Valuation : Professionals' Insight

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

Valuation: Professionals' Insight

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

Disclaimer: The views and opinions expressed in this article are those of the author and based on his experience and not necessarily those of the Institute or any other regulatory body. Examples of analysis performed, methodologies and approaches described within these articles are only examples which have been truncated with a lot of specifics omitted for brevity of these articles. They should and must not be utilized 'as-is' in the real-world without having sufficient guidance or experience or otherwise consulting a professional valuer.

First Edition	:	July 2018
Committee/Department	:	Valuation Standards Board
E-mail	:	valuationstandards@icai.in
Website	:	www.icai.org
Price	:	₹ 150/-
ISBN No	:	978-81-8441-932-0
Published by	:	The Publication Department on behalf of the Institute of Chartered Accountants of India. ICAI Bhawan, Post Box No. 7100, Indraprastha Marg, New Delhi – 110 002, India.
Printed by	:	Sahitya Bhawan Publications, Hospital Road, Agra 282 003 July/2018/1,000

Message

Valuation per se is the process of estimating the market value of a financial asset or liability. To understand the valuation process it is necessary to understand the term value. It is a complex subject which needs professional acumen and in depth knowledge

At this backdrop, it is of utmost importance that the Valuation professionals should know the practical insight of valuation, various aspects, techniques methods approaches involved in valuation.

ICAI RVO has planned to associate with industry chambers for organising training/ workshops in India, to train and develop the Valuers on a continuous basis.

The Valuation Standards Board of ICAI and Registered Valuers Organisation of ICAI are taking various joint initiatives for the benefit of Valuation professionals.

I have the pleasure that in this joint endeavour Valuation Standards Board of ICAI and ICAI Registered Valuers Organisation (ICAI RVO) are bringing out the publication 'Valuation: Professionals' Insight' covering articles contributed by various valuation experts.

I thank the Valuation Standards Board (VSB) of ICAI under the Chairmanship of CA. M. P. VijayKumar and to the members of the Board of ICAI RVO, Shri I. Y. R Krishna Rao, Shri Samir Kumar Barua and Shri M. D. Mallya for this joint effort. I would sincerely thank CA. Naveen N. D. Gupta, CA. Nilesh S. Vikamsey and CA. Dhinal A. Shah – the Directors of ICAI RVO, for their continued support in this initiative.

My appreciation to CA. Sarika Singhal, Secretary Valuation Standards Board for contributing and compiling Articles for the publication.

I am certain that this publication will be of immense use for the members and other stakeholders in understanding various aspects of valuation.

Justice Anil R. Dave (Retd.)
Chairman,
ICAI Registered Valuers Organisation

Date: 27th June, 2018
Place: New Delhi

Foreword

The business landscape has changed completely, there is a paradigm shift in the focus from just increasing company's share price to creating value through financial decision making. Today, valuation is the talk of the business. Everybody from financial experts to a novice is discussing this topic.

Valuation is required in many contexts including investment analysis, capital budgeting, merger and acquisition transactions, financial reporting, taxable events to determine the proper tax liability, and in litigation.

Valuation is the epicenter of financial decision making. If a firm wants to achieve the ultimate goal of maximizing value of its owners, then it is necessary to understand valuation.

At this juncture, I congratulate Valuation Standards Board to bring out a publication titled- 'Valuation: Professionals' Insight' containing the Articles on various aspects of Valuation. This publication would help not only the members engaged as registered valuers in gaining profound knowledge about the valuation, but also to others engaged in other capacities to develop understanding in this area thereby assisting them in playing an important role in Valuation.

I congratulate the Valuation Standards Board and ICAI Registered Valuers Organisation in taking this joint initiative of bringing out this publication. I extend my sincere appreciation to the entire Board and specially appreciate the efforts put in by CA. M. P. Vijay Kumar, Chairman Valuation Standards Board and CA. Dhinal A. Shah Vice- Chairman, Valuation Standards Board for bringing out publication on such an important topic of relevance.

I am sure that this publication, like other publications of the Board, would be warmly received and appreciated by the members and other interested readers.

CA. Naveen N.D. Gupta
President ICAI
Director ICAI RVO

Date: 28th June, 2018

Place: New Delhi

Preface

In the knowledge-driven global marketplace, where valuation of assets whether it is tangible or intangible hold value, uniformity in the practices followed is still to mature. With the introduction of the concept of "Registered Valuers under the Companies Act, 2013 and also with the notification of Companies (Registered Valuers and Valuation) Rules, 2018, the requirements place a tremendous responsibility on the members of our profession in carrying out the valuation and in furnishing the valuation report with the confidence reposed in the them by the Government.

As we all know that there were no Valuation Standards in India, the Valuation Standards Board has recently issued ICAI Valuation Standards 2018 with a view to have the consistent, uniform and transparent valuation principles and harmonise the diverse practices in use in India. The Board has also issued a Technical Guide on Valuation which comprehensively covers valuation of business.

Moving ahead with various initiatives and considering the fact that the responsibilities of chartered accountants have increased manifold, the Valuation Standards Board felt the need of bringing out a publication titled "Valuation: Professionals' Insights" which captures some practical insights on valuation, to share these insights to valuers' and users of valuation reports.

We may mention that the views expressed in this publication are the views of the authors and are not the views of the Institute. The purpose of this publication is to provide an overview of the valuation involved in mergers, amalgamation, options, business, case studies by compiling articles.

We would like to thank the President of ICAI CA. Naveen N. D. Gupta and Vice President, CA. Prafulla P Chajjed for their continued support in all the endeavours of the Board.

We sincerely appreciate the members of the Valuation Standards Board, Co-opted members and Special Invitees for their help and guidance in framing and bringing out this publication.

We would also like to thank CA. Sujal Shah, CA Rashmi Shah, CA Rajan Wadhawan, CA Rajkumar S. Adukia, CA Rammohan Bhave, CA. Amrish Garg, CA. Sagar Goyal, CA. Harsh Dolia, CA. Manish Saxena, CA Pradyumna Nag, CA

Urvish Mehta, CA Akhil Maheshwari, CA. Kajal Malik and CA Shruthi Sathyanarayanan who have contributed articles.

We would like to thank CA. Sarika Singhal, Secretary Valuation Standards Board for contributing the articles and administrative support.

We sincerely believe that this publication will be of great help in understanding various facets of valuation.

CA. M. P. Vijay Kumar
Chairman
Valuation Standards Board, ICAI

CA. Dhinal A. Shah
Vice Chairman
Valuation Standards Board, ICAI

Date: June, 2018

Place: New Delhi

Index

Chapter 1
Valuations

"*Not everything that can be counted counts, and not everything that counts can be counted*" – **William Bruce Cameron**

Nearly six decades back, in an unimaginable world without internet, the statement was made. It well suited in present complex and dynamic world as the value of a business can be very different then perhaps what gets revealed from its balance sheet. The book value of a business can be significantly different from its economic value. The fair value of a business needs to be determined for strategic, regulatory, financial reporting or tax purposes. Business valuation is the process of determining the economic value of a business or company. The need for business valuation generally arises when an entity considers to sell all or a portion of its operations or to merge with or acquire another entity. The current worth of a business is determined after evaluating all aspects of the business and making the use of objective measures. A business valuation might include an analysis of the company's management, its capital structure, its future earnings prospects, or the market value of its assets. The field of business valuation is vast and encompasses a wide array of variables that jointly and severally impact the value.

There are various reasons for which a business owner or an individual may need to know the value of its business(or its assets) such as:

- To evaluate an offer and negotiate a strategic sale of a business.
- To determine the per share value of an Employee Stock Ownership Plan (ESOP).
- For exit strategy planning purposes
- To value a portfolio of Intellectual Property Rights – patents, trademarks, copyrights, proprietary processes, etc.
- To justify the value of a company for annual shareholder meetings.
- To undertake division wise valuations so as to identify weak divisions of a business; this may be to refocus the operational efforts or to divest the under-performing divisions.

Valuation: Professionals' Insight

- For shareholder or partnership disputes.
- For shareholder or partnership investments or buyouts.
- For buy-sell purposes and raising funds.
- To obtain bank financing or alternative investment.
- For financial reporting purposes
- For goodwill impairment testing purposes.
- To allocate the purchase price after an acquisition of a business.
- For tax planning purposes – transferring an interest to family members, transfer to trusts, corporate restructuring purposes, etc.
- To value stock options
- To set a current baseline value of the business and develop a strategy to improve the profitability of the business and increase the value of the business in future.
- To value a business for a business bankruptcy.
- To assess whether the fair value is different from the market's perception of the value of the business.
- To identify whether the business is growing, stagnant or declining in value to restructure the business.

Apart from above, there are many other reasons wherein a valuation may be needed. Section 247 of the Companies Act, 2013 mandates that only a Registered Valuer can undertake valuation and issue valuation reports for complying with fair valuation requirements under the said Act. Certain other laws such as Foreign Exchange Laws, Tax Laws also require the management to obtain independent fair valuation reports.

As business valuation is a complex financial analysis, it should be undertaken by a qualified valuation professional with the appropriate credentials. In case, the business owners undertake valuation themselves, there are chances of a biased view. Apart from this, the important benefits received from a comprehensive third party independent valuation analysis, such as helping business owners to negotiate a strategic sale of their business, minimize the risk in a litigation matter as well as to provide defense in a scrutiny situation may not be available.

Since valuation is not an exact science but as much an art, the independent valuer may also face challenges while undertaking business valuation such as:

- Developing reasonable assumptions for projections based on historical trends and expected future occurrences and documenting the reasoning behind those assumption choices
- Requesting, tracking and reviewing the necessary documents
- Selecting an appropriate valuation methodology or multiple valuation methodologies and assigning weights
- Finding robust private or public company or industry data against which to benchmark the subject entity
- Gathering the appropriate market comparable (both public and private) and documenting the reasoning behind the market comparable choices
- Calculating a discount rate that appropriately reflects the risk inherent in the subject entity and documenting the reasons for using (or not using) the methods used for calculating the WACC
- Conducting valuation procedures to produce reliable value indicators
- Remaining compliant with the regulatory guidelines and other industry standards
- Compiling a robust and fundamentally sound valuation report. The written report is often the only tangible product delivered to the client and typically serves as the cornerstone of professional credibility.

For a better understanding of valuation concepts and methodologies as well as to assist members in performing robust valuation while complying with various regulatory requirements, the Institute of Chartered Accountants of India (ICAI) has issued ICAI Valuation Standards 2018. These valuation standards while consistent with the legal framework and valuation practices prevalent in India are based on the valuation concepts, principles and procedures which are generally accepted internationally. In formulating the Valuation Standards, the ICAI considered best valuation practices followed globally as well as in India, the uniqueness of Indian conditions, current practices in India alongwith their advantages and disadvantages and various purposes for which valuations might be required over and above the requirements of Companies Act. These standards came as a result of ICAI's

consistent drive to guide its members in ensuring high quality work and standards. The ICAI Valuation Standards 2018 will be applicable for all valuation engagements undertaken by the members of ICAI RVO (Registered Valuer Organisation) on the mandatory basis under the Companies Act 2013. In respect of valuation engagements under other statutes like Income Tax, SEBI, FEMA etc, the applicability will be on the recommendatory basis for the members of the ICAI. These Valuation Standards are effective for the valuation reports issued on or after 1st July, 2018. The ICAI Valuation Standards are briefly summarised below:

1. *Preface to the ICAI Valuation Standards*: This contains the objectives and functions of the Valuation Standards Board, the scope of Valuation Standards and the procedure followed for issuing Valuation Standards.

2. *Framework for the Preparation of Valuation Report in accordance with the ICAI Valuation Standards*: The framework sets out the concepts that underlie the preparation of valuation reports in accordance with the ICAI Valuation Standards 2018 for its users. It also provides for qualitative characteristics that determine the usefulness of information in the valuation report and the fundamental ethical principles to be observed by the valuers

3. ICAI Valuation Standard 101 –*Definitions*: This Standard provides for definitions of certain terms used in ICAI Valuation Standards 2018.

4. ICAI Valuation Standard 102 - *Valuation Bases:* The Valuation Base means the indication of the type of value being used in a valuation engagement. This Standard explains few commonly used valuation bases such as Fair Value, Liquidation Value and Participant Specific Value

5. ICAI Valuation Standard 103 - *Valuation Approaches and Methods*: This Standard describes the different approaches and methods for valuation and provides guidance on usage of various valuation approaches and methods.

6. ICAI Valuation Standard 201 - *Scope of Work, Analyses and Evaluation*: The terms of valuation engagement, responsibilities of valuer and client and the extent of analyses and evaluations to be carried out by valuer are provided in this Standard. It also lays down valuer's responsibility while relying on the work of other experts.

7. ICAI Valuation Standard 202 - *Reporting and Documentation: This Sta*ndard provides for the minimum content of the valuation report, basis for preparation of the valuation report and maintaining sufficient documentation.

8. ICAI Valuation Standard 301 - *Business Valuation: This Standard pr*ovides additional guidance to valuers who are performing business valuation

9. ICAI Valuation Standard 30*2 - Intangible Assets: This Standard pr*ovides for additional guidelines while conducting the valuation of intangible assets

10. ICAI Valuation Standard 3*03 - Financial Instruments: This Standa*rd provides additional considerations to be followed by valuer in performing the valuation of financial instruments

Besides a thorough understanding of valuation methodologies, valuation standards, applicable law and the workings of various financial markets, a valuer needs several skill sets, both technical and non-technical, in order to work as a successful valuer and conduct robust valuations. Some of the skill sets needed are:

- **Accounting knowledge**

  Accounting knowledge will help valuer in understanding the financial statements as well as the impact of related party transactions and one-off transactions on company's performance.

- **Analytical Thinking**

  Analytical thinking includes data analysis and financial analysis, as well as wider applications, such as generalised problem-solving.

- **Technological Expertise**

  Technological expertise is required to use various different databases to extract industry and business related information required for valuations.

- **Written and Verbal Communication**

  Communication skills are required for drafting valuation reports and communicating the results. They are also helpful to extract necessary information especially from a resisting source.

Valuation: Professionals' Insight

- **Professional Skepticism**

  It means the valuer should make a critical assessment, with a questioning mind, of the information obtained.

- **Professional Judgement**

  The valuer needs to consider materiality, risk, quantity and quality of information when planning and performing the valuation assignment.

Chartered Accountants are best suited to issue such independent fair valuation reports and assist management in making informed decisions. Increased investor scrutiny has led to a demand for greater transparency and enhanced governance over the valuation and reporting of illiquid investments. Today, investors are insisting on a valuation framework that is free of conflicts of interest, especially when committing new capital. Investors and regulators demand accurate and reliable valuations of their investments and are also driving the trend towards independent value determination. A Chartered Accountant with requisite experience and training can conduct a robust valuation and indirectly express an opinion as to the financial fairness of the transactions such as equity transactions, related party/arm's length transactions, public company takeovers, acquisitions by public companies, debt agreements or other security agreements.

While there is a huge opportunity for Chartered Accountants in this field of valuation, in order to be successful, the Chartered Accountant should acquire the additional skill sets as needed to be regarded as a high quality service provider. To conclude,

"*Managers and investors alike must understand that accounting number is the beginning, not the end, of business valuation*" – Warren Buffett

Chapter 2
Basics and Overview of Valuation

Valuation Concept

"Valuation is neither a pure Art nor a pure science but a perfect combination of both."

Science is the effort to discover, and increase human understanding of how the physical world works through controlled methods. Such methods include experimentation that tries to simulate natural phenomena under controlled conditions and thought experiments.

Art is basically the way of doing work by a human being. Art refers to a diverse range of human activities, creations, and expressions that are appealing to the senses or emotions of a human individual.

In the valuation process, Valuer values the organization by using technology, applying specific methods of valuation (which can be termed as part of Science) and his own experience in taking various assumptions i.e. an Art.

The argument goes on and says that valuation is nice in theory but fragile in practice. And the verdict is on the exercise is worthless and it should be scrapped. If the theory does not provide answers, practitioners are left with no choice but to make ad hoc adjustments according to their judgment in order to suit their purpose. Practitioners generally take theory into their hands in the guise of making it usable. It is generally believed that the one deviates from theory, the better practitioner one is. Sometimes deviations can be justified in making theory workable but the question is how much deviation is acceptable. Theoreticians are obligated to the truth but have no time constraints. In contrast to this, practitioners are obligated to the mandate given by the client and have time constraints.

The ultimate purpose of any firm is the creation of wealth or value for its owners (shareholders). Therefore, if a firm wants to achieve the ultimate goal of maximizing the value of its owners, then it is necessary to understand valuation.

To enhance the value of the business, here are five key lessons of value creation:

1. In the real market, one can create value for the shareholders only by earning a return on invested capital (Or capital employed) greater than the opportunity cost of capital.
2. The more one can invest funds of business at a return above the cost of capital the more value one creates (i.e. growth creates more value to the shareholders as long as the return on capital exceeds the weighted average cost of capital).
3. One should select business strategies, which maximize the present value of expected cash flows or Economic benefits.
4. The value of a company's shares in the stock market equals the intrinsic value of the share based on the market's expectations of future performance of the company, but the market expectations of future performance of company may not be an unbiased estimate of performance.
5. The returns that shareholders want to earn depend primarily on the changes in their expectations more than the actual performance of the company.

Valuation assignment is unique. That is why there is no standard path in terms of the way a valuer approaches the service needs of his/her client. So, tailoring a valuer about the most suitable and appropriate procedures to be relevant to each assignment is somewhat a very technical issue.

Definition of Valuation

Valuation is the process of estimating the market value of a financial asset or liability of the business or an Individual.

A Valuation is typically the most complex and often controversial issue that arises at the early stage of any transaction, strategy review or dispute. Nonetheless, a valuer /appraiser's valuation can help to deliver a service that is practical and objective.

Valuation is required in many contexts including investment analysis, capital budgeting, merger and acquisition transactions, financial reporting, taxable events to determine the proper tax liability, and in litigation.

What is Value?

To understand the valuation process it is necessary to understand the term value. It is one of the most complicated and most often misunderstood parts of the economy as well.

Value is a subjective term as what is the value to one person may be inconsequential to another. It is easy to understand the concept of value with the help of the value of a property because all of us are well known to it.

A property might be more valuable to one person in comparison to another, because that person values certain features of the property higher than the other person or because the property has a higher utility to one person than to another. There may be many forces, which influence the value of property e.g. environmental and physical characteristics of the property, social standards, economic trends (Growth domestic product, Net Income, Inflation etc.) and political or government regulations.

No doubt the term 'value' is a tenuous word but we need to grasp it in order to avoid misunderstanding. For this purpose, ICAI Valuation Standards 2018 adopted by ICAI RVO definition, and in the broader sense highlights of the definition are given below in order to start the discussion. It says that the value is

- An economic concept
- An estimate of the likely price to be concluded by the buyers and sellers of a good or service that is available for purchase
- Not a fact
- An estimate of likely price at a given time in accordance with a particular definition of value.''

The definition talks about the economic concept of value which indicates the benefits that accrue to one who owns the goods or receives the services as on date of valuation.

The US Appraisal Foundation defines market value as:

"The most probable price which a property should bring in a competitive and open market under all conditions requisite to a fair sale, the buyer and seller each acting prudently and knowledgeable, and assuming the price is not affected by undue stimulus."

There may be a substantial gap between subjective valuations and the fluctuations of the free market. Thus, the value of a property does not always correspond to its price. The forces of supply and demand cannot be scientifically predicted.

In common economic terms, value usually means “the typical price a product fetches in an unregulated market.” Value theory can also involve legal, moral, aesthetic, or quantitative value. It can involve just one type of value or a combination of different types.

The value may be in monetary terms or in terms of the value of the asset exchanged for in return to the property under valuation. Economic values are expressed as “how much” of one desirable condition or commodity will, or would be given up in exchange for some other desired condition or commodity.

Sources For Defining Value

The definition of value can be derived from the following sources:

(a) Relevant Statutes

The first source for interpreting the meaning of value is to refer to the statutes applicable to the specific subject area that is being valued. Central or state statutes often define the relevant standard of value.

Statutes sometimes also define value in the context of mergers, dissenters’ rights, marital dissolutions, and family issues.

(b) Case Law

Definitions of value are also influenced by judicial pronouncements that apply statutory definitions to the facts of individual cases. Therefore, case laws provide perspectives that affect the definition of value and it is crucial to consult the relevant case laws to understand how the court applies a given definition of value to a particular set of facts.

(c) Contracts and Agreements

Contractual agreements between the parties are also an important source for defining value. Parties to a contract generally define the term value for their specific purpose to meet their special situation. Sometimes parties may even negotiate a definition of value which may not even conform to the definition in

general legal context. Where such agreements exist, the definition of value will be determined by such agreements.

(d) Professional Bodies

Professional bodies often define standards of value. For example, Financial Accounting Standards Board (FASB) in the United States, a professional organization primarily responsible for establishing Financial Reporting Standards. The FASB's standards are known as generally accepted accounting principles (GAAP).

There are people who think that the value lies in the eyes of the beholder and the idea behind this thinking is the "bigger fool theory". This theory says that there is a bigger fool around who would be ready to buy the asset. Hence, any price can be justified if a buyer is ready to pay that price. Don't forget the risk involved in this thinking. Who knows you are the last buyer and the greatest fool. What we learn from this is that every price cannot be the value and vice a versa. Before we move further, we need to differentiate between the value and the price.

The Difference between Value and Price

Value of the asset Depends on many factors including the investor, the structure, the marketplace, and the approach and sometimes the ultimate selling price can be greater than the value.

The term price indicates the amount at which particular asset is bought or sold in an open market in a particular transaction. While the term value indicates the worth of that assets in normal circumstances or the amount at which it should be exchanged.

The price may be understood as "the amount of money or other consideration asked for or given in exchange for something else". The price is, therefore, an outcome of a transaction whereas the value may not necessarily require the arrival of a transaction. The value exists even in some assets which may not be generating cash flows today but can generate in the future on the happening of some events. For example an oil reserve of ONGC may not have any value when the oil price is $60 due to extraction cost of $70. When the price reaches to $120 and is expected to prevail around this figure it may have significant value.

Let us take another example of sale of a motor boat which is 2 years old. If we assume that the market worth of this motor boat is Rs. 20,000 after considering normal wear and tear and present condition of the boat. But due the flood in the area this motor boat is sold at a price of Rs. 1 lac, which is five times of its worth. Now question arises, why this difference is? This is due to present market condition, where it is necessary to use boat to save the life of peoples. Now, in this example price of boat is Rs. 1 lac but it does not mean that the value of the boat is also Rs. 1 lac. Value of the boat will be Rs. 20000, which is its worth.

No method of valuation would answer how much is the price. This can be answered at the negotiation stage which depends upon so many economic as well as non-economic factors. The value, therefore, is the starting point to negotiate the price. In that sense, the value is the “should be price”. We can also say that price is where values of buyer and seller converge. This, however, may not be true when either party is forced into the transaction. In favorable market conditions, one may receive price more than the value and in the reverse case one may have to sell it at a discount. Therefore the price is greatly influenced by the market conditions whereas the value will not change unless fundamentals of the business change. Typically, the price should represent the value if the market is efficient and the investors are risk-averse. In practice, things are different. Demand and supply may not have a greater impact on the price in an efficient market or a normal market. Deviations of price from value are bigger in a boom or doom market and in such situations, demand and supply have a greater role to play.

The difference between price and value can be explained with the help of the behavior of the investors. In theory, every decision maker behaves rationally. A decision is called ‘rational’ when it meets two criteria- when the objective of the decision maker is clear and he is well informed. We all know that decision makers do not always behave rationally. This presents the basis for an interesting branch of finance, which is today referred to as behavioral finance. The homogenous expectations are characteristic of efficient markets. Now it is clear to us that in reality the market participants are working with asymmetric information and the expectations are different. This will explain the difference between value and price to a great extent.

The overall objective of the valuation is that the deal should be priced around the value if not at the value. The value helps in two ways; one in the price discovery and the other in testing the reasonableness of the price. We can

now conclude that a valuation is an estimation of what something is worth and that is the value. This is different from price – what someone will actually pay for something in a commercial transaction. The value and price don't necessarily have to be equal.

Knowing the difference between cost, price and value can increase profitability:

To conclude the above, it may be inferred that **Price** is the amount of money you pay to buy the equipment. **Cost** is the amount of money you pay to operate the equipment over the lifetime. Pricing should be in line with the **Value** of the benefits that your business provides for its customers, while also bearing in mind the prices your competitors charge.

To summarize:

- the **cost** of your product or service is the amount you spend to produce it
- the **price** is your financial reward for providing the product or service
- the **value** is what your customer believes the product or service is worth to them

Purpose & Role of Valuation

Purpose of Valuation

A valuation is undertaken for one or more of several reasons / objectives e.g. to estimate the cost of the producing, acquiring, altering or completing a property; to estimate the monetary amount of damages to an asset; and to buy an existing business.

Valuation requires an object to be valued, a framework for the valuation, and a criterion that reflects the usefulness or desirability of the object.

*An important concept in valuation is that value often depends on the **intended purpose** of the valuation; therefore, the same business often has different values depending on the purpose of valuation. Nonetheless, placing the right value on a particular business and in helping the achievement of financial goals, which is necessary for a number of reasons, is the ultimate purpose of a valuation.*

The same subject company, with the same valuation date will be valued differently depending on the Purpose. Because the purpose has a dominant

impact on the valuation process and the valuation result, a single valuation cannot serve more than one Purpose.

The process of Valuation may be essential for any of the following purposes:

- Sell your business at the Fair Market Value
- Provide a lender with Fair Market Value information for a business loan
- Plan for a merger, acquisition or stock offering
- Admission or retirement of a partner in a business
- Develop an estate plan or tax plan to protect your wealth
- Transfer of the business into a trust or create a succession plan
- Determine the value of assets and liabilities for a divorce settlement
- Assist attorneys in litigation
- Settlement of an insurance claim
- Dispute resolution in cases where damages must be determined for the lost value of a business, such as breach of contract, patent infringement, franchise disputes, antitrust suits, eminent domain, lender liability, and dissenting stockholder suits.
- Set up an Employee Stock Ownership Plan (ESOP), etc.

The purpose of valuation can be broadly classified in the four categories. The broad classification is based on the Statement on Standards for Valuation Services Issued by the AICPA, USA. They are given as below:

	Purpose of valuation	**Examples**
1.	Valuation for transactions	Business purchase , business sale, M&A(Mergers & Acquisition),reverse merger, Recapitalization, Restructuring, LBO (Leverage Buy Out), MBO (Management Buy Out), MBI (Management Buy-In), BSA (Buy Sell Agreement), IPO, ESOPs, Buyback of shares, project financing and others
2.	Valuation for court cases	Bankruptcy, contractual disputes, ownership disputes, dissenting and oppressive

		shareholder cases, divorce cases, intellectual property disputes and other
3.	Valuation for compliances	Fair value accounting, Tax Issues
4.	Valuation for planning	Estate planning, Personal financial planning, M&A planning, strategic planning

Again, there are a number of situations in which intangible assets and intellectual property may need to be valued. These include:

1.	**Acquisitions**	Particularly where a significant portion of the value of the acquisition is not in the form of tangible assets. There is often a requirement that financial statements properly reflect assets acquired – tangible or intangible
2.	**Bankruptcy**	where claims may be made as to the significant value of intangibles
3.	**Tax Assessments**	Covering a range of taxation considerations including capital gains tax, stamp duty etc.
4.	**Financing**	where intellectual property can be used as loan collateral or as the basis for a financing structure
5.	**Income Taxes**	where foreign subsidiaries of parent companies gain income using the intellectual property of the parent
6.	**Infringement Lawsuits**	where value must be attributed as a result of infringement of intellectual property
7.	**Joint Ventures**	where contributions to the venture may be a mix of tangible and intangible assets
8.	**Licensing Arrangements**	where the relationship between existing intangibles and future income is determined
9.	**Marital Dissolutions**	where businesses that are part of marital property often possess proprietary intangible assets
10.	***Property Taxes***	where there can be confusion between the relative contributions of real property value and intangible asset value

11.	***Management Support and Presentation***	Enabling an assessment of a company's return on assets and the performance of management, strengthening balance sheet presentations and advising shareholders of the financial position of the company including "hidden" assets.

In some situations, the valuation is publicly disclosed and the assets may be recorded as part of an acquisition, in company balance sheets or financing arrangements. In other situations, for example in management support or in submissions to lenders to support funding proposals, the valuation remains undisclosed and confidential to the company.

Chapter 3

Valuation and the Companies Act 2013

Valuation is neither a pure art nor a pure science but a perfect combination of both. Valuation can be a 'Goldmine' and also be a 'minefield'.

Key Facts of Valuation

- **Price is not the same as the value**

  The Value of a business, by whatever valuation method it is obtained, is not the selling price of the business. Value is an economic concept based on certain data & assumptions, however, Price is what a Buyer is willing to pay keeping in consideration the Economic and Non-Economic factors like Emotions, Perception etc., which cannot be valued as such.

- **Value varies with person, purpose and time**

  The Value is a subjective term and can have different connotations meaning different things to different people and the result may not be the same, as the context or time changes.

- **Transaction concludes at negotiated prices**

  Though the value of a business can be objectively determined employing valuation approaches, the value is still subjective, dependent on buyer and seller expectations and subsequent negotiations and the transaction happens at the negotiated price only.

- **Valuation is a hybrid of art & science**

  Valuation is more of an art and not an exact science. The Art is Professional Judgment and Science in Statistics. Mathematical certainty is neither determined nor indeed it is possible as the use of professional judgment is an essential component of estimating value.

The relevance and importance of valuations in various business and investment decisions as well as in company processes, such as schemes of

amalgamations etc, is growing. Further, the need for treating valuation as a specialized discipline with a properly articulated, statutory framework for academic, institutional and regulatory aspects governing valuation professionals has been increasingly felt.

It is becoming difficult to predict the future, yet financial decision ought to be taken. The soundness of financial decisions is critical to the success of corporations. Therefore, every financial decision is tested in terms of value creation. The valuation is the epicentre of financial decision-making.

Keeping in mind the complexities of business that are arising in the fast-changing financial world today, the new Companies Act, 2013 has introduced a new chapter as Chapter XVII on Registered Valuers. Section 247 in that chapter provides that wherever any valuation is required to be made in respect of any property, stocks, shares, debentures, securities or goodwill or any other assets or net worth of a company or its liabilities, it shall be valued by a person having such qualifications and experience and registered as a valuer on such terms and conditions as may be prescribed and appointed by the audit committee or in its absence by the Board of Directors of that company.

The Companies Act 2013 prescribes Valuation by a registered valuer under the following Sections:

- Section 62 (c) – Issue of shares on rights basis
- Section 192 (2) – Non cash transactions with Directors
- Section 230 – Compromise or arrangement with creditors and members
- Section 236 – Purchase of minority shareholding
- Section 247- Registered Valuer
- Section 260- Valuation in respect of Shares and Assets to arrive at the Reserve Price for Company Administrator
- Section 281- Valuing assets for submission of the report by Company Liquidator
- Section 305- Report on Assets for declaration of solvency in case of the proposal to wind up voluntarily

- Section 319- Valuing interest of any dissenting member under Power of Company Liquidator to accept shares etc., as consideration for sale of the property of the company

Companies (Registered Valuers and Valuation) Rules, 2017

The Ministry of Corporate Affairs has issued Companies (Registered Valuers and Valuation) Rules, 2017 and made effective from 18th October, 2017.

Authority for functioning under Section 247 of the Companies Act 2013

Ministry of Corporate Affairs (MCA), vide notification dated October 18, 2017, has delegated the power and functions vested with Central Government under section 247 of the Companies Act, 2013 to the Insolvency and Bankruptcy Board of India (IBBI), in exercise of power under section 485 of the Companies Act, 2013. Accordingly, IBBI is the "authority" to perform the functions under the rules.

