Valuation : Professionals' Insight

Valuation: Professionals' Insight

Series -3

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

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Message

The success of an institutional framework depends on the well-organized, efficient and effective working of the institutions involved in it. As per the Companies (Registered Valuers and Valuation) Rules, 2017, the Registered Valuers Organsiations are the frontline Regulators to regulate and promote the continuous education of the registered valuers who derive value on which the economic growth of a country depends.

Value is always influenced by a variety of factors: the preconceptions and bias of the asset's owner, the valuer's understanding of the market, the methodology that is being used, and the complexity of the underlying business. These influences impact the assumptions being made by valuers. Decision makers must be confident that the assumptions applied are appropriate, and that they are not overly optimistic or needlessly pessimistic. This is why it is essential to know, and understand, the basis of the assumptions made by a valuer.

To continuously upgrade the knowledge of the Valuers, the ICAI Registered Valuers Organisation is working jointly with the Valuation Standards Board of the Institute of Chartered Accountants of India and bringing out various publications, organizing the webcasts, training programmes, workshops etc apart from conducting 50 hours educational course.

I am extremely happy that in continuing with the joint endeavours, the Valuation Standards Board of ICAI and ICAI Registered Valuers Organisation (ICAI RVO) are bringing out this Third Series of publication on 'Valuation: Professionals' Insight' to give a thoughtful insight of the practices followed by other valuers and professionals.

I would like to put on record my appreciation to the Institute of Chartered Accountants of India for all the joint initiatives with ICAI RVO. My thanks to the Valuation Standards Board (VSB) of ICAI under the Chairmanship of CA. N. C. Hegde and Vice Chairmanship of M. P. VijaKumar and to the members of the Board of ICAI RVO, Shri I. Y. R Krishna Rao, Shri Samir Kumar Barua, Shri Ashok Haldia for this joint initiative. I convey my heartfelt thanks to CA. Prafulla P. Chhajed, CA. Atul Kumar Gupta and CA. Nilesh S. Vikamsey– the Directors of ICAI RVO, for their support in this initiative.

I would like to thank CA. Sarika Singhal, Secretary Valuation Standards Board who is involved in compiling and contributing the articles.

I sincerely believe that this Educational Material will be of immense use to the valuer members and others stakeholders.

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

Date: June, 2019

Place: New Delhi

Foreword

With globalisation and dismantling of trade barriers, corporates are increasingly making international forays- be it accessing capital or making acquisitions abroad. This has led to increase in the demand for valuation experts as Companies are seeking accurate valuations for their businesses. The Valuation profession got further recognition with the introduction of the concept Registered Valuers in the Companies Act, 2013

In the valuation process, valuation expert values the organisation by using technology, applying specific methods of valuation (which can be termed as Science) and by his own experience in taking various assumptions. The importance of Valuation cannot be undermined as understanding what an asset is worth, and what drives that value, is very essential, when both management and stakeholders need to make informed and effective business and investment decisions.

I appreciate the efforts of the Valuation Standards Board and ICAI Registered Valuers Organisation in taking the joint initiatives for upgradation of knowledge of valuers. In continuation of these endeavours, the publication titled - 'Valuation: Professionals' Insight' containing the views in the form of Articles capturing the varied practices of valuation is been brought out.

I sincerely appreciate the dedicated efforts put in by CA. N. C. Hedge, Chairman, Valuation Standards Board and CA. M. P. Vijay Kumar, Vice-Chairman, Valuation Standards Board and other members of the VSB for bringing out this publication in the form of Series.

I am hopeful that this this Series of the publication will further enhance the knowledge and wisdom of valuers and at the same time ensure quality work being done by the valuers.

CA. Prafulla P. Chhajed
President ICAI
Director ICAI RVO

Date: June 2019
Place: New Delhi

Preface

An important aspect of valuation is that the 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 which is necessary for a number of reasons, is the ultimate purpose of a valuation.

