ICAI

Series-7

Valuation: Professionals' Insight

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Valuation Standards Board
and
ICAI Registered Valuers Organisation
The Institute of Chartered Accountants of India
(Set up by an Act of Parliament)
New Delhi

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Foreword

The Valuation Standards Board (VSB) was formed by the ICAI to formulate ICAI Valuation Standards with a view to ensuring the consistent, uniform and transparent valuation policies for the members undertaking Valuation Assignments and to set up concepts, principles and procedures which are generally accepted internationally having regard to legal framework and practices prevalent in India. The Board also Interacts/ Represents on issues relating to Valuation with Government/IBBI.

I am very happy that the Valuation Standards Board of ICAI and ICAI Registered Valuers Organisation (ICAI RVO) have taken this joint initiative and are bringing out the Seventh Series of the publication 'Valuation: Professionals' Insight' to help the professionals in understanding practical aspects of valuation based on the experience and insight of experts in this field of practice. This publication will provide valuers with knowledge of good practices followed by professionals in the field of valuation. It contains various articles from Professional Valuers with a focus on pertinent valuation topics and emerging issues.

I extend my appreciation to the entire Valuation Standards Board as well as ICAI Registered Valuers Organisation and CA. Mangesh Pandurang Kinare, Chairman and CA. Cotha S. Srinivas, Vice-Chairman, Valuation Standards Board for bringing out this publication with the objective of capacity building and knowledge dissemination for the benefit of members and other stakeholders.

I am confident that this publication would be of great help to the members, and other stakeholders in all their professional endeavours.

Date: 30th June 2022
Place: New Delhi

CA. (Dr.) Debashis Mitra
President, ICAI
Director, ICAI RVO

Preface

In today's market economy Valuation is an important profession as it provides critical inputs to serve as a reference for the evaluation of choices and decision-making under various scenarios like Insolvency, Mergers and Acquisitions, fund raising etc. Several financial crises around the world are attributed to consequences of poor valuation. Hence, the vision of the regulators and the government for the Valuation Profession in India is to develop it as a discipline of knowledge such that Valuers are not only valuation professionals, but also the most valuable professionals.

As part of our continuous endeavours towards enhancing and enriching the knowledge base of valuation professionals and to bringing to the fore the best practices followed by the Registered Valuers, the Valuation Standards Board jointly with ICAI Registered Valuers Organisation has decided to bring out the Seventh Series of the publication titled "Valuation: Professionals' Insights".

This publication like the other Six Series is a compilation of articles on varied valuation topics written by experts in this field. The publication covers some important topics like Debt Valuation, Startup Valuation, ESG Valuation etc. The objective of the publication is to make available the knowledge of the valuers and experts in this field of practice.

We may clarify that the views expressed in this publication are the views of the authors and are not the views of the Institute.

In this connection, we take this opportunity in thanking the President ICAI and Director ICAI RVO CA. (Dr.) Debashis Mitra, and the Vice President ICAI CA. Aniket Sunil Talati for their constant support and encouragement.

We would also like to express our gratitude towards the Board of ICAI RVO comprising of Shri Rajeev Kher, Chairman of the Board and other Directors, Shri Pawan Singh Tomar, Prof. Anil Saini and Shri Rakesh Sehgal for joining in the constant efforts of the Board.

Most importantly, we also thank, CA. Rajan Wadhawan; CA. Dipam Patel; CA. Shilpang Karia; CA. Deepak Sharma; CA. Sanchit Vijay; CA. Abraham Mathews; CA. Sridhar Venkatraya Sundararaja; CA. Sanjay H Shah; CA. Ishan Tulsian; CA. Harsh Vardhan Bhandari and CA Srivatsan Ranganathan who have contributed articles featured in the publication.

We would like to put on record the efforts put in by CA. Sarika Singhal, Secretary VSB, ICAI and Officiating CEO, ICAI RVO and Ms. Seema Jangid, Assistant Secretary ICAI and CA. Pragya Agrawal, Assistant Project Officer ICAI for providing the technical and administrative support. We also sincerely appreciate the support and guidance of all members, co-opted members, special invitees of the Valuation Standards Board of ICAI which encourages us to bring such publications regularly.

We are sure that the members and other stakeholders will find this publication extremely useful in supporting and contributing to their professional commitments and assignments.

CA. Mangesh Pandurang Kinare
Chairman
Valuation Standards Board, ICAI

CA. Cotha S Srinivas
Vice Chairman
Valuation Standards Board, ICAI

Place: New Delhi

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Chapter 1
Financial Statement Analysis for Value Investment

I. Introduction

Value investing is an investment paradigm that involves buying shares & securities that appear under-priced by some form of fundamental analysis of Industry in which it operates like comparing financials of respective companies vis-à-vis peer, and through techniques like Ratio Analysis or is expected to offer comparative advantage in segment it operates.

Financial statements are the primary source of information for assessment of the financial position of business operations of the company during a year, financial position of its assets and liabilities at the year-end & changes in free cash flows from operating, financing & investing activities during the year. The annual report is a very important document which has both financial and non-financial information including that of industry & competition, segment reporting of the business, related party transactions and accounting policies and principles in general and specific to certain transactions. Although the earning of a company is important, ability of a company to generate free cash flows over a longer period of time is the real test. The assessment of a company based on the basis of free cash flows is much better than an assessment based on its earnings.

Knowledge of industry, amongst other parameters, is necessary and essential for valuer's assessment before deciding on value investing. Valuer should make assessment of the economic and technological trends and regulations in order to assess the risk and return characteristics of companies operating in different industries. Industry understanding and analysis is required for the preparation and review of financial forecasts of the concerned company. Valuers need to first look at the economy in which company is operating, then the industry and finally the company. So the valuer has to scan environment by first looking into the economic factors like GDP, inflation, interest rate and government policies, then at the industry forecast in which the company falls and its growth potential, and finally the company's financial performance.

Financial statements are not an end in themselves but are useful in decision making context. Financial statements are very helpful in giving various indicators with the help of techniques such as 'Ratio Analysis', if appropriately carried out & analysed. Analysis of financial statements consist of segregating data according to parameters of desired spectrum and presenting them in a fashion so that the desired objective of such analysis is achieved. The analysis and interpretation bridge the gap between the art of recording and the art of using information. Analysis is basically an exercise to find facts from the given set of complex figures and data. Investors lay heavy emphasis on the analysis of financial statements with the help of Ratio Analysis.

II. Flow of the Article:

1. Some Value Investing Truths.
2. Industry Analysis.
3. Financial Statement Analysis.
4. Ratio Analysis.

1. SOME VALUE INVESTING TRUTHS

Following Valuation related quotes of renowned personalities & legends in value investment gives us insight into value investing:

- Value is future looking. Investors buy tomorrow's cash flow, not yesterday's or even today's. [*James Hitchner*]
- I am better investor because I am a businessman, and I am better businessman because I am an investor [*Warren Buffet]*
- Some men know the price of everything and the value of nothing *[Oscar Wilde]*
- It's better to be roughly right than to be precisely wrong [*J.M. Keynes]*
- PRICE is what you pay - VALUE is what you get:

  Buyer's success: Value (-) Price : Seller's success: Price (-) Value
- Cash is King – Consider cash flow and not profits.
- Managers & Investors alike must understand that accounting numbers are the beginning, not the end of business valuation [*Warren Buffet*]
- There is nothing so dangerous as the pursuit of a rational investment policy in this irrational world [*John Maynard Keynes*]

- Unless you are willing to put in the effort to learn accounting – how to read and interpret financial statement – you really shouldn't select stocks yourself *[Warren Buffet]*
- The past performance is only relative to the extent that it is indicative of the company's future performance. *[James Hitchner]*
- There is vast difference between 'Understanding something well enough to buy it' as opposed to 'Understanding it well enough to sell it' *[Zig Ziglar - 'Secret of Closing the Sale, 1984]*
- "It's stupid the way people extrapolate the past and not slightly stupid, but massively stupid" *[Charlie Munger]*
- The past performance is only relative to the extent that it is indicative of the company's future performance. *[James Hitchner]*
- The Numbers are never whole story, its only starting point
- We must always remember that market research, no matters how well done, is based on past. We are always susceptible to discovering a truth whose time has gone. *[Mark A. Johnson – 'The Random Walk & Beyond', 1988']*
- A judicial man uses statistics, not to get knowledge but to save himself from having ignorance foisted upon him *[Thomas Carlyle]*
- This behaviour thinks that market is going to climb up & up and whoever doesn't board is going to be left behind forever. This goes on till the last fool is identified *[Allan Greenspan]*
- Unless you are willing to put in the effort to learn accounting – how to read and interpret financial statement – you really shouldn't select stocks yourself *[Warren Buffet]*

2. INDUSTRY ANALYSIS

An understanding of the economic and industry outlook is fundamental for developing reasonable expectations about company's prospects.

- Size of the Industry.
- Market for Product & Services of the Industry.
- Growth Potential of Market Segment.
- Possible Substitute of Product & Services.

- Sales Trend of Product & Services.
- Recent developments in the Market of the said Industry.
- Impact of Technological Changes on Industry Participants.
- Key Economic Drivers of Industry & Business.
- Labour & Social factors affecting Industry & Business.
- Government Policies & Regulations applicable to the industry.
- Competition Existing in the Industry.

Suggested Sources: Annual Reports of same industry segment cos., Recent Prospectus filing by same segment cos., Industry or trade association publications / websites, Internet searches, Business Newspaper & Trade Journals, Research Reports etc.

3. FINANCIAL STATEMENT ANALYSIS

a) What is Financial Statement?

- Financial statement is a compilation of financial data, in fact, it is just beyond compilation.
- It is collected and classified in a systematic manner according to accounting principles.
- It gives the Financial Position of an enterprise as regards to the profitability, operational efficiency, cash generation, long and short – term solvency etc.
- A financial statement is basic and formal means through which management of enterprise makes public communication of financial position.

b) Financial Statement Analysis for Value Investment:

- Financial statement analysis should include Ratio Analysis, Trend Analysis & Cash Flow Analysis.
- Understand Valuation of shares & securities for Investment.
- Before Investing, fundamentals of the Business must be understood. First step to understand the fundamentals of any shares & securities is analysing 'Historical Financial Performance'.
- The purpose of 'Historical Financial Performance' is to develop reasonable expectation about the future of the business.

c) Answer for following should be searched while reviewing Financial Statements:

- Focus on identifying the Key Value Drivers, for e.g., Number of Customers, Repetitive Customers, Reputed Customers, Reputed Contracts, Scalability due to adoption of Information Technology, Rating, Branding, Brand Ambassador, Marketing Budget, Locational advantage for acquisition of raw materials, Locational Advantage for selling of goods, Locational Eco-System, Key Managerial Personnel etc. List can be exhaustive depending upon the Business Activities & Business Model of the Company.
- What are the Economic Mots i.e. Competitive Advantages? For e.g. Lower Cost, Greater Size, Intangible Assets like branding / goodwill, Business Networking like dealer distributor etc., Commanding High Switching cost i.e. longer gestation period.
- Key Value Driver: Rate of Return on Capital / Rate of Return on Invested Capital (ROIC).
- Return on Invested capital and the proportion of its profits that the company invests for growth drive the free cash flow of future, which in turn drive value.
- Dividend Pay-out Ratio: If company has high dividend pay-out ratio and also investment rate more than 1, than it must be borrowing money to pay interest & dividend / negative free cash flow.
- Whether company is consuming more funds than it is generating (Investment rate greater than 1).
- Credit or liquidity perspective: Is company generating or consuming cash?
- How much debt does the company employ relative to equity? Debt has tax advantage but not flexibility.
- What Margin of Safety does the company have with respect to its debt financing?
- Interest Coverage: Operating Profit available to pay interest.
- Normal level of performance should be assessed and Abnormal income / loss should not be considered if it's not recurring in nature. So, non-operating income and expenses with respect to core business activities should be removed.

- Excess assets or assets deficiency may be compared vis-à-vis benchmark for industry.
- Whether any redundant assets exist in the balance sheet of the company? i.e. assets which are not contributing to operation of cash flows.
- Capital structure of the Business vis-à-vis previous year & vis-à-vis peer company / industry, if any.
- Core Working capital items should be assessed in % term with sales i.e. Trade Receivables, Trade Payables & Inventory.
- Operating cash cycle of the Business vis-à-vis previous year & vis-à-vis peer company / industry, if any.
- Share Capital addition & understand reason for such capital addition.
- CAPEX Addition vis-à-vis Business Plans.
- Length of financial history, looking to industry.
- Analysis vis-à-vis past trend & industry segment:
    - Sensitivity of Free Cash Flow to key value drivers.
    - Sales growth rate %, Quantitative growth, Average Sales Price Realization growth.
    - Operating profit margin.
    - Core working capital items along with sales turnover i.e. Cash Cycle.
    - Incremental Investment in working capital vis-à-vis sales growth
    - Incremental investment in fixed assets vis-à-vis present installed capacity & its utilization.
    - Share Capital Structure.
- Accounting policy which affects financials of the company
- Qualification / Disclaimer if any given by statutory auditor.
- Excess Cash, Marketable Securities and Surplus Assets vis-à-vis Operating assets.
- Tax status of the Business, e.g.: Tax rate applied vis-à-vis Normal rate of tax, Tax Benefits enjoyed if any, Advance tax being paid in relation to the business operations, Tax Disputes if any.

- Contingent Assets & Liabilities.

d) Over Valued Assets / Redundant Assets:

- Increasing inventory level vis-à-vis sales.
- Obsolete / slow moving / non-moving stock & realizable value of stock.
- Stock Valuation methodology adopted.
- Longer period Receivables.
- Longer period Capital work in progress.
- Litigated Assets.
- Deferred Revenue Expenditure.
- Investment carrying low rate of Income.
- Contribution of Intangible Assets on Revenue.
- Group company investments Balance Sheet performance vis-à-vis level of investment.

e) Non-operating Items:

- Excess cash than Business needs.
- Excess marketable securities.
- Excess Real Estate investment (If company can operate in rented premises, instead of investing excess in it).
- Luxurious investment in name of company, being used personally.

f) Off Balance Sheet / Other Items Review:

- Qualification / Emphasis in the matter.
- Negative Reporting in Audit Report.
- Tax Dispute & Long Tax Outstanding, if any.
- Loan borrowing interest rate & primary / collateral securities offered.
- Contingent Liabilities.
- Future Lease Commitments.
- Environmental Liabilities.
- Third Party Claims / Product Liability Claims / Warranty Claims.
- Labour issues / Labour claims.

- Adequate Insurance coverage.
- Legal rights over Brand / IP being used.
- Accounting policies which affect the financials of the company.
- Impact analysis of any change in the accounting policy vis-à-vis previous year.

g) Financial Analysis Tools:

- **Ratio Analysis**: Comparing company's performance vis-à-vis previous years (Trend Analysis) & vis-à-vis peer business / industry average.
- **Cash Flow Analysis**: Whether company generating or consuming cash for investor?

h) Financial Risk Analysis:

- Operating Leverage
  - Fixed operating expenditure over total operating expenditure is known as 'Operating Leverage'
  - Higher operating leverage makes the operating earning more volatile.
  - More volatile the operating earnings as compared to volatility of sales; the greater will be the firm's operating leverage.
- Financial Leverage
  - Fixed financial obligations over capital employed in business is known as 'Financial Leverage'. High financial leverage makes earning more volatile.
  - 3 major steps to analyse Financial Risk:
    - Balance Sheet Ratio: Compares the capital derived from debt compared to equity.
    - Earnings Ratio: Compare the earning available to pay fixed financial charges.
    - Cash Flow Ratio: Cash flow to outstanding obligation & cash flow available to pay fixed obligations.
- Interest Coverage
  - Income before interest & taxes how many times to fixed interest obligation.

- Higher the ratio - lower the financial risk.

- External Market Liquidity
  - Ability to buy or sell stock quickly with little price change from prior trade.
  - Volume to trading activity & bid-ask spread majors external market liquidity. Smaller spread indicates greater liquidity.

i) Techniques

- **Dupont Model** (Majors Return on Equity by considering efficient utilization of Assets)
  - his equation reveals that how firm can improve return on equity either by increasing profit margin OR by using all assets including fixed assets more efficiently / optimally.
  - Return on Assets = Net Profit Margin * Total assets turnover * Equity Multiplier
    - Net Profit Margin = Net Profit After Tax / Total Revenue
    - Total Assets turnover = Total Revenue / Total Assets
    - Equity Multiplier = Total Assets / Shareholder Equity

- **Sensitivity Analysis**
  - By making few sensitive variations in key indicator of company & measuring overall impact on financials.

- **Scenario Analysis**
  - Process to analyse financial impact under situation of Rapid growth, moderate growth & slow growth.

4. RATIO ANALYSIS

Majorly Ratio Analysis can be grouped into 5 classes:

a.	**Liquidity Ratios**	• Describes how quickly and easily co. can turn current assets into cash when necessary. • Measure ability of business to meet short term obligations.
b.	**Solvency Ratios**	• Measures optimum utilization Debt &

		Equity. • It deals with company's ability to service its long-term liabilities.
c.	**Efficiency Ratios**	• Measures efficiency of management towards various business activities.
d.	**Profitability Ratios**	• Measures efficiency of management to generate profitability / return on investment.
e.	**Valuation Ratios**	• To determine the valuation of company.

a) Liquidity ratios:

Important Liquidity Ratios are:

(i) CASH RATIO
= Cash & Cash Equivalents / Current Liabilities
• Cash or cash equivalent available to pay current liabilities immediately. • More conservative than Current ratio & Quick ratio. • It doesn't consider Trade Receivables & Inventories. • Low cash shows financial issues. • High cash, waiving potential business opportunities. Investment opts for safe capital instead of risk capital.
• **Norms: Industry Specific, however in general say = 0.5: 1**
(ii) QUICK RATIO (Acid Test)
= Quick Assets (Current Assets – Inventory – Prepaid Expenses) / Current Liabilities.
• Measure ability to pay current liabilities from current assets other than inventories. • Inventory may take its time to realize & convert into cash. • Period of Receivables & its Realizability. • Refers Cash Flow: Receivables realized vis-à-vis Total Revenue.
• **Norms: Industry Specific, however in general say = 1: 1**

(iii) CURRENT RATIO
= Current Assets / Current Liabilities.
• Measure ability to pay current liabilities from current assets. • Period of Receivables and Inventories & its Realizability. • Refer Cash Flow: Receivables & Inventory realized vis-à-vis Total Revenue.
• **Norms: Industry Specific, however in general say = 1.5:1 or 2:1**
(iv) INVENTORY TO CORE WORKING CAPITAL
= Inventory / (Trade Receivable + Inventory – Trade Payable).
• Measures level of Inventory in total working capital deployed. • Higher ratios suggest inventory blocking. • Increase should be read with Sales growth & new Business Development. • Lower ratio, signifies higher liquidity, however, should be read along with Receivables level to working capital also.
• **Norms: Industry Specific, however in general say = 40% to 60% of Current Assets**
(v) TRADE RECEIVABLES TO CORE WORKING CAPITAL
= Trade Receivable / (Trade Receivable + Inventory – Trade Payable).
• Measures level of Receivables in total working capital deployed. • Higher ratio suggests receivables blocking. • Increase should be read with Sales growth & new Business Development.
• **Norms: Industry Specific, however in general say = 40% to 60% of Current Assets**
(vi) TRADE PAYABLE TO CORE WORKING CAPITAL
= Trade Payable / (Trade Receivable + Inventory – Trade Payable).
• Measures level of Payable in total working capital deployed. • Higher ratios suggest liquidity issues.

• Increase should be read with inventory held.
• **Norms: Industry Specific, however in general say = 40% to 60% of Current Assets**
(vii) SALES TO CORE WORKING CAPITAL
= Annualized Net Sales / (Trade Receivable + Inventory – Trade Payable).
• Measures no. of times working capital cycled in a year. • Higher the ratio, more efficient utilization of working capital. • Lower ratios suggest issues in business, liquidity & credit policy. • Used as a trending signal to alert to investigate various management decisions.
• **Norms: Industry Specific, however in general say = minimum 4+, which means working capital cycle less than 90 days.**
(viii) SALES TO CORE CURRENT ASSETS
= Annualized Net Sales / Current Assets (Trade Receivable + Inventory).
• Measures no. of times current assets cycled in a year. • Sales to working capital also consider trade payable, while this ratio considers only current assets. Higher the ratio, more efficient utilization of current assets. • Lower ratios suggest issues in business, liquidity & credit policy. • Used as a trending signal to alert, to investigate various management decisions.
• **Norms: Industry Specific, however in general say = minimum 3+, which means working capital cycle less than 120 days.**

b) SOLVENCY RATIOS:

Important Solvency Ratios are:

(i) TOTAL DEBT TO ASSETS RATIO
= Total Debt (Short & Long Term) / Total Assets.
• Extent of total debt financing over total assets, so to have optimization benefit of one financing method over another. • Higher the riskier.

• Lower, opportunity cost of equity to be considered. • Margin also governs level of Debt
• **Norms: Industry Specific, however in general say = 1: 1**
(ii) TOTAL DEBT TO EQUITY RATIO
= Total Debt (Short & Long Term) / Net Worth.
• Measure Company's financing from debt & equity. • Higher the riskier. • Lower, opportunity cost of equity to be considered. • Margin also governs level of Debt
• **Norms: Industry Specific, however in general say = 1: 1**
(iii) LONG TERM DEBT TO EQUITY RATIO
= Long Term Debt / Net Worth.
• Measures long term component of capital structure • Higher the riskier. • Lower, opportunity cost of equity to be considered. • Margin also governs level of Debt
• **Norms: Industry Specific, however in general say = 2: 1**
(iv) DEBT SERVICE COVERAGE RATIO
= Operating Profit (EBIT) / Debt Principal + Interest.
• Measures nos. of time a company's debt payment ability by comparing its net earning with amount of long-term loan & interest payments. • Higher the better. • Lower the risker.
• **Norms: Industry Specific, however in general say = 1.5: 1**
(v) TOTAL DEBT TO EBITDA RATIO
= Debt (Short & Long Term)/ EBITDA.
• Measures no. of times a Debt held over EBITDA earned. • Higher the risker. • Lower the better.

• **Norms: Industry Specific, however in general say = 2 to 3 times**
(vi) WORKING CAPITAL TO DEBT RATIO
= Working Capital (Current Assets – Current Liabilities) / Total Debt (Short & Long-Term borrowing).
• Measures Company's ability to reduce or eliminate its debt. • Higher ratio value is generally considered a good sign of financial health. • It helps to determine how quickly & easily the organization could liquidate its cashable assets to repay debts.
• **Norms: Industry Specific, however in general say = 0.30 to 0.35 + i.e. organization has capacity to repay within say approx. 3 years.**
(vii) INTEREST COVERAGE RATIO
= Earnings Before Interest & Taxes / Interest Exp.
• Measures efficiency to pay interest exp. • Higher the better. • Lower the risker.
• **Norms: Industry Specific, however in general say = 3 +**

c) EFFICIENCY RATIOS:

Important Efficiency Ratios are:

(i) ASSET TURNOVER RATIO
= Net Annual Sales/ Average Total Assets (Excluding Cash & Cash Equivalents**).**
• Measures efficiency of assets to generate income. • Higher Ratio indicates efficient use of assets. • Lower Ratio indicates inefficient utilisation of assets. • Depends upon margin of revenue to give total return on total assets.
• **Norms: Industry Specific, however in general say = 1.5 +**

(ii) INVENTORY TURNOVER RATIO
= Sales or COGS / Average Inventory.
• Measure average inventory level against cost of goods sold. • Higher the better. • Lower the risker.
• **Norms: Industry Specific, however in general say = 4 to 6 +**
(iii) TRADE RECEIVABLE TURNOVER RATIO
= Total Sales / Average Accounts Receivable.
• Measures efficiency in collection from customers. • Slow trend in realization of receivables: signal that firm's financial health may be declining. • Higher Ratio: suggests efficient credit policy & liquidity.
• **Norms: Industry Specific, however in general say = 4 to 6 +**
(iv) TRADE PAYABLE TURNOVER RATIO
= Total Purchase / Average Accounts Payable.
• Measures efficiency to meet supplier's debt obligations. • Slow trend in supplier payment: signal that firm's financial health may be declining. • Higher Ratio: suggests liquidity to pay supplier & take price cost advantages.
• **Norms: Industry Specific, however in general say = 8 to 12 +**
(v) PRODUCTIVITY RATIO
= Total Annualized Sales / Any Productive selling unit Identified for Business.
• Level of sales per 'any productive selling unit identified for business' • For e.g.: Per cab, Per Person, Per Machine, Per Outlet etc. • Measures productivity on average selling unit. • Any increase in it, increases profit margin.
• **Norms: Industry Specific & depending upon Market Competition for said segment.**

d) PROFITABILITY RATIOS:

Important Profitability Ratios are:

(i) RETURN ON EQUITY RATIO
= (Net profit after tax – preference dividend if any) / Net worth.
• Measures total earning available for the year over total equity fund deployed • As an investor, this ratio shows how effectively company is using investor money to generate returns. • How firms' management is using equity to support ongoing operations & to fund growth & expansion. • Optimization of Debt & Equity Ratio: gives higher return.
• **Norms: Industry Specific, however in general say = 12% to 15% +**
(ii) RETURN ON CAPITAL EMPLOYED (ROC) / RETURN ON INVESTED CAPITAL (ROIC)
= (EBIT (1-t) or Net profit after tax + Post Tax Interest) / Capital Employed (i.e. Total Assets – Current Liabilities).
• Measures net earnings from operations to the amount of total capital employed. • It should give return more than opportunity cost of fund to investor.
• **Norms: Industry Specific, however in general say = 15% to 18%+**
(iii) GROSS PROFIT MARGIN
= (Total Sales – COGS) / Sales.
• Non-operating other income or expenses to be excluded. (e.g. profit / loss on sale of fixed assets, currency gain / loss etc.) • Measure ability of the company to generate profit on basis of trading / manufacturing / direct business operating activities.
• **Norms: Industry Specific, depending upon core business activities & generally accepted market norms for said Industry at relevant period of time.**

(iv) EBITDA MARGIN
= (Earnings Before Interest, Taxation, Depreciation & Amortization) / Sales.
• It can be equated as Cash Operating Income to the entire business capital used including Debt & Equity. • Widely used across the industry for financials decision.
• **Norms: Industry Specific, depending upon core business activities & generally accepted market norms for said Industry at relevant period of time.**
(v) EBIT MARGIN
= (Earnings Before Interest & Taxation) / Sales.
• It can be equated as net earnings available to the entire business capital used including Debt & Equity. • Widely used across the industry for financials decision.
• **Norms: Industry Specific, depending upon core business activities & generally accepted market norms for said Industry at relevant period of time.**
(vi) OPERATING MARGIN
= (Operating Profit / Operating EBITDA – Depreciation) / Sales.
• Non-operating other income or expenses to be excluded. (e.g. profit / loss on sale of fixed assets, currency gain / loss etc.) • Measure's ability of the company to generate profit exceeding its cost of operations.
• **Norms: Industry Specific, depending upon core business activities & generally accepted market norms for said Industry at relevant period of time**
(vii) NET PROFIT MARGIN
= (Net profit after tax) / Sales.
• Net available to equity holder after all accrued expenses including taxation.
• **Norms: Industry Specific, however in general say = 10% + PAT**

(viii) EARNING PER SHARE (EPS)
= (Net profit after tax – preference dividend if any) / Number of Equity Shares.
• Earnings per share available for the year over total nos. of equity shares deployed.
• **Norms: Industry Specific & depending upon Capital Structuring**

e) VALUATION RATIOS:

Important Valuation Ratios are:

(i) DIVIDEND PAY OUT RATIO
= Dividend Per Share / Earning per share.
• Profit distribution pay out. Balance is considered as invested for growth. • When the ratio is more than 1, it suggests business is paying out more in dividend than its actual earnings
• **Norms: Industry Specific, however in general say = It should advisably not exceed more than 30% to 40%, when there is business has potential to grow.**
(ii) PRICE EARNING RATIO (P/E Ratio)
= Market Price Per share / Earning Per share.
• How much investor willing to pay price over earning per share. • Indicator for share under-priced or over-priced in market. • Prone to Accounting Adjustment of Depreciation, Amortization & Deferred Tax.
• **Norms: Industry Specific, however in general say = 12 to 15. Higher or lower should be assessed for stock to stock, industry to industry & depending upon the capital structuring of the company.**

(iii) PRICE EARNING TO GROWTH RATIO (PEG Ratio)

= P/E Ratio / EPS Growth Rate.

