficult to find comparable companies

Identifying comparable companies with similar growth rates, business composition, stage and riskiness of business is a difficult task and finding a perfect match is extremely challenging.

Future potentials are not considered

Relative valuation considers historical data. The method does not consider significant future potential or benefit that may arise due to beneficial circumstances such as market expansion, which may result into under valuation of a company.

Adjustments to Multiples in Certain Situations

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Controlling Interest

- When the target company has a minority stakeholder or lack of marketability, the impact of DLOM or DLOC should be deducted from the enterprise value.

Multiples Adjustment

- To achieve the fair value of the company extremely high, low and negative multiples should be examined and excluded from the comparable set.

Multiples Trend

- Consider the trend in multiples over several historical periods to determine if the recent multiples provide a reasonable basis to select the final range of multiples.

Forward Multiples

- When using forward multiples, ensure that the financial metrics for companies can be reliably projected.

Preferred Multiples by Sectors

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Sectors	P/E	P/B	EV/EBITDA	EV/EBIT	EV/Revenue	Price/FCF
 Banking, Financial Service & Insurance	✓	✓		✓		
 Energy			✓			
 Food and Beverages	✓		✓			
 Life Sciences & Healthcare			✓		✓	
 Manufacturing & Distribution			✓	✓		✓
 Real Estate, Building Materials & Construction	✓	✓	✓			
 Software	✓					
 Technology, Media & Telecommunications	✓		✓	✓		

Industry Specific Multiples

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Industries	Key Variables
Mutual Fund	Asset Under Management
Oil	EV/ Barrel of equivalent
Power	EV/MW
Entertainment & Media	EV/Per screen, EV/Subscriber
Metal	EV/Metric Ton
Textiles	EBITDA depend upon capacity utilization Percentage & per spindle value
Hospital	EV/Room
Airlines	EV/Plane, EV/passenger, EV/Aero Revenue, EV/Non-Aero Revenue
Shipping	EV/Order Book
Cement	EV/Per Ton

Common Mistakes in Relative Valuation

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Blindly Using Comparable Price Paid	• In some cases, the buyer or seller may have been in a weak negotiating position which influenced the price paid. • Such inflated market price distort the subject company value.
Selecting Inappropriate Valuation Multiple	• Selecting EV/EBIT multiple for valuing companies having negative EBIT, capital intensive companies and banking & insurance sector etc, results into fallacious valuation of the company.
Selecting Inappropriate Comparable Companies	• Selected comparable companies' characteristics such as company geography, market cap, revenue, risk, growth potential, leverage, etc dispersed to the subject company leads to distorted valuation. • For instance, subject company is operating in developed market, so the comparable companies operating in the developed market should be selected.
Selecting Older Transaction	• The value of recent transaction differs from the value of the older transactions. However, transaction are impacted by macro-economic and industry factor which affects value of the company.
Considering Same Numerator & Denominator	• While selecting valuation multiples for both trading and transaction comps, considering same numerator or denominator results into distorted valuation. • For instance, considering Price/EV or Price/FCFE, EV/Net Income, Ev/Market Cap.

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Valuation of Private Companies

What is Private Company Valuation?

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Private Company Valuation

- Private company valuation is the process of determining the economic value or worth of a privately held company, taking into account factors such as financial performance, growth prospects, industry dynamics, and risk factors.

Public Company Vs Private Company

Public Company

- Large number of shareholders, and their shares are publicly traded on stock exchanges, making ownership open to general public.
- More complex decision-making process due to larger number of shareholders and regulatory requirements.
- Access to wider range of capital sources, including issuing stocks and bonds to public.
- Transparency with financial performance, making financial statements and reports available to public.
- Adhere to strict regulatory compliances, including regular financial reporting, adherence to securities laws and more.

Private Company

- Ownership is typically held by small group of individuals, founder or family. Shares are not publicly traded on stock exchange.
- Greater decision-making autonomy since ownership is concentrated among a smaller group.
- Typically, have limited options to raise capital relying on private investors, bank loan, or venture capital.
- Advantage of maintaining greater financial privacy since their financial information is not publicly disclosed.
- Fewer disclosure requirements and face less scrutiny from regulatory bodies.

Why is Valuation Important?

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Why is valuation important?

A company's valuation is a test to understand how much the company is worth and has grown over a period of time.

1. Private companies have a smaller group of owners and are not publicly traded, while public companies have numerous shareholders and trade on stock exchanges.
2. The value derived from the various methodologies forms a basis on which many decisions are made by the founders and the investors.
3. Private company valuations are typically performed for three reasons: transactions, compliance (financial or tax reporting), or litigation.
4. In India, valuation of private company may be required for issue/transfer of shares, M&A, impairment testing, etc. under various laws such as Companies Act, Income Tax Act, FEMA, IBC.
5. Factors influencing private company valuations include financial performance, industry and market conditions, growth prospects, intellectual property, and customer base. Challenges in private company valuations are limited transparency, illiquid shares, influence of controlling shareholders, and subjective assumptions.

Factors Influencing Private Company Valuation

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Financial Performance	The financial performance of a private company is crucial for its valuation. Assessing revenue growth, profitability, and cash flow generation through historical statements and projections determines its ability to sustain earnings.
Industry and Market Conditions	The industry in which the private company operates, and the overall market conditions can affect its valuation. Factors such as market growth potential, competitive landscape, and barriers to entry are considered to evaluate the company's position within its industry.
Growth Prospects	The growth potential of a private company is key to its valuation. Factors like innovation, market expansion, and business scalability are assessed to gauge future revenue and earnings potential
Intellectual Property and Assets	Intellectual property, proprietary technology, patents, and other valuable assets owned by the private company can contribute to its valuation. These assets can provide a competitive advantage and create barriers to entry for potential competitors.
Customer Base and Relationships	Customer base factors impact a private company's value. Considerations include size, loyalty, diversification, long-term relationships, recurring revenue, and a robust sales pipeline
Risk Factors	Evaluating risks is vital in valuing a private company. Factors like regulatory compliance, market volatility, operational risks, and dependence on key customers or suppliers are considered to assess the company's risk profile
Comparable Transactions	Analyzing comparable transactions in the industry can provide valuable insights into the valuation of a private company. Examining recent mergers, acquisitions, or financing rounds involving similar companies can help establish a benchmark for valuation multiples.

Challenges in Private Company Valuations

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Lack of market data	• Private companies operate outside the realm of public markets, where pricing and valuation data are readily available. The absence of comparable transactions and market indicators can make it challenging to determine an accurate valuation.
Limited financial disclosure	• Private companies' limited obligation to publicly disclose financial information leads to a lack of comprehensive data for analysis. Investors and valuation professionals often rely on limited financial statements, which may not offer a complete picture of the company's performance
Subjectivity in assumptions	• Valuing private companies often involves making assumptions about future performance, growth prospects, and market conditions. These assumptions can be subjective and vary among different stakeholders, leading to divergent valuations
Illiquidity and lack of exit options	• Private company shares are typically illiquid and not easily traded on public exchanges. The absence of a liquid market can impact the valuation process and make it more challenging for investors to determine an appropriate value.
Influence of controlling shareholders	• In many private companies, a single or a few controlling shareholders hold significant influence over the company's operations and decision-making. This concentrated ownership can introduce complexities in assessing the fair value of minority stakes

Key Consideration

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Liquidity discount	• The illiquidity discount is the discount applied to the valuation of an assets, as compensation for the reduced marketability. • It stems from liquidity risk, which is the incurred loss in asset value from the inability to easily liquidate the position. • Measures of how quickly an asset can be sold in the open market without requiring a significant discount
Discount for lack of marketability	• Discounts for lack of marketability (DLOM) refer to the method used to help calculate the value of closely held and restricted shares. • The theory behind DLOM is that a valuation discount exists between a stock that is publicly traded and thus has a market, and the market for privately held stock, which often has little if any marketplace.
Size premium	• The size premium is the additional return that investors require for the risks of investing in small businesses. • The size premium can be observed in earnings multiples of listed companies, with large companies trading on higher multiples than small companies, all else being equal.

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Valuation of Startups

Introduction to Start-ups

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Start-up Overview

- A Start-up is a new business venture providing services or products to an existing and growing market
- A start-up is in the first stage of operations and comprises one or more entrepreneurs
- The primary aim is to respond to market demand by creating new and innovative products or services
- While most small businesses might intend to stay small, a start-up focuses on fast growth in a designated market. Usually, such companies start as an idea and gradually grow into a viable product, service, or platform

Recent Developments

1	In 2016, the Government of India announced its flagship initiative for building start-ups ('Start-Up Scheme') and nurturing innovation with the main objective to boost entrepreneurship, economic growth and employment across India
2	Under the Start-Up Scheme, several benefits were granted to start-ups from legal perspective, funding support, fast tracking of patent applications at lower costs, benefits under Income-tax Act, 1961 etc.
3	As of April 30, 2022, 98,208 start-ups are recognized under Start-Up Scheme and around 1,163 start-ups have been granted income tax related exemptions
4	As per data available on Start-Up India website more than 3,465 start-ups have been funded by SIDBI Funds of funds. India currently houses 3rd largest start-up ecosystem in the world after US and China
5	As per media reports, as at December 2022 India had 108 start-ups with valuation of over $1 billion or having the coveted 'Unicorn' status

Eligibility under Indian Laws

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Indian Acts	Description	Eligibility Criteria
Ministry Of Commerce and Industry	Under the Start-up India Action Plan, start-ups that meet the definition as prescribed under G.S.R. notification 127 (E) are eligible to apply for recognition under the program.	• Should be incorporated as a pvt ltd co. or as a partnership firm or as a LLP • Turnover should be less than INR 100 Crores in any of the previous financial years • Considered as a start-up up to 10 years from the date of its incorporation • Should be working towards innovation/ improvement of existing products, services and processes and should have the potential to generate employment/ create wealth • An entity formed by splitting up or reconstruction of an existing business shall not be considered a "Start-up"
Companies Act, 2013	An entity is considered a "Start-up" only if it is incorporated as a Private Limited company (under the Companies Act, 2013), or registered as a Partnership Firm (under the Partnership Act) or a Limited Liability partnership (under the Limited Liability Partnership Act) in India.	• Not more than 7 years have elapsed from its incorporation/ registration (for an entity in the biotechnology sector, this period is 10 years) • Turnover in any financial year since incorporation/ registration should not exceed INR 250 Mn • Working towards innovation, development or improvement of products or processes or services, or is a scalable business model with a high potential of employment generation or wealth creation • Start-ups that are private companies or LLP formed on or after 01 April 2016 • Holds a certificate of eligible business from Inter-Ministerial Board of Certification • Plant & machinery should be new and have never been used in India before
Income Tax Act, 1961	Post getting recognition a Start-up may apply for Angel Tax Exemption Shall be eligible for notification under clause (ii) of the proviso to clause (viib) of sub-section (2) of section 56 of the Act	• Should be recognised by DPIIT under para 2(iii)(a) or as per any earlier notification • The aggregate amount of paid-up share capital and share premium of the Start-up after the proposed issue of share, if any, does not exceed INR 25 Crore

Types of Start-ups

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Scalable Start-ups

- Often, companies working in the technology domain belong to the scalable start-up group and these companies work hard to rapidly grow and achieve a high return on investment (ROI)

Large Company Start-ups

- A large company or offshoot start-up includes large companies that have been in operation for a long time
- Companies that fit into this category start with revolutionary products and quickly become famous

Small Business Start-ups

- The purpose of a small business start-up is longevity rather than scalability
- While these businesses have an interest in growth, they grow at their own pace
- Business owners usually bootstrap and self-finance these start-ups

Lifestyle Start-ups

- People who have hobbies and want to pursue their passion can build a lifestyle start-up
- Often, these business owners desire independence and spend their energy, money and time building a start-up
- These business owners earn money by pursuing their favourite hobby or activity

Social Entrepreneurship Start-ups

- Social entrepreneurship start-up focuses on building business to change the environment and society positively
- Some examples of these companies include charities and non-profit organizations

Buyable Start-ups

- Unlike other start-ups on this list, buyable start-ups do not aim to become large and successful
- A business owner builds such a company from scratch to sell it to a big company
- Usually, you are likely to find such companies in the technology and software industry

Key Metrics of Start-ups (1/2)

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Gross Assets Value (GAV)	• Gross assets value is the sum of the value of tangible assets owned by the company
Gross Merchandise Value (GMV)	• Gross merchandise value refers to the value of goods sold through your platform
Customer Acquisition Cost (CAC)	• Customer acquisition cost is the total cost of acquiring a new customer. CAC is calculated as acquisition costs divided by the number of customers acquired.
Retention Rate	• Customer retention rate measures the number of customers a company retains over a given period of time
Annual Run Rate (ARR)	• Annual run rate is the amount of money that you can expect to generate from your customers on an annual basis
Monthly Recurring Revenue (MRR)	• Monthly recurring revenue is the amount of money that you can expect to generate from your customers on a monthly basis
Average Order Size	• The average order size is the average amount of money that your customers spend when they make a purchase from your business
Cash Runway	• Cash runway is the amount of time that you have to achieve profitability before your start-up runs out of money

Key Metrics of Start-ups (2/2)

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Burn Rate	• Burn rate is the rate at which your start-up is spending money
K - Factor	• k-factor is the rate at which your start-up is growing organically by word of mouth
Monthly Active User	• Monthly active users is the number of people who use your product or service on a monthly basis
Return on Advertising Spend (RoAS)	• Return on advertising spend refers to the number of sales came from the advertising spending over a period of time
Customer Life Time Value (LTV)	• Customer lift time value is the amount of money that you can expect from your customer over the duration of their relationship with the business
Net Promoter Score (NPS)	• NPS (Net Promoter Score) is a measure of how likely your customers are to recommend your product or service to their friends or family
Lead Velocity Rate	• Lead velocity rate measures the growth in the number of leads generated by your business per month
Average Sales Cycle Length	• Average sales cycle length indicates the time lag between initiating sales contract and closing the deal

Income, Market and Cost Approach

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Following are the start-up valuation methodologies:			
Valuation Methods	**Income Approach**	**Market Approach**	**Cost Approach**
Venture Capital Method	✓		
Scorecard Valuation Method	✓		
Comparable Transactions Method		✓	
Cost-to-Duplicate Approach			✓
Risk Factor Summation Method	✓		
Discounted Cash Flow Method	✓		
The Berkus Method	✓		

Valuation Methodologies (1/7)

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A Venture Capital Method

- As the name suggests, this method is a go-to for venture capital firms, and it's another option to consider if you need a pre-revenue valuation.
- It also reflects the mindset of investors who are looking to exit a business within several years.
- Following are the two formulas to work toward the valuation:

Anticipated Return on Investment (ROI) = ***Terminal Value*** ÷ ***Post-Money Valuation***

Post-Money Valuation = ***Terminal Value*** ÷ ***Anticipated Return on Investment (ROI)***

First, you'll calculate your start-up's terminal value, or the expected selling price after the VC firm has invested.

You can find this using estimated revenue multiples for your industry or the price-to-earnings ratio.

Determine the anticipated ROI, such as 10x, and plug everything in to find your post-money valuation. From there, subtract the investment amount you're asking for to get your pre-money valuation.

Valuation Methodologies (2/7)

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B Scorecard Valuation Method

- The Scorecard Method is another approach for pre-revenue businesses. It also works by comparing the subject start-up to others that are already funded but with added criteria.
- First, determine the average pre-money valuation of comparable companies. Consider how subject business stacks up according to the qualities.

Qualities	Score
Strength of the team	0 – 30%
Size of the opportunity	0 – 25%
Product or service	0 – 15%
Competitive environment	0 – 10%
Marketing, sales channels, and partnerships	0 – 10%
Need for additional investment	0 – 5%
Other	0 – 5%

Following are the steps:

Assign Quality Percentage

- Assign each quality a comparison percentage.
- Essentially, you can be on par (100%), below average (<100%), or above average (>100%) for each quality compared to your competitors.

Factoring

- For example, you give your ecommerce team a 150% score because it's complete, fully trained, and has experienced developers and marketers, some from rival businesses.
- You'd multiply 30% by 150% to get a factor of .45.
- Do this for each start-up quality and find the sum of all factors.

Valuation

- Multiply that sum by the average valuation in your business sector to get your pre-revenue valuation.

Valuation Methodologies (3/7)

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C Comparable Transactions Method

The Comparable Transactions Method is one the most popular start-up valuation techniques because it's built on precedent.

This approach answers the question "How much were similar start-ups acquired for?"

With any comparison model, you need to factor in ratios or multipliers for anything that's dramatically different between your two businesses.

For example, if another SaaS company has proprietary technology and you don't, you may want to use the multiplier on the lower end of the range.

This method is similar to the Market Multiples Approach.

Valuation Methodologies (4/7)

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D Cost-to-Duplicate Approach

- The cost-to-duplicate approach involves taking into account all costs and expenses associated with the start-up and the development of its product, including the purchase of physical assets.
- All such expenses are taken into account in order to determine the start-up's fair market value.

Following are the drawbacks of the method

Companies Projected Financials are not Considered

- The cost-to-duplicate approach, not considering the company's future potential by projecting financial statements of its future sales and growth.

Non-Current Assets are not Considered

- Intangible assets and physical assets are not taking into consideration.
- The argument here is that even at a start-up stage, the company's intangibles may have a lot to offer to its valuation, i.e., brand value, goodwill, patent rights (if any), and so on.

Valuation Methodologies (5/7)

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E Risk Factor Summation Method

- The risk factor summation approach values a start-up by taking into quantitative consideration all risks associated with the business that can affect the return on investment.
- Following are the steps for risk factor summation method:

1. Under the risk factor summation method, an estimated initial value is calculated for the start-up using any of the other methods discussed in this article.
2. To this initial value, the effect, whether positive or negative, of different types of business risks are taken into account, and an estimate is either deducted or added to the initial value based on the effect of the risk.
3. After taking into consideration all risks and implementing the “risk factor summation” to the initial estimated value of the start-up, the final value of the start-up is determined.

Following are 12 common risk categories:

Management	Stage of the business	Legislation/political risk	Manufacturing risk
Sales and marketing risk	Funding/capital rising risk	Competition risk	Technology risk
Litigation risk	International risk	Reputation risk	Potential lucrative exit

Valuation Methodologies (6/7)

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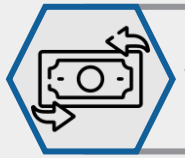
F Discounted Cash Flow Method



The discounted cash flow (DCF) method focuses on projecting the start-up's future free cash flow.

A rate of return on investment, called the discount rate, is then estimated.

Since start-ups are new companies and there is a high risk associated with investing in them, a high discount rate is generally applied.

The future free cash flows are then discounted back to present value.

Valuation Methodologies (7/7)

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G The Berkus Method

- The Berkus approach, was created by American venture capitalist and angel investor Dave Berkus. The method looks at valuing a pre-revenue start-up based on a detailed assessment of the following five key success factors:

Basic Value

Technology

Execution

Strategic relationships in the core market

Production and consequent sales

Key Highlights of the Method

Key Factor Assessment

A detailed assessment is carried out evaluating how much monetary value is assigned to the five key success factors. The start-up valuation is the summation of those monetary values.

Drawback

This approach doesn't take other market factors into account, the limited scope is useful for businesses looking for an uncomplicated tool.

Value Allocation

This approach normally allocates up to $500,000 per success factor for a theoretical maximum pre-money valuation of $2.5 million.

Stage Development Method

The Berkus approach may sometimes also be referred to as the stage development method or the development stage valuation approach.

Selection of Valuation Method

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- Following are the some examples of methods used in different stage start-up valuation but not limit to this, however there is no right or wrong method.