It's more than a year since the valuation spectrum has been formally regulated by the Government as a professional practice. The Companies (Registered Valuers and Valuation) Rules, 2017 provides an institutional set-up comprising of four main pillars. The pillars are Registered Valuers, Registered Valuers Organisation the Insolvency and Bankruptcy Board of India and the Ministry of Corporate Affairs which has the most important role of administering the entire framework of valuation as per Section 247 of the Companies Act, 2013 and Rules thereunder.

The Implementation of any system does not only depend on the law, but also on the institutions involved in administration and execution of the same. It depends on the effective functioning of all the institutions but a very critical role is played by the Registered Valuers who have a vital role to play in the entire valuation process.

As part of the continuous efforts towards upgradation of knowledge and to bring to the fore the practices followed by the registered valuers, the Valuation Standards Board jointly with ICAI Registered Valuers Organisation has decided to bring out Third Series of the publication titled "Valuation: Professionals' Insights" covering practical insights on valuation.

This publication like the other two series, is a compilation of articles on varied valuation topics written by experts in this field. The objective of the publication is to make available the knowledge of the valuers of the professional practices followed by them in the field of valuation.

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

In this connection, we take this opportunity in thanking the President ICAI and Director ICAI RVO CA. Prafulla P. Chhajed, and the Vice President ICAI and Director ICAI RVO CA. Atul Kumar Gupta for their moral support and encouragement in bringing out the publication.

Our gratitude towards the Board of ICAI RVO comprising of Hon'ble Mr. Justice Anil R. Dave (Retd.), Chairman of the Board and other Directors, Shri I.Y.R Krishna Rao, Shri Ashok Haldia, Prof. Samir K. Barua and CA. Nilesh S. Vikamsey, Past President, ICAI for joining in the constant endeavours of the Board.

We would also like to thank all members, co-opted members, special invitees of the Board for their support and guidance in bringing out this publication.

We would also like to thank CA. Dhinal A. Shah, CA. Rajan Wadhawan, Shri Shankar Bhargava, CA. Dipam Patel, CA. Nitesh Bhuta, CA. Aseem Mankodi, CA. Aparna Khatri, CA. Harsh Vardhan Bhandari, Ms. Nisreen Sura, Shri Neeraj Garg, CA. Abraham Mathews, CA. Amrish Garg, CA. Gandharv Jain, CA. Paras Gupta, CA. Chinmaya Arikutharam and CA. Gaurang Shah who have contributed articles featured in the publication.

We would like to put on record the efforts put in by CA. Sarika Singhal, Secretary Valuation Standards Board, Ms. S. Rita and Ms. Seema Jangid for contributing articles and providing the technical and administrative support.

We sincerely wish that this third series of the publication would be useful to our members and other stakeholders.

CA. N. C. Hegde	**CA. M. P. Vijay Kumar**
Chairman	Vice Chairman
Valuation Standards Board, ICAI	Valuation Standards Board, ICAI

Date: June, 2019

Place: New Delhi

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Chapter 1

Institutional Framework of Valuation

The Ministry of Corporate Affairs (MCA) vide its notification dated October 18, 2017, brought into force the provisions of Section 247 of the Companies Act, 2013, which deals with the Valuation of, inter alia, property, stocks, shares, debentures or net worth of a company by the Registered Valuers.

The distinguishing feature is that the subject of Valuation and the regulation of the profession of Valuation is covered under Section 247 of the Companies Act, 2013 which is a single section in one chapter of the Act. Any important decision to be taken by a banker, businessman, shareholder, investors any stakeholder is dependent on the report of the valuer.

The Valuation as a practice and as a profession is being regulated now to improve Corporate Governance and better transparency in the corporate sector which is imperative to infuse confidence amongst investors in Indian market and abroad.

Valuation of a business requires understanding and analysis of various complex factors and has a major impact on all type of businesses whether big or small.

As we all know that the Valuation assignment is distinctive and there are no uniform practices that are being adopted by the valuers in carrying Valuation. So, tailoring a Valuation about the most suitable and appropriate procedures to be relevant to each assignment is somewhat a very technical issue.

The intention of bringing the Rules is to make the valuers more accountable as Valuation plays a significant role in the capital growth of the country. It is the economic and social activity. Valuation denotes the worth of the underlying assets as on a particular date. Better Corporate Governance is likewise prompting requirement of independent Business Valuations.