- Price Earning Growth in based on the assumption that PE Ratio is positively linearly correlated to the expected growth rate in the earning.
- To identify overvalued & undervalued stock.
- Lower PEG says stocks are undervalued.
- Higher PEG says stocks are overvalued.
- Price Earnings ratio of any company which if fairly valued, will be equal to growth rate.

Norms: The following are the interpretation of the Price Earnings Growth ratio:

- **If the PEG ratio is equal to 1, it will be stated that fairly priced or valuation of the business.**
- **If the Price Earning Growth ratio is less than 1, it will be stated that undervaluation of the business.**
- **If the PEG ratio is more than 1, it will be stated that overvaluation of the business.**

(iv) EV/ SALES

= Enterprise Value / Sales

- Enterprise Value = Market Capitalization + Debt – Surplus Cash & Cash Equivalents.
- Simplest to apply when in losses but having good customer base and revenue from it.
- Not preferable to user other than matured company.

- **Norms: Industry Specific, however in general say = Range of 1 to 3. Higher or lower should be assessed for stock to stock, industry to industry.**

(v) EV/ EBITDA MULTIPLE
= Enterprise Value / EBITDA
• Enterprise Value = Market Capitalization + Debt – Surplus Cash & Cash Equivalents. • Widely used as best multiple. It considers operational profit. • Not prone to Accounting Adjustment of Depreciation, Amortization & Deferred Tax • Values irrespective of Debt Level.
• **Norms: Industry Specific, however in general say = Ranging as 10+. Higher or lower should be assessed for stock to stock, industry to industry.**

Chapter 2

Handling Debt in Business Valuations

1. Background

The concept paper on findings of the Peer Review of the Valuation Reports, released by the ICAI Registered Valuers Organisation and the Valuation Standards Board of the Institute of Chartered Accountants of India, discussed the arbitrary assumptions made in many valuation reports. The arbitrary assumptions commonly observed were listed to include:

i) Growth rate is assumed at 10%

ii) Terminal growth rate is assumed at 5%

iii) Beta is assumed at 1

iv) Product Life Cycle is assumed as indefinite

v) Assuming Book value of Debt to be Market Value of Debt

While a lot of literature would be available on the manner of being objective and the manner of scientifically calculating the first three, and also factual information might be available generally for point number four, however, it is difficult to obtain technical guidance on the commonly observed arbitrary assumption listed at point number five above. In this Article, we would attempt to learn more about managing Debt in the valuation analysis.

2. What is Debt?

First things first. It is very critical to understand what Debt is to appropriately apply the classification principles for the valuation analysis. With two sets of Accounting Standards being applied in the country and both having separate classification principles for complex instruments, it becomes imperative for a valuer to not only understand the nuances of classification of financial instruments, but also be practically aware as to what would lead to a consistency in the conclusion of the valuation analysis; especially for cases where in there is a relative valuation of two businesses, one business applies Ind-AS and the other business applies I-GAAP.

The objective of this Article is not to delve into the subject of classification of financial instruments. However, the idea of providing the above brief was to

bring it to the reader's attention that due care has to be taken for establishing "What is Debt?" in each of the valuation engagements that one undertakes.

Some guiding principles for an item to be considered as Debt can be illustrated below:

- Generally backed with an underlying contract, which leads to the creation of a contractual obligation for the borrower to make a payment/ repayment.
- Commitment to make fixed payments in the future. Here, the amount may or may not be fixed as the rate may be fixed or floating. Yet, the commitment to make payment is there.
- The failure to make the payments can lead to adverse consequences for the borrower, including default or loss of control.

Some of the typically challenging components of financial statements are discussed here:

Short-term borrowings: Typically, short-term borrowings represent money borrowed from Banks or financial institutions to fund the ongoing operations of a business, where the borrowing entity is expected to pay off the borrowing within twelve months. Whether short-term borrowings would be considered as Debt or would be considered as a part of working capital? Applying the guiding principles discussed above, each of the characteristic is present for the short-term borrowing to be considered as Debt, and it should be so considered.

Lease Liability: An interesting development under Ind AS financial statements is the recognition of various items in the financial statements at the present value of what they represent. Under a long-term lease, the business is committed to make the payment of the lease obligations on a period basis to the lessor and accordingly, this item too meets all the characteristics enumerated in the guiding principles above, warranting the same to be considered as Debt for the entity. It is important to note here that with this consideration, when financial statements are prepared under Ind AS and that the Valuer is analysing the Free Cash Flow to Firm (FCFF) in the Discounted Cash Flow method, the Valuer should consider the impact of depreciation charge on the Right of use asset (replacing the lease payments) and the lease payments being reflected as interest cost under the line-item of Finance costs. Not adjusting these would lead to higher calculation of FCFF

inadvertently, and hence, consideration of an item as a liability should also lead to the modifications of other affecting items suitably.

Trade Payables: Trade Payables are those balances in the financial statements which reflect the amounts payable by the entity to its suppliers/vendors with which the entity deals in the normal course of its business. At times, the supplier would offer to accept a lesser amount of a payment to settle the dues in exchange of an early payment. This is commonly understood as cash discount. An argument in favour of considering Trade Payables as a Debt is that the balance would have been lower had the payment been made earlier, and the said difference is nothing but interest paid to the supplier by the business, which should essentially consider this balance as a Debt. However, the absence of an explicit interest component, as well as the absence of any borrowing/asset being used without ownership, is what makes Trade Payables to be considered as a part of working capital of a business rather than Debt.

Convertible Debentures: Debentures, in their vanilla form are to be considered as Debt. However, depending upon the terms of the issue of the debentures, it is to be seen as to whether the debentures are convertible or otherwise, and who holds the conversion option, as to whether the holder or the issuer. Care has to be taken while evaluating such instruments as to the terms of conversion (if the debentures are compulsorily convertible, such financial instruments might be classified as a combination of Debt and equity in the financial statements prepared under Ind AS; however, for valuation purposes, the dilutive potential of the same is critical with related adjustments), coupon rate, tenure, etc.

Preference Shares: In the Indian context, preference shares generally represent a manner of raising capital, which gives the holder of the instrument a preference in the liquidation sequence and other preferences, as per the terms of the issue. The holders of preference shares are entitled to receive dividend, which by its inherent definition implies that the returns are contingent upon the business/entity making profits. Only if the terms of issue of the preference share contain a condition of the dividend being cumulative, would there be a claim of the preference shareholders, that too, only in the event of the business/entity making profits. However, modern-age businesses have a tendency to issue complex instruments including optionally convertible preference capital and hence, the classification of such items would depend on the terms of the issue of such instruments.

Nonetheless, if the preference shares are redeemable, and that the term of their issue meets the characteristics enumerated above for the classification of such instruments as a Debt, the Valuer may consider the preference capital as Debt. However, care should be taken to note that the return provided to the holders of redeemable preference capital in the form of dividend does not offer a tax advantage, and that should be appropriately factored in while considering the weighted-average cost of capital.

With a lot of entities choosing to issue complex financial instruments, whilst the accounting classification can be considered to be fairly representative of the true nature of the complex financial instruments, care has to be taken in ironing out the accounting classification differences when valuation analysis is done on a relative basis between two businesses using separate accounting standards for preparing the financial statements.

3. Calculating the Market Value of Debt

Moving on to the primary topic of this Article, how to actually calculate the market value of Debt. Before moving on to the calculation aspect, it is important to understand what really is the market value of Debt? Market value of the Debt, in a nutshell, can be explained as the replacement value of Debt viz., the amount which a market participant is willing to replace the existing Debt of the entity with. It refers to the price, a participant is willing to pay for buying the entity's Debt.

The market value of Debt is a representation of the investor's expectation to obtain return in line with the risks that the investor takes in a debt instrument of an identified business/entity, in line with the present market conditions.

For calculating the market value of Debt, it is necessary for the valuation analyst to have access to information. Information and data in the form of various inputs for the formula of calculating the market value of Debt is critical. The formula for calculating the Market Value of Debt is as under:

$$Market\ Value\ of\ Debt = \left(I\ X\ \left(1 - \frac{1}{(1+Kd)^{t}}\right) X \frac{1}{Kd}\right) + \left(\frac{D}{(1+Kd)^{t}}\right)$$

Where:

I	=	The Interest Expense
Kd	=	Pre-tax Cost of the Debt

D = Book Value of the Debt
t = Maturity term of the Debt

When the above analysis is done for each individual Debt separately, the total of all such calculations would result into the market value of Total Debt of the entity being valued. A formulaic representation of the above equation, which can be applied in spreadsheet tools like MS Excel, is presented below:

A	B	C
1	Book Value of Debt (D)	2000
2	Interest Expense (I)	120
3	Pre-tax Cost of Debt (Kd)	7.50%
4	Maturity term of the Debt (t)	6
5	Market Value of Debt	1859

Formula used in Cell C5 above is

"=(C3*((1-((1/(1+C4)^C5)))/C4)+(C2/((1+C4)^C5)))"

On performing the analysis to arrive at the market value of Debt, the market value of Debt differs from the book value of Debt by a considerable amount. The primary reason for the same in the above analysis is because of the lower interest expense indicating that the existing Debt of the above entity being valued might be at the rate of around 6% (120/2000) whereas the current cost of Debt for the entity has increased, meaning thereby that when this Debt is sold in the market, buyers would be willing to pay only 1859, as then only would their return equal the present market return on similar Debt.

While the above analysis can be performed for each of the debts of the business being valued, there is another manner of weighted average calculation that can be handy to establish a ballpark of the market value of Debt on a combined analysis. In this method, the time to maturity of each Debt is multiplied with the outstanding amount (book value) of each Debt and a weighted average maturity of all the debts is calculated by dividing the sum of the said multiplication result with the total of the Book Value of each Debt. The same is presented below for better understanding:

A	B	C	D	E
1	Particulars	Time to Maturity	Book Value of Debt	C*D
2	Debt 1	1	100	100
3	Debt 2	2	150	300
4	Debt 3	3	200	600
5	Total		450	1000
6	Weighted Average Maturity		=E5/D5→	2.22

After calculating the weighted average maturity, the formula discussed above is applied with the sum total of all inputs using the weighted average maturity.

Now, that we have discussed how to calculate the market value of Debt, let us move on to how to correctly input the right figures for the formula to perform well.

4. Interest Expense (I)

While interest expenses are to be taken from the historic financial statements, appropriate care should be taken to factor in the characteristics of recent debts, meaning thereby that if the interest expense historically is not annualised, the same should be annualised to have a properly resulting formula. In case the timing is not matched in the formula, the formula may yield absurd results.

5. Book Value of Debt (D)

Calculating the book value of Debt is fairly simple, as it is reflected in the financial statements. However, the Valuer should be aware of the fair value adjustments, if any, done to the carrying value of the Debt items, and the Valuer should appropriately factor those adjustments while using the above formula. Also, considering the Current and Non-current classification of the Debt items is essential.

6. Pre-tax Cost of the Debt (Kd)

The pre-tax cost of Debt is the current cost of Debt of the entity being valued. This can be obtained by relying on the latest rate available to the entity of a very recent loan arrangement, or if the Debt instruments of the entity are

listed on a recognised stock exchange, then the yield to maturity (YTM) of such a security is a good indicator of the current cost of Debt of the entity. In the absence of either of the above, the Valuer has to look at market forces, including credit rating of the entity (not of any particular instrument; because sometimes, credit rating agencies are engaged to only rate the instrument, which might be secured with the most valuable/liquid assets of the entity resulting into better credit rating) and evaluating the appropriate pre-tax cost of Debt for the business being valued.

7. Maturity term of the Debt (t)

Maturity term of the Debt has to be considered from the valuation date onwards, and not the full term of the Debt.

8. Concluding thoughts

While valuation is not an exact science, increasing regulatory and stakeholders' expectations from a valuation engagement cannot be denied. Diligence, on part of the Valuer is expected, which includes the expectation that when the base of valuation is fair valuation, the Valuer would consider the fair value of all items, including the Debt that the enterprise owes, and not simply the book value. In the valuation analysis, theoretically, the Debt of the entity would not have an impact on the equity value of the business; however, miscalculating the value of Debt would result into a disarrayed enterprise value, which in the transaction world forms the basis of a deal.

While in most situations, there would not be a significant difference in the market value and the book value of Debt, especially when there is an insignificant difference in the Pre-tax Cost of Debt and the interest rate at which the Debt is borrowed, it would be essential for the Valuer to apply this test for the valuation analysis undertaken.

Chapter 3
Business Value Consulting

1. Introduction

Business Value Consultant, Value Consultant, Business Value Architect, Value Engineer, and similarly other such terms denote persons who specialise in guiding businesses for what can be best described as value consulting! In non-financial terms, i.e., in grammatical terms, value can be defined as "the importance or worth of something for someone". How does a business become valuable? A simplistic answer is "when the business solves a problem". More specific, yet a simplistic description of the value drivers of any business product or service is its ability to:

i. Increase revenue/efficiency

ii. Decrease cost/inefficiency

iii. Mitigate risks

If any business product/service achieves any of the above parameters, then that business product/service is considered valuable. Simplistically, the extent of a business' value is determined by the quantum of its impact on each of the above parameters.

In today's modern world, with its added complexities, value consulting or value engineering would relate more to an operational level, e.g., a consultant advising on identifying and chartering how the product/service creates quantifiable value for the customers and guiding businesses with their growth plans. A business has to solve a problem and solve it well (read it economically) to become valuable.

Once a business has the characteristics for it to be valuable, Business Value Consulting comes in to usher the value of the business to the next level. This article focuses discussion on Business Value Consulting and how Registered Valuers of the SFA asset class can leverage their knowledge, experience and skills to assist businesses and grow professionally.

2. Understanding EVA

It is rudimentary to be aware that Value Consulting is neither magic nor a tool to window-dress the business for it to be superficially promoted for an

inflated valuation. The fundamental way to move forward with Value Consulting is to get to know the business and assist the business in getting more economic value added in and from its operations. This can also be done by the businesses themselves or by engaging Value Engineers; however, businesses need to understand the need for it and the possibility of the same. Business Value Consultants can play a crucial role in enabling this thought process and use their intellect, experience and expertise to assist businesses in this field.

EVA is what is the basic principle for the value to prosper. To assist any business with value consulting, the consultant has to build a detailed understanding of two things:

(i) How value has been created up to now? and

(ii) How will value be continued to be created in the future?

At the core, Economic Value Added (EVA) estimates a business' economic profit, i.e., return created in excess of the required return of the business' cost of capital. Simply put, the business has to generate cash flows in excess of the expectations of its financing stakeholders, i.e., the equity and the debt holders of the business.

As a Value Consultant, one can serve the client business by first understanding how the business cultivates ideas or concepts and employs its invested capital, targeting to get returns in excess of its cost of capital. As a Value Consultant, one's role is to consult the business and assist them in identifying the areas where the business can perform better and advise the business on discontinuing products/services that do not have a solid EVA. The role of a Value Consultant in a business would primarily be to engage the concerned stakeholders and get them to adopt the concept of EVA as the driver of value and then make the concerned stakeholders focus their efforts to achieve higher EVA in each of the business processes they undertake.

However, it is to be appreciated that the process of value creation is not unidirectional. It requires efforts in many different ways for each industry and depends on the business' position in the life cycle. Hence, the next section of the article discusses a crucial aspect for Value Consulting, storytelling!

3. What Drives Value: Numbers or Story?

When you don the hat of a Registered Valuer, as a Valuer you must respect the figures, especially the historic and the projected figures to check the

sanity of the underlying assumptions and the plausibility of achievement of the same by the business. Essentially, valuation discussion in most academic courses focuses on sharpening the valuer's skills at number crunching, and in the professional world too, valuers have been experts at spreadsheets, financial modelling, review of complex accounting data, and so on. While at the core, numbers matter and nothing would hold or sustain without the backing of numbers, it is the story that engages and garners the required attention for the business to be interestingly attractive.

A good valuation would combine strong numbers backed by an interesting story! Numbers alone are not interesting, and a story alone is not sustainable. Hence, a combination of numbers and story provides a good valuation, and a Value Consultant's role is to blend these two in an intuitive and connecting manner to convey the true essence of the business.

A classic example of storytelling in the corporate world is the launch event of the Apple iPhone in 2007. How Steve Jobs launched the product is considered one of the century's best product launches. At the time, the world was still consuming and processing the BlackBerrys and Nokias of the world, and at the launch of the product, it was dubbed to be a combination of three devices put in one, which was not only beyond its time but also serves the world today. It was introduced as an amalgamation of

i) A Widescreen iPod with touch controls,

ii) A Revolutionary mobile phone and

iii) A Breakthrough internet communications device, and

the product till date serves these purposes. Undoubtedly, the product itself had the characteristics to be valuable; however, the storytelling behind the launch made the product even more acceptable.

As an example, let us continue the discussion from the previous section relating to the Value Consultant having to gain an understanding of the business. How it is essential to build a detailed understanding of two things:

(iii) How value has been created up to now? and

(iv) How will value be continued to be created in the future?

The storytelling aspect in this situation is how the Value Consultant works on adding more weight to the factors relating to the growth assets of the business, i.e., the assets that are expected to generate the growth revenue for the business in the future, rather than focusing on the historic

achievements of the business. A Value Consultant also engages in thought process to deepen the application of the products/services that the business serves and makes it more engaging and provide for a more extensive reach and engages the management of the business to increase and focus efforts on the broader application of the business' solutions. This maximises the potential of the business' products and services and provides for a wider spectrum of thinking for the management of the business.

At the same time, it is essential for a Value Consultant to consider the interest of all the stakeholders and avoid any false statements or misleading information creeping in, while preparing the storytelling experience for the business. This is essential for the genuineness of the business data and the sustainability of the assumed growth of the business.

How does a story help the valuation? When a valuer approaches to value a business, he would essentially follow the valuation standards and vet the financial model that the business provides him for obtaining his valuation report. He would have his set of questions to validate the growth assumptions that the business would have adopted for preparing the financial model. In the case of a convincing story, the valuer would be able to fathom the assumptions and accept the financial model with much ease compared to when the financial model is not backed with a story.

The importance of the story again depends on what stage of the business life cycle a business is in at the moment. The importance of a story is much more essential for a young business like a start-up. The mega-valuations that young start-up businesses have been obtaining in recent times are predominantly based on these businesses' stories. Generally, young businesses have limited numbers to tell their story; however, the potential of their business is what drives their value. Hence, it is essential for the promoters of younger companies to curate a story around their idea to get the desired valuation and seed capital to propel their growth. However, for an older business, the importance of the story might not be paramount but only supportive, as the focus of the investors/stakeholders is more on the sustainability of the growing cash flows rather than the possibility of exponential growth.

Hence, the importance of a story in valuation cannot be undermined irrespective of the stage of the business life cycle. Before parting to the next part of the discussion, here is a brief checklist for the storytelling aspect as a Value Consultant:

i) Keep it crisp, clear and simple

ii) Keep it factual

iii) Keep the business central to the story

iv) Try to quantify the impact

Even though the bottom line is that the numbers would be the core of the valuation, the story behind the numbers would be the edge that a business can exploit to get a good valuation. At the end of this discussion, it is to be appreciated that a story backs each valuation, and with the change in the story, the value also changes.

4. Life Cycle of the Business

A Value Consultant's role in an engagement with a business would not only have an all-positive approach. It may also have to provide practical inputs and make the management of the business bite the bullet in case the management is not taking appropriate actions in connection with the business. In recent times, most aged businesses have been losing patience when news items emerge of this nature: "*At the end of trade, Zomato's market cap stood at ₹98,700 crore, far ahead of established giants such as Mahindra & Mahindra, Coal India, Hindalco Industries, Hero MotoCorp, Bharat Petroleum Corporation and Dr Reddy's Laboratories.*" When such news items come up and are read by the management of mature businesses, there is an instant urge for such businesses to change how they operate and function to replicate how such start-ups operate to potentially achieve the valuation with which they have been meeting. However, there may be far more risk in doing so, and that might ruin what the business has achieved up to now, and that would be a responsibility of the Value Consultant to educate the management of the business to act as is in accordance with the life cycle of the business.

It is generally discussed that technology businesses are lean and embrace change faster than non-technology businesses. Whereas this might be a well-accepted fact, even within the technology companies, it is essential to understand that not all are at the same point in the business life cycle. Mature technology companies with a large user base and a consistent long-term performance of their services would have a mature management process, and decision-making would be laggard compared to a new-age technology start-up. For example, if a large-sized mature search engine

company identifies an additional feature to launch on its search engine, it would have rounds of troubleshooting and dummy deployments before going live; whereas if a small technology start-up identifies to launch a new feature, the start-up can deploy that after development within a few hours and can even correct for bugs after deployment, with a version update, which larger businesses would not (and should not).

Businesses need to act as per their position in the business life cycle. A typical business life cycle can be considered to be starting with Birth → Young Businesses → Growth Businesses → Mature Growth Businesses → Stable Businesses → Declining Businesses. Whereas the most lucrative position for a business is in a Mature Growth phase, it is difficult to maintain the position at that single phase for a very long time. Each business belonging to a different position in the business life cycle has a different manner of functioning and a different need for advice. Effectively, these are the roles and functions that the management has to perform; however, the role of consultants is to advise the management of the businesses on how to perform management functions. As a Value Consultant, it is rudimentary to understand the primary needs of the business depending on the position in the life cycle of the business, viz.,

Birth → The need is to survive, as most new businesses fail to survive past their initial bad days.

Young Businesses → The need is to avoid doing unreasonably fancy things. While it is not to deter the management's aspirations, it is to advise on taking calculated risks. The role here is to explain to the management that the future is promising and that the path is correct (if you believe so) and not to derail from the growth path the business is on.

Growth Businesses → The need is to deliver on the growth and handle it. The most significant identified problem with growth companies has been their inability to cater to the unprecedented demand and/or being overwhelmed and overconfident with the high growth business that the result of the function is a declining business. The focus at this phase has to be on delivering the stakeholders' expectations and handling the success well.

Mature Growth Businesses → The place where every business intends to stay! It is challenging but not impossible. Many businesses have maintained themselves in this position for decades together. The management has to

proactively upgrade their business processes and products/services to achieve and maintain the position in this phase of the business life cycle.

Stable Businesses → Though it is not a bad place to be, strong and effective communication has to be given to the management of the business that efforts need to be in place for shifting towards the Mature Growth Business rather than the Declining Business phase of the life cycle.

Declining Business → The worst place to be. Suppose it is identified that the phase in which the business is in is the declining phase. In that case, it is in the best interest of the stakeholders that the management decides to pass on the resources to the owners rather than losing it all in the declining business.

As a Value Consultant, even the timing of the exit of the business owners has to be advised upon depending upon the risk appetite and the expectations of the stakeholders and assisting the owners in making an appropriate decision in line with their mandate.

5. Concluding thoughts

At the outset, as a Registered Valuer, to maintain the ethical conduct of the profession and to respect the code of conduct, it must be understood that the Registered Valuer should ideally not perform value consulting and Registered Valuer's services to the same client, as there is an inherent conflict of interest which would lead to significant bias in the valuation.

In today's corporate world, the emphasis on value creation and nurturing value is paramount. Moreover, with more second and third-generation entrepreneurs entering into the family business (with family businesses being the primary category of businesses in India), the focus of even traditional family businesses to nurture and garner value in their businesses has been increasing. Whereas it cannot be mastered clearly by anyone, it is an opportunity knocking on the doors of valuation professionals. The need for the same for businesses cannot be undermined. Whereas the factors discussed above in this article are not the only factors in value creation, understanding the interplay of a valuable business by its Economic Value Addition, the story that it communicates and the life cycle in which it is positioned, a Value Consultant can assist businesses in putting in optimum efforts for growing the value in an optimum and sustainable manner.

Chapter 4

Valuation of Intangible Assets in Purchase Price Allocation

1. Introduction

Ind AS 103 is applicable in case of Business Combinations. Business combinations are defined as under:

When a transaction where the assets acquired and liabilities assumed together constitute a business, then such transaction can be identified as a business combination.

E.g., Merger, de-merger, slump sale, etc.

2. Objective of Ind AS 103?

It is to improve the relevance, reliability, and comparability of the information that a reporting entity provides in its financial statements about a business combination and its effects. To accomplish that, this Ind AS establishes principles and requirements for how the acquirer:

a) recognizes and measures in its financial statements the identifiable assets acquired, the liabilities assumed and any non-controlling interest in the acquiree.

b) recognizes and measures the goodwill/ capital reserve acquired in the business combination or a gain from a bargain purchase.

and

c) determines what information to disclose to enable users of the financial statements to evaluate the nature and financial effects of the business combination.