Start-ups Stages	Idea	Seed	Early Growth	Expansion	Sustainable Growth
Fixed Range	✓	✓			
Comparable Method					✓
Scorecard Valuation	✓	✓			
Cost-to-Duplicate	✓	✓			
DCF			✓	✓	✓
VC Method			✓	✓	

Why Do Start-ups need Funding?

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Start-up Overview

- A start-up might require funding for one, a few, or all of the following purposes.
- It is important that an entrepreneur is clear about why they are raising funds.
- Founders should have a detailed financial and business plan before they approach investors.

Start-ups usually require funding for the following activities:


Prototype Creation


Product Development


Team Hiring


Working Capital


Legal & Consulting Services


Raw Material & Equipment


Licenses & Certifications


Marketing & Sales


Offices spaces & Admin expenses

Sources of Fund Raising

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Personal Investment	Business owner invest some of their own money—either in the form of cash or collateral on your assets.
Friends & Family	Friends and family are a great source of funding since they generally trust you and are easier to convince than strangers.
Venture Capital & Private Equity	Venture capitalists take an equity position in the company to help it carry out a promising but higher risk project. Venture capitalists also expect a healthy return on their investment, often generated when the business starts selling shares to the public.
Angel Investor	Angel investors are wealthy individuals who are keen to invest in promising start-ups.
Crowdfunding	Crowdfunding is taking a loan, contribution, pre-order or investment from more than one person.
Business Incubators	Incubator and accelerator programs help start-ups to gain traction in the market.
Grants and Subsidies	Subsidies, grant, loans etc initiated by the government for supporting new ideas and young entrepreneurs.
Loan	Banks provide the best financing source to the firms in order to secure the loan. Banks offer two types of financial services: working capital loans and funding.

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Stages of Start-up Funding

Stages of Start-up Funding (1/5)

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1 Pre-Seed / Ideation Stage

- This is the stage where the entrepreneur has an idea and is working on bringing it to life.
- At this stage, the amount of funds needed is usually small.
- Additionally, at the initial stage in the start-up lifecycle, there are very limited and mostly informal channels available for raising funds. This is the research phase of beginning a start-up.
- During the pre-seed stage, make sure to answer the following questions:

Is the idea viable?

Has the idea been done before?

How costly is the venture?

What kind of business model will be used?

How to get started?

Following are the available sources of funding at this stage:

Bootstrapping/Self-financing

Friends & Family

Business Plan/Pitching Events

Stages of Start-up Funding (2/5)

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2 Seed / Validation Stage

- At this stage, a start-up has a prototype ready and needs to validate the potential demand of the start-ups product/service.
- This is called conducting a 'Proof of Concept (POC)', after which comes the big market launch.
- At this point, your idea is an actual business with some customer traction. Entrepreneurs in this phase provide company equity in return for larger amounts of cash provided by investors.
- Costs covered by seed funding include:

Product launch

Product marketing

Market research on product-market-fit

New employees

Following are the available sources of funding at this stage:

Incubator

Government Loan Schemes

Angel Investors

Crowdfunding

Stages of Start-up Funding (3/5)

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3 Series A / Early Traction Stage

- At the Early Traction stage start-up's products or services have been launched in the market
- Key performance indicators such as customer base, revenue, app downloads, etc. become important at this stage
- The Series A funding stage marks the beginning of venture capitalist investment, and shares of the company are offered in exchange for capital
- At this point, you can begin to set yourself up for future business growth
- This includes the following:

Optimizing your business

Development of product & services

Offsetting financial losses or shortfalls

Creating a scalable blueprint for growth

Following are the available sources of funding at this stage:

Venture Capital Funds

Banks/NBFCs

Venture Debt Funds

Stages of Start-up Funding (4/5)

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4 Scaling Stages

- At this stage, the start-up is experiencing a fast rate of market growth and increasing revenues.
- Start-ups in this stage have dedicated user bases and steady streams of revenue.

Series Rounds	Description	Fund Usage
Series B	• At this point, you have proven you can scale your idea	**At this stage funds are used in:** • Employ advanced market reach activities • Increase market share • Form operational teams such as business development and marketing
Series C	• Series C funding is for a company well on its growth path and often interested in expanding globally • It may be easier to find investors at this stage, as they trust the start-up to succeed	**At this stage funds are utilized as follow:** • Build new products • Reach new markets • Acquire underperforming start-ups in the same industry
Series D	• There is no limit to how many funding rounds a start-up can go through • If a company has more advanced revenue goals, it may complete as many fundraising series as necessary	**There are usually two reasons a start-up goes past the Series C funding round. They are:** • **New opportunities:** A potentially lucrative opportunity appears that requires the company to act before the Initial Public Offering (IPO) • **Subpar performance:** The start-up misses the goals set during the Series C round of funding. It then raises more funds in the Series D round to address the issues

Following are the available sources of funding at this stage:

Venture Capital Funds

Equity/Investment Firms

Stages of Start-up Funding (5/5)

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5 Exit Options

Initial Public Offering (IPO)

- IPO refers to the event where a start-up lists on the stock market for the first time
- Since the public listing process is elaborate and replete with statutory formalities, it is generally undertaken by start-ups with an impressive track record of profits and who are growing at a steady pace

Merges & Acquisitions

- The investor may decide to sell the portfolio company to another company in the market
- In essence, it entails one company combining with another, either by acquiring it (or part of it) or by being acquired (in whole or in part)

Selling Shares

- Investors may sell their equity or shares to other venture capital or private equity firms

Buybacks

- Founders of the start-up may also buy back their shares from the fund/investors if they have liquid assets to make the purchase and wish to regain control of their company

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Steps to Start-up Fund Raising

Steps to Start-up Fund Raising (1/6)

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Step: 1 | **Assessing the need for Funding**

The start-up needs to assess why the funding is required, and the right amount to be raised

The start-up should develop a milestone-based plan with clear timelines regarding what the start-up wishes to do in the next 2, 4, and 10 years

A financial forecast is a carefully constructed projection of company development over a given time period, taking into consideration projected sales data, as well as market and economic indicators

The cost of production, prototype development, research, manufacturing, etc. should be planned well. Based on this, the start-up can decide what the next round of investment will be for

Steps to Start-up Fund Raising (2/6)

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Step: 2

Assessing Investment Readiness

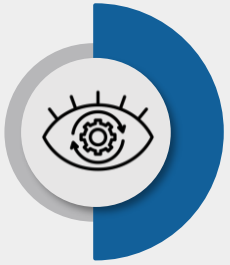
- While it is important to identify the requirement of funding, it is also equally important to understand if the start-up is ready to raise funds.
- Any investor will take you seriously if they are convinced about your revenue projections and their returns.
- Investors are generally looking for the following in potential investee start-ups:

Revenue growth and market position

Favourable return on investment

Time to break-even and profitability

Uniqueness of the start-up and competitive advantage



The entrepreneurs' vision and future plans

Reliable, passionate, and talented team

Steps to Start-up Fund Raising (3/6)

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Step: 3

Preparation of Pitch Deck

- A pitch deck is a detailed presentation about the start-up outlining all the important aspects of the start-up.
- Creating an investor pitch is all about telling a good story.
- Your pitch isn't a series of individual slides but should flow like a story connecting each element to the other.

Following things to include in the Pitch Deck

- **Company Overview**
- **Problem Statement**
- **Management profiles**
- **Traction**
- **Key Competitive Advantages**
- **Expansion Strategy**
- **Competition Analysis**
- **Proposed use of funds**
- **Valuation**

Steps to Start-up Fund Raising (4/6)

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Step: 4

Investor Targeting

- Every Venture Capitalist Firm has an Investment Thesis which is a strategy that the venture capitalist fund follows
- The Investment Thesis identifies the stage, geography, focus of investments, and differentiation of the firm

- You can gauge the Investment Thesis of the company by thoroughly going through the company website, brochures, and fund description

- To target the right set of investors, it is necessary to research Investment Thesis, their past investments in the market, and speak with entrepreneurs who have successfully raised equity funding

This exercise will help you in:

Venture Capital Funds

Venture Capital Funds

Venture Capital Funds

Venture Capital Funds

Venture Capital Funds

Steps to Start-up Fund Raising (5/6)

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Step: 5

Due Diligence by Interested Investors

Angel networks and VCs conduct thorough due diligence of the start-up before finalizing any equity deal

They look at the start-up's past financial decisions and the team's credentials as well as background

This is done to ensure that the start-up's claims regarding the growth and market numbers can be verified as well as to ensure that the investor can identify any objectionable activities beforehand

If the due diligence is a success, the funding is finalized and completed on mutually agreeable terms

Steps to Start-up Fund Raising (6/6)

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Step: 6 | **Term Sheet**

- A term sheet is a “Non-binding” list of propositions by a venture capital firm at the early stages of a deal.
- It summarizes the major points of engagement in the deal between the investing firm/investor and the start-up.
- A term sheet for a venture capital transaction in India typically consists of four structural provisions:

Valuation	• Start-up valuation is the total worth of the company as estimated by a professional valuer • There are various methods of valuing a start-up company, such as the Cost to Duplicate approach, Market Multiple approach, Discounted cash flow (DCF) analysis, and Valuation-by-Stage approach • Investors choose the relevant approach based on the stage of investment and market maturity of the start-up
Investment Structure	• It defines the mode of the venture capital investment in the start-up, whether it is through equity, debt, or a combination of both
Management Structure	• The term sheet lays down the management structure of the company which includes a list for the board of directors, and prescribed appointment and removal procedures
Changes to the Share Capital	• All investors in start-ups have their investment timelines, and accordingly they seek flexibility while analysing exit options through subsequent rounds of funding • The term sheet addresses the stakeholders’ rights and obligations for subsequent changes in the company’s share capital

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Types of Instrument for Start-up Funding

Types of Instrument for Start-up Funding

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Equity Shares

- Equity shares are long-term financing sources for any company
- These shares are issued to the general public and are non-redeemable in nature. Investors in such shares hold the right to vote, share profits and claim assets of a company
- The value in the case of equity shares can be expressed in various terms like par value, face value, book value and so on

Share Warrants

- A share warrant is a contract between an individual and an organization that allows the individual to trade the company shares at a fixed price on or before a pre-decided date. The price is called 'strike price', and the date before which it can be traded is called the 'expiration date'. The idea is that companies offer stock warrant shares at a price significantly lower than the current market value
- The share warrant is a promise to honour the strike price mentioned on the warrant when the investor wants to exercise call rights. The investor must exercise the call right before the strike date for the company to honour and uphold the contract

Preference Shares

- Preference shares, also known as preferred shares, are a type of security that offers characteristics similar to both common shares and a fixed-income security. There are two types of preference shares:
- **Redeemable:** Issued with callable option, that is company can redeem the shares at any given time. The prices at which companies can repurchase these redeemable shares are already decided during issuing those shares
- **Convertible:** Enable holders to convert preference shares into equity shares at a fixed rate. However, the shares can be converted after the expiry of specified time

Debentures

- A debenture is essentially a long-term loan that a corporate or government raises from the public for capital requirements. Debenture share holder are the creditors of the company
- Debenture holders earn an interest income for investing in the debt instrument
- The coupon rates or interest rates are usually fixed unless they are of the floating kind. Debenture shares are less risker.
- Like preference shares debenture shares are also redeemable and convertible

Recent Popular Instruments for Funding

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Compulsorily Convertible Preference Shares (CCPS)

- CCPS is a popular instrument used by start-ups to raise capital from investors.
- It is type of preferred share that pays a dividend and compulsorily converted into common equity shares at a conversion ratio after a specified time.
- After preferred shareholders convert their shares, they give up their rights as a preferred shareholder (no fixed dividend or higher claim on assets) and become a common shareholder (ability to vote and participate in share price appreciation)

Optionally Convertible Preference Shares (OCPS)

- OCPS is another popular tool for raising funds by start-ups.
- Unlike CCPS, here the OCPS are optionally convertible into equity shares.
- Here, based on mutual agreement, either the investor or the company has the option to convert the preference shares into equity shares.
- The option holder can exercise their right to convert the preference shares into equity shares anytime before the expiry of the tenure. If the option is not exercised by the option holder, the company shall redeem the preference shares

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Convertible Notes v/s SAFE Notes

Convertible Notes

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What are Convertible Notes?

- A convertible note is short-term debt that converts into equity.
- In the context of seed financing, the debt typically automatically converts into shares upon the closing of a Series A round of financing.
- In other words, investors loan money to a start-up as its first round of funding; and then rather than get their money back with interest, the investors receive shares as part of the start-up's initial preferred stock financing, based on the terms of the note.

What is the need for Convertible Notes?

1. Traditionally, investors know a start-up's valuation before a fundraising round because the valuation determines how much equity they receive.
2. However, if the business is too new for an accurate valuation, this may be difficult or impossible to determine.
3. Convertible notes help solve this dilemma by using the concept of "convertible equity."
4. Convertible notes can be issued during the pre-seed or seed funding stage.
5. They can then be converted into equity once the company has a valuation (e.g., during Series A fundraising).

Critical Terms of Convertible Notes

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Interest Rate

- Convertible notes function as a debt instrument. They have an interest rate attached like any other loan
- However, in this case, the “interest” is paid in the form of business equity, rather than cash

Discount Rate

- Investors who provide start-up funding in the form of convertible notes receive a discount when buying shares later

Valuation Cap

- Convertible note investors are also rewarded for taking on risk in the form of a valuation cap
- This figure is an upper limit on the company’s valuation when the convertible note turns into equity

Maturity Date

- The maturity date of a convertible note is the final day by which the business either needs to repay the loan or extend the agreement

SAFE Notes

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What are SAFE Notes?

1. SAFE (simple agreement for future equity) notes are a simpler alternative to convertible notes

2. They were created in 2013 by Y Combinator, a Silicon Valley accelerator, and allow start-ups to structure seed investments without interest rates or maturity dates. SAFEs are short five-page documents. The valuation caps are the only negotiable detail. In India it is popular as 'iSAFE note'

3. A Simple Agreement for Future Equity or SAFE is a financing agreement between the company and an investor which grants the investor the right to receive shares at a point in the future, based on the valuation of the company at that point (usually the next funding round, often series A)

4. SAFEs are a form of convertible security not debt, so they don't attract interest or have a maturity date by which they are expected to be repaid. They can remain in place indefinitely, and investors don't have any leverage over the way the company is run in the meantime

5. To comply with applicable Indian law, iSAFE note takes the legal form of compulsorily convertible preference shares (CCPS) which is convertible on occurrence of specified events

Benefits of SAFE Notes

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Simplicity

- A SAFE note is simpler than a convertible note. It has no end date or interest and is only a five-page document
- You may even be able to understand and draft one without a lawyer's help. It will be straightforward with clear perks and downsides

Conversion to Equity

- Investors can change their investment to equity later
- The date of conversion is not predetermined, but it can happen when an equity round is raised and preferred shares are distributed

Less to Negotiate

- Unlike other investments, SAFE notes do not require much negotiation. Sometimes valuation caps are talked about, but that's all

Flexibility for Start-ups

- The lack of pre-defined terms and a maturity date gives the start-up total freedom with no specific destination or expectation

Similar provisions

- SAFE notes still make provision for early exits, change of control, or even the dissolution of a company
- There are provisions for investors, such as discounts and valuation caps

Proportional Benefits

- When SAFE notes do convert, you may be entitled to better benefits in proportion to your original investment
- They can offer preferred stock, called "shadow" or "sub-series" stock
- This can be a better deal than convertible notes, but it can also make for a more complicated mix of shares

Types of SAFE Notes

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Fixed conversion at a future date

The investor invests a particular sum of money and the company commits a particular percentage of equity to the investor

Valuation cap, no discount

In these types of SAFE notes, there is an upper limit on the valuation of the firm in the next round but there is no floor cap and no discount is offered to the investors. The higher the valuation cap, the better it is for the founders as it will result in lower dilution of equity for the founder but provided founders are confident to close the next round at higher than the valuation cap

Discount, no valuation cap

In these SAFE notes, the investor only negotiates the discount for the next round and leave the valuation discussion for the future as that is discussed in pricing round

Valuation cap & discount

In this type, the investor agrees on both the discount and the valuation. Here, the discount is applied to the pre-money cap of the pricing round

Most favoured nation clause

Here, the MFN clause entitles the investors to the same terms as offered to the subsequent investors, so that they will always get the most favourable terms

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Key Terms in a Shareholders Agreement

Key Terms in a Shareholders Agreement (1/2)

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Pre-emptive Rights and Anti-dilution	• Pre-emptive rights clause requires the Company to first offer the new shares to the existing shareholders in proportion to their present shareholding. This clause is effective when all the existing shareholders are willing to invest further • When the Company is offering new shares to new investors, anti-dilution clause plays a crucial role • An anti-dilution clause in your start-up Shareholders' Agreement will enable the investors to keep their holding unchanged without further investment
Right of First Refusal (ROFR)	• This protective clause for the shareholders restricts the transfer of shares • This clause ensures that the company's control is not transferred to undesirable third parties • A shareholder willing to transfer their shares must first offer the same to other existing shareholders at the same price • If the existing shareholder is not willing to purchase the shares at the given price, then the Company may find another investor
Right of First Offer (ROFO)	• A ROFO provides the non-selling shareholders with the right to make an offer for the selling shareholder's shares before the selling shareholder can solicit for third party offers for its shares
Tag-Along Rights	• When the majority of the shareholders wish to sell their holding, the minority group suffers by being in business with unwanted co-owners • The tag-along rights protect the minority's interest in such events • Also known as piggyback rights, this allows the minority shareholders to sell their holding at the same price and terms, if they so choose

Key Terms in a Shareholders Agreement (2/2)

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Drag-Along Rights	• While tag-along rights give the power to minority, drag-along rights are favourable to the buyer • Drag along rights forces the minority shareholders to be dragged for company's sale at the same price and terms • This ensures that the buyer can receive 100% of the shares
Buy-out Rights	• The Shareholders' agreement must include the clause of buy-out rights which states that when a shareholder is found incompetent due to certain major events i.e.; death, disability, bankruptcy or marital dissolution, the company or existing shareholders in such case can buy the shares of such shareholder • It also includes a clause called "expulsion" where the existing shareholders can expel any undesirable shareholder and acquire his/her shares
Exit or Termination Clause	• Upon achieving important milestones, the founders tend to offer buy out or the investors wish to exit from the business. • If such milestones are predefined, this clause provides the manner of exit by the investors or even for the founders • Often, the shareholders take exit at fair value or with guaranteed premium on the acquisition
Good Leaver Bad Leaver	• A good leaver is usually directors or employees who cease to be employed for reasons such as redundancy, ill health, resignation or where the employee has performed well but simply wants to move on to another job opportunity. A bad leaver is an employee who departs from the company on bad terms or circumstances, such as a breach of their contract of employment, gross misconduct or leaves within a certain defined period • A good leaver can but not mandatory to sell their shares on departure. However, a bad leaver is obliged to sell his shares on exit to the other shareholders and will then simply get the nominal value of the shares

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Valuation of Financial Services Firms

Financial Service Firms

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What are financial service firms ?

- The financial service sector provides financial services to people and corporates.
- Financial service firms include banks, investment houses, lenders, finance companies, and insurance companies.
- Broadly a financial services company seeks to foster economic growth by bringing together those who can supply money through saving accounts, and those who need capital through loans.
- However, the financial industry has developed into a sophisticated pool of products.
- Therefore, nowadays financial services companies are offering more than intermediary services.