Registered Valuer

- Registered Valuer means the person **registered with IBBI** in accordance with the Companies (Registered Valuers and Valuation) Rules, 2017 ("Rules").
- Eligible RVs are: Individual, partnership firm and Company

Registered Valuers Organisation

- Registered Valuers Organisation (RVO) means a registered valuer organization recognized under rule 13(5)
- Not for profit Company (Companies Act)/ professional institute established by an act of parliament/ society (Society Registration Act)/ Trust (Indian Trust Act)
- **For Society & Trust:** till 17th October, 2018, should be converted or registered as **section 8 company**, with governance structure and bye laws specified in **Annexure-III of the said Rules.**
- **For section 25 company and section 8 company: till 17th October, 2018** shall have the governance structure and incorporate in its bye laws the requirements specified in Annexure-III **of the said Rules**

Qualification and Experience to become Registered Valuer as per the Rules:

An individual shall have the following qualifications and experience to be eligible for registration under rule 4, namely:-

(i) Graduate and

(ii) Chartered Accountant, Cost Accountant, Company Secretary, MBA/ PGDBM in Finance and an individual having post graduate degree in finance and

(iii) Having at least three years' experience after possessing qualification as mentioned in (ii) above.

An individual has to first enroll as a valuer member with Registered Valuers Organisation and complete 50 hours Educational Course conducted by the RVO.

On completion of the Course and receiving a certificate of participation, the valuer member has to clear examination conducted by IBBI.

After clearing examination, valuer member to enroll with RVO and to make an application to the Authority in Form A of the Annexure II of the Companies (Registered Valuers and Valuation) Rules, 2017.

Eligibility to become Registered Valuer as per the Rules:

I. A person shall be eligible to be registered valuer, if

(i) is a valuer member of a registered valuers organisation;

Explanation.— For the purposes of this clause, "a valuer member" is a member of a registered valuers organisation who possesses the requisite educational qualifications and experience for being registered as a valuer;

(ii) is recommended by the registered valuers organisation of which he is a valuer member for registration as a valuer;

(iii) has passed the valuation examination under rule 5 within three years preceding the date of making an application for registration under rule 6;

(iv) possesses the qualifications and experience as specified in rule 4;

(v) is not a minor;

(vi) has not been declared to be of unsound mind;

(vii) is not an undischarged bankrupt, or has not applied to be adjudicated as a bankrupt;

(viii) is a person resident in India;

Explanation.— For the purposes of these rules 'person resident in India' shall have the same meaning as defined in clause (v) of section 2 of the Foreign Exchange Management Act, 1999 (42 of 1999) as far as it is applicable to an individual;

(ix) has not been convicted by any competent court for an offence punishable with imprisonment for a term exceeding six months or for an offence involving moral turpitude, and a period of five years has not elapsed from the date of expiry of the sentence:

Provided that if a person has been convicted of any offence and sentenced in respect thereof to imprisonment for a period of seven years or more, he shall not be eligible to be registered;

(x) has not been levied a penalty under section 271J of Income-tax Act, 1961 (43 of 1961) and time limit for filing appeal before Commissioner of Income-tax (Appeals) or Income-tax Appellate Tribunal, as the case may be has expired, or such penalty has been confirmed by Income-tax Appellate Tribunal, and five years have not elapsed after levy of such penalty; and

(xi) is a fit and proper person:

Explanation.— For determining whether an individual is a fit and proper person under these rules, the authority may take account of any relevant consideration, including but not limited to the following criteria-

(a) integrity, reputation and character,

(b) absence of convictions and restraint orders, and

(c) competence and financial solvency.

II. No partnership entity or company shall be eligible to be a registered valuer if:

(i) it has been set up for objects other than for rendering professional or financial services, including valuation services and that in the case of a company, it is not a subsidiary, joint venture or associate of another company or body corporate;

(ii) it is undergoing an insolvency resolution or is an undischarged bankrupt;

(iii) all the partners or directors, as the case may be, are not ineligible under clauses (c), (d), (e), (g), (h), (i), (j) and (k) of sub-rule (1);

(iv) three or all the partners or directors, whichever is lower, of the partnership entity or company, as the case may be, are not registered valuers; or

(v) none of its partners or directors, as the case may be, is a registered valuer for the asset class, for the valuation of which it seeks to be a registered valuer.

Compliance with Valuation Standards

As per Rule 8 of Companies (Registered Valuers and Valuation) Rules, 2017, the registered valuer shall, while conducting a valuation, comply with the valuation standards as notified or modified under rule 18:

Provided that until the valuation standards are notified or modified by the Central Government, a valuer shall make valuations as per-

(a) internationally accepted valuation standards;

(b) valuation standards adopted by any registered valuers organisation.

Transitional Arrangement

Any person who may be rendering valuation services under the Companies Act, 2013 on October 18, 2017 may continue to render valuation services without a certificate of registration till September 30, 2018.

If any valuer appointed before September 30, 2018, such valuer shall complete such valuation or such part within 3 months thereafter i.e. till December 31, 2018.

Key Areas where Valuation plays an important Role

There are certain key areas where valuation plays a key role which are as follows:

1. Sell-side and buy-side mandate
2. Going Public-IPO
3. Going private-LBO and MBO
4. Corporate restructuring and turnaround
5. Secured lending including project finance
6. Securitization
7. Implementation of Basel II
8. Financial Derivatives
9. Portfolio management-Mutual fund, Hedge funds and professional investors
10. Long term and medium term investment decisions-M&A, takeovers, strategic investments, financial investment including exit. (disinvestment) valuation, capital budgeting, private equity investment, venture capital investments, buyback of shares and others
11. Profit and dividend distribution decision.
12. Borrowing decisions
13. Financial risk management decisions
14. Tax related valuation
15. Development projects valuation
16. Intangibles
17. Financial reporting valuation
18. Equity research area
19. Insurance product valuation
20. Estate and personal financial planning

Valuation: Professionals' Insight

21. Corporate planning
22. Property valuation
23. Value based performance measurement
24. Credit rating

The Companies Act, 2013 opens up new avenues for the professionals especially Chartered Accountants as Valuation is a blend of accounting and finance and the Chartered Accountants are thoroughly equipped and trained in this field.

Chapter 4
Valuation Myths

Valuation myths have been developed in recent years that there exists a single and appropriate value for a company and the more sophisticated is valuation method, better it is. Some of the most common valuation myths are:

(a) That a private business should only be valued, when the business is ready to be sold

(b) A good valuation provides a precise estimate of value: Even at the end of the most careful and detailed valuation, there will be uncertainty about the final numbers, because of the assumptions that we make about the future of the company and the economy.

(c) The proprietor believes that his /her business can be sold for more than annual revenue so there is no need to pay some other person to value the business.

(d) The owner believes that if a local competitor can sell business at a very high price than I can also sell my business at a good price.

(e) If a business is operating on losses then it is not possible to get good price and hence there is no need for valuation.

(f) The owner believes that valuer use specific formula to figure out valuation

(g) That if good and proper maintenance is there, then it will result in high valuation.

(h) That valuation depends on negotiations and it varies from buyer to buyer.

(i) Valuation is affected by the appraisal of buyer and seller.

(j) In a booming economy, valuations will always be high.

(k) For intangible assets that have the potential to create future cash flows, we argue for the use of option pricing models.

(l) Valuation is objective – the truth is that it is subjective

Valuation: Professionals' Insight

(m) Valuation is a science- the truth is that it is science as well as art

(n) Valuation gives precise number- the truth is that valuation only gives an estimate

(o) A single valuation serves more than one purpose- the truth is that the value will change if the purpose changes

(p) A complex financial model gives better valuation- the truth is that it doesn't give better valuation

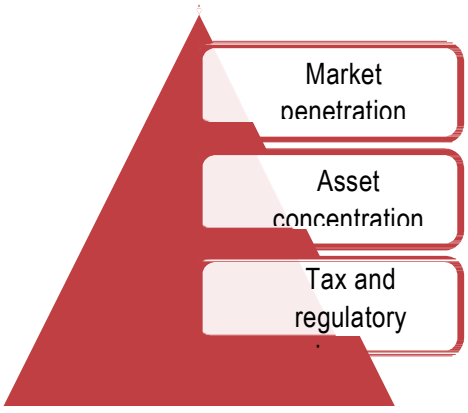
(q) Growth in earning increases valuation- the truth is that may not be correct always

(r) Valuation is worthless as it involves lot of assumptions- the truth is that it is useful in decision making

Chapter 5

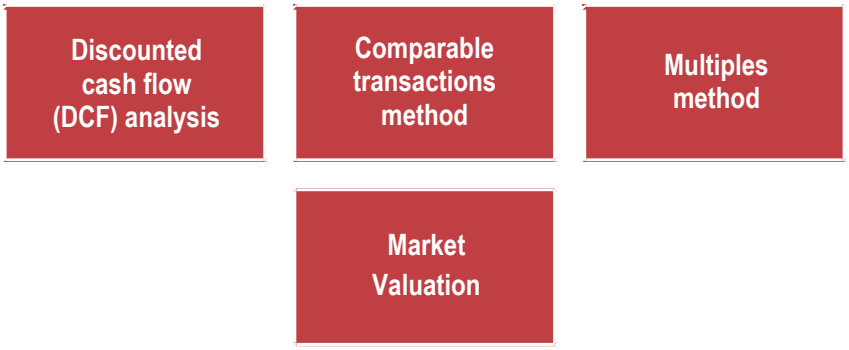
Valuation: A walkthrough of basic concepts

As the axiom goes “Price is what you pay. Value is what you get”. It fits very well in today’s scenario wherein almost everything revolves around valuation. It has become so pertinent and prevalent in our day to day affairs, that it is gaining lot of attention from various users. Valuations are needed for many reasons such as investment analysis, capital budgeting, merger and acquisition transactions, financial reporting, taxable events to determine the proper tax liability, and in litigation. Not going far, taking the recent example of Flipkart sale which has grabbed everyone’s attention. Such deals are quite mesmerizing and make everyone inquisitive to understand the background. And the reasons are obvious as to how can a company be valued at such a high worth wherein it is apparently reporting losses since a decade. Valuation, therefore, is the real foundation of any company, basis which it stands, progresses further and entices umpteen offers. The investment bankers have to really rack their brains and burn the midnight oil to reach to certain valuation numbers. It involves lot of factors in which the foremost would be the future cash flows followed by contingent liabilities. Other major factors that would ensure swift ROI are as follows:



Let’s take a basic example of buying a company which would involve equity (stock) and debt (bonds and loans). The value of debt is quite simple to

calculate which is nothing but the book value of debt. On the contrary, figuring out equity value is quite tricky and there's when the valuation techniques come into play. The most commonly used techniques are:



I. Discounted cash flow (DCF) analysis:

- Considered as most thorough way to value a company
- DCF analyses use future free cash flow projections and discounts them, using an annual rate, to arrive at present value estimates
- Require calculation of Free Cash Flows (FCFs) and Net Present Value (NPV) of these FCFs
- Two ways of computation: Adjusted Present Value (APV) and Weighted Average Cost of Capital (WACC) Method
- If the value arrived at through this analysis is higher than the current cost of investment, it indicates a good opportunity
- Calculated as: DCF = $[CF1 / (1+r)^1] + [CF2 / (1+r)^2] + ... + [CFn / (1+r)^n]$ CF = Cash Flow r = discount rate (WACC)

II. Comparable Transaction Method

- Basis for a method for valuing a company that is being targeted in a mergers and acquisitions (M&A) deal
- Revolves around some parameter for a similar transaction that has taken place in industry
- Key valuation parameter (E.g. EBIT, EBITDA, Revenue etc.) is the requisite
- Helps approximate the market clearing price of the target that the shareholders would be willing to accept

III. Multiples method

- Widely used method
- Based on the idea that similar assets sell at similar prices
- Assumes that a ratio comparing value to some specific-firm variable (operating margins, cash flow etc.) is the same across similar firms
- Two categories: Enterprise value multiples and equity multiples. EV multiples include EV/Sales, EV/EBIT and EV/EBITDA. Equity multiples include P/E ratio, price-earnings to growth (PEG), price-to-book ratio and price-to-sales ratio
- Multiples used for other companies are referred to Calculated by dividing the market or estimated value of an asset by a specific item on the financial statements or some other measure
- Seeks to capture many of a firm's operating and financial characteristics (e.g. expected growth) in a single number that can be multiplied by some financial metric (e.g. EBITDA) to yield an enterprise or equity value

IV. Market valuation

- Value is ascertained by performing a comparison between the firms concerned with organizations in the similar location, of equal volume or operating in similar sector
- Approach of comparison would be shares of publically traded companies and those involved in identical commercial activities
- Open and free market dealing

There is a wider scope of valuation and off late valuation of start-ups is quite sought after and challenging. The biggest determinants of startup's value are the market forces of the industry and sector in which it plays, which include the following:

- Balance or imbalance between demand and supply of money
- Size of recent deals
- Willingness of an investor to pay a premium to get into a deal
- And the level of desperation of the entrepreneur looking for money

Valuation: Professionals' Insight

A startup company's value, is largely dictated by the market forces in the industry in which it operates. To be specific, the current value is determined by the market forces in play today and today's perception of what the future has in its garb. One needs to toil hard to justify the valuation and get prospective buyers. There are various ways of addressing these concerns like using financial models which pave a good way to predict the future. An investor is willing to pay more for your company if:

- It is in a good sector
- One has a functioning product
- One has traction

In conclusion, market forces greatly affect the value of a company. These depend upon pricing of similar deals and how recent exits have been valued in that specific sector. The best thing you can do to arm yourself with a feeling of what values are in the market before you speak to an investor is by speaking to other startups like yours (effectively making your own mental comparable table) that have raised money and see if they'll share with you what they were valued and how much they raised when they were at your stage. It is worth noting that nothing increases your company's value more than showing an investor that people out there want your product and are even willing to pay for it.

Hope this gives a requisite context in understating the basic of valuation.

Chapter 6

Valuation : One Approach or Multiple?

In today's highly competitive business environment accentuated by evolving business models and economic liberalization, mergers and acquisitions (M&A) have become a common strategic tool for achieving growth. M&A/strategy teams are perpetually faced with challenges while ascertaining the value of a potential acquisition target.

There are three globally accepted valuation approaches –Income approach, Market approach, and Cost approach. The three approaches rely on different criteria for valuation and have their own advantages and short comings. Income approach factors the future cash generating potential of the asset/business. Market approach indicates the value of an asset/business based on a comparison with market prices or historical transactions. Cost approach ascertains value of an asset based on the amount realizable from sale or amount required to replace the asset – for an operating business/company, this is usually based on the net assets on the balance sheet.

Of the above three approaches, is the Cost approach really relevant? – It is not forward looking and historical costs or the current asset base may not reflect the future cash generating potential of the asset/ business. Moreover, the relevance would be rather limited in case of businesses which are primarily driven by intangible assets – for example technology companies, brand holding companies, license holding companies. The value of such companies would be driven largely by the earnings /cash flow potential of the technology/intellectual property, which may not be reflected in the Balance Sheet, and the tangible asset (fixed asset and working capital) base is likely to be relatively small. However for asset heavy businesses, such as land/investment holding companies, infrastructure companies, etc., the tangible asset value would be of greater relevance. This approach is also relevant when valuing certain intangibles such as internally developed software or workforce which are not primary revenue drivers for the business and for which, the costs of replacement can be reasonably estimated. The

Income and Market approaches would be more relevant for determining the fair value of most stable and profitable businesses (as well as cash generating assets). However, application of both the Income and Market approaches can involve a significant amount of subjectivity.

Valuation, though backed by research and analysis, involves significant amount of judgement. With respect to the Discounted Cash Flow method ("DCF") an application of the Income approach, the future cash flows projections form a key input – the business forecasts invariably involve subjectivity. For example, consider a scenario where the revenues of the company being valued have grown by 15%, 5% and 12% per annum in the last three financial years. The projected financials forecast that the revenues will grow at20% per annum over the next five years. Prima facie, based on past trends alone, this appears an optimistic forecast rather than the most realistic one. The valuer will need to exercise judgement based on his or her analysis of the achievability of the forecasts and accordingly factor this in the valuation, either by moderating the projections or by factoring in a suitable risk premium in the discount rate derivation. Similarly estimation of valuation parameters such as discount rate and terminal value also involve subjective assessments. The discount rate can vary based on various parameters, such as selection of risk free rate (e.g. 10 year vs 20 year treasury yields), selection of comparable companies for beta estimation, horizon for beta estimation (e.g. 3 year vs 5 year, daily vs weekly vs monthly betas), debt-equity ratio, equity risk premium as well as any company specific risk premium (for risks related to achievability of forecasts, small size, client concentration etc.). Similarly, the estimation of terminal growth rate as well as the normalized margins, capital expenditure and working capital in the terminal year also involve judgement.

The application of Market approach also involves significant subjectivity - selection/weightage of chosen multiples (revenue vs EBITDA/ PAT multiples, listed company multiples vs transaction multiples), selection of comparable companies or methodology in computation (for e.g. whether to rely on current market capitalization or an average over 3 or 6 months) etc. Moreover, no two companies are identical and application of premia/discounts to reflect differences (in size, operating performance, client concentration etc.) also involves subjective assessments.

Accordingly, given the same set of data, at any given point in time, the probability of two valuation professionals assigning different values to any

asset/ business is probable It is the Valuer's expertise and experience based on which a value conclusion is assessed. Although, the Valuer would ideally maximize the use of factual inputs and minimize the use of assumptions, considering the number of subjective parameters in the valuation, rationalization of results from different approaches is essential. The following illustration may help to make this clearer – Say, one is valuing a company in an industry where the comparable listed companies are trading in the range of 10 -15 times earnings. On applying the DCF methodology, the value translates into 25 times earnings, much higher than the value indication from the Market approach. There could be multiple reasons for this –the projections could be overly optimistic, the discount rate could be too low or the terminal value assumptions could be exceptionally optimistic – it could be a combination of the above as well. It could also be that the stock markets at the given time are depressed. But it is important to carry out a rationalization prior to concluding at a valuation, which would be reasonable from various perspectives.

It is possible that there may be a paucity of listed companies or transactions in companies that are closely comparable to the company being valued. Even in such cases, it is generally possible to use market multiples of a broader industry set to do broad rationalizations. As a best practice, valuation professionals should adopt secondary approaches to corroborate the findings of the primary approach. For asset heavy industries, the net asset value (as per books or replacement costs) should also be used for validation, even if not relied on directly in the value assessment.

As a best practice, the values under the different approaches adopted should not be at a significant variance from each other. If the initial workings are not meeting this criterion, the Valuer should revisit his or her analysis before concluding. If required the Valuer may need to re-consider the subjective assumptions in the Income approach including the cash flow projections, discount rate and terminal value along with the selection of comparable companies, weightages and discounts/premia with respect to the Market approach; and analyze whether any changes needs to be made in the light of the divergence in values. For asset-heavy industries, the Valuer should also check whether the value conclusion reflects a reasonable return on the capital employed. In conclusion, given the subjectivity involved, a Valuer should look at the valuation from multiple angles and ensure that the results under different methods converge so as to minimize potential errors or bias.

Chapter 7

ICAI Valuation Standards 2018 Issued by ICAI

Recognising the need to have the consistent, uniform and transparent valuation policies and harmonise the diverse practices in use in India, the Council of the Institute of Chartered Accountants of India (ICAI) has issued the Valuation Standards which are 1st of its kind in India.

With a vision to promote best practices in this niche area of practice, the Standards lay down a framework for the chartered accountants to ensure uniformity in approach and quality of valuation output. The following Valuation Standards have been issued by ICAI:

1. Preface to the ICAI Valuation Standards
2. Framework for the Preparation of Valuation Report in accordance with the ICAI Valuation Standards
3. ICAI Valuation Standard 101 - Definitions
4. ICAI Valuation Standard 102 - Valuation Bases
5. ICAI Valuation Standard 103 - Valuation Approaches and Methods
6. ICAI Valuation Standard 201 - Scope of Work, Analyses and Evaluation
7. ICAI Valuation Standard 202 - Reporting and Documentation
8. ICAI Valuation Standard 301 - Business Valuation
9. ICAI Valuation Standard 302 - Intangible Assets
10. ICAI Valuation Standard 303 - Financial Instruments

The Standard provides guidance for the following three main valuation approaches which includes:

1. Market Approach

Some of the common valuation methods under income approach are as follows:

(a) Market Price Method;

(b) Comparable Companies Multiple (CCM) Method; and

(c) Comparable Transaction Multiple (CTM) Method.

2. Income approach; and

Some of the common valuation methods under income approach are as follows:

(a) Discounted Cash Flow (DCF) Method;

(b) Relief from Royalty (RFR) Method;

(c) Multi-Period Excess Earnings Method (MEEM);

(d) With and Without Method (WWM); and

(e) Option pricing models such as Black-Scholes-Merton formula or binomial (lattice) model.

3. Cost approach.

The following are the two most commonly used valuation methods under the Cost approach:

(a) Replacement Cost Method; and

(b) Reproduction Cost Method.

Brief about the Valuation Standards

Valuation Standard	Name of the Standard	Description
	Preface to the ICAI Valuation Standards	Formation of Valuation Standards Board, its objectives, Functions, Scope, Procedure for Issuing Valuation Standards
	Framework for the	The framework sets out the

	Preparation of Valuation Report in accordance with the ICAI Valuation Standards	concepts that underlie the preparation of valuation reports in accordance with the ICAI Valuation Standards for its users.
ICAI Valuation Standard - 101	Definitions	The objective of this valuation standard is to prescribe specific definitions and principles which are applicable to the ICAI Valuation Standards, dealt specifically in other standards. The definitions enunciated in this Standard shall guide and form the basis for certain terms used in other valuation standards prescribed herein.
ICAI Valuation Standard - 102	Valuation Bases	This Standards • defines the important valuation bases; • prescribes the measurement assumptions on which the value will be based; and • explains the premises of values.
ICAI Valuation Standard- 103	Valuation Approaches and Methods	This Standard: • defines the approaches and methods for valuing an asset; and • provides guidance on use of various valuation approaches/methods.

ICAI Valuation Standard – 202	Valuation Report and Documentation	• This Standard provides the: • minimum content of the valuation report; • basis for preparation of the valuation report; and • basis for maintaining sufficient and appropriate documentation.
ICAI Valuation Standard - 301	Business Valuation	• This Standard provides guidance for business valuers who are performing business valuation or business ownership interests valuation engagements. • The objective of this Standard is to establish uniform concepts, principles, practices and procedures for valuers performing valuation services.
ICAI Valuation Standard - 302	Intangible Assets	The objective of this Standard is to prescribe specific guidelines and principles which are applicable to the valuation of intangible assets that are not dealt specifically in another Standard.
ICAI Valuation Standard - 303	Financial Instruments	This Standard establishes principles, suggests methodology and considerations to be followed

		by a valuer in performing valuation of financial instruments. This Standard supplements the other ICAI Valuation Standards by providing specific principles and considerations in relation to financial instruments.

The Valuation Standards have been issued by the Institute of Chartered Accountants of India to set up concepts, principles and procedures which are generally accepted internationally having regard to legal framework and practices prevalent in India.

Applicability of Valuation Standards

These ICAI Valuation Standards 2018 will be applicable for all valuation engagements on mandatory basis under the Companies Act 2013. In respect of Valuation engagements under other Statutes like Income Tax, SEBI, FEMA etc, it will be on recommendatory basis for the members of the Institute. These Valuation Standards are effective for the valuation reports issued on or after 1st July, 2018.

In formulating the Valuation Standards, ICAI considered best valuation practices followed globally as well as in India, uniqueness of Indian conditions, current practices in India alongwith their advantages and disadvantages and various purposes for which valuations might be required over and above the requirements of Companies Act.

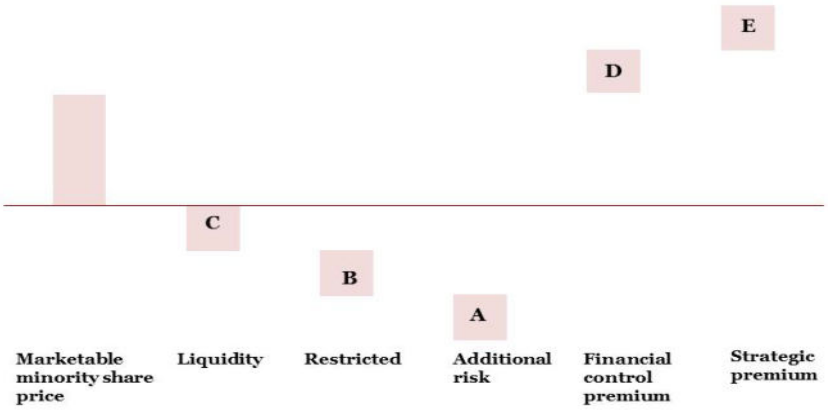
These standards come as ICAI's consistent drive to guide its members for ensuring high quality work and standards.

Chapter 8
Control Premiums and Minority Discounts

Ascribing an accurate, well substantiated and unbiased indication of value is an arduous task in the context of mergers and acquisitions. Pitfalls include overpayment or paying large premiums in acquisitions. The transaction price is often influenced by a number of factors with one such factor being the type of acquisition i.e. minority or controlling stake acquisition.

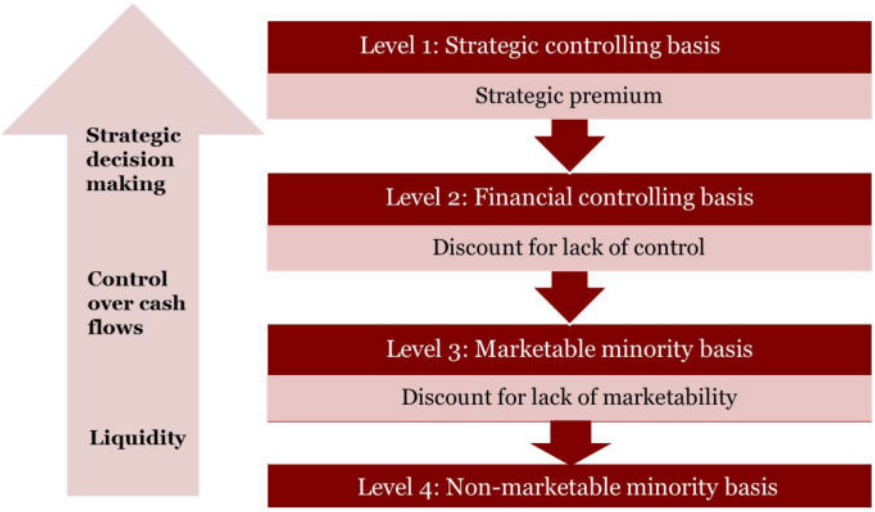
The concept of control premiums is driven by the perceived incremental value that an acquirer believes can be generated by acquiring control over the company's operations and being able to extract higher cash flows post acquisition. For example, consider the normal (marketable minority) stock price of a generic pharmaceutical company as depicted in Figure 1. A financial buyer will pay a premium in return for the privilege of control i.e. premium D. A strategic buyer (another generic pharmaceutical for example), will be willing to pay a further premium E due to the business synergies that they may be able to extract. This is commonly known as a strategic premium. The strategic component shows that different buyers as well as sellers can have different points of view of value which will manifest itself in the price that is ultimately established.

Figure 1: Illustrating premiums and discounts



Control confers value implying that the benefactor has certain rights that can influence business decisions/operations and thereby provide the ability to control cash flows of the business. There are two types of basis for control, strategic controlling basis and financial controlling basis.

Figure 2: Hierarchy of premiums and discounts[1]



Level 1: Strategic controlling basis

If a potential buyer believes that he or she can better implement value accretive initiatives through strategic means, then he or she may be willing to pay a premium for control. For example, the premium may be justifiable to shareholders as well as the management if it confers certain privileges such as selecting management, merging the company or changing business operations.

Level 2: Financial controlling basis

The premium associated with having 100 percent control over the existing cash flows of the business (premium D in figure 1), may be driven by perceived benefits relating to direct access to gross cash flows as opposed to dividend flows over which one will have little influence and no control.

[1]Source: Pratt, S and Niculita, A. Valuing a Business – The Analysis and Appraisal of Closely Held Companies, McGraw-Hill, 2008

Minority basis

The other common 'level of value' is value derived on a minority basis. Considering the methodology by which a minority stakeholder may derive value, two types of discounts are commonly applicable. These include the following:

- Discount for lack of control so as to arrive at a marketable minority basis (Figure 2: Level 3)
- Discount for lack of marketability so as to arrive at a non-marketable minority basis (Figure 2: Level 4)

Level 3: Marketable minority basis

A marketable minority interest lacks control, but may still possess the benefit of liquidity within an active market, for example a share in a NSE or BSE listed company, allowing the individual to freely trade the security at market prices. However, given that a minority shareholder is unlikely to exert strategic or financial control, a discount for lack of control is often applicable.

Level 4: Non-marketable minority basis

A non-marketable minority interest has neither control nor liquidity, similar to a share in a private company that is both a minority and lacks an active publicly traded market. Liquidity confers value and prospective buyers will pay extra for flexibility to exit as and when required. A discount for lack of marketability indicates that non-liquid assets can sell at a discount (discount C, in the Figure 1) to an asset where willing buyers are readily available. Other factors such as restrictions on selling the stock may further increase such discounts, thereby depressing overall value.

In general, the target as well as the buyer will have their own perceptions of value. While, for example, a target's valuation may interpret the level of value as a strategic controlling interest worthy of a control premium, a buyer may consider a discount for lack of control assuming a marketable minority level of value. The difference in opinion and hence, the concluded values can be contentious, leading to disconnects. Therefore, in pricing transactions assessing the level of value and determining the correct discount or premium will often be the key to structuring an investment.

Why pay a control premium?

Business owners consider a controlling interest to have greater value than a minority interest under the premise that the purchaser will be able to effect changes in the business structure and influence overall business policies. Empirical market data corroborates that control premiums observed in successful transactions vary greatly. Amongst the plethora of factors affecting the magnitude of a given control premium select factors could include:

- The nature of business opportunities which are currently not being effectively monetized,
- Perceived quality of existing management,
- The ability of the target company to integrate into the acquirer's business and the probability that management will be able to implement change/new initiatives and,
- Competitive landscape of the industry in which the target operates.

What constitutes control worthy of paying a premium?

Controlling interests are usually more valuable than minority shares because they often contain a bundle of rights that minority shareholders do not enjoy.

The rights afforded by 'control' can vary across a broad spectrum depending on transaction specific nuances. Hence, it is important to carefully analyze the magnitude of the stake being acquired in a transaction in conjunction with the rights that the acquirer will possess post transaction, as these factors directly impact the magnitude of the control premium paid.

In the Indian context, the Companies Act, 2013 provides guidance on major corporate actions for which ordinary and special resolutions are required to be passed and the associated level of control/majority required. Specifically, a resolution can be deemed as an ordinary resolution if it is required to be passed by the votes cast, whether on a show of hands, electronically or through a poll, in favour of the resolution (i.e. at least 51% votes required). While, in case of special resolutions, the votes required are in excess of three fourth of the total votes casted.

While accessing the applicability and magnitude of control premiums, company and transaction specific factors should be analysed. For example, cases may arise where less than 50 percent shareholding may form part of a given transaction, however, "effective control" may still exist if the balance

shares are widely dispersed. Also, there could be an instance where a minority shareholder possesses effective control by owning the majority of voting shares in a company which has both voting and non-voting classes of shares. Accordingly, transactions should be analyzed on a case by case basis to ascertain the appropriate application of control premiums.

Chapter 9

Enterprise Value of Firms in case of Insolvency

Introduction

"The only certainty in life is uncertainty"

The above maxim is as applicable to businesses as to life. Businesses, as life, are full of uncertainties. Dealing with unfavorable macro-economic events, strong industry headwinds and hostile competition can be challenging at the best of times, and well-nigh impossible when some or all of these conditions become adverse at the same time.

Distress can be broadly categorized as Economic or Financial Distress

Economic Distress

Economic distress is broad-based and afflicts most companies operating in the industry or economy at one point or another. Economic distress factors are normally outside the control of a company. Examples of factors causing economic distress are – technological or cultural shifts, recessions, and sometimes wars or other geo-political confrontations. Some of the economic distress factors are temporary, while other factors may leave behind a permanent change in the business landscape.