3. Recognizing and measuring the Identifiable Assets and Liabilities

The acquirer shall have to recognize, separately from goodwill, the identifiable assets acquired, the liabilities assumed and any non-controlling interest in the acquiree, subject to fulfilment of conditions as prescribed.

i. All tangible assets excluding property, plant and equipment and liabilities assumed shall be recognized at the realizable value.

ii. All property, plant and equipment and liabilities assumed shall be recognized at the fair market value.

iii. Further, the acquirer may have to recognize some of the assets and liabilities that were not recognized earlier in the books of acquiree. These consists of intangible assets such as franchises, trademarks, patents, copyrights, mineral rights, customer contracts or relationships, etc. that grant rights and privileges, and have value for the owner.

Intangible assets are assets in addition to financial and tangible assets and working capital. Under Ind AS 38 an intangible asset is defined as *"An identifiable non-monetary asset without physical substance".* From an accounting perspective, it has the following key attributes:

- identifiability - they are separable or may arise from contractual or other legal rights,
- future economic benefits – their existence depends on expectation of future benefit 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 benefit

4. Some of the common types of Intangible Assets which are obtained during a Business Combination:

i) Brand

Brand is derived from consumer perception for that company. It is a value premium which a company receives from its products or services as compared to another product or service in the same industry. Depending on the company, the brand name can be critical to the success of the business. When a company has a positive brand value, customers may be willing to pay a high price for its products, even if they could get the same thing from a competitor for less.

ii) Intellectual Property

It is one of the important types of intangible assets, which is a registration of creativity; it might be in technology or design. These are the most valuable assets of any corporation. It is also referred to as

inventions or unique designs. The owners legally protect these inventions or designs from outside uses without consent.

The companies should be aware of the value of these intellectual properties the same as another kind of physical property, as the value of the intellectual property are huge when it compares to physical property. There are 4 different types of intellectual property:

a) **Patents:** Protection of new technologies from using or developing by others. For example, Samsung wireless charging technology.

b) **Copyrights:** Protection of authorship from using and publishing by others; For example, most of the books published in the world cover copyrights, prevent others not to publish without consent of the author.

c) **Trademark:** Protection brand names, logo, or unique designs of the company. For example, Logos or product designs are protected from trademarks.

d) **Trade Secrets:** Protection of secret information of a product from using by others.

Research and development (R&D) are another type of intellectual property (IP) and refers to when a company performs research with the goal of developing a new product or solution. IP and R&D go together because the research alone may or may not produce a valuable asset, but the development side will.

iii) Customer Contracts / Relationships

A list of the regular / repetitive customers can be considered as an Intangible asset of the company. It takes a long time to build a customer relationship and can have a significant future value for any business because it can help in future segment targeted marketing for new or the same products or services and help in gaining new businesses.

iv) Licensing and Rights

These are other kinds of intangible assets that are widely used in business. Licensing and Rights are the agreement between an intellectual property owner and others who are authorized to use those intellectual properties for their business purpose in exchange for an agreed payment, which is called Licensing fee or Royalty.

A license gives the holder certain rights of using or generating revenue from someone else, business, or inventions.

v) Non-Compete Agreements

Non-compete agreements may reduce the risk of the acquired business losing customers to the vendor. They might also prevent the vendor from seeking to recruit key employees of the acquired business, thereby reducing future recruitment, and training costs and improving the retention of know-how within the business. Non-compete agreements may therefore represent future economic benefits in the form of higher sales and lower costs.

5. Principle for Measurement

The measurement principle used under Ind AS to value an asset is *"fair value",* which means that it is the price that would be received to sell an asset in an orderly transaction between market participants at the measurement date under current market conditions. While it emphasizes a market-based measurement, it is likely that the observable market data may not always be available. In such cases, valuation techniques maximizing the use of relevant observable inputs should be used. The underlying aim is to use assumptions that market participants would employ when valuing the asset, including assumptions about risk, restrictions on its sale or use, condition of the asset, geographical use restrictions, etc.

6. Valuation Approaches and Methodologies

The generally accepted valuation approaches comprise of Market Approach, Income Approach, and Cost Approach. Each approach has its own advantages and disadvantages. Thus, depending on the circumstances of each case; for instance: asset type, information availability and quality thereof, risk characteristics, etc. a particular approach might be used. The selection of the approach and methodology is a process of elimination and often the Valuer will use more than one method under different approaches to corroborate or set a guideline for an estimate of the fair value. Moreover, depending on the approach and methodology used, the valuation may be predicated on either historical or prospective financial information along with contemporaneously available market data.

The valuation approaches and key methodologies under each are briefly discussed hereunder:

i) Market Approach:

This approach uses market-based indicators of value. It is based on a relative approach and on the premise of efficient markets and supply & demand. It estimates fair value by reference to observable market price data or transactions of comparable intangible assets. However, given that there is no active market for trading in intangible assets, comparable transactions may be used under this approach. Market data from market participants is often used in income-based models, such as determining reasonable royalty rates and discount rates. There are several databases available in the market to get access to some of these information inputs (e.g., www.royaltystat.com, www.upcounsel.com, etc.)

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 for the purpose of valuing the comparable intangible asset. While evaluating comparability, factors such as age of the asset, applicability of use, locational / geographical access or use, risk and expected return characteristics, etc. are considered. Typical benchmarks include multiples of revenue or profitability.

However, while an ideal method, it has limited practical applicability. For one, observable market-based transactions of identical or substantially similar intangible assets are often difficult to obtain. Such transactions are generally confidential and often involve other negotiated terms with respect to marketing, financing, use restrictions, etc. which influence price, but the existence of such arrangements is not publicly known. A further limitation is a lack of comparability - by nature, intangible assets usually enjoy unique characteristic, which almost always necessitates adjustments to be made to the benchmark metric.

Consequently, depending on the quality of data, if available, the method is generally used to corroborate the value arrived at under other valuation methods.

ii) Income Approach:

The income approach uses estimates of future estimated economic benefits or cash flows and discounts them for the associated time and risks involved to a present value. The method is founded on the

principal of anticipation – whether of revenue streams or cost savings or other economic benefit. Thus, it finds maximum applicability in the valuation of intangible assets such as brands, customer relationships, copyrights, patents, etc. which generate a future income or cash inflow stream. However, a key area of difficulty under this approach lies in separating the cash flows exclusively pertaining to the asset under valuation from that of the enterprise.

The discount factors typically used in such instances are the weighted average cost of capital (WACC), or weighted average return on assets (WARA), or the Internal Rate of Return (IRR) of the investor specific to the asset being valued. Thus, depending on the risk and return profile of the asset, a suitable discount factor would be applied to the cash flow stream to arrive at the present value.

This approach includes the following commonly used methods:

a) **Relief from Royalty Method:** The Relief from Royalty method is based on the principle that, if the business did not own the asset, it would have to in-license it in order to earn the returns that it is earning. Alternatively, the business could out-license the asset if it did not wish to use it. Thus, the value of the asset is calculated based on the present value of the royalty stream that the business is saving by owning the asset.

Under this method, a royalty that could be expected to be obtained in normal commercial practice is applied to an estimated level of future maintainable sales and the resultant after-tax royalty stream is computed. Such computed after-tax royalty stream is discounted using a relevant discount factor to arrive at the value of the asset.

The method is popularly employed in the valuation of intangible assets such as brands, licences and technical know-how, where transacted royalty rates for similar assets are often available. These rates are then adjusted for asset specific risks and returns such as geographical use restrictions, brand recall, etc. to arrive at a suitable royalty rate.

Pitfalls with rules of thumb: It may be the case that past or current transactions for royalty rates for similar assets may not be available. In such instances, a generally accepted heuristic is the "25%-profit split" method. The 25% Rule as defined by

Goldscheider et al (2002) suggests that a licensee should pay a royalty rate equivalent to about 25 % of the expected profits for the product that incorporates the subject IP. The genesis of the 25 % rule was an observation by Robert Goldscheider that the average royalty from a small sample of licensing agreements for a bundle of IP from one company, Philco, reached in the 1950s was about 25% of operating profit. However, this is not backed by reliable evidence. Empirical evidence suggests extremely wide variation depending on the industry. Nevertheless, it still enjoys wide-spread acceptance. Thus, the Valuer should be cautious in its use, and should employ it as a cross-check with suitable up/down adjustment and in addition to other data sources to arrive at an appropriate royalty rate.

b) **Multi-period Excess Earnings Method:** Under the multi-period excess earnings method, the present value of the cash flows generated by, and only by, the intangible asset is considered. In order to arrive at cash flows from the intangible asset only, the cash flows generated by the intangible asset in combination with other assets are reduced by subtracting notional cash outflows for the "contributory" assets (the contributory asset charges). This procedure treats the contributory assets as being leased from a third-party, to the extent necessary for the generation of the cash flows. The method is particularly useful in case the intangible asset being valued is a significant value driver with other assets being secondary in nature to it.

c) **With and Without Method/ Premium Profits Method:** This method 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. This method requires the determination of the future cash flows from the existing business with the asset and the future cash flows from a notional business without the asset. Non-compete arrangements are commonly valued using this method.

d) **Greenfield Method:** The Greenfield Method estimates the value of the asset based on the discounted cashflows of a notional Start-up business with no assets but the subject intangible. The revenue projections from the identified intangible asset are to be

discounted by applying discount rate of such Start-up-type discount rate along with incremental risk premium.

iii) Cost Approach:

This approach is based on the economic principle of substitution and covers opportunity costs during the stage of development of the asset as well. However, it ignores the amount, duration and timing of future economic benefit arising from the asset. Further, it does not consider the risk characteristics of the asset nor its performance in a competitive environment. Hence, it is not usually useful in valuing assets such as patents, copyrights, brands, etc. which mainly derive their value from their future earning ability. Nevertheless, it is used when either data required under other valuation approaches is not available or the asset is unique or there is no active market for the asset under consideration.

The approach is best used in valuing intangible assets such as technical drawings or internally developed software that do not generate a direct cash inflow stream, or assembled workforce; which although is not separately recognized on the balance sheet, is used to arrive at the fair value of other assets). There are two commonly used methodologies under this approach:

a) **Historical Method:** This method considers the historic or suck cost or purchase price to value the asset. This method does not consider future benefits arising out of the use of assets. Hence, it usually is not a good indicator of the true value of the intangible asset.

b) **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 and functional / economic obsolescence, wherever applicable. It is based on the premise that a prudent third-party would pay no more for an asset than its replacement cost.

7. Tax Amortization Benefit (TAB)

Based on the above methodologies, the valuer arrives at the value of an asset on a stand-alone basis, which is its pre-tax value. However, tax jurisdictions allow an intangible asset to be amortized over its useful life. The

present value of such tax benefit is considered in the fair valuation of the asset. The process is iterative considering the amortization period, the discount factor, and the applicable marginal tax rate to arrive at the fair value of the asset post TAB.

8. Conclusion

While it is possible for one method being incorrectly used for the valuation of a specific type of Intangible Asset, there are usually several valuation methods which could be used in deriving an approximate value of the Intangible Asset. The method used generally is based on the reliability and availability of data required for the valuation of the Intangible Asset. Below is the list of the most often methods used in the valuation of Intangible Assets -

Intangible Asset	Relief from Royalty	Excess Earnings	Cost	Greenfield	With or without
Brand	✔				
Patents	✔				
Copyright	✔				
Trademark	✔		✔		
Trade Secrets	✔				
Research and Development			✔		
Customer Contracts / Relationship		✔			
Licensing and Rights				✔	
Non – Compete Agreements					✔

Illustrative Examples for Stand-alone Intangible Asset Valuation

Assembled Workforce - Replacement Cost Method

Particulars	INR Mn
Current Annual CTC of Assembled Workforce	215

Hiring Cost (1 month's CTC)	18
Training Cost (1.5 month's CTC)	27
Inefficiency Cost (50% for 2 month's CTC)	18
Replacement Cost of Workforce	**278**

Brand Valuation - Royalty Relief Method *(INR Mn)*

Particulars		**2020**	**2021**	**2022**	**2023**	**2024**	**Terminal**
Net Sales		400	750	1,100	1,400	1,600	1,680
Pre-Tax Relief from Royalty	5.00%	20	38	55	70	80	84
Income Tax	34.94%	7	13	19	24	28	29
After Tax Royalty		13	24	36	46	52	55
Discounting Factor	19.50%	0.84	0.70	0.38	0.22	0.16	0.16
Growth Rate	5.00%						
PV of Cash Flows		**11**	**17**	**14**	**10**	**8**	**9**
Sum of PV of Cash Flows	60						
PV of Perpetuity	61						
Fair Value of Brand	**121**						

- *Royalty Rate is based on prevailing rates charged for brand licence by company to franchisees.*
- *Discount factor is based on company WACC with adjustment for risk premium for asset*

Non-Compete Valuation - With and Without Method *INR Mn*

Particulars		**2020**	**2021**	**2022**	**2023**	**2024**
Cash flows (with non-compete)		19	24	32	35	40

Cash flows (without non-compete)		2	5	17	25	33
Difference in Cash flows		17	19	15	10	7
Discount factor	17.50%	0.85	0.72	0.39	0.23	0.16
PV of Differential Cash Flows		**14**	**14**	**6**	**2**	**1**
Sum of Differential Cash Flows	38					
Probability of competing	50%					
Fair Value of Non-compete	**19**					

Cash flow with Non-compete

Particulars		**2020**	**2021**	**2022**	**2023**	**2024**
EBIT		50	58	65	70	74
Less: Income Tax	34.94%	17	20	23	24	26
Net Income		**33**	**38**	**42**	**46**	**48**
Add: Dep		2	2	2	2	1
Less: Capex		12	12	10	10	8
Less: Increase in Working Capital		4	4	3	2	2
Cash flows with non-compete		**19**	**24**	**32**	**35**	**40**

Cash flow without Non-compete

Particulars		**2020**	**2021**	**2022**	**2023**	**2024**
EBIT		20	32	49	56	70
Less: Income Tax	34.94%	7	11	17	20	24
Net Income		**13**	**21**	**32**	**36**	**45**
Add: Dep		2	2	2	2	1
Less: Capex		12	12	10	10	8
Less: Increase in Working Capital		2	6	7	3	6
Cash flows without Non-compete		**2**	**5**	**17**	**25**	**33**

- *Cash*-flows are considered for the period of non-compete

- The *dependency* ratio on the non-compete has been considered to arrive at cash flows with non-compete, which reduces with time as follows:

Particulars	2020	2021	2022	2023	2024
Dependency Ratio	*60%*	*45%*	*25%*	*20%*	*5%*

- A *probability* that the seller may compete of 50% has been considered to arrive at the Fair Value of Non-compete.

Customer Relations – Multi Period Excess Earnings Method

Particulars		FY23	FY24	FY25	FY26	FY27	FY28	FY29	FY30
Total Revenue		24,00,00,000	26,40,00,000	29,04,00,000	31,94,40,000	35,13,84,000	38,65,22,400	42,51,74,640	46,76,92,104
% from repetitive Client		60%	33%	18%	10%	5%	3%	2%	1%
Revenue from repetitive customers		14,40,00,000	8,71,20,000	5,27,07,600	3,18,88,098	1,92,92,299	1,16,71,841	70,61,464	42,72,186
EBIT Margin		45%	45%	45%	45%	45%	45%	45%	45%
EBIT margin before considering asset charge		**6,48,00,000**	**3,92,04,000**	**2,37,18,420**	**1,43,49,644**	**86,81,535**	**52,52,328**	**31,77,659**	**19,22,484**
Less: Taxes	25.17%	(1,63,08,864)	(98,66,863)	(59,69,452)	(36,11,518)	(21,84,969)	(13,21,906)	(7,99,753)	(4,83,851)
PAT pre asset charge		**4,84,91,136**	**2,93,37,137**	**1,77,48,968**	**1,07,38,126**	**64,96,566**	**39,30,422**	**23,77,906**	**14,38,633**
Less: Contributory Asset Charge									
Fixed asset		92,69,372.0	1,05,29,648.4	60,61,510.4	35,41,927.1	21,03,280.6	12,72,484.8	7,69,853.3	4,65,761.2
Working capital		(11,60,328.7)	7,28,388.7	2,25,704.4	2,62,935.3	3,06,045.4	1,73,374.7	98,216.8	55,639.8
Work Force		11,45,639.4	12,60,203.4	6,93,111.9	3,81,211.5	2,09,666.3	1,15,316.5	63,424.1	34,883.2
Brand		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Content creation		1,17,97,158.0	1,29,76,873.8	71,37,280.6	39,25,504.3	21,59,027.4	11,87,465.1	6,53,105.8	3,59,208.2
PAT post asset charge		**2,74,39,295**	**38,42,023**	**36,31,361**	**26,26,547**	**17,18,546**	**11,81,781**	**7,93,306**	**5,23,140**
Discounting factor	18.28%	0.9	0.8	0.7	0.6	0.5	0.4	0.3	0.3
Net present Value		2,52,30,322	29,86,823	23,86,814	14,59,601	8,07,439	4,69,446	2,66,433	1,48,548
Value of Customer list	**3,38,81,050**								
Fair Value of Customer relation	**3,38,81,050**								

Chapter 5
Call option pricing when the exercise price is uncertain

Some ESOP schemes and related documents are drafted in a way that it creates uncertainty in the application of the ESOP plan. An example is as under:

"Exercise Price" means the amount per Option, as may be decided by the Committee of Directors at the time of Grant that shall be paid by an Optionee at the time of Exercise. The Exercise Price and the entitlement to Shares on the Options issued shall be subject to appropriate adjustment at the discretion of the Committee of Directors, in the event of the Company issuing Rights/Split/Bonus Shares prior to the conversion of the Options into shares.

The drafting of the scheme above seems to indicate that the exercise price will be decided at the time of Grant and could be adjusted at the time of exercise. However, the grant letter conveys otherwise as given below:

1. Grant of Options

In consideration for your experience, relationship and value addition, the Company hereby grants you options as per following details

No. of options granted to you	332 (exercisable into equal number of equity shares of Rs.1/- each)
Vesting Schedule	33% - xx/xx/xxx8, 33% - xx/xx/xxx9 and 34% - xx/xx/xxx0
1.1.1 Exercise Price	Would be intimated from time to time, if applicable
1.1.2 Exercise period	Two years from the date of vesting

The wording of the grant letter seems to indicate a variable exercise price. In this context, the objective of this note is to ascertain the method to be followed in determining the fair value of the option and the related cost to be accounted yearly.

Of course, a simple and practical solution to the problem outlined above, is to get the Board of Directors to clearly state the exercise price of the options.

Failing any clarity from the Board, the valuer is left with finding a suitable solution to a vexing problem in valuing the options granted.

2. Literature review

As Black and Scholes point out, corporate stock in a firm which has also issued bonds, can be regarded as a call, with the exercise price being the payment made to the bondholders. Building on this argument, Stanley Fischer's article in Journal of Finance (1978) - **Call Option Pricing When the Exercise Price is Uncertain, and the Valuation of Index Bonds**, considers how to value such call options. A few quotes from the note –

(a) To value an option with an uncertain exercise price, it is necessary also to infer how an asset which hedges against changes in the exercise price should be valued.

(b) The value of an option to purchase the stock at the stock price is precisely zero; the stock pays no dividend; i.e., where S (current stock price) = X (exercise price), then C (call option price) is zero.

(c) the derivation of the call pricing formula follows the same lines as the BSM derivations.

A riskless portfolio comprising the call, the stock and the hedge security is created. The inclusion of the stock in the portfolio hedges against the changes in the stock price, while the inclusion of the hedge security hedges against the changes in the exercise price. Based on these principles, a modification to the B-S call pricing formula has been derived, to value an option when the exercise price is uncertain:

$$C = S \cdot N\left\{\frac{\ln(S/X) + \left[r_h - \alpha_x + (\hat{\sigma}^2/2)\right]T}{\hat{\sigma}\sqrt{T}}\right\}$$

$$- Xe^{-(r_h - \alpha_x)T} \cdot N\left\{\frac{\ln(S/X) + \left[r_h - \alpha_x - (\hat{\sigma}^2/2)\right]T}{\hat{\sigma}\sqrt{T}}\right\}$$

The valuer could try to use this modification to the B-S formula to value the options. Alternatively, the Guidance Note below suggests using the Binomial Model to value the option, and this is elucidated in the accounting treatment provided below.

3. Guidance Note on accounting for share-based payments, 2020 issued by ICAI

Once the option value has been ascertained, we attempt below to understand how to compute the accounting cost where the exercise price is variable. Firstly, the definitions of 'market condition' and 'performance condition' need to be understood.

Market Condition is a performance condition upon which the exercise price, vesting or exercisability of an equity instrument depends that is related to the market price (or value) of the enterprise's equity instruments (or the equity instruments of another enterprise in the same group), such as:

(a) attaining a specified share price or a specified amount of intrinsic value of a share option; or

(b) achieving a specified target that is based on the market price (or value) of the enterprise's equity instruments (or the equity instruments of another enterprise in the same group) relative to an index of market prices of equity instruments of other enterprises.

A market condition requires the counterparty to complete a specified period of service (i.e. a service condition); the service requirement can be explicit or implicit.

Performance condition is a vesting condition that requires:

(a) the counterparty to complete a specified period of service (i.e. a service condition); the service requirement can be explicit or implicit; and

(b) specified performance target(s) to be met while the counterparty is rendering the service required in (a).

The period of achieving the performance target(s):

(a) shall not extend beyond the end of the service period; and

(b) may start before the service period on the condition that the commencement date of the performance target is not substantially before the commencement of the service period.

Accounting:

If an employee is granted share options conditional upon the achievement of a performance condition and remaining in the enterprise's employment until that performance condition is satisfied, and the length of the vesting period

varies depending on when that performance condition is satisfied, the enterprise shall presume that the services to be rendered by the employee as consideration for the share options will be received in the future, over the expected vesting period. The enterprise shall estimate the length of the expected vesting period at grant date, based on the most likely outcome of the performance condition. If the performance condition is a market condition, the estimate of the length of the expected vesting period shall be consistent with the assumptions used in estimating the fair value of the options granted and shall not be subsequently revised. If the performance condition is not a market condition, the enterprise shall revise its estimate of the length of the vesting period, if necessary, if subsequent information indicates that the length of the vesting period differs from previous estimates.

From the above paragraphs, it is clear that the period (the vesting period) over which the cost of options is amortized is determined over the future service period, as on the grant date, and the estimate of the vesting period needs to be consistent with the assumptions used in estimating the fair value of the options granted. Importantly, the expected vesting period shall not be subsequently revised.

4. Treatment of vesting conditions

Furthermore, para 28 of the guidance note goes on to state:

28. A grant of equity instruments might be conditional upon satisfying specified vesting conditions. For example, a grant of shares or share options to an employee is typically conditional on the employee remaining in the enterprise's employment for a specified period of time. There might be performance conditions that must be satisfied, such as the enterprise achieving a specified growth in profit or a specified increase in the enterprise's share price. Vesting conditions, other than market conditions, shall not be taken into account when estimating the fair value of the shares or share options at the measurement date. Instead, vesting conditions shall be taken into account by adjusting the number of equity instruments included in the measurement of the transaction amount so that, ultimately, the amount recognised for goods or services received as consideration for the equity instruments granted shall be based on the number of equity instruments that eventually vest. Hence, on a cumulative basis, no amount is recognised for goods or services received if the equity instruments granted do not vest because of failure to satisfy a vesting condition, e.g. the counterparty fails to

complete a specified service period, or a performance condition is not satisfied, subject to the requirements of paragraph 30.

30. Market conditions, such as a target share price upon which vesting (or exercisability) is conditioned, shall be taken into account when estimating the fair value of the equity instruments granted. Therefore, for grants of equity instruments with market conditions, the enterprise shall recognise the goods or services received from a counterparty who satisfies all other vesting conditions (e.g. services received from an employee who remains in service for the specified period of service), irrespective of whether that market condition is satisfied.

The Illustration below, given in the guidance note, clarifies the accounting treatment.

Illustration 4: Grant with a Performance Condition, in which the Exercise Price varies

At the beginning of year 1, an enterprise grants 10,000 stock options to a senior executive, conditional upon the executive remaining in the employment of the enterprise until the end of year 3. The exercise price is INR 40. However, the exercise price drops to INR 30 if the earnings of the enterprise increase by at least an average of 10 per cent per year over the three-year period.

On the grant date, the enterprise estimates that the fair value of the stock options, with an exercise price of INR 30, is INR 16 per option. If the exercise price is INR 40, the enterprise estimates that the stock options have a fair value of INR 12 per option. During year 1, the earnings of the enterprise increased by 12 per cent, and the enterprise expects that earnings will continue to increase at this rate over the next two years. The enterprise, therefore, expects that the earnings target will be achieved, and hence the stock options will have an exercise price of INR 30. During year 2, the earnings of the enterprise increased by 13 per cent, and the enterprise continues to expect that the earnings target will be achieved. During year 3, the earnings of the enterprise increased by only 3 per cent, and therefore the earnings target was not achieved. The executive completes three years' service, and therefore satisfies the service condition. Because the earnings target was not achieved, the 10,000 vested stock options have an exercise price of INR 40.

5. Suggested Accounting Treatment as per the Guidance Note

Because the exercise price varies depending on the outcome of a performance condition that is not a market condition, the effect of that performance condition (i.e. the possibility that the exercise price might be INR 40 and the possibility that the exercise price might be INR 30) is not taken into account when estimating the fair value of the stock options at the grant date. Instead, the enterprise estimates the fair value of the stock options at the grant date under each scenario (i.e. exercise price of INR 40 and exercise price of INR 30) and ultimately revises the transaction amount to reflect the outcome of that performance condition, as illustrated below:

Year	Calculation	Compensation expense for period (₹)	Cumulative compensation expense (₹)
1	10,000 options × ₹ 16 × 1/3	53,333	53,333
2	(10,000 options × ₹ 16 × 2/3) – ₹ 53,333	53,334	1,06,667
3	(10,000 options × ₹ 12 × 3/3) – ₹ 1,06,667	13,333	1,20,000

Illustration 5: Grant with a Market Condition

At the beginning of year 1, an enterprise grants 10,000 stock options to a senior executive, conditional upon the executive remaining in the employment of the enterprise until the end of year 3. However, the stock options cannot be exercised unless the share price has increased from INR 50 at the beginning of year 1 to above INR 65 at the end of year 3. If the share price is above INR 65 at the end of year 3, the stock options can be exercised at any time during the next seven years, i.e. by the end of year 10. **The enterprise applies a binomial option pricing model**, which takes into account the possibility that the share price will exceed INR 65 at the end of year 3 (and hence the stock options become exercisable) and the possibility that the share price will not exceed INR 65 at the end of year 3 (and hence the options will not become exercisable). It estimates the fair value of the stock options with this market condition to be INR 24 per option.