The introduction of these Rules would not only ensure a streamlined methodology but would also ensure an increase in the standard of professional judgment utilized in Valuation process. This would also lead to Valuation being a specialized profession and offer a host of opportunities to the existing professionals including Chartered Accountants, Company

Secretaries, Cost Accountants and MBA/ PGDBM in finance, however it is a very onerous endeavour and has come with lot of responsibilities as it now stands regulated.

The Rules also provide that the Insolvency and Bankruptcy Board of India ("**IBBI**") should be established to be the "Authority" which will hold examinations and grant certifications of the designation of a "Registered Valuer".

Responsibility of a Registered Valuer under Section 247(2) of the Companies Act, 2013.

(a) Make an impartial, true and fair Valuation of assets which may be required to be valued;

(b) Exercise due diligence while performing the functions of a valuer;

(c) Make the Valuation in accordance with such rules as may be prescribed; and

(d) Not undertake Valuation of any assets in which he has a direct or indirect interest or becomes so interested at any time during or after the Valuation of assets.

Applicability of the Rules

1. The Companies Act, 2013

2. Insolvency and Bankruptcy Code, 2016

3. Any other Authority which provides for adoption of the same framework as that of Companies (Registered Valuers and Valuation) Rules, 2017.

Institutional Set up under the Companies (Registered Valuers and Valuation) Rules, 2017

The Companies (Registered Valuers and Valuation), Rules, 2017 provides an institutional set-up comprising of five pillars:

• Registered Valuers- To conduct the Valuation under the Companies Act, 2013 and the Insolvency and Bankruptcy Code, 2016, the role of the Registered Valuer encompasses a wide range of functions, which

include adhering to procedure of the law, as well as accounting and finance related functions.

- Registered Valuers Organsiation- To enrol and regulate Registered Valuers as its members in accordance with the Section 247 of the Companies Act, 2013 and read with Companies (Registered Valuers and Valuation), Rules, 2017.

- Insolvency and Bankruptcy Board of India- An authority who will oversee these organsiations and to perform legislative, executive and quasi-judicial functions with respect to the Registered Valuers and Registered Valuers Organisations.

- The Ministry of Corporate Affairs- The Ministry is a Regulator which is primarily concerned with administration of the Companies Act 2013, and rules & regulations framed there-under mainly for regulating the functioning of the corporate sector in accordance with law.

- Adjudicating Authority- The National Company Law Tribunal (NCLT), established under the Companies Act, 2013 would function as an adjudicator.

The implementation of any system does not only depend on the law, but also on the institutions involved in administration and execution of the same. It depends on the effective functioning of all the institutions but the Registered Valuers have a vital role to play in the entire process.

Recognition of Registered Valuers Organisations

A company registered under section 8 of the Companies Act, 2013 (or section 25 of the erstwhile Companies Act, 1956), with the sole object of dealing with matters relating to regulation of valuers of an asset class or classes and professional institutes established by an Act of Parliament. They are eligible to be registered as Registered Valuers Organisations, provided they meet the following key requirements:

- Conducts educational courses /training in Valuation, in accordance with the syllabus as prescribed by the IBBI.

- Grants memberships to individuals who possess qualifications and experience as prescribed under the Registered Valuers and Valuation Rules, 2017.

- Reviews and monitors the functioning, including quality, of services, of valuers who are its members.

ICAI Registered Valuers Organisation formed by the Institute of Chartered Accountants of India- Journey so far.

ICAI Registered Valuers Organisation (RVO) is a Section 8 private company formed by the Institute of Chartered Accountants of India which has been recognized by the IBBI to enroll and regulate registered valuers or valuer member as its members in accordance with the Companies (Registered Valuers and Valuation) Rules, 2017, and functions incidental thereto. ICAI RVO is registered for Securities or Financial Assets Class.