Types of financial service firms

Based on the Kind of Activity

Banks

Insurance Companies

Securities Brokerage

Mutual Funds

Assets Finance Company

Investment Company

Non-Banking Financial Company

Peculiarities of Valuation of Financial Services Firms

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1 Regulatory Framework	• Financial service firms are required to maintain regulatory capital ratios • Mergers between existing firms are controlled by the regulatory authorities • These firms are often constrained in terms of where they can invest their funds • From a valuation perspective, assumptions about growth are linked to assumptions about reinvestment, however, for financial service firms these assumptions are scrutinized to ensure that they pass regulatory constraints
2 Capital Structure	• Financial service firms treat debt as raw materials rather than treating as a source of capital • The definition of debt in a financial service firm is ambiguous. For instance, deposits made by customers into their checking account at a bank be treated as debt by that bank? • If debt can define as a source of capital and measure precisely, there is a final dimension on which financial service firms differ from other firms. They tend to use more debt in funding their businesses and thus have higher financial leverage than most other firms
3 Defining Debt	• If short-term and long-term borrowings are treated as debt then, the debt ratio for banks will be stratospheric. • If we combine such high debt ratios with low cost of debt, that results in a small (4%) or lower cost of capital for banks. • Thus, we can decide to include only long-term debt in the cost of capital computation and end up with more realistic numbers, but there is no logical rationale for the choice.

Widely Used Valuation Methods (1/2)

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Relative Valuation Method

- There are various multiples used to value firms, however EV/EBITDA or EV/EBIT would be difficult to compute for financial service firms. Therefore ideal multiple to value such firms would be equity multiples.
- The three most widely used equity multiples are price earnings ratio, price to book value ratio and price to sales ratios. Since sales or revenues are not really measurable for financial service firms, price to sales ratio cannot be estimated or used for these firms

Price to Book Value Ratio

$$\frac{\textit{Price Per Share}}{\textit{BV of Equity Per Share}}$$

- Higher price to book value ratio is a function of four variables:
  - Higher growth rate in earnings
  - Higher pay-out ratio
  - Lower cost of equity
  - Higher return on equity
- The strength of the relationship between price to book ratios and returns on equity should be stronger for financial service firms than for other firms, because the book value of equity is much more likely to track the market value of equity invested in existing assets
- Similarly, the return on equity is less likely to be affected by accounting decisions

Price Earning Ratio

$$\frac{\textit{Price Per Share}}{\textit{Earnings Per Share}}$$

- Price earnings ratio is a function of three variables:
  - Expected growth rate in earnings
  - Pay-out ratio
  - Cost of equity
- As with other firms, the price earnings ratio should be higher for financial service firms with higher expected growth rates in earnings, higher pay-out ratios and lower costs of equity
- An issue that is specific to financial service firms is the use of provisions for expected expenses
- For instance, banks routinely set aside provisions for bad loans. These provisions reduce the reported income and affect the reported price earnings ratio

Widely Used Valuation Methods (2/2)

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Assets Based Valuation Method

In asset-based valuation, we value the existing assets of a financial service firm, net out debt and other outstanding claims and report the difference as the value of equity

With a Financial services firm, this would require valuing the loan portfolio of the bank which would comprise its assets and subtracting outstanding debt to estimate the value of equity

How would you value the loan portfolio of a bank?

One approach would be to estimate the price at which the loan portfolio can be sold to another financial service firm, but the better approach is to value it based upon the expected cash flows, but the better approach is to value it based upon the expected cash flows

Following are the constrains in valuing loan portfolio

It does not assign any value to expected future growth and the excess returns that flow from that growth.

It is difficult to apply when a financial service firm enters multiple businesses

Challenges in Adopting DCF Method (1/3)

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Estimating Equity Value of Financial Service Firm

- Estimating cash flows prior to debt payments at a weighted average cost of capital is problematic, when debt and debt payments cannot be easily identified
- Equity can be valued directly, however, by discounting cashflows to equity at the cost of equity
- To value the equity in a firm, we normally estimate the free cashflow to equity

Free Cashflow to Equity = ***Net Income*** − ***Net Capex*** − ***Changes in Non-Cash Working Capital*** − ***(Debt Repaid − Net Debt Issued)***

If we cannot estimate net capital expenditures or non-cash working capital, we clearly cannot estimate the free cashflow to equity. Since this is the case with financial service firms, we have three choices:

Dividends	• To use dividends as cash flows to equity and assume that firms over-time pay out their free cash flows to equity as dividends • Since dividends are observable, we therefore do not have to confront the question of how much firms reinvest
Excess Returns	• To keep the focus on excess returns, rather than on earnings, dividends and growth rates, and to value these excess returns
Free Cashflow to Equity	• To adapt the free cashflow to equity measure to allow for the types of reinvestment that financial service firms make

Challenges in Adopting DCF Method (2/3)

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Due to following aspects analysts are not adopting DCF for valuing financial service firms

Earnings as Cash Flows

- Analysts valuing banks by discounting their earnings back to the present argues that banks have little or no net capex and working capital needs
- The problem, is that the analysts couple the discounting of earnings with a positive or even high expected growth rate in these earnings which is clearly not feasible in the long term
- That is why reinvestment has to include investments in regulatory capital, acquisitions and other such investments that banks need to make to continue to grow

Pseudo Cash Flow

- If analysts uses conventional definition of cash flow, they generate measures of cash flows that are even more skewed than earnings
- The net capital expenditures at a financial service firm, at least as defined by conventional accounting statements, will be a very small or negative number
- However, defining working capital as the difference between non-cash current assets and non-debt current liabilities is difficult considering banks treat cash as inventory

Challenges in Adopting DCF Method (3/3)

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If we define reinvestment as necessary for future growth, measuring reinvestment with financial service firm would be difficult. Reinvestment for Financial Service Firms includes following items:

Net Capital Expenditures

- Unlike manufacturing firms that invest in plant, equipment and other fixed assets, financial service firms invest primarily in intangible assets such as brand name and human capital
- Consequently, financial service firms investments for future growth often are categorized as operating expenses in accounting statements

Working Capital

- If we define working capital as the difference between current assets and current liabilities, a large proportion of a bank's balance sheet would fall into one or the other of these categories
- We cannot estimate cash flows without estimating reinvestment
- Further, estimating expected future growth becomes more difficult, if the reinvestment rate cannot be measured

Overcoming Challenges while Adopting DCF Method

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In order to solve reinvestment valuing problem, the investment in regulatory capital; this is the capital as defined by the regulatory authorities, which, in turn, determines the limits on future growth

FCFE Financial Service Firm = **Net Income** − **Reinvestment in Regulatory Capital**

To estimating the reinvestment in regulatory capital, we have to define two parameters:

Book equity capital ratio

- The book equity capital ratio that will determine the investment; this will be heavily influenced by regulatory requirements but will also reflect the choices made by a bank
- Conservative banks may choose to maintain a higher capital ratio than required by regulatory authorities whereas aggressive banks may push towards the regulatory constraints

Profitability of the activity

- The profitability of the activity is defined in terms of net income. We have to specify how much net income the bank will generate with the additional loans

Conclusion

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The basic principles of valuation apply just as much for financial service firms as they do for other firms. Following are the aspects related to value financial service firm:

Defining and Measuring Debt is Difficult	For a financial service firm, debt is difficult to define and measure, making it difficult to estimate firm value or costs of capital
Equity Valuation	It is easier to value the equity directly in a financial service firm, by discounting cash flows to equity at the cost of equity
Capex and Working Capital	Capex and Working capital are the inputs required to estimate cashflow, which is often not easily identified at financial service firms
Operating Expenses	The reinvestment that occurs at such firms are categorised as operating expenses. Therefore, to estimate cashflow either use dividend (and assume amount not paid as dividend is the reinvestment) or modify reinvestment definition
Equity Multiples are Ideal for Valuing such Firms	Difficulties associated with defining debt make equity multiples such as price earnings or price to book value ratios better suited for comparing financial service firms than value multiples. In making these comparisons, we have to control for differences in fundamentals – risk, growth, cash flows, loan quality – that affect value
Regulatory Considerations and Constraints	Regulatory authorities significantly impact financial service firms returns and valuation

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Valuation of Distressed Companies

Distressed Companies

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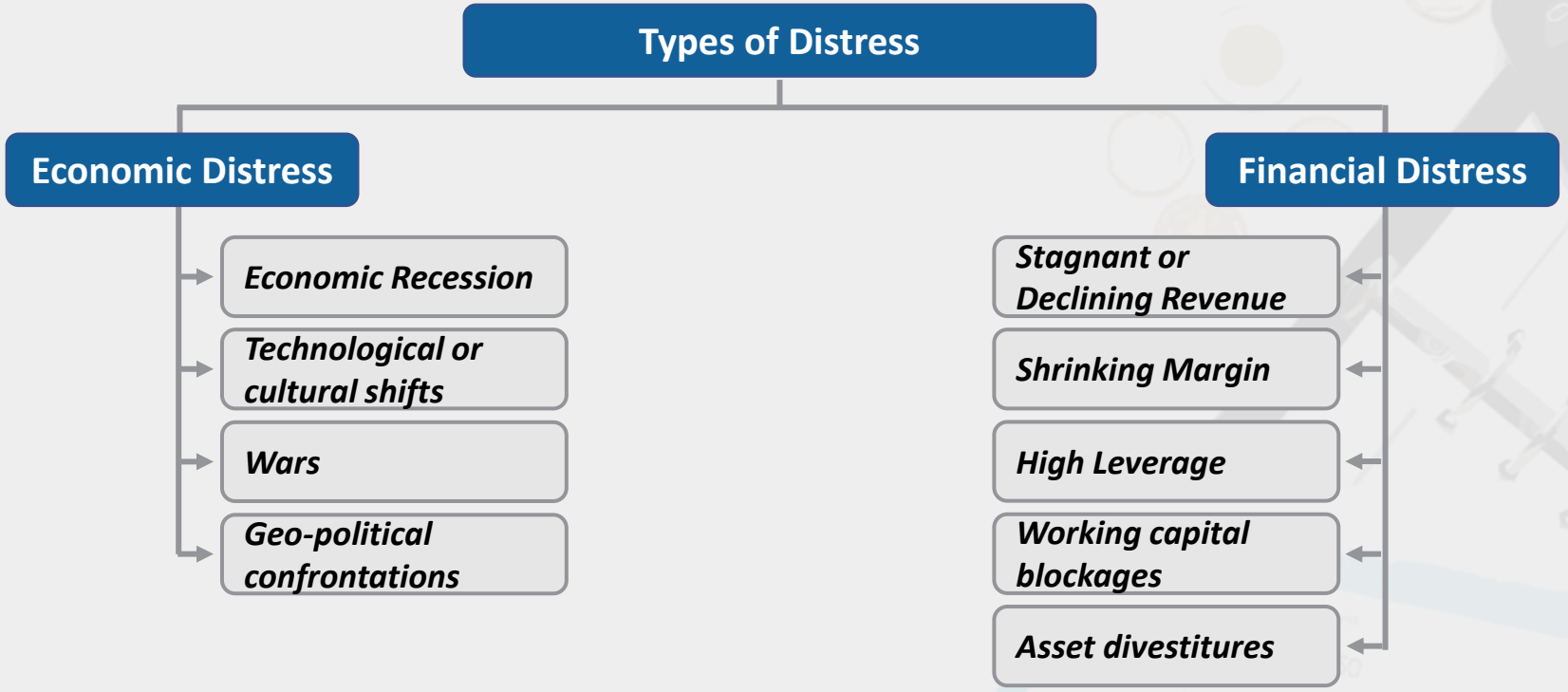
When is a Company said to be in Distress?

- A company is said to be in distress when the company is unable to meet, or has difficulty paying off, its financial obligations to its creditors, typically due to
  - High Fixed Cost
  - Illiquid Assets
  - Revenues being sensitive to economic downturns, etc.
- Companies are said to be "financially distressed", to mean that it appears to be:
  - Reasonably unlikely that the company will be able to pay all of its debts as they fall due and payable within the immediately ensuing six months, or
  - Reasonably likely that the company will become insolvent within the immediately ensuing six months



Evolution of Insolvency Laws in India

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1956

Companies Act, 1956
No separate provision of restructuring except through M&A or voluntary compromise

1985

SICA, 1985
Deals with restructuring of distressed industrial firms

2002

SARFAESI Act, 2002
Introduce to help banks takeover assets of defaulters and ease recovery

2003

Asset Reconstruction Company
Focusing on recovery and financial engineering like recasting or rescheduling debt

2004

Corporate Debt Restructuring,
Introduce to reschedule debt repayments, to provide relief to borrowers

2015

Strategic Debt Restructuring
Introduce to help creditors take ownership of the company by converting outstanding loan to equity

2016

Scheme for Sustainable Structuring of Stresses Asset
Introduced as change in RBI's SDR. It says control of business remains with borrower as long as 50% of debt is 'sustainable'

2016

IBC, 2016
Introduce to tackle NPA problem with banks. The code provides a clear priority of claims structure for cash distribution in 180-90 day resolution time or else liquidation

Signs of a Distressed Companies

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Following are some of the signs / indicators of a distressed company:

Working Capital/ Liquidity

- Declining or negative free cash flow
- Increase in accounts-receivable aging
- Increase in outstanding accounts payable

Profitability and Industry Outlook

- Reduced capital-investment programs
- Shrinking EBITDA margin
- The adverse regulatory environment and regulatory inquiries

Financial

- Declining stock price and bond price
- Inability to meet debt covenants
- Diminishing liquidity and downgrades in debt ratings

Employees

- Large or unplanned reductions in the workforce
- Management turnover
- Disruptions in the unionized workforce

Judging Financial Soundness

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Altman Z-score

- Altman's Z-score Model is a numerical measurement that is used to predict the chances of bankruptcy.
- American Edward Altman published the Z-score Model in 1968 as a measure of the probability of a company going bankrupt.
- Altman's Z-score model combines five financial ratios to predict the probability of a company becoming insolvent in the next two years.
- **Altman's Z-score formula :**

$$\zeta = 1.2A + 1.4B + 3.3C + 0.6D + 1.0E$$

Where -

- Zeta (ζ) is the **Altman's Z-score**
- A is the **Working Capital/Total Assets** ratio
- B is the **Retained Earnings/Total Assets** ratio
- C is the **Earnings Before Interest and Tax/Total Assets** ratio
- D is the **Market Value of Equity/Total Liabilities** ratio
- E is the **Total Sales/Total Assets** ratio

Interpretation of Z-Scores –

- The Altman Z - scores shows the figures that can be used to categorize a company into the financial distressed and non – financial distressed company.
- The descriptions of the categories are as follows –

Sr. No.	Range of Z-score	Interpretation
1.	> 2.99	The institution is in good position and safe from financial problem
2.	2.99 – 1.81	Warning Sign! It is considered as grey area as the financial institution have chances to faces bankruptcy problem
3.	< 1.81	Bad Indication! The financial institution is most likely to be heading towards bankruptcy problem. Necessary actions are needed to avoid from the worst situation.

Possibility of Accounting Manipulation

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Beneish M-score

- Beneish's M-Score is a model that uses eight financial ratios weighted by coefficients to identify whether a company has manipulated its profits.
- It was created by Professor Messod Beneish who published a paper in June 1999 called The Detection of Earnings Manipulation.
- Beneish surmises that companies are incentivized to manipulate profits if they have high sales growth, deteriorating gross margins, rising operating expenses and rising leverage.

- **Beneish M-Score formula :** $M = -4.84 + 0.92*DSRI + 0.528*GMI + 0.404*AQI + 0.892*SGI + 0.115*DEPI - 0.172*SGAI + 4.679*TATA - 0.327*LVGI$

Where -

- M is the **Beneish M-score**
- DSRI is the **Days' Sales in Receivables Index**
- GMI is the **Gross Margin Index**
- AQI is the **Asset Quality Index**
- SGI is the **Sales Growth Index**
- DEPI is the **Depreciation Index**
- SGAI is the **Sales, General and Administrative Expenses Index (SGAI)**
- TATA is the **Total Accruals to Total Assets**
- LVGI is the **Leverage Index**

Interpretation of M-Scores –

- The variables are constructed from the data in the company's financial statements to create an M-Score that serves to describe how much the earnings have been manipulated. A primary application of the Beneish model is as a tool to uncover financial fraud.

M-score	Interpretation
< -1.78	The company is unlikely to be a manipulator. For example, an M-score value of -2.50 suggests a low likelihood of manipulation.
> -1.78	The company is likely to be manipulator. For example, an M-score value of -1.50 suggests a high likelihood of manipulation.

Financial Distressed Vs Insolvency

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Financial Distress

1	Financial distress is something that happens to companies because of operating decisions or external forces
2	Financial distress may lead a firm to default on a contract and is the pre-condition of insolvency
3	Financial distress is a situation where a firm's operating cash flows are not sufficient to satisfy current obligations

Insolvency/Bankruptcy

1	Bankruptcy is something that companies choose to do to protect their assets from creditors
2	Bankruptcy occurs subsequent to a period of financial distress
3	Insolvency is a situation when a firm is unable to meet their financial obligations

Challenges in Valuing Distress Companies

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The following factors discuss why conventional methods are not usefully deployed when valuing companies in distress:

Existing Assets

- In declining firms, existing assets, earn less than the cost of capital
- If existing assets generates profit less than the cost of capital, the logical response is to sell or divest the firm, however, divestitures of assets create discontinuities in past data and make forecasts more difficult

Growth Assets

- Declining firms derive little from growth assets, so the valuation of these assets should not have a significant impact on value
- If these assets earn less than the cost of capital, the value of adding new assets will be negative, and reinvestment will lower the firm's value

Terminal Value

- Conventional valuation methods involve the computation of terminal value i.e., the value of the subject going into perpetuity
- This may not hold true for companies in distress for which an assumption of perpetuity is not practically relevant and feasible

Discount Rates

- Discount rates or multiples used in traditional methods reflect operations of companies that are operationally as well as financially sound
- They cannot be used in their pure forms without adjusting them for the probabilities of failures of the companies in case of distressed companies

Methods of Valuation of Distressed Companies (1/4)

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Modified Discounted Cash Flows

- This method is based on the underlying principles of the discounted cash flow method but adjustment for the risk of default needs to be carried out for cash flows as well as discount rate. The same can be done as follows:

Estimating the Cash Flows

- Cash flows across each scenarios must be estimated with the respective probabilities of each scenario
- The expected cash flow for a particular year is calculated as = SUM (Estimated cash flow under each scenario x Probability of respective scenario)
- It is important to note that the adjustment for distress is a cumulative one and will have a greater impact on the cash flows in the later years

Estimating the Discount Rate

- **The following approaches may be used for addressing the risk of distress in the discount rate:**
  - Using bottom-up betas and updated debt to equity ratios (rather than historical or regression betas) to estimate the cost of equity. The bottom-up unlevered beta should be used and re-levered using the subject company's current debt to equity ratio and the effective tax rate

  OR

  - Estimate a distressed premium which is to be added to the cost of equity calculated using standard measures. One of the ways of computing the distress premium is to compare the company's pre-tax cost of debt to the industry's cost of debt

Methods of Valuation of Distressed Companies (2/4)

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DCF Valuation + Distress Value

- A DCF valuation values a firm as a going concern. If there is a significant likelihood of the firm failing before it reaches stable growth and if the assets will then be sold for a value less than the present value of the expected cashflows (a distress sale value), DCF valuations will understate the value of the firm:

$$\text{Value of Equity} = \text{DCF Value of Equity} \times (1 - \text{Probability of Distress}) + \text{Distress Sale Value of Equity} \times (\text{Probability of Distress})$$

Steps to be Followed:

1 Going Concern Value

Carry out the conventional DCF valuation exercise with going concern as the underlying assumption