6. Suggested Accounting Treatment

Because this Guidance Note requires the enterprise to recognise the services received from an employee who satisfies all other vesting conditions

(e.g., services received from an employee who remains in service for the specified service period), irrespective of whether that market condition is satisfied, it makes no difference whether the share price target is achieved. The possibility that the share price target might not be achieved has already been taken into account when estimating the fair value of the stock options at the grant date. Therefore, if the enterprise expects the executive to complete the three-year service period, and the executive does so, the enterprise recognises the following amounts in years 1, 2 and 3:

Year	Calculation	Compensation expense for period (₹)	Cumulative compensation expense (₹)
1	10,000 options × ₹ 24 × 1/3	80,000	80,000
2	(10,000 options × ₹ 24 × 2/3) – ₹ 80,000	80,000	1,60,000
3	(10,000 options × ₹ 24) – ₹ 1,60,000	80,000	2,40,000

As noted above, these amounts are recognised irrespective of the outcome of the market condition. However, if the executive left during year 2 (or year 3), the amount recognised during year 1 (and year 2) would be reversed in year 2 (or year 3). This is because the service condition, in contrast to the market condition, was not taken into account when estimating the fair value of the stock options at grant date. Instead, the service condition is taken into account by adjusting the transaction amount to be based on the number of shares or stock options that ultimately vest, in accordance with this Guidance Note.

7. Conclusion

Regardless of whether the BSM model or the Binomial Model is used in computing the fair value of the option, the degree of uncertainty in computing the fair value of the option is high, due to the way in which the grant documents are drafted. It is also not practicable to compute the intrinsic value of the option with any great certainty if the exercise price cannot be determined. The modification to the BSM model suggested provides a possible way out of the dilemma.

Chapter 6
Impact of Covid on Business Valuation and Financial Reporting

The coronavirus pandemic has impacted everything and everyone including Businesses and Economy. Businesses are shutting down, being sold or merging into other companies. Key activity for those transactions like Business Valuations are also being impacted by instabilities in the economy as well as government mandates and legislation issued time to time on a short time. **Companies began to revamp from the first wave of pandemic** in first quarter of financial year, then arrival of second wave of the pandemic made them helpless once again. Second wave was severe as compared to first one by high-frequency indicators, such as mobility trends, auto sales, and rising unemployment rates.

The rules governing the Business valuations are evolving significantly since inception of Covid-19 till date, and many of these changes will be permanent as we head into 2021.

Against this backdrop, the article offers practical insights on the issues and likely solutions on the Impact of COVID on Business Valuations and Financial Reporting during these challenging and highly uncertain times.

The following key issues have been discussed in this article:

1. Financial Reporting Valuations
2. Trends on Investment pre and post COVID
3. Challenges faced in Business Valuation post COVID
4. Industry Guide during and post COVID

1. Financial Reporting Valuations:

A financial instrument is a contract that creates rights or obligations between specified parties to receive or pay cash or other financial consideration. Such instruments include but are not limited to, derivatives or other contingent instruments, hybrid instruments, fixed income, structured products and equity instruments.

Ind AS 113 is a dedicated Standard on "Fair Value" Measurement – in line with global equivalents – IFRS 13 and ASC 820 (US GAAP) covers Financial Reporting.

Fair Value is defined as 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 under current market conditions

- Fair Value is based on Willing Buyer; Willing Seller concept
- Considers "Known or Knowable" events at the "measurement date"
- Orderly means with Adequate Marketing
- Fair Value is a market-based measurement, NOT an entity-specific measurement
- Gives more preference to valuation methods relying on "Observable Inputs" than unobservable inputs as per Fair Value Hierarchy

Valuations are generally based upon consideration of three principal approaches: namely, the income, market and cost (or asset) approaches. While each of these approaches have their own pros and cons, however; in the current Covid-19 environment, valuation professionals have been putting much more emphasis to the discounted cash flow (DCF) method, a variation of the income approach, given its direct relevance to the entity being valued.

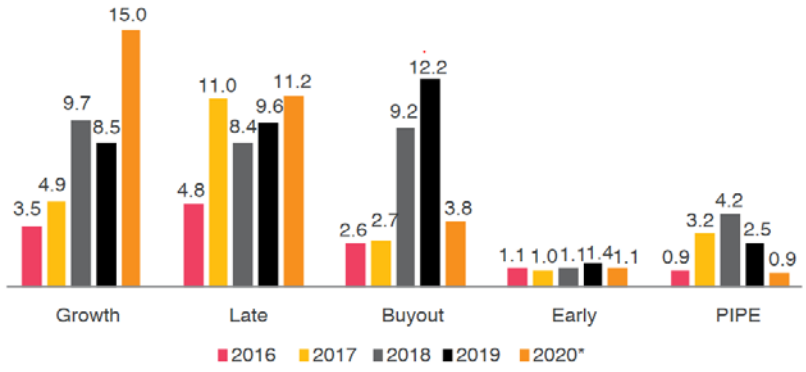
2. Trends on Investment; pre and post COVID:

Uncertainty was the key area of concern for the investor community across the globe during entire year 2020. Even after having concerns around macroeconomics, corporate governance, changing regulatory norms, geopolitics and global tensions, deal values in 2020 nearly retained same with the previous year. The next few years will be expected to be challenging for the Indian economy. However, corporate India has previously demonstrated alertness and adaptability in the crises.

Below mentioned snippets shows the trends for change in Deals (PE and M&A) in last 5 years.

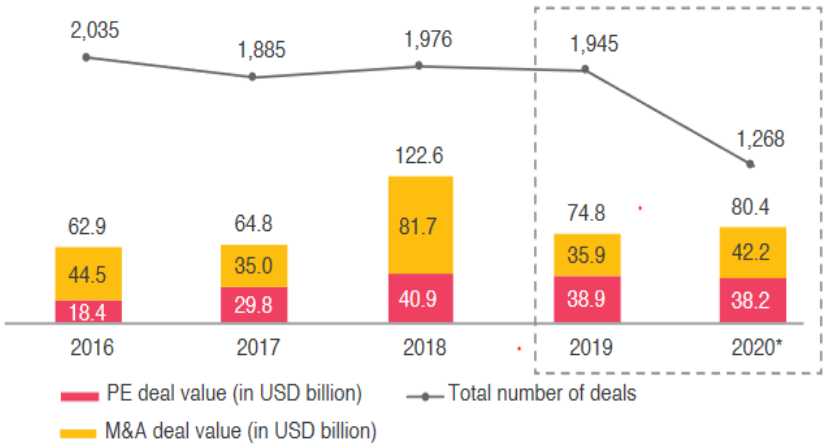
PE Investments Trends:

PE investments by stage (in USD billion)^



Source: PWC – Deals in India (Annual Review)

Deal activity in India



Source: PWC – Deals in India (Annual Review)

3. Challenges faced in Business Valuation post COVID

Professionals should consider the following key business valuation challenges as we enter 2021 as mentioned below:

a) **One size does not fit for all:** We have to accept that not all businesses have been negatively impacted by Covid-19. One has to consider the

specific fundamental facts and conditions of a business affecting its financial condition along with its operating outlook for valuation analysis.

b) **The Global economic recession and its recovery are highly uncertain:** The uncertainty in magnitude and duration of the global recession was triggered in major countries including India by Covid-19. Its recovery affects the prospects for growth and profitability at both the industry and the individual company levels.

c) **Emphasis on the DCF approach to value:** The DCF method has become the method of choice for many business valuations in the new Covid-19 age. DCF analysis requires significant judgement on the part of the valuation specialist in conjunction with management perspectives as to the company's long-term outlook.

d) **Financial Projections with Scenario Analysis:** No one really knows how long the pandemic will continue and how many further waves can emerge. A key consideration is short and long-term financial projections. Valuers should run different scenarios to try to project what might happen if the coronavirus is under control in three, six, nine and twelve months, as well as one, two and five years into the future.

e) **Higher discount rates:** The risks and uncertainty of businesses and economy are very much heightened, which in turn adversely affects the risk profile of a given company in the form of discount rates with reduced valuation.

f) **Risk and uncertainty must align with the company's outlook and operating projections:** If the cash flow of a company has already been tempered to fully reflect Covid-19-related impacts over the long term, then the selection of a discount rate must be developed commensurately to the forecast risk.

g) **Forward-looking public company market multiples are emphasized:** short term financial history of a company (its past revenue, earnings, cash flow, etc.) are now viewed as less reliable parameters used to predict future, since they do not fully reflect the subject company's post-Covid-19 financial conditions and earning power outlook.

h) **Comparable transactions of non-publicly traded companies occurring before the Covid-19 era are given little weight:** Business valuation indications derived under the guideline transaction company method ("GTCM") are generally viewed as less reliable because the

market multiples are often dated, lack adequate detail, and reflect price levels predicated upon pre-Covid-19 earnings and outlook factors.

i) **The cost (or asset) approach can be considered more frequently:** Because of the present Covid-19 age, many businesses have become financially distressed. Therefore, the cost approach is often used, especially in situations in which a company may be worth more based on the value of its net asset value or in liquidation than as a going concern.

j) **Higher discounts for lack of marketability (DLOM):** In Covid-19 situation, transactions of businesses have decreased significantly. A decrease in market activity and pool of interested willing buyers tends to decrease liquidity in the market

k) **Bankruptcy, restructuring, and reorganization will the new reality:** In Covid-19 and the concurrent economic recessionary environment, businesses may fail and/or be forced to restructure and reorganize due to decreased liquidity and adverse economic impact. In these instances, businesses and their underlying assets may require independent fair valuations for these transactions to be made.

Industry guide during and post COVID

COVID-19 affected different industries differently, due to their nature of Business. We have segmented few industries in three groups (Red, Yellow, and Green) as follows:

Green Zone (Affected Positively)	**Yellow Zone (Moderately affected)**	**Red Zone (Most Severely affected)**
EdTech, FMCG, Healthcare, Pharmaceuticals	Consumer Goods, Trading	Travel, Tourism, Aviation
Insurance, Telecom, Utilities	Pharmaceuticals*	Local Transport, Hospitality, Cinema
Agriculture, Produce, Digital Products	Banking	Live Sports, Events and Conferences, Luxury Products

Freelancing, Stock Market Investing	Glass, Plastics	Tech & Gadgets, Gems & Jewellery
Home Gardening, Online Coaching, Mental Health	Logistics	Retail, Automobile, Steel, Apparel & Footwear
Alternate Energy, Gaming, Affiliate / Network Marketing	Mining	Paper, Print, Real Estate, Construction
Data Science, Spiritual Sciences		Oil & Gas, Shipping, Microfinance Institutions

*Though India is one of the top formulation drug exporters in the world, the domestic pharma industry relies heavily on import of bulk drugs (APIs and intermediates that give medicines their therapeutic value). With India's API imports from China averaging almost 70 per cent of its consumption by value, importers are at the risk of supply disruptions and unexpected price movements. For many critical antibiotics and antipyretics, dependency on imports from China is close to 100 per cent. Therefore, due to heavy dependents on imports, we have considered "Pharmaceuticals" industry in Yellow Zone as well with Green Zone.

4. Conclusion

Overall, pandemic has uprooted the fundamental approach to business valuation and has forced valuation professionals to reassess, unlearn and relearn. Moreover, we as a world is recovering from the pandemic with the invent of many vaccines and medications, we can look forward to this dynamic evolving. Heighted uncertainty around these inputs may lead to more valuation disputes related to valuation of the underlying companies which may increase in hassle among Valuers, Auditors and companies in the days to come. Therefore, it is more important than ever to carefully consider valuation inputs, assumptions and limitations for the valuation analysis. Many more unknowns lead to uncertain future outcomes in addition to normal business risks. These unknowns may include another shutdown, vaccine date rollout(s) and government support timelines.

Chapter 7
Indian Banking Industry – A Valuation Perspective

Mergers & Acquisitions are quite common in the corporate world. The year 2021 was a big year for mergers & acquisitions in spite of the Covid-19 pandemic. Some of the mergers & acquisitions during 2021 are

- Acquisition of Big Basket by Tata Group
- Acquisition of 1 mg by Tata Group
- Acquisition of Zee Entertainment by Sony
- Acquisition of Aakash Educational Services Ltd. by BYJU's
- Wipro Ltd acquired British consultancy firm Capco
- HDFC Life acquired Exide Life Insurance

The year 2022 seems to be no less compared to the previous year. Axis Bank announced its acquisition of Citibank's India Consumer Business from Citibank N.A. on 30th March 2022. Next was the biggest merger in banking and finance industry, HDFC Limited announced its merger with HDFC Bank Limited on 4th March 2022. In this article we will mainly discuss the acquisition of Citibank's India Consumer Business from Citibank N.A. by Axis Bank, besides touching upon other mergers & acquisitions.

Axis Bank is placed as the third largest private sector bank in India. The Bank has widespread reach and provides the all the spectrum of financial services to various customer segments covering Large and Mid-Corporates, MSME, Agriculture and Retail Businesses. The Bank has huge presence all over India with 4594 branches. It has more than 11000 ATMs. It has eight overseas branches too at London, Singapore and in Gulf region. Axis Bank was initially promoted by Unit Trust of India (UTI) jointly with LIC, General Insurance Corporation, National Insurance Co. The New India Assurance and The Oriental Insurance co. Axis Bank has assets totalling Rs. 996118 crores as on 31st March 2021. It has an impressive five-year CAGR of 13% in total assets and 15% in Deposits.

Axis Bank, the third largest private sector bank in India, announced acquisition of Citibank's India Consumer Business from Citibank N.A. (acting through its branch in India) ("CBNA") and the NBFC Consumer Business from Citicorp Finance (India) Limited ("CFIL"), as going concerns on 30th March 2022. This was a sort of coup in the banking industry in India. Citibank N.A. has been looking to exit India and Axis Bank was waiting for an opportunity to expand its business in a big way. What better way can be otherwise than acquiring an existing successfully running bank. Organic growth is time consuming and the benefits take time to accrue. Inorganic growth is fairly quick and benefits can be seen accruing almost immediately.

Axis Bank is third largest private bank in India. In the past too it has expanded through inorganic acquisition. The past acquisitions of Axis Bank are:

Year	Acquisition	Cost of Acquisition
2013	Investment banking and equity capital market business of Enam Securities	Rs. 2067 crores
2017	Free Charge – digital payments company	Rs. 385 crores
2022	Citibank's consumer business, covering loans, credit cards, wealth management and retail banking operations	Rs. 12325 crores

In 2013, Axis Bank acquired investment banking and equity capital market business of Enam Securities in an all-stock deal for Rs. 2067 crores. Enam Securities' net profit was at Rs. 90 crores before the acquisition and at Rs 75 crores in the first half of year of acquisition. The annualised profit was estimated at Rs. 120 crores. The deal was valued at 17-18 times PE forward multiple. There were comparables easily available. IIFL, Motilal Oswal, Emkay which do similar brokerage business, were valued at 20 times their earnings. Axis Bank hence got a fair deal. The performance of Axis Bank post acquisition of Enam Securities also improved as shown below:

Acquisition of Enam Securities (Rs. Crores)			
	Before Acquisition	**After Acquisition**	**Increase**
Operating Revenue	16217	19356	19.36%
Operating Profit	9303	11456	23.14%
Net Profit	5179	6217	20.04%
EPS	119.67	132.56	10.77%
Book Value	707.5	813.47	14.98%
ROE	20.51%	18.23%	-11.12%
ROA	1.70%	1.78%	4.71%
CAR Tier 1	12.23%	12.62%	3.19%

(Source Annual Reports of Axis Bank Ltd for FY2012 & 2013)

Except for the ROE, there was significant increase in all the parameters. Since Enam was absorbed as a step-down subsidiary, it is difficult to segregate the increase due to the acquisition.

In the case of acquisition of FreeCharge Payment Technologies Ltd., and Accelyst Solutions Private Limited (together form FreeCharge digital payment), separate financial performance of FreeCharge is available and is as under:

Rs in Cr

Particulars	**2018-19**	**2019-20**	**Increase**
Total Assets	278.84	337.64	21.08%
Total Income	119.33	185.51	55.46%
PBT	-78.33	-8.46	-
PAT	-	(18.19)	-

As can be seen from above, Axis Bank did not benefit financially by the acquisition of FreeCharge except that top line improved.

Citibank's India Business (Citi India) is the latest acquisition by Axis Bank recently announced on 30th March 2022. Key highlights of the acquisition are given below:

- Addition of about 2.5 million Citibank card accounts
- Addition of Rs. 1,10,900 crores assets under management from Citi wealth and private banking products.
- Addition of aggregate deposits of Rs. 50,200 crores
- Addition of corporate relationships with more than one million customers
- Access to world class Citi Phone Banking technology
- Access to 7 offices, 21 branches and 499 ATMS across 18 cities
- Absorption of trained work force of 3600 employees

The key drivers in an acquisition are

- Inorganic growth
- Better competitive edge
- Wider market access
- Improve core competencies
- Acquire new technology & capability
- Diversification in new market segment/geographical area

The acquisition of Citi India by Axis Bank is co-generic merger of businesses. This kind of merger happens between companies in the same industry offering similar products but not the same. It helps in improving product diversification, increasing market share and provides strategic advantage.

1. Valuation Methodology

In an acquisition valuation, the relative values of the business being acquired shall be considered. Qualitative factors relevant to the existing business of Axis Bank and the business dynamics and growth potential of the acquired business needs to be taken into consideration. Evaluation should be done on a standalone basis and post-acquisition synergies are not to be considered.

The premise of valuation is decided depending upon the purpose of valuation and basis of value used. Citi India business is acquired on “going concern premise”. Under this premise the acquired business assets are continued to be used and the business would continue to operate as such. The common methods used for valuation of an acquisition are:

- Asset method
- Earnings method
- Market method

The method chosen also depends on the stage of the business at the time of acquisition. The different stages of a business can be broadly as shown below:

- Start-up stage
- Expansion stage
- Growth stage
- Consolidation stage
- Decline stage

The valuation methodology used for the acquisitions are as follows:

Acquisition	Methodology
Enam Securities	PE multiple of about 18 times forward earning
FreeCharge	Net Asset Value
Citi India Business	PE multiple of 18.7

Citi India's business is well established and can be said to be in consolidation stage. Revenue and operating income were growing steadily. There is a definite operational history and future projections are visible and can be reasonably assessed accurately. There is comparable business in the market as well. Axis Bank's own business can also provide good comparison.

The different valuation methodologies employ different elements. Asset method is simplest and takes the net asset value of the business as on reference date. Earnings method takes into account discounted cash flow, earnings capitalisation, incremental cashflows and is based on projections. Market approach of valuation is used when there are comparable companies/business. Market price, comparable business multiple or comparable transaction multiple is used under Market approach.

Different methods may give different values within a range. Normally when more than one method is used, weighted average of the values arrived is

considered. Weightage is given based on professional judgement and experience. Generally, the following weightages are applied:

Net Asset Value method	1
Earnings method	2
Market method	2

For a going concern premise, higher weightage is attached to earnings method and market method. Now SEBI has made it mandatory to provide information about weights given to each valuation methodology.

In the present case of Citi India acquisition by Axis Bank, the key drivers could be easily identified.

- Addition of Rs. 27400 crores across Credit Cards, Mortgage, Personal & Ready Credit Loans, Asset Backed Finance, Small Business Banking
- Credit card customers added about 2.5 million
- Deposits of Rs. 50200 crores added of which CASA is 81%
- AUM of Rs. 110900 across all Citi products added
- 21 branches, 7 offices and 499 ATMs

The key financial parameters of Citi India business taken into consideration for valuation of the acquisition are:

Financials	**Rs. Crores**
Net Interest Income	2086
Other Income	1959
Net Revenue	4045
Operating Expenses	2298
PBT	1747
PAT	**842**
Net Interest Income %	3.9%
Other Income %	3.6%
Cost to Assets	4.3%
ROA	1.6%
ROE	21.7%

(Source: BSE filings by Axis Bank Limited)

The PE multiple of the NIFTY Bank as on 31st March 2022 was 20.51. The minimum PE during FY2021-22 was 18.87 and maximum was 26.48. Price-to-book value (PB) was 2.71 as on 31st March 2022. The minimum PB during FY2021-22 was 2.43 and maximum was 3.24. (Source: www1.nseindia.com). If we calculate by the PE multiple method based on the latest PAT of Rs. 842 crores of Citi India,

Valuation at minimum PE 18.87 Rs. 15888 crores

Valuation at maximum PE 26.48 Rs. 22296 crores

The value of equity can be derived from the ROE given, 21.7%. Applying the same on the PAT, we get an equity value of Rs. 3880 crores. Similarly, the ROA given was 1.6%. Applying the same formula, we get total asset value of Rs. 52625 crores.

Since details of liabilities in the books of Citi India is not available, it is not possible to estimate the net asset value. With available data on public websites, PE multiple method can only be applied as shown above. With that we get a minimum value of Rs. 15888 crores for Citi India. Actually, Axis Bank has agreed for a consideration of Rs. 12325 crores. Integration costs were estimated at Rs. 1500 crores. Hence, actual cost for Axis Bank will be Rs. 13825 crores. The implied equity value has been calculated as shown below:

Particulars	**Rs. Crores**
Purchase Consideration	12325
Estimated equity requirement	+3450
Implied Equity Value	**15,775**

The estimated equity requirement has been calculated assuming CET 1 (Common Equity Tier 1) at 13% of RWA (Risk Weighted Assets). Hence, the RWA was estimated at Rs. 26538 crores. For capital adequacy, the equity requirement was calculated at 13%, i.e., Rs. 3450 crores.

Income Tax Benefits accruing to Axis Bank:

Axis Bank will get depreciation on the written down value of block of assets transferred from Citi India which will be the same as in the case of Citi India had it continued to hold such assets. Depreciation will be apportioned in the ratio of the number of days for which the assets were used if the date of transfer is in the middle of a financial year. Under Sec 72A, banking

companies are entitled for carry forward & set-off losses, if any. Unabsorbed depreciation can also be used without any time limit.

However, the acquisition needs regulatory approvals such as

- Under the Companies Act, 2013
- The Income Tax Act, 1961
- RBI & FEMA provisions
- SEBI (LODR) Regulations
- Stamp Duty act
- Accounting Standards
- Industry specific Regulations

2. Acquisition Synergies not included in the Valuation:

The proposed acquisition will provide lot of synergies to Axis Bank. Credit card business will be gone up by 57%. CASA (Current Account Savings Account) deposits will go up by 2%. Total advances will go up by 4%. Wealth Management AUM will go up by 42%. It will take more than two years for complete synergy to accrue to Axis Bank. Regulatory approvals and customer consents will take 9-12 months. Then Citi India's consumer business assets, liabilities, customers and employees will be transferred to Axis Bank, which may take about 18 months. Finally, all customers, products, data and partner connections will be transferred to Axis Bank's systems.

3. Conclusion:

It can be seen from the above that in the three acquisitions studied here, Axis Bank used the inorganic route to expand its business and also acquired new technology. In majority of the cases, PE multiple of earnings have been applied to arrive at the valuation

The valuation methodology used for the acquisitions are as follows:

Acquisition	**Methodology**
Enam Securities	PE multiple of about 18 times forward earning
FreeCharge	Net Asset Value
Citi India Business	PE multiple of 18.7

In the case of FreeCharge, Axis Bank's acquisition was more for the technology than for the profitability. Hence, only NAV was considered. Moreover, initially Snapdeal had invested over Rs. 500 crores in the digital payment company. As Snapdeal had some cash flow problems, it was in a hurry to close the deal. Hence, it was sold to Axis Bank at a discount. Also, FreeCharge was never a profit-making entity. However, Axis Bank got over 50 million FreeCharge registered wallet users and over two lakh merchants. Hence, we can say that Axis Bank got a fair deal in FreeCharge though profitability was not visible.

In the case of Enam Securities acquisition, the business was already profit making. Hence PE multiple was used.

Let us now see how the stock market reacted to the acquisitions. The acquisition of Enam Securities was announced on 21st January 2013. The stock price of Axis Bank closed at Rs. 1389.35 on 22nd January 2013, against previous day close of 1383.75. Hence, not much enthusiasm was shown by investors.

The acquisition of FreeCharge was announced on 27th July 2017. On 28th July 2017 the stock price of Axis Bank dropped to Rs. 515.00 against the previous day close of Rs. 524.70. Obviously, the investors did not like the deal though the bank was very enthusiastic about it.

The acquisition of Citi India business was announced on 30th March 2022 after market hours. On 31st March 2022, the stock price of Axis Bank closed higher at Rs. 757.83 against previous day close of 754.58. Surprisingly, the stock market seems indifferent to such a significant acquisition. May be because the benefits may not accrue immediately. Though the stock price shot up to Rs. 783.65 on 4th April 2022, it was more because generally the market sentiment was positive.

(All stock prices are from www.bseindia.com)

Thus, it can be seen from the above that investors are wary of acquisitions till the actual results show up. However, inorganic expansion in banking industry is quite common. The biggest private sector bank in India, ICICI bank acquired Bank of Madura in an all-stock deal in the year 2001. Again, ICICI Bank acquired Bank of Rajasthan in 2010.

The second largest private sector bank, HDFC Bank acquired Centurion Bank of Punjab in 2008 in an all-stock deal, which gave HDFC bank a greater presence in Haryana and Punjab. And on 4th March 2022, in a big bang

merger, HDFC Bank Limited and HDFC Limited announced their merger. This is one of largest mergers in the history of Indian corporate mergers. Both being listed companies on the stock exchanges, the swap ratio has been fixed at 42 shares of HDFC Bank for 25 shares of HDFC. The ratio works out to 1 **:**1.68 Investors welcomed the merger and the share prices of both companies zoomed more than 10% higher. A comparison of the two companies:

Particulars	**HDFC**	**HDFC Bank**	**Ratio**
Share price Rs. as on 1/4/2022	2450.95	1506.30	1.63
Market Cap Rs. Crores	485691	918591	0.53
Price to Earnings	36.69	26.16	1.40
Price to Book Value	4.34	4.20	1.03

From the above it can be seen that the swap ratio has been based on market prices of both companies since they are listed.

In conclusion, the valuation in mergers and acquisitions in Indian Banking industry has been mostly based on market method or PE multiple of forward earnings.