For example, war affects all businesses (except suppliers of arms and ammunitions); however, businesses recover after normalcy returns. But, a technological shift such as innovation in mobile phones has rendered the aim-and-shoot camera industry redundant forever. It is critical to identify whether factors causing distress are temporary or long-term to be able to chart the future course of action for a distress company.

Financial Distress

Firms in financial distress cannot meet, or have difficulty paying off their financial obligations to their creditors, typically due to high fixed costs, illiquid assets or revenues that are sensitive to economic downturns, etc. Some of the characteristics of financially distressed companies – Stagnant or declining

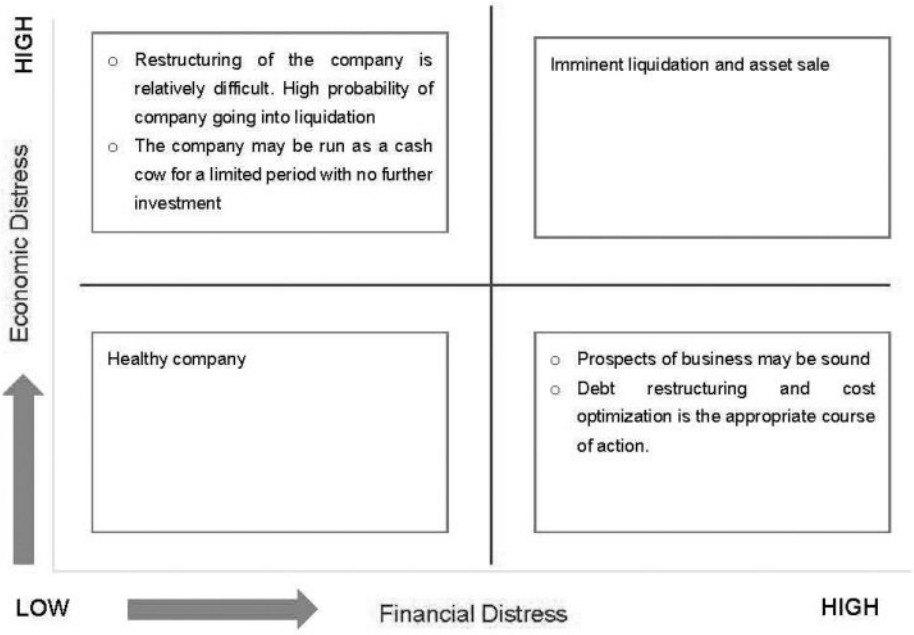
revenue, shrinking margin, high leverage, ballooning interest costs, working capital blockage, high customer and employee attrition etc.

Economic distress at times overlaps with micro (i.e., firm specific) factors resulting in financial distress. Some of the key micro factors contributing to financial distress are:

- **Management**: Management sometimes veers away from its mandate to enhance stakeholders' value through optimum use of resources at its disposal, which can be attributed to either incompetency or the 'Agency Problem.'[2]
- **Debt:** Debt is a double-edged sword. For disciplined companies with predictable cash flows, it increases return on equity due to leverage and tax benefit. However, for distressed companies, debt can hasten insolvency.
- **Force Majeure:** Force majeure or Act of God is unforeseen circumstances that can have deleterious impact on a business and result in distress.

In a world with unlimited capital and resources, distressed companies will never face insolvency. Unfortunately, since capital is limited and chases businesses with the best prospects, distressed companies become insolvent. The following is a decision matrix for companies facing financial and economic distress.

[2] In corporate finance, the agency problem usually refers to a conflict of interest between a company's management (the agent) and the company's stockholders (principals).



Regulatory Recognition of Distress

There is no regulatory guidance in terms of recognition of distress and most laws come into effect once an act of default occurs. In India, under Insolvency and Bankruptcy Act, 2016,("IBC")when a corporate debtor[3] commits a default, a financial creditor[4], an operational creditor[4] or the corporate debtor itself may initiate corporate insolvency resolution provided the minimum amount of the default is one lakh rupees. Under the UK Insolvency Act, 1986, a company is deemed unable to pay its debts, if a creditor (by assignment or otherwise) to whom the company is indebted in a sum exceeding £750[5].

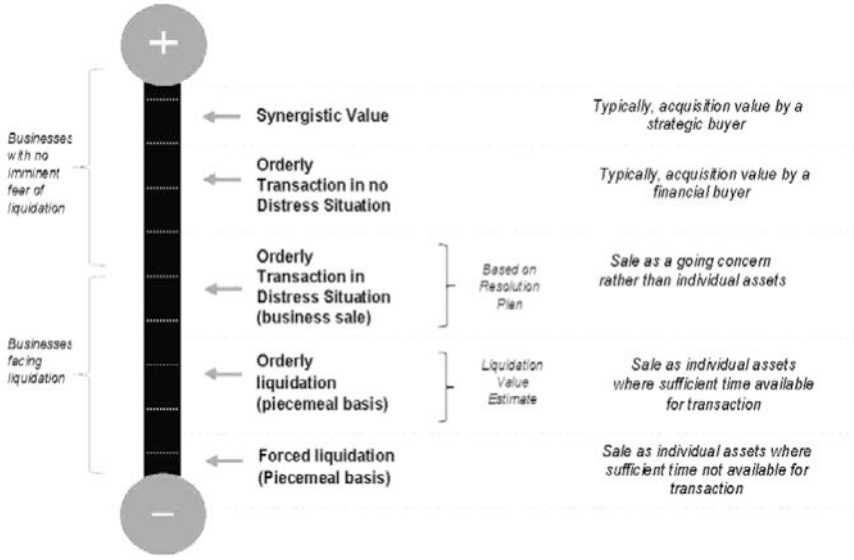
Though there is no formal definition, there can be telltale signs of distress prior to the default event. These signs should be observed or monitored carefully and incorporated into valuation of such enterprise.

[3] Corporate debtor means a corporate person who owes a debt to any person
[4] "Creditor" means any person to whom a debt is owed and includes a financial creditor, an operational creditor, a secured creditor, an unsecured creditor and a decree holder
[5]http://www.legislation.gov.uk/ukpga/1986/45/section/123

Levels of Value

It is critical to identify the nature of distress. The optimal course of action for companies facing irreversible economic distress is liquidation of assets. However, for companies with good prospects but suffering due to high debt burden, financial restructuring is advisable. Estimating enterprise value is a critical step in financial restructuring.

The following represents a quick overview of the levels of Value for a company under distress:



Enterprise Value v/s Liquidation Value

The two routes available to a company under insolvency are

(a) to liquidate the business, selling off business or physical assets piecemeal, and returning the proceeds to creditors, or

(b) to restructure its debts to manageable levels and continue as a going concern.

Accordingly, there are two premises under which an insolvent company can be valued:

Liquidation Value

Liquidation Value has been defined under various acts as listed below:

As per section 35 (1) of the Insolvency and Bankruptcy Code, 2016 ("IBC"), "Liquidation Value is the estimated realizable value of the assets of the corporate debtor if the corporate debtor were to be liquidated on the insolvency commencement date". Further, section 35 (2) of IBC requires the valuer to determine liquidation value using internationally accepted valuation standards.

According to the International Valuation Standards ("IVS") 104, "Liquidation Value is the amount that would be realized when an asset or group of assets is sold on a piecemeal basis, that is without consideration of benefits (or detriments) associated with a going-concern business".

According to the Indian Banks' Association (IBA)," Liquidation Value describes the situation where a group of assets employed together in a business are offered for sale separately, usually following a closure of the business". Therefore, Liquidation value is essentially, the estimated value of assets when sold on piecemeal basis on the insolvency commencement date.

Enterprise Value

Enterprise Value ("EV") is a measure of total value of company's operating assets. It is a going concern value and takes into account best use of assets. A business which is merely financially distressed (i.e. one whose assets are more valuable if kept together as a functioning unit than they would be if sold off piecemeal) is said to have a 'going concern surplus'[6].

Estimation of Enterprise Value of a firm under distress & insolvency

There are three basic approaches to valuation – Income, Market and Cost. The Cost approach estimates the cost of recreating or replacing the assets of an enterprise. Since, for an operating business, the whole is greater than the sum of its parts in general, cost approach is not the most preferred method for estimating enterprise value of going concerns.

On the other hand, traditional methods are more suited for healthy companies and can't be used, as is, for valuation of distressed companies. There are several ways to incorporate the risk of bankruptcy while estimating the enterprise value of the firm under different valuation approaches.

[6] Value over and above the liquidation value of assets of the company

Market Approach

Market approach is a relative benchmarking. It uses a comparison between the subject enterprise and a company with a discovered price either through publicly traded shares or a private transaction using operating/ financial metrics for comparison. The applicability of market approach is limited in case of distressed companies as nature of distress can vary from firm to firm.

While valuing a company under distress, it is essential to select the right set of companies as there might be very few companies under similar situation operating in the same industry. Moreover, the distressed company's recent historical revenue and earnings might not be meaningful. Hence, a sustainable or normalized metric has to be ascertained on which the multiple should be applied.

Income Approach

Under income approach, Discounted Cash Flow (DCF) method is a commonly used methodology, wherein present value of future expected economic benefits of an enterprise over life of the enterprise is estimated by using a discount rate based on their riskiness. For a going concern, life of the enterprise is typically assumed to be till perpetuity. Hence, cash flows beyond a discreet period are captured using a terminal value. Traditional DCF method is not suitable for distressed companies for the following reasons:

- Uncertainty over future cash flows
- Uncertainty around life of the enterprise
- Challenges around estimating the appropriate discount rate

The following discussion encapsulates how to modify traditional DCF to overcome the above challenges.

Uncertainty over future cash flows

Distressed companies typically have a very volatile past; hence, projecting future cash flows is quite challenging. There are normally too many moving pieces to capture in a traditional framework. Hence, Scenario Analysis is commonly used for valuing such companies.

In Scenario Analysis, possible future courses are identified for the enterprise. A thorough understanding of the cause of distress is helpful in identifying possible scenarios.

For example, a gas-based power plant without a Power Purchase Agreement (PPA) and a dedicated gas linkage is currently not producing as current spot prices are unviable. It is therefore not able to service its debt. Possible scenarios for this power plant could be:

- Future gas prices remain at high level. In such a scenario, it will never be viable for the plant to produce power. Hence, it faces liquidations and the plant & equipment need to be sold on a piecemeal basis.
- Spot prices come down and demand improves. In this scenario, it is viable for the plant to operate and gradually increase production to operate at a peak plant load factor (PLF) of say, 75%.
- Spot gas prices based on future estimates are expected to be lower than current spot prices but there is not much improvement in demand. In such a scenario, the plant is able to operate as a peak load plant during those hours of the day when demand is high and shut down during periods of low demand, overall achieving a PLF of 25%.

Based on a macro view of future gas prices, demand for electricity and analysis of the plant's fixed costs, it will be possible to assign a probability to the above three scenarios to arrive at a concluded value.

Alternatively, a simulation analysis of the key variables of the business such as revenue growth, profitability, etc can be carried out. This will also take into account the possibility of negative outcomes or cause the firm into liquidation. Simulation can be performed using Monte Carlo simulation technique or probability simulation. It provides for a range of possible outcomes and the probabilities for each course of action including extreme possibilities (liquidation of the company) and for the most conservative decision (firm will continue as a going concern entity with reasonable profitability and optimal capital structure) - along with all possible consequences for middle-of-the-road decisions. Following steps need to be performed for the simulation process:

- Choose the variables in the DCF valuation for which you want to estimate probability distributions, such as revenue, profitability, capital structure, etc.
- Define the distributions (type and parameters) for each of these variables.
- Run a simulation, where you draw one outcome from each distribution

and compute the value of the firm. If the firm hits the "distress conditions", value it as a distressed firm.

- Repeat the previous step as many times as you can
- Estimate the expected value across repeated simulations and then an average of the expected values is taken into consideration for the estimation of the enterprise value of the distressed firm.

Life of the Enterprise

Life of the enterprise can be concluded based on nature of distress, resources required for turnaround and appetite for such assets in market.

- If nature of distress is permanent rather than temporary (more often economic), it is advisable to shut the business down. Hence, a limited period life is more likely
- Sometimes, though the nature of distress is temporary and the business is likely to be revived, the cost of maintaining the asset or turnaround cost could be higher. For example, maintenance cost of non-producing mine could be significantly high. Similarly, the upfront cost for turning around a business can also be significant. In these cases, liquidation is the most likely scenario and accordingly, a limited life should be considered in DCF.
- Appetite for distressed assets in market also matters. In an industry with surplus capacity, assets capable of revival, also are shut down.

While calculating terminal value using a Gordon Growth Model, terminal growth rate should be considered similar to any healthy company. A lower terminal growth rate is not appropriate, since terminal value ascribes 'a going concern nature' to the business. Any trial or tribulation should be considered in the transition period.

Discount Rate

In traditional DCF model, riskiness of cashflows are captured in discount rate. However, it is difficult to capture risk of liquidation in cashflows only. As discussed earlier, probability of liquidation can be captured separately. Also, scenarios or simulation can be considered to capture risk in the cash flows. Life of the enterprise can be considered based on the likely outcomes for each scenario.

Capital asset pricing model (CAPM) is commonly used to estimate cost of

capital. The following points should be considered while estimating discount rate to arrive at EV:

- Typically, distressed companies suffer from lack of working capital funding due to high debt positions. However, while estimating EV, a sustainable leverage should be considered based on Company's cash generating potential. Sufficient working capital funding should be considered going forward.
- Any economic distress factors will be captured in Beta as comparable companies will be exposed to similar risk factors.

Beta

Using a historically regressed beta for the distressed company can lead to underestimation of the cost of equity as regression betas lag distress as they are calculating over a long historical period hence, a using a bottom-up beta approach is suitable. This approach uses beta based on the peer group operating in the same industry. These betas are then unlevered and then re-levered based on the financial and operating risks suitably. This method is useful for companies which are listed as well privately held.

Cost of Debt

For a distressed firm, the current market rate of borrowings is significantly higher due to current capital structure or bad economic conditions. For our purpose of estimating the cost of debt, the rate of borrowing should be taken into consideration based on the future profitability and capital structure emerging from the restructuring plan. For this purpose, the cost of debt can be estimated based on a synthetic rating, which in turn can be estimated based on the financial characteristics of the firms within each class of ratings (for example, interest coverage ratio, capital structure, etc.)

Tax Rate

The current effective tax rate for a distressed company might be the minimum alternative. The tax rate is low in the beginning for the company as tax carry forwards might exist. It increases as the company starts generating profits and its situation improves. Considering that, for a distress firm, the tax rate would gradually increase, it is suggested that the effect of this be included while estimating post tax cost of debt by using different post tax cost of debt at different points of time during the projected period.

Capital Structure / Leverage

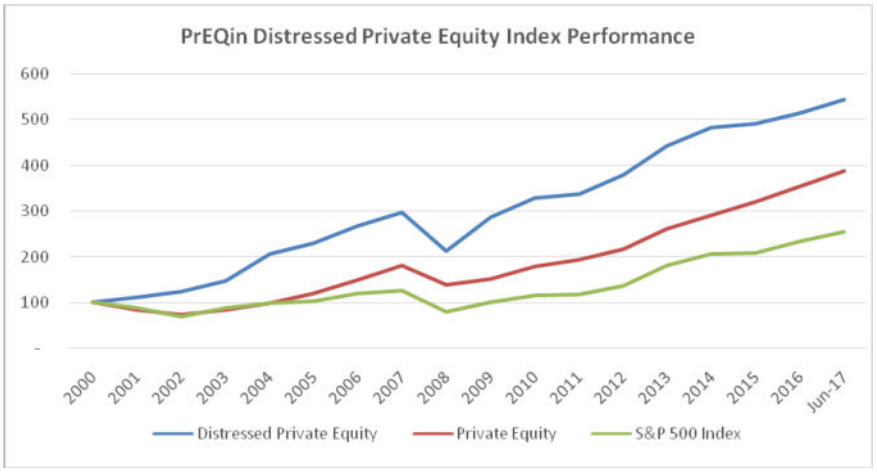
A distressed company is generally faced with financial distress and hence, considering a constant target capital structure for the company for calculating the discount rate may not be appropriate as the improvement of capital structure towards the industry average, although dependent on the restructuring plan, is mostly likely to be gradual over time. Hence, a separate discount rate needs to be estimated for each year till the industry average as per the restructuring plan is achieved. This can be done by varying the debt equity ratio and various other inputs used in the discount rate calculation for which the forecasts are available.

Benchmarking with Historical Returns of ARCs and Distressed Equity Funds

Discount rate can also be benchmarked with empirical historical returns of Asset Reconstruction Companies (ARCs).There is a lack of sufficient publicly available data related to historical returns of ARC operating in India. Traditionally, 20.0 percent has been a thumb rule return for ARCs. However, implementation of the 15/85 scheme (earlier 5/95) for the new capital requirements in August 2014 has resulted in upfront cash component increased to 15.0 percent, the ARCs would require more capital to acquire the stressed assets in India along with funding of working capital needs for the stressed assets. This has significantly increased the cost of acquisition of stressed assets for ARCs. This scheme has also decreased the propensity of the ARCs to rely just on the management fee based on the net asset value of the security receipts issued to the investors (earlier estimated based on the outstanding security receipts). This has reduced the overall IRR for the ARC in India.

To offset this, ARCs have been seeking higher discounts to buy NPAs; however, banks are unwilling to reduce price, resulting in an expectation mismatch. This has led to a sharp decline in the transaction closure rate. The main reason for this gap appears to be the vastly different discounting rates being used by banks and ARCs. While banks use discount rates in the range of 10% to 15%, given their access to cheap capital in the form of public deposits, ARCs use much higher discount rates of 20% to 25% as their cost of funds is relatively higher than that of banks. Without realistic valuation guidelines, there is no incentive for private investors to participate in auctions as the reserve price tends to be high, given the low discount rate used by banks vis-à-vis ARCs and private investors.

As risk and return go hand in hand, historical returns of ARCs can be considered as benchmark expected return from investment in distressed equity. The following graph represents the PrEQ in Distressed Private Equity Index[7] over the last 16 years which has consistently outperformed the private equity asset class and S&P 500 Index as a whole and has been one of the best performing strategies within the industry.



Source: *Preguin*

Reorganization costs

Reorganization costs are one-time costs incurred to extend the life of a company facing bankruptcy through special arrangements and restructuring in order to keep the business alive. This cost relates to the objective of getting the debt levels down and closer to their optimal capital structure. This can be achieved through either persuading the creditors to write down their claims, sell assets or issue new securities. The impact of reorganization costs in estimating the valuation of the distressed firm can be considered while estimating the discount rate where instead of using a single discount rate for all the years, different discount rates can be considered based on the varying capital structure for each period of cash flow. Higher discount rate in the first year would reflect higher leverage and then moving towards the optimal capital structure in the outer years thereby reducing the discount rate.

[7] PrEQIn Index is a money-weighted index that uses fund level cash flow transactions and net asset values for over 3,900 private equity funds

Valuing distress separately from the going concern value of the firm[8]

An alternate way of incorporating probability of distress while estimating the value of the distressed firm is accounting for the distress separately from the going concern value. This is because the traditional methods of valuation do not work well for companies in declining stage and also facing financial distress. Hence, there is a need of a new framework which addresses the issue of bankruptcy or distress risk into the value of the distressed firm.

Hence, the below adapts the identified issues and deals specifically with the risk of default in a separate variable, tailored to the firm's characteristics.

The model is based around the following equation:

> Value = Value of Going Concern * (1 – probability of liquidation) + Liquidation Value * probability of liquidation, where probability of liquidation represents the cumulative probability of liquidation over the valuation period.
>
> Probability of default based on credit rating can be considered a proxy for probability of liquidation. For example, if a CCC rated 10-year bond yield is 14.5%, while the risk-free rate based on 10-year Govt. bond yield is 7.0%, the probability of liquidation can be calculated as follows:
>
> 1 – {(1+risk-free rate) /(1+risky bond YTM)}^(maturity period)
>
> = 1- {(1+7.0%)/(1+14.5%)}^10 = 49.2%
>
> Accordingly, 10-year cumulative liquidation probability as signified by the CCC-rating of the bond is 49.2%. Please note, probability of liquidation tends to be lower than the default probability of bonds.

Conclusion

Valuation in general is a combination of science and art, more so in case of distressed companies. Hence, it is paramount that the right framework, methodology and assumption mix is considered to arrive at the right valuation, which balances the theoretical and practical aspects. Arriving at the right enterprise value is critical to arrive at the appropriate pay-offs to secured, unsecured, operational creditors and equity holders, which in turn is critical to ensure the best resolution for the subject business.

[8] Sebastian Afflerbach, Master Thesis on Valuation of distressed firms, August 2014

Chapter 10
International Valuation Standards

"Price Is What You Pay, Value Is What You Get".

This is quite a true fact quoted by Warren Buffet. The valuation which is an opinion is the key factor of the decision of every transaction. Take it business or individual, valuation has its form and necessity depending upon the transaction. Often, we have a question like "is it worth". It can be defined in a number of different ways, and without carefully defining the term, the results of the valuation can become meaningless.

The difference between the price, cost, and value of a product or service is very negligible, perceived and subtle. When we talk about price it refers to the money which we have to pay to acquire the same. Cost refers to the amount spent or incurred to manufacture the product or service in question.

The concept of valuation has gained momentum now-a-days. Valuation is not an exact science. Mathematical certainty is not demanded nor is it possible. It involves a decision-making process by using different methods to determine the price one is willing to pay or receive to affect the sale of a business. It is based upon assumptions, method and the data considered by the Valuer. Moreover, Value is also dependent upon the other circumstances like demand, availability, uniqueness etc. A fair valuation is the spirit of the valuation process.

The first great landmark in the long and tortuous intellectual struggle with the riddle of value was laid by the philosophers of the Athenian Academy in the 4th century BC. It was Aristotle (384-322) who held that the source of value was based on need, without which exchange would not take place. Originally, it was he who distinguished between the value in use and value in exchange- 'of everything which we possess, there are two uses; For example, a shoe is used to wear and it is used for exchange'.

Valuations are widely used and relied upon in financial and other markets, whether for inclusion in financial statements, for regulatory compliance or to support secured lending and transactional activity.

Valuation of assets, as a field of work is vast and diverse. There are a

number of valuer's associations around the world that are engaged in the process of standardising the methods and approaches to valuations of assets.

It is a general understanding that no two assets are identical and the methods and assumptions for the purpose of valuation used for one asset cannot be followed for the valuation of other assets without modifications. This may lead to the difference in the value of an asset arrived at, by two different valuers.

And hence, a need for a standardised process or set of rules to regulate all the valuation assignments being carried out.

As is the case with the standards on accounting, various international bodies of valuers have issued standards on Valuation. The major Valuation Standards are listed below:

- International Valuation Standards, 2017, issued by the International Valuation Standards Council (IVSC)
- European Valuation Standards, 2016 issued by The European Group of Valuers' Association (TEGoVA), also known as the Blue Book.
- American Society of Appraisers Business Valuation Standards, approved through November 2009.
- RICS Valuation – Global Standards, 2017 (Red Book), issued by the Royal Institution of Chartered Surveyors (RICS), headquartered in London.

International Valuation Standards, 2017.

The International Valuation Standards (IVS) are standards for undertaking valuation assignments using generally recognised concepts and principles that promote transparency and consistency in valuation practice.

The International Valuation Standards (IVS) are international standards that consist of various actions required during the undertaking of valuation assignment supported by technical information and guidance.

The IVSs are formulated and published by the International Valuation Standards Council (IVSC). IVSC is an independent, non- profit organization. It was established in 1981, as the International Assets Valuation Standards Committee (TIAVSC). Its major area of interest was the valuation of real property, as the founder members were the professional institutes from that field.

Later, in 1991, the name of the committee was changed to International Valuation Standards Committee, and from late 1990s, membership was also offered to valuation professionals' organizations for assets other than real property.

The IVSC was again restructured in 2008, and the name was changed to International Valuation Standards Council.

Valuation professionals of different countries come together for the discussion on various issues. Also, the members point out the differences in the national and international issues and methods of valuation. These differences are smoothened out when the new version of the IVSs are issued.

Its objective is to build confidence and public trust in valuation by producing standards and securing their universal adoption and implementation for the valuation of assets across the world.

The IVSs harmonise the practice of valuation by ironing out the differences in the manner the exercise of valuation is carried out across various countries, by members of different professional bodies. When such standardisation is achieved, public trust is gained in the process. The standards laid out by the IVSC assure consistency, transparency and confidence in the valuations carried out on their basis.

Sir David Tweedie, IVSC Chairman, says: "IVS 2017 represents the latest in IVSC's continuing commitment to developing high-quality valuation standards. The valuation of assets, both tangible and intangible, plays an essential role in the financial and real estate markets – and therefore the global economy. IVS 2017 will be instrumental in improving valuation practice and will bring greater efficiency to capital markets."

As per the IVSC, the International Valuation Standards (IVS) are a fundamental part of the financial system, along with high levels of professionalism in applying them.

The IVSC Standards Board is the body responsible for setting the IVS. The Board has autonomy in the development of its agenda and approval of its publications. In developing the IVS, the Board: -

- Established due process in the development of any new standard, including consultation with stakeholders (valuers, users of valuation services, regulators, valuation professional organisations, etc.) and public exposure of all new standards or material alterations to existing standards,

- Coordinate with other bodies that have a standard-setting function in the financial markets,
- Conducts outreach activities including round-table discussions with invited constituents and targeted discussions with specific users or user groups.

Objective of IVS

The objective of the International Valuation Standards (IVS) is to increase the confidence and trust of users of valuation services by establishing transparent and consistent valuation practices. A standard within IVS will do one or more of the following:

- identify or develop globally accepted principles and definitions,
- identify and promulgate considerations for the undertaking of valuation assignments and the reporting of valuations,
- identify specific matters that require consideration and methods commonly used for valuing different types of assets or liabilities.

The IVS consist of mandatory requirements that must be followed in order to state that a valuation was performed in compliance with the IVS. Certain aspects of the standards do not direct or mandate any particular course of action but provide fundamental principles and concepts that must be considered in undertaking a valuation.

Arrangement of IVS

IVS are generally classified into three parts.

1. Framework
2. General standards
3. Asset specific standards

The Framework describes the applicability of the standards and also defines “Valuer”. It states that the task of valuation should be undertaken with objectivity and competence and also list outs when departures from certain requirements of the standards are allowed and how should they be presented.

General Standards cover the common aspects of a valuation assignment. There are five General Standards of Valuation.

1. IVS 101 – Scope of work
2. IVS 102 – Investigations and Compliance
3. IVS 103 – Reporting
4. IVS 104 – Bases of Value
5. IVS 105 – Valuation Approaches and Methods

Asset Specific Standards are the standards laid down with respect to a particular asset class. In the valuation of all those assets for whom specific standards have been formulated, should be valued as per those standards. There are six asset specific valuation standards. They are:

1. IVS 200 – Business and Business Interests
2. IVS 210 – Intangible Assets
3. IVS 300 – Plant and Machinery
4. IVS 400 – Real Property Interest
5. IVS 410 – Development Property
6. IVS 500 – Financial Instruments

The current version of IVS 2017 came into effect from July 1, 2017, by replacing IVS 2013.

The website of the International Valuation Standards Council is *https://www.ivsc.org/.*

All the updates regarding the IVS and drafts and discussions with regard to the new standards being considered, can be accessed from there.

IVS 500 deals with the valuation of Financial Instruments.

Valuation of financial instruments is done for many purposes which includes:

(a) acquisitions, mergers and sales of businesses or parts of businesses,

(b) purchase and sale,

(c) financial reporting,

(d) legal or regulatory requirements (subject to any specific requirements set by the relevant authority),

(e) internal risk and compliance procedures,

(f) tax, and

(g) litigation.

The requirement to disclose the valuation approach(es) and reasoning, in the valuation report will differ for different categories of financial instruments. Sufficient information should be provided to allow users to understand the nature of each class of instrument valued and the primary factors influencing the values. In determining the level of appropriate disclosure, regard must be had to the following:

(a) Materiality

(b) Uncertainty

(c) Complexity

(d) Comparability

(e) Underlying Instruments

Valuation Approaches and Methods for the Valuation of Financial Instruments:

1. Market Approach

A price obtained from trading on a liquid exchange on, or very close to, the time or date of valuation is normally the best indication of the market value of a holding of the identical instrument. In cases where there have not been recent relevant transactions, the evidence of quoted or consensus prices, or private transactions may also be relevant.

2. Income Approach

Under this approach, the discounted cash flow method can be used for the valuation of financial instruments.

In establishing the appropriate discount rate, it is necessary to assess the return that would be required on the instrument to compensate for the time value of money and potential additional risks from, but not limited to the following:

(a) the terms and conditions of the instrument, such as, subordination,

(b) the credit risk, or the uncertainty about the ability of the counterparty to make payments when due,

(c) the liquidity and marketability of the instrument,

(d) the risk of changes to the regulatory or legal environment, and

(e) the tax status of the instrument.

3. Cost Approach

In applying the cost approach, valuers must follow the guidance contained in IVS 105 Valuation Approaches and Methods.

Special Considerations for Financial Instruments

(a) *Valuation Inputs:* Valuation inputs may come from a variety of sources. Commonly used valuation input sources are:

- broker quotations,
- consensus pricing services,
- the prices of comparable instruments from third parties and
- market data pricing services.

Implied inputs can often be derived from such observable prices such as volatility and yields.

(b) *Credit Risk Adjustments:* Some of the common factors that need to be considered in establishing and measuring credit risk include the following:

- Own credit and counterparty risk
- The valuer also needs to be able to differentiate between the credit risk of the instrument and the credit risk of the issuer and/or counterparty.
- Subordination
- Leverage
- Netting agreements
- Default protection

(c) *Liquidity and Market Activity:* Liquidity and market activity are different from each other. The liquidity of an asset is a measure of how easily and quickly it can be transferred in return for cash or a cash equivalent. Market activity is a measure of the volume of trading at any given time, and is a relative rather than an absolute measure. Low market activity for an instrument does not necessarily imply the instrument is illiquid.

(d) Valuation Control and Objectivity : The following need to be considered while accessing valuation control:

- establishing a governance group responsible for valuation policies and procedures and for oversight of the entity's valuation process, including some members external to the entity,
- systems for regulatory compliance if applicable,
- a protocol for the frequency and methods for calibration and testing of valuation models,
- criteria for verification of certain valuations by different internal or external experts,
- periodic independent validation of the valuation model(s),
- identifying thresholds or events that trigger more thorough investigation or secondary approval requirements, and
- identifying procedures for establishing significant inputs that are not directly observable in the market, e.g., by establishing pricing or audit committees.

European Valuation Standards, 2016 (also known as blue book)

These standards are issued by TEGoVA, The European Group of Valuers' Association, which is a non-profit association, with a membership of 71 Valuers' associations from 37 countries. It is the European umbrella organisation of national valuers associations.

The main objective of TEGoVa is the scientific and educational promotion of the profession of Valuer and the creation and spreading of harmonised standards for valuation practice, for education and qualification as well as for corporate governance and ethics for valuers. It supports its member associations in the introduction and implementation of these standards.

The eighth edition of the European Valuation Standards was launched on 13th May, 2016. The previous few editions were that of 2012, 2009 and 2003. The EVS is also known as the Blue Book.

The framework and content of EVS 2016, the eighth edition of European Valuation Standards, has been determined by recognition, extensive consultation and feedback.

The major objective of TEGoVA is to maintain its focus on the real estate sector, provide additional guidance and technical information to meet the diverse needs of it member associations and continue to concentrate on high level principles.

EVS 2016 provides harmonised European standards, guidance and technical information for use by all sectors of the European valuation profession. Corporate governance and ethical considerations are embedded within the standards, confirming, for instance, that a valuation produced in accordance with these standards is signed by a qualified professional whose experience, qualification, diligence and ethical behaviour are appropriate to the instruction.