2 Estimating the Probability of Distress

- We need to estimate a cumulative probability of distress over the lifetime of the DCF analysis - often 10 years
- Bond Rating is one of the indicators to estimate the probability of distress

3 Estimating Distress Sale Value

The distress sale value of equity can be estimated –

- As a % of book value (and this value will be lower if the economy is doing badly and there are other firms in the same business also in distress)
- As a % of the DCF value, estimated as a going concern

Methods of Valuation of Distressed Companies (3/4)

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Relative Valuation

- Revenue and EBITDA multiples are used more often to value distressed firms than healthy firms
- However, multiples such as P/E or P/BV often cannot even be computed for a distressed firm

Following are the approaches available for relative valuation:

Compare the distressed company's valuation to that of other distressed companies	In this approach, unless there are a large number of distressed firms in the said sector, this approach will not work
Compare with healthy companies but adjust for the distress	Identify the healthy companies in the sector, however, coming up with objective criteria for determining the level of distress that work well may be difficult to do
Consider the possibility of distress explicitly	*Distress adjusted value* = *Relative value based upon healthy firms* (1 − *Probability of Distress*) + *Distress Sale Proceeds* (*Probability of Distress*)

Methods of Valuation of Distressed Companies (4/4)

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Monte Carlo Simulations

- Following are the steps for Monte Carlo Simulations:

Preliminary Step	Define the circumstances under which you would expect a firm to be pushed into distress.
Step 1	Choose the variables in the DCF valuation that you want estimate probability distributions on
Step 2 & 3	Define the distributions (type and parameters) for each of these variables
Step 4	Run a simulation, where you draw one outcome from each distribution and compute the value of the firm. If the firm hits the “distress conditions”, value it as a distressed firm
Step 5	Repeat step 4 as many times as you can
Step 6	Estimate the expected value across repeated simulations

Case Study (1/2)

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Sanghvi Forging and Engineering Ltd

- Incorporated in 1989, headquartered at Vadodara, Gujarat.
- Engaged in manufacturing of forged flanges & Heavy forgings for the Defence and Aerospace, Power, Oil & Gas, Construction & Mining, Railways, Marine, and General Engineering sectors
- The Company exports its products to more than 20 countries across Europe, the USA, and the Middle East
- Operates with two manufacturing plants Heavy Forging Division and Flange & Component Division located at Vadodara, with 18,600 MTPA manufacturing capacity as of 2020

Sanghvi Forging and Engineering Ltd Admitted Distress

Particulars (INR Cr.)	2016	2017	2018	2019	2020
Revenue	69	56	57	64	60
EBITDA	15	3	3	4	6
Net Profit/(Loss)	(10)	(23)	(23)	(2)	(5)
Debt	133	114	96	97	145
Net Assets Value	44	21	(3)	(23)	(28)

- **The company has continued to incur losses resulting in erosion of entire Net-worth, and Liabilities exceed Assets. Therefore, the company management decided to undergo Corporate Insolvency Resolution Process (CIRP) under the provisions of IBC, 2016**

Case Study (2/2)

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Bharat Forge Industrial Solution Ltd acquired 100% stake in Sanghvi Forging and Engineering Ltd

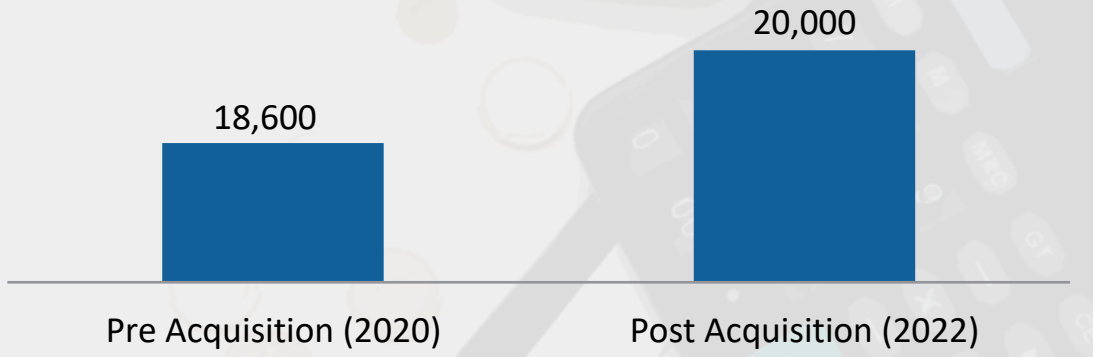
- On 28, June, 2021, Bharat Forge acquired a 100% stake in Sanghvi Forging and Engineering Ltd through SPV Bharat Forge Industrial Solution Ltd and renamed Bharat Forge Industrial Technology and Solutions Ltd
- Following is the deal value of SFEL :

Total Deal Value (INR Cr.)	90
Equity Shares (INR Cr.)	4
Convertible Debentures (INR Cr.)	11
Paid to Financial Creditors of SFEL (INR Cr.)	75

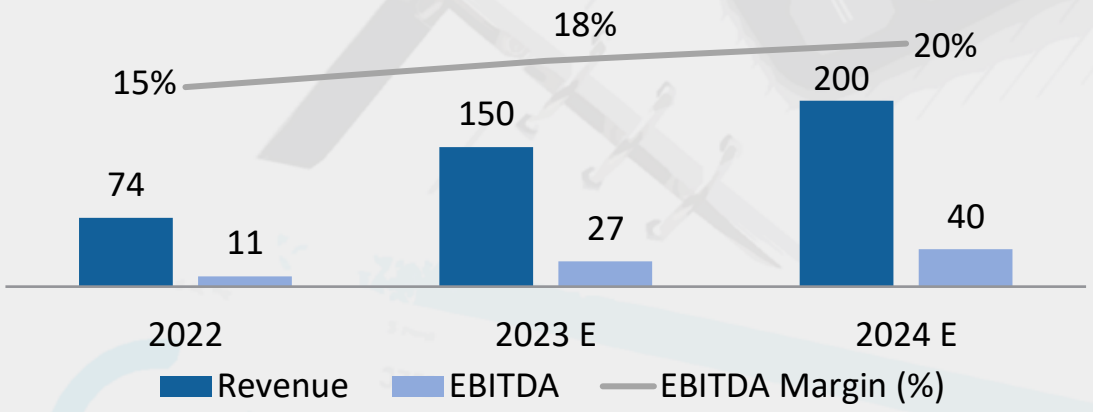
Key Points

Business Turnaround	Over 9 months after acquisition by incorporating proper system and process along with intra team coordination, Bharat Forge enable to integrate and turnaround SFEL
Forging Capacity	Also, the company, increased manufacturing capacity by ~8% post acquisition
Top-Line Growth	As resultant, SFEL recorded a top line growth of 13% in 2022 as compared to INR ~65 Cr. in 2021 and projected to generate healthy margin in 2023 and 2024

Steel Forging Capacity of SFEL (MTPA)



SFEL Projected Revenue & EBITDA (INR Cr.)



Appendix

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15 Years Global Corporate Average Cumulative Default Rates (1981–2017) by S&P (%)

	Time Horizon (Years)														
Rating	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**	**12**	**13**	**14**	**15**
AAA	0.00	0.03	0.13	0.24	0.35	0.46	0.51	0.60	0.65	0.71	0.74	0.77	0.80	0.86	0.93
AA	0.02	0.06	0.12	0.22	0.32	0.43	0.53	0.60	0.68	0.75	0.82	0.89	0.95	1.01	1.07
A	0.06	0.14	0.24	0.37	0.51	0.66	0.85	1.01	1.17	1.34	1.50	1.64	1.79	1.93	2.09
BBB	0.17	0.49	0.84	1.26	1.70	2.13	2.50	2.87	3.23	3.58	3.94	4.24	4.52	4.81	5.11
BB	0.68	2.13	3.83	5.53	7.11	8.57	9.81	10.92	11.90	12.77	13.49	14.14	14.72	15.24	15.80
B	3.59	8.25	12.26	15.44	17.88	19.88	21.48	22.76	23.90	24.95	25.84	26.53	27.15	27.75	28.34
CCC/C	26.82	36.03	41.03	43.97	46.22	47.13	48.33	49.23	50.08	50.71	51.20	51.71	52.34	52.82	52.82
Investment Grade	0.10	0.26	0.45	0.68	0.92	1.17	1.40	1.61	1.82	2.03	2.23	2.40	2.57	2.73	2.91
Speculative Grade	3.75	7.31	10.39	12.90	14.95	16.64	18.05	19.23	20.27	21.21	22.00	22.65	23.25	23.80	24.34
All Rated	1.50	2.95	4.22	5.29	6.18	6.94	7.57	8.12	8.60	9.05	9.44	9.77	10.07	10.35	10.63

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Valuation of Intangible Assets

What are Intangible Assets?

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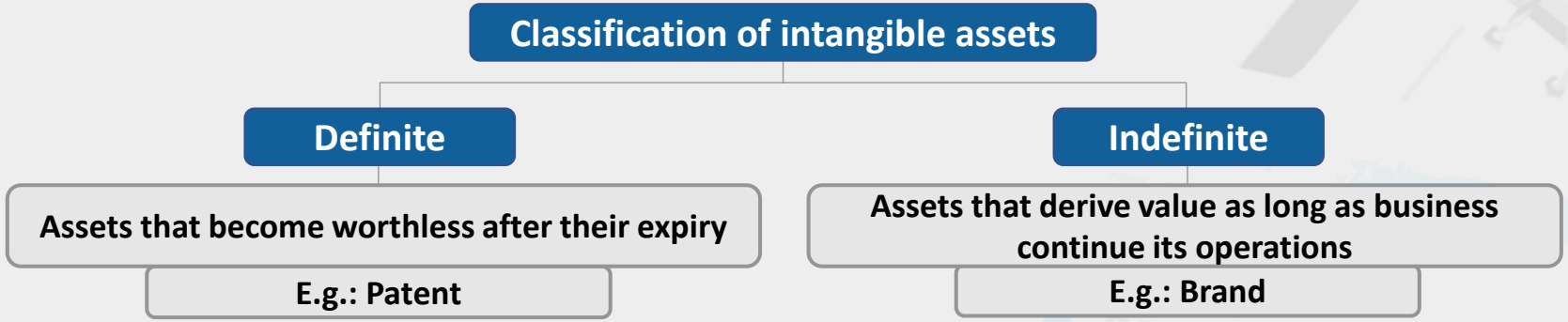
Value of intangible assets in new age companies

- Wealth and growth in today's economy are primarily driven by intangible (intellectual) assets
- Physical and financial assets are rapidly becoming commodities, yielding at best an average return on investment
- Abnormal profits, dominant competitive positions, and sometimes even temporary monopolies are achieved by the sound deployment of intangibles, along with other types of assets
- Intangible assets play an important role in valuation of companies in today's economy. Due to increase in economic competitiveness and innovation, large number of new age companies primarily derive value from their intangible assets such as Technology, knowhow, software, etc.
- However, there are certain challenges in recording fair value of intangible assets into books of accounts, which may distort true value of the firm

As per Ind AS-38 – intangible assets

- An intangible asset is an identifiable non-monetary asset without physical substance. It also includes Financial assets (as defined under Ind AS 32) that derive value from a contractual right/claim
- Intangible assets are recognized as follows:
  - **Identifiability** - they are separable or may arise from contractual or other legal rights;
  - **Future economic benefits** – their existence depends on the expectation of future benefits such as revenue or cost savings or other benefits resulting from their use; and
  - **Control** - the owner can control the use or restrict the access to the future economic benefits



Categories of Intangible Assets

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Raconteur Publishing has classified intangible assets into eight different categories:

Intellectual Property

B2B Rights

Brand

Hard Intangibles

Data

Non-Revenue Rights

Public Rights

Relationships

The value of the intellectual capital derived from specialized knowledge and experience that employees of an acquiree bring to their jobs may be captured in the value of other intangible assets in certain circumstances

Intangible Assets across Industries

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Following are the examples of intangible assets in respective industries:

IT Industry
- Patent
- Technical Know-how
- Internet Domain Names
- Technology or Software Codes

Business Services Industry
- Customer/ Vendor Relationships
- Order Backlogs
- Non-compete Agreements
- Database

Pharmaceutical Industry
- Product Molecules
- In-process Research & Development
- Licensing Agreements
- Trade Names and Trademarks

Telecommunication Industry
- Spectrum Licenses
- Software
- Customer
- Tower Rights

Oil & Gas
- Software
- Exploration and Evaluation for Oil
- License
- Patent, Trademark etc.

Aerospace & Defence
- Patent
- Airport Operating Rights
- License
- Services

Sector wise Intangible Assets

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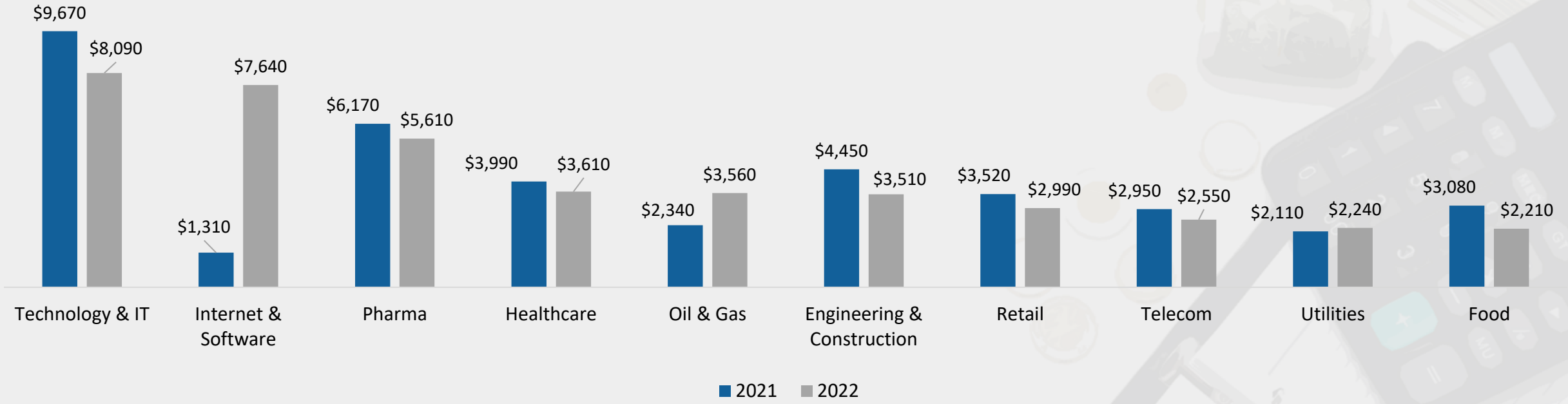
Total intangible assets value by sector ($ Bn)



- Global intangible value has declined by 25% y-o-y, from $76 Tn in 2021 to $57 Tn in 2022 primarily due to the impact of COVID-19 pandemic
- On the other hand, sectors such as Internet & Software, Oil & Gas, and Utilities have experienced a y-o-y increase in intangible value
- Internet & Software sector rebounded significantly in 2022 as compared to 2021, recording $1,310 Bn in 2021 and $7,640 Bn in 2022 respectively
- Oil and gas sector increased by 52% from $2,340 Bn in 2021 to $3,560 Bn in 2022 and utilities by 6% from $2,110 Bn in 2021 to $2,240 in 2022

Shift in Companies Assets Investments

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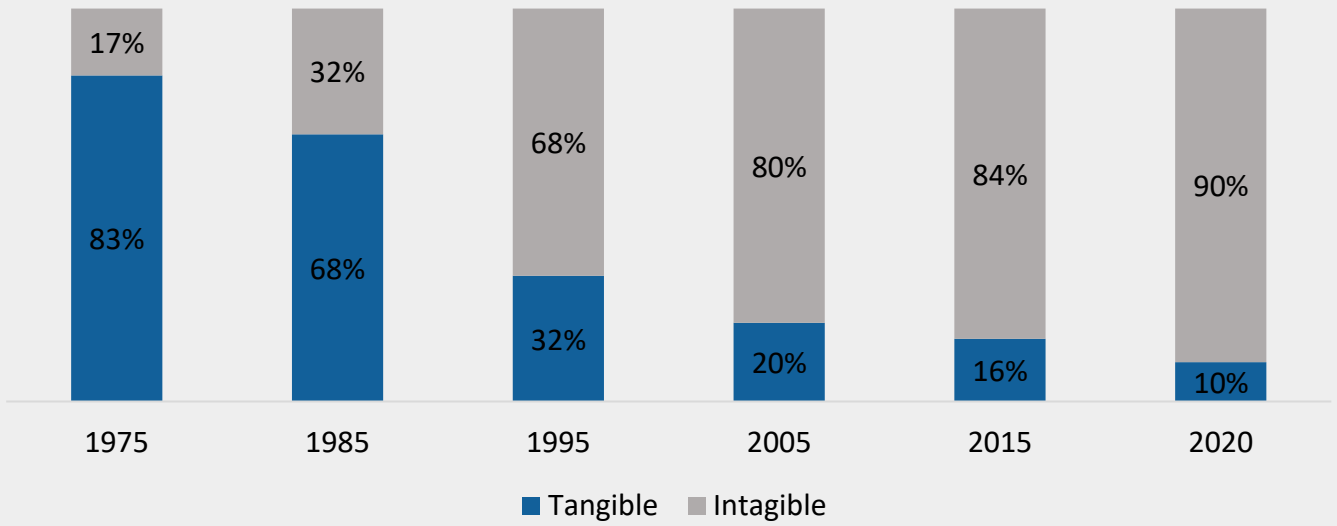
Share of Tangible vs Intangible assets of S&P 500 companies (%)



Companies where Intangible assets value represent 100% of Enterprise Value (2022)

P&G, MasterCard, abbvie, BROADCOM, Johnson & Johnson, UNITEDHEALTH GROUP, DANAHER, Cigna, IBM, ABInBev

- Intangibles used to play a much smaller role than they do now, with physical assets comprising the majority of value for most companies
- An increase in competition and innovations led to a rise in intellectual property and other intangible assets of the companies
- Intangible assets have evolved as a key component in the valuation of an enterprise
- Over and above the technology & IT companies, pharma and healthcare companies' intangible assets value represents 100% of its business valuation