Chapter 8
Practical considerations in applying the Multi Period Excess Earnings Method

The need for reliable and robust intangible asset valuations continues to increase as greater emphasis is being placed by Regulators, Shareholders and Auditors. With the widespread adoption of Ind AS, the need to fair value intangible assets in business combinations have also become a priority. While several methods such as the Relief from Royalty, Replacement Cost and With or Without method are commonly used to value intangibles of various kinds, the Multi Period Excess Earnings ("MEEM") is often used to estimate the value of the "primary cash generating" asset of the business.

The principal behind the MEEM is that the value of the subject intangible asset is equal to the present value of the after-tax cash flows attributable to the intangible asset only.

While specific adjustments will need to be made on a case-by-case basis, the general steps in a MEEM include:

- Forecast revenues attributable solely to the subject intangible asset;
- Application of an appropriate margin to forecast sales;
- Application of an appropriate tax charge to estimate post-tax cash flows;
- Application of post-tax contributory asset charges ("CAC") to reflect the return required on other assets that contribute to the generation of the forecast cash flows, and;
- Discount the resulting net post-tax cash flows, using an appropriate discount rate to arrive at the net present value.

A few practical considerations while applying the MEEM are as follows:

1) Determine which intangible to apply the MEEM to?

   In business combination a valuer may have to value several intangible assets as part of the purchase price allocation. In such situations, a careful identification of all possible intangibles needs to be undertaken

first. Thereafter, based on the nature of the business and inputs from client management a determination should be made as to which intangible is the "primary" driver of business cash flows and then MEEM should be used to value this intangible. In certain businesses, for example, it may be difficult to identify whether the customer relationships or the underlying technology platform should be valued as the primary asset. However, even in such cases it is best practice to identify the primary intangible. Value it using the MEEM and apply another valuation method for the secondary/other assets. This helps to avoid the circularity created by "cross charging" of CAC when multiple MEEMs are contemplated.

2) Isolating the P&L associated with the subject intangible and ascertaining its remaining useful life

   Often valuers are provided with five-year projections related to the entire business and it is a challenge to isolate cashflows that pertain to the subject intangible alone. However, it is critical to work with the client to ensure that the revenue and expenses that are being utilized in the MEEM pertain solely to the intangible and not to the overall business. Expenses that form part of the overall business projections but do not pertain to the subject intangible should be excluded. For example, Sales and Marketing expense that is focused on capturing future customer relationships, should not be included in a MEEM that is being used to value a long-standing existing customer relationship that require negligible sales and marketing effort in the future.

   Valuers should carefully assess the remaining useful life ("RUL") of finite lived intangibles based on criterions such as historical trends, industry dynamics, competitive landscape, product life cycles etc. On the other hand, certain intangibles such as well-established brand names, company trademark and trade names may have an indefinite life. However, valuers are cautioned to rely on evidence-based assessments to arrive at an appropriate RUL applicable to the subject intangible.

3) Computing Contributory Asset Charges ("CAC")

   In cases where the subject intangible asset contributes to value under the Income Approach, a CAC is deducted from the intangible asset's cash flows to arrive at the value attributable to the intangible asset. Charges for the use of contributory assets represent the required return on the other assets employed to generate future income. The principle

behind a CAC is that each intangible asset "rents" or "leases" from a hypothetical third party, all the other assets it requires to generate the cash flows resulting from the subject asset's use. As a result, a fair return is assumed to be paid to the owner of the rented assets. Thus, net cash flows remaining after such charges are attributable to the subject intangible asset. Common examples of CAC including a charge for the use of net working capital, tangible assets, workforce, trademark and tradenames. While computing such CACs, a valuer should ensure that both the "return of" and "return on" the contributing asset is being included from a market participant viewpoint. Furthermore, the CAC charge should represent only the level of use that the intangible requires to generate the projected cash flows. For example, if in a pharma company, the tangible assets are being utilized to manufacture several products and the valuer has been tasked to value a single product intangible, then it is crucial to attribute the CAC associated with only the tangible asset block that is being utilized by the subject intangible rather than assuming a CAC charge based on the entire block.

4) Arriving at a discount rate for the subject intangible

   Standard techniques to compute discount rates include the Weighted Average Cost of Capital ("WACC") based on the capital asset pricing model ("CAPM"). However, such methods help a valuer arrive at a discount rate applicable to the entire business which is a blend of lower risk assets such as tangible assets, cash, working capital etc. as well as intangibles including goodwill which could be considered as higher risk. While isolating a discount rate appropriate for a subject intangible it is important to access the risk associated with its "intangible" nature, cashflows related risks and whether the nature of the asset is contractual or non-contractual.

5) Applicability of a tax amortization benefit ("TAB")

   Based on the nature of the intangible asset and whether it meets the eligibility criterion for a tax amortization benefit (in the jurisdiction where the intangible resides), an informed and well supported rationale should be present while applying a TAB in intangible asset valuations.

In conclusion, the MEEM is a well-accepted and accurate method of ascertaining the value of an intangible asset. However, it is important to pay close attention to the above outlined factors to ensure that the valuation of the subject intangible is accurate, robust and defensible.

Chapter 9
Valuation of Early-Stage Companies

1. Executive Summary

In this era of Pandemic and Lockdown, the Start-up Industry went booming and are on the rise to becoming Unicorns with these companies witnessing multi-fold increase in their valuations in various funding rounds over the past several months even after being in heavy losses. What should have been the reason for exaggerated valuations for Start-ups even after incurring heavy losses? Is it web site hits, number of users, number of subscribers or anything else used in Valuation and giving heavy funding to them?

There are Start-up unicorns like Flipkart, Snapdeal, Ola Cabs, Zomato, Paytm, Byju's, Swiggy, Oyo Rooms, Udaan, Delhivery, Billdesk, Dream11 etc., they are having valuations of more than $1 billion even after being in losses. It would be always a dilemma to accept these higher valuations considering their financials.

Valuation: USD 37.6 billion

Valuation: USD 2.4 billion

Valuation: USD 8.4 billion

Valuation: USD 6.7 billion

Valuation: USD 16.5 billion

Valuation: USD 5.5 billion

Valuation: USD 3.1 billion

Valuation: USD 16.0 billion

Valuation: USD 3.0 billion

Fundraising is a very crucial part of any Start-up. For creating a successful business story, start-ups need to go through several rounds of fundraising: pre-seed, seed and series rounds.

In such a dynamic scenario, fundraising plays an important role in removing the glitches in the business operations. However, to attract investors, start-ups need to carry out a detailed process of valuation that helps in making an informed decision for investors as well as for the start-up.

Usually, new founders lack knowledge of evaluating the start-up. Many founders quote a high figure to investors even when they are at the pre-revenue generation stage or ideation stage. Similarly, few founders quote a lower amount even if they have a winning idea and the potential to disrupt the market. Thus, it is essential to understand the key methods that are useful in the start-up valuation process as per the life cycle of the company.

For valuing start-ups, Market Approach should be considered compared to other approaches as start-ups usually have aggressive projections without having proven track record. Therefore, approaches like Income Approach and Asset Approach should be avoided for such valuation. In Market approach, start-ups should adapt methods like First Chicago method, Scorecard method, Exit multiple method and Backsolve method for valuation.

2. Detailed Article

With total of 16 unicorns (start-up with a valuation of over $1 billion) and more than $11 billion in funding, mainly from the US-based investment firms (till June – end), many Indian startups turned unicorn as mentioned below in 2021 alone.

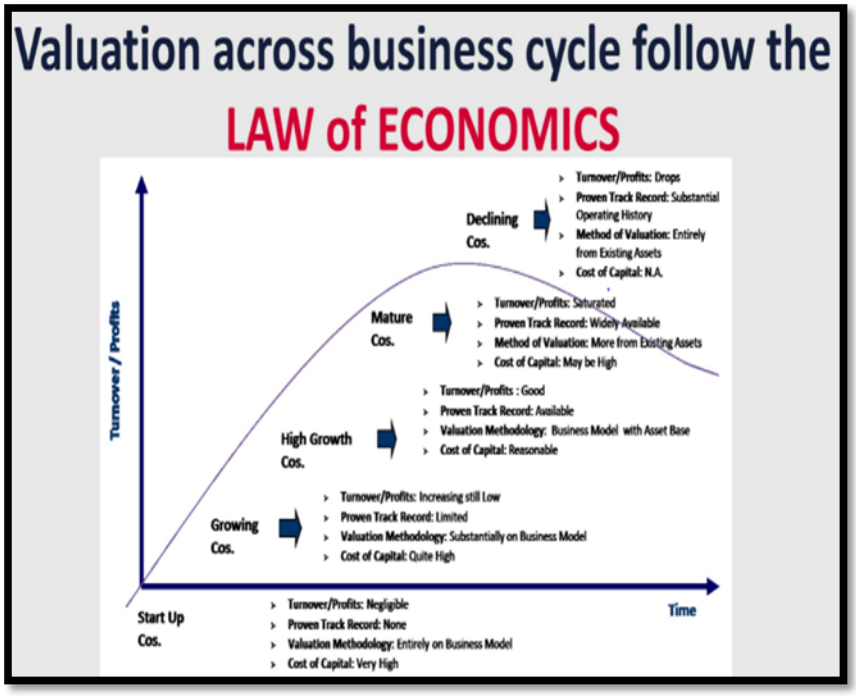
Indian Startup Unicorns in 2021			
Sr. No.	**Unicorn Name**	**Valuation (in $ billion)**	**Sector**
1	Digit Insurance	1.9	Insurance
2	Innovaccer	1.3	Software
3	Infra.Market	1	Infrastructure
4	Five Star Business Finance	1.4	Banking
5	Meesho	2.1	Social Commerce
6	Cred	2.2	Fintech
7	Pharmeasy	1.5	E-Pharmacy

Indian Startup Unicorns in 2021			
Sr. No.	**Unicorn Name**	**Valuation (in $ billion)**	**Sector**
8	Groww	1.0	Stockbroking
9	Mohalla Tech (Sharechat and Moj)	2.1	Social Media
10	Gupshup	1.4	Enterprise Messaging
11	Chargebee	1.4	Fintech
12	Urban Company	2.0	Home Service
13	Moglix	1.0	B2B E-commerce
14	Zeta	1.5	Banking Technology
15	Browserstack	4.0	SaaS
16	BlackBuck	1.0	Logistics

Source : ETtech research

In this complex financial and economic world, valuing all sorts of companies has become necessary for a number of reasons like Investment, Acquisition, Merger or even a statutory purpose. At the same time the difficulty for the valuers has also increased due to dynamic environment as it would be difficult to value all the companies using the same methodologies.

Businesses at **different stages of their life-cycle demand different methodologies** for their valuations. The below chart shows, how the life cycle of a business affects the valuation approach:



Focusing on the start-up companies or early-stage companies, we can say that Start-up valuation is more about understanding promoter's and management background, experience and vision, future potential of business, people, technology, competitive landscape, traction and the probability of success and failure attached with the start-up. In a way, Start-up valuation also involves validation/review of business model which makes it complicated vis-à-vis other valuations. It can be concluded that while valuating a Start-up, the experience of valuer plays a significant role in value conclusion as it certainly is an art, not the science.

3. Key characteristics of Start-up companies:

- No history, operations has not reached commercial production
- Negligible revenues with high operational losses / Negative Cash Flows
- Limited capital infused by promoter and high dependence on external source of funds
- Illiquid Investments
- Speculative/Aggressive Financial Projections

- High Risk Companies
- Complex Capital Structure

4. Why higher valuations even after in losses?

In the recent times, many technologies and e-commerce (B2C) companies were distinguished. Most of these companies created decent sales but could not create profits due to lack of sustainable business model.

Most of the Valuers have hard time valuing Start-ups because of the great uncertainty surrounding potential market size, profitability and required investments. Financial multiples that normally provide a benchmark for valuation are rendered futile because profitability is often negative.

Whenever investors are ready to infuse money, academics and practitioners **rely on non-financial multiples**, which compare enterprise value with one or more non-operating metrics, such as web site hits, unique visitors, number of subscribers or gross merchandising value (GMV) etc.

However, it is strongly emphasised that the non-financial metrics must be a reasonable predicator of future value creation, and thus somehow tied to ROCE and growth. Non-financial multiples should be used only when they can be connected to the financial multiples. For example, if a company cannot translate visitors, page views, subscribers or GMV into profits and cash flows or the same cannot be validated on the valuation date, the non-financial metric turn illogical and use of such multiples should be avoided.

In such a case, it then remains as an investor's call on the founder's reputation and capability and the transactions takes place at the price equilibrium considering the demand-supply characteristics.

Whatever multiple selected for valuing the company, the following methods should be applied on such valuation to account for such risky venture.

5. Valuation Methodology for Early-Stage Companies

For valuing companies there are three approaches i.e. Asset, Income and Market approach; however, for Early-stage companies "Market Approach" is recommended, as the long-term projections are speculative/aggressive at this stage.

A. Where independent investment has not yet been made in the company:

i. First Chicago Method

The First Chicago method entails three different projections – Success, Failure and Survival cases – and profitability estimates is assigned to each case.

This method eventually results in a separate valuation and pricing for each outcome. These heads are then averaged and the weighted average valuation is determined (weights being the probability assigned to each case).

'First Chicago Method'

All Amount INR Million

Particulars	Success	Survival	Failure
Projected Sales of the Company for FY ended 2018	199.21	132.80	74.04
Projected EBITDA of the Company for FY ended 2018	127.95	85.30	47.82
Present Value Factor	0.91	0.90	0.90
Adjusted EBITDA of the Company	115.80	76.88	42.82
industry adjusted average (EV/EBITDA Multiple)	4.00	4.00	4.00
enterprise Value of the Company as per CCM	463.19	307.54	171.65
Probability of Each Scernario	25.00%	50.00%	25.00%
Concluded Enterprise Value			312.49
Add: Cash as on 31.03.2017			1.80
Less: Debt as on 31.03.2017			20.92
Concluded Equity Value (Post Money)			293.37
Less: Estimated Capex Required			65.00
Concluded Equity Value (Pre Money) (INR Million)			228.37
Concluded Equity Value (Pre Money) (USD Million)			3.51

ii. Scorecard Method

The Scorecard valuation method is a more elaborated approach to the subject company valuation. It starts in the same way as the First Chicago

Method i.e. you determine a base valuation for a certain set of criteria except, those criteria are themselves weighted up based on their impact on the overall success of the subject company. Besides the normal valuation of a company the scorecard method considers the qualitative scores of managements, traction, competition, etc. The weighted average value is recommended as the value through Score Card methodology.

Qualittative Factors	% Weightage	Company XYZ Score	Factor
Size of the Opportunity	10%	80%	0.08
Product/Technology Uniqueness	10%	80%	0.08
Operational Status of the startup (Ideation / Concepting / Validation stage), Scaling Stage, Establishing stage	20%	80%	0.16
For how long is Core Team working together with each other and how do they complement	10%	80%	0.08
Current Traction of your startup	15%	80%	0.12
Competitive Environment	10%	20%	0.02
Need for Additional Investment	20%	20%	0.04
What alternatives do your customers using right now?	5%	60%	0.03
			0.43
Pre Money Equity Value of the Company (INR Million) (Calculated through First Chicago Method)			228.37
Scorecard Factor			0.43
Adjusted Equity Value through Scorecard Method (INR Million)			98.19
Adjusted Equity Value through Scorecard Method (USD Million)			1.51

iii. Exit Multiple Method

As Start-ups are high risk companies, investors expect higher returns. The Exit Multiple method takes into account the current investment, the expected return, and the valuation at the time of exit to determine the current value of the company by discounting it back by the expected return.

B. Where independent investment has been made in the company:

i. Reverse Calculation or Back Solve Method

This method derives the implied equity value for the Company from a transaction involving the company's own securities, typically, the preferred stock.

It indicates an equity value that is consistent with the rate of return that investors in the most recent round expected given the degree of marketability of their investment as well as any special rights (e.g. liquidation preferences) accorded to them.

6. Concluding Thoughts:

Traditionally, valuations of companies were based on historical financials like EBITDA, revenue, Profit after Tax etc. However, valuations of the start-ups are currently being performed by various other factors like their impact in the market, number of subscribers, database which they have, eventually which will lead to future revenue for the companies. These will lead loss making companies with higher valuations in their initial years.

Selection of Valuation methodology for start-up are based on the company's life cycle, characteristics and experience of Valuer.

Chapter 10
Influence Environmental, Social and Governance (ESG) factors on Valuations under any situation including M&A

We keep hearing of corporate failures, but unlike financial failures due to fraud or negligence, corporate failures are on account of faulty products.

A few years ago, we heard about European Car manufacturers being under fire for admitting that defective devices were installed by them in their vehicles and they had misguided the emissions tests authorities. This 'Diesel gate' raised several questions about the management practices of these companies. The companies encountered recalls of a majority of their vehicles, leading to exorbitant levels of additional costs. Consequently, these car manufacturers also experienced a significant decline in their market capitalization.

For the mergers and acquisitions (M&A) community, the goal of creating and enduring a sustainable value has always been about finding the right balance between risk and return. However now a days, the transformational move to embrace environmental, social and corporate governance (ESG) is also having a dramatic impact on how M&A is conducted.

For any M&A, the board considers the situation of long-term sustainability for the acquisition and accordingly the targets are valued. It's simply an imperative for the deals they pursue. Board of Directors do this for their shareholders because they expect it. Their deals are also expected to yield a positive IRR, as an investment proposition, that should be measured over long term. Thus, a right Valuation considering the ESG factors is also relevant. Nowadays, S & P 500 companies mentions ESG during earnings calls, which specify the importance of these factors in corporate valuations.

Investors and corporate directors are also challenging their M&A teams to consider targets that advance the organization's pursuit of long-term sustainability and would not like any Valuations without considering ESG.

The direction of travel is clear: ESG issues are taking a more prominent place in the boardroom as a rule, including in the context of acquisitions. The ESG literacy at various levels of companies has undoubtedly increased, the pressure from institutional investors is significant and well known, but there are also pressures from dealmakers that needs to be considered.

Dealmakers generally looks at an ESG deal's impact on profit and positioning within the supply chain, an area where more scientific analysis is needed, to Value the Company.

It is observed that deal teams increasingly use financial metrics to assign values to ESG factors. For example, teams will apply implied prices on

1) greenhouse gas emissions
2) increased insurance costs from operations in climate-sensitive areas
3) enhanced demand for goods with positive environmental or social characteristics; and
4) value of enhanced employee retention and productivity.

The next generation wants to work for companies, buy from companies, and invest in companies that embraces ESG. This is where the economic demand is going up and M&A needs to align with this reality.

A growing market of providers of ESG data, facilitated by technological innovations such as AI and machine learning, presents a host of benefits that go beyond ethical or reputational concerns. Analysing ESG data and information through the M&A process allows for better comparability across companies, improved identification of opportunities and increased transparency between the companies and other stakeholders. We are entering an era where companies will not want to do business with a firm that does not have high ESG standards.

On the other hand, it is also expected that we will see more 'stranded assets' that can't be sold because of their negative ESG standing. Some companies will be left behind in a cycle of declining valuation with strained capital availability.

The situation also highlighted the failure of Valuation models of investors and analysts to capture the full range of risks posed by environmental, social and governance (ESG) factors. Valuation models are typically based on the most commonly used valuation method – the discounted cash flow (DCF) method.

Under this method, the free cash flows (FCF) of a company are often forecasted until perpetuity.

These cash flows are discounted with a rate equivalent to the expected cost of capital (reflective of the risk related to these cash flows) consisting of both cost of equity and cost of debt and after considering a target capital structure, but the relative risk arising out of ESG factors failure are absent and has a significant impact.

Cash flow drivers, analysed to perform business valuations, typically are, expected sales growth, development of profitability and capital investments. Historically, these cash flow drivers were often determined only from a direct financial/economic point of view. For example, sales growth was assessed in relation to expected industry growth, development of product/services line, market penetration, market share, etc. Profitability margins were also considered based on various factors such as forecasts based on expected development of cost of production, supply chain relations and exchange rate fluctuations.

Investment levels were also determined based on the required levels of the asset base to grow and sustain sales growth in the future, etc. Based on these assessments, the management of companies prepared budgets and long- term forecasts. But factors which are outside the Company and ESG also has considerable impact on the company's success or failure and needs to be considered.

1.1 ESG factors in cash flows or discount rate?

Cash flows and discount rate calculations required to perform business valuations, as it is imperative for investors and management to assess the value drivers of businesses with not just a financial lens but also with an ESG lens.

Often investors and management attempt to include ESG-related risks in the discount rate by including premia (in case of high ESG risks). Although this approach is considered to be more practical, but it is also recommended to include cash flow adjustments related to ESG risks in an explicit manner. This approach would create visibility related to the impact of an ESG factor that is considered material.

1.2 How to incorporate ESG in cash flows?

Below we present some examples of how cash flow drivers could be determined by incorporating an ESG perspective:

— With regard to the **Environment** of the ESG - Task force on Climate Related Financial Disclosure recommends two scenarios. As per their analysis one way is to reflect **additional risk** associated with climate change or severe weather events in the future in the cashflows. For example, beverage companies could assess the impact of the shortage/ excess of water on the costs and investments related to water utilization. Another such example that could be applicable for many companies is the introduction of carbon points and its pricing.

— With regard to the **Social** factors of the ESG lens - the impact to be considered on revenues and cost-related cash flows due to employee unrest in industries such as the garment industry or steel sectors or construction known for poor labour conditions, health and safety issues, is an example of capturing the impact of poor social measures. In such circumstances, additional costs could be incurred to satisfy the compensation or safety-related concerns of the workforce or product sales of companies could plummet due to the damaging impact of these kinds of news.

— With regard to the **Governance** of the ESG lens, the impact on cash flows in the form of fines/increased taxation imposed by regulatory authorities due to weak governance policies of companies, could be an example of considering the likelihood of governance-related factors. For example, in case of Google, higher taxes were imposed by the European Commission due to their perceived unethical business practices. Thus, while valuing tech companies, the imposition of fines or higher taxes could be considered as a negative cash flow impact in case it is concluded that not enough measures have been taken by tech companies to mitigate the concerns of regulatory authorities. Indian Companies having cross border dealing may face situation of taxation in the transfer pricing assessment or change in policies.

By presenting the adjustments in the above manner, management and investors would avoid ambiguity surrounding the positive/negative impact of ESG-related issues on the future cash flows of the company which would also facilitate focusing on the relevant material ESG issues concerning the company.

1.3 How to incorporate ESG in discount rate?

— While applying ESG adjustments to cash flows, care should also be

taken that there is no double-counting of the risks (and opportunities) in the discount rate. For example, if a company belongs to an industry which in general is impacted by ESG factors such as the automotive industry (due to the influx of hybrid and electric vehicle competitors) or thermal power industry (due to the non-availability of the key raw material component) it could be argued that the industry beta (a measure of risk) partly includes the ESG risk. In this case, one would need to be careful while applying additional downward adjustments to the cash flows due since the negative ESG impact could be partly captured in the industry beta. Accordingly, incorporating additional premia or discounts in the discount rate should be carefully considered

— in conjunction with industry- and company-specific characteristics and the ESG adjustments in the cash flows

1.4 How to attempt to circumvent the subjectivity of ESG?

Given the potential subjective nature of the assessment of the materiality and application of ESG-related adjustments on the cash flows and the discount rate, these adjustments could also be applied in varying degrees under different scenarios, wherein each scenario would reflect the impact of a particular material ESG factor on the business. The final valuation outcome could be a weighted average scenario outcome wherein probabilities and weightings (based on materiality) are attached to the various ESG scenarios based on materiality. Materiality of ESG factors can be determined not only based on internal assessments of companies, but also by looking into the social media feeds of companies, to understand the market sentiment of ESG risks and opportunities associated with companies. Many standard guidelines are typically considered in relation to the assessment of the materiality of ESG factors in relation to a company in a specific industry. The assessment of the weighted average valuation outcomes could be enhanced by the usage of new technological tools such as big data, artificial intelligence and predictive forecasting tools using smart algorithms.

In the end, business valuation outcomes are a reflection of the story line of the financial figures that serve as inputs for these valuations. Given the new and expanding view on risks and opportunities associated with businesses, viewing the development of industry and market forces not just with a financial lens but also with an ESG-lens and incorporating them in the cash flows and discount-rate analysis, is a need of the hour.

Chapter 11
Value of Customer

We come across many digital products and services in the new age digital world. A number of products and services are so called “free” to the customer. This term “free” may not have any upfront costs i.e. complimentary to the customer, hence seems to be free to the customer. This leads to the question on how anyone can offer something for free. This needs to be understood from a wider perspective of the company / organisation that is offering the product and services free to the customer. In the new age digital world, traditional ways to attract customer may not be very feasible and needs a relook at mechanisms and importance of modern approaches to customer relationships.

1. Customer is GOD

We may have come across many sayings that the customer is always right. There is very specific proverb in Japanese - *“okyakusama wa kamisama desu”* which translates into Customer is God. More specifically the term “kyakusama” means customer but expresses particular honour and adoration as in for an honoured guest.

Similarly in German language there is an expression in business *“der Kunde ist König”* which directly translates into Customer is King. Thus, the status of customer is one who is admired and respected across the different cultures.

2. Consumerism

In most of the earlier times, people would consume the resources to survive. Accordingly, the consumption was towards the necessities for life. A frugal way of life was the norm whereas consuming heavily or excessively was looked down and termed as being careless by the world at large. Such restricted consumption was also due the fact of resource limitation and also limitation on extent to which these resources could be exploited by extraction and conversion.

In the modern era, technological developments have enabled higher accessibility of resources. This has led to a high rate of production of goods. More recently, availability of consumer credit has enabled high buying power to the consumer. Another aspect that helped is global supply chain

management giving a power to consumer in the remotest part of the world to order and consume any product or service of his choice.

3. Customer relationship

For a company, the customer is the key driver of business. He is not only a consumer of products and services, but also a critical source of review and response on the products and services. This helps the company to improve upon the product and services. Accordingly, the importance of customer needs no further endorsement. Thus, the customer can be a key deciding factor for a company to either grow or perish. Over the years, marketing has evolved from a transaction-oriented task to a relationship with the customer. Accordingly, the process is more about defining, developing and delivering value to the customer. A high rate of competition has ensured that quality and effective service is provided to satisfy the consumer and loyalty be developed. This has also led to higher switching of brands by consumers getting higher satisfaction from a rival goods or service provider.

Customer relationship is now about the customer value and value chain. From an organisation / company perspective, the relationship defines the business and is a key strategic asset. Customers are now central to all the marketing endeavours of the company because they do not only generate income, but also increase the market value of the company as well. Customer relationship management (CRM) is now at the core of all interconnected processes and activities that design, connect and deliver values for customers.