As Mr. **Krzysztof Grzesik, Chairman of Board of Directors of TEGoVA says, "**The European authorities want reliable valuation standards throughout the Union giving TEGoVA a special responsibility to adapt EVS to the rapid EU mutations in banking supervision. Mortgage Lending Value is a case in point: EVS 2016 continues to provide the authoritative guidance on the assessment of MLV and enhances it with detailed analysis and explanation of the key issues and approaches to be followed. Other systemically key updates are the guidance on Property Valuation for Securitisation Purposes and Property and Market Rating."

Framework:

EVS are generally classified into four parts, with part one further divided into two subparts.

1. A: European valuation standards

B: European Valuation guidance notes

2. European codes

3. European Union Legislation and property valuation

4. Technical documents

EVS continues to provide five standards. They have all been refined and reinforced beyond those published in previous editions.

Part 1: A: European valuation standards: EVS 1-6

1. Market value

2. Valuation basis other than market value

3. The qualified valuer
4. The valuation process
5. Reporting the valuation
6. Automated Valuation Models (approved on 28.10.17, and rendered immediately operational)

Guidance Notes (previously referred to as Applications) follow on from the Standards. They have been reinforced to provide detailed analysis and explanation of key issues and approaches to be followed.

B: European Valuation guidance notes EVGN 1-11

1. Valuation for the purpose of financial reporting
2. Valuation for lending purposes
3. Property valuation for securitisation purposes
4. Assessment of insurable value and damages
5. Assessment of investment value
6. Cross-border valuation
7. Property valuation in the context of the alternative fund managers directive
8. Property valuation and energy efficiency
9. EMF and TEGoVA commercial loan specification
10. Valuations: compliance with EVS (approved on 28.10.17, and rendered immediately operational)
11. The valuer's use of Statistical Tools

Part 2: European codes: EC 1-2

Two updated and extended codes are provided in EVS, namely, the European Valuers' Code of Ethics and the European Code of Measurement.

Part 3: European Union Legislation and property valuation

As the standards cover all the countries of the European Union, this part was introduced in the 2012 edition of the standards. Many local property and real estate laws are applicable to the properties in the different countries of the European union. a complete section is devoted to the body of EU law

impacting real estate and valuation with many updates to take account of the EU real estate policy advances over recent years.

Part 4: Technical documents EVIP 1 – 8

The technical documents are the information papers. They are up for discussion and feedback.

1. Sustainability and valuation
2. Valuation certainty and market risk
3. Apportionment of value between land and buildings
4. Valuation and other issues for recurrent property tax purposes
5. Valuation methodology
6. Automated valuation models (null and void after 23.10.17, with the introduction of EVS 6.)
7. European property and market rating: a valuer's guide
8. Fair value measurement under IFRS 13.

EVS provides minimum standards that TEGoVA Member Associations (TMAs) must adopt in their own standards, supplementing such additional requirements as are deemed necessary by legislation, regulation or generally accepted practice within a specific state.

EVS 2016 is effective from 1st June, 2016.

The website of the TEGoVA is http://www.tegova.org/

All the updates regarding the EVS and drafts and discussions with regard to the new standards being considered, can be accessed from there.

As a Business Valuation Standards, 2009

These are the standards issued by the American Society of Appraisers (ASA), in November 2009.

ASA is a non profit organization of individuals that was incorporated in the state of Delaware, in 1952. It was formed by the consolidation of The American Society of Technical Appraisers (ASTA) and the Technical Valuation Society (TVS), organized in 1936 and 1939 respectively.

The major purpose for the formation of ASA was to establish an effective professional affiliation of appraisers of all disciplines, working cooperatively to elevate the standards of the appraisal profession.

The objectives of ASA, as outlined in Article II, sections 1-6, in the April, 2000 constitution are:

1. The society **shall promote the exchange of ideas and experiences** among its members; cultivate the profession of appraising; establish and maintain principles of appraisal practice and a code of ethics for the guidance of its members; maintain universal recognition that members of the society are objective, unbiased appraisers and consultants of property values; award one or more professional designations to qualified members of the society; and seek to attain recognition of the profession by both public and private enterprise.

2. The society **recognizes** that there are **basic communities of concept, purpose, thought, practice, and standards that are common to the many appraisal fields** in which its members engage and that their guided promotion and establishment are vital to each and all such special fields and to the appraisal profession and to the public.

3. The society shall **promote research and development in all phases of property economics;** cooperate with other appraisal and valuation societies and related professions and with finance, economics, engineering, architecture, accounting, building construction and related interests, real estate, insurance, taxation, and management; and approve and adopt reports of its committees or other groups as to standards, codes, and recommended practices.

4. The society shall forbid the use of its name, emblem, or initials in any manner not in accord with its constitution, bylaws, principles of appraisal practice, and code of ethics.

5. The society shall have the power to do any act or thing necessary for its functioning.

6. The board of governors shall **establish an Educational Foundation** with the purpose that the Educational Foundation shall encourage the advancement in appraising of all classes of property, both real and personal.

ASA is devoted to providing the highest possible standard in all areas of ethics, professionalism, education and designation criteria in the areas of Appraisal Review & Management, Business Valuation, Gems & Jewellery, Machinery & Technical Specialties, Personal Property and Real Property.

The members of the ASA are grouped according to 5 geographical regions, covering countries of Europe, Canada, Mexico, China, Hongkong and Japan, besides the United States.

The framework of ASA Business Valuation Standards is as follows:

1. General preamble
2. ASA Business valuation standards
3. Statements on business valuation standards
4. Advisory opinions
5. Procedural guidelines

The general preamble outlines all the areas to which the standards are applicable and the principles from various codes, that are applicable to the valuations of businesses, business ownership interests, securities and intangible assets.

There are 9 ASA Business Valuation Standards (BVS), which provide minimum criteria to be followed by business appraisers in developing and reporting the valuation of businesses, business ownership interests, securities and intangible assets. The ASA BVS are listed below:

1. General requirements for developing a business valuation
2. Financial statement adjustments
3. Asset-based approach to business valuation
4. Income approach to business valuation
5. Market approach to business valuation
6. Reaching a conclusion of value
7. Valuation discounts and premiums
8. Comprehensive written business valuation report
9. Intangible assets valuation

The Statements on ASA Business Valuation Standards (SBVS) clarify, interpret, explain or elaborate on Standards and have the full weight of the Standards. There are two SBVS. They are Guideline Public Company Method and Guideline Transactions Method.

The fourth part of the standard is the Advisory opinions. It provides advisory opinions to illustrate the applicability of the Standards and Statements in specific situations, offer advice for the resolution of valuation issues and are not binding. There is one Advisory Opinion or (AO) on Financial Consultation and Advisory Services.

The last part with regards to Procedural Guidelines (PG) suggests certain procedures that may be used in the conduct of an assignment and are not binding. There are two procedural guidelines till date. They are:

1. Litigation Support: Role of the Independent Financial Expert
2. Valuation of partial ownership interests.

ASA is devoted to providing the highest possible standard in all areas of ethics, professionalism, education and designation criteria in the areas of Appraisal Review & Management, Business Valuation, Gems & Jewellery, Machinery & Technical Specialties, Personal Property and Real Property.

Membership of ASA provides with first class education and accreditation programs, international and advanced conference events, legislative representations and professional networking.

For the updates regarding the ASA Business Valuation Standards, its website http://www.appraisers.org/ should be visited.

Rics Valuation – Global Standards, 2017 (The Red Book)

RICS stands for Royal Institution of Chartered Surveyors. It is a professional body that accredits professionals within land, property, construction and infrastructure sectors worldwide.

RICS was founded in London as the Institution of Surveyors after a meeting of 49 surveyors at the Westminster Palace Hotel on 15 June, 1868. It received the Royal Charter as the Surveyors' Institution in August, 1881. The Surveyors' Institution became the Chartered Surveyors' Institution in 1930. In 1946, George VI granted the title "Royal" and in 1947 the professional body

became the **Royal Institution of Chartered Surveyors.** "Confidence through professional standards" is its tagline.

RICS headquarters are in London. It also has regional offices in UK, across mainland Europe, in China, Hongkong, Singapore, Australia, the Middle East, Sub Saharan Africa, North America and Brazil. The members of RICS are spread across 150 countries and it accredits 125,000 qualified and trainee professionals worldwide.

RICS specifies areas of specialism, each with its own professional group, clustered into Land, Property and Construction. Within each professional group there may be further specialisms.

RICS standards and guidance cover all the areas of surveying practice and embody best practice. They fall into the following categories: Professional statements, Practice statements, Codes of practice and Guidance notes.

The RICS global standards framework is as follows:

1. Introduction
2. Glossary
3. Professional standards
    (a) PS 1: compliance with standards when a written valuation is provided
    (b) PS 2: Ethics, competency, objectivity and disclosures
4. Valuation technical and performance standards
    (a) VPS 1: Terms of engagement, Scope of work
    (b) VPS 2: Inspections, investigations and records
    (c) VPS 3: Valuation reports
    (d) VPS 4: Basis of value, assumptions and special assumptions
    (e) VPS 5: Valuation approaches and methods
5. Valuation applications
    (a) Valuation for inclusion in financial statements
    (b) Valuation of interests in secured lending
    (c) Valuation of business and business interests

(d) Valuation of individual trade related properties

(e) Valuation of plant and equipment

(f) Valuation of intangible assets

(g) Valuation of personal property inclusive of arts and antiques

(h) Valuation of real property interests

(i) Identification of portfolios, collections and group of properties

(j) Matters that give rise to material valuation uncertainty

6. International valuation standards, 2017.

The IVS issued by IVSC is reproduced in full in this part.

RICS updates can be checked on https://www.rics.org

These standards were issued in June 2017 and are effective from 1 July, 2017.

Conclusion

After studying all the different standards issued by different organisations, we can observe that the major points covered in each of the sets of standards are: the scope of work, methods of valuations and reporting and documentation.

Different standards may have different terminologies and different procedures for the same task of valuation, but the core principles remain the same. Procedures change, keeping in focus the geographical and political area to which the standards are applicable.

Synopsis

Standards on valuation provide a guideline on the way a valuation is done. It lays down a list of assumptions and the procedures that can be followed.

There are number of valuation standards issued by various international bodies on valuation, like the European Valuation Standards or the Blue Book issued by The European Group of Valuers' Associations, ASA Business Valuation Standards issued by American Society for Appraisers, the Red book or the Global standards issued by Royal Institute of Chartered Surveyors, International Valuation Standards (IVS) issued by the International Valuation Standards Council (IVSC). All these organisations are in the field of

valuation for a number of years, and their standards are the result of the knowledge and experience gained over the years. Here, we have tried to introduce these standards and provide an outline of the topics covered by each of them.

Chapter 11

Valuation of Complex Investment Instruments – An emerging opportunity for Business Valuers in India

IND-AS has opened up new opportunities for Business Valuers in India as IND-AS requires fair valuation of complex investment/ financial instruments such as Compulsorily/ Optionally Convertible Preference Shares, Compulsorily/ Optionally Convertible Debentures etc.

Earlier, under I-GAAP, in the books of an issuer, these instruments were recorded at a book value, on the liability side of a balance sheet, as a share capital or debt depending on the nature of the instrument. For ex: Compulsorily/ Optionally Convertible Preference Shares were recorded at book value as share capital and Compulsorily/ Optionally Convertible Debentures were recorded as debt. However, under IND-AS, these instruments are required to be recorded at a fair value on each reporting date and the fair value are also required to be further bifurcated under equity/ liability/ derivative component depending upon the nature and terms of the instrument.

In conventional valuation, we assume that all equity claims/ shares are identical and divide the value of equity by the number of shares to get the value per share. In practice, though, claims on equity can vary on a number of dimensions. For Ex: some equity investors have preferential claims on the cash flows– dividends in some cases and cash flows in liquidation in other cases. This situation is common in case of investment by private equity players which usually invests in form of Compulsorily Convertible Preference Shares/ Debentures and also has preferred liquidation rights in case of liquidation over the other equity shareholders of the company. Thus, any company which has raised equity funds from private equity investor by issuing Compulsorily Convertible Preference Shares/ Debentures and is implementing IND-AS requires to record the Compulsorily Convertible Preference Shares/ Debentures at fair value and not a book value.

Valuation of complex investment/ financial instruments:

The fair value of such instruments is determined by allocating equity value over the common shares and such convertible/ preferred instruments.

The AICPA Practice Aid, *Valuation of Privately-Held-Company Equity Securities Issued as Compensation*, describes three methods of allocating value between preferred and common equity, which include:

- Current Value Method ("CVM")
- Probability Weighted Expected Return Method ("PWERM")
- Option-Pricing Method ("OPM")

OPM, which is based on the Black-Scholes model, is a common method for allocating equity value between common and preferred shares. This methodology models the value of various components of an entity's capital structure as a succession of call options on the proceeds expected from the sale of the business or the pending liquidation of a company's assets at some future date.

Overview of Key Steps for the Option Pricing Method:

Below, we have summarized the steps and general processes in applying the option-pricing method.

Step 1: Determine Business Value and Black-Scholes Assumptions

- **Business Value**: As the OPM values invested capital as a call option on a company's value, we need to first determine which value to use. Conceptually, this value should be the amount stakeholders would receive in a liquidity event. Accordingly, it is reasonable to estimate this value by using the implied enterprise value derived from the market-based and income-based analyses as of the valuation date. Since the fair value of interest-bearing debt (net of excess cash) is typically known, it can be subtracted from enterprise value.
- **Time to Liquidity Event:** This is one of many assumptions that can be difficult to pin down, but the question that it raises is a significant one:

How much time exists until there is a planned or likely liquidity event, such as a sale, public offering or other exit event? Of course, no company has a crystal ball and many professionals are often frustrated trying to defend the assumption. Interaction at the board level is often warranted.

- **Risk-Free Rate**: The risk-free rate is the most obvious assumption. Typically, it is the rate available on a government security whose term matches the assumed time to liquidity.
- **Volatility:** This measure should be based on the standard deviation of quoted market prices. In the case of a public company, volatility can be derived easily from the company's historical stock prices. For private companies, volatility can be estimated by analyzing comparable public companies' historical stock performances. It should be noted that the range of the stock returns sampled should cover the same period as the estimated time to liquidity. The OPM is highly sensitive to volatility and great care should be taken in estimating the volatility factor.

Step 2: Understanding the Capital Structure

Convertible debt and preferred stock come in many flavors, shapes, and sizes. It is critical to invest the time to properly understand any conversion features. For example, some private equity firms structure preferred rounds that are effectively debt but labeled as preferred stock for tax purposes (the preferred never converts, instead it simply accrues a dividend). Whereas, other more common preferred rounds may have a choice of both realizing their preferences and then participating with common shareholders. Other preferred stock may be structured to either convert to common or be paid its preference, but not both. It is important to understand the subtle differences of preferred stock.

Step 3: Determine the different levels of equity value (breakpoints)

This step consists of determining different levels of equity value, called breakpoints (also known as "waterfall" distribution). Each consecutive breakpoint represents an incremental claim on company's equity value by a certain class of shareholders/option holders triggered by their respective liquidation, participation, and/or conversion rights.

Step 4: Determine the proportion of incremental equity value to be distributed

After calculating the breakpoints, the proportion in which incremental Equity Value would be distributed between consecutive breakpoints is determined.

Step 5: Determine the incremental equity value of each option

Each consecutive breakpoint is considered a strike price in the call options on the company's equity value. Using the Black-Scholes Option Pricing model, with other inputs as discussed above, the incremental value of each option is calculated.

Step 6: Distribute the incremental equity value

The incremental value of each call option is distributed among different classes of shareholders based on their respective distribution proportion as calculated in Step 4.

Computation of breakpoints

In OPM, one of the critical steps is to determine the breakpoints. Using the OPM, the common stock is modeled as a call option that gives its owner the right, but not the obligation, to buy the underlying equity value at a predetermined price. The considered "price" of these common-stock "call options" is based on the value of the entire enterprise at specific equity values ('breakpoints'). The point at which each class of equity becomes "in-the-money" is viewed as a call option. It is therefore, necessary to determine the underlying value where each class would receive value, known as the strike price.

The OPM is a widely accepted valuation methodology for determining the fair value of complex instruments/ different classes of shares in developed countries such as the US. We believe the application of OPM will increase in India also with the adoption of IND-AS and requirement of the fair value of complex instruments for financial reporting purpose.

Chapter 12
Premises of a Valuation Base

Introduction

Valuation has become more important in various business areas such as raising of capital, acquisitions, insolvency proceedings, etc. Various statutes also provide for the requirement of a valuation report for the specific purposes such as Income Tax Law, FEMA, etc.

Understanding the requirement for a discipline in the area of valuation and to govern the valuation professionals, Institute of Chartered Accountants of India (ICAI) had set up a Valuation Standards Board (VSB) in February 2017 to draft a framework and valuation standards. Accordingly, VSB had prepared draft ICAI Valuation Standards (IVS) in April, 2018 which have been approved by the council in May, 2018.

These standards will be effective from 1st July, 2018 and will, thereby, apply to all valuation reports issued on or after that date. These standards will be in place for all the valuation engagements under the Companies Act, 2013 until Central Government notifies a set of Valuation Standards under Companies (Registered Valuers and Valuation) Rules, 2017.

This article will cover on the premises of value that shall be considered while valuing an asset or a liability, as per the standards.

Premise of Value

IVS 101 defines Premise of value to be the conditions and circumstances how an asset is deployed. (Any reference to an asset, includes a liability). Premise, in common parlance, refers to an assumption or a statement, based on which a study is undertaken. Since valuation is not only asset-specific and may vary depend on the client for whom the valuation is conducted, there are certain premises which must be understood before the valuation is performed. For eg., an asset or a group of assets may derive more value on 'Going Concern' than on 'Liquidation'. Similarly, an asset may have more value in an 'Orderly' transaction than in a 'Forced' Transaction.

IVS 102 identifies some of the following common premises in a valuation:

(a) Highest and best use

(b) Going Concern Value

(c) As is where is Value

(d) Orderly Liquidation

(e) Forced Transaction

A valuer may use either, or more than one, of the above premises for the purposes of valuation depending on the circumstances.

Highest and Best Use

The Highest and Best Use (HBU) is generally used for a non-financial asset. As per the premise, the value of an asset is the value when used by a market participant who puts the asset to its maximum use. It may or may not be the use by the current owner, or the intended use by the prospective buyer. However, the current use of an asset is presumed to be at its HBU, unless a market or other factor proves to the contrary. If the current use is not at its HBU, the value shall also consider the cost of conversion required to put the asset from its current position to its HBU.

The HBU of an asset should be the one that is physically possible (based on physical characteristics), legally permissible (not legally restricted or prohibited) and financially feasible (returns based on market expectations).

The value is determined based on the price that a market participant would be willing to pay to buy it who derives the maximum value, either on a standalone basis, or in combination with a group of assets or with assets and liabilities. Utility and Substitution of the asset determines the HBU of the asset. The price would depend on the utility that can be derived from the property as well as on the price at which an asset with the similar utility is sold.

For eg., a space is vacant and available for occupancy, either for residential or commercial purposes. It is generally understood that leasing for commercial purpose generates more revenue than for residential purpose. Hence, though, there may not be offers to take the space on lease for commercial use, the value based on HBU would consider the income that would be generated on a commercial lease.

Going Concern Value

Going Concern Value is the value of an enterprise which is expected to continue its operations and not liquidates in the near future. The value apart from the tangible assets, also includes intangible assets such as Goodwill due to the trained workforce, the presence of an operational plant, necessary licenses, marketing systems, procedures in place, etc.

As-is-where-is Value

This represents the existing use of the asset. This may or may not be an HBU of the asset. This may be used in a valuation for the purposes of Financial Reporting.

Orderly Liquidation

An orderly liquidation refers to the realisable value of an asset in the event of a liquidation after allowing appropriate marketing efforts and a reasonable period of time to market the asset on an as-is, where-is basis. What is a reasonable period of time may vary depending on the asset type, market conditions, etc.

Forced Transaction

Sometimes, an owner of the asset may be under a compulsion to sell the asset within a limited period of time, as a result of which, he may not fetch its true value. Thus, it refers to a transaction in which the seller is forced to sell an asset without adequate marketing efforts or reasonable period of time to market the asset.

A marketing constraint is not a forced sale. Sale in an inactive market also cannot be construed as a forced transaction. The limitation should be on the time required for marketing the product and sell it at reasonable price. A typical example of a forced transaction would be an auction.

Conclusion

The premise(s) of value shall reflect the facts and circumstances underlying the asset to be valued and the purpose of valuation engagement. The premise will have an impact on the other factors of valuation such as Valuation bases, approaches, methodology, etc.

The premise of value shall be mutually agreed by the valuer and the client and shall also be documented as part of the engagement letter.

Chapter 13
Business Valuation

Imagine a situation where in a conference room, prospective buyer and seller are sitting and discussing about purchase and sale of a business, what is the first question that comes in the mind of a buyer? The question is, “What is the purchase price? What is the business valuation” This valuation is nothing but the price of the business at which the seller is agreeing to sell his business. The above situation depicts a simple situation of where and why a business valuation is required.

Now the question comes is that what is a business valuation. Business valuation is a set of procedures used to determine the economic value of a business or company. In earlier times, generally it was at the time of business purchase or merger when a business valuation was required. But in today’s time we can find various reasons why the same is required? Following are some of the reasons:-

- Sell of business
- Merger
- Capital restructuring
- Divorce cases/Alimony
- Visa requirement
- Financial reporting
- General information purposes
- Loan disbursements
- Corporate or partnership dissolution
- Estate planning and more…

Now the question is how the business valuation is to be done? There are largely the following methods which can be helpful to find the economics of business:-

1. Market based approach

2. Earning based approach
3. Asset based approach

Market based approach

Market value approach attempts to determine the value of a business by comparing it with the similar business that has been recently sold. This is the highest price available in an open and unrestricted market between two informed parties, acting at arm's length, expressed in terms of money. This method is simplest of all to determine the value of business but its drawback is that this method will only be useful if sufficient number of comparable business in the market has been sold.

Earning based approach/Income valuation approach

This approach attempts to determine the value of a business based on its capacity to generate the wealth in future. The most common method is capitalization of the earnings or discounting. In capitalization method, business value is determined using the following steps:-

(a) Expected level of cash flow is determined

(b) The same is divided by the capitalization factor

This capitalization factor is the expected rate of return a purchaser would expect he will get on his investment. For example, if the capitalisation rate is 10% and the expected level of cash flow is Rupees Ten lakh, the value of the business is Rupees One crore.

The discounting method is a bit different:-

1. Business income stream over some future period of time is determined.
2. Discount rate which reflects the risk of getting the income is determined.
3. Business value at the end of the period is determined.

Finally, the discounting calculation gives you the present value the business which is its worth today.

Both capitalization and discounting do the same thing, they generally present the same results. Infact, the capitalization and discount rates are related:-

$$C = D – K$$

where *C* is the capitalization rate, *D* is the discount rate, and *K* is the expected growth of the income stream over the period of years. Let's say that the discount rate is 25% and your projections show that the business profits are growing at a steady 5% per year. Then the capitalization rate is 25 - 5 = 20%.

The Capitalization Rate most commonly used is referred to as a

"*Weighted Average Cost of Capital*".

A Weighted Average Cost of Capital is comprised of three main parts:

- Cost of equity
- Cost of debt

Perhaps the biggest difference between capitalization and discounting is what income input is used. Capitalization uses a single income measure such as the average of the earnings over several years. The discounting is done on a set of income values, one for each year in the projection period.

If a business is smooth and generating regular income, capitalization method is beneficial but if the business is fast changing and less predictable, discounting gives more accurate results. However, sometimes both these methods give different results because each buyer will likely have a different expectation of the risk involved, hence their capitalization and discount rates will differ. Thus, even if they use the same valuation methods the resulting value conclusions may be quite different.

Asset based approach

This approach of business valuation adds the total assets and investments of the business. Asset-based business valuations can be done on a going concern or on a liquidation basis.

- A **going concern asset-based approach** considers that the business is going to run at least for 1 year from the date of valuation. And so it lists the business's net balance sheet value of its assets and subtracts the value of its liabilities. For example, if the total assets sum up to Rupees 1 crore and the value of liabilities is Rupees 20 lakh, the value of the business is Rupees 80 lakh.

- A **liquidation asset-based approach** considers that the business is not going to run at least for 1 year from the date of valuation. It determines the net cash that would be received if all assets were sold and liabilities paid off.

Using the asset-based approach to value a sole proprietorship is difficult than any partnership or corporation. This is because the all the assets of the partnership or corporation are owned by them however, assets in a sole proprietorship exist in the name of the owner and separating assets from business and personal use can be difficult. So the potential buyer would need to know that which assets the seller wants to sell.

Goodwill

Now after this, the seller may argue that he has run his business for so long and has earned a good reputation in the market which will be beneficial for the prospective buyer to run the business, so he must be paid for that also. This market reputation is nothing but "Goodwill". Generally, goodwill is related to a good customer base, company's brand name, patents, employee relations etc. Now it is important to note here that self-made goodwill (in the balance sheet) generally cannot be sold. It is only the commercial goodwill (which should be valued) can only be sold.

In the conclusion, although the earning based approach is mostly used, it may be fair for most businesses; some combination of business valuation methods will be the fairest way to set a selling price.

Chapter 14

A Comparative Analysis of Different Variants of Discounted Cash Flow Methodology

One of the most commonly used approaches to value a company, project, or asset is the Discounted Cash Flow approach("DCF"). There are two widely used variants of the DCF methodology, viz. Free Cash Flow to the Firm ("FCFF") and Free Cash Flow to Equity ("FCFE"). While theory suggests that both variants of DCF should yield the same value for equity, given the same set of inputs, practitioners of valuation often come across situations where the equity values using the two approaches do not converge. Further, there are divergent views on when a particular variant should be used versus the other. This article attempts to examine the suitability of the two approaches in valuing a company or project. The article also aims to demonstrate why these two approaches may lead to different results and how these can be addressed leading to a more consistent and robust valuation analysis.

The Basics

The DCF methodology is based on the premise of the time value of money, wherein all future cash flows are estimated and discounted at the applicable cost of capital to give their present values.

FCFF: This method estimates the Enterprise Value ("EV") which is the net amount of cash available for distribution among debtholders and equity shareholders after all expenses and re-investment requirements have been met. EV is the sum of Present Value ("PV") of all free cash flows, discounted using the Weighted Average Cost of Capital ("WACC"). The Equity Value can be ascertained by adjusting the non-equity claims such as external debt, preferred stock, minority interest and cash & cash equivalents from the EV. The formula for estimating the FCFF for each year is shown as:

FCFF = Earnings Before Interest and Tax * (1-tax rate) + Depreciation – Capital Expenditure – Increase in Non-Cash Working Capital

FCFE: This method estimates the Equity Value which is the cash distributable among the equity shareholders after all expenses, reinvestments and debt obligations have been met by the company. The Equity Value is the sum of PV of all free cash flows, discounted using the Cost of Equity ("COE"). The formula for estimating the FCFE for each year is shown as:

FCFE = Net Income or Profit After Tax + Depreciation & Amortization – Capital Expenditure – Increase in Non-Cash Working Capital + Change in Debt

Discount Rate

For calculating EV using FCFF approach, WACC is used to discount the future cash flows. WACC is based on the proportionate weights of each component of the source of capital. The COE, calculated using the Capital Asset Pricing Model (CAPM), is used to discount free cash flows to equity under FCFE. COE reflects the return expected by the equity shareholders, commensurate with the risk assumed through their investment in the business. The Cost of Debt ("COD") is based on the current or expected borrowing rate for the company, which may be provided by the management of the company and is generally assumed to be the market rate.

Case Study

The following case study demonstrates the application of different approaches of DCF.

Company A ("Company" or "Project") is an infrastructure company engaged in a contractual project with a definite life span of ten years. The revenues from the project are expected to grow at a 10% YOY growth rate, starting with an initial revenue of INR 1,000 Mn. The project is funded by INR 250 Mn of equity and INR 1,000 Mn of debt leading to an initial D/E ratio of 4.0x. The other key assumptions like EBITDA, tax rate, comparable companies' beta, etc. are detailed in Appendix 1. For mathematical simplicity, it has been assumed that capex and depreciation is zero and there are no changes in working capital. These factors, when introduced in the model, are not likely to affect this analysis.

The valuation of equity of the project can be carried out using both, FCFF and FCFE. As shown in Table 1 and 2 below, the cash flows under FCFF and FCFE are consistent except for the interest and debt repayment being considered in FCFE.

Table 1: Cash flows under FCFF

Particulars	FY1	FY2	FY3	FY4	FY5	FY6	FY7	FY8	FY9	FY10
Revenue	1,000	1,100	1,210	1,331	1,464	1,611	1,772	1,949	2,144	2,358
Annual Revenue Growth		*10%*	*10%*	*10%*	*10%*	*10%*	*10%*	*10%*	*10%*	*10%*
EBITDA	**400**	**440**	**484**	**532**	**732**	**805**	**886**	**1,169**	**1,286**	**1,415**
EBITDA Margin %	*40%*	*40%*	*40%*	*40%*	*50.0%*	*50%*	*50%*	*60.0%*	*60%*	*60%*
Less: Depreciation	-	-	-	-	-	-	-	-	-	-
EBIT	**400**	**440**	**484**	**532**	**732**	**805**	**886**	**1,169**	**1,286**	**1,415**
Less: Income Tax Expense	138	152	167	184	253	279	306	405	445	490
Cash Flows from Operations	**262**	**288**	**317**	**348**	**479**	**527**	**579**	**765**	**841**	**925**
Add: Depreciation	-	-	-	-	-	-	-	-	-	-
Less: Capital Expenditure	-	-	-	-	-	-	-	-	-	-
Less: Increase in Non-Cash WC	-	-	-	-	-	-	-	-	-	-
Net Free Cash Flows to the Firm	**262**	**288**	**317**	**348**	**479**	**527**	**579**	**765**	**841**	**925**

Table 2: Cash flows under FCFE

Particulars	FY1	FY2	FY3	FY4	FY5	FY6	FY7	FY8	FY9	FY10
Revenue	1,000	1,100	1,210	1,331	1,464	1,611	1,772	1,949	2,144	2,358
Annual Revenue Growth		*10%*	*10%*	*10%*	*10%*	*10%*	*10%*	*10%*	*10%*	*10%*
EBITDA	**400**	**440**	**484**	**532**	**732**	**805**	**886**	**1,169**	**1,286**	**1,415**
EBITDA Margin %	*40%*	*40%*	*40%*	*40%*	*50%*	*50%*	*50%*	*60%*	*60%*	*60%*
Less: Depreciation	-	-	-	-	-	-	-	-	-	-
Less: Interest Expense	100	80	60	40	20	0	0	0	0	0
EBT	**300**	**360**	**424**	**492**	**712**	**805**	**886**	**1,169**	**1,286**	**1,415**
Less: Income Tax Expense	104	125	147	170	246	279	306	405	445	490
PAT	**196**	**235**	**277**	**322**	**466**	**527**	**579**	**765**	**841**	**925**
Add: Depreciation	-	-	-	-	-	-	-	-	-	-
Less: Capital Expenditure	-	-	-	-	-	-	-	-	-	-
Less: Increase in Non-Cash WC	-	-	-	-	-	-	-	-	-	-
Less: Repayment of Debt	200	200	200	200	200	0	0	0	0	0
Net Free Cash Flows to Equity	**-4**	**35**	**77**	**122**	**266**	**527**	**579**	**765**	**841**	**925**

However, the primary difference which leads to divergent values using the two approaches is the method of estimating the discount rate. As shown in Table 3 below, to estimate the COE under FCFE, the most common practice amongst valuation professionals is to consider the initial COE owing to the mathematical simplicity of the process.