Valuation of Top Brands

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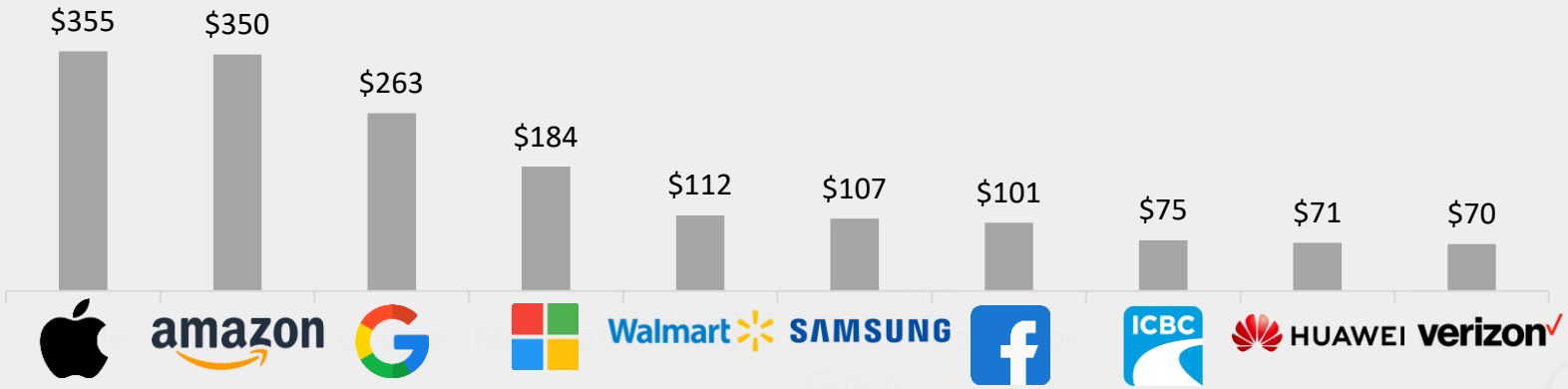
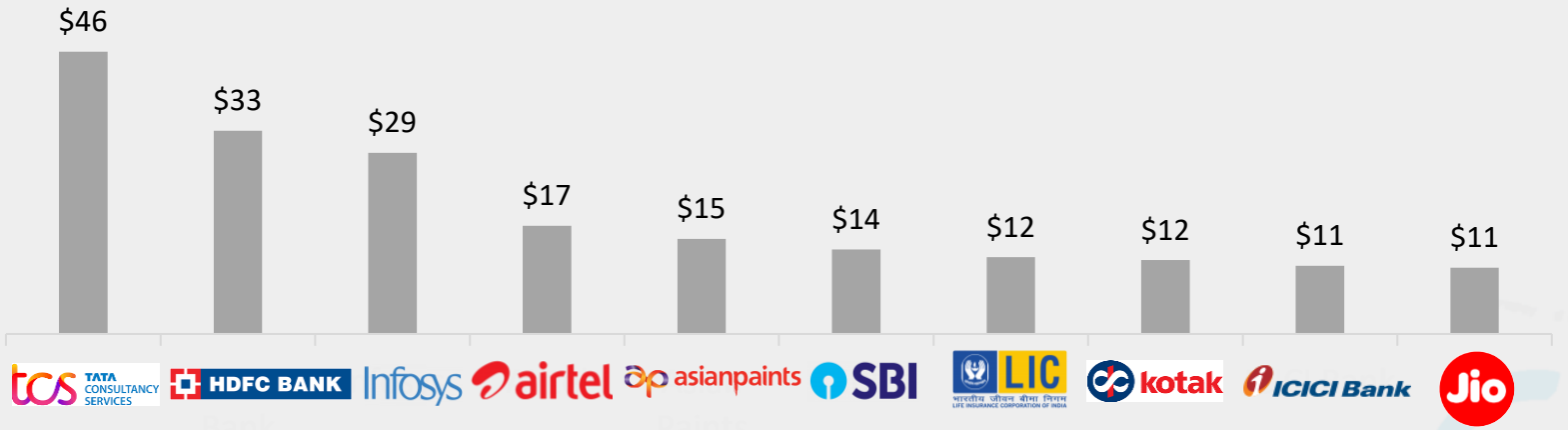
Top 10 global brands value ($Bn, 2022)



Top 10 Indian brands Value ($Bn, 2022)



Commentary

- Among the global brand Apple was the most valuable brand in 2022 with a $355 Bn brand value followed by Amazon with a $350 Bn brand value
- Whereas, among Indian brands TCS was the most valuable brand recording $46 Bn, followed by private financial institution HDFC Bank with a brand value of $33 Bn in 2022
- Over and above the digital-centric sector, global retail companies are also significantly increasing their brand value
- Major technology and IT company's brand value is driven by increase in intangible assets investment

Intangible Assets Intensive Brands

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The following table shows top 15 companies with share of Intangible Assets in Enterprise Value (2021):

Rank	Intangible Assets Intensive Firms	Country	Share of Intangible Assets (%)
1	Microsoft		93
2	Ayden		92
3	LVMH		92
4	Unilever		91
5	Medtronic		87
6	Atlas Copco		86
7	Oersted		85
8	Novartis		82
9	Ferrari		80
10	Volkswagen		80
11	Tencent		78
12	Kindred Group		77
13	Bank Central Asia		75
14	TCS		75
15	QNB Finansbank		73

Need for Valuation of Intangible Assets

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As per Ind AS 38, an intangible asset is recognized if the below conditions are met

- It is probable that the expected future economic benefits attributable to the asset will flow to the entity
- The cost of the asset can be measured reliably

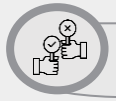
Importance of valuation of intangible assets

- Internally generated intangible assets are recognized as expenses, therefore, not recorded in the balance sheet and have no recorded book value, as a result, they are not appropriately recognized as assets in the financial statement. This create a need for appropriate valuation of intangible assets
- Intangible assets play an important role in the valuation of the businesses engaged in pharmaceuticals, technology, luxury, financial services, and consumer industry
- The convergence of Indian Accounting Standards with IFRS has brought the valuation of intangible assets to the fore
- Intangibles comprise a significant asset class in the allocation of the purchase price in case of Business Combinations under Ind AS 103 and Ind AS 38 which deal with the accounting treatment of intangible assets

Intangible asset valuation is critical in the following cases:


Financial Reporting


M&A Decisions


Business Formation & Business Dissolution


Strategic Planning & Corporate Governance


Licensing

Tax Compliance & Planning


Dispute Resolution


Liquidation


Litigations


Fund Raising

Valuation Standard

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The ICAI valuation standard 302 deals with the valuation of intangible assets, following considerations, are included in the standard:

1	To determine the purpose and objective of the overall valuation assignment
2	To consider the legal rights of the intangible asset to be valued. For example, a registered trademark may have a higher value as compared to an unregistered trademark. However, an unpatented technology (as not in the public domain) may have a higher value than a patented technology
3	To evaluate the highest and best use considerations
4	To assess the history and development of the intangible asset
5	To consider any specific laws or regulations guiding the intangible asset valuation in the country. For example, royalty payments in India are regulated

Valuation Methods (1/2)

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IND AS 38 has recommended below valuation methods for valuation of Intangible Assets

Methods	Description
Market	**Comparable Transaction Method** • Transactions occurring in a free and open market between knowledgeable and willing buyers and sellers conducted on an arm's length basis can be used to determine benchmark metrics such as revenue and profitability multiples for valuing comparable intangible assets • While evaluating comparable, factors such as age of the asset, applicability of use, locational / geographical access or use, risk and expected return characteristics, etc. should be considered • An amount or percentage may be deducted from the value to reflect the relative absence of marketability/liquidity in the subject asset to be valued. Also control premium needs to be appropriately reflected
Cost	**Historical Method** • This method considers the historic / sunk cost / purchase price to value the asset • Future benefits arising out of the use of assets are not considered under this method • This method does not reflect the true value of intangible assets as it focuses more on book value rather than intrinsic value of the assets **Replacement Cost Method** • The method considers estimating the costs to recreate/replace an asset with equivalent functionality at current prices and costs, including adjustments for factors like physical deterioration & functional/economic obsolescence • It is based on the premise that a prudent third party would not pay more than the assets' replacement cost • The buyer would be willing to pay more than the replacement cost on account of competition, timing, uniqueness, and other features

Valuation Methods (2/2)

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IND AS 38 has recommended below valuation methods for valuation of Intangible Assets

Methods	Description
Income	**Relief from Royalty Method (RRM)** • Calculates value based on the hypothetical royalty payments that would be saved by owning the asset rather than licensing it • The RRM is often used to value domain names, trademarks, licensed computer software, and in-progress R&D that can be tied to a specific revenue stream and where data on royalty and license fees from other market transactions are available **Multiperiod Excess Earnings Method (MEEM)** • The MEEM is a variation of discounted cash-flow analysis • Rather than focusing on the whole entity, the MEEM isolates the cash flows that can be associated with a single intangible asset and measures fair value by discounting them to present value • The MEEM tends to be applied in early-stage enterprises and technology firms **With and Without Method (WWM)** • WWM measures the economic contribution of the asset by calculating the net present value of the incremental cash flows to be derived from the use of the asset • In this method one needs to calculate two sets of cash flows; one that represents the status quo for the business enterprise with the asset in place, and another without it • The difference could be either in terms of higher pricing that the product/service commands owing to brand or higher volume/units sold as it may have the potential of higher penetration in the target markets • The difference between the cash flows is assumed to be attributed to Intangibles • The WWM is often used to value noncompete agreements

Selection of Intangible Valuation Method

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According to AICPA, different valuation methods are preferable for each asset class of Intangible Assets

Intangible Assets	Primary	Secondary	Tertiary
Patent	Income	Market	Cost
Technology	Income	Market	Cost
Copyright	Income	Market	Cost
Assembled Workforce	Cost	Income	Market
Internally developed software	Cost	Market	Income
Brand name	Income	Market	Cost
Customer relationships	Income	Cost	Market

Aspects of Valuing Intangible Assets

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Following aspects should be considered for the valuation of Intangible assets

Contributory Asset Charge (CAC)	• Assessing the CAC can be a challenge under MEEM method • The required returns on CAC must be consistent with an assessment of the risk of individual asset classes and should reconcile overall to the enterprise WACC • The projection period for the PFI used in the model should reflect the estimated useful life of the subject asset
Tax Amortization Benefit (TAB)	• The present value of tax benefit on intangible assets should considered in valuation of the assets • The process is iterative taking into account the amortization period, the discount factor and the applicable marginal tax rate to arrive at the fair value of the asset post TAB
Useful life of an Intangible Assets	• The useful life of an intangible asset that arises from contractual or other legal rights shall not exceed the period of the contractual or other legal rights • The depreciable amount of an intangible asset with a finite useful life shall be allocated on a systematic basis over its useful life • An intangible asset with an indefinite useful life shall not be amortised

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Valuation of Goodwill

What is Goodwill?

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Goodwill Overview

Goodwill is good name or the reputation of the business, which is earned by a firm through the hard work and honesty of its owners

Built by offering good service that satisfies customers and encourages repeat business

Value of the reputation of a firm which enables it to earn higher profits in comparison to the normal profits earned by other firms in the same trade

Value of a firm's reputation, leading to increased future earnings, can't be self-generated; it's acquired and recognized when selling the business

Examples include brand value, customer loyalty, employee relationships, and patents

Established companies benefit from brand value and customer trust, buyers pay extra for these advantages, which is termed goodwill

Buyers expect future super profits and pay for goodwill accordingly, Valuation of goodwill involves assessing its value for the firm's intrinsic worth

When is Goodwill Calculated?

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The valuation of Goodwill occurs in the following scenarios

Partnership

- The firm needs goodwill valuation at the time of admission, retirement, or death of a Partner.
- The need for goodwill valuation also arises at the time of dissolution or amalgamation of the firm.
- A firm also needs to value goodwill at the time of change in the profit-sharing ratio of the old partners.

Company

- Goodwill valuation takes place during Acquisitions and Mergers.

Sole Proprietorship

- Goodwill valuation occurs while calculating purchase considerations related to the sale or acquisition of the Business.

Features of Goodwill

Intangible Asset

Separation from Business - Not Possible

Value Not Relative to any Investment Amount or Cost

Subjective Value it Depends on Individual's Judgement

Subject to Wild & Unpredictable Fluctuation in Response to Externalities

Types of Goodwill

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Purchased Goodwill

- Arises from acquiring a business for an amount exceeding the fair value of its separately identifiable net assets
- Reflected as an asset on the balance sheet
- Represents the only form of goodwill eligible for recognition in a company's financial accounts

Self-Generated Goodwill

- Self-generated goodwill or inherent goodwill is the value of the business over the fair value of its net assets
- It is referred to as internally generated goodwill and it occurs over some time due to the good status of a business
- The value of goodwill may be positive or adverse
- Positive goodwill occurs when the value of the business as a total is higher than the fair value of its net assets taken over
- It is adverse when the value of the business is lower than the value of its net assets taken over

Factors Affecting Goodwill

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Location of the business	A business which is in a suitable location will have a more favorable chance of higher goodwill than a business located in a remote location
Quality of goods and services	A business which is providing a higher quality of goods and services stands a great chance of earning more goodwill than competitors who provide inferior goods and services
Efficiency of management	Efficient management results in an increase in profit of the business which enhances the goodwill of the business
Business Risk	A business having less risk has a better chance of creating goodwill than a high-risk business
Nature of business	It means the type of products that business deals with, the level of competition in the market, demand for the products and the regulations impacting the business. A business having a favorable outcome in all these areas will have a greater goodwill
Favourable Contracts	A firm will enjoy a higher goodwill if it has access to favorable contracts for sale of products
Possession of trademark & patents	Firms that have patents and trademarks will enjoy a monopoly in the market, which will contribute to the increase in the goodwill of the firm
Capital	A firm with a higher return on investment along with lesser capital investment will be considered by buyers as more profitable and having more goodwill

Valuation Methodologies

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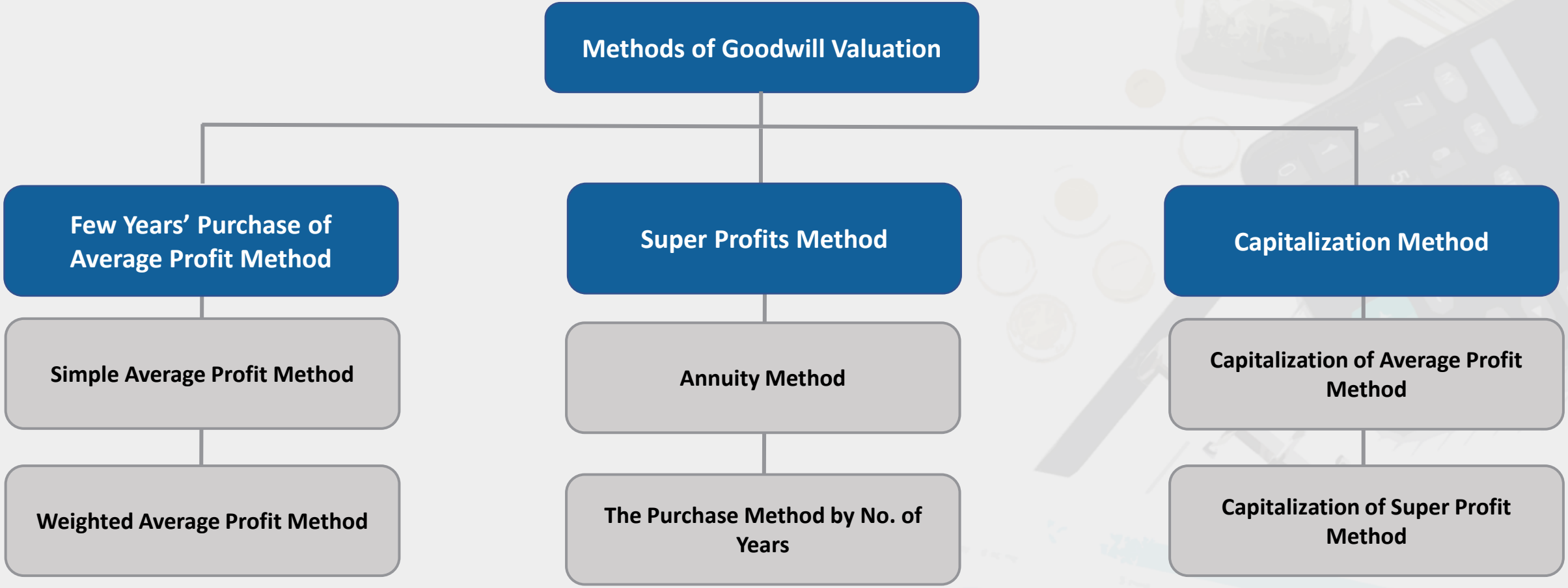
The methods of valuation of goodwill should be consistent with the market practices of the Business



Few Years' Purchase of Average Profits Method (1/2)

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Few Years' Purchase of Average Profit Method

- It is the simplest method of valuation of goodwill
- The firm Values the goodwill based on an agreed number of years' purchase of the average maintainable Profit
- **Factors considered during valuation:**
  - ✓ Subtracting the year's abnormal gains from that year's net profit
  - ✓ Adding the abnormal loss of the year to the net profit of that year
  - ✓ Deducting income not earned from operations from the Net Profit of that year
  - ✓ For example, income from investments

Method 1 — **Simple Average Profit Method**

- The firm values the Goodwill based on the Numbers of past years' profits
- It then computes the average of such gains, and it does this by dividing the total of such Profits by the Number of years
- For calculating the value of Goodwill, the firm multiplies the average of the profits with the agreed number of years of purchase

1. **Average Profit** = **Total Profit** ÷ **No. of Years**
2. **Goodwill** = **Average Profit** × **No. of Years of Purchase**

Few Years' Purchase of Average Profits Method (2/2)

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Method 2 | **Weighted Average Profit Method**

- Allot weights to the Profit of the latest year
- Compute the Product of profits by multiplying the weight with the gain of that particular year
- Calculate the weighted average Profit by dividing the total products of profits by the Total Weights
- Calculate the value of the goodwill by multiplying the Weighted Average Profit and the Number of years of purchase

1. **Weighted Average Profit** = **Total Product of Profit** ÷ **Total Weight**
2. **Goodwill** = **Average Profit** × **No. of Years of Purchase**

Super Profits Method (1/2)

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Super Profit Method

- The firm calculates goodwill based on the Super profit
- Super Profit means the excess of actual profit earned over the normal yield
- The actual profit is the profit that an organization makes with or without making the adjustment
- If there is no anticipated super profit, there is no goodwill for the firm
- The Number of years of purchase a firm takes into consideration depends on many factors

Steps to Compute Goodwill

1	Actual Average Profit	=	Total Profit	÷	No. of Years			
2	Capital Employed	=	Total Asset	−	Current Liabilities			
3	The Normal Profit	=	Capital Employed	×	Normal Rate of Return	÷	100	
4	Super Profit	=	Actual Average Profit	−	Normal Profit			
5	Goodwill	=	Super Profit	×	No. of Years of Purchase			

Super Profit Method (2/2)

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Annuity Method

- The basis is the average Super Profit.
- The value of goodwill is the current value of an annuity of the average Super Profit discounted at a given Rate of Interest

Goodwill = **Super Profit** × **Discounting Factor**

Purchase Method by No. of Years

- The firm evaluates the super profits in a definite number of purchase years for calculating the value of goodwill

Super Profit = **Actual Profit** − **Normal Profit**

Capitalization Method (1/2)

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Capitalization Method

- The organization, determines the capitalized value of its profits
- It helps to find the amount of capital the firm needs to make the desired profit

Method 1 — **Capitalization of Average Profit Method**

- The firm estimates the capitalized value of the average profit based on the standard rate of return
- The following steps are involved in calculating the value of goodwill under the Capitalization Method:

Step 1 Compute the Average Profit by dividing the total profits by the Number of Years.

Step 2 Compute the Capitalized Value of the Average profit.

Capitalized Value of Average Profit = **Average Profit** × **100** ÷ **Normal Rate of Return**

Step 3 Find the Goodwill of the Firm by deducting the Capital invested from the Capitalized Value of the Average Profit.

Goodwill = **Capitalized Value of the Average Profit** − **Capital Invested**

Capital invested is the difference between Assets and Liabilities as on the date of valuation of Goodwill.

Capitalization Method (2/2)

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Method 2 | **Capitalization of Super Profit Method**

The firm determines the capitalized value of the Super Profit based on the Normal Rate of return

It enables the firm to assess the amount of Capital it requires to earn the Super Profit

In this method, the value of Goodwill and the capitalized value of the Super Profit are equal

Step 1 Calculate the Super Profit by finding the excess of the Actual Average Profit over the Normal Profit

Step 2 Find out the Goodwill of the firm

Goodwill = **Super Profit** × **100** ÷ **Normal Rate of Return**

Impairment of Goodwill

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Overview of Goodwill Impairment

- Impairment is an accounting charge that companies record when goodwill's carrying value on financial statements exceeds its fair value.
- Goodwill is recorded after a company acquires assets and liabilities and pays a price in excess of their identifiable net value.
- The impairment expense is calculated as the difference between the current market value and the purchase price of the intangible asset.
- The impairment results in a decrease in the goodwill account on the balance sheet.
- An impairment charge is a process used by businesses to write off worthless goodwill.
- We will cover the impairment of goodwill in more details in our next valuation series in Volume 9. Stay tuned for more updates on impairment of goodwill.