The availability of large amounts of data (big data) about the individual customers and groups of customers has enabled a more granular understanding of the relationship. This progression has now enabled a significant deviation from past forms centred around brand equity, product and transaction towards customer relationship which is a valuable intangible asset of the company. The objective of CRM is towards expanding to new customer, retain existing customer and forge long-term relationship with customers.

This leads to an important question: What is the value of the customer? Or more specifically for a business organisation, what is the true value that a customer is worth so as to design business strategies.

4. Models for calculating Value of Customer

A. RFM – Recency, Frequency, and Monetary (RFM) approach [1]

The Recency, Frequency, and Monetary (RFM) approach is a method to identify customers who are more likely to respond to new offers.

RFM groups customers by:

1. Recency: Time since the customer made his/her most recent purchase. Customers who made a recent purchase would have the product on their mind and are more likely to buy the product again. Generally this is measured in days, however few businesses may measure this in years, weeks or even hours.
2. Frequency: Number of purchases this customer made within a designated time period. Customers who purchased a product once are also more likely to buy again. Also, such first-time customers may be a good potential target for a follow-up to convert them into frequent customers
3. Monetary: Average purchase amount. Customers who spend a large amount of money are more likely to spend higher amounts in the future and give higher value to a business.

Under RFM analysis a score is ascribed to the three factors. Below is an example of RFM analysis. Here three customers namely, Akash, Shivam and Rohan are tagged to understand the scores assigned.

R (recency) is measure in number of months here.

- For R <= 2 points would be 20,
- For R between 2 and 4 points would be 10
- For R between 4 and 6 points would be 5
- For R between 6 and 9 points would be 3

Frequency is measured in number of times purchased in a month.

- For F points calculation would be F * 3

Monetary is value of purchase in each instance.

- M points would be the Rupee purchase (i.e. M) * 0.1

Weights are assigned to each of R (0.5 recency), F (0.2 frequency) and M (0.3 monetary). RFM score is the total of weighted points.

RFM Analysis [2]

		Recency				Frequency				Monetary				
	Purchase number	R (months since last purchase)	R points	Weight of R	Weighted R points	F	F points	Weight of F	Weighted F points	M	M points	Weight of M	Weighted M points	RFM score
A	B	C	D	E	F = C*D	G	H	I	J=H*I	K	L	M	N=K*L	O = E+I+M
Rohan	1	2	20	0.5	10	1	3	0.2	0.6	40	4	0.3	1.2	24.9
	2	4	10	0.5	5	1	3	0.2	0.6	120	12	0.3	3.6	
	3	9	3	0.5	1.5	1	3	0.2	0.6	60	6	0.3	1.8	
Akash	1	6	5	0.5	2.5	2	6	0.2	1.2	400	25	0.3	7.5	11.2
Shivam	1	2	20	0.5	10	1	3	0.2	0.6	90	9	0.3	2.7	30.4
	2	4	10	0.5	5	1	3	0.2	0.6	70	7	0.3	2.1	
	3	6	5	0.5	2.5	2	6	0.2	1.2	80	8	0.3	2.4	
	4	9	3	0.5	1.5	1	3	0.2	0.6	40	4	0.3	1.2	

Here it can be observed that the customer – Shivam has highest RFM score of 30.4 as compared to Akash and Rohan, who have lower scores. The organisation would be interested in targeting more customers in the league of Shivam in above case as they would have a higher RFM score and thus are highly valued by the business.

B. SOW – Share of Wallet

Share of wallet (SOW) is the percentage of customer's expenses on a product that is provided by the firm selling the product. At the individual level, it is the proportion of category value accounted for by a brand or firm amongst all category purchases by the buyer. Thus, at the collective level, it is the proportion of category value accounted for by a brand or firm amongst a certain base of buyers;

For example: in similar example we assess that the total amounts spent by each of the customer (Rohan, Akash and Shivam) as compared to the total amount spend by each in company's product category

Share of wallet

Customer	Amounts spend on company platform	Amount that a buyer spends in total on company's product category	Share of wallet
A	B	C	D = B/C*100
Rohan	220	400	55
Akash	400	800	50
Shivam	280	350	80
Average	**900**	**1550**	**58**

On an individual level the Company's products have the highest share of wallet (SOW) for Customer – Shivam as 80% of his purchase in the product category are from the company. Here he is having very high level of engagement with the company to buy the maximum items from the company as against the competitor company (i.e. total product category). Such customers are valued highest by the company and such customer would be targeted on a higher a basis.

On an average level the company products have a 58% share of wallet (SOW) by including all the customers. This indicates that the company has competitors who are consuming balance 42% SOW on an aggregate level. Thus, the company has 58% serviceable available SOW and company would have stickiness amongst such customers.

C. Past customer value (PCV)

This is the total contribution by the customer towards the present profits based on all the past transactions

Below is the formula for calculating Past customer value:

$$PCV_i = \sum_{t=1}^{T} GC_{it} * (1+d)^t$$

- Here GC_{it} = Gross contribution by ith customer's transaction relating to time t
- T = number of time periods prior to the current time
- d = discount rate (e.g., 15% per year, 1.25% per month)

The below example highlights the sale to a customer (example Shivam) from April 2021 to Sep 2021. It is assumed that the gross contribution i.e. gross margin is about 40% for each sale. Discount multiplier is considered at 15% per year i.e. 1.25% per month.

Past Customer Value (PCV)

	Apr-21	May-21	Jun-21	Jul-21	Aug-21	Sep-21	Total
A. Gross merchandise value (GMV) A	900.00	700.00	800.00	400.00	600.00	500.00	3,900.0
B. Gross contribution @ 40% (A*40%)	360.00	280.00	320.00	160.00	240.00	200.00	1,560.0
C. Discount multiplier (1+d)^t	1.077	1.064	1.051	1.038	1.025	1.013	
PCV (B * C)	**387.86**	**297.94**	**336.30**	**166.08**	**246.04**	**202.50**	**1,636.7**

The total Past customer value (PCV) for customer, Shivam is INR 1636.72. Similar calculation can be made to understand the value that a customer provides in comparison with other customers. These scores, as calculated using PCV, can be a basis for ranking and identifying potentially high value customer for the business.

The three models (RFM, SOW and PCV) discussed above are based on historical information. These do not consider the future revenues and corresponding future costs to service customers.

D. Customer Lifetime Value (CLV)

Customer Lifetime Value i.e. CLV is the present value of all future cash flows during the entire lifetime of relationship with the company. Thus, it is the value of business assigned to the customer during the entire relationship with the company. This is also termed as Lifetime Customer Value (LCV) or Lifetime Value (LTV). Thus, it is the sum of total worth of the customer's cash flow to business over the duration of his engagement with the company.

CLV is the value a customer provides to the business over the entire lifetime at the company. The aim is to maximise the earnings and profits by understanding customer behaviour and business cycles to classify and target customers with highest prospective value over time.

The formula for Customer Lifetime Value (CLV) is as below:

$$CLV = \sum_{t=0}^{T} \left[\frac{M}{(1+d)^t} r^t \right]$$

- M = Contribution
- r = rate of retention for customers
- d = discount rate
- t = time period
- T = total time periods

The below example highlights the sale to a customer (example Shivam) from 2021 to 2028. It is assumed that the sale is constant for the years. Further it is assumed that the gross contribution i.e. gross margin is about 40%. Discount multiplier is considered at 10% per year. Retention rate (Likelihood

of retention) of customer is 30%. It is also assumed that the customer flows are realised at the end of the years.

Customer Lifetime Value (CLV)

	2021	2022	2023	2024	2025	2026	2027	2028
A. Gross merchandise value (GMV)	300.00	300.00	300.00	300.00	300.00	300.00	300.00	300.00
B. Gross contribution @ 40%	120.00	120.00	120.00	120.00	120.00	120.00	120.00	120.00
C. Discount multiplier 1/(1+d)^t	0.91	0.83	0.75	0.68	0.62	0.56	0.51	0.47
D. Discounted contribution (B*C)	109.09	99.17	90.16	81.96	74.51	67.74	61.58	55.98
E. Retention rate	100%	30.0%	9.0%	2.7%	0.8%	0.2%	0.1%	0.0%
F. Discounted contribution * retention rate (D*E)	109.09	29.75	8.11	2.21	0.60	0.16	0.04	0.01
Customer Lifetime Value	**150.00**							

Here the customer – Shivam has Customer lifetime value (CLV) of INR 150 based on the retention ratio of 30%. This information can be similarly calculated for each customer on individual level or cohort (group) level. Cohort is a group of customers who can be segmented in a single unit based on their buying habit, spending power, age, region, etc. Thus, cohort analysis can be conducted with average revenue per user as one metric being used. Alternately the cohort revenue can be calculated to result in the Customer Lifetime Value (CLV) of the entire cohort. Averaging for the number of customers in the cohort will give the average Customer lifetime value for cohort.

Customer Acquisition Cost (CAC) – Customer acquisition cost is the cost incurred to convince a probable customer to buy a product or service. Some

of the costs that can be considered part of CAC include sales and marketing staff wages, software costs for sales and marketing, supplementary professional charges for consultants, designers etc along with associated overhead costs to sales and marketing.

$$CAC = \frac{MCC + W + S + PS + O}{CA}$$

- CAC = Customer Acquisition Cost [3]
- MCC = total marketing cost for acquisition of customers
- W = wages for sales and marketing team
- S = Software costs related to the marketing and sales (e.g. E-Commerce Platform, artificial intelligence marketing, analytics etc.)
- PS = Professional service costs in marketing / sales (Designer, consultant, etc.)
- O = Other overheads that are associated with marketing and sales
- CA = total number of customers acquired

Extending the above example, following costs may be incurred

Acquisition Costs	**Amount**
MCC = total marketing cost for acquisition of customers	200000
W = wages for sales and marketing team	100000
S = Software costs related to the marketing and sales (e.g. E-Commerce Platform, artificial intelligence marketing, analytics etc.)	50000
PS = Professional service costs in marketing / sales (Designer, consultant, etc.)	25000
O = Other overheads that are associated with marketing and sales	25000
Total costs	400000

Total number of customers acquired – 6000

$$CAC \quad \frac{400000}{6000} = 66.67$$

Thus, CAC would be 66.67 for each customer acquired. If the customer, Shivam is giving CLV of 150 as compared to CAC of 66.67 i.e. ratio of CLV/CAC is about 2.25. Such customers are giving higher value as compared to the costs to acquire.

Customer Retention Costs (CRC): These are the costs incurred by a company providing product or services to retain an existing customer. Some of the costs that can be considered part of CRC include after-sales support staff wages, software costs for after-sales, billing costs, promotion costs etc along with associated overhead costs to after-sales and promotion.

$$CRC = \frac{PCC + W + S + PC + O}{CR}$$

- CAC = Customer Retention Cost
- PCC = total promotion cost for promoting to existing customers
- W = wages for after-sales team
- S = Software costs related to the after-sales (e.g. E-Commerce Platform, supply chain monitoring, analytics etc.)
- PS = Professional service costs in promotion and after-sales (Designer, consultant, etc.)
- O = Other overheads that are associated with after-sales and promotion

CR = total number of customers retained

Extending the above example, following costs may be incurred

Acquisition Costs	Amount
PCC = total promotion cost for promoting to existing customers	75000
W = wages for after-sales team	50000
S = Software costs related to the after-sales (e.g. E-Commerce Platform, supply chain monitoring, analytics etc.)	25000
PS = Professional service costs in promotion and after-sales (Designer, consultant, etc.)	10000
O = Other overheads that are associated with after-sales and promotion	10000
Total	170000

Total number of customers retained – 4000

$$\text{CRC} \qquad \frac{170000}{4000} = 42.50$$

Thus, CRC would be 42.50 for each customer acquired. If the customer, Shivam is giving CLV of 150, CAC of 66.67 and CRC of 42.50 then the customer is giving 40.83 as a net profit. Such customers are giving higher value as compared to the costs to acquire and retain.

The company needs to finalise right strategic decision by computing and tracing the CLV along with the Customer Acquisition Cost (CAC) associated with CLV. This is important to understand the overall profitability of the company from each customer. In an ideal situation the CLV should be exceeding the CAC i.e. the value of each customer should be more than the cost spent on acquiring such customer. CLV provides pivotal metrics to basic financial health of a customer and the strategies employed to acquire him. In case the company is not able to retain or reduce the churn rate then these customers are leaking value for the company. The most important long-term strategy is to keep CAC at the minimum in relation to the CLV. Conversely to keep growing CLV as compared to the CAC to enable higher contribution to the company.

Similarly, Customer Retention Costs (CRC) need to be benchmarked to understand the CLV. It is generally understood that the CRC is lower compared to CAC i.e. cost of retaining a customer is lower as compared to acquiring new customers. A combination of CAC and CRC can be assessed against CLV to arrive at the net value each customer is adding to the company. Also, pertinent to note that CAC is an upfront cost vs CRC which is a recurring cost which will be incurred each year. Over a longer term the active customers can be benchmarked to understand the CLV and the value each bring to the company. Thus, value of customers can be assessed in the new age digital world which ultimately lead to value to the company.

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1 Recency Frequency and Monetary Model- https://www.researchgate.net/publication/311569434

2 Customer lifetime value (CLV) - http://www.personal.psu.edu

3 https://en.wikipedia.org/wiki/Customer_acquisition_cost

Chapter 12
How to Value your Business during COVID-19 times?

1. Valuation under Income Approach and its preference during COVID-19 times:

The income approach of business valuation is based on the idea of valuing the present value of future benefits. This approach estimates business value by considering the future income accruing over a period of time. There are two major methods that fall under this category which is capitalisation of earning method and discounted cash flow method.

A valuer should consider the subject company's cash balance and cash usage rate in assessing the company's ability to continue operations. This also includes assessing changes the company has made to preserve capital during this time period as well as going forward. Doing so will give the valuer a good idea of how long the company may survive under the current situation.

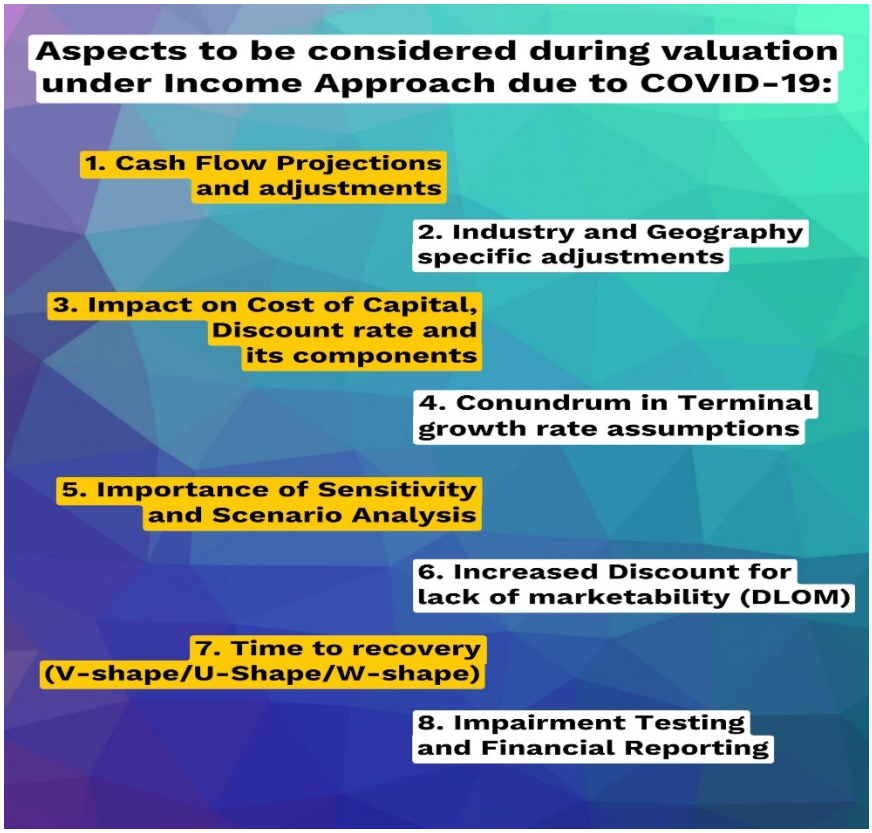
2. Why is Income Approach Valuation methodology more appropriate during the COVID-19 pandemic?

The Income approach is emphasized to value business in the new COVID-19 age with the use of multiple projection scenario analyses and probability-weighted outcomes. The key in DCF analysis, one of the methods under Income Approach, is the development of projections that reflect COVID-19-related impacts including a subsequent recovery to a point of stability and maturity over the long term. Forecasting and computation of discount rate under DCF analysis require significant judgement on the part of the valuer in tandem with management perspectives as to the company's long-term outlook. The cash flow projection rationales must be fully documented and shall include the effect of all relevant economic, industry, and company specific factors, as affected by COVID-19, and as known or knowable as of the valuation date. Also, the DCF method may be more suitable to estimate the limited and short-lived downside period more accurately as compared to other valuation methods.

Also, a H-model or multi-period model may be used with multiple discount rates to factor the expected short-term and long-term risks of the company. A higher discount rate may be applied for the first 3-year period when COVID-19 is expected to impact the earnings of the company comparatively more than the next 2 years for which a lower discount rate may be selected and for the period after which the business activity returns to normal, a terminal discount rate may be used which is in conjunction with the long-term Cost of equity of the company.

With the recent uncertainty created by the COVID-19 pandemic, the use of the Discounted Cash Flow analysis may be more appropriate for the determination of fair market value for many small closely held businesses such as private limited companies or unlisted public companies.

3. Aspects to be considered during valuation under Income Approach due to COVID-19:

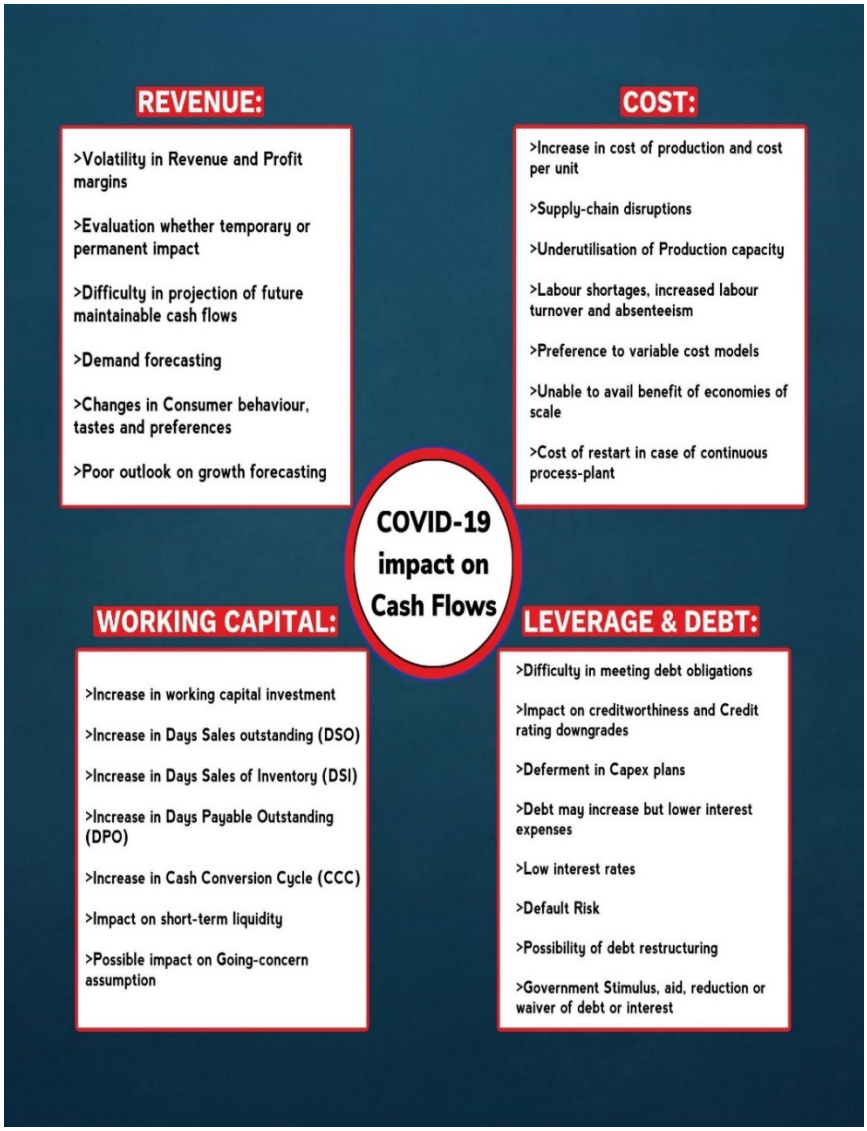


3.1 Cash Flow projections and adjustments:

Business valuation involves making cash flow projections and is forward-looking in nature and such cash flow projections reflect what is "known or knowable" to the valuer on the measurement date i.e. the valuation date. Due to the rapid, material and sudden change in the economy and the industry around the world, the valuation of a particular entity may be drastically different as on 31st December 2019 as compared to the valuation of the same entity carried out on 31st March, 2020 or on 31st March, 2021. Since there shall be significant fluctuations and variances from historical trends of revenue and expenses across financial years 2020, 2021 and 2022, the requirement of making normalization adjustments to such revenue and expenses becomes of paramount importance during forecasting of financial statements for the purpose of valuation.

The materiality of such cash flow adjustments may vary depending on the specific entity type. Furthermore, there is significant uncertainty about the duration and frequency of pandemic outbreaks, requiring substantial judgement and scepticism on the part of the valuer in development of cash flow projections based on the "known and the knowable" at the time of the valuation.

Due to COVID-19, the following considerations are required in cash-flow projections:



a) **Revenue Considerations:** The Valuer shall take into consideration the volatility inherent in projections of revenue and profit margins due to the impact of COVID-19. It is significant to evaluate whether the fluctuations in revenue are temporary or permanent in nature to ensure appropriate forecasting for the next 5 years and also for perpetuity. Due to the difficulty in forecasting revenue for the forecasting period, estimating future maintainable cash flows becomes challenging. The Valuer should quantify the impact of demand and growth forecasting with due

consideration to the changes in consumer behaviour, taste and preference, if any, due to recurrent lockdowns and the vagaries of pandemic. Also, in compliance to the ethical standards and regulations of *The Companies (Registered Valuers and Valuation), Rules 2017*, the Valuer has to ascertain the reasonableness and appropriateness of the forecasted numbers and ensure a declaration is provided to that extent in the valuation report and he should not disclaim the responsibility and shift such burden of responsibility to the Management.

b) **Cost Considerations:** The Valuer should evaluate the rationale and the impact of factors contributing to the increase in cost of production and thereby leading to an increase of cost per unit of product. The Valuer should take cognisance of such contributory factors leading to an increase in the cost of production, such as due to supply-chain disruptions of preferred vendors and due to experiencing hindrances and disruptions in logistical chain of movement of goods. Other factors impacting adversely are labour shortages leading to increased incidents of labour absenteeism and a higher labour turnover due to restriction on movement of civilians during lockdowns and in containment areas. Due to frequent lockdowns and lack of operational staff and foremen, the production capacity and efficiency of plant and machinery may be underutilized and therefore the benefits of economies of scale on cost may be under-availed. The Valuer may ascertain the impact of cost of the management decision to shift to a variable cost model from a fixed cost model such as that of opting for co-working and sharing office spaces rather than incurring a fixed rental cost in the nature of sunk cost or future financial commitments.

c) **Working Capital Considerations:** The Valuer should evaluate the impact of COVID-19 on the investment in working capital. Mostly, the requirement of investment in working capital should increase due to several factors such as the increase in the Cash Conversion Cycle (CCC) due to the increase in the number of days working capital remains invested in inventory (i.e. DSI) and trade receivables (i.e. DSO) before being realised into cash due to the slowdown in business operations due to lockdowns and other disruptions due to COVID-19. Unless the days of payable outstanding (i.e. DPO) increases too, there shall be a marked increase in the days of working capital investment which may have an adverse impact on the liquidity and the going

concern assumption in case the Current Ratio or the Acid Test Ratio is between 0 to 0.99 and in that case the Valuer, in a few cases, may have to consider its impact on the selection of the Valuation base, from income approach to liquidation approach.

d) **Leverage and Debt Considerations:** The Valuer should evaluate whether the Earnings Before Taxes (EBT) becomes negative after reduction of Interest expense from Earnings Before Interest and Taxes (EBIT) and the Free Cash Flows eventually become negative, signifying the poor health of the entity to meet its debt obligations. Also, the Valuer may evaluate the Degree of Financial Leverage (DFL) (i.e. DFL= (EBIT)/(EBT)) to reasonably infer the amount of debt which can be taken and paid since a higher DFL may indicate earnings volatility and an increased inability to assume and repay additional debt and interest whereas a low DFL may indicate a lower level of fluctuation in earnings and the ability to take additional debt. The Valuer may also evaluate the impact of COVID-19 on the creditworthiness and the credit rating of the entity to further consider the probability and effect of default risk. Even though plans of Capital expenditure and Capital Budgeting may be deferred during the COVID-19 crisis to preserve capital, there may be tendency to undertake additional debt due to the reduced interest rates, therefore debt may increase but the interest expenses may reduce. The Valuer may evaluate the impact of quantification of any Government stimulus provided in the form of a loan or interest waiver or a moratorium period provided in the payment of interest such as the forgiveness of the full loan amount taken under Pay-check Protection Program (PPP) in the United States on the satisfaction of certain conditions or a 6 month moratorium announced by the RBI EMI Moratorium dated 27.3.2020 from March to August 2020 on repayment of loan, at the discretion of the bank.

3.2 Industry and Geography specific adjustments:

COVID-19 may have been a death knell for businesses in certain sectors i.e. Travel and tourism, hospitality, aviation and consumer discretionary, whereas it was a blessing in disguise for the prosperity and growth of businesses in specific sectors i.e. Digital payment platform, Educational Technology firms, Pharmaceuticals, Food delivery and aggregators platforms. Therefore, the valuer should evaluate the impact of COVID-19 on the specific industry sector the business pertains to and shall also gauge the impact of other

specific fundamental parameters such as the industry demand and growth affecting the financial condition and operating outlook of the business and consider the same in his valuation analysis.