Some of the important roles of ICAI RVO are as follows-

(a) ensure compliance with the Companies Act, 2013 and rules, regulations and guidelines issued thereunder governing the conduct of Registered Valuers Organisation and Registered Valuers;

(b) employ fair, reasonable, just, and non-discriminatory practices for the enrolment and regulation of its members;

(c) be accountable to the authority in relation to all bye-laws and directions issued to its members;

(d) develop the profession of registered valuers;

(e) promote continuous professional development of its members;

(f) continuously improve upon its internal regulations and guidelines to ensure that high standards of professional and ethical conduct are maintained by its members; and

(g) provide information about its activities to the authority.

Rule 5 (1) of the Companies (Registered Valuers and Valuation) Rules, 2017 provides that the authority shall, either on its own or through a designated agency, conduct Valuation examination for one or more asset classes, for individuals, who possess the qualifications and experience as specified in Rule 4, and have completed their educational courses as member of a Registered Valuers Organisation, to test their professional knowledge, skills, values and ethics in respect of Valuation:

Rule 5 (2) provides that the authority shall determine the syllabus for various Valuation specific subjects or assets classes for the Valuation examination

on the recommendation of one or more Committee of experts constituted by the authority in this regard.

IBBI has notified the syllabus and mandated a 50 hours training by the Registered Valuers Organisation which is a precondition to take examination to become Registered Valuer and revised the same.

Training Conducted

In this direction, from June, 2018 onwards, ICAI RVO has conducted the 50 hours training across the country and batches have been held at Delhi (3), Mumbai (3), Kolkata(2), Chennai (2), Bangalore(2), Ahmedabad, Jaipur, Gurugram, Coimbatore, Hyderabad, Salem, Ernakulam, Pune, Indore, Jaipur, Vasai, Ludhiana, Chandigarh, Baroda.

Valuer Members trained:

As on date 1300+ members have been trained by ICAI RVO at its Educational course of 50 hours.

Registered valuers registered as on 25th June, 2019

ICAI RVO has the highest number of registration of Registered Valuers under the Asset Class- 'Securities or Financial Asset'. As on 25th June, 2019, 555 Registered Valuers have been registered by the Insolvency and Bankruptcy Board of India under the Asset Class Securities or Financial Assets. Out of which, 322 Registered Valuers (58%) are ICAI RVO members.

Conclusion

The real fair value is when the same is calculated by stepping in the shoes of the stakeholder for whom the value is calculated. Further, regulation brings in discipline but the self- regulation is most important.

The increased transparency and fairness in the Valuation system would also boost stakeholder confidence by bringing uniformity.

Chapter 2

Frontiers of Valuation

History of Valuation

For a big part of the 20th century, tangible assets, which include fixed assets such as buildings, land, and machinery, were considered to be the main source of the commercial value for any business. They were usually recorded in the financial statement based on their cost and/or outstanding value. The company's assessment on profitability and performance focused on all assets except intangible assets. Intangibles were generally excluded as the specific value of such assets wasn't always clear.

The Original methodology used for Valuation was Assets minus Liabilities, or just the equity. Later, the regulatory requirements for better tax accountancy, prohibition, the tax breaks and compensation paid to some businesses by the Governments formed a new viewpoint. This revolutionary concept was that a company was actually worth far more than simply its assets minus its liabilities or only its equity. Since then, the methodology has seen significant changes. The inputs, risk factors and range of information which are used to calculate the final company Valuation based on their current circumstances has also evolved to become more robust and complete. This development brought about new concepts including the value of future profit and goodwill in calculating company Valuation.

In the past couple of decades, as the awareness of creating value for the shareholders increased dramatically, the significance of intangible assets and their Valuation changed. Although several stakeholders paid little attention to the benefits from intangible assets, the management of the company was aware of the importance of such assets. Intangible assets often give businesses their competitive advantage. Most businesses were successful due to effective corporate management of intangible assets such as brands, patents, technology and employees. However, because they have no physical characteristics, their value can be hard to determine.