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Valuation under Impairment Testing

Impairment Testing

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Introduction to Ind AS 36

- Ind-AS 36 was introduced as the Indian Accounting Standards equivalent for IAS 36 (IFRS), covering Impairment of Assets.
- Transition from limited impairment testing under previous Indian GAAP to broader application under Ind AS
- Significance and relevance of Ind AS 36 in the Indian accounting landscape
  - ✓ Overview of applicability, requirements, and methodologies for implementing Ind AS 36
  - ✓ Practical approach to conducting impairment assessments and testing under Ind AS 36

Applicability of Ind AS 36

- This standard must be applied in accounting for the impairment of all assets, unless they are specifically excluded from its scope.
- To assess impairment of assets or intangible assets, a CGU approach is used i.e., recoverable amount is assessed for each cash-generating unit (CGU) and compared with the carrying amount of the CGU, then drilled down to asset level.

Assets to which IND AS 36 is commonly applied are

- Investment in Subsidiaries, Joint Ventures and Associates,
- Plant, property and Equipment,
- Intangible Assets including Goodwill

Assets to which IND AS 36 does not apply are

- Inventories
- Contracts recognized in accordance with Ind AS 115
- Deferred Tax Assets
- Financial Assets
- Non-Current Assets classified for sale (Ind AS 105)
- Biological Assets related to agricultural activity
- Assets arising from the employee benefits

Definitions

Recoverable amount	Recoverable amount for an asset or a cash-generating unit is the higher of its fair value less costs of disposal and its value in use.
Fair value	Fair value is the price that would be received to sell an asset or paid to transfer a liability in an orderly transaction between market participants at the measurement date .
Costs of disposal	Costs of disposal are incremental costs directly attributable to the disposal of an asset or cash-generating unit, excluding finance costs and income tax expense.
Value in use (VIU)	Value in use is the present value of the future cash flows expected to be derived from an asset or cash-generating unit.
Impairment loss	An impairment loss is the amount by which the carrying amount of an asset or cash-generating unit exceeds its recoverable amount.
Cash-generating unit (CGU)	A cash-generating unit (CGU) is the smallest identifiable group of assets that generates cash inflows that are largely independent of the cash inflows from other assets or group of assets.
Corporate assets	Corporate assets are assets other than goodwill that contribute to the future cash flows of both the cash-generating unit under review and other cash-generating units.

Indicators of Impairment

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Indicators of Impairment as per Ind AS 36

- In assessing whether there is any indication that an asset may be impaired, an entity shall consider the

Internal Indicators such as:

- Obsolescence or physical damage of an asset
- Under-performance of an asset compared to expectations
- Reassessing the useful life of an asset as finite rather than indefinite, etc.

External Indicators such as :

- Changes in regulations
- Adverse effects in the technological, economic or legal environment
- Increase in market interest rates, etc.

The following must be done annually whether or not there are indications of impairment

- Impairment testing of intangible assets with an indefinite useful lives and intangible assets not yet available for use
- Impairment testing of goodwill and/or intangible assets acquired in a business combination

Testing of Impairment

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All other in-scope assets other than goodwill (If impairment indicators exist)

- Impairment testing for all assets, other than goodwill, should be carried out on an individual basis, wherever possible.
- If it is not possible to determine the recoverable amount for the individual asset, then determine recoverable amount for the asset's cash-generating unit (CGU).

Goodwill (periodically irrespective of indicators)

- Impairment testing for goodwill is always carried out in the context of a CGU or a group of CGUs because goodwill does not generate cash flows independently of other assets.

To arrive at the impairment loss, the following steps need to be followed

Impairment methodology

Estimating Recoverable Amount (RA)

Comparing Recoverable Amount (RA) and Carrying Amount (CA)

Recognising Impairment Loss

Impairment Methodology (1/4)

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Estimating Recoverable Amount

- Recoverable amount is the higher of the following for a CGU or asset:
  - ✓ Fair value less costs of disposal (FVLCOD)
  - ✓ Value in use (VIU)
- It is not always necessary to determine both an asset's FVLCOD and VIU. If either of these amounts exceeds the asset's carrying amount, the asset is not impaired.

Fair Value less Costs of Disposal (FVLCOD)

- Fair Value is the amount obtainable from the sale of an asset or CGU in an arm's length transaction between knowledgeable, willing parties.
- Fair value estimate takes market participants' perception of the price of an asset into account. FVLCOD would consider future developments only if they are publicly known, supportable and are considered by other market participants as well.
- Examples of costs of disposal are -
  - ✓ Legal costs
  - ✓ Stamp duty
  - ✓ Transaction taxes
  - ✓ Costs of removing the asset
  - ✓ Direct incremental costs to bring an asset into condition for its sale.

Value in Use

- Value in use is the present value of the future cash flows expected to be derived from an asset or cash-generating unit.
- VIU is usually estimated by using the Discounted Cash Flow (DCF) method, in the following steps:
  - ✓ Estimating the future cash inflows and outflows derived from continuing use of the asset
  - ✓ Estimating the terminal period cash flows or cash flows from its ultimate disposal, as applicable
  - ✓ Applying the appropriate discount rate to those future cash flows

Impairment Methodology (2/4)

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Step 1 — **Forecast Cash Flows**

- Cash flows are prepared based on reasonable and supportable assumptions that represent management's best estimate, most recent financial budgets/forecasts approved by management. Projections should cover a maximum of 5 years unless a longer period can be justified.
- Future cash flows will be operating cash flows only based on current status of the business and will not include:
  - ✓ Improvement or enhancement of performance
  - ✓ A future restructuring to which an entity is not yet committed
  - ✓ Income tax receipts or payments
- VIU should reflect the present value of future cash flows. In practice, present values are computed either by a 'traditional' or 'expected' cash flow approach.
  - ✓ Under a 'traditional cash flow approach', a single set of estimated cash flows and a single discount rate are used.
  - ✓ Under an 'expected cash flow approach', all expectations about possible cash flows are used instead of the single most likely cash flow.
- Discount rates must therefore also be pre-tax rate and varied to reflect the risk within each set of possible cash flows.

Step 2 — **Terminal Cash flows**

- Terminal Value can be calculated either by Gordon Growth model or Exit Multiple method, in case of ongoing businesses.
- In the Gordon Growth model, the terminal value is calculated by capitalizing the final year's cash flows at a rate that is derived as the difference between the discount rate applicable to the business and the terminal growth rate.
- In the Exit Multiple method, the terminal value is calculated by applying a market multiple to the company's final year EBITDA or EBIT, to arrive at enterprise value at the end of the cash flow period.
- The chosen market multiple is usually an average of recent exit multiples for listed companies or private transactions.
- Whether Gordon Growth model or Exit Multiple method is used, the resent must be presented in present value terms.

Impairment Methodology (3/4)

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Step 3 | **Applying the appropriate discount rate to future cash flows**

- As per Ind AS 36, the discount rate shall be a pre-tax rate that reflects current market assessments of the time value of money and the risks specific to the asset for which the future cash flow estimates have not been adjusted.
- However, in practice the Capital Asset Pricing model (CAPM) is used, which takes the post-tax discount rate into account.
- In such as situation, the cash flows should be post-tax cash flows as well, to ensure consistency.
- The CAPM method requires multiple inputs from market data, of which the key ones are:
  - ✓ Risk Free rate derived from government bond yields
  - ✓ Beta which calculates the volatility of a specific industry
  - ✓ Equity market risk premium is the risk premium of the stock market
  - ✓ Specific risk premium is the risk premium specific to the company and its cash flows
  - ✓ Cost of debt of the company and the tax rate it is subject to
  - ✓ Industry gearing ratios i.e. the capital structure of companies in the same sector

Comparing Recoverable Amount and Carrying Amount

- Subsequent to estimation of the asset's recoverable amount, the next step is to compare the same to the carrying amount.
- Where the carrying amount exceeds the recoverable amount, the entity will record an impairment loss.
- Goodwill and Corporate Assets relating to a Cash generating unit (CGU) would be allocated to it while calculating carrying amount.

Impairment Methodology (4/4)

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Recognizing Impairment Loss, if any

- An impairment loss shall be recognized immediately in the P&L account, unless the asset is carried at revalued amount in accordance with another standard.
- The impairment loss shall be allocated to reduce the carrying amount of the assets of the unit (group of units) in the following order:
  - ✓ First, to reduce the carrying amount of any goodwill allocated to the cash-generating unit (group of units); and
  - ✓ Then, to the other assets of the unit (group of units) pro rata on the basis of the carrying amount of each asset in the unit (group of units).
- The carrying amount of an asset will never be reduced below the higher of its individual recoverable amount and zero.

Cross Checks and Sensitivity of Impairment Results

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Recoverable Amount Calculation Methodology	➢ Recoverable amount is usually calculated using a VIU approach. This means that the result is based on a DCF method which uses the CGU or company cash flows, ➢ But does not factor in market multiples or movements therein. ➢ It is therefore necessary to cross-check recoverable amounts against market multiples
Cross-Check with Market Multiples	➢ This is done by calculating the implied multiple (RA/EBITDA or RA/PAT) and comparing it to the trading multiples of listed companies and/or transaction multiples of private companies in the same sector. ➢ Significant divergence, if any, from market multiples, should be justifiable - if it is not justifiable then a review of cash flows or discount rates is usually necessary
Sensitivity Analysis	➢ Assess the impact of key input variations on recoverable amounts. ➢ Key inputs include revenue growth, EBITDA margins, discount rate, and terminal growth rates. ➢ Identify if minor changes in inputs could potentially trigger asset impairment, prompting conservative recognition of impairment.
Complexity of Impairment Testing	➢ Especially challenging for initial assessments. ➢ Audit requirements necessitate a comprehensive impairment memo outlining the testing process. ➢ Many companies prefer to enlist valuation professionals with expertise in this area for assistance.

Common Errors While Performing Impairment Testing

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Insufficient definition / incorrect identification of CGUs and allocation of goodwill	Goodwill should be allocated to a CGU or group of CGUs that are expected to benefit from the synergies of the business combination [IAS 36.80]. Often allocation of goodwill does not fully reflect this requirement and the determined level of CGUs is not conforming to IAS 36.68.
Insufficient allocation of corporate assets to CGUs	Corporate assets are a special case of allocating assets to CGUs. Corporate assets generate benefits and costs for more than one CGU (e.g., headquarter function, R&D department). Corporate assets have to be allocated to CGUs on a reasonable basis.
Change in CGU composition between reporting periods	Ideally, the initial allocation of goodwill recognized in a business combination to CGUs should be completed before the end of the annual period in which the business combination is affected. Unless the entity is reorganizing its reporting structure or disposing parts of its CGUs, the initial goodwill allocation cannot be changed for future impairment testing
Errors in carrying amount calculation	The carrying amount should be determined on a basis consistent with the way the recoverable amount of the CGU is determined. Often, assets are included in the carrying amount that are not part of the cash flow generating process reflected in the CGU's recoverable amount.
Insufficient consideration of the market participant view	The FVLCD assumes a hypothetical buyer (called the "market participant") which puts each asset (CGU) to its highest and best use. The underlying cash flows need to be ''cleaned'' from entity specific synergies and unusual items (e.g. excessive compensation).

Reversal of Impairment Loss

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- The increased carrying amount of an asset other than goodwill attributable to a reversal of an impairment loss shall not exceed the carrying amount that would have been determined (net of amortization or depreciation) had no impairment loss been recognized for the asset in prior years.

- Para 119 says that "A reversal of an impairment loss for an asset other than goodwill shall be recognized immediately in profit or loss, unless the asset is carried at revalued amount in accordance with another Indian Accounting Standard (for example, the revaluation model in Ind AS 16)

- Any reversal of an impairment loss of a revalued asset shall be treated as a revaluation increase in accordance with that other Indian Accounting Standard".

- A reversal of an impairment loss on a revalued asset is recognized in other comprehensive income and increases the revaluation surplus for that asset . However, to the extent that an impairment loss on the same revalued asset was previously recognized in profit or loss, a reversal of that impairment loss is also recognized in profit or loss.

- After a reversal of an impairment loss is recognized, the depreciation (amortization) charge for the asset shall be adjusted in future periods to allocate the asset's revised carrying amount, less its residual value (if any), on a systematic basis over its remaining useful life.

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Valuation of ESOP

What are ESOPs?

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What are ESOPs?

- An employee stock ownership plan (ESOP) is a method of rewarding employees that gives them a share of the company's ownership.
- Employees are offered stocks of the company at a low or no additional cost that they can encash after a specific period at a particular price.
- Companies often use ESOPs as a corporate-finance strategy to align the interests of their employees with those of their shareholders.
- The objective of issuing ESOP is to provide an incentive to attract, retain and reward employees of the company and motivate employees to contribute to the growth and profitability of the company.

Important Terms of ESOPs

Option

- Option is a right but not an obligation to purchase the shares of the company on the fulfilment of the conditions mentioned in the ESOP plan at the price decided at the time of grant of options.

Vesting

- It is the entitlement of the option to an employee. Before exercising the option, the employee must wait for a limited period as a condition of ESOP grant.

Grant

- The eligibility of a particular employee (depending on the criteria set) for grant of stock options based on his role and performance is known as grant of option.

Exercise

- The activity of converting the options granted to an employee into shares by paying the required exercise price, i.e., allotment.
- The companies have freedom to determine the exercise price in conformity with the applicable accounting policies, if any.

Types of ESOP

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Following are the types of ESOPs that companies offer to the employees:

Employee Stock Option Scheme (ESOS)	• Allows an employee the opportunity to purchase company shares at a predetermined price, typically below the market value. • These options are typically granted as part of a compensation package and are subject to certain performance goals over a set vesting period.
Employee Stock Purchase Plan (ESPP)	• An employee stock purchase plan (ESPP) allows employees to purchase company stock at a discounted price and gradually increase their ownership stake in the business through periodic investments.
Restricted Stock Units (RSUs)	• Restricted stock units (RSUs) are a type of ESOP that allows employees to convert RSUs into real company stocks in exchange for a certain number of years spent working for the company or when specific performance milestones are achieved.
Restricted Stock Award (RSA)	• Restricted Stock Awards (RSA) is a type of stock-based compensation that involves the grant of a specific number of shares to an employee, subject to certain restrictions. • Typically, the restrictions on RSA shares are based on the vesting period and other performance goals.
Stock Appreciation Rights (SARs)	• Allows employees to receive a payment based on the appreciation of company stock over a certain period of time. • Companies can use SARs to provide employees with stock benefits without diluting their equity. On the other hand, employees can benefit from such a plan by cashing in equity gains without taking on any downside risks.
Phantom Equity Plan (PEP)	• A Phantom Equity Plan (PEP) is a type of ESOP that allows employees to receive a payment based on the value of the company's stock without actually owning any shares.

Need of ESOP Valuation

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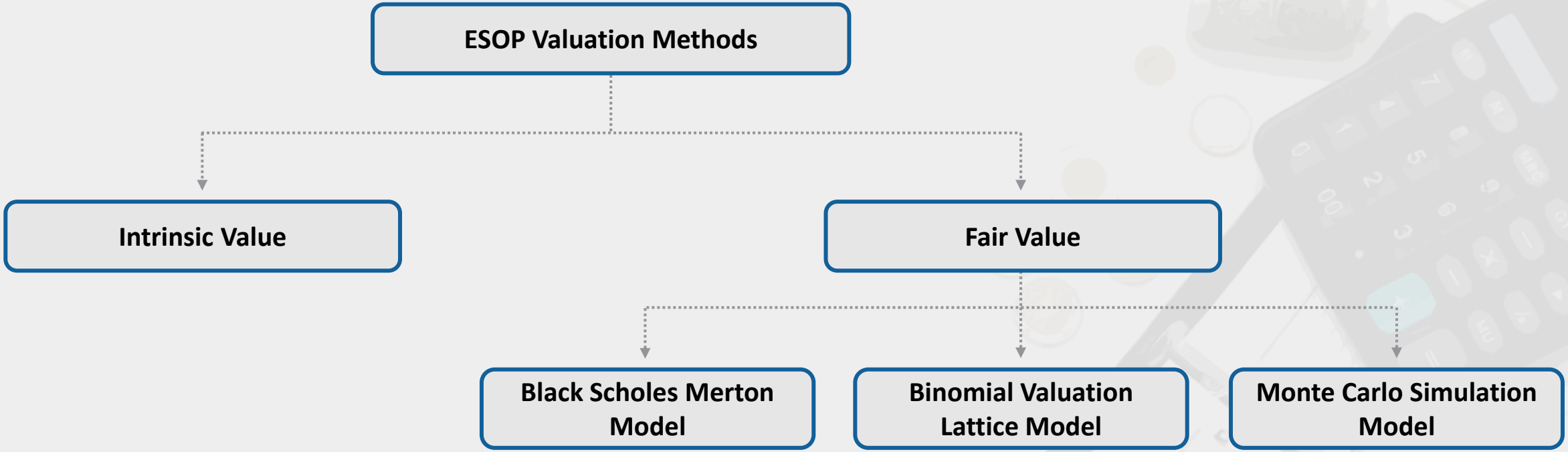
Following are the reasons why do companies need ESOP Valuation:

1. Companies need ESOP valuation for accounting purposes and tax purposes.
2. The company issuing the ESOPs must record the compensation costs during the vesting period.
3. Additionally, ESOP valuations help to determine the perquisite tax due by the company's personnel.
4. The increased compensation expenditure lowers the company's earnings per share (EPS), and excess taxes requirements make the ESOP plan undesirable.
5. Therefore, it is necessary to plan ESOP well, and ESOP valuation is crucial in this context.

Valuation Methodology



Intrinsic Value

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Intrinsic Value

Intrinsic Value is the measure of the extent to which the market price of the share exceeds the exercise price of the option. In other words, "intrinsic value" is the profit that accrues to employees on account of the higher market value of the shares.

In a nutshell, intrinsic value is the difference between the market price and the price of exercising the option with any upfront payment.

Intrinsic value is an imputed gain that an employee receives by selling their option.

If market price is below the exercise price, then intrinsic value of the option will be zero.

Following is the example of intrinsic value

ESOP is granted to the employees by the company they work for, and the company's share's current market price is 100. It can be exercised after two and a half years for Rs. 60, in which case, the Intrinsic Value of the options is Rs. 40.

In another case, if the share's current market price were Rs. 50, there would be no Intrinsic Value of the option given to the employees since the exercise price is more than the current market price. Therefore, the options could not be exercised in such a case and ended up standing lapsed. The difference between the Intrinsic Value method and the Fair Value method is the time value.

Fair Value (1/3)

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There are three methods for determining fair value of ESOPs:

1 Black Scholes Merton Model

- The Black Scholes Merton (BSM) model is a model of price variation over time of financial instruments such as stocks that can, among other things, be used to determine the price of an option. This is the most widely used option valuation model.
- The model assumes the price of heavily traded assets follows a geometric Brownian motion with constant drift and volatility. When applied to a stock option, the model incorporates the constant price variation of the stock, the time value of money, the option's strike price, and the time to the option's expiry.

Call Option Price (C) = ***Current Stock Price (St)*** × ***Normal Distribution (N)*** × ***Probability Factor (d1)*** − ***Strike Price (Ke)***

(Risk Free Interest Rate (r) x Time of Maturity (t)) × ***Normal Distribution (N)*** × ***Probability Factor (d2)***

Assumptions of the Black-Scholes model:

The option is European and can only be exercised at expiration.