The severity of COVID-19 impact on the economic health of several sectors is enumerated below:

SECTOR WISE SEVERITY OF COVID-19 IMPACT:

Sectors Positively Impacted	Sectors Moderately Impacted	Sectors Most Severely Impacted
Pharmaceuticals, Healthcare, EduTech, FMCG	Consumer Goods, Trading	Travel, Hotel and Tourism, Aviation
Agriculture, Produce, Digital Products	Banking	Local Transport, Automobiles and Advanced Industries, Restaurants and Hospitality, Cinema
Insurance, Telecommunications, Utilities	Glass, Rubber and Plastics	Construction and Real Estate
Home Gardening, Online Coaching, Mental Health	Freight and Logistics	Tech & Gadgets, Gems & Jewellery
Data Science, Spiritual Sciences	Oil & Gas Drilling	Automobile, Steel, Paper, Print
Alternate Energy, Gaming, Affiliate / Network Marketing	Chemicals and Chemical products	Live Sports, Events and Conferences, Luxury Products
Freelancing, Stock Market Investing		Basic Metal and mining, Shipping, Microfinance Institutions
IT Services		Textiles, retail, Apparel & Footwear
Industrial and specialized REITs		Financial & Professional Services
		Electrical Equipments

Therefore, the Valuer should be informed that the industry wise economic impact that COVID-19 has varied across industries and in general the industry wise impact may be categorised as:

a. Minimal — consumer staples, technology and utilities;

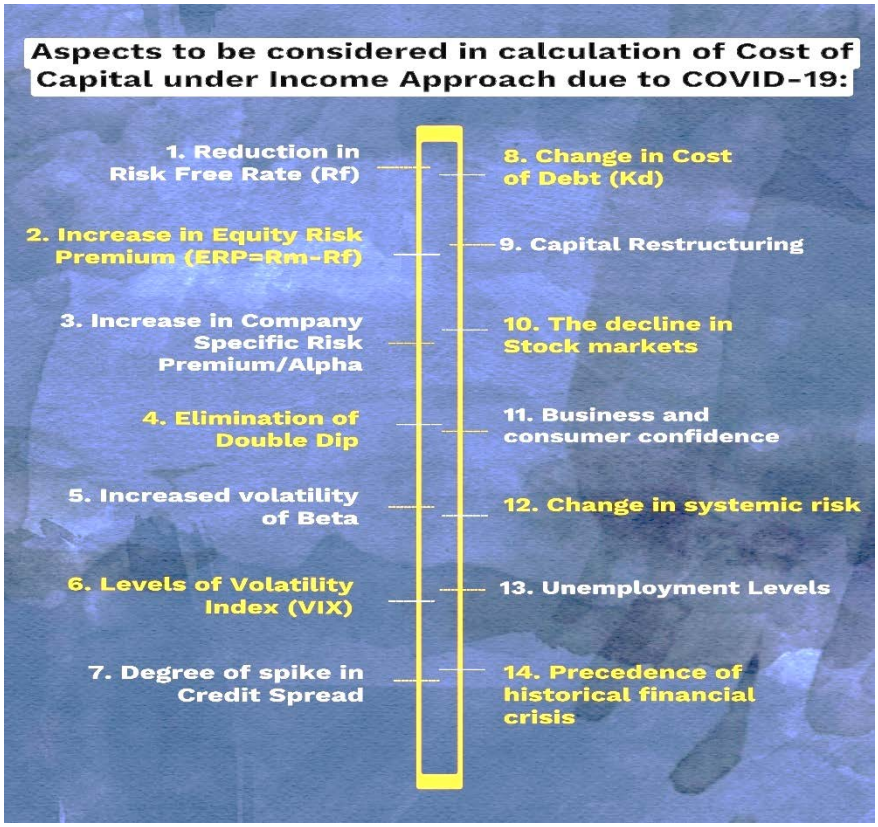
b. Moderate — financials, health care, industrials and real estate; and

c. Significant — consumer discretionary, energy, retail and tourism and hospitality.

3.3 Impact on Cost of Capital, Discount Rate and its components:

The valuer may continue to use Capital Asset Pricing Model (CAPM) and other established methods for calculating the cost of capital as they have a well-founded theoretical basis and should be appropriate to calculate the discount rate even in an economic downturn. However, a thorough review of each component of the Cost of Capital is required both individually as well as jointly with other inputs and the possibility of normalizations to such components may not be ruled out in order to evaluate the assessment of the overall result.

The following table enumerates the major aspects to consider in calculation of the Cost of Capital under the Income Approach due to COVID-19:



The various components of cost of equity:

Cost of Equity= Risk-free Rate (Rf) + Equity Risk Premium (ERP)+ Company Specific Risk Premium/Alpha (α)

a) Reduction in Risk-Free Rate:

To combat the economic downturn and recession due to the onset of COVID-19, the RBI had undertaken several initiatives to infuse liquidity in the economy by reducing the Repo Rate and thereby the base interest rate. This coupled with the increasing demand by investors for quality and safe investments in Government Bonds, there has been a decrease in the risk-free rate.

Risk Free Rate (R_f)

Interest Rate	As of	
	2/28/2020	3/31/2020
India (10-Year Bond Yield)	6.37%	6.14%
USA (20-Year Treasury Constant Maturity Rate)	1.46%	1.15%

Source: *COVID-19- Impact on valuations material dated 8.04.2020 by EBC Learning and Finvox Analytics*

A decrease in the risk-free rate may not necessarily mean a reduction in the Cost of Capital since there may be an upward impact on the Cost of Capital by other components due to increase in risk and volatility of returns.

b) Increase in Equity Risk Premium i.e. (ERP= Rm-Rf):

There has been an increase in the Equity Risk Premium on the onset of COVID-19 i.e. April 2020, as compared to the pre-COVID era i.e. February 2020, both in the developed economy of USA and in the developing economy of India, due to the increase in expectation of return on the stock on the assumption of a higher risk and volatility on returns by the investor.

United States of America-

Aswath Damodaran increased implied ERP from 5.77% as of March 1, 2020 through 6.52% as of April 1, 2020 *(**Source:** http://pages.stern.nyu.edu/-adamodar/)*

Duff & Phelps also increased Recommended US ERP from 5.00% to 6.00% with effect from March 25, 2020

*(**Source:** https://duffandphelps.com/insights/publications/cost-of-capital)*

India-

The Equity Risk Premium of India as in January 2020 as per Aswath Damodaran was 7.08% *(**Source:** https://www.youtube.com/watch?v=h8y02tnMY_s)*

The Equity Risk Premium of India at the beginning of April 2020 was 7.50% as per Incwert Valuation Chronicles, Series 4, 2020 (***Source:*** *https://secureservercdn.net/160.153.137.218/end.241.myftpupload.com/wp-content/uploads/2020/07/Assessment-of-discount-rate_india_June-2020.pdf?time=1594016580)*

The valuer should prefer using of Forward-Looking estimate for Market Return over the Historical estimate of Market return since, say, the historical estimate for the market indices such as NSE NIFTY Returns would disregard the impact of the structural changes occurred in the previous year which may be an economic downturn as was in 2007 or may be the favourable effects of Liberalisation, Privatisation and Globalisation model (LPG Model) introduced in year 1991. Whereas the forward- looking estimate of market return ensures to capture the implied Equity Risk Premium at the current market value of the equity by equating the present value of expected future cash flows to the total market capitalization of all the constituents of the index. Therefore, the adoption of the latter estimate would ensure that when risk and volatility increase and consequently Market Indices fall, it would lead to an increase in the Equity Risk Premium (ERP).

c) Increase in Company-Specific Risk Premium/Alpha (α):

In order to ensure all factors contributing to risk are considered in the discount rate, the valuer uses his professional judgement to estimate the company specific risk premium which is dependent on the internal factors of the company such as financial performance in previous years, product or service vertical, depth and concentration, competitive strength, risks associated to KMPs, litigation history and current status of pending litigations, small size and illiquidity, amongst other company-specific factors. Also, the uncertainty in cash flow projections may lead to some downside scenarios being missed from the probability weighted average set of projections and the valuer may be inclined to factor a risk premium, namely, Alpha, for the same in the discount rate for appropriate estimate of valuation.

Therefore, Company Specific Risk Premium/Alpha **(α)**, may be captured by taking effect in:

- Future projections/ cash flows of the company or
- Adding additional risk premium to the cost of equity for COVID-19 in addition to the internal factors of the company.

Usually, valuers estimate company specific risk premium or Alpha to be in the following range:

- For higher risk companies in the range of 4-4.5%
- For lower risk companies in the range of 1.5-2%

d) Elimination of Double Dip:

The valuer should be cautious and avoid double count wherein both, normalizations to cash flow projections reflecting the impact of COVID-19 have been made and the element of risk premium due to COVID-19 has also been considered in calculating the company-specific risk premium. Double dip should be avoided since it would lead to understated or conservative valuation of business.

Valuers prefer adjustments for COVID-19 on the cash flow projections over the adjustment made in the cost of capital by adding a risk premium to Alpha since the latter ensures more accurate forecasts and is lesser subjective. However, adjusting for COVID-19 impacts on both cash flows and discount rate may lead to double counting the pandemic effect and an inaccurate and underestimated business valuation.

The risk premium added in cost of equity should be for a specific time period and not for the entire projection period.

In case adjustments are unable to be made to the cash flows, then adjustments may be made to the discount rate and also a H-model or a multi-phase model of discount rates may be used, wherein initially a higher discount rate may be used for a period of 3 years and then discount rate may be brought down corresponding to the pre-covid level for the remaining 2 years out of the 5-year forecast period.

It has been observed that some valuers have followed an approach of adding a discount for distress. Distressed entities generally have higher risk profiles and lower profitability levels compared to their healthier competitors, and a discount for distress, usually at least 20%, is built into the valuation. However, this is not a preferred approach and a better approach is to consider the impact of risk in either the cash flows or the discount rate.

Therefore, the valuer should reasonably expect-

A lower Increase in Cost of Equity

- In case the management considered the effect of COVID-19 and builds the risk in cash flow projections
- A higher Increase in Equity Risk Premium (ERP) is set off by a lower decrease in Risk-Free Rate (Rf)

Higher Increase in cost of Equity

- In case the management considered the effect of COVID-19 and builds the risk in Cost of Capital by adding a COVID-19 specific risk premium.

e) Increased Volatility of Beta:

Estimating betas using weekly returns over the past two years shows that, on average, betas have increased substantially since the COVID-19 pandemic began in March 2020. An increase in beta, all other factors being unchanged, implies an increase in discount rate and a corresponding reduction in valuation. The increase in betas varies broadly across industries. The COVID-19 pandemic has also resulted in an additional element of uncertainty for the valuer with regard to the most appropriate way to calculate beta. It is well established that the estimation period may impact betas. Since, the COVID-19 pandemic unfolded drastically, betas calculated using short-term lookback windows are more likely to be affected than betas calculated from longer-term data. Again, this is a valuer's professional judgement to evaluate and consider the sector to which the company belongs to determine whether the long-term price movements should be given higher weightage in Beta estimations or short term. It is to be kept in mind that for the sectors, which have had moderate to low impact beta may be estimated using long term price movements, and sectors which have had high impact with lingering after effects, would require higher weightage to short term price movements for beta estimations.

The Valuer should apply increased scrutiny to previously assessed betas which shall be appropriate to ensure that expected sector volatility is appropriately incorporated within the discount rate. Due to the extreme volatility experienced due to the spread of the COVID period there can be a disproportionately large impact from the data in certain months on the beta calculations, in some cases causing betas to double or halve from previous levels. The valuer may decide to appropriately exclude the data of these particularly volatile months in certain circumstances to ensure the beta isn't disproportionately weighted towards data from this highly volatile period.

f) Levels of Volatility Index (VIX):

India VIX, which is also called the fear index, touched 86.63 on 24th March, 2020, higher than its historic closing peak of 85.13 it reached during the global financial crisis in November 2008. The VIX Index is an apt indicator to gauge the investor sentiments and whether the market value is a true

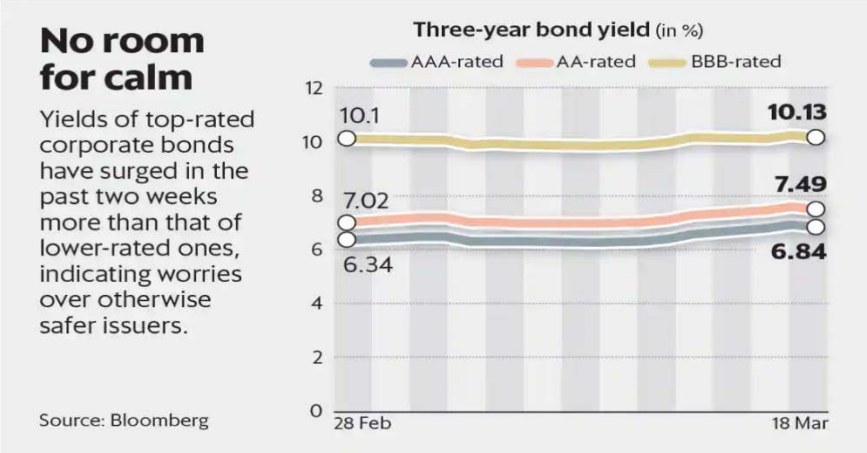
indicator of Fair Value or is indeed Fear Value. The VIX Index which usually trades at the level of 20, when trades at a level of 40 or above represents investor's anxiety and fear and such high levels of implied volatility indicate are acutely bearish.

g) Degree of spike in Credit Spread:

During the months of March and April 2020, India's corporate bond market had been pricing in greater risk due to the Covid-19 outbreak threatening economic activity and the corporate bond spreads continued to widen even for AAA-rated paper. In fact, the yield on AAA-rated corporate bond had jumped more than that on the lowest investment grade rating of BBB, as the below chart indicates. For raising three-year money, AAA-rated companies had to shell out at least 6.8% against a modest 6.3% a mere two weeks earlier. Those with AA rating have had to shell out at least 25 basis points more. Even the strongest balance sheets were having to shell out more to entice investors now.

Therefore, valuers took into consideration the increase in the Credit spread due to the impact of COVID-19, in determining the cost of debt since a credit spread is the risk premium add-on to the base interest rate used when pricing corporate debt issues and reflects the credit rating or risk rating of the

company, the maturity of the issue, current market spread rates, as well as other components such as security and liquidity.



h) Increase in cost of Debt (Kd):

The valuer may need to evaluate the revision in the cost of debt to consider industry, geographic or company specific risks arising out of current market conditions. Therefore, valuers must consider on a case-by-case basis whether the actual and current debt margins should be applied or not in order to estimate an appropriate cost of debt by giving weightage to the following factors:

- Whether a company is funded short-term or long-term,
- The requirement of future re-financing,
- Promised vs. expected yield,
- Assumption whether observed credit spreads persist indefinitely,
- Creditworthiness and credit rating of the entity
- Decrease in base interest rates
- Ability to meet debt obligations and possible debt restructuring
- Requirement of additional debt to meet Capex plans
- Conversion of debt into equity share capital
- Government stimulus on waiver or relaxation of debt or interest

The same principle holds for the appropriate target debt/equity ratio which, in general, might be expected to be lower relative to equivalent historical ratios

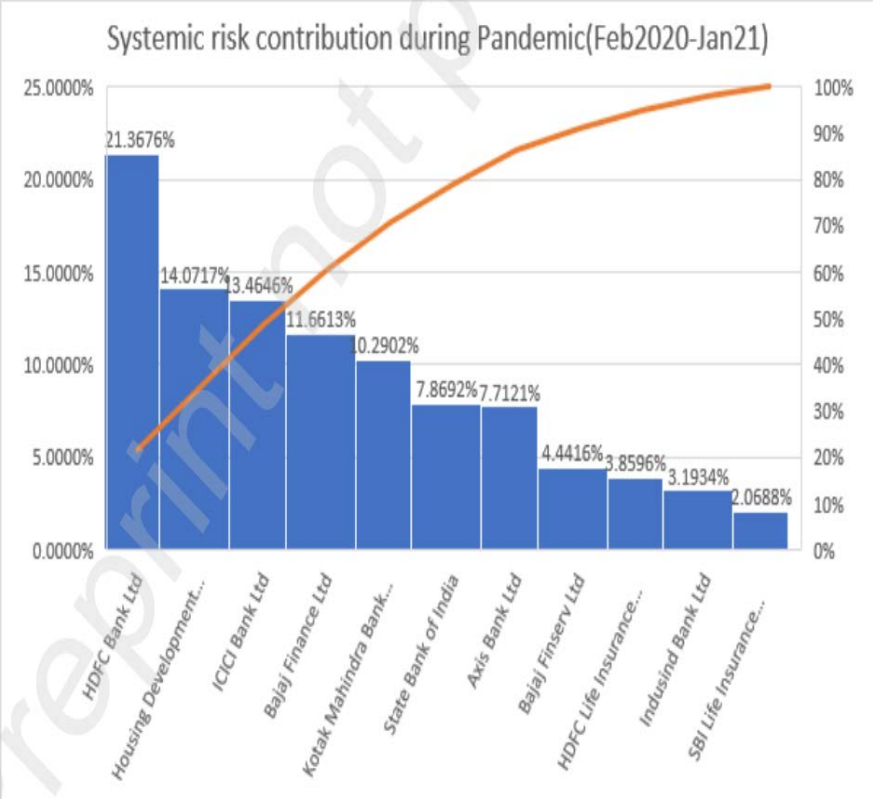
in certain sectors due to the constraints on debt financing packages during covid

i) Other notable considerations such as capital restructuring, decline in stock markets, changes in business and consumer confidence, change in Systemic Risk, rising unemployment levels and precedence of historical financial crisis

These factors also have significant impact on the cost of capital or the discount rate which the valuer takes in consideration while valuing the business. The valuer should evaluate the impact of the capital restructuring exercise on the cost of capital in situations of buy back of shares, loan or interest restructuring by bank due to loan becoming NPA, loan refinancing at a higher interest rate due to credit downgrade or such impacts in case of conversion of debt into equity. The decline in stock market due to COVID-19 instils fear in the minds of the investors towards equity investments and a higher market return may be expected due to higher volatility. COVID-19 has disrupted the lifestyle and livelihood of the public which may lead to a change in business and consumer confidence or a change in taste and preference and may lead to an increase in the required rate of return from the business for the investors.

As per the research paper titled *"Change in Systemic Risk in Indian Financial Market due to COVID-19 Pandemic" by Chandramani Jha and Dr. Utkarsh Goel, (IIIT), Allahabad, Department of Management Studies,* the marginal expected shortfall of financial firms of NIFTY 50 for pre-COVID year 2019-20 and COVID year2020-21 were measured and found that the undercapitalization of Indian financial firm has increased 3 fold during COVID-19 Pandemic ensuing systemic risk had been increased during COVID-19 year to pre-COVID year. The result is also supported by daily stock return correlations of financial firms which is a simple and robust indicator of systemic risk. It has been found that the correlations of financial firm stock returns among themselves and market index as well is increased during COVID-19 pandemic that led to rise in systemic risk.

Figure 2. **Systemic risk contribution during Covid Year.**



Source: *Research paper titled "Change in Systemic Risk in Indian Financial Market due to COVID-19 Pandemic" by Chandramani Jha and Dr. Utkarsh Goel, (IIIT), Allahabad, Department of Management Studies*

As per the above table, HDFC Bank has highest average capital shortfall and contributes maximum to the systemic risk during covid-19. Whereas SBI Life has contributed lowest to systemic risk in both pre-covid and covid year.

3.4 Conundrum in Terminal Growth rate assumptions:

Valuers usually considers the growth rate of Gross Domestic Product of the country it is situated in as the terminal growth rate for the business. While economies worldwide had been hit hard, India had suffered one of the largest contractions. During the F.Y. 2020-21, the rates of decline in GDP for the world were 3.3% and 2.2% for emerging market and developing economies. The table hereunder summarises growth of GDP pre-covid i.e. F.Y. 2019 and

post-covid for India i.e. FY 2020, along with a reference group of comparable countries and the world. The fact that India's growth rate in 2019 was among the highest, makes the drop due to Covid-19 even more noticeable. The valuer may assume the terminal growth rate in the range of 3.5%-4% which is a close approximation of the long-term growth rate for India's GDP at constant prices in 2019 i.e. pre-covid period.

Table 1: Summary of key macroeconomic indicators

	India	Reference group	World
GDP at constant prices 2019 (% change)	4.0%	3.6%	2.8%
GDP at constant prices 2020 (% change)	-7.3%	-2.2%	-3.3%

Source: *World Economic Outlook Database April 2021, International Monetary Fund*

Additionally, the valuer should acknowledge that the long-term growth rate assumptions should reflect market participants' long-term estimates for inflation and real economic growth, adjusted to reflect the outlook for the sector that a company is operating in as well as company specific factors. Typically, the effects of new industries and technologies and the impact of competition within industries may limit the company's specific long term growth rates to a lower level than for the economy as a whole to at least some degree. However, the long-term sector and company specific outlook may well have changed as a result of Covid-19, with some sectors demonstrating stronger growth such as online educational platforms like Byju's and Unacademy, online connectivity platforms like Zoom Meetings, digital payments platforms like Phonepe, Bharatpe, Paytm etc., and others showing more resilience and being relatively weaker than previously expected. The overall drop-in risk-free rates, and indeed discount rates more broadly, is also arguably consistent with a reduction in long term economy wide nominal growth expectations to at least some degree, due to changing

expectations of inflation and/or real economic growth. It is therefore important that the discount rate and long- term growth rate assumptions used within a valuation are internally consistent, otherwise the capitalization rates/multiples implied within terminal values may not be realistic or reconcilable with market data.

3.5 Importance of Sensitivity and Scenario Analysis:

Fair value is based on what is known and knowable at the time of valuation and it requires informed judgement on the part of the Valuer. Thus, while valuing companies for the year 2020 and onwards, revenue and expenses may show a significant fluctuation and deviation from the Last Twelve Months data (LTM) and historical trends and may not reflect a normal level of operations for the basis of forecasting entity's operation. Thus, while computing the fair value, sensitivity and scenario analysis might be worth considering wherein probability weighted average in multiple scenarios for the forecasts may be preferred over a single set of projections.

Different cash flow scenarios could be a useful way of understanding the range of potential outcomes for a business and its attached risks. For example, the following multiple scenarios may be considered in the Sensitivity Analysis:

- **Base Case:** In this scenario the revenues and operations may be impacted for 1-2 years and will return to normal level of operations after that period. This may be considered as scenario with short to medium term disruption and the severity of impact of COVID-19 is moderate.
- **Bear Case:** In this scenario the revenues and operations may be impacted for the next 3-5 years and shall take time to recover. In such cases, longer term projections would be required (say 10 years). This may be considered as a scenario with a broader and longer economic downturn and the severity of impact of COVID-19 is significant.
- **Bull Case:** In this scenario the revenues and operations would return to normal level of operations within the same / next year. This may be considered as a business-as usual scenario and the severity of impact of COVID-19 is nil to negligible.

The valuer may determine whether Going Concern Value may be arrived at using scenario analysis. While Scenario analysis is not new and is often used in valuation given the uncertainty around future, this is more relevant during these times of COVID-19 crisis and disruption in business.

In case, the valuer chooses to value the company using scenarios, value of going concern may be:

Going Concern Value = (Value base case x Probability base case) + (Value bear case x Probability bear case) + (Value bull case x Probability bull case.

3.6 Increase Discount for Lack of Marketability (DLOM):

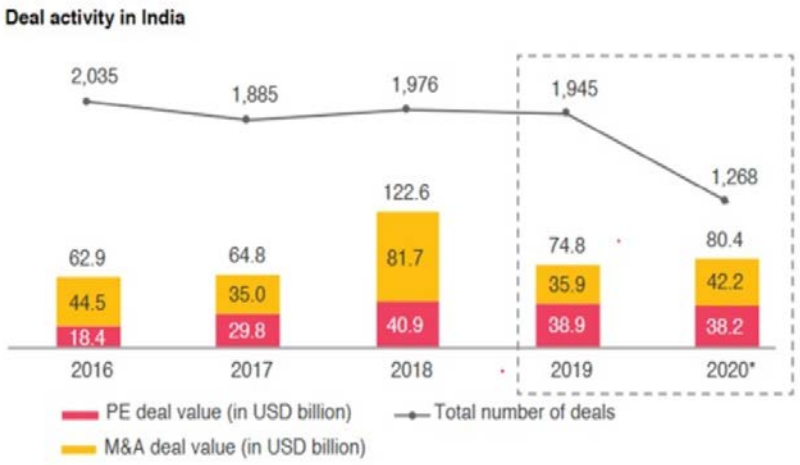
The valuer shall evaluate whether there is a significant impact of COVID-19 on the aspect of illiquidity or non-marketability of investment in the concerned company or whether there is a decrease in the ability on the part of the investors to access the Capital or Secondary Market to liquidate the investment in the company, thereby demanding a COVID-19 marketability discount.

The logic to develop a COVID-19 marketability discount can be applied to directly adjusting the multiplier, discount, or capitalization rate or applied as a separate discount for marketability. As with any discount, care must be exercised by the valuer to avoid Double Dip i.e. to not apply a discount for a risk that has already been fully accounted for.

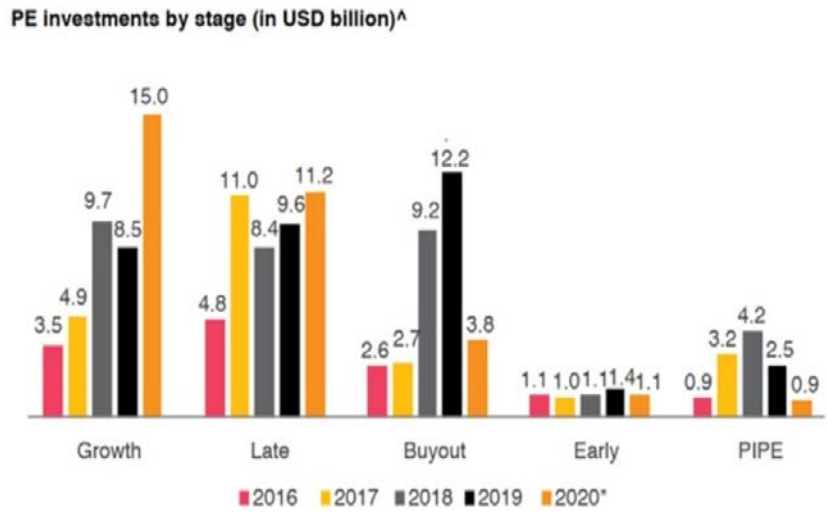
When applying a COVID-19 marketability discount, Valuers must value the subject company similar to how they would have done prior to COVID-19-related issues becoming prevalent. Valuers may adjust future cash flows to what is most likely. Since February 2020, in general, marketability discounts have increased as a result of the factors below – even though it has been partially offset by a lower risk-free rate of interest:

- Decreased access and opportunities to financing for the underlying business and the purchase of the minority position itself.
- Decreased Mergers and Acquisition activity and a reduced pool of willing buyers.
- Increased supply side of secondary investments as institutions seek to divest to rebalance and/or meet regulatory requirements.
- Reduced expected profitability, cash flow and longer realization timelines.
- Increased perceived risk and higher required rate of return

The following tables show the trends for change in Deals in both, Private Equity and Mergers and Acquisitions in the last 5 years including the impact of COVID-19:



Source: PWC – Deals in India (Annual Review)



Source: PWC – Deals in India (Annual Review)

Therefore, a higher discount for lack of marketability (DLOM) shall be required in the present COVID-19 environment since the transactions of

businesses have decreased significantly and there is a drastic decrease in market activity and of the pool of interested, willing buyers, thereby leading to an increase in illiquidity and the DLOM.