Shifting Paradigm

Business Valuation focus has shifted from just the value of tangible assets to become more comprehensive. It also includes Earnings capability, Intangible assets, Innovative capabilities and Management capabilities which are now considered critical in the Valuation of any business. With several companies becoming service oriented rather than product oriented, the proportion of intangibles to the entire business has increased. This led to the serious realization of the need for some guidelines in valuing the intangible assets. Several standard setting bodies developed guidelines for Valuation of various kinds of assets using various approaches like:

- **Market approach** - based on market evidence of what third parties have paid for comparable assets

- **Income approach** – based on the present value of future earnings from the asset

- **Cost approach** - based on the costs of developing or acquiring a new asset that is of similar use as the existing one

These methods look at things like comparable transactions, excess earnings, relief from royalty, replacement or reproduction costs and simulation analysis. As for Goodwill, value is based on the calculation of a residual value, by subtracting the net value of assets from the enterprise value of the business.

Need for Regulation and Valuation Standards

Corporate Valuation is necessary for the purpose of corporate finance activities, accounting and regulatory requirements or for internal management reporting. However, Valuation is not an exact science, it depends on various factors such as purpose, size of business, industry, location of business, risk, management assumptions, promoter strength, etc. The wide variation in Valuation methodologies and approaches across markets has made it difficult to compare Valuations.

Further, international investors require greater levels of transparency and confidence in the Valuations to enable them to make sound investment decisions.

Valuations also form a key part of audited financials which should provide transparency and comparability in relation to the value of companies and therefore impact share prices. This is important for the purpose of financial market stability and ultimately, a stable economy.

Considering the above, Government has enacted Section 247 of the Companies Act, 2013 ("the Act" or "Companies Act"). Further, the MCA also issued the Companies (Registered Valuation and Valuation) Rules, 2017.

Section 247

As per Section 247, where a Valuation is required to be made in respect of any property, stocks, shares, debentures, securities, goodwill or any other assets or liabilities or net worth of a company under the provisions of the Act. It shall be valued by a person, registered as a valuer and being a member of a recognised organisation.

The valuer appointed shall:

- make an impartial, true and fair Valuation of any assets which may be required to be valued;

- exercise due diligence while performing the functions as valuer

- make the Valuation in accordance with prescribed rules

- not undertake Valuation of any assets in which he has a direct or indirect interest or becomes so interested at any time during or after the Valuation of assets

Onus on Valuer

The aforesaid provisions, rules and Valuation standards clearly spell out the responsibilities and duties of the Valuer. The stringent penalty provisions under the Companies Act should act as a deterrent, increasing compliance and ultimately promote consistency in Valuation methodologies. These increase in compliances and responsibility cast on the valuer has resulted in people shying away from the field of Valuation. However, it must be noted that such regulatory oversight was the need of the hour to increase transparency and accountability in Valuation engagements. The Act encourages high quality reporting and ensures that good professionals who are able to take on such responsibility shall thrive in the field of Valuation.

Companies (Registered Valuation and Valuation) Rules, 2017

The Companies (Registered Valuation and Valuation) Rules, 2017 prescribe the rules for eligibility, qualification and registration of valuers and Valuation professional organizations.

Further, the said rules also state that a Registered Valuer shall make Valuations as per the Valuation Standards notified by the Central Government. However, until such time as the Valuation Standards are notified by the Central Government, a valuer shall make Valuations as per

- internationally accepted valuation standards;

- Valuation standards adopted by any registered valuers organisation;

It must be noted that the Central Government has not issued such Valuation Standards at this point of time.

Valuation Standards issued by the ICAI

The Institute of Chartered Accountants of India (ICAI) has issued the following Valuation Standards:

- Preface to the ICAI Valuation Standards

- Framework for the Preparation of Valuation Report in accordance with the ICAI Valuation Standards

- ICAI Valuation Standard 101 - Definitions

- ICAI Valuation Standard 102 - Valuation Bases

- ICAI Valuation Standard 103 - Valuation Approaches and Methods

- ICAI Valuation Standard 201 - Scope of Work, Analyses and Evaluation

- ICAI Valuation Standard 202 - Reporting and Documentation

- ICAI Valuation Standard 301 - Business Valuation

- ICAI Valuation Standard 302 - Intangible Assets

- ICAI Valuation Standard 303 - Financial Instruments

Positive impact of ICAI Valuation Standards on Valuers

While the Valuation Rules have put the onus on valuers in terms of increased liability and responsibility, the Valuation Standards have the following positives for valuers:

- Valuation standards ensure consistency and reduce discretionary 'judgement calls' taken by valuers.