Markets are efficient i.e., market movements cannot be predicted.

There are no transaction costs in buying the option and returns on the underlying are normally distributed.

The risk-free rate and volatility of the underlying are known and constant.

Fair Value (2/3)

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2 Binomial Valuation Lattice Model

- Binomial option pricing model is used to price options and is based on the concept of no arbitrage.

$$Value_{end} = \frac{Balance_{end}}{ConversionPrice} * CallValuePerShare$$

Where

$$ConversionPrice\ (or\ Exercise\ Price) = stockPrice\ Per\ Note * ConversionPercentage$$

ExercisePrice is determined per the note – sometimes lowest, sometime the volume-weighted average of all, or lowest in window. *Conversion Percentage* is as per note.

$$CallValuePerShare = StockFraction * StockPrice_{ValueDate} + BondPortion$$

CallValuePerShare is based on a Call-replicating portfolio of a stock and a fraction of a bond. The Stock price is the closing price on the valuation date.

$$BondPortion = \frac{CallPayoff_{lower} - StockPayoff_{lower} * StockFraction}{(1 + rate_{rf})}$$

Where the risk-free rate is the Tbill rate for the Tbill that is closest to, but less than, the remaining term of the note.

$$StockFraction = \frac{CallPayoff_{upper} - CallPayoff_{lower}}{StockPayoff_{upper} - StockPayoff_{lower}} = 1.0\ (by\ definition)$$

$$CallPayoff_{upper|lower} = StockPayoff_{upper|lower} - ExercisePrice$$

$$StockPayoff_{upper|lower} = StockPrice_{ValueDate} * (1 + P(up|down))$$

$$P(down) = \frac{1}{P(up)}$$

Where P(up) is the expected volatility over the remaining term of the note:

$$\sigma_{term} = \sigma_{historical} * \sqrt{round\left(\frac{term_{remaining}}{7} * 5\right)}$$

Assumptions of Binomial Option Pricing models:

There are only two possible prices for the underlying asset on the next day.

The two possible prices are the up-price and down-price.

The underlying asset does not pay any dividends.

Rate of interest is constant throughout the expected life of the option.

Markets are frictionless i.e. there are no taxes and no transaction cost.

Investors are risk neutral i.e. investors are indifferent towards risk.

Fair Value (3/3)

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3 Monte Carlo Simulation Model

Computational Algorithms	Monte Carlo methods are a class of computational algorithms that are based on repeated computation and random sampling.
Option Pricing	Options can be priced by Monte Carlo simulation. First, the price of the underlying asset is simulated by random number generation for a number of paths. Then, the value of the option is found by calculating the average of discounted returns over all paths.
Risk Free Interest Rate	The option is priced under risk-neutral measure, the discount rate is the risk-free interest rate.
Simulation Estimates	In order to get a good estimate from simulation, the variance of the estimator should go to zero and thus the number of samples should go to infinity, which is computationally not feasible. Therefore, variance reduction techniques such as antithetic variates and control variates help us to obtain a better estimate in simulation.

Challenges in Valuing ESOP

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Following are the common issues faced while valuing ESOPs:

Risk free rate of return

- The risk free rate being considered for the calculation is the interest rate applicable for a maturity equal to the expected life of the options based on the zero-coupon yield curve for Government Securities or 10 years government bonds.

Expected Life of Option

- For valuations, we must examine the option's probable life, not its overall life. For predicted life, average the maximum and minimal option lives for each grant vesting.

Expected future volatility

- The volatility is a measure of how much the share price deviates from its average value over a period of time.
- A common way to estimate future volatility is to calculate the historical volatility of the share and use that with any appropriate adjustments for one-off events as an approximation of future volatility.
- In case of a private company, market price of the shares is not readily available and hence volatility cannot be determined. In such cases, annualized volatility of the comparable companies listed on the recognized stock exchange can be adopted.

Dividend yield

- Dividends lower share prices. ESOP holders don't accumulate dividends throughout the ESOP term.
- Dividends provided before the ESOP exercise can lower ESOP value.
- Therefore, companies must establish a dividend yield rate. Historical dividend pay-out could be used to anticipate future dividend yield.

Key Inputs of ESOP Valuation

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Following are the variables that influence the fair value of the ESOP:

Underlying Variable	Change in Variable	Changes in Call Option
Exercise Price	↑	↓
Market Price	↑	↑
Current Dividend Yield	↑	↓
Risk Free Rate of Return	↑	↑
Maturity Period	↑	↑
Volatility of the Stock	↑	↑

Financial Reporting of ESOP

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Ind AS 102 specifies the financial reporting by an entity when it undertakes a share-based payment transaction. In particular, it requires an entity to reflect in its profit or loss and financial position the effects of share-based payment transactions, including expenses associated with transactions in which share options are granted to employees.

Assets	ESOPs has no direct impact on the assets side of the balance sheet other than an increase in cash balance or other assets resulting from the financing aspects of certain plan structure.
Liability	ESOP is recorded under current liabilities as accrued plan contribution.
Equity	Under equity, an ESOP Loan Contra Account is created and deducted from the total equity shares of the company resulting into reduction in the net equity. The amount of reduction in the contra account is measured by the amount of compensation expense recorded on the financial statement attribution to ESOP activity.
Income Statement	In the income statement, ESOP reflects as compensation cost.
Cashflow Statement	Reflected as reduction in cashflow from operating activities.
EPS	Shares allocated released or committed to be released are considers as outstanding, In such cases convertible preferred stocks are considered as equity stock equivalent . This will reduce the number of shares outstanding until an ESOP loan is fully amortized.

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Valuation of Inventory

Introduction to Inventory

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Inventory overview

- Inventory refers to the collection of raw materials used in production and the finished goods available for sale.
- It is a crucial asset for a company as the turnover of inventory generates revenue and earnings for shareholders.
- On a company's balance sheet, inventory is classified as a current asset.
- There are three main types of inventories: raw materials, work-in-progress, and finished goods.

Definition of the inventory

Held for sale in the normal course of business i.e., finished goods

Goods which are in the production process i.e. work in progress

Raw materials which are consumed during production process or rendering of services (including consumable stores item)

Explanation

- Inventory specifically pertains to goods and assets that are not subject to depreciation and is distinct from Property, Plant, or Equipment.
- Therefore, any spare parts or assets that are exclusively used in connection with fixed assets, have irregular usage, and are classified as property, plant, or equipment should not be considered as inventory.
- For instance, a vehicle would be categorized as inventory for a vehicle manufacturer but would be classified as a fixed asset for an entity that includes it as part of its fleet.

Inventory Valuation

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What is Inventory Valuation?

1	Inventory valuation is a crucial accounting process that involves assigning a value to a company's inventory.
2	Given that inventory often constitutes a significant portion of a company's assets, it is vital to consistently measure its value.
3	Proper inventory valuation ensures accurate representation of inventory value in financial statements and plays a significant role in maximizing profitability.
4	Choosing and implementing an appropriate inventory valuation method requires careful analysis and due diligence, as once selected, it is generally not possible to change the method midway.
5	To ensure compliance and standardization, inventory valuation follows specific accounting standards and regulations.
6	Since inventory is a primary current asset of a business entity, accurate valuation is essential.
7	This process facilitates timely procurement and sale, minimizing waste and enabling effective cost control.

Objectives of Inventory Valuation

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- The valuation of inventory is performed at the end of each fiscal year to determine the cost of goods sold and the value of unsold inventory. This process is crucial as it directly impacts a company's production and profitability.
- Following are the objective of inventory valuation:

Evaluate Capital Investment	Inventory valuation helps assess the capital invested in the business, including both fixed assets (stores, warehouses, etc.) and variable assets.
Sales Velocity	For small eCommerce businesses, inventory valuation provides insights into the number of items sold during a specific time period, indicating the sales velocity of the company.
Determine MOQ & EOQ	By evaluating inventory, businesses can identify the quantity of products sold and determine the minimum order quantity (MOQ) and economic order quantity (EOQ) to optimize inventory management.
Valuation-Based Loans	Banks often require access to a company's balance sheet, including inventory valuation, to assess eligibility for loans related to business expansion and infrastructure investment.
Gross Income Calculation	Inventory valuation helps determine the cost of goods sold, which, when matched with revenue, provides insights into gross profit.
Reflect Financial Position	Inventory is considered a current asset and plays a crucial role in presenting the financial position of a business on the balance sheet. Accurate valuation is essential to avoid presenting a false image of the company's working capital and overall financial status
Identify Asset-Liability Gaps	By understanding the value of assets through inventory valuation, businesses can compare it with liabilities and implement strategies to reduce gaps, such as optimizing warehouses, eliminating non-performing assets, and streamlining the supply chain.

Inventory Valuation as per IND AS (1/2)

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Ind AS 2 prescribes that the inventories shall be measured at 'lower of Cost and Net Realisable Value'.

1 Costs

Cost of Purchase	Cost of Conversion	Other Cost
• The costs associated with the purchase of inventories include the purchase price of the items, import duties, and applicable taxes (excluding any taxes recoverable from taxing authorities). • Additionally, costs related to transportation, handling, and other expenses directly linked to the acquisition of finished goods, materials, and services are considered part of the purchase costs. • When calculating the costs of purchase, trade discounts, rebates, and similar items are subtracted.	• The cost of conversion includes direct costs. They also involve the systematic allocation of both fixed and variable production overheads that are incurred during the transformation of materials into finished goods. • Fixed overheads refer to indirect production costs that remain relatively stable irrespective of production volume, such as expenses for factory building depreciation, equipment maintenance, and factory management and administration. • Variable production overheads refers to indirect production costs that fluctuate in proportion to the volume of production, such as expenses for indirect materials and indirect labour.	• The costs related to inventories include expenses that are necessary for bringing the assets to their current location. • Other costs are incorporated into the inventory's cost only if they are incurred in bringing the inventories to their present location and condition. • For instance, it may be appropriate to include non-production overhead costs or the expenses associated with designing products for specific customers in the inventory's cost.

Exclusion

- **Abnormal Waste**
- **Storage Cost**
- **Admin Overheads**
- **Selling and distribution Cost**
- **Interest Cost**

Inventory Valuation as per IND AS (2/2)

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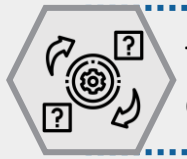
Ind AS 2 prescribes that the inventories shall be measured at 'lower of Cost and Net Realisable Value'.

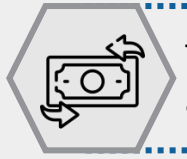
2 Net Realisable Value



The Net Realizable Value (NRV) refers to the estimated selling price of inventories in the normal course of business, minus the estimated costs of completion and the estimated costs associated with making the sale.

The estimation of NRV plays a crucial role in inventory valuation.

If the NRV is lower than the cost, then the inventories are recorded at the NRV.



This practice of writing down inventories below cost to their net realizable value aligns with the principle that assets should not be carried at amounts exceeding what is expected to be realized from their sale or use.

The estimation of NRV is based on the most reliable evidence available at the time the estimates are made, reflecting the amount expected to be realized from the sale of the inventories.

Importance of Inventory Valuation for Businesses

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Impact on Cost of Goods Sold

- The valuation of inventory directly affects the cost of goods sold. If a large volume of goods is sold during the inventory valuation period, the cost of goods sold will be higher, indicating that a significant portion of the inventory has been sold.
- Conversely, if the inventory is valued lower, it will result in higher holding costs and an increased overall cost of goods sold, impacting profit levels reported.

Impact on Financial Records

- Accurate and timely inventory valuation is crucial to avoid recording errors that can carry over into subsequent accounting periods.
- Incorrect ending balances in one period can lead to recurring errors in the beginning inventory balance of the next reporting period.
- This can result in multiple errors in reported profits over consecutive quarters or years, causing imbalances in the balance sheet.

Impact on Loan Ratio

- When seeking a loan for business purposes, the valuation of inventory becomes relevant as lenders often base loan decisions on company valuation. Loan agreements may include restrictions on the allowable proportions of current assets to current liabilities. Failing to meet these target ratios can result in the lender cancelling the loan.
- Since inventory is a significant component of the current ratio, accurate inventory valuation is essential in maintaining a healthy loan ratio.

Impact on Income Taxes

- Inventory valuation methods can impact the amount of income tax paid by a company. The choice of inventory valuation method, such as the Last-in, First-out (LIFO) approach, can influence income tax calculations. LIFO is commonly used during periods of rising prices to lower income taxes.
- By matching current sales with the most recent costs, LIFO increases the cost of goods sold, leading to higher tax deductions and lower taxable income.

Valuation Methods (1/4)

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1 FIFO (First-In, First-Out)

- The FIFO inventory valuation method operates on the principle that the first inventory purchased or produced should be the first to be sold. This approach assigns the cost of goods sold to the oldest inventory, while the remaining inventory is valued based on the most recently acquired assets.
- FIFO is a commonly used method in eCommerce, due to its simplicity and ease of implementation. During inflation, FIFO tends to provide a more accurate representation of costs. It results in a higher valuation of remaining inventory, lower cost of goods sold, and higher gross profit.

Example

- Let's say a business bought laptops at different timing and prices

1 *10 Laptops @ $ 1,000 each* → 2 *5 Laptops @ $ 1,100 each*

After selling 8 laptops COGS balance → *8 Laptops X $ 1,000 FIFO Cost = $ 8,000*

Accounting balance of Inventory account = *2 Laptops (each at $ 1,000)* + *5 Laptops (each at $ 1,100)* = *$ 7,500*

Pros of FIFO

The cost of goods sold (COGS) is not affected by any inventory carried over from the previous fiscal year as this method aligns the costs with the actual cash flow and physical movement of goods in the warehouse.

The simplicity and intuitive nature of FIFO result in the inventory being valued in the order it was purchased and sold

FIFO is a popular inventory valuation method among e-commerce firms due to its simplicity. It ensures that the cost of each item sold is consistent, preventing any manipulation of revenue by selecting specific items to sell.

Cons of FIFO

It is common for product prices to increase over time in the field of economics, especially for agricultural goods affected by factors like extreme weather and climatic conditions.

In some cases, FIFO inventory valuation may lead to a mismatch between expenses and income since the calculated values do not align with the actual inflated figures.

Even under normal inflation assumptions, FIFO can result in inflated profits, leading to a higher tax burden compared to alternative methods.

Valuation Methods (2/4)

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2 LIFO (Last-In, First-Out)

- The LIFO inventory valuation method works in contrast to FIFO, where the newest inventory is sold first, while the older inventory remains in stock.
- LIFO is not widely adopted by businesses due to the potential increase in holding costs and obsolescence of older inventory. This method is typically used when businesses anticipate rising inventory costs due to inflation.
- By allocating high-cost inventory to the cost of goods sold, companies can reduce their declared profit levels, resulting in lower tax payments.

Example

- Let's say a business bought laptops at different timing and prices

1 *10 Laptops @ $ 1,000 each* → 2 *5 Laptops @ $ 1,100 each*

After selling 2 laptops COGS balance → *2 Laptops X $ 1,100 LIFO Cost = $ 2,200*

Accounting balance of Inventory account = *3 Laptops (each at $ 1,100)* + *10 Laptops (each at $ 1,000)* = *$ 13,300*

Pros of LIFO

During inflation LIFO results into higher COGS and lower balance of inventory, due to the lower earrings businesses can pay less tax.

This method aligns more closely with profitability as it considers the most recent costs and evaluates actual profits of the businesses.

LIFO leads to lower profits due to the low net income. Accountants and regulators consider it a valuable tool for assessing management's profitability.

Cons of LIFO

Realistic inventory systems generally do not LIFO method. Companies dealing with perishable goods, prefer to sell the freshest inventory before older inventory.

When the most recent purchases are used as the cost of goods sold in accounting or finance, it can lead to a situation where a group of older inventory remains unsold.

The use of LIFO for inventory valuation is disapproved by several accounting authorities, including US GAAP.

Valuation Methods (3/4)

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3 Weighted Average Cost Method

- The weighted average cost method calculates the average cost per unit based on the total cost of inventory goods divided by the sum of total units in inventory. This method is employed when it is difficult to track the cost of individual items or when the items are indistinguishable from each other.
- It is commonly used to determine inventory valuation for items that cannot be individually identified. However, it may not provide an accurate valuation for businesses requiring precise cost allocation.

Example

- Let's say a business bought laptops at different timing and prices

1. *10 Laptops @ $ 1,000 each* → 2. *5 Laptops @ $ 1,100 each* = *15 Laptops (10+5)* → *$ 15,500 (10,000 + 5,500)*

Weighted Average Cost per Laptop = *$ 15,500 cost / 15 Laptops = $ 1,033*

After selling 13 laptops COGS balance → *13 Laptops X $ 1,033 = $ 13,433*

Accounting balance of Inventory account = *2 Laptops* × *$ 1,033 average cost* = *$ 2,066*

Pros of Weighted Average Cost Method

This method is suitable for the business that have a large quantity of inventory of identical products.

Only the price at which the transactions were completed is taken into account when using the weighted average cost method.

This method is most appropriate when the items being evaluated are difficult to distinguish.

Cons of Weighted Average Cost Method

The limitation of this method is the possibility of selling items at a loss. This occurs because the pricing of the products may not accurately reflect their value when costs suddenly increase, and a typical mark-up of cost of goods sold (COGS) is used to determine prices.

The cost of inventory often differs from the market price of the products, which can lead to questions and challenges due to the complex calculations.

Valuation Methods (4/4)

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4 Specific Identification Method

- The specific identification method involves individually tracking and recording each item in the inventory from its acquisition until its sale.
- This method is primarily utilized for items with distinct features and costs, often found in high-value or unique products.
- It requires the ability to trace and identify items through means such as RFID tags or serial numbers.
- While providing a high level of accuracy in inventory valuation, this method is limited to valuing specific, high-value items that require meticulous tracking procedures.

Pros of Specific Identification Method

The method has the advantage of having a much higher degree of accuracy when it comes to the actual number of items in inventory and, of course, a higher degree of accuracy when it comes to the amount of money made in revenue or profit, as well as any lost revenue if items are damaged, lost, or returned.

Because of its accuracy, such a system almost eliminates the possibility of losing or misplacing inventory.

Cons of Specific Identification Method

It demands a firm grasp of how to quickly and reliably identify every single item in an organization's inventory, keep track of their costs, and produce them upon sale or the promise of sale.

Because of the enormous volume that bigger firms, like big box retailers, transport every day, it is exceedingly difficult for them to accomplish the procedure.

The cost of the item and the money obtained from the item's sale must be related to a particular item with some kind of unique identifier that marks it out.

Smaller firms do not typically encounter this problem, which explains why these businesses are the ones that use the specific identification approach most frequently.