3.7 Time to Recovery (V-shape/U shape/W shape/K shape):

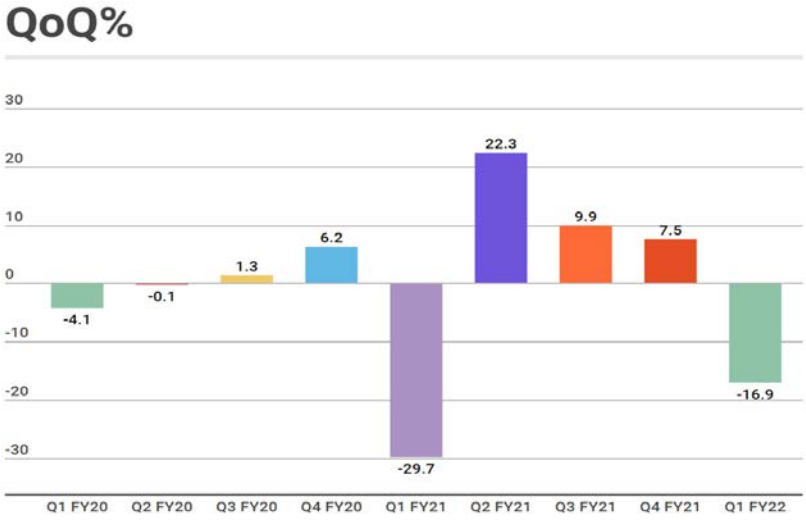
India's Gross Domestic Product (GDP) contracted by 7.3% in F.Y. 2020-21.

A V-shaped recovery is considered the best-case scenario, where the economy bounces back immediately after a sharp decline to go back to its pre-recession level in less than a year.

In a U-shaped recovery, the economy experiences stagnation for a significant period of time after declining. It then rises gradually to its previous peak. This means the recession lasts longer, causing job losses and erosion of savings.

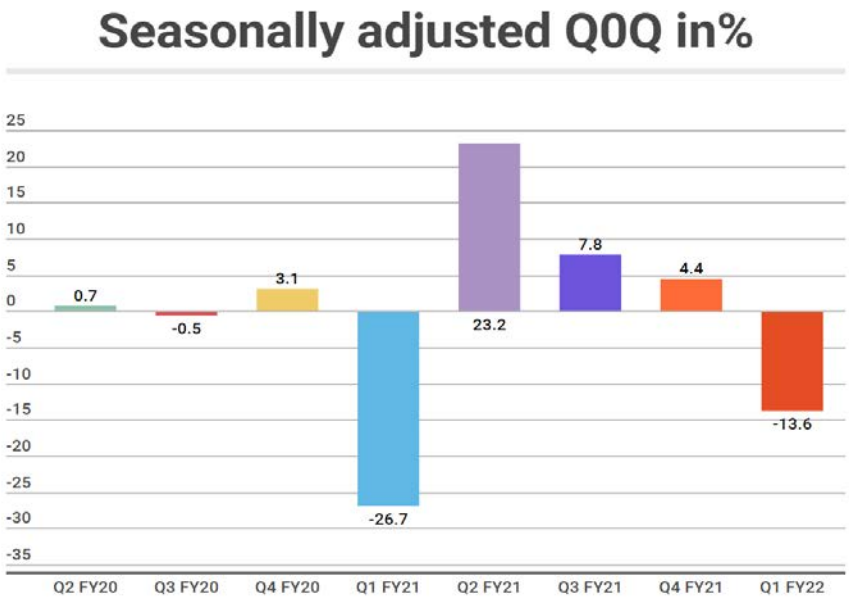
Also called the "double-dip recession", a W-shaped recovery sees an economy staging a brief comeback only to fall a second time. This scenario breaks consumer confidence and enters the full recovery period that can take up to 2 years. The economy will witness two recessionary periods.

In respect to the Indian economy, if one looks at quarter-on-quarter growth, the recovery seems to be W-shaped if the coming quarters see growth. However, when seen quarter-on-quarter, GDP generally contracts in Q1 because the size of the economy is higher in Q4.



Source: *Business Standard publication dated 7.10.2021*

When growth is seen in the context of seasonally adjusted quarter-on-quarter, it seems to be W-shaped if it comes in the next quarters. This is the most appropriate measure in the current times.

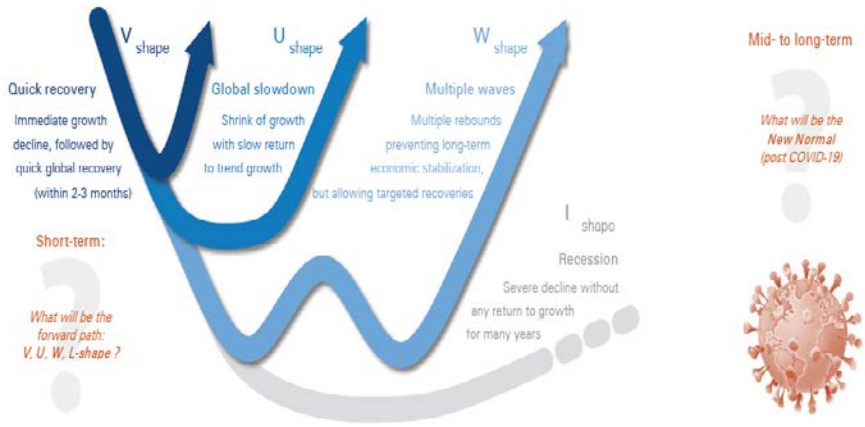


Source: *Business Standard publication dated 7.10.2021*

Therefore, the recovery pattern of Indian economy is W shaped and the Valuer may take due consideration of the same while forecasting and doing valuation of the business.

The following table explains the various types of economic recovery patterns in pictorial representation:

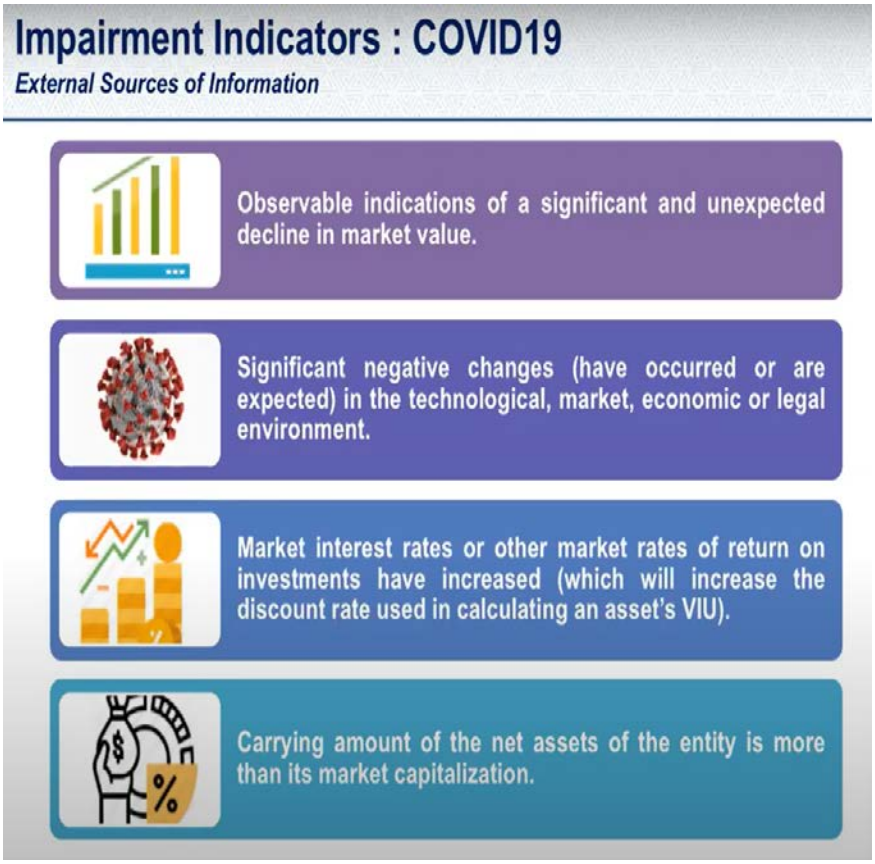
Figure 3: Economic recovery scenarios



Source: Arthur D. Little analysis

3.8 Impairment Testing and Financial Reporting:

Since the financial and capital market environment across the globe got affected by the rapid spread of COVID-19, there may be significant volatility or indications of significant decline in market prices of financial instruments. The valuer should evaluate whether the management has carried out the annual impairment testing of assets or cash generating units in compliance to the IND-AS 36, Impairment of Assets. The following external factors are indicative of requirement of impairment testing and the estimation of the recoverable amount of the asset, including non-financial assets, (i.e. Recoverable value is the higher of Fair value less cost of selling and Value in Use.) As per IND-AS 36, Weighted Average Cost of Capital (WACC) derived from Capital Asset Pricing Model (CAPM) can be used as a discount rate after adjustments for COVID-specific risks, to derive the Value in Use of the asset.



Source: *Material of Impact of COVID-19 on valuation of securities and financial assets by Finvox dated 23.6.2020*

COVID-19 global pandemic has caused substantial contraction in the entity's business since March 2020 and this depressed scenario is expected to continue over the next few quarters and onwards. Since entities are experiencing significant cancellation of business orders and bookings by its customers and the observable market value of the business as a whole has declined coupled with significant adverse changes occurring or are expected to occur in the technological, market and economy, are reasons enough for undertaking the impairment exercise and recognising impairment loss in case of long term or a permanent decline in the value of the assets.

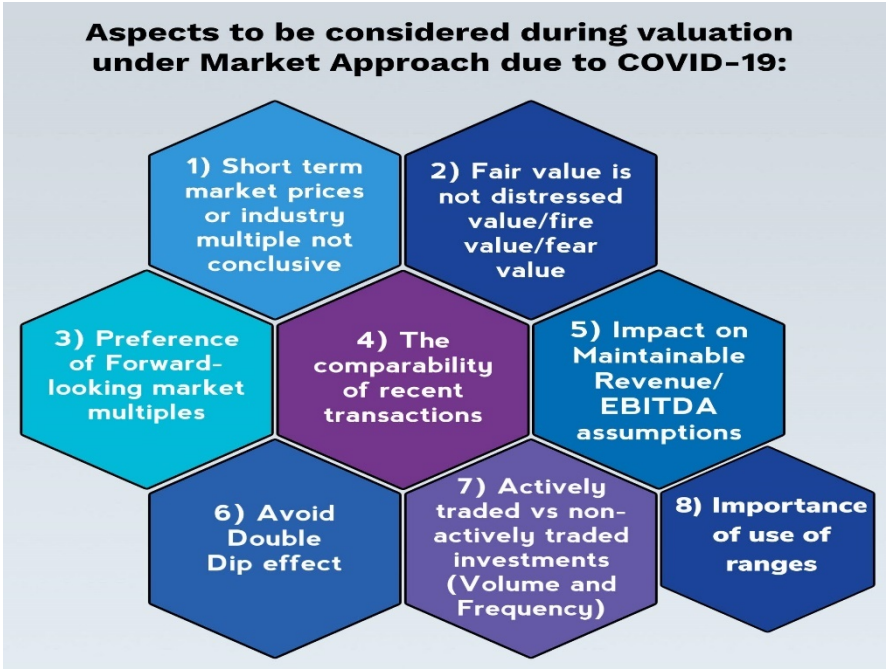
The valuer acknowledges that cash flows may not be affected by impairment directly as the same is a non-cash transaction in nature. However, it directly

affects the income statement and balance sheet in reducing the value of the assets to the recoverable amount in case of recognition of impairment loss.

4. Valuation under Market Approach:

Market-based valuations determine the value of a company by comparing it to similar business transactions. The valuer while applying the Market Method may be faced with the challenge of insufficient access to market data on insufficiently comparable competitors. Additionally, the valuer is posed with another distinct challenge of deciding to use pre- COVID-19 transactions in post-COVID-19 valuations. Expert valuation analysis and normalisation adjustments shall be required in order to produce useful financial metrics. During such unprecedented times of COVID-19, merely selecting a group of transactions from the past two years and calculating an average multiple shall not suffice.

5. Aspects to be considered during valuation under Market Approach due to COVID-19:



5.1 Short Term Market prices or industry multiple not conclusive:

The valuer should take a long-term view of the market multiples rather than a distressed multiple as on a specific date which may disproportionately reduce the value of the company.

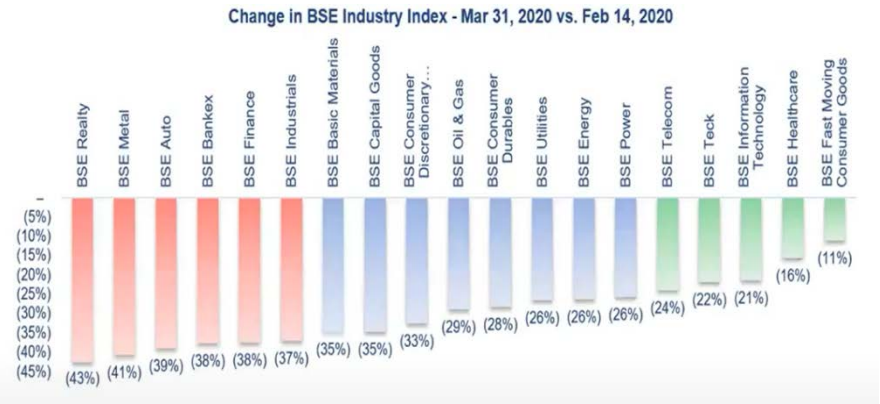
The valuer should evaluate whether the market price of comparable companies on the valuation date represents fair value or not.

Valuer, usually, uses Last Twelve Months (LTM) EBITDA multiple while applying Market Approach, and such a singular use of LTM multiple may not be appropriate and may require a combination of LTM and NTM i.e. Next Twelve months Multiples.

The valuer should note that the unlisted companies or the private limited companies should be valued using inputs consistent with the perspectives of the market participants, that emphasizes on the use of general market conditions over and above market conditions for a particular date.

Therefore, Industry multiple calculated based on the prevailing market prices as on 31.3.2020 may not be an appropriately adjusted Industry Multiple for unlisted companies especially because of a high volatility factor. Therefore, it is pertinent for the valuer to use the multiple based on the market prices over a period of time rather than on a specific date.

The valuer takes cognisance of the fact that the unlisted and private limited companies are less volatile since private investments lag the public markets and change value less quickly as compared to the actively traded public limited companies and should not be discounted as much as the public limited companies. The private investments lag the public markets since the public markets have a more active market and there are frequent and quick sale and purchase of equity shares as compared to that for a closely held private limited company, hence the volatility is lower in the latter company.



Source: *COVID-19- Impact on valuations material dated 8.04.2020 by EBC Learning and Finvox Analytics*

The valuer should not assume that the corresponding industry multiple of Realty has also declined by 43% just as there is a similar decline in the Realty Index, while conducting business valuation.

5.2 Fair value is not distressed value/fire value/fear value:

As per IND-AS 113, Fair Value is defined as 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.

Significant elements of Fair Value:

1) Orderly Transaction
2) Measurement Date
3) Market Participants assumptions wherein there shall be a willing buyer and a willing seller and there shall be focus on future maintainable income or revenue

Fair value is not the same as Distressed sale Price/Forced sale price.

Fair Value means the amount which would be received in an orderly transaction given an appropriate marketing period. In case of distressed sale or a forced sale during the adverse impact of COVID-19, then an appropriate marketing period may not have been available to ensure an orderly transaction and such consequent distressed sale price should not be considered as Fair Value.

Comparable transactions pertaining from February 15th to March 31st, 2020, should not be considered since such value is not fair value and is a forced/fire sale price.

It is important to assess whether current market prices are reflecting long term fair value. The valuer should consider preference of unaffected metrics over affected market prices and in case of use of actual or normalized market multiples, it is important to document the nature of the selected multiples.

The valuer may consider the VIX Index, which is an apt indicator to gauge the investor sentiments and whether the market value is a true indicator of Fair Value or is indeed Fear Value. The VIX Index which usually trades at the level of 20, when trades at a level of 40 or above represents investor's anxiety and fear and such high levels of implied volatility indicate are acutely bearish.

5.3 Preference of Forward-looking Market Multiples:

The valuer should prefer the use of forward-looking public company market multiples. In the guideline public company method (GPCM), a variation of the market approach, forward-looking multiples are now stressed to indicate business value. This is because, these multiples reflect COVID-19-related market pricing and earnings impacts. The recent financial history of a company (its past revenue, earnings, cash flow, etc.) are now viewed as less reliable parameters used to indicate value, since they do not fully reflect the subject company's post-COVID-19 financial conditions and earning power outlook.

5.4 The comparability of recent transactions:

The Guideline Public Method and Comparable Transaction Method is a comparable analysis method that seeks to value similar companies using the same financial metrics applied in recent comparable transactions. Market approach requires use of different multiples like Book Value Multiple, EBIT multiple etc. The valuer should be mindful that a multiple reported even a month ago might materially misrepresent the risk associated with a comparable transaction as on date.

The valuer may prefer to use the Transaction Multiples Method but special attention and caution is required to be provided on such comparable transactions occurred during the COVID-19 crisis period which may require downward adjustments to prevent overstatement of business valuation. The Valuer may use his professional judgement to evaluate the degree of this

adjustment which may need to be assessed on a case-to-case basis depending upon the industry and the level of stress.

Thus, the valuation professional needs to carefully use the multiples associated with the transactions that occurred during this crisis.

In usual practice, the comparable transactions pertaining to a time period of previous 2-3 financial years are considered and a longer duration is not preferred due to drastic changes in economy, industry and technology and other macro-economic factors.

5.5 Impact of maintainable revenue/EBITDA assumptions:

The valuer shall evaluate maintainable revenue and earnings, keeping in view the market participants' perspective.

The valuer shall analyse comprehensively the impact on the financial metrics of the target company such as PAT, EBITDA, EPS, EBIT, Revenue etc.

The valuer shall gain insight by industry benchmarking to comprehend short-term and long-term impacts on the financial metrics.

	Expected Change in PAT	
	Scenario 1 – Covid Impact lasts till 1Q FY 21	Scenario 2 – Covid Impact lasts till 2Q FY 21
• Consumer Discretionary	(19.9%)	(31.2%)
• Real Estate	(29.2%)	(49.6%)
• Energy (Oil and Gas)	(40.2%)	(57.7%)
• Financial Services	(10.0%)	(17.5%)
• Auto and Auto Components	(11.7%)	(21.3%)
• FMCG	(2.5%)	(5.2%)
• IT and Exchanges	(4.6%)	(9.8%)

Source: HDFC Securities

5.6 Avoid Double Dip Effect:

In case, the valuer having calculated the target multiple based upon the current market price using the LTM multiple basis for comparable companies, that already includes the impact of COVID-19, shall not consider adjusting

the performance or financial matrix of the target company, in order to ensure that the business value is not underestimated or conservative.

5.7 Actively traded vs non-actively traded investments (Volume and frequency):

The Valuer should take cognisance of the fact that infrequently traded or non-traded investments are usually less volatile than actively traded investments. During times of drastic public market value changes, private investments tend to lag the public markets and tend to change value less steeply than the actively traded investments.

The private investments lag the public markets since the public markets have a more active market and there are frequent and quick sale and purchase of equity shares as compared to that for a closely held private limited company, hence the volatility is lower in the latter company.

5.8 Importance of use of ranges:

Due to high volatility and the possibility of subjective valuation using scenario analysis or due to the shortcomings of selection of market multiples methods during COVID times, the valuation ranges may need to be wider than normal, and these ranges may well be subject to volatility as valuations are updated over time.

In terms of financial reporting valuations, disclosures in the valuation report may require to be more comprehensive and mention that valuations could change quickly over a relatively short time frame, particularly if the businesses are highly leveraged.

6. Conclusion:

The Valuer is expected to apply his professional judgement on case-to-case basis since there is no set thumb rule to approach and account for market uncertainties and volatility in the valuation exercise and no standard normalization adjustments to cash flows or discount rates are made available to make the valuation assignment any less subjective. The market environment is so unpredictable and volatile that if a particular business were to be valued on 31st December 2019, it may reflect a drastically different picture as against being valued on 31st March 2020 or on 31st March 2021. The engagement with management becomes of paramount importance to discuss and assess any short-term or long-term effects in financial performance or metrics.

The valuer may consider using traditional approaches to business valuation paralleled with conducting a more meticulous due diligence on the quality, accuracy and completeness of financial forecasts provided to them and in deciding the nature and extent of normalisation adjustments, if any, to be made to revenue, multiples, discount rates and other financial or performance matrix. Thus, implication and challenges to the valuation would be unique and negotiating the valuation to close a deal would remain a challenge.

The use of range of values has become significant in every engagement along with a disclaimer that valuations may change significantly and frequently given the changes in such dynamic circumstances.

Chapter-13
Deep Dive into the Power of "N" Factor in Terminal Value

This article is a mathematical continuation or more so a corollary of what has been written in the Chapter-5 of Valuation Professionals Insight Series-6.

The concept of Terminal Value assumes that after the explicit period a firm continues forever into infinity but in a moderated growth or more so a realistic growth. The realistic growth is assumed again because of the entity life cycle concept where an entity goes through infancy, growth, maturity and then decline again followed by either infusion of capital, technology or other inputs to revive it back on the path of infancy, growth in a continuum thus forever.

This is the reason prima facie, when the debate comes on the rate of growth which can be taken for Terminal Value calculation, the best growth one may get is the respective economic environment of the country or the GDP growth. GDP growth is a complex portfolio of multiple businesses and income streams; the perfection of which may never be possible by any enterprise. To accommodate the next best alternative to GDP growth is the risk-free rate of the respective country where the entity operates. In case of a multinational operating in different geographical segments, the risk-free rate might need to be weighted based on the volume of the business (Contribution more so Sales minus Variable cost or even country wise EBIT) as the maximum possible growth. This is being suggested as historically we all know that no entity can achieve this theoretical growth. To achieve this type of a growth one has to be in a perfect market with no arbitrage; a possibility which seldom happens in reality.

The utility of the risk-free rate as the terminal growth is to evaluate a realistic Terminal value. We all have been observing it in reality that the Terminal value contributes to the maximum entity value while adopting DCF valuation model. When the risk-free rate is adopted in the terminal value the maximum terminal value can be derived using this approach. From this, one can discount the reality of the entity and shaving off the unnecessary factors from this growth rate will enable one to come to a realistic growth rate and in turn a realistic terminal value. Another alternative is to vet terminal value through a sensitivity study, assuming an extended growth of the entity to further 2/3

periods similar to the explicit period and thus derive the entity value on finite basis say for 10/15/20 years. One has to appreciate here the farther one travels in time no matter the growth the last cash flows or the terminating cash flows are unlikely to have a greater impact on the overall entity value.

The Mathematics behind Terminal value is as under –

When we say after the explicit period an entity is likely to grow forever until infinity at a constant growth rate then this assumes a growing perpetuity.

The present value of a normal perpetuity is given by –

$$\text{PV of Perpetuity} = p/r$$

where p = principal or cash flows and

r = discounting rate.

If P = 1 then the PV factor becomes 1/r.

Let's understand how this formula is derived in the first place as that will help us to understand how a growing perpetuity then can be mathematically derived as well.

Present value of a perpetuity =

$$PV_\infty = 1/(1+r) + 1/(1+r)^2 + 1/(1+r)^3 \ldots\ldots 1/(1+r)^\infty \quad \ldots\ldots \text{Equation (1)}$$

Multiplying both sides of the equation by (1+r)

$$PV_\infty (1+r) = 1 + 1/(1+r)1 + 1/(1+r)^2 \ldots\ldots 1/(1+r)^{(\infty-1)} \quad \ldots\ldots \text{Equation (2)}$$

Subtracting Equations (2) minus (1) (*bigger number from a smaller number as PV cannot be in negative) -*

$$PV_\infty (1+r) - PV_\infty = 1 - 1/(1+r)^{(\infty-1)}$$

Because of time value of money the value of second term $1/(1+r)^{(\infty - 1)}$ will be equal to zero as its value is too small to impact the present value.

So the equation will read simplified as under –

$PV_\infty (r) = 1$ thus $PV_\infty = 1/r$ for every Rupee of return being the present value of a constant perpetuity.

For a growing perpetuity as in terminal value with growth = g, the Present value of the perpetuity PV_∞ will read as under for every rupee of return/cash flow. The first rupee is returned at end of year 1 so this cannot be growing further we assume it thus for now to understand it better.

Present value of a growing perpetuity –

$PV_{\infty} = 1/(1+r) + 1(1+g)/(1+r)^2 + 1(1+g)^2/(1+r)^3 \ldots\ldots\ldots\ldots\ldots 1(1+g)^{\infty}/(1+r)^{\infty}$

…… Equation (3)

This is a Geometric Progression (GP) with the common ratio growing until infinity at (1+g)/(1+r). The value of (1+g)/(1+r) will always be less than "1" (*or a fractional number*) else the summation cannot exist for an infinite GP.

The sum to "n" terms of a infinite GP (Summation formula) = a/(1-r) Modulus of r<1 where "a" is the first term and "r" is the common ratio.

Substituting a = 1/(1+r) and r = (1+g)/(1+r) from equation (3) in the above summation formula a/(1-r) and simplifying -

PV of growing perpetuity until $_{\infty}$ = 1/(1+r)/[1 - (1+g)/(1+r)]

PV of growing perpetuity until $_{\infty}$ = 1/(1+r)/(1+r-1-g)/(1+r)

PV of growing perpetuity until $_{\infty}$ = 1/(r - g)

If we recollect our assumption the starting point of "1" we assumed that is the end of the first year.

So, if we assume the same to be the previous year or year"0" then the same will read as (1+g)/(r-g)

This PV factor thus becomes amenable to whatever terminal value we get and the end of the respective year when the start point begins. So, we do not further discount it as (n+1) but keep the discounting simply for "n" where "n" becomes the last year of the explicit cash flow period.

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