Table 3: COE using initial D/E ratio

Particulars	Details
Asset beta (unlevered)	0.6
Re-levered Beta*	2.2
Risk Free Rate (rf)	7.0%
ERP	7.4%
COE	**23.1%**

**Re-levered using initial D/E ratio of 4.0x*

Under FCFF, as explained in Table 4 below, common practice is to consider the COE estimated above and the cost of debt to arrive at the WACC of the project.

Table 4: WACC using initial D/E ratio

Particulars	Details
COE	23.1%
Pre Tax COD	10.0%
Tax Rate	34.6%
Post Tax COD	6.5%
Initial D/E Ratio	4.0x
Debt to Total Capital	0.8
Equity to Total Capital	0.2
WACC	**9.8%**

On the basis of the above assumptions, the estimated equity value of Company A is significantly different under the two approaches, as can be seen in Table 5 below:

Table 5: Equity Value of Company A using initial D/E ratio (INR Mn)

FCFF	FCFE	Difference
2,079	985	53%

In order to understand the reason for this deviation, the valuation is carried out considering four capital structures scenarios, with the Company's initial D/E ranging from 4.0x to 0.0x.

Table 6 below summarises the results for each scenario where the leverage of the Project changes from the initially high D/E ratio to zero over the life of the Project as debt is repaid over time.

Table 6: Equity Value of Company A Under Four Scenarios of D/E ratio (INR Mn)

Initial D/E Ratio	FCFF	FCFE	Difference
4.0x	2,079	985	53%
2.0x	2,539	1,734	32%
1.0x	2,740	2,243	18%
0.0x	2,848	2,848	0%

Based on the above analysis, the following inferences can be drawn:

- The FCFF and FCFE approaches lead to consistent results when the leverage is lower.
- When valuing a project or company where the capital structure changes significantly over the life of the project, FCFF gives relatively consistent results. As seen above in Table6, the variance in equity values under FCFF is not significant irrespective of the level of leverage.
- If FCFE is being used for valuing a company with high leverage which changes over time, the following adjustments can be incorporated while estimating the discount rate:

1. Average D/E ratio

If the Project is valued using FCFE and FCFF considering the average D/E ratio over the life of the project instead of the initial D/E ratio, the results under FCFF and FCFE become more consistent.

Table 8: COE using average D/E ratio

Particulars	Details
Asset beta (unlevered)	0.6
Re-levered Beta*	0.7
Risk Free Rate (rf)	7.0%
ERP	7.4%
COE	**12.4%**

**Re-levered using average D/E ratio over the life of project*

Table 9: WACC using average D/E ratio

Particulars	Details
COE	12.4%
Pre Tax COD	10.0%
Tax Rate	34.6%
Post Tax COD	6.5%
Average D/E Ratio	0.32x
Debt to Total Capital	0.25
Equity to Total Capital	0.75
WACC	**11.0%**

Table 10: Equity Value of Company A using average D/E ratio (INR Mn)

Initial D/E Ratio	FCFF	FCFE	Difference
4.0x	1,916	1,806	6%
2.0x	2,367	2,331	2%
1.0x	2,601	2,594	0%
0.0x	2,848	2,848	0%

Hence, considering an average of D/E ratio over the life of the project to estimate the equity value under FCFF and FCFE reduces the difference in equity values from 53% using initial D/E ratio to only 6% using average D/E ratio, for a project with an initial D/E ratio of 4.0x.

2. Rotating COE

Rotating Cost of Equity ("Rotating COE") implies that the COE is continuously adjusted over the life of the forecast period, as debt is repaid. As the unlevered beta is re-levered using the reduced D/E ratio for each year, the COE comes down owing to the lower risk assumed by the equity shareholders. This adjusted COE can be used to discount the free cash flow to equity for each year. The same COE can also be used to estimate the WACC under FCFF.

The COE estimated as per the above method for the scenario with an initial D/E ratio of 4.0x is shown in Table 11 below.

Table 11: Rotating COE for Project with Initial D/E ratio of 4.0x (INR Mn)

Particulars	FY1	FY2	FY3	FY4	FY5	FY6	FY7	FY8	FY9	FY10
D/E Ratio	1.8	0.9	0.4	0.2	-	-	-	-	-	-
Risk Free Rate	7.0%	7.0%	7.0%	7.0%	7.0%	7.0%	7.0%	7.0%	7.0%	7.0%
Re-levered Beta*	1.30	0.95	0.76	0.66	0.60	0.60	0.60	0.60	0.60	0.60
ERP	7.4%	7.4%	7.4%	7.4%	7.4%	7.4%	7.4%	7.4%	7.4%	7.4%
Adjusted COE	16.6%	14.0%	12.7%	11.9%	11.4%	11.4%	11.4%	11.4%	11.4%	11.4%

**Re-levered using D/E ratio for each year of forecast period.*

The FCFF and FCFE values using rotating COE is summarized in Table 12 below.

Table 12: Equity Value of Company A (INR Mn)

Initial D/E Ratio	FCFF	FCFE	Difference
4.0x	1,858	1,910	-3%
2.0x	2,350	2,359	0%
1.0x	2,598	2,598	0%
0.0x	2,848	2,848	0%

Hence, incorporating the changing D/E ratio into the COE further reduces the effect of varying capital structures on the equity values, bringing down the difference in equity value from 6% under average COE approach to -3% in Rotating COE fora project with an initial D/E ratio of 4.0x.

3. Incremental COE

Incremental COE is an alternative approach to Rotating COE approach. This

approach is similar to Rotating COE as it considers the adjusted D/E ratio for each year over the life of the project. However, the difference in this approach is in the method of estimating the PV factor. Under Incremental COE, the PV factor for each year is arrived by dividing the PV factor for the previous year with the adjusted COE for the current year. The approach is termed as Incremental COE, as it considers the incremental change in the discount factor for each year.

The FCFF and FCFE values using rotating COE is summarized in Table 13 below.

Table 13: Equity Value of Company A (INR Mn)

Initial D/E Ratio	FCFF	FCFE	Difference
4.0x	1,905	1,802	5%
2.0x	2,363	2,333	1%
1.0x	2,600	2,594	0%
0.0x	2,848	2,848	0%

It may be observed that the results obtained using Incremental COE are not too divergent from the results using Rotating COE.

4. Recursive COE/WACC

Recursive COE/WACC is an iterative approach wherein the D/E is based on the fair value of equity rather than the book value of equity. It presents a unique circularity issue, as the WACC is estimated using the value of equity of the company and the value of equity is in turn estimated using the WACC. This circularity is further confounded as the cost of equity itself depends on leverage.

Under this approach, the EV for each year is calculated by discounting the free cash flows to the firm for each year using WACC for the corresponding period, starting from the last year of project life and working backward till the valuation date. The Debt to Total Value ratio used in WACC is calculated using the EV calculated in the above step, thereby making this a circular step. Using this Debt to Total Value ratio, the DE ratio is calculated and subsequently the COE.

The FCFF and FCFE values using recursive COE/WACC is summarized in Table 14 below.

Table 14: Equity Value of Company A (INR Mn)

Initial D/E Ratio	FCFF	FCFE	Difference
4.0x	1,812	1,846	2%
2.0x	2,315	2,338	1%
1.0x	2,578	2,590	0%
0.0x	2,848	2,848	-

It is observed in the above table that the equity values for each scenario are not very divergent between FCFF and FCFE approaches.

5. Alternative approach: Adjusted Present Value (APV)

To address the inherent limitations of using WACC in situations where capital structure is moving significantly, an alternative methodology is available that differentiates between the investment decision and the financing decision by splitting the traditional DCF methodology into two parts. The first part (the investment decision) is based on discounting the un-leveraged cash flows to present at an appropriate cost of equity. The second part (the financing decision) then discounts the interest tax shield to present value at an appropriate rate of return that reflects the risk in actually achieving these tax benefits. The value of the enterprise is simply the summation of the two. This approach is based on the concept of value additivity, which assumes that a firm is fully financed by equity funds and then adds the present value factors which create additional value such as interest tax shield. It is worth noting that the results obtained using this approach is not too divergent from the approaches explained earlier.

Conclusion

The above analyses help us understand that though none of the approaches can be concluded to be the 'best' approach, it is advisable to use an approach which captures the changes in leverage. Also, the analysis highlights that FCFE is comparatively more volatile and sensitive to changes in financial leverage over a period than FCFF, making the use of a constant discount rate difficult to justify. The most important step for the practitioner is

to understand each business case and then proceed to eliminate or address the limitations by adjusting the technique in valuing the subject. It is also suggested that though none of the approaches shall be used in isolation, a combination of the above can be applied to estimate the value, analyze and corroborate the results from each approach and arrive at the most accurate value possible.

Appendix 1

Assumptions	Particulars
Revenue growth rate	10% Year on Year
EBITDA Margin	FY1 to FY4: 40% FY5 to FY7: 50% FY8 to FY10: 60%
Tax Rate (t)	34.6%
Depreciation per year	Nil
Change in Non-Cash Working Capital (WC) for each year forecast period	Nil
Asset beta (Unlevered)	0.6
Risk free rate (rf)	7.0%
Equity Risk Premium (ERP)	7.4%
Pre Tax Cost of Debt	10%

References

- http://pages.stern.nyu.edu/~adamodar/New_Home_Page/lectures/basics.html
- http://www.acuitasinc.com/articles/mlz_apv_method.html
- https://hbr.org/1997/05/using-apv-a-better-tool-for-valuing-operations
- https://www.tandfonline.com/doi/full/10.1080/1331677X.2014.974916
- https://ocw.mit.edu/courses/sloan-school-of-management/15-402-finance-theory-ii-spring-2003/lecture-notes/lec14awaccapv.pdf

Chapter 15

Valuing a Business for a Stake Sale – *A Practical Approach*

2017 was a harbinger of times to come. Reported PE exits in India hit an all-time high crossing Rs. 80,000 crores across over 300 deals (Rs. 377,000 crores in the US). This is apart from the thousands of stake sales which occurred across the country in the VC and Angel Investment space and thousands more not covered by the media houses owing to their private nature. Interestingly the Indian Government was also a significant participant as divestment measures were at an all-time high in 2017. But how different is a valuation for a stake sale? What does one need to do differently?

What differs?

Valuing a running business for investment is slightly different from valuing a business for a stake sale, the fundamental difference being an understanding of partnership in the future as against liquidating a position today. While an investment transaction may be quite satisfied in a multiple or DCF valuation, a stake sale/ secondary transaction requires the establishment of a reasonable price for a transaction. While reasonability is a factor of the high price of ownership or auction fever (Research published in the Journal of Consumer Research) and buyer-seller expectation management, practitioners deploy more than one method to ensure that reasonableness can be as less subjective as possible.

Picking the right methods

Valuations are only part science. While the tools are scientific, they are always based on certain assumptions and representations of the management and the ability of a valuer to be able to identify non-financial metrics and laterally relate them to the value of a business. Each valuation method employed may provide a completely different range of valuation numbers. Cherry picking the right valuation methodologies that showcase the relative value of a business requires:

1. Picking the right methodologies – MPM (market price method)/ CCM

(Comparable Companies Multiple Method) and subset CTMM (Comparable Transaction Multiples Method) & CEM (Comparable Exit Multiples Method)/ DCF (Discounted Cash Flows)/ TV (Terminal Value)

2. Choosing the right multiples under the methodologies that are indicative of the value of a business
3. Choosing the right combination of methodologies
4. Adjusting the valuation to factor in specifics of the transaction
5. Applying the right weights to factor in specifics of the transaction

Picking the right methodologies

Owing to the nature of a valuation exercise itself, different methods of valuation may yield different results for the value which may not be in similar ranges unless the business has reached a mature stage in business. Comparability with the public companies on all parameters, stage in the lifecycle and uniqueness of the business can throw up deviations which require the use of multiple methods. We can delve separately on how to pick the right methodology in another article dedicated to the purpose. For the limited purpose of this article, we should move on.

Choosing the right multiples

Let us take 2 examples of unlisted securities based on my practice which are secondary stake sale transactions I have advised on in various capacities. Again, this may vary significantly from the nature of the business and the stage of the entity.

Example 1, Table 1:

A 6YO ERP company being acquired by a Strategic Investor where the objective was to enter into the Indian market by capitalizing on their market reach *for CCM method*

PE Multiple	Book Value	EBITDA Multiple	Revenue Multiple
Wrong Company had spent years in product	**Wrong** Asset light business that does not require	**Maybe** Business in technology space tend to have high	**Right** Business had achieved continuity

development and Revenue - Cost relationship was significantly changing each year	significant investments on assets to scale further	EBIT margins when intangible assets are still being capitalised	revenue and broken into the market which would flow in over the next few years

Example 2, Table 2:

A 10YO IT services company being acquired by a Strategic Investor where the objective was to consolidate and achieve cost and talent efficiency *for CCM method*

PE Multiple	**Book Value**	**EBITDA Multiple**	**Revenue Multiple**
Maybe The company had been able to achieve stable growth and convert them into cash flows consistently.	**Wrong** Asset light business that does not require significant investments on assets to continue stable growth	**Right** Business's return on capital deployed was stable and predictable as any CGU is.	**Wrong** Business had already achieved stability and was in a mature business environment.

*CGU means Cash Generating Unit

It may be observed from the examples above, within the same industry, you could have completely different method under the same methodology being deployed in arriving at the value of the asset. In many cases, there may be a non-financial metric involved as well (such as gross profit per full-time employee in business services or EV (Economic Value) per sft. of completed development in real estate).

Once the right multiples have been agreed upon, the next step is opting for the right methodologies to be employed.

Picking the right combination of methodologies

This is where practice takes a slight deviation from text books. Typically, a valuer may choose to employ more than one method for the valuation in the interest of fairness for all the parties and to reduce the skewness of variability between one method and the other. An example of this is the First Chicago Method/ Venture Capital Method, elements of a discounted cash flow as well as multiples are employed is in vogue in the North American markets.

Example 2, Table 3:

Let's take the example of the case of the company in Example 2 above, DCF, CTMM, CMM & CEM were employed together to generate a weighted average valuation which provides the best of all worlds.

DCF	CTMM	CMM	CEM
Why? **The core reason for the existence is generation of return for stakeholders**	*Why?* **There have been transactions in the past which can establish the value more clearly**	*Why?* **Acceptable methodology backed with less subjective evidence of relative value**	*Why?* **There have been transactions in the past which can establish the value more clearly**
DCF only	***EBITDA Multiple*** *of businesses that have had a similar transaction in last 18-24 months*	***Revenue Multiple*** *of businesses that have comparable size, stage of lifecycle, level of diversification etc.*	***Revenue Multiple*** *of businesses that have had a majority/ minority stake sale of comparable size, stage of lifecycle, level of diversification etc.*

Adjusting for specifics

Now that the methods that need to employ have generated their expectation of a value, you would need to adjust it (discount/ premium) to factor in for the specifics of the transaction.

These adjustments may include:

1. A **control premium** to factor in the benefits of controlling the business operations, directly or indirectly or the opposite, **discount for lack of control**
2. A **discount for lack of marketability** of the unlisted securities or **illiquidity risk**
3. A **discount for size of the business** as it may not have reached the stage where the business risk/ organizational is relatively low or **small stock risk**
4. A **discount for the secondary transaction** as the transaction is between shareholders only and do not mean providing the company with growth capital, as in most other cases that warrant a valuation
5. Any other specific adjustments such as synergy gains, cost of post transaction integration, etc.

Example 2, Table 4:

Continuing from Example 2, Table 3 above, there were specific adjustments to be done in each method.

DCF	CTMM	CMM	CEM
Adj: **Unadjusted COE** **+ Control premium** **+ Small stock risk** **+ Illiquidity premium** **= Adjusted COE** **EV***(unadjusted)* **- Cost of integration** **= EV** *(adjusted)*	*Adj:* **EV** (*unadjusted)* **X small stock discount** **x secondary discount** **= EV** *(adjusted)*	*Adj:* **EV** (*unadjusted)* **x illiquidity discount** **x small stock discount** **x secondary discount** **x control premium** **= EV** *(adjusted)*	*Adj:* **EV** (*unadjusted)* **x illiquidity discount** **x small stock discount** **x control premium** **= EV** *(adjusted)*

Applying the right weights

Once the EVs have been generated with the above exercise comes the trickier part that requires experience and detailed knowledge of the

transaction. The most subjective among the steps, each valuer needs to create their own calculator for why and when to apply a specific weight. This checklist-based approach can help justify and ensure that subjectivity can be reduced with an internal policy.

Example 2, Table 5:

Continuing from Example 2, Table 4 above, the weights assigned for the valuation based on the checklist of factors prepared and identified were:

DCF	CTMM	CMM	CEM
34/100	**18**/100	**22**/100	**26**/100

Multiplication

The easiest part of the exercise is now deriving the weighted average enterprise value with as less subjectivity as possible.

Conclusion

The fundamental premise of any valuation exercise is to arrive at a reasonable, less subjective financial number for a non-financial asset (a running business made of real people, tangible assets and intangible relationships they have accumulated). When any business approaches a valuer, it is the implicit responsibility of the valuer to be able to gauge, understand and translate this to financial terms in a manner that ensures that due credit is given to what makes the business as well as the transaction unique. This is the reason that valuation is still for the most part, an art that is mastered with years of experience and deliberation. The introduction of standards is a bold step in the right direction to avoid subjectivity and educate the fraternity to be able to deal with the dynamic world of transactions and collaborations.

Chapter 16

Valuation of Un-Quoted Shares- Requirements and Implications

Background

'Valuation of an Un-quoted shares' is always being the matter of dispute between the assessee and the authorities. The value of shares is also being misused to evade the income tax on transfer of shares from time to time. Also, fresh issue of shares was one of the good tools to generate the black money.

To overcome this situation, the Government had inserted few provisions as per section 56(2)(viib) of Income Tax Act, 1961 to levy the tax on aggregate consideration received for **issue of shares which exceeds the Fair Market Value (FMV) of the share.**

Further, to curb the black money, the **transfer of shares is also subject to the requirement of fair market value (FMV)** as per the section 50CA.

Why valuation of Un-quoted shares is required: The valuation of un-quoted shares is required to determine the fair market value (FMV). The valuation is required as per the below provisions:

Transfer of Shares

Section 50CA *: Where the consideration received or accruing as a result of the* ***transfer by an assessee of a capital asset, being share of a company other than a quoted share****, is less than the fair market value of such share determined in such manner as may be prescribed (under rule 11UAA of Income Tax Rules, 1962), the value so determined shall, for the purposes of section 48, be deemed to be the full value of consideration received or accruing as a result of such transfer.*

The method to calculate the fair market value of such share is prescribed under rule 11UAA which refers to the clause (c) of rule 11UA. As per the clause (c) of rule 11UA, the fair market value can be determined as per the following method:

1. *Book value method;*
2. *Estimated price it would fetch in the open market on the valuation date and valuation report may be obtained from the merchant banker or the accountant;*

The transferor has to determine the fair market value of shares as per the method prescribed as above to substantiate that the transaction is at more than the Fair Market Value (FMV).

Further, the valuation of shares shall be determined as on the date of transfer of shares.

Issue of Shares:

Section 56(2)(viib) : *where a company, not being a company in which the public are substantially interested, receives, in any previous year,* ***from any person being a resident, any consideration for issue of shares*** *that exceeds the face value of such shares, the aggregate consideration received for such shares as exceeds the fair market value of the shares shall be chargeable to income-tax under the head "Income from other sources":*

Explanation.—for the purposes of this clause,—

(a) the fair market value of the shares shall be the value—

(i) as may be determined in accordance with such method as may be prescribed(as per sub rule (2) of rule 11UA); or

(ii) as may be substantiated by the company to the satisfaction of the Assessing Officer, based on the value, on the date of issue of shares, of its assets, including intangible assets being goodwill, know-how, patents, copyrights, trademarks, licences, franchises or any other business or commercial rights of similar nature,

whichever is higher;

So, we have discussed the requirement for the valuation of shares. But now the question is what should be the appropriate method for the valuation, who can do the valuation and most importantly on which date the valuation shall be done. Let's discuss these concerns with legal provisions.

Analysis of value of un-quoted shares:

	Section 50CA **(Transfer of un-quoted shares and securities)**	**Section 56(2)(viib)** **(Issue of un-quoted shares)**
Method of Valuation	**Transfer of Equity shares:** Valuation shall be done as per Rule 11UA (1)(c)(b) of IT Rules, 1962.This sub-rule provides that valuation shall be done on the basis of book value as per ***balance sheet****. The ***formula***** is provided in notes to this table. **Transfer of other shares and securities:** Valuation shall be done as per Rule 11UA (1)(c)(c) of IT Rules, 1962. Such sub-rule provides that valuation shall be the estimated price it would fetch if sold in the open market on the valuation date (i.e. the date of transfer). The assessee is suggested to obtain the report from merchant banker or an ***accountant**#* in respect of such valuation.	**Transfer of Equity shares:** Valuation shall be done as per Rule 11UA (2) of IT Rules, 1962. This sub-rule provides that valuation shall be done by following either of the below options: a) The FMV of Un-quoted equity shares as per book value as per ***balance sheet**^^*. The ***formula**##*is provided in the notes to this table. b) The FMV can be determined by the merchant banker or an ***accountant**^* as per the Discounted Free Cash Flow (DCF) Method; **Transfer of Preference shares:** Valuation shall be done as per Rule 11UA (1)(c)(c) of IT Rules, 1962. Such sub-rule provides that valuation shall be the estimated price it would fetch if sold in the open market on the valuation date (i.e. the date of transfer). The assessee is suggested to obtain the report from merchant banker or an

		accountant# in respect of such valuation.
Who can do the valuation	**The valuation can be done by the *accountant#*.** Please note that in case of transfer of equity shares the company can determine the value as per the books values of balance sheet. However, it is suggested to involve the merchant banker or accountant to get the valuation report to avoid any disputes at a later stage.	The valuation can be done by the ***accountant^/#.***It is mandatory to engage an accountant or merchant banker in case of valuation of equity shares by DCF method. Please note that in case of issue of equity shares, the company may determine the value as per the book value method. However, it is suggested to involve the merchant banker or accountant to get the valuation report to avoid any disputes at a later stage.
What is the relevant date for valuation of shares	The relevant date for valuation is the date of transfer of assets under the meaning of section 50CA of Income tax act, 1961.	The relevant date for valuation is the date of receipt of consideration.
Notes	***Accountant^: Valuation of shares at DCF*** The accountant should be Fellow Chartered Accountant member of the ICAI. He/ She should not be appointed as the Tax auditor or Statutory auditor of the company; *As per the notification no. 23/2018 dated 24 May 2018, CBDT has omitted the word "Accountant" from the rules. Therefore, with effect from 24 May 2018, Chartered accountants shall not be eligible to issue the valuation report under Sub rule (2) of Rule 11UA under DCF method. However, ICAI has represented to CBDT to include Chartered Accountants.* ***Accountant#: Valuation of shares at Book Value***	

	The accountant should be eligible under section 288 (2) of Income tax act, 1961. In simple words, He/She should be eligible to be appointed as Statutory auditor of the company; *As per the notification no. 23/2018 dated 24 May 2018, CBDT has omitted the word "Accountant" from the rules. Therefore, with effect from 24 May 2018, accountants shall not be eligible to issue the valuation report under Sub rule (2) of Rule 11UA under DCF method. However, ICAI has represented to CBDT to include Chartered Accountants.* ***Balance sheet^^:*** Balance sheet as drawn on the valuation date (the date of receipt of consideration as the case may be) which has been audited by the Statutory auditor. If not drawn on the valuation date, then the balance sheet drawn up as on a date immediately preceding the valuation date which is duly adopted in the AGM. *(If consideration for issue of shares received on 28-03-2018 then audited balance sheet for FY 2016-17 can be considered for determining the fair market value of shares)* ***Balance sheet*:*** *Balance sheet drawn upon the valuation date (i.e. the date of receipt of property or consideration as the case may be).* ***Formula*:*** *The fair market value of unquoted equity shares =(A+B+C+D - L)× (PV)/(PE), where,* *A= book value of all the assets (other than jewellery, artistic work, shares, securities and immovable property) in the balance-sheet as reduced by,—* *any amount of income-tax paid, if any, less the amount of income-tax refund claimed, if any; and* *any amount shown as asset including the unamortised amount of deferred expenditure which does not represent the value of any asset;* *B = the price which the jewellery and artistic work would*

	fetch if sold in the open market on the basis of the valuation report obtained from a registered valuer; *C = fair market value of shares and securities as determined in the manner provided in this rule;* *D = the value adopted or assessed or assessable by any authority of the Government for the purpose of payment of stamp duty in respect of the immovable property;* *L= book value of liabilities shown in the balance sheet, but not including the following amounts, namely:—* *(i) the paid-up capital in respect of equity shares;* *(ii) the amount set apart for payment of dividends on preference shares and equity shares where such dividends have not been declared before the date of transfer at a general body meeting of the company;* *(iii) reserves and surplus, by whatever name called, even if the resulting figure is negative, other than those set apart towards depreciation;* *(iv) any amount representing provision for taxation, other than amount of income-tax paid, if any, less the amount of income-tax claimed as refund, if any, to the extent of the excess over the tax payable with reference to the book profits in accordance with the law applicable thereto;* *(v) any amount representing provisions made for meeting liabilities, other than ascertained liabilities;*

	(vi) any amount representing contingent liabilities other than arrears of dividends payable in respect of cumulative preference shares; *PV= the paid up value of such equity shares;* *PE = total amount of paid up equity share capital as shown in the balance-sheet;* ***Formula##*** The fair market value of unquoted equity shares = {(A–L) × (PV)}/(PE) where, A = book value of the assets in the balance-sheet as reduced by any amount of tax paid as deduction or collection at source or as advance tax payment as reduced by the amount of tax claimed as refund under the Income-tax Act and any amount shown in the balance-sheet as asset including the unamortised amount of deferred expenditure which does not represent the value of any asset; L = book value of liabilities shown in the balance-sheet, but not including the following amounts, namely:— (i) the paid-up capital in respect of equity shares; (ii) the amount set apart for payment of dividends on preference shares and equity shares where such dividends have not been declared before the date of transfer at a general body meeting of the company; (iii) reserves and surplus, by whatever name called, even if the resulting figure is negative, other than those set apart towards depreciation; (iv) any amount representing provision for taxation, other than the amount of tax paid as deduction or collection at source or as advance tax payment as reduced by the amount of tax claimed as refund under the Income-tax Act, to the extent of the excess over the tax payable with reference to the book profits in accordance with the

	law applicable thereto; (v) any amount representing provisions made for meeting liabilities, other than ascertained liabilities; (vi) any amount representing contingent liabilities other than arrears of dividends payable in respect of cumulative preference shares; PE = total amount of paid up equity share capital as shown in the balance-sheet; PV = the paid up value of such equity shares;

We have discussed majorly all issues regarding valuation of un-quoted shares under the Income Tax Act, 1961. It is also necessary to highlight that w.e.f. AY 2018-19 the assessee shall be required to report the FMV into the ITR form under the head Income arising from Capital gains and other sources.

Analysis of Provisions under the Companies Act, 2013

The provisions of section 62(1)(c) of the Companies Act, 2013 mandates to obtain a valuation report from the **registered valuer** in case of fresh issue of equity shares and convertible (optionally or compulsorily) securities under preferential allotment except for right issues.

Accordingly, in case of allotment of shares to existing shareholders no valuation shall be required.

Further, the value so obtained shall be **minimum price** of the share under Companies Act, 2013 which shall be applicable for Residents and Non-Residents both. The 'Registered Valuer' shall be the valuers get registered with the regulatory authority i.e. Insolvency and Bankruptcy Board of India (IBBI). However, the Companies (Registered Valuers and Valuation) Rules, 2017 are not yet notified and therefore it is clarified that either an independent SEBI-registered merchant banker or an independent CA with minimum of 10 years' of experience shall be allowed to issue the valuation report as required under section 62(1)(c) of the Act up to September 2018.

Contradiction between Income Tax Act, 1961 and Companies Act, 2013

We have discussed the valuation methods as per Income Tax Act, 1961 and Companies Act, 2013. But it is pertinent to note that both the legislations are slight contradictory on the value.

The section 56(2)(viib) of Income Tax Act, 1961 provides for value of shares to be issued should not exceed the FMV i.e. FMV calculated for the purpose of Income Tax Act, 1961 for issue of shares, is the Maximum value which is calculated as per prescribed method. But, as per section 62(3) of Companies Act, 2013, the FMV of shares calculated as per valuation report is the minimum value for issuance of shares.

Therefore, the company has to see and take along both the legislations and comply with accordingly.

Analysis of RBI Guidelines on Foreign Direct Investment (FDI)

Whenever issue or transfer of Equity shares or convertible instruments of an Indian Company are taking place between Indian resident and non-resident, FDI valuation gets triggered. However, the FDI valuation guidelines are not applicable where the investment is on non-repatriation basis. The valuation shall be done using the internationally accepted pricing methodology which generally includes Discounted Cash Flow Method (DCF). Further, the conversion ratio incase of convertible instruments shall be determined upfront at the time of such instrument

Under FDI transactions with Unlisted Indian Company, the valuation of shares can be done by a Chartered Accountant or a SEBI registered merchant banker or a cost accountant.

Conclusion

As per the provisions, it is necessary to understand the correct valuation requirements because this may lead to incorrect assumptions/method and non-compliance on the part of issuer/receiver or transferor/transferee.

Therefore, we would suggest that before undergoing any transaction for transfer of un-quoted shares and securities or fresh issue of shares, the assessee should make share that the valuation of shares and securities is done correctly.

Chapter 17
Profit isn't a misfit anymore

Valuing a business, is in many respects, akin to quantifying the supposedly unquantifiable. Arriving at a number which captures the value of a business is similar to attempting to define what is rather perceived as something very indeterminate, if not indefinite. Business operates on the thumb-rule of subjectivity, and it is often difficult to test it on the touch-stone of numeric parameters. Numbers often end up in doing little justice to the task those were employed to undertake in the first place. No sooner than a number sees the light of the day, analysts wearing thick glasses keep their jargon-book ready. Phrases like 'optimistically over-valued', 'tunnel-vision value', 'exceptionally expectant figure' resurface almost as a reflex action. Cognoscenti keep wondering while the promoters laugh happily all the way to their banks.

Under such a scenario, e-commerce sites present their own set of challenges to valuation experts. An e-commerce platform has dynamics of its own; tangibility may not always be felt and the place of its setup may not be different from the dining rooms of the promoters' residence. The valuation figures of e-commerce sites off late have reiterated the view that virtual is the new physical. Their valuation has always evoked interest from different sections of the economy. Only time will tell whether it is a bubble waiting to be burst or whether its sustainability will endure.

Gross Merchandize Value, fondly abbreviated as **GMV**, was the metric generally associated as the base of valuation to which a multiplier was applied. In layman's terms, GMV is the value of the goods sold over a period of time, without taking into account the discounts offered, the cashbacks granted or any other expense in connection to the sale. Thus, to quote a simple example, a commodity worth INR 1000 was offered at 60% discount, that is, at INR 400. Furthermore, the customer was offered a 10% cashback, and thus he paid an amount of INR 360 for the product. Though the cash inflow in INR 360, the GMV is INR 1000. Thus, the '**G**' of **GMV** assumes a significant importance. Had this e-commerce platform served only as an intermediary, it would have been entitled for a certain percentage of the sale value as commission, which it would rightly term as its own 'revenue'. Thus,

the GMV and revenue are as different as chalk and cheese. Another noteworthy point to be carried home is the fact that GMV nowhere considers 'profitability' of the transaction from the e-commerce site's perspective. GMV is INR 1000, irrespective of the fact whether the commodity costed INR 5 or INR 5000 to the e-commerce platform.