Challenges in Inventory Valuation

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Determining the Remaining Inventory	• Determining the remaining inventory can be a complex task, especially when considering products in transit. Businesses have to decide whether to include these products in their inventory valuation. Some companies utilize a periodic inventory management system, evaluating inventory at the end of each accounting period. Alternatively, a perpetual inventory system tracks every purchase order and sale, regularly updating inventory to reflect these transactions.
Incorporating Related Costs	• During inventory valuation, it is crucial to include not only the costs of the products but also the expenses associated with procuring and maintaining inventory. These expenses can encompass transportation costs, inventory holding costs, delivery costs, insurance costs, packing and picking costs, and even the electricity utilized to store the inventory. Determining the exact value of these expenses in relation to the remaining inventory can present challenges for sellers.
Valuating Damaged Products	• Monetarily evaluating damaged products can be difficult, as their market value decreases. Sellers may try to sell damaged products as refurbished items during sales or offer them to second-hand dealers. Similarly, perishable products lose value over time, as storing them becomes more expensive compared to the revenue they generate in a competitive market. Perishable items often require special warehousing facilities with temperature control and specialized containers.
Identifying Stock Discrepancy	• Stock discrepancy refers to the difference between physically available stock and the inventory recorded in the system. • To determine accurate inventory valuation, sellers must reconcile the differences by contacting the manufacturer, reviewing old bills, and conducting thorough checks. In some cases, the missing inventory may remain unaccounted for, leading to waste and affecting the final valuation.
Valuing Seasonal Items	• The value and pricing of seasonal items fluctuate over time. When a season ends, manufacturers often offer heavy discounts, resulting in price variations compared to the initial purchase price. For instance, in the case of a garments seller, if coats are sold during winter but demand is lower than anticipated due to milder weather, the seller must store the remaining inventory until the next winter season. This can lead to potential damage or obsolescence as newer designs are introduced to the market.

Ind AS 2 Vs US GAAP – ASU 2015-11

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Item	Ind AS	US GAAP
Inventory Costing	• The cost of inventories, other than that which is not ordinarily inter-changeable, shall be assigned by using the first-in first-out formula (FIFO) or weighted average cost formula. LIFO is not permitted.	• The cost of inventories can be assigned by using the first in-first out (FIFO), last in-first out (LIFO) or weighted average cost formula.
Inventory Measurement	• Inventory is measured at the lower of cost and net realisable value. • Net realisable value is estimated selling price less cost of completion of sale.	• Inventory that is measured using method other than LIFO or the retail inventory method is measured at lower of cost and net realisable value. • Inventory that is measured using LIFO or the retail inventory method is measured at lower of cost or market value. • Market Value is defined as current replacement cost subject to an upper limit of net realisable value and a lower limit of net realisable value less a normal profit margin.
Reversal of Inventory write-downs	• Reversals of Inventory write downs are permitted for subsequent recoveries.	• Reversals of write-downs are prohibited.

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Valuation under Special Situations

Overview of Special Situations (1/2)

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Types of Special Situations

- Mergers and acquisitions are deals in which two or more companies merge in some way. Despite the fact that the terms mergers and acquisitions (M&A) are sometimes used interchangeably, they have distinct legal meanings.

Mergers

- One firm absorbs the assets and liabilities of the other firm in a merger. The acquiring firm retains its identity. In many cases, control is shared between the two management teams. Transactions were generally conducted on friendly terms.
- In a consolidation, an entirely new firm is created.

Acquisitions

- Traditionally, the term described a situation when a larger corporation purchases the assets or stock of a smaller corporation, while control remained exclusively with the larger corporation.
- Often a tender offer is made to the target firm (friendly) or directly to the shareholders (often a hostile takeover).

Demerger

- Splitting up of a division/business of an existing company into a new company/existing separate operating company.
- The shareholders of original company would generally receive shares of the new entity

Overview of Special Situations (2/2)

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Carve-out

- Carve-out is the partial divestiture of a business unit in which a parent company sells a minority interest of a subsidiary to outside investors.
- Company undertaking a carve-out is not selling a business unit outright but, instead, is selling an equity stake in that business or relinquishing control of the business from its own while retaining an equity stake.
- Carve-out allows a company to capitalize on a business segment that may not be part of its core operations.

Spin-off

- Spinoff is a new and separate company that's created when a parent company distributes shares in a subsidiary or business division to the parent company shareholders, It is a type of divestiture.
- A parent company creates a spinoff expecting that it will be worth more as an independent entity than it was as part of the parent company.
- Spinoff is also known as a spinout or starburst.

Buyback

- A buyback, also known as a share repurchase, is when a company buys its own outstanding shares to reduce the number of shares available on the open market.
- Companies buy back shares for a number of reasons, such as to increase the value of remaining shares available by reducing the supply or to prevent other shareholders from taking a controlling stake.

Merger Negotiations

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What are Negotiations ?

- Negotiation is the mutual debate and structuring of the conditions of a transaction in order to reach a settlement or agreement.
- Negotiation is the most critical step when it comes to mergers and acquisitions. It is the stage where the deal either comes together with the way the negotiators want it to or falls apart because their efforts have exhausted them.

Friendly Acquisition

- The acquisition of a target company that is willing to be taken over.
- Usually, the target will accommodate overtures and provide access to confidential information to facilitate the scoping and due diligence processes.

Hostile Takeover

- A takeover in which the target has no desire to be acquired and actively rebuffs the acquirer and refuses to provide any confidential information.
- The acquirer usually has already accumulated an interest in the target (20% of the outstanding shares) and this preemptive investment indicates the strength of resolve of the acquirer.

Target	The corporation being purchased, when there is a clear buyer and seller.
Bidder	The corporation that makes the purchase, when there is a clear buyer and seller. Also known as the acquiring firm.
Friendly	The transaction takes place with the approval of each firm's management.
Hostile	The transaction is not approved by the management of the target firm.

Fundamental Reasons for M&A

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Synergies	Through the integration of business operations, there is a tendency for a boost in overall performance efficiency, accompanied by a reduction in overall costs. This occurs as each company capitalizes on the strengths of the other.
Increase Supply – Chain Pricing Power	Acquiring one of its suppliers or distributors enables a business to eliminate an entire tier of costs. In the case of purchasing a supplier, termed a vertical merger, the company typically reduces costs by saving on the margins previously added by the supplier. Conversely, acquiring a distributor often empowers the company to sell its products at a lower cost.
Eliminate Competition	Numerous M&A deals provide the acquiring company with the opportunity to eliminate future competition and secure a more substantial market share. However, on the flip side, offering a significant premium is often necessary to persuade the shareholders of the target company to accept the proposal.
Growth	Mergers offer the acquiring company a chance to expand its market share without undertaking substantial efforts. In these instances, acquirers simply purchase a competitor's business, a process commonly known as a horizontal merger.
Succession and retirement	One of the primary catalysts for M&A activity is when owners are seeking retirement or aiming to transfer the business to successors or potential buyers. In such cases, owners often seek strategic buyers who possess a deep understanding of the business. This choice is driven by the desire for a seamless transfer that ensures continuity for employees and other stakeholders involved.

Types of Merger

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Horizontal Merger	➢ A horizontal merger occurs when two companies operating in the same market (and selling similar products or services) come together to dominate market share. ➢ This type is attractive for merging companies aiming to build economies of scale and decrease market competition.
Vertical Merger	➢ Vertical mergers involve two companies in the same industry who operate in different stages of production. This could involve a retailer who merges with a wholesaler, or a wholesaler merging with a manufacturer. ➢ This type of merger is ideal for streamlining operations, boosting efficiencies, and cutting costs across the supply chain.
Congeneric Merger	➢ A merger is considered congeneric if the companies offer different products or services but operate in the same sphere and sell to the same customer base. ➢ Congeneric mergers allow companies to sell new products, which is why they're also known as product extension mergers.
Conglomerate Merger	➢ Conglomerate merger occurs between two companies whose business activities and industries may be completely unrelated. ➢ In pure conglomerate mergers, the two firms may continue to operate separately within their own markets, whereas in a mixed one, they may look to expand product or market reach.
Market Extension Merger	➢ A market extension merger is a horizontal merger that allows two companies that sell the same product to operate in a new market. ➢ These types of consolidations help companies drive more revenue by expanding where they do business.
SPAC Merger	➢ Special Purpose Acquisition Company (SPAC) is a company without commercial operations and is formed strictly to raise capital through an initial public offering (IPO) for the purpose of acquiring or merging with an existing company. ➢ Also known as blank check companies, SPACs have existed for decades, but their popularity has soared in recent years.

Synergies in M&A

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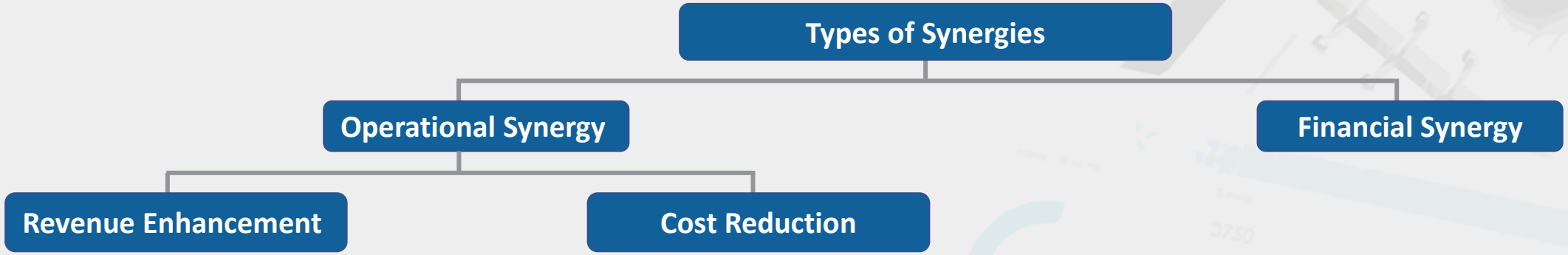
What are Synergies in M&A?

- Mergers and acquisitions are made with the goal of improving the company's financial performance for the shareholders.
- Two business can merge to form one company that is capable of producing more revenue than either could have been able to independently, or to create one company that is able to eliminate or streamline redundant process, resulting in significant cost reduction.
- Because of this principal, the potential synergy is examined during the merger and acquisition process.
- If two companies can merge to create greater efficiency or scale, the result is what is sometimes referred to as a synergy.
- Synergies are the estimated cost savings or incremental revenue arising from a mergers and acquisitions (M&A).
  - ✓ Suppose firm A is contemplating acquiring firm B
  - ✓ The synergy from the acquisition is
  - ✓ Synergy = $V_{AB} - (V_A + V_B)$
  - ✓ The synergy of an acquisition can be determined from the standard discounted cash flow model: Synergy = $\sum_{t=1}^{T} \frac{\Delta CF_t}{(1+r)^t}$



Types of Synergies

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Revenue Enhancement

- Revenue synergies are based on the assumption that the combined companies can generate more cash flows than if their individual cash flows were added together.
- Hence, these benefits in M&A must be pitched as being mutually beneficial, as opposed to being one-sided exchanges.
- Frequently referred to as the "phase-in" period, synergies are typically realized two to three years post-transaction.

Cost Reduction

- Cost synergies tend to be more likely to be realized and therefore are viewed as more credible, which is attributable to how cost synergies can point towards specific cost-cutting initiatives such as laying off workers and shutting down facilities.
- Acquirers must often accept that the expected synergies used to justify a purchase price premium may not ever materialize.

Financial Synergy

- Financial synergy is when two mid-sized companies merge together to create financial advantages.
- In comparison, the topic of financial synergies is more of a gray area, as quantifying the benefits is more intricate relative to the other types.
- But some commonly cited examples include the following:
  - ✓ Tax Savings from Net Operating Losses
  - ✓ Greater Debt Capacity
  - ✓ Lower Cost of Capital

Mode of Financing Merger (1/2)

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Stock Swap Transaction

- When companies own stock that is traded publicly, the acquirer can exchange its stock with the target company.
- Stock swaps are common for private companies, whereby the owner of the target company wants to retain a portion of the stake in the combined company since they will likely remain actively involved in the operation of the business.
- The acquiring company often relies on the proficiency of the owner of the target firm to operate effectively.

Acquisition Through Equity

- In acquisition finance, equity is the most expensive form of capital.
- Equity financing is often desirable by acquiring companies that target companies that operate in unstable industries and with unsteady free cash flows.
- Acquisition financing is also more flexible, due to the absence of commitment for periodic payments.

Cash Acquisition

- In an all-cash acquisition deal, shares are usually swapped for cash.
- The equity portion of the balance sheet of the parent company remains the same.
- Cash transactions during an acquisition often happen in situations where the company being acquired is smaller and with lower cash reserves than the acquirer.

Acquisition Through Debt

- Debt financing is one of the favorite ways of financing acquisitions.
- Most companies either lack the capacity to pay out of cash or their balance sheets won't allow it.
- Debt is also considered the most inexpensive method of financing an acquisition and comes in numerous forms.
- When providing funds for an acquisition, the bank usually analyzes the target company's projected cash flow, profit margins, and liabilities.

Mode of Financing Merger (2/2)

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Acquisition Through Mezzanine or Quasi Debt

- Mezzanine or quasi-debt is an integrated form of financing that includes both equity and debt features.
- It usually comes with an option of being converted to equity.
- Mezzanine financing is suitable for target companies with a strong balance sheet and steady profitability.
- Flexibility makes mezzanine financing appealing.

Leveraged Buyout (LBO)

- A leveraged buyout is a unique mix of both equity and debt that is used to finance an acquisition. It is one of the most popular acquisition finance structures.
- In an LBO, the assets of both the acquiring company and target company are considered as secured collateral.
- Companies that involve themselves in LBO transactions are usually mature, possess a strong asset base, generate consistent and strong operating cash flows, and have few capital requirements.
- The principal idea behind a leveraged buyout is to compel companies to yield steady free cash flows capable of financing the debt taken on to acquire them.

Seller's Financing / Vendor Take-Back Loan (VTB)

- Seller's financing is where the acquiring company's source of acquisition financing is internal, within the deal, coming from the target company.
- Buyers usually resort to the seller's financing method when obtaining capital from outside is difficult.
- The financing may be through delayed payments, seller note, earn-outs, etc.

Key Considerations

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Synergies	Synergy is the concept in which the augmented value generated by combining two companies is greater than the sum of separate individual parts. It creates opportunities that would not have been available to these businesses at their level.
Form of Consideration	The company must take into consideration how the buyers will pay, and the sellers will get paid. This is often considered by analyzing how the company views its business and the anticipated synergies from a merger or an acquisition.
Accounting	The companies may require financial and tax reports. It is important in the determination of goodwill in the M&A transactions. For instance, if the acquirer company purchases the acquired company and assigns that purchase amount into the assets and liabilities of the business, then these are to be used for both financial and tax purposes.
Intellectual Properties	Directly or indirectly, the intellectual property of a business plays a major role in a merger and acquisition transaction. It is any corporation's biggest asset and hence play a crucial role in determining the price of the business. . Transfer of intellectual property also benefits the acquirer with a transfer of technology which helps in its exploitation and utilization to the full extent.
Acquisition Premium	Acquisition premium is the difference between the price paid for an acquired company in a merger or acquisition and the acquired company's assessed market value. It is maintained on the acquirer's balance sheet as an intangible asset after the deal is completed.

Factors Driving the M&A (1/2)

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Lack of competency	➢ Another reason for divesting a business unit can be the lack of competency of the business unit in comparison with the other players in the industry. ➢ If a business unit is not competitive enough in the market this will lead to a lower market share which would in turn produce less profits.
Non-performance of assets and losses	➢ A company's management may choose to divest certain assets or divisions which are consistently non-performing. ➢ In this situation holding onto an asset may increase more losses and debts instead of earning profits and increasing productivity ➢ Hence divestiture of those non- performing and low value divisions is undertaken.
Anti-trust divestiture	➢ Sometime the companies are required to comply with certain regulations in order to decrease monopolies. ➢ In order to comply with such regulations and orders, the companies have to divest some of their business divisions or assets as per orders.
Changes in the market	➢ The outside factors play a key role in the growth and expansion of a company. ➢ There are certain factors such as the trends in the market, demand and value of a business in the market and the competition in the industry from other businesses.

Factors Driving the M&A (2/2)

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Bankruptcy	➢ In the event of a company not being able cope up with its accumulated debts, the company is declared bankrupt. ➢ During bankruptcy, a company may try to generate sufficient funds to pay back its debts through several sources. ➢ One of the ways by which the company can raise money is through divestiture. ➢ By selling of its business divisions and enterprises, the company can secure enough money to pay its debts and pay the creditors.
Location and geo-political scenario	➢ In areas of war and social conflict it is difficult for companies to operate and function with ease. ➢ As a result, the companies choose to divest their business divisions in that area until the situation becomes better. ➢ Companies such as PepsiCo. And Macy's decided to divest in Myanmar during its political crisis.
Financial factors	➢ In times of financial crisis, a company may decide to divest certain assets and business units. ➢ This divestment helps the company to raise funds which might be crucial for the future investments that the company might want to pursue. ➢ This could also help in eliminating debts that the company has accumulated.
Streamlining of the company's functions	➢ Sometimes a company has many different enterprises or business divisions under its ambit. ➢ Over the course of time, the company might realize that its future goals have changed. ➢ The company might also want to streamline its functional areas by eliminating certain divisions that are no longer consistent with its future goals.

Challenges in M&A (1/2)

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Working in a Global Environment

- The consolidation and securing are by and large and generally done between the organizations having central command in various nations.
- This confuses the exchange of training as administrators by and large accept that their insight is ideal and applies all around and they neglect to understand that exhibition drivers shift from one culture to another.

Language Barrier

- The correspondence between the representatives is viewed as the greatest test.
- As the consolidated organizations are from various nations and language utilized among is unique and when such various organizations meet up the representatives appears to confine them from cooperating

Strategic Planning

- Routinely HR specialists are not enough drawn in with the evaluation of target associations before deals are settled upon.
- If they are not individuals in the improvement of an M&A approach and the screening of capacity and culture at a beginning phase, they should play look into later on, fixing issues that might have been avoided had they been incorporated from the start.

Planning Integration

- A significant test is to guarantee that the new business substance isn't impacted by the M&A's exercises.
- What's more, investigate worker's presentation to guarantee that client necessities keep on being met.
- Coordination arranging and activity should start before time as achievable before the arrangement closes.

Challenges in M&A (2/2)

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Lacking a good motive for the acquisition

- Issues of consolidations and acquisitions start even before an arrangement happens.
- The consolidation or obtaining has recently run into its first issue and the odds of other emerging areas of now higher as an immediate result.

Overestimating synergies

- In the least difficult terms, collaborations happen when one in addition to one is more noteworthy than two.
- This typically implies either expanded income or cost investment funds which are a result of the exchange.
- These are a solid intention in many arrangements, but at the same time, they're normally misjudged.

Failed Integration

- In fact, reconciliation comes after a consolidation or procurement, yet that doesn't mean it ought to be a reconsideration.
- Issues with acquisitions during Integration, which incorporate culture and change the board, can make a wasteful and surprisingly harmful workplace.

Deal Structure

- An exchange can be organized in three ways: Stock purchase; Asset sale, and Merger.
- Inside every choice, the purchaser and target have to restrict lawful interests and concerns.
- While arranging a specific arrangement structure, it's basic to comprehend and address material worries.

Accretion Dilution Analysis

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What is Accretion Dilution Analysis?

- Accretion and Dilution refer to a simple test that determines the impact of an acquisition or merger on the buying firm's Earnings Per Share (EPS).
- Accretion Dilution analysis helps the acquirer (buyer) weigh the consequences of the merger, incorporating all factors and complexities.

Accretion

- An accretive acquisition or merger is one where the pro forma (post-deal) Earnings per Share is greater than the acquirer's (buyer's) EPS before the deal is made.

Pro Forma (Post-Deal) EPS > Acquirer's EPS

Dilution

- A dilutive acquisition or merger is one where the pro forma (post-deal) EPS is less than the EPS of the acquiring business when it stands alone before the deal is made.

Pro Forma (Post-Deal) EPS < Acquirer's EPS

Breakeven

- This scenario is pretty self-explanatory. Upon a merger or acquisition, the acquiring (buying) company would essentially "breakeven." In other words, there would be no impact on the acquirer's EPS, and the company's EPS would be the same before and after the deal is made.

Pro Forma (Post-Deal) EPS = No Impact on Acquirer's EPS

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Thank You

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