- They increase comparability between different valuers and Valuation firms by promoting use of consistent Valuation methodologies.

- The Standards ensure that 'best practices' of Valuation are followed and there is fairness in Valuation services.

- They promote credibility, relevancy & transparency of Valuation information.

- The Standards cover Valuation of all assets, liabilities and businesses (cash flows). Accordingly, there is more guidance available on Valuation of complex financial instruments as well as unusual items.

- The Standards specify usage and give direction on various items such as discount rates to be used, illiquidity discounts, discount for lack of control etc.

- The Standards help Valuer in preparing information checklist, choosing Valuation method and finalising Valuation reports.

In conclusion, the field of Valuation is witnessing a revolution and conduct of Valuations by quality Valuation professionals will improve public confidence in Valuations.

Valuation-Through the Judicial Lens

One of the parameters for evaluating a Valuation outcome is its ability to stand the rigors of scrutiny by the various stakeholders. With Valuation outcomes impacting tax revenues of the country, the Government too is interested in the correctness of the Valuation results and hence, amongst others, the Indian tax authorities have been closely scrutinizing Valuation reports on the basis of which transactions have been carried out. The past year has witnessed a flurry of judicial rulings on a variety of Valuation related aspects by various tax courts across the country. As professionals in the field of Valuation, we cannot help but take note of this.

This Chapter accordingly takes us through some of the relevant observations made by courts in judgements and orders pronounced by them. While these may, at times, be more pertinent in the specific facts of the case, they do also provide guidance to the practitioners in general and may aid in the Valuation process.

Sanctity of Choice of Selection of Method

Section 56(2)(vii)(b) of the Income-Tax Act, 1961 (Act) aims at taxing excess share premium received by a closely held company from resident investors. This provision read with Rule 11UA of the Income-tax Rules, 1962 (Rules) inter alia grants the taxpayer a choice to determine the Fair Market Value of the shares using the Discounted Cash Flow (DCF) method in addition to the Net Asset Value Method. This option to use DCF as the Valuation method is important as it allows the taxpayer to demonstrate the appropriateness of the pricing based on future cash flows (and not just book the value of the net assets), which is also often the basis for pricing of actual transactions between parties.

Taxpayers have faced challenges on this front where the actual operating results have differed from the cash flow projections/ estimates or where there have been differences in the underlying assumptions adopted by the valuer as compared to those considered by the Assessing Officer (AO) during the scrutiny process. The AO has, in certain cases, not only challenged the DCF

computation but also rejected the method and asked the taxpayer to determine the share price as per the Net Asset Value Method, which would throw up a very different (and lower) share price thereby leading to a greater tax outflow.

However, the Courts have come to the rescue of the taxpayers. The Bombay High Court in the case of *Vodafone M-Pesa Ltd*[1] held that the AO can scrutinize the Valuation report and determine a fresh Valuation either by himself or by calling a final determination from an independent valuer to confront the taxpayer. But the basis has to be DCF method and he cannot change the method of Valuation which has been adopted by the taxpayer. This view has also been upheld amongst others by the Bangalore Bench of the Income Tax Appellate Tribunal (ITAT) in the case of Innoviti Payment Solutions Ltd[2] and by the Jaipur Bench of the ITAT in the case of Rameshwaram Strong Glass (P) Ltd[3]. This is indeed a welcome relief.

Here, it is pertinent to note that a contrary view has been taken by the Delhi Bench of the ITAT in the case of *Agro Portfolio Pvt Ltd*[4] wherein, on perusing the long disclaimer appended by the merchant banker of not undertaking any independent examination of the financial data, the Tribunal concluded that the valuer did not do anything reflecting his expertise except by applying the formula. Further, the ITAT held that if the taxpayer does not provide any evidence to substantiate the data on which the DCF Valuation is based and does not provides reasonable connectivity between those projections in cash flow with the reality evidences by the material, it is not possible even for the Departmental Valuation Officer to conduct any exercise of verification of the acceptability of the value determined by the merchant banker, the AO has the power to reject the DCF method and value the shares using the NAV method.