The rationale behind such a valuation model was that the e-commerce site, whether adopting a purchase-and-sell model or an intermediary-model would benefit as and when the value of the sales effected would go up. The greed of generating a higher GMV, and by extension, a higher valuation, led to a generous array of consumer-pleasing tactics and vast discount roll-outs, especially on electronic goods. Discounts became the norm for sale. Cheap selling was equated with a survival tool. Cash-burnouts became a monotony and a trade-practice. The focus to strengthen the top-line led to a complete disregard for the bottom-line up to the point-of-time there was no cash left to be burnt. Valuations were based on **facilitating** the sale more than **generating profit** from the transactions. (Perhaps, they took Peter Drucker's statement very seriously: *'There is only one valid definition of business purpose – to create a customer'!*)

It was only a matter of time that the stakeholders realized that valuations and profitability cannot be kept in different silos; and cannot be divorced from each other. To make the business self-sustaining, profitability was the first check-box to be ticked. Valuations started dropping, and perhaps the bubble-theorists were the happiest species alive.

A classic case of investors beginning to seek profitability and not GMV alone is India's blue-eyed e-commerce setup – **Flipkart.** Its value was placed at 15 times its GMV in 2011, while in 2015, the multiplier came down heavily to a mere 3.3. Analysts fear that the rise in GMV will further lower down the multiplier. Flipkart's whooping $15 billion valuation in 2015 fell southward to a $5.7 billion in 2017. The fact that Flipkart's losses aggravated from INR 2969 crore in 2015 to INR 5223 crore in 2016, is by any stretch of imagination, not a mere co-incidence to the declining valuation. Flipkart was devalued seven times in 2016.The corporate world came to terms with a reality which was rather an anticipated consequence than a surprise. Snapdeal's GMV multiple too fell from 20 in 2012 to less than 2 in 2015. One may very well cite the recent Flipkart- Walmart deal as a defence against the increasing emphasis being laid on the profitability aspect of a business. However, valuation isn't a one-dimensional game wherein a straight-jacketed formula can be conveniently laid down. It isn't an uni-regressional model. The presence of

Flipkart in the shopping-cart of Walmart can be attributed to a host of other strategic factors, one of them being gaining entry of an unprecedented scale in India's emerging e-commerce horizon, which may have commanded a heavy premium. Beauty lies in the eyes of the beholder; value lies in the hold of the acquirer. Valuation is the leading ancillary to the adage – 'Different folks, different strokes'.

In a segment where loss is the rule and profit the exception, this is a very difficult fact to fathom. Shopclues, Quikr, UrbanLadder, Pepperfry, Zomato, BigBasket, BookMyShow, Ibibo all have their bottom-lines in red for the year ended March 2016.

Achieving operational profits isn't a tough nut to crack, especially in an ecosystem accustomed to discounts, cashbacks and incentives. For instance, Ola reduced the incentives to drivers by 30% to 40%. The cab-drivers regarded this as an unwelcome move and resorted to strikes. Business, in an online environment, is a zero-sum game where one's loss in another's gain. Blink for a second, and your opponent will take you down in half of that time. The Indian consumer is spoilt for choices, and not offering discounts makes his job only easier. The trade-off may not be an easy decision for the corporates; nevertheless, it cannot be weighed against eventual profitability.

The weather may be gloomy but it's not too dark. Quikr Jobs turned profitable in March 2017. EBITDA of matrimony.com became eight-fold in the last one year. TravelTriangle, a traveling portal achieved economics profitability across all geographies with a GMV of INR 350 Crore. Infibeam's total revenue is tiny as compared to the e-commerce giants but its strategy to enhance viability and avoid loss making propositions enabled it to be profitable and today has a market capitalization of $ 1.2 billion. Such stories may be far and few, yet they are living examples of the fact that profit-making still isn't rocket-science.

The tides of valuation metrics have turned towards unit economics and sustainability. Private equity funds and venture capitalists no longer consider GMV as the sole substratum for valuing e-commerce businesses. GMV is no longer the invincible cloak to brush losses under the carpet. It's that time when the investors have started reading the projected financial statements bottom-up rather than top-down.

This leaves us with a message for the to-be start-up giants – keep the profitability slide handy when you approach your potential investors!

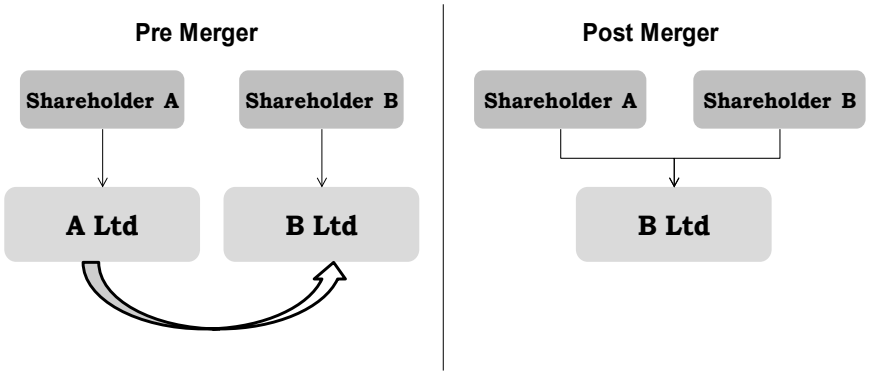
Chapter 18
Valuation for Mergers and Demergers

The Indian business environment is rapidly changing with changes in technology, introduction of new products and services, competition, change in economic conditions and government regulations, globalisation etc. In order to survive and grow, the businesses need to innovate continuously and have strategic plans to keep up with the change. Inorganic growth strategies like mergers, acquisitions and spinoffs are important engines that help companies to enter new markets, cut competition, consolidate and grow quickly. Thus, inorganic growth strategies are regarded as fast track 'corporate restructuring' strategies for growth.

Let us acquaint ourselves with two of the main modes of corporate restructuring viz. (a) Merger; and (b) Demerger.

(a) Merger:

Merger, also known as 'amalgamation', in Indian parlance means the combination of two or more companies into one company, where the transferor company(s) loses its identity. The shareholders of the transferor company(s) are offered shares of transferee company as a consideration for transfer of business by the transferor company(s).



Section 2(1B) of the Income Tax Act, 1961 defines the term 'Amalgamation' as below:

"Amalgamation means the merger of one or more companies with another company or the merger of two or more companies to form one company (the company or companies which so merge being referred to as the amalgamating company or companies and the company with which they merge or which is formed as a result of the merger, as the amalgamated company) in such a manner that—

(i) all the property of the amalgamating company or companies immediately before the amalgamation becomes the property of the amalgamated company by virtue of the amalgamation;

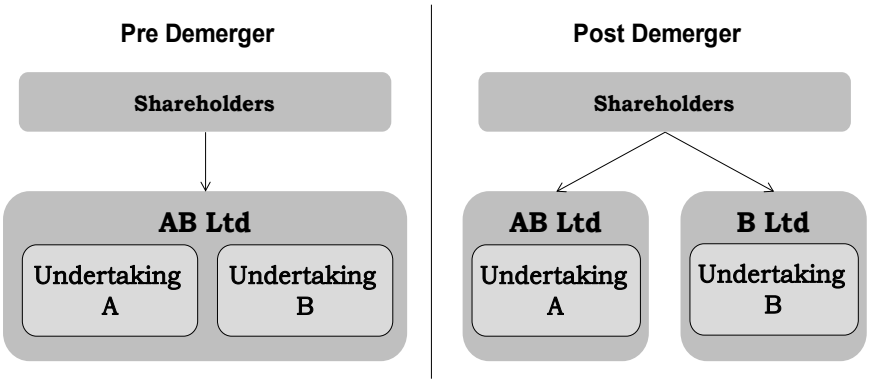
(ii) all the liabilities of the amalgamating company or companies immediately before the amalgamation become the liabilities of the amalgamated company by virtue of the amalgamation;

(iii) shareholders holding not less than three-fourths in value of the shares in the amalgamating company or companies (other than shares already held therein immediately before the amalgamation by, or by a nominee for, the amalgamated company or its subsidiary) become shareholders of the amalgamated company by virtue of the amalgamation,

otherwise than as a result of the acquisition of the property of one company by another company pursuant to the purchase of such property by the other company or as a result of the distribution of such property to the other company after the winding up of the first-mentioned company."

(b) Demerger:

Demerger, is a form of corporate restructuring, where one or more business undertakings ('demerged undertaking') of a company ('transferor / demerged company') are transferred to another company ('transferee / resulting company'). In case of demerger, the transferor / demerged company continue to exist. The shareholders of demerged company are offered shares of the resulting company as consideration for the transfer of business undertaking by the demerged company into resulting company.



Section 2(19AA) of the Income Tax Act, 1961 defines the term 'Demerger' as below:

"Demerger, in relation to companies, means the transfer, pursuant to a scheme of arrangement under sections 230 to 232 of the Companies Act, 2013, by a demerged company of its one or more undertakings to any resulting company in such a manner that:

(i) all the property of the undertaking, being transferred by the demerged company, immediately before the demerger, becomes the property of the resulting company by virtue of the demerger;

(ii) all the liabilities relatable to the undertaking, being transferred by the demerged company, immediately before the demerger, become the liabilities of the resulting company by virtue of the demerger;

(iii) the property and the liabilities of the undertaking or undertakings being transferred by the demerged company are transferred at values appearing in its books of account immediately before the demerger;

(iv) the resulting company issues, in consideration of the demerger, its shares to the shareholders of the demerged company on a proportionate basis except where the resulting company itself is a shareholder of the demerged company;

(v) the shareholders holding not less than three-fourths in value of the shares in the demerged company (other than shares already held therein immediately before the demerger, or by a nominee for, the resulting company or, its subsidiary) become

shareholders of the resulting company or companies by virtue of the demerger,

otherwise than as a result of the acquisition of the property or assets of the demerged company or any undertaking thereof by the resulting company;

(vi) the transfer of the undertaking is on a going concern basis;

(vii) the demerger is in accordance with the conditions, if any, notified under sub-section (5) of section 72A by the Central Government in this behalf.

Entities opt for merger / demerger for variety of reasons viz. ensuring survival in difficult economic situations, expansion purposes or for gaining competitive advantage, market leadership, etc. The decision to merge / demerge is not only based on the market study, competitor analysis, forecasting of synergies, etc., but also need to take into account valuation of businesses involved in merger / demerger as well as the legal and procedural aspects for implementation. Valuation is, therefore, one of the key considerations in any corporate restructuring exercise.

This article discusses in brief the various aspects dealing with valuations in case of merger / demergers.

1. Concept of 'relative valuation'

In case of Merger, a valuer needs to determine a 'share exchange / swap ratio' which would be based on the relative valuation of the transferor and transferee companies. Similarly, in the case of 'demerger', a 'share entitlement ratio' needs to be determined by the valuer based on the relative valuation of the demerged undertaking of the demerged company and transferee company. The relative values are generally determined by using similar valuation approaches / methods and applying similar weightages to values arrived under each approach / method. However, in certain cases, use of different approach / methods may be appropriate for e.g. merger of an investment holding company into technology company where valuation of investment holding company would be based on 'asset approach', whereas valuation of 'technology company' would be based on 'market approach' and / or 'income approach'.

In certain cases of mergers / demergers, no valuation is required to be

carried out and share exchange / share entitlement ratio is recommended without carrying out a valuation exercise and is based on the ultimate beneficial ownership of the companies, capital structure and future equity servicing capacity of the transferee company in case of demerger, etc. Following are some of the instances:

a) *Demerger of an Undertaking of a demerged company into a new company:*

   Since the shareholding pattern of the new company is identical to that of demerged company i.e. the beneficial ownership of demerged company and the new company is the same, no valuation is required.

b) *Merger of holding company into its subsidiary company:*

   No valuation may be required in this case, if there is no change in the shareholding of the subsidiary company and it does not affect the interest of other shareholders of subsidiary company.

2. Valuation Aspects In Regulations Governing Merger / Demergers

Mergers / Demergers, in India, are governed by various regulations / authorities. These regulations also provide for valuation to be undertaken in case of merger / demergers, some of which are discussed below:

Sections 232 to 234 of the Companies Act 2013 lay down the provisions for mergers / demergers; wherein a share exchange / share entitlement ratio, as the case may be, by a Registered Valuer is required to be obtained.

The Ministry of Corporate Affairs ('MCA') notified the Companies (Registered Valuers and Valuation) Rules, 2017 ('Registered Valuer Rules') with effect from October 18, 2017. These Rules provide for transitional arrangement, whereby an existing valuer, who was rendering valuation services under the Companies Act 2013, can continue to render valuation services under the Companies Act 2013 without obtaining the prescribed certificate of registration under the Rules upto September 30, 2018.

Till the time section 247 and the Rules were not notified, the valuation required under the Companies Act 2013 were required to be carried out by an independent merchant banker who is registered with the SEBI or an independent chartered accountant in practice having a minimum experience of ten years. By virtue of this transitional arrangement provisions, valuation

under the Rules can be carried out by such merchant bankers and / or chartered accountants till September 30, 2018 without obtaining certificate of registration.

Although the Companies Act 2013 does not provide any specific valuation methods/formulae to be followed, the Registered Valuer Rules require a Registered Valuer to conduct valuations in compliance with the valuation standards as notified by the Central Government. Until such notification, a Registered Valuer needs to carry out valuation as per:

a. internationally accepted valuation standards; or

b. valuation standards adopted by any Registered Valuers Organisation ('RVO').

The Institute of Chartered Accountants of India ('ICAI') has notified 'ICAI Valuation Standards 2018' ("IND VS") on 24th May, 2018 and the same shall be effective for the valuation reports issued by Chartered Accountants on or after **July 01, 2018** for the purpose of Companies Act, 2013. These standards will be effective till the time valuation standards are not notified by the Central Government. Therefore, a chartered accountant issuing a report on valuation for merger / demerger on or after July 01, 2018 will have to comply with these IND VS issued by ICAI.

2.1 Cross Border Merger Regulations

Section 234 of the Companies Act 2013 and Foreign Exchange Management (Cross Border Merger) Regulations, 2018 lays down the provisions for mergers, amalgamations and arrangements between Indian companies and foreign companies. As per these regulations, valuation of the Indian company and the foreign company shall be done in accordance with Rule 25A of the Companies (Compromises, Arrangement or Amalgamation) Rules, 2016.

As per Rule 25A, the valuation for the purpose of cross border mergers / arrangements needs to be carried out by valuers who are members of a recognised professional body in the jurisdiction of the transferee company and such valuation should be in accordance with internationally accepted principles on accounting and valuation.

2.2 SEBI Regulations:

In case of any scheme of arrangement involving a listed company, the

draft scheme of arrangement needs to be approved by stock exchange(s) before the same is filed with the National Company Law Tribunal ('NCLT'). In this regard, SEBI, through its regulations and circulars has laid down various conditions for grant of approval, guidelines in respect of pricing and disclosure requirements for mergers / demergers involving listed companies. Following are the key requirements relating to valuation, under SEBI Regulations, that needs to be complied with in case of merger / demerger involving listed companies:

2.3.1 In case of merger of an unlisted company with a listed company or in case of demerger of a division of an unlisted company into a listed company, wherein shares of listed company are issued to shareholders of unlisted company, the valuer shall follow the pricing provisions of Chapter VII of SEBI (Issue of Capital and Disclosure Requirements) Regulations, 2009 ('ICDR Regulations'). *[SEBI Circular No. CFD/DIL3/CIR/2017/21 dated March 10, 2017 (as amended by SEBI Circular No. CFD/DIL3/CIR/2018/2 dated January 03, 2018) read with SEBI Circular No. CFD/DIL3/CIR/2017/26 dated March 23, 2017]*

In my view, this does not mean that the value of the shares of the listed company needs to be determined only on the basis of ICDR pricing guidelines. The price as per the ICDR Regulations will serve as the base minimum value of the shares of the listed company in case of any merger / demerger of unlisted company into listed company.

The guidelines for pricing provisions are laid down in Regulation 76 of the ICDR Regulations for frequently traded shares. The price as per regulation 76 needs to be calculated based on higher of the (i) average of weekly high and low of the volume weighted average price (VWAMP) of the equity shares during 26 weeks preceding the *relevant date;* or (ii) average of weekly high and low of the VWAMP of the equity shares during 2 weeks preceding the *relevant date*. The date of board meeting in which the scheme for merger / demerger is approved will be the 'relevant date' for computing the price of shares of listed company for the purpose of merger / demerger.

2.3.2 In case of any scheme of arrangement involving listed companies, a report on share exchange / entitlement ratio of an Independent Chartered Accountant needs to be submitted to the stock exchange(s).

Further, a 'Fairness Opinion' by an Independent SEBI Registered Merchant Banker on such report of the Chartered Accountant is also required to be submitted to the stock exchange(s).The chartered accountant and the merchant banker shall not be treated as independent in case there is any material conflict of interest among themselves or with the company, including that of common directorships or partnerships. [*SEBI (Listing Obligations and Disclosure Requirements) Regulations, 2015 read with SEBI Circular No. CFD/DIL3/CIR/2017/21 dated March 10, 2017 as amended by SEBI Circular No. CFD/DIL3/CIR/2018/2 dated January 03, 2018]*

2.3.3 As per Circular No. LIST/COMP/02/2017-18 dated May 29, 2017 issued by BSE Limited and Circular No. NSE/CML/2017/12 dated June 01, 2017 issued by National Stock Exchange of India Limited, following disclosure needs to be made by a valuer in the valuation report:

Valuation Approach	**XYZ Ltd**		**PQR Ltd**	
	Value per share	**Weight**	**Value per share**	**Weight**
Asset Approach	X	A	Y	d
Income Approach	X	B	Y	e
Market Approach	X	C	Y	f
Relative Value per Share	**X**		**Y**	
Exchange Ratio (rounded off)			**XX**	

RATIO:

x (xxx) equity shares of XYZ Ltd of INR 10 each fully paid up for every y (yyy) equity shares of PQR Ltd of INR 10 each fully paid up

In case any of the approach mentioned in the table above is not used for arriving at the share exchange / entitlement ratio, detailed reasons for the same needs to be provided by the valuer in his report.

2.3.4 Valuation report of Independent Chartered Accountant is not required to be obtained in cases where there is no change in the shareholding pattern of the listed transferee company. *[SEBI Circular No. CFD/DIL3/CIR/2017/21 dated March 10, 2017as amended by SEBI*

Circular No. CFD/DIL3/CIR/2018/2 dated January 03, 2018]. Following are some instances, wherein valuation report will not be required:

a) Merger of a wholly-owned-subsidiary with its listed parent company or Demerger of an undertaking of a wholly owned subsidiary into its listed parent company; where the shareholders and shareholding pattern of listed parent company remains the same.

b) Demerger of an undertaking of a listed company into a new company; wherein the shareholding pattern of new company is identical to that of listed company i.e. the beneficial ownership of listed company and that of the new company is the same.

3. Court Judgements

Valuation aspect in merger / demergers has also been dealt by various courts in the past and has laid down certain important principles dealing with valuation in case of mergers / demergers. Some of the decisions are as under:

(a) Supreme Court, in case of Hindustan Lever Employees' Union Vs. HLL (1995) 83 Com. Case 30 SC, held that

"the jurisdiction of the Court in sanctioning a scheme of merger is not to ascertain with mathematical accuracy if the determination satisfied the arithmetic test. A company court does not exercise an appellate jurisdiction. It exercises a jurisdiction founded on fairness. It is not required to interfere only because the figure arrived at by the valuer was not as better as it would have been if another method would have been adopted. What is imperative is that such determination should not have been contrary to law and that it was not unfair to the shareholders of the company which was being merged. The court's obligation is to be satisfied that valuation was in accordance with law and it was carried out by an independent body. Since more than 95% of the shareholders who are the best judge of their interest and are better conversant with market trend agreed to the valuation determined, it could not be interfered by the courts."

(b) In case of Kamala Sugar Mills Limited (55 Company Cases 308) the Gujarat High Court observed as under:

"Once the exchange ratio of the shares of the transferee-company to be allotted to the shareholders of the transferor-company has been worked out by a recognised firm of chartered accountants who are experts in the field of valuation and if no mistake can be pointed out in the said valuation, it is not for the court to substitute its exchange ratio, especially when the same has been accepted without demur by the overwhelming majority of the shareholders of the two companies or to say that the shareholders in their collective wisdom should not have accepted the said exchange ratio on the ground that it will be detrimental to their interest."

(c) Similarly, in case of Dinesh Lakhani v/s. Parke Davis (India) Limited the Bombay High Court ruled that *"the court will not interfere only because the valuation adopted by the valuer could have been improved upon had another method been adopted. The Court is neither a valuer nor an appellate forum to reappreciate the merits of the valuation. The court has to ensure that the determination should not be contrary to the law or unfair to the shareholders of the company which has been merged."*

Chapter 19
Overview on Valuation of Options

Understanding an Option is no longer an option…..

The world of finance has witnessed significant vigor in the application and utility of derivatives. One such derivative that has witnessed immense popularity owing to its nature and characteristics are “Options”. We see Options being issued for compensation to executives, being embedded with bonds, added to acquisition agreements for determining purchase consideration and so on. It is therefore essential to understand how Options function and some techniques for valuing them. This article focuses on giving an overview of Options and some popular techniques to determine the value of Options.

As the name suggests, derivatives derive their value from its underlying asset. Option, being a derivative, derives its value from the underlying asset. An Options contract gives its owner the right but not an obligation to either buy or sell an underlying asset at a specified time and price. This feature distinguishes an option from a forward or futures contract, where the holder is under compulsion to buy or sell the underlying asset. While the owner of an option has to incur a cost to acquire an option, there is no cost associated to enter into a forward or futures contract.

Types and Positions of Options

Options can be categorized as Call and Put Options. A buyer of a call option has the right but not an obligation to buy an underlying asset at a predetermined price and time. A buyer of a put option has the right but not an obligation to sell an underlying asset at a predetermined price and time. American options can be exercised anytime from purchase until the date of expiration whereas European options can only be exercised at the time of expiration.

Options can be said to have long and short positions. Buyers are referred to as having a long position (where buyer of a call option has the right to buy an underlying asset and buyer of a put option has the right to sell an underlying asset) and Sellers are referred to as having a short position (where seller of a

call option is obligated to sell an underlying asset and seller of a put option is obligated to buy an underlying asset).

Factors affecting pricing of Options

The key factors affecting the value of an Option are as below:

Current Share Price (S) is the price at which the share (underlying asset) is being currently traded.

Exercise Price (K) is the price at which the Option can be exercised.

Time to Expiration (T) is the time for which the Option remains active and exercisable. T for a European Option is a fixed date and that for an American Option is any date before and including date of expiration.

Volatility of Share Price (σ) is the rate at which price of a share increases or decreases for a given return.

Risk-free interest rate(Rf) is generally the rate of government securities.

Dividends expected during the life of the Option (D) is the expected dividend yield on the stock.

Other things remaining constant, value of a call option generally increases with an increase in either of the following: current share price, time to expiration, volatility and risk-free interest rate.

Other things remaining constant, value of a call option generally decreases with an increase in either of the following: exercise price and dividends.

Other things remaining constant, value of a put option generally increases with an increase in either of the following: exercise price, time to expiration, volatility and dividends.

Other things remaining constant, value of a put option generally decreases with an increase in either of the following: current share price and risk-free interest rate.

Payoff / Moneyness of Options

Moneyness or payoff of an Option refers to the positive difference between the current share price (S) and exercise price (K). Options can be In the Money, At the Money and Out of the Money. In all circumstances, the option will most likely be left unexercised if it is Out of the Money, in which case the Option expires.

A call option is In the Money if the difference between the share price and exercise price is more than zero (S – K > 0), Out of the Money if the difference between the share price and exercise price is less than zero (S – K < 0) and At the Money if difference between the share price and exercise price is equal to zero (S – K = 0).

A put option is In the Money if the difference between the exercise price and share price is more than zero (K – S > 0), Out of the Money if the difference between the exercise price and share price is less than zero (K – S < 0) and At the Money if difference between the exercise price and share price is equal to zero (K – S = 0).

Valuation of Options

Options are valued by using one of the following valuation models:

- Black-Scholes-Merton Model (BSM Model)
- Binomial Model
- Monte Carlo Simulation

While there are several macro-enabled models available for the above-mentioned valuation techniques, the genesis of these models remains same and is explained as below.

Black-Scholes-Merton Model (BSM Model)

The BSM Model for option pricing was introduced and evolved by Fischer Black, Myron Scholes and Robert Merton in the early 1970s. The hypothesis of the BSM model is that assumes the lognormal property of stock prices, which means that % changes in prices of shares during a short time frame are normally distributed. Value of the Option using BSM Model can be interpreted to be the present value of the expected payoff (current price minus present value of strike price) of the option at expiration. A variable with lognormal distribution can supposedly take any value between zero and infinity. BSM Model is generally adopted to value European Options.

The main determinants (variables relating to the underlying asset) that form inputs to the BSM model are:

- Fair value of the underlying asset / current share price (S)
- Strike price of option (K)

- Risk-free rate (Rf)
- Volatility in share price (σ)
- Life of the option / Time to expiration (T)
- Expected dividends on underlying asset (D)

The value of a call option using the BSM formulae is as below:

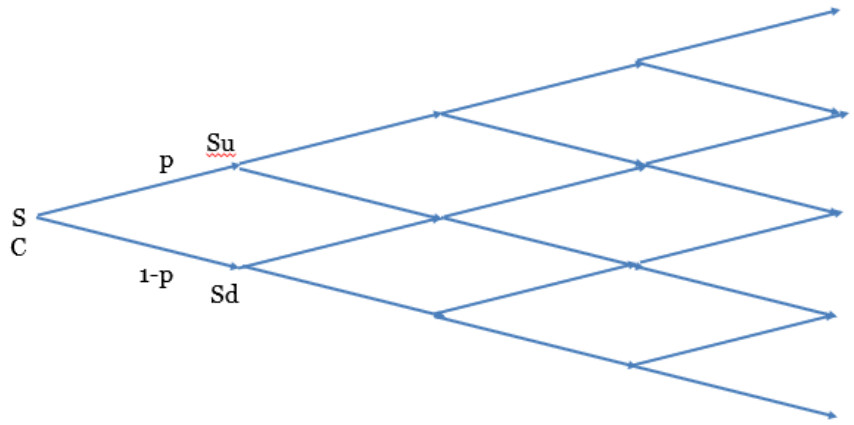
Value of Call Option (C) = [EXP(-D*T)*S*N(d1)] – [EXP(-Rf*T)*K*N(d2)]

Where,

- ✓ $d1 = [\ln(S/K)+(Rf - D + \sigma^2/2)*T]/\sigma\sqrt{T}$
- ✓ $d2 = d1 - \sigma\sqrt{T}$
- ✓ ln(S/K) = Natural log of ratio of stock price to the exercise price
- ✓ S*N(d1) = probability weighted value of the share price
- ✓ N = cumulative distribution function for a standard normal distribution
- ✓ N(d2) is the probability that the option will be exercised
- ✓ K*N(d2) = probability that exercise price will be paid
- ✓ EXP = exponential function used to arrive at the present value of payout

Binomial Model

The genesis of the Binomial model is that the price of an asset can move in any one of the two possible prices in a given time period. The model when extrapolated gives a pictorial representation (as below) of a tree and is often referred to as the Binomial Tree or Lattice Model.



Given its characteristics, the Binomial model is usually adopted to value American options. The life of the option is divided into a large number of small time intervals of ΔT. The model assumes that in each given time interval, the price of the underlying asset moves from its initial value of S to one of the two new values, Su and Sd. Su and Sd are called as nodes.

There are two numbers at each node, where the top number of the node indicates the stock price and the bottom number of the node indicates the value of the option. The movement from S to Su is regarded as an Up movement and the movement from S to Sd is considered as a Down movement. The probability of an up movement is denoted by 'p' and the probability of a down movement is denoted by '1-p'.In general, $u > 1$ and $d < 1$.

As a practice, the prices of the option is first calculated at the final node, based on which the value of options at penultimate nodesis calculated. The model at any time captures the maximum of present value of probability adjusted future payoff and current payoff.

Monte Carlo Simulation

The genesis of Monte Carlo Model is that the price of the underlying asset is simulated by random generation for a number of paths. Monte Carlo method derives value of an option using computational algorithms that are based on repeated computation and random sampling. In general, Monte Carlo Simulation is adopted to cross check the price of an option determined using the BSM Model or Binomial Model.

The price of the underlying asset is simulated by random number generation (with the help of the key variables affecting value of an option) for a number of paths. The value of the option is determined by calculating the average of discounted returns over all the paths so extrapolated. The discounted rate considered to calculate present value of payoff of the call option is the risk-free interest rate, as the basic assumption for option pricing is that the option is priced under risk-neutral measure.

Monte Carlo simulation is often used to benchmark or cross-check the value obtained from BSM Model or Binomial Model.

The key functions used in MS Excel for arriving at random variables is NORMSINV, which is the inverse cumulative function for the standard normal distribution and NORMSINV(RAND()), which gives a random sample from a standard normal distribution from a set of stock prices at time T.

Chapter 20

Valuation of Intangible Assets 94 Types & 11 Case Studies

Executive Summary

Intangible assets have always been intriguing puzzles for a business. Panchamahabhutas have given birth to many intangible assets thru innovation to start with. And now Start-ups and aggregators with digitization, web-apps, cloud computing and block-chain the NEW intangible assets are being innovated. An attempt has been made to unfold a few live case studies out of 94 types of intangible assets here.

Anywhere & Everywhere Intangible assets

First week of June 2018 started with two significant news. One, an announcement by Microsoft buying Git Hub a cloud computing platform company at a staggering valuation of $7.5B and **in Dallas, Texas, USA. Page 58 drawings on Tintin sell for $426000**

This decade & even century is likely to witness corporate wars on INTANGIBLE ASSETS, with sky high valuations. The valuation of intangible assets is therefore crucial.

Definition

International Valuation Standard no 210 in para 20.1 defines an intangible asset is a non-monetary asset that manifests itself by its economic properties. It does not have physical substance but grants rights and/or economic benefits to its owner

Panchmahabhutas

Many of the intangible assets are arise out of Panchmahabhutas (the classical elements), Agni (fire/energy/power), Jal (water), Vayu (air), Dhara (earth), Aakash(sky).

Most of them are Government owned

To mention a few

Agni – 1) Windmill rights, then Power 2) production, 3) generation, 4) distribution 5) transmission rights, 6) Solar energy production rights,

Jal – 7) ferrying rights, 8) shipping rights, 9) water conservation rights 10) irrigation rights 11) cargo rights

Vayu – 12) Carbon credits, 12) navigation rights, 13) spectrum, 14) Cloud computing

Dhara – 15) mining rights, 16) Farming/agriculture rights, 17) Urban development rights, 18) Fix mobile tower (telecom), 19) FSI (floor space index), 20) Toll collections rights

Aakash21) flying rights – domestic 22) flying rights – international 23) satellite rights

One can find 91 types of intangible assets on website www.Intangiblebusiness.com plus one can add FSI (Floor space index), TDR (tenancy development rights), UDR (Urban development right.

C & AG has done a wonderful job on valuing various intangible assets and During the process valued many assets like spectrum. Their website is worth studying for a professional chartered accountant valuer.

For want of space apart from above 23 another 11 case studies are elaborated below, and those interested can surely contact author for knowledge of all 94 types.

Our Alma mater CA institute has done wonderful job regarding this wherein accounting standard on intangible assets Ind AS 38 along with Ind AS 113 Fair value measurements provides good understanding of measurement principles and recently announced Valuation standards by Valuation Standards Board having background of IVS (International Valuation Standards) is opening a global door for Valuation consulting as well as Global M & A head job opportunities.

Categories

IVS 210 under para 20.3 classifies following categories intangible assets

(a) Marketing related like trademarks, tradenames, unique trade design. We may add latest names like web-apps, e.g. web-apps by taxi-for sure, ola-cabs, uber

(b) Customer-related like order backlog, customer lists, contractual and

even non-contractual customer relationships e.g., First Quarter 2017 Backlog Highlights:

- Total backlog at March 31, 2017 of $925 million was up 12.4% from the fourth quarter of 2016;

A statement by sterling construction company proudly stating about its order backlog indicates how valuable "ORDER BACKLOG" could be.