Following this, the Bangalore Bench of the ITAT, in the case of *TUV Rheinland NIFE Academy Pvt Ltd*[5] held that since the taxpayer was unable to

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[1] 164 DTR 257
[2] ITA No. 1278/Bang/2018
[3] ITA No. 884/JP/2016
[4] ITA No. 2189/Del/2018
[5] ITA No. 3160/Bang/2018

substantiate the projections on the basis of which the value was determined using the DCF Method, the AO could proceed with the NAV method.

While the above judgements appear to be conflicting, there is still a common thread running through them – in order to stand the test of scrutiny, it is imperative for the taxpayer to consider the best estimate drawn up on a scientific basis and considering the relevant economic factors. Similarly, it is imperative that the valuer maintains robust documentation and gives a sound reasoning for underlying inputs and assumptions made while drawing up the projections. This would help defend in case of a challenge even where the actual numbers vary significantly from the projections.

The above is also supported by the observations of the Jaipur Bench of the ITAT in the case of *Rameshwaram Strong Glass (P) Ltd,* (supra) which gave due cognizance to the ground work done by the Chartered Accountant (CA) while undertaking the Valuation exercise. The ITAT observed that the CA had considered the plant capacity, industry and market conditions as prevailed in the state, the sanctioning of the loan by the bank which factors formed a reasonable basis of projections and that the Valuation reports were prepared by the CA as per the guidelines given by the ICAI. The AO had not found any fault. Accordingly, the ITAT did not find any rational or sound basis in the order of the AO rejecting the Valuation report submitted by the taxpayer based on DCF Method.

Guidelines for Application of the DCF Method

The Bangalore Bench of the ITAT in the case of *Innoviti Solutions* discussed above, while examining the application of the DCF method, emphasized on the importance of appropriateness of the cash flows, which forms the foundation of the Valuation. Taking note of the Technical Guide on Share Valuation (issued in 2009) by the Research Committee of The Institute of Chartered Accountants of India (ICAI) and other rulings[6], the ITAT stated that the Cash Flow projection based on which the Valuation report is prepared by the Chartered Accountant needs to be estimated with reasonable certainty. The taxpayer needs to demonstrate that the projections are a reliable estimate achievable with reasonable certainty on the basis of facts available

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[6] Bharat Earth Movers v CIT [245 ITR 428] and Rotork Controls India (P) Ltd. v. CIT [314 ITR 62]

on the date of Valuation and actual result of future cannot be a basis for saying that the estimates of the management are not reasonable and reliable.

The ITAT recognised that in the case of a start-up where no past data is available, it should not be insisted upon that the cash flow projection should be on the basis of reliable future estimate. It rules that in such cases, the projections may be on the basis of expectations as long as it is shown that such expectations are reasonable after considering various macro and micro economic factors affecting the business.

The ITAT further observed that the primary onus to prove the correctness of the Valuation Report is on the taxpayer as he has special knowledge and he is a privy to the facts of the company and only he has opted for this method. Hence, he has to satisfy about the correctness of the projections, discounting factor and terminal value etc. with the help of empirical data or industry norm if any and/or scientific data, scientific method, scientific study and applicable guidelines regarding DCF Method of Valuation. If the taxpayer cannot establish that the cash flow is achievable with reasonable certainty, the future cash flow cannot be recognized and the DCF method is not workable.

Substance of The Security – Preference Versus Equity

Recently, the Bangalore Bench of the ITAT in the case of *2M Power Health Management Services Pvt Ltd*[7], while examining the dispute around Valuation of preference shares directed that the substance of the securities being issued needed to be looked at while undertaking the Valuation exercise.

In this case, the taxpayer allotted compulsorily convertible preference shares at a premium. The holders of these shares had the right to attend the general meetings of the company and vote on resolutions directly affecting their interest. After examining the facts of the case, the ITAT held that the nature of the issued share was that of an equity share and not preference share. It further stated that it was important to decide, based on the evidence, if the share premium is received for equity shares to be issued later or for preference shares issued now, the prescribed Valuation methodology should be applied.