(c) Artistic related like plays, books film, music e.g. M F Hussain paintings fetch millions of dollars, of signature cricket bat of Sachin Tendulkar can get sold for few millions

(d) Contract related like licensing, royalty agreements, lease agreements, servicing contracts e.g. IPL contracts with cricketeers having auction driving down value Similarly the latest accounting standard under IFRS 16 new lease standard recognizes operating lease as a "RIGHT OF USE OF ASSET"

(e) Technology based trade secrets, processes, recipes e.g. ISO standard or SIX SIGMA

Methods of Valuation

Discussed below are few methods of valuations of intangible assets

A. Excess earnings method – industry average earning less valuation of tangible assets

B. Relief from royalty method - Based on the notion that a brand holding company owns the brand and licenses it to an operating company. The notional price paid by the operating company to the brand company is expressed as a royalty rate.

C. Premium profit method - Premium Profits method. This method looks at the additional profit or cost savings that the owner of the right will achieve in relation to if they did not own the right. When valuing trademarks, the value of a branded product is typically looked at more favourably than a non-branded product.

D. Greenfield method – build out method - Suitable for startup

Infra cost, DCF minus startup costs and capital investments

e.g. telecom license, television and radio broadcasting industries wherein the method is utilized to value FCC licenses. Additional examples where the application may be appropriate include other subsets of telecommunications (i.e., wireless, satellite, etc.), power generation, and franchising.

E. Distributor method – example of laboratory testing company which carried of testing thru network of physicians (than ultimate consumer) derives value thru distributor method for typically types of products.

Purpose of Valuation

This could be driver of choice of valuation technique. The purposes could be quite a few.

(a) Financial reporting

(b) Tax reporting

(c) Litigation

(d) Statutory and legal events

(e) Collateral lending & transactional support engagements

Some new fund as

- Author recommends reader to encompass his/her knowledge with few new terminologies like
  - (i) Contributory assets – i.e. assets used in conjunction with the related intangible assets for realization of prospective cash-flow
  - (ii) MPEEM – Multiple period excess earnings method
  - (iii) TAB – tax amortization benefit

Risk assessment

It is necessary for valuer to perform risk assessment before starting valuations

Some of the risks specified in international valuation standards are worth mentioning here

(a) intangible assets carry higher risks than tangible

(b) ascertain current use of intangible. If it is highly specialized the risk is higher than an intangible asset having multiple potential uses

(c) single intangible assets will be riskier than group of assets

(d) longer the lives of intangible assets as for any other assets, as future is always UNCERTAIN.

(e) Backlog like assets have readily estimable cash flow streams as against something like brand

Case Studies

For the ready reference and benefit of readers produced below are 11 case studies along with the disclosures of well-reputed India – centric organisations.

1. Mining Rights:

In June 2006, Jindal Steel acquired the rights to develop 20 billion tons of iron ore reserve at the Bolivian El Mutun Mines. The company planned to invest approximately USD 2.3 billion over a period of 10 years beginning 2006 for the purpose of mining and building a steel plant in Bolivia. The El Mutun Mines are said to be the world's single largest iron ore mines: they have approximately 40 billion tons of iron ore reserves, half of which Jindal Steel had the rights to mine. The company's plans included setting up a 1.7 million tone integrated steel plant along with 6 million tons per year sponge iron and pellet plant with a yearly capacity of 10 million tones. In addition, the company also planned to construct a 400 MW power plant as a supporting infrastructure. Naveen Jindal, Vice Chairman and MD of Jindal Steel, stated that 80% of the INR 10,000 Crore investment would be in sponge iron and steel plants and 15-20% in iron ore mining.

GROUP OF ASSETS	GROSS BLOCK				DEPRECIATION				NET BLOCK	
	AS AT 01.04.06	ADDITIONS DURING THE YEAR	SALES/TFR DURING THE YEAR	AS AT 31.03.2007	AS AT 01.04.06	ADDITIONS DURING THE YEAR	SALES/TFR DURING THE YEAR	AS AT 31.03.2007	AS AT 31.03.2007	AS AT 31.03.2006
Land - freehold	25.48	16.36	0.06	41.78	-	-	-	-	41.78	25.48
Land - leasehold	14.85	11.14	-	25.99	0.78	0.33	-	1.11	24.88	14.07
Live Stock	0.14	-	-	0.14	-	-	-	-	0.14	0.14
Building	336.60	113.37	2.80	447.17	28.12	14.88	2.66	40.34	406.83	308.48
Plant & Machinery	2,705.42	1,560.86	99.03	4,167.25	482.45	306.10	93.88	694.67	3,472.58	2,222.97
Electrical Installation	70.03	9.91	0.01	79.93	4.18	3.42	0.01	7.59	72.34	65.85
Furniture & Fixtures	17.96	3.87	0.06	21.77	3.52	1.35	0.05	4.82	16.95	14.44
Vehicles	36.98	44.24	0.98	80.24	17.29	4.90	0.45	21.74	58.50	19.69
Air Craft (GE Lease)	26.10	-	-	26.10	5.83	3.65	-	9.48	16.62	20.27
Air Craft (Owned)	7.96	29.16	-	37.12	0.15	1.53	-	1.68	35.44	7.81
Intangible assets	1.53	0.01	-	1.54	0.01	0.31	-	0.32	1.22	1.52
TOTAL	3,243.05	1,788.92	102.94	4,929.03	542.33	336.47	97.05	781.75	4,147.28	2,700.72

(Source: http://www.thehindubusinessline.com/todays-paper/article1735753.ece)

2. Drilling Rights:

Royal Dutch Shell, Europe's Oil and Petroleum giant, in 2015 dropped its plans of hunting for oil in the Chukchi sea off the northwest coast of Alaska and gave up its drilling rights for the "foreseeable future" after facing the heat from environmentalists for encroaching on one of the world's last pristine natural resource and failing to drill any significant amount of oil. Shell executives did highlight the marginal discovery of oil and gas in their 2015 summer exploration of the Chukchi sea, but also mentioned that it wasn't enough to continue drilling for the foreseeable future. Shell had already spent a whopping USD 7 billion on this barely successful oil hunt and will have to further face a loss of USD 4.1 billion in future earnings due to this decision, but there isn't any clarity on what the final bill will be. The development came at a time when Shell was reeling under the pressure of falling crude prices, and a merger deal with its rival BG. Environmentalists; however, see this as a victory for the "Save the Arctic Program."

Consolidated Statement of Income

$ million

	Notes	2016	2015	2014
Revenue	5	233,591	264,960	421,105
Share of profit of joint ventures and associates	10	3,545	3,527	6,116
Interest and other income	6	2,897	3,669	4,123
Total revenue and other income		240,033	272,156	431,344
Purchases		162,574	194,644	327,278
Production and manufacturing expenses		28,434	28,095	30,038
Selling, distribution and administrative expenses		12,101	11,956	13,965
Research and development		1,014	1,093	1,222
Exploration		2,108	5,719	4,224
Depreciation, depletion and amortisation	5	24,993	26,714	24,499
Interest expense	7	3,203	1,888	1,804
Total expenditure		234,427	270,109	403,030
Income before taxation		5,606	2,047	28,314
Taxation charge/(credit)	17	829	(153)	13,584
Income for the period	5	4,777	2,200	14,730
Income/(loss) attributable to non-controlling interest		202	261	(144)
Income attributable to Royal Dutch Shell plc shareholders		4,575	1,939	14,874
Basic earnings per share ($)	25	0.58	0.31	2.36
Diluted earnings per share ($)	25	0.58	0.30	2.36

Consolidated Balance Sheet

$ million

	Notes	Dec 31, 2016	Dec 31, 2015
Assets			
Non-current assets			
Intangible assets	8	23,967	6,283
Property, plant and equipment	9	236,098	182,838
Joint ventures and associates	10	33,255	30,150
Investments in securities	11	5,952	3,416
Deferred tax	17	14,425	11,033
Retirement benefits	18	1,456	4,362
Trade and other receivables	12	9,553	8,717
		324,706	246,799
Current assets			
Inventories	13	21,775	15,822
Trade and other receivables	12	45,664	45,784
Cash and cash equivalents	14	19,130	31,752
		86,569	93,358
Total assets		411,275	340,157

8 INTANGIBLE ASSETS

2016

$ million

	Goodwill	LNG off-take and sales contracts	Other	Total
Cost				
At January 1	2,604	3,271	4,473	10,348
Additions on acquisition of BG (see Note 4)	10,997	7,158	607	18,762
Other additions	–	–	130	130
Sales, retirements and other movements	(3)	–	–	(3)
Currency translation differences	(6)	–	(125)	(131)
At December 31	13,592	10,429	5,085	29,106
Depreciation, depletion and amortisation, including impairments				
At January 1	594	556	2,915	4,065
Charge for the year	–	919	306	1,225
Sales, retirements and other movements	–	–	(63)	(63)
Currency translation differences	11	–	(99)	(88)
At December 31	605	1,475	3,059	5,139
Carrying amount at December 31	12,987	8,954	2,026	23,967

2015

$ million

	Goodwill	LNG off-take and sales contracts	Other	Total
Cost				
At January 1	2,712	3,271	4,562	10,545
Additions	–	–	277	277
Sales, retirements and other movements	–	–	(174)	(174)
Currency translation differences	(108)	–	(192)	(300)
At December 31	2,604	3,271	4,473	10,348
Depreciation, depletion and amortisation, including impairments				
At January 1	316	278	2,875	3,469
Charge for the year	315	278	335	928
Sales, retirements and other movements	–	–	(156)	(156)
Currency translation differences	(37)	–	(139)	(176)
At December 31	594	556	2,915	4,065
Carrying amount at December 31	2,010	2,715	1,558	6,283

(Source:https://www.theguardian.com/business/2015/sep/28/shell-ceases-alaska-arctic-drilling-exploratory-well-oil-gas-disappoints, Shell Financial Statements, 2016)

3. Dry Leasing Rights:

In April 2016, it was reported that SpiceJet planned to substitute all its wet-lease aircrafts with dry lease planes by June 2016 in an attempt to cut costs and speed up operations. "Since wet lease planes are more expensive for daily operations and come with a longer turnaround time, the decision to replace them with dry-lease planes was taken", SpiceJet chairman Ajay Singh told The Hindu. Seven planes wighere inducted on wet-lease plans after Mr. Singh was announced the Chairman in 2015; in order to salvage the troubled airline. It was also the first time for an Indian carrier to have inducted planes on wet-lease plans for domestic operations. However, the airline soon faced the consequences in the form of rising costs and delayed operations. This strategy proved to be a

Balance Sheet as at March 31, 2016
(All amounts are in millions of Indian Rupees, unless otherwise stated)

	Notes	March 31, 2016	March 31, 2015
Equity and Liabilities			
Shareholders' Funds			
Share capital	3	5,994.50	5,994.50
Advance money received against securities to be issued	4	5,790.89	5,290.89
Reserves and surplus	5	(18,101.62)	(22,144.67)
		(6,316.23)	**(10,859.28)**
Non-Current Liabilities			
Long-term borrowings	6	9,237.26	11,198.65
Other long-term liabilities	7	220.04	254.78
Long-term provisions	8	2,821.82	1,852.97
		12,279.12	**13,306.40**
Current Liabilities			
Short-term borrowings	9	1,050.00	1,200.00
Trade payables [including dues to micro, small and medium enterprises of Rs. Nil (previous year Rs. Nil)]	10 (i)	7,761.96	9,492.71
Other current liabilities	10 (ii)	8,578.72	9,188.67
Short-term provisions	11	3,684.34	3,737.40
		21,075.02	**23,618.78**
Total		**27,037.91**	**26,065.90**
Assets			
Non-current Assets			
Fixed Assets			
Tangible assets	12	16,010.87	17,114.38
Intangible assets	13	10.10	23.87
Long-term loans and advances	14	3,029.08	3,101.81
Other non-current assets	15	1,246.56	344.36
		20,296.61	**20,584.42**
Current Assets			
Current investments	16	200.00	-
Inventories	17	665.46	451.17
Trade receivables	18 (i)	433.74	1,281.83
Cash and bank balances	19	1,084.86	235.84
Short-term loans and advances	20	3,710.22	3,292.25
Other current assets	18 (ii)	647.02	220.39
		6,741.30	**5,481.48**
Total		**27,037.91**	**26,065.90**

turning point for the airline as it posted a profit of INR 73 Crores in the first quarter of 2016, which rose to INR 149 Crores in the first quarter of 2017. Though the airline suffered a loss of INR 33 Crores due to the depreciation of the rupee, it was partially offset by the replacement of wet-lease planes with dry-lease planes.

Particulars	Plant & Machinery	Rotable & Tools	Office Equipment	Computers	Furniture & Fixtures	Motor Vehicles	Leasehold Improvements	Aircraft^	Total
Cost or Valuation									
As at April 1, 2014	479.84	1,397.48	87.77	176.71	26.69	399.09	436.12	18,504.98	**21,508.68**
Additions during the year	2.64	62.67	4.00	11.33	1.15	35.68	3.80	-	**121.27**
Disposals	2.42	11.95	6.90	25.55	2.04	1.25	-	1,233.40	**1,283.51**
Other adjustments*	-	-	-	-	-	-	-	547.72	**547.72**
As at March 31, 2015	**480.06**	**1,448.20**	**84.87**	**162.49**	**25.80**	**433.52**	**439.92**	**17,819.30**	**20,894.16**
Additions during the year	37.57	266.42	9.31	33.83	3.80	73.21	0.49	-	**424.63**
Disposals	2.52	75.52	1.79	0.94	0.14	8.88	0.49	1,252.65	**1,342.93**
Other adjustments*	-	-	-	-	-	-	-	734.48	**734.48**
As at March 31, 2016	**515.11**	**1,639.10**	**92.39**	**195.38**	**29.46**	**497.85**	**439.92**	**17,301.13**	**20,710.34**
Depreciation									
As at April 1, 2014	81.34	262.60	15.93	101.63	11.82	105.06	393.02	1,808.84	**2,780.24**
Charge for the year	34.56	81.41	22.47	41.70	2.96	53.27	14.66	974.66	**1,225.69**
Disposals	1.67	2.40	6.10	25.23	1.77	1.21	-	212.17	**250.55**
Other Adjustments#	0.99	-	8.99	11.85	-	2.57	-	-	**24.40**
As at March 31, 2015	**115.22**	**341.61**	**41.29**	**129.95**	**13.01**	**159.69**	**407.68**	**2,571.33**	**3,779.78**
Charge for the year	34.86	91.07	18.36	16.73	3.01	53.40	10.46	933.24	**1,161.13**
Disposals	1.21	13.87	1.73	0.94	0.14	8.29	0.37	214.89	**241.44**
Other Adjustments	-	-	-	-	-	-	-	-	-
As at March 31, 2016	**148.87**	**418.81**	**57.92**	**145.74**	**15.88**	**204.80**	**417.77**	**3,289.68**	**4,699.47**
Net Block									
As at March 31, 2015	**364.84**	**1,106.59**	**43.58**	**32.54**	**12.79**	**273.83**	**32.24**	**15,247.97**	**17,114.38**
As at March 31, 2016	**366.24**	**1,220.29**	**34.47**	**49.64**	**13.58**	**293.05**	**22.15**	**14,011.45**	**16,010.87**

^ Under the agreement with the lender, the title to the aircrafts vest with the lessor, and the Company shall take title to aircrafts at the end of the lease period upon payment of all dues under the lease agreements. Also refer note 6 (b)
* Represents foreign exchange loss capitalised during the year and depreciation thereon. Also refer note 2 (c).
# Represents impact of adoption of useful lives of fixed assets as prescribed under Schedule II to the Act, which has been adjusted with the balance carried forward in the statement of profit and loss (deficit). Also refer note 5.

(Source:http://www.thehindu.com/business/Industry/SpiceJet-to-swap-wet-lease-fleet-by-June/article14247794.ece, http://www.thehindubusinessline.com/companies/spicejet-net-profit-doubles-to-rs-149-crore-in-q1/article9080862.ece, http://corporate.spicejet.com/Content/pdf/2015-16AnnualReport.pdf)

4. FSI:

As of 22nd January 2015, shares of DB Realty were locked in an upper circuit of 10% at INR 79.35 on the BSE after the company's project DB Orchid Heights at Mahalaxmi, Mumbai, received a go-ahead from the Maharashtra Government for the development of 3 Floor Space Index (FSI) as against an earlier FSI of 2.5. The approval came through on the 19th of January 2015, bringing in substantial positive development for the company as the Mahalaxmi project has significant revenue potential for the

company. This development boosts the company's IOD potential from 23,000 square meters to 37,000 square meters; an increase of 60% and added another INR 1,500 Crores to the company's total sale potential, thereby bringing it to INR 4,000 Crores.

	Particulars	Note No.	As at 31st March, 2016		As at 31st March, 2015	
I.	**EQUITY AND LIABILITIES**					
1	**Shareholders' Funds**					
	Share Capital	3	**3,150,145,220**		2,432,587,820	
	Reserves and Surplus	4	**32,346,665,948**	**35,496,811,168**	31,073,902,009	33,506,489,829
2	**Non-current Liabilities**					
	Long-term Borrowings	5	**1,156,923,587**		306,049,303	
	Other Long term liabilities	6	**932,250**		-	
	Long-term Provisions	7	**31,880,171**	**1,189,736,008**	28,396,974	334,446,277
3	**Current Liabilities**					
	Short-term Borrowings	8	**2,386,657,563**		1,820,854,884	
	Trade Payables :-	9A				
	(i) Micro and Small Enterprises		**-**		-	
	(ii) Other Enterprises		**278,142,765**		125,866,269	
	Other Current Liabilities	9B	**2,813,256,451**		3,178,371,697	
	Short-term Provisions	10	**19,804,627**	**5,497,861,406**	20,359,802	5,145,452,652
	TOTAL			**42,184,408,582**		38,986,388,758
II.	**ASSETS**					
	Non-current Assets					
1	Fixed Assets	11				
	Tangible Assets		**73,321,954**		95,337,065	
	Intangible Assets		**2,748,946**		25,731,181	
	Intangible Assets under development		**206,145,711**		210,990,518	
			282,216,611		332,058,764	
	Non-current Investments	12	**23,702,051,356**		23,297,944,621	
	Deferred Tax Assets (Net)	13	**68,687,748**		63,452,710	
	Long-term Loans and Advances	14	**5,624,286,803**		6,703,791,339	
	Other Non-current Assets	15	**-**	**29,677,242,518**	33,029,644	30,430,277,078
2	**Current Assets**					
	Current Investments	16	**858,275,191**		1,808,309,533	
	Inventories	17	**3,138,978,930**		2,543,129,919	
	Trade Receivables	18	**454,117,527**		-	
	Cash and Bank Balances	19	**98,199,061**		18,916,359	
	Short-term Loans and Advances	20	**7,645,044,576**		4,073,256,637	
	Other Current Assets	21	**312,550,779**	**12,507,166,064**	112,499,232	8,556,111,680
	TOTAL			**42,184,408,582**		38,986,388,758

STATEMENT OF PROFIT AND LOSS FOR THE YEAR ENDED MARCH 31, 2016

(Amount in ₹)

	Particulars	Note No.	For the Year ended 31st March, 2016	For the Year ended 31st March, 2015
I	Revenue from Operation	22	**1,770,350,525**	-
II	Other Income	23	**(92,892,539)**	359,819,826
III	**Total Revenue (I+II)**		**1,677,457,986**	359,819,826
IV	**Expenses:**			
	Project Expenses	24	**499,724,960**	280,969,115
	Purchases of Stock-in-Trade	25	**569,969,946**	-
	Changes in Inventories of Project Work in Progress, Raw Material, Stock-in-Trade and Finished Goods	26	**(271,584,360)**	(280,969,115)
	Employee Benefits Expense	27	**158,541,078**	112,586,273
	Finance Costs	28	**480,951,296**	411,252,026
	Depreciation and Amortization Expense	11 &12	**50,687,147**	54,839,043
	Other Expenses	29	**116,382,837**	104,343,491
	Total Expenses		**1,604,672,904**	683,020,833
V	**Profit/(Loss) before exceptional items and tax (III-IV)**		**72,785,082**	(323,201,007)

(Source:http://www.dbrealty.co.in/pdfs/Annual%20Report%20FY%202015-2016; http://www.business-standard.com/article/markets/d-b-realty-surges-10-

on-getting-additional-fsi-for-mumbai-project-115012200492_1.html; http://www.moneycontrol.com/news/business/companies/see-revenuesorchid-heights-by-2015-end-db-realty-1331451.html)

5. TDR:

In March 2017, the BMC granted Mumbai based builder Lodha Group permission to utilize Transferable Development Rights (TDR) anywhere in Mumbai, including in the island city. Till this approval, TDR was prohibited in the island city and was only permitted in the suburbs. However, a government mandate introduced in November 2016 changed this norm and TDR can now be used anywhere in the city, including South Mumbai, where property prices are among the highest in the world. Lodha had surrendered around an acre of its 17.5-acre property at Shreeniwas Mills, Lower Parel to MHADA free of cost for housing mill workers. As compensation under the new 2016 policy, the company received 12,000 square meters from the BMC's development plan department. Lodha Group can use these additional construction rights for construction anywhere in the city or sell the entire block to a third party.

(Source: http://timesofindia.indiatimes.com/city/mumbai/bmc-allows-builder-to-use-tdr-in-island-city/articleshow/57833375.cms)

6. Franchise:

McDonald's India Private Limited, the Indian arm of the American fast food joint, on 21st August 2017 terminated its franchise agreement with Connaught Plaza Restaurants Pvt. Ltd (CPRL) which operates McDonald's outlets in North and East India. It is now looking for a new franchise partner to rebuild the brand. The joint venture between McDonalds India and Connaught Plaza Restaurants Pvt Limited ran 169 McDonald's restaurants across North and East India. Non-payment of royalties by the franchisee (CPRL) over a period of two years was the primary reason for the termination of the agreement, according to McDonalds India. Thus, CPRL will now be barred from using

proprietary rights in McDonald's names, trademarks, designs, branding, operational and marketing policies, and food recipes. This move will have tremendous impact on all stakeholders, including thousands of employees across all 169 outlets; but it will prove to be beneficial for Dominos, Burger King and KFC.

Consolidated Balance Sheet

In millions, except per share data	*December 31, **2016***	*2015*
ASSETS		
Current assets		
Cash and equivalents	**$ 1,223.4**	$ 7,685.5
Accounts and notes receivable	**1,474.1**	1,298.7
Inventories, at cost, not in excess of market	**58.9**	100.1
Prepaid expenses and other current assets	**565.2**	558.7
Assets of businesses held for sale	**1,527.0**	—
Total current assets	**4,848.6**	9,643.0
Other assets		
Investments in and advances to affiliates	**725.9**	792.7
Goodwill	**2,336.5**	2,516.3
Miscellaneous	**1,855.3**	1,869.1
Total other assets	**4,917.7**	5,178.1
Property and equipment		
Property and equipment, at cost	**34,443.4**	37,692.4
Accumulated depreciation and amortization	**(13,185.8)**	(14,574.8)
Net property and equipment	**21,257.6**	23,117.6
Total assets	**$ 31,023.9**	$ 37,938.7

Consolidated Statement of Income

In millions, except per share data	*Years ended December 31, **2016***	*2015*	*2014*
REVENUES			
Sales by Company-operated restaurants	**$ 15,295.0**	$ 16,488.3	$ 18,169.3
Revenues from franchised restaurants	**9,326.9**	8,924.7	9,272.0
Total revenues	**24,621.9**	25,413.0	27,441.3
OPERATING COSTS AND EXPENSES			
Company-operated restaurant expenses			
Food & paper	**4,896.9**	5,552.2	6,129.7
Payroll & employee benefits	**4,134.2**	4,400.0	4,756.0
Occupancy & other operating expenses	**3,667.7**	4,024.7	4,402.6
Franchised restaurants-occupancy expenses	**1,718.4**	1,646.9	1,697.3
Selling, general & administrative expenses	**2,384.5**	2,434.3	2,487.9
Other operating (income) expense, net	**75.7**	209.4	18.6
Total operating costs and expenses	**16,877.4**	18,267.5	19,492.1
Operating income	**7,744.5**	7,145.5	7,949.2
Interest expense-net of capitalized interest of $7.1, $9.4 and $14.7	**884.8**	638.3	576.4
Nonoperating (income) expense, net	**(6.3)**	(48.5)	0.8
Income before provision for income taxes	**6,866.0**	6,555.7	7,372.0
Provision for income taxes	**2,179.5**	2,026.4	2,614.2
Net income	**$ 4,686.5**	$ 4,529.3	$ 4,757.8
Earnings per common share–basic	**$ 5.49**	$ 4.82	$ 4.85
Earnings per common share–diluted	**$ 5.44**	$ 4.80	$ 4.82
Dividends declared per common share	**$ 3.61**	$ 3.44	$ 3.28
Weighted-average shares outstanding–basic	**854.4**	939.4	980.5
Weighted-average shares outstanding–diluted	**861.2**	944.6	986.3

(Source:http://www.livemint.com/Companies/iV9DSFI76RU1YlPwe5IcrI/McDonalds-terminates-franchise-agreement-with-CPRL-for-169.html,)

7. Dealership Rights:

BERKSHIRE HATHAWAY AUTOMOTIVE

In October 2014, Warren Buffet acquired Van Tuyl Group, the largest privately held car dealership chain in the US for USD 4 billion and renamed it Berkshire Hathaway Automotive,

confident that the sector would consolidate. The Van Tuyl Group was established 60 years ago and Warren Buffet is confident that he and the leaders at Van Tuyl will hear from several dealerships looking to sell in the coming years. As of 2015, Berkshire Hathaway Automotive stands at the number 5 spot across the US with approximately USD 9 billion in revenue and 78 independently operated locations in 10 states.

BERKSHIRE HATHAWAY INC.
and Subsidiaries

CONSOLIDATED BALANCE SHEETS
(dollars in millions)

	December 31, 2015	December 31, 2014
ASSETS		
Insurance and Other:		
Cash and cash equivalents	$ 61,181	$ 57,974
Investments:		
Fixed maturity securities	25,988	27,397
Equity securities	110,212	115,529
Other	15,998	16,346
Investments in The Kraft Heinz Company	23,424	11,660
Receivables	23,303	21,852
Inventories	11,916	10,236
Property, plant and equipment	15,540	14,153
Goodwill	37,188	34,959
Other intangible assets	9,148	9,203
Deferred charges reinsurance assumed	7,687	7,772
Other	6,697	6,748
	348,282	333,829
Railroad, Utilities and Energy:		
Cash and cash equivalents	3,437	3,001
Property, plant and equipment	120,279	115,054
Goodwill	24,178	24,418
Regulatory assets	4,285	4,253
Other	12,833	11,817
	165,012	158,543
Finance and Financial Products:		
Cash and cash equivalents	7,112	2,294
Investments in equity and fixed maturity securities	411	1,299
Other investments	5,719	5,978
Loans and finance receivables	12,772	12,566
Property, plant and equipment and assets held for lease	9,347	8,037
Goodwill	1,342	1,337
Other	2,260	1,984
	38,963	33,495
	$552,257	$525,867

(Source: Berkshire Hathaway Annual Report 2015-16,)

8. CMM:

Tata Consultancy Services (TCS), became the first company in the world in 2001 to receive a People Capability Maturity Model (PCMM) level 4 certification from the Carnegie Mellon

University's Software Engineering Institute (SEI). PCMM provides guidelines to software companies in order to attract, develop, deploy, train and motivate key talent needed for continuous improvement in the organisation's software capabilities. PCMM is akin to SEI's CMM, the standard against which the service quality of software companies is benchmarked. Several Indian IT big-wigs were working to achieve the PCMM certification. Two of TCS's India centers have received the PCMM level 4 certification, while other two centers awaited assessment as of 2001.

(Source: http://www.tata.com/article/inside/wMxv4I8Pkz0=/TLYVr3YPkMU=)

9. ISO:

ISO/IEC 27001 is the only global auditable standard that outlines the requirements of an Information Security Management System (ISMS). ISO 27001 is designed keeping in mind the need for the selection of adequate security controls. Professional Services Global Delivery Center, India, is a subsidiary of HP Software Professional Services Business Unit. After an assessment by the British Standards Institution (BSI) in 2013, the company decided to implement on-site controls which included the institutionalization of onsite security controls along with the institutionalization of offshore security controls. Some of the benefits that HP derived from institutionalizing ISMS ISO 27001 are:

(a) HP customers are now confident about HP's promise to keep customer data safe.

(b) Created a niche for them in the marketplace, distinct from their competitors.

(c) Reduction in the risk from cost escalations as a result of single/multiple security breaches. Reducing the risk of a security breach has a significant impact on stakeholder confidence.

(d) Ensured a more dependable availability of both hardware and data.

(e) Employee awareness about security issues and their role within the organization was enhanced.

(f) Periodic ISMS audits are helping the company to continually use, monitor and upgrade their management systems and processes.

	For the fiscal years ended October 31		
	2013	2012	2011
	In millions, except per share amounts		
Net revenue:			
Products	$ 72,398	$ 77,887	$ 84,757
Services	39,453	42,008	42,039
Financing income	447	462	449
Total net revenue	112,298	120,357	127,245
Costs and expenses:			
Cost of products	55,632	59,468	65,167
Cost of services	30,436	32,600	31,945
Financing interest	312	317	306
Research and development	3,135	3,399	3,254
Selling, general and administrative	13,267	13,500	13,577
Amortization of intangible assets	1,373	1,784	1,607
Impairment of goodwill and intangible assets	—	18,035	885
Restructuring charges	990	2,266	645
Acquisition-related charges	22	45	182
Total operating expenses	105,167	131,414	117,568
Earnings (loss) from operations	7,131	(11,057)	9,677
Interest and other, net	(621)	(876)	(695)
Earnings (loss) before taxes	6,510	(11,933)	8,982
Provision for taxes	(1,397)	(717)	(1,908)
Net earnings (loss)	$ 5,113	$(12,650)	$ 7,074

Consolidated Balance Sheets

	As of October 31	
	2013	2012
	In millions, except par value	
ASSETS		
Current assets:		
Cash and cash equivalents	$ 12,163	$ 11,301
Accounts receivable	15,876	16,407
Financing receivables	3,144	3,252
Inventory	6,046	6,317
Other current assets	13,135	13,360
Total current assets	50,364	50,637
Property, plant and equipment	11,463	11,954
Long-term financing receivables and other assets	9,556	10,593
Goodwill	31,124	31,069
Intangible assets	3,169	4,515
Total assets	$105,676	$108,768

(Source: http://h30261.www3.hp.com/~/media/Files/H/HP-IR/documents/reports/2014/hpq-annual-report-2013.pdf; https://www.bsigroup.com/LocalFiles/en-IN/Case-studies/ISO_27001_HPSW%20PS%20_case_study.pdf)

10. Six Sigma:

Wipro was the first Indian IT firm to have established a robust framework for the implementation of Six Sigma in 1997. Through the years, the Six Sigma Program at Wipro evolved to become among the most mature in the industry with 91% of its projects being completed on time, as against the industry average of 55%. As

Wipro scaled the Six Sigma ladder, it has rolled out close to a 1000 project. The Six Sigma Program significantly impacts several departments at Wipro, namely: project management, market development and resource utilization. Wipro's financial gains through the use of Six Sigma have been one of the most talked about point. As its Six Sigma program neared maturity, Wipro noticed the following phenomena:

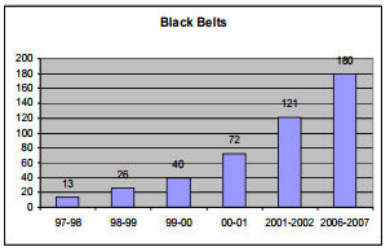
(a) Several large-scale projects had all been completed.

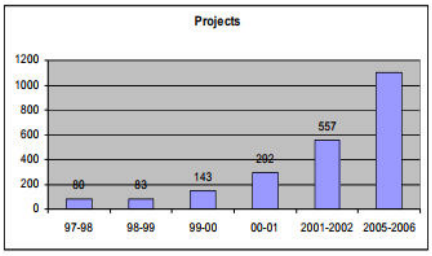
(b) Adopting the Yellow Belt Culture had helped solve several small problems before they could become big ones.

(c) An achievement of close to 250%, 6 minutes for data transfer of 1 MB and 18 minutes for average data transfer. The target rate was at 200%.

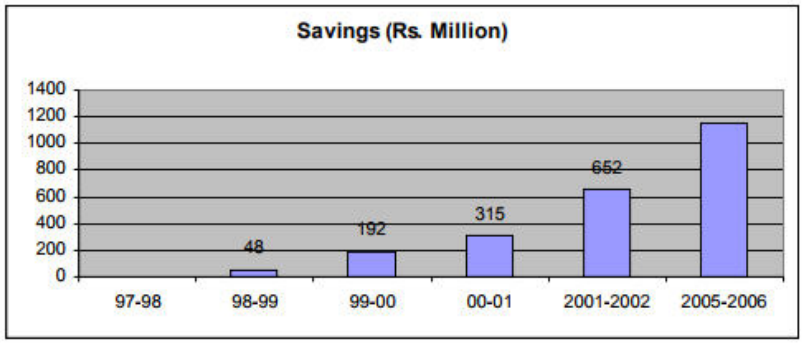
(d) Lower maintenance costs, schedule overrun costs, and development costs for customers.

Resources invested in Six Sigma





Six Sigma and Financial Gains:



(Source: Wipro Annual Reports 2002-06; https://www.iitk.ac.in/infocell/announce/convention/papers/Changing%20Playfield-04_Manisha%20Sharma,%20Kapil%20Pandla,%20Prasanth%20Gupta.pdf)

11. Export Rights:

In March 2017, the Delhi High Court granted Indian pharma company Alembic the permission to export the generic version of German pharma giant Bayer's lifesaving medicines for regulatory and research purposes. The ruling comes as much needed relief to Indian drug manufacturers locked in legal battles with the inventors of such drugs. The German company had taken the legal route in 2016 to stop Alembic from exporting the generic version of its blood thinner brand "Xarelto". In what is seen as a major setback for Bayer, the Indian court has allowed Alembic to export the generic version for clinical development and research purposes. Alembic was required to give an undertaking that the drug wouldn't be exported for any purpose other than those listed in Section 107A of the Indian Patents Act, 1970. However, Bayer alleged that Alembic had exported 90kgs of the drug worth INR 3 Crores which was in violation of Section 107A of the Indian Patents Act, 1970.

Statement of Profit and Loss

₹ in crores

Particulars	Notes	Year ended 31st March, 2017		Year ended 31st March, 2016	
INCOME					
Revenue from Operations	21		2,985.90		3,009.02
Other Income	22		2.42		6.82
Total Income			2,988.32		3,015.85
EXPENSES					
Cost of Materials Consumed	23	703.87		652.52	
Purchase of Stock-in-Trade		230.31		255.13	
Changes in Inventories of Finished Goods and Work in Process	23	(47.90)		(95.94)	
Employee Benefits Expense	24	527.46		453.32	
Finance costs		3.09		3.68	
Depreciation and Amortization Expense	3	82.90		71.86	
Other Expenses	25	938.86		761.27	
Total Expenses			2,438.61		2,101.83
Profit Before Tax			549.71		914.01
Tax Expense					
Current Tax		119.08		198.11	
Deferred Tax		-	119.08	17.17	215.28
Profit for the period			430.63		698.74

21. Revenue from Operations

For the period ended	31st March, 2017		31st March, 2016	
Sale of products				
- Domestic	1,318.07		1,236.48	
- Exports	1,593.14	2,911.21	1,685.59	2,922.07
- Export Incentives		53.43		57.42
- Royalty		17.97		25.97
Other Operating Revenues				
- Miscellaneous		3.29		3.55
		2,985.90		3,009.02

(Source:http://economictimes.indiatimes.com/industry/healthcare/biotech/pharmaceuticals/delhi-high-court-favours-natco-alembic-allows-them-to-export-generics-of-bayers-drugs/articleshow/57534420.cms; Alembic Annual Report 2016-17)

Summary and conclusion

Having made clear, the complexity of intangible assets valuations – the practical aspects, I wish a great success for my CA Professional who will be registered valuers soon by taking training and passing exams, will make a mark for themselves not only in India but become global valuers by understanding valuation nuances.

Chapter 21
Impact of IND-AS on Acquisition Accounting

IND-AS has a significant impact on acquisition accounting mainly on account of the treatment of goodwill under IND-AS 103 Business Combination. As per the IND-AS, any asset having indefinite life cannot be amortized but tested for impairment on annual basis.

Under I-GAAP, generally, any goodwill arising on acquisition accounting (i.e. a difference between the purchase consideration paid and fair value of assets and liabilities acquired) is amortized over a period of 3-5 years as there are no specific guidelines on amortization of goodwill under I-GAAP.

However, under IND-AS 103, goodwill could not be amortized but will be tested for impairment, as goodwill has an indefinite life. This has a direct impact on tax liability/ outflow of a company especially for the companies which are liable to MAT (minimum alternative tax). Since the goodwill could not be amortized, this may result in higher book profit and thereby higher MAT liability. Under the provisions of the Income Tax Act, 1961, goodwill is allowed to be amortized at a rate of 25% on WDV (written down value) basis. Therefore, a situation may arise where normal income tax will be lower than MAT. Accordingly, it may result in a higher tax outflow for the company under IND-AS as compared to the tax outflow under I-GAAP in case of a business acquisition.

As per IND-AS 103, in case of a business acquisition, all identifiable assets and liabilities of the acquired business have to be recorded at a fair value. Therefore, it requires identification of all possible assets (both tangible and intangible) and determination of their fair value.

Therefore, in case IND-AS is applicable on an acquirer company, the management of the acquirer, at the time of acquisition itself, should identify potential intangible assets which may include brand, distribution network, customer list etc., and determine the fair value of those identified intangible assets by applying appropriate valuation methodologies such as Royalty Relief Method, Multi-period Excess Earning Method, With-and-Without

method or premium profit method etc. The management should conduct a purchase price allocation exercise at the time of evaluation of transaction itself so that the potential impact acquisition accounting on tax outflow could be analyzed at the time of evaluation of acquisition transaction and should not come as a surprise at the time of accounting post-acquisition.

An intangible asset is identifiable if it meets either the separability criterion or the contractual-legal criterion.

- Contractual-legal criterion: As asset is identifiable if it arises from contractual or other legal rights, regardless of whether those rights are transferable or separable from the entity or from other rights and obligations. An intangible asset that meets the contractual-legal criterion is identifiable even if the asset is not transferable or separable from the acquiree or from other rights and obligations
- Separability criterion: The separability criterion means that an acquired intangible asset is capable of being separated or divided from the acquiree and sold, transferred, licensed, rented or exchanged, either individually or together with a related contract, identifiable asset or liability (regardless of whether there is an intent to do so). Key recognition criteria for separable intangible assets:
    - If there is an evidence of exchange transactions for that type of asset or an asset of a similar type, even if those transactions are infrequent and regardless of whether the acquirer is involved in them?
    - Will it generate future economic benefit?
    - Can value be attributed to such as asset?
    - Does appropriate valuation method exist to value the same?

Intangible assets can generally be classified under the following broad categories:

- Customer-based intangible assets such as customer contracts, customer relationship, customer list;
- Marketing-based intangible assets such as trademark, brand, trade name;
- Contract-based intangible assets such as lease agreement, non-compete agreement;

- Technology-based intangible assets such as patents, know-how, trade secrets; or
- Artistic-based intangible assets such as films and music, books, plays.

The Institute of Chartered Accountants of India has also recently formulated a valuation standard – Indian Valuation Standard 302 on Valuation of Intangible Assets to prescribe the specific guidelines and principles which are applicable to the valuation of intangible assets.

Case Study

A listed FMCG company acquires an FMCG brand for a purchase consideration INR 100 crore. The transaction mainly includes the acquisition of trademark and brand name, copyright, and distribution network. No tangible assets in form of plant & machinery, land & building were acquired as part of this transaction.

Key Assumptions

- The FMCG Company is under a MAT regime and IND-AS is applicable to it.
- Profit Before Depreciation and Tax ("PBDT") of the FMCG Company: INR 50 crore
- Depreciation as per books of account: INR 5 crore (without considering the impact of acquisition)
- Depreciation as per income tax act: INR 10 crore (without considering the impact of acquisition)
- MAT Rate: 20%
- Marginal Tax Rate: 30%

Scenario 1: Assuming entire INR 100 crore of purchase consideration is recorded as goodwill.

Under normal income tax provisions

Particulars	Figures in INR Crore
PBDT	50.0
Less: Depreciation as per income tax act (including depreciation @ 25% on goodwill i.e.	35.0

INR 25 crore)	
Taxable Income	**15.0**
Income Tax @ 30%	**4.5**

Under MAT provisions

Particulars	**Figures in INR Crore**
PBDT	50.0
Less: Depreciation as per books of account (assuming no impairment of goodwill)	5.0
Book Profit	**45.0**
MAT @ 20%	**9.0**

Effective tax outflow INR 9.0 crore.

Scenario 2: Assuming out of INR 100 crore, INR 80 crore is allocated over various identified intangible assets such as trademark, distribution network, copyright having a remaining useful life of 5 years and balance INR 20 crore on goodwill.

Under normal income tax provisions

Particulars	**Figures in INR Crore**
PBDT	50.0
Less: Depreciation as per income tax act (including depreciation @ 25% on goodwill i.e. INR 25 crore)	35.0
Taxable Income	**15.0**
Income Tax @ 30%	**4.5**

Under MAT provisions

Particulars	**Figures in INR Crore**
PBDT	50.0
Less: Depreciation as per books of account (including depreciation of INR 16 crore on identified intangible assets)	21.0
Book Profit	**29.0**
MAT @ 20%	**5.8**

Effective tax outflow INR 5.8 crore.

The difference in tax outflow between two scenarios is INR 3.2 crore. As a result, by allocating purchase consideration over identifying intangible assets having definite useful life, the company is able to optimize the tax outflow.

Chapter 22

Embrace and Win - M&A Deals, Enterprise Valuations and Case Study

Despite the stringent regulations in India, more than a thousand mergers and acquisitions (M&A) deals took place in the year just ended, the highest of last seven years. M&A deals momentum is also continued in the current year witnessing giant deals.

Amongst the giant deals are, the merger of Vodafone India Limited and Idea Cellular Limited, valued at $23 billion; Walmart's acquisition of 77% stake in Flipkart for the value of $16 billion; the acquisition of 51.11% stake in Hindustan Petroleum Corporation Limited by Oil and Natural Gas Corporation Limited for $5.8 billion; Adani Transmission Limited acquiring Reliance Infrastructure Limited's Mumbai power business for nearly $3 billion; and IndusInd Bank Limited's merger with Bharat Financial Inclusion Limited, which was valued at $2.4 billion.

Looking at the growing scope, in this article we will discuss the types of M&A deals to be differently valued, what is valuation, the need of valuation for M&A deals, imperatives for valuation, information about the ideal methods of valuation for M&A, other crucial assessments and a case study followed by the scope for Chartered Accountants.

Types of M&A Deals - A brief

These M&A deals include domestic and cross-border deals. Further, domestic M&A deals include mergers and acquisitions of both public and private companies, whereas cross-border deals comprise of inbound and outbound mergers and acquisitions. In an inbound M&A deal a foreign company merges with or purchases a domestic company, vice versa is an outbound deal having foreign company as the target company.

Valuation - A prerequisite to M&A Deals

One of the most critical prerequisite for the process of any M&A deal is the

valuation of the target business or enterprise or company. Enterprise valuation is not an exact science and it not only deals with various financial models and valuation approaches, but also the assumptions and non-financial factors affecting the restructuring deal or transaction.

Valuation in M&A is a process to ascertain the price to be paid to the target company or to find the enterprise value which will be received upon paying the price for the same, with the help of available information, valuation tools, assumptions and reasonable judgements.

Imperatives for Enterprise Valuation

Valuation, being the most critical task, requires experienced unbiased valuers having been essentially equipped with the following knowledge and expertise while calculating the enterprise value:

1. Conceptual clarity and expertise on application of prevailing valuation standards and principles.
2. Understanding of acceptable valuation methodologies and valuation requirements prescribed under the Companies Act, 2013, accompanied rules and other relevant laws.
3. Knowledge about dynamics, trends and aspects related to the industry of the target company.
4. Expertise to use the valuation methods relevant for the industry of the target company.
5. Cognizance about market multiples in case target companies are listed on any stock exchange and comparable transactions or companies if target companies are unlisted.
6. Skills to identify, arrange and assess the reasonableness of available data and information and use of adequate professional judgement by the valuer in case of inadequate information.
7. Reasonable knowledge of relevant accounting standards (substantially Ind AS 103, 113).
8. Adequate understanding of taxation impact.
9. Ability to identify and implement suitable valuation approaches and methods for the vital valuations of contingent liabilities, synergies and intangible assets like customer relationships, brand value, technological innovations and enhancements.

Note to ponder: Indian Valuation Standards, as formulated by ICAI and notified for all the valuations under the Companies Act, 2013, will be applicable for the valuation reports issued on or after 1st July 2018, until Central Government notifies the valuation standards under Rule 18 of the Companies (Registered Valuers and Valuation) Rules, 2018.

Valuation Approaches and Methods

Indian Valuation Standard 103 and International Valuation Standard 105 has defined three main approaches to be used in valuation, i.e.

(1) Market approach,

(2) Income approach, and

(3) Cost approach.

The valuer has an important role to play while identifying the most appropriate method to be used for the given M&A deal considering all the relevant factors and futuristic assumptions. The valuer also needs to consider the approaches used by other participants in the relevant industry in view of the similar line of businesses as of target company.

However, the valuer should use multiple methods in major M&A deals, so that a reliable conclusion of the valuation can be made. The key valuation method for M&A is Discounted Cash Flow (DCF) method under Income Approach, which needs to be supported by Comparable Company Multiples Analysis and Dilution Analysis. These valuation methods are used to value the equity of the target company in the M&A deal. According to the assumptions and methods opted for valuation, the enterprise value may vary by different valuers.

Questionnaire for extracting the information and further analysis

The valuer should set a questionnaire to extract the information as inputs for enterprise valuation in the M&A deal keeping in mind the imperatives discussed previously.

The following set of questions can also be part of the same, this is not an exhaustive list:

1. Type of the target company: Publicly traded or privately held.

2. What are the potential Synergies; and how the new or acquiring company will gain from the potential synergies?
3. Is it privately negotiated deal or being acquired through auction; accordingly what are the opportunities and threats attached?
4. Is it a hostile or friendly takeover by the acquiring company; and if it is a hostile takeover, through which ways can the target company restrict the takeover?
5. What are the types of consideration offered (i.e. Cash or Stock or Employee Stock Options) and how this will impact the results?
6. What are the contingent liabilities of the target company?
7. What are the bank guarantees and letter of credits given by the target company or its existing parent company if any; and whether substantial cost is attached to such bank guarantees after completion of the M&A transaction?
8. What are the technological enhancements or flaws and how the same will cost or benefit to the new or acquiring company?
9. Is the available information adequate to ascertain the value of customer relationships, brand, goodwill, technology (artificial intelligence, digital enhancements, etc.), trademarks or other intangible assets?

Valuation of Flipkart's Acquisition by Walmart - M&A Case To Study

As stated earlier, Walmart's acquisition of 77% stake in Flipkart for the value of $16 billion is one of the giant M&A deals in India for the year. The valuation of cash guzzling Flipkart was debated by many valuers and media before this high value was agreed to be paid by Walmart. Has Walmart paid this value only for tangible and monetary assets or there is something which was assessed differently by different valuers or there is a completely new picture of this value.

Let us understand through the below factors considered during this valuation by Walmart:

1. Future plans of Flipkart to penetrate the fashion market, which was visible through Myntra and Jabong acquisitions.

2. Electronics is another driving market for Flipkart and potential synergies attached to the same must have lured Walmart.
3. PhonePe, Flipkart's UPI payments platform, may be leveraged by Walmart to modernize the grocery store network.
4. Artificial intelligence used by Flipkart can be leveraged for the international and US markets by Walmart.
5. Taking direct hold on the 2nd largest consumer market in the world, i.e. Indian market. The same can be utilized for Walmart's existing establishments in India.
6. Combination of strong logistics, payments and technology abilities of Flipkart will help Walmart to extend the same system in other markets of the big US retail giant.
7. For calculating the synergies, Walmart could have considered 10 years forecasting, as ascertainable from the deal announcement.

There are some negative factors as well, but the same have been assumed to be set off by aforementioned potential synergies.

Scope for Chartered Accountants and The Way Forward

ICAI has recently issued Indian Valuation Standards and formed a Registered Valuer Organization to give an opportunity to its members to grab the valuation opportunities in the growing Indian and global market. One of the unsaturated job and practice markets include business and enterprise valuations for M&A deals, as the volume of such deals is increasing day by day in comparison to the consultants and faculties. The members can join the training, appear for the prescribed exam and join the league of registered valuers. In the era of digitization, emerging global market and complex financial instruments, the valuation of digital, virtual and other unique assets are also becoming critical. Hence, the members can grab the opportunity in the valuation segment which is full of unpredictability and use of professional judgement. As the organizations are embracing and winning through M&A, we professionals should also step in to support the organizations in the critical prerequisite, i.e. enterprise valuation.

Chapter 23

The Telecom Deal – More Than Just Numbers

Status of India's telecom industry

The Indian telecom industry is the world's second largest telecommunication market with 445.96 million internet subscribers, as of December 2017and is expected to grow by 10% annually to reach USD 103.9 billion by 2020. The country is poised to have almost one billion unique mobile subscribers by 2020. Revenues from the telecom equipment sector are expected to grow to US$ 26.38 billion by 2020.Telecommunication is considered to be the driver of economic change in India and has tremendous potential to stay ahead of the curve in the technological revolution and put the country among the world's super-powers in the future.

Merger and acquisition – Road to survival in Telecom industry?

Mergers seem to be the flavour of telecom industry in India recently. Late last year, telecom secretary Ms. Aruna Sundararajan said 2017 had been a year of consolidation for the sector, while 2018 would be a year of growth. She was certainly right with regard to the former. 2017 had been a year of good amount of talks of corporate restructuring and the industry witnessed several mergers among private telecom firms including Tier -1 companies, and a merger of two state-owned firms - MTNL and BSNL, is predicted. With Aircel filing for bankruptcy, the last of the small telecom companies is out of the way. It leaves the behemoths—Airtel, Vodafone-Idea and Reliance Jio—to fight the battle.

The entry of India's richest man Mukesh Ambani's Reliance JioInfocomm Ltd. has proven to be a game – changer for the telecom market. Reliance Jio entered the Indian mobile market in September 2016 with its 4G-only data and Voice over LTE (VoLTE) service. This service was initially free and then evolved to ultra-cheap service pricing which was combined with 4G handsets to increase Jio's subscriber base rapidly to 100 million. At the same time, it

disrupted the market, triggered the consolidation process and ushered in a data revolution in the country.

Telecom companies, of late, have started to depend on mergers to survive the unfettered competition. Here is a snapshot of the major Companies in Telecom industry that faced USD 23 billion losses during the fiscal year ended 2017 and how these Companies have either merged or quit the market altogether.

Investor	Losses/ write offs	Status
Vodafone Group	USD 8.7 billion	Merging with Idea Cellular
Maxis Communications	USD 7 billion	Filed for bankruptcy
Telenor	USD 4.1 billion	Sold to Bharti Airtel, exited
NTT Docomo	USD 1.3 billion	Litigated, sold stake back to Tata group, exited
Etisalat	USD 0.829 billion	Exited
AFK Sistema	USD 0.695 billion	Merged with Reliance Communications
Axiata Group Bhd	USD 0.356 billion	Took write-offs, still holding 10.66% in Idea
Total	**USD 23 billion**	

Source: Economic Times dated May 23, 2018

The Bharti Airtel and Telenor India deal happens to be one of the most interesting deals of the recent times as the amalgamation **will not involve any cash payments to Telenor. However, Bharti Airtel shall assume Telenor's unit liabilities related to license fees and lease obligations for phone towers.**

The article is a case study on evaluation of the deal and valuation methodologies used for valuing the companies associated to the deal based on publicly available information. The analysis does not represent any fairness opinion. It is an attempt to present the facts of the case and appraisal of the same in an objective manner.

All about Bharti Airtel and Telenor

Airtel – Sab Kuch Try Karo, Fir SahiChuno

Bharti Airtel Limited (BAL) is the fourth largest mobile operator in the world and is engaged in the business of providing global telecommunications with operations in 20 countries across Asia and Africa. In India, Airtel's product offerings include 2G, 3G and 4G wireless services, mobile commerce, fixed line services, high-speed home broadband, DTH, Enterprise services including national and international long-distance services to carriers. The total assets are estimated to be around: □2,327 billion (US$36 billion) as of 2017. This telecom giant founded by Sunil Bharti Mittal, is amongst the most trusted telecommunication brands in the world. BAL is listed on the BSE Limited and the National Stock Exchange(NSE) Limited in India.

Telenor-vision out of focus

Telenor (India) Communications Private Limited ("Telenor") is ultimately owned by Telenor ASA, a global Telecom Company with direct presence in 13 countries. It also has an equity interest of 23.70% in VimpelCom, which operates in 14 countries. Telenor provides mobile services to 6 telecom circles in India, with a subscriber base of over 54 million as of December 2016. In addition, Telenor India has 1800 MHz spectrum in Assam. The journey of Telenor in India is rather tumultuous. Like many other global telecom majors - Vodafone, MTS, and DoCoMo - Telenor was lured by the vast potentiality offered by India.Telenor India runs operations in seven circles - Andhra Pradesh, Bihar, Maharashtra, Gujarat, UP (East), UP (West) and Assam. Nearly eight years after venturing into India, Telenor has decided to call it quits with no consideration and no outflow for future liability and current debt.

Initially, Telenor joined hands with Unitech to form joint venture - Unitech Wireless (with a brand name Uninor). Unitech exited the JV in 2012 leading to Telenor acquiring 100 per cent stake in the company. Telenor constantly dealt with legal battles and regulatory uncertainties and the management decided to sharpen its focus. Telenor primarily targeted low-value prepaid customers who wanted voice, SMS and basic value-added services. It also moved out of high-margin postpaid schemes, and kept a close watch on costs. The target was to serve mass market where margins may be lower but the volumes are high.

But the sector was moving away from voice services. The SMS segment was

losing its battle to messaging apps whereas voice market was getting commoditised. From 2011 onwards when 3G services were launched by major carriers, the Company did not probably see the writing on the wall – "The future of telecom is data". Telenor failed to sense the data opportunity and stuck to 2G technology even though it had liberalised spectrum in 1800 MHz, the ideal band to launch 4G services.

The launch of 4G in 2015 made it clear that fringe players in the Indian market like Telenor had no place because rolling out data networks is a costly business. Telenor, on the other hand, was constantly struggling with financial performance. For instance, its total impairment loss and write downs were INR 5,825 crore during the nine months of 2016.

Besides getting mired in the regulatory cobweb, Telenor India's case also highlights that even serious players are unable to realise their folly and see which way the wind is blowing.

Bharti Airtel + Telenor – the real deal

Bharti Airtel's rationale for the scheme of amalgamation of the transferor company into transferee company was:

- Consolidate the telecom business of the transferor company(Bharti Airtel Limited) with the transferee company(Telenor (India) Communications Private Limited)
- Further expansion of the transferee company's business into the growing markets of India
- Availability of increased resources and assets for the transferee company which can be utilised for strengthening customer base and servicing existing as well as new customers innovatively and efficiently
- Building a strong infrastructural capability to effectively meet future challenges in the ever-evolving telecom business and a strategic fit for serving existing market
- Leading to increased competitive strength and efficiencies for the transferee company.

The Department of Telecom (DoT) approved the merger of Telenor India with Bharti Airtel on May 14, 2018 after the Supreme Court rejected DoT's petition for security deposit of around INR 1,700 crore from the companies and directed it to approve the merger. The guarantee included Rs

1,499 crore for one-time spectrum charge for the radio waves allocated to Airtel without auction, and over Rs 200 crore for spectrum payment which Telenor has to make.

The merger will bolster Airtel's spectrum footprint in seven telecom circles, with the addition of 43.4 MHz spectrum in the 1800 MHz band. DoT has asked Airtel to reduce its market share based on adjusted gross revenue (money earned from telecom services) in Bihar service area to the limit of 50 per cent, within one year from the date of merger of the two companies is approved. The National Company Law Tribunal (NCLT) had already approved this merger on March 8, 2018.

The valuation story

As soon as the amalgamation of BAL and Telenor India was proposed by the board of directors of both the companies, Walter Chandiok & Co, LLP - Grant Thornton India was approached to conduct relative valuation and recommend a fair share exchange ratio for the purpose of this amalgamation.

More than valuation being both art and science, it is a process by itself. A valuation of this nature is based on the financial statements of both the companies, fixed assets of Telenor India, details of the working capital and liabilities transferred to BAL by Telenor, extent of spectrum footprints and other relevant information.

The facts of the deal as per this report dated February 23, 2017 - the valuation methodology and arriving at the final deal price are discussed in this section.

The most commonly used valuation methodologies to determine the fair share exchange ratio for the proposed amalgamation are discussed below:

1. Adjusted Net Asset Value method
2. Market Price method
3. Discounted Cash Flows method

Choosing the best valuation technique

Method of valuation	About the method	Valuation of Bharti Airtel Limited	Valuation of Telenor India
Adjusted	The adjusted net	BAL is the	Telenor India was

Net Asset Value (ANAV) Method	asset value method is the most commonly utilized asset-based approach to valuation based on the financial statements of the business. Under this method,adjustments are made to the company's historical balance sheet in order to present each asset and liability item at its respective fair market value. The difference between the total fair market value of the adjusted assets and the total fair market value of the adjusted liabilities is used to value a company.	acquiring company and is expected to generate cash flows in the future. Also, it satisfies the going concern assumption and is considered to continue operations for a foreseeable future. In this method, the NAV is calculated using historic data which does not reflect the value of the business to the buyer investing in the business as a going concern. Hence this method is not suited to value BAL.	incurring significant losses to the extent of eroding the Company's net worth. Further, in the absence of funding requirements being met, there is material uncertainty for the Company to continue as a going concern (qualified opinion by statutory auditors of Telenor India on the financial statements for the year ended March 31, 2016). Given that Telenor might not continue as a going concern and future cash flows cannot be estimated, ANAV methodology can be used for valuation.
Market Price Method	This method evaluates the market price of shares of the Company on the basis of prices of equity shares	The equity shares of BAL are listed on both Bombay Stock Exchange ('BSE') and National Stock	Telenor India is a private company. Hence, ANAV method for reason discussed earlier is considered more appropriate for

	quoted on the stock exchange, subject to the shares being regularly and freely traded. The market price of shares of the Company are normally considered as the value of equity shares of that company where such quotations are arising from the shares being regularly and freely traded in. But there could be situations where the value of shares quoted in stock market would not be regarded as proper index of the fair value of the share especially when market values are fluctuating in a volatile capital market or liquidity of the shares is low or is infrequently traded.	Exchange('NSE') and there are regular high-volume transactions in the shares. Accordingly, market price methodology can be considered for determining value of BAL.	valuation of Telenor India.
Discounted Cash Flows (DCF) Method	The DCF method uses the future free cash flows of the Company discounted by cost of capital to arrive	For BAL, market price method is more reflective of its current value as a company as it is highly traded	Telenor India had the limitation of not being able to give a projected business plan beyond December

	at the present value. In general, DCF is a preferred method for business valuation and is widely accepted as it concentrates on cash generating potential of a business.	and market price is easily and accurately determinable with publicly available market information.	31, 2017 and the future cash flow of the company was not predictable. Therefore, this method was not considered for valuation of Telenor India.

Summary of valuation techniques followed for valuation

Name of the company	Valuation method
Bharti Airtel Limited (BAL)	Market Price method
Telenor India	Adjusted Net Asset Value (ANAV) method

Final Valuation

The fair share exchange ratio of equity shares of Telenor India and BAL has been arrived at on the basis of relative valuation of the companies after considering the above methodologies and also various qualitative factors relevant to each company, business dynamics and growth potentials of businesses of the companies having regard to information base, key underlying assumptions and limitations.

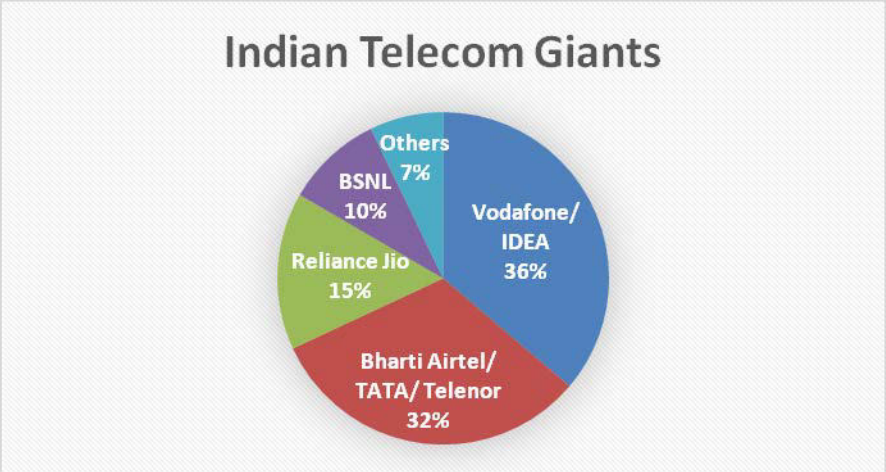
On consideration of various facts and circumstances, it was concluded that no material consideration needs to be paid to the equity shareholder – Telenor South Asia Investment Pte Limited (100% holding company) of Telenor India. However, **BAL has agreed to issue five equity shares of BAL each of INR 5 each, fully paid up to Telenor South Asia Investment Pte Limited for its equity shares held in Telenor India as a token consideration.**

Post-amalgamation, it is expected that the net worth of BAL will be reduced from INR 69,827 crore to INR 64,256 crore with carried forward loss of INR 5,575.95 crore. *Telenor had negative net worth as on December 31, 2016 amounting to INR 2,097.85 crore.*

Effects of takeover

- The transaction, which won't involve any cash payments to Telenor, will give Airtel access to 54 million customers (increasing its user base to 320 million), 43.4 megahertz (MHz) of spectrum in the 1,800MHz band and 20,000 base stations.
- BAL will assume the Telenor unit's liabilities related to licence fees and lease obligations for phone towers. That is Airtel will take on residual future liabilities including around INR 1,600 crore of spectrum and INR 4,000 crore lease obligations. There is no clarity on debt including External Commercial Borrowings ("ECB") in books of Telenor, but it seems all the debt will be taken over by BAL and ECB from Telenor might be converted into equity.
- The benefits of carried forward loss of INR 5,575.95 crore can be claimed by BAL within one year with current profit size of the company.

The market share of telecom giants after the merger



Source: India's phone regulator – TRAI

In the above pie chart, Vodafone, IDEA, Bharti Airtel, TATA and Telenor India are combined to reflect the agreed-to mergers that are yet to be completed.

With the merger mania taking over the telecom sector one can only hope that it is a value creating and not a value destroying strategy. The year 2018 will most definitely be the turn-around year for the Indian telecom industry!

References

- Valuation report by Walter Chandiok & Co, LLP dated February 22, 2017
- https://economictimes.indiatimes.com/industry/telecom/telecom-news/how-to-lose-23-billion-in-a-market-thats-surged-61436/articleshow/64283865.cms
- https://timesofindia.indiatimes.com/business/india-business/dot-approves-merger-of-bharti-airtel-and-telenor-india/articleshow/64157166.cms
- http://www.cio.in/slideshow/5-major-mergers-changed-telecom-game-india
- http://telecomera.net/blog/will-2018-be-the-year-to-turn-around-the-indian-telecom-industry/