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[7] ITA No.2880/Bang/2018

For the purposes of calculating FMV under Section 56, Rule 11UA of the Rules provides Valuation methodology for equity shares as well as preference shares. Rule 11UA(1)(c)(c) provides that the FMV of preference shares should be the price the shares would fetch if sold in the open market on the Valuation date. Based on the above, it may be possible that the AO will value the shares as equity (per Rule 11UA) and not as preference shares (i.e. applying the price fetched if they are sold on the open market), if depending on the nature and terms of its issue, the instrument fails to satisfy the test of being preference shares. Accordingly, just going by the nomenclature of the security would not suffice therefore, it would be important to examine the terms thereof.

In the following case too, the Mumbai Bench of the ITAT gave due importance to the features of the security being valued. The ruling was pronounced in the case of *Golden Line Studio Pvt. Ltd*[8]. In this case, the ITAT ruled that for the purposes of determining whether excessive premium has been charged on the issue of redeemable non-cumulative preference shares, its fair market value (FMV) should not be calculated on the basis of the Net Asset Value (NAV) of the issuing company as there was a difference in equity and preference shares and they both could not be valued the same way.

The taxpayer argued that considering that the return on preference shares is fixed whether in terms of dividend or at the time of winding up, the preference shareholders get a preference over equity shareholders on payment of dividend and repayment of capital. Accordingly, preference shares are akin to *quasi* debt instruments and should be valued based on the returns they fetch and not the company's NAV. The Tribunal appreciated the above arguments while deciding in favour of the taxpayer.

Conclusion

In the past, there have been judgements e.g. in the case of *G. L. Sultania*[9] where the Supreme Court (SC) has held that unless it is shown to the court that some well accepted principles of Valuation have been departed from without any reason or that the approach adopted is patently erroneous or that

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[8] I.T.A. No. 6146/Mum/2016

[9] G. L. Sultania and Another v. SEBI and Others (5 SC 133) (SC)

relevant factors have not been considered by the valuer or that the Valuation was made on a fundamentally erroneous basis or that the valuer adopted a demonstrably wrong approach or a fundamental error going to the root of the matter, the court cannot interfere with the Valuation of an expert. However, considering that appropriateness of a Valuation result depends on the facts and underlying assumptions, the issue is more fact driven than by law. Similarly, the SC in the case of *Hindustan Lever*[10] and *Miheer Mafatlal*[11] had observed that Valuation of shares is a technical and complex problem which can he appropriately left to the consideration of experts in the field of accountancy and that even courts are not equipped to question the assumptions made by a valuer.

As regards approach towards Valuation, it is known that there are bound to be differences in the Valuations undertaken by two valuers and hence, even the value determined by the AO could differ from that undertaken by the professional valuer but does that vitiate the Valuation done by the latter needs to be pondered over. In the book "Study on Share Valuation", published by the ICAI, the following observation has been made in the Foreword to the first edition:

"The subject of Valuation of shares has always been controversial in the accounting profession. No two accountants have ever agreed in the past or will ever agree in the future on the Valuation of shares of a company, as inevitably they involve the use of personal judgment on which professional men will necessarily differ ..."

The above was acknowledged by the Gujarat High Court in the case o*f Kiritbhai Hiralal Patel and Ors. vs Arvind Intex Ltd.*[12]

Inspite of the above guidance by the highest courts of the country, one of the fundamental questions that keeps coming up is whether the AO can question / revisit the assumptions followed while preparing the projections and the various inputs / variables considered to arrive at the Valuation. This is on account of the fact that Valuation is a fact and judgement driven process and the likelihood of a challenge cannot be ruled out.

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[10] Hindustan Lever Employees Union v. Hindustan Lever Ltd and Others (1995) (83 Comp. Cases 30 (SC)

[11] Miheer H. Mafatlal v. Mafatlal Industries Ltd. (1997) (1 SCC 579) (SC)

[12] Equivalent citation: 107 Comp. Cas 232 Guj

To conclude, while over the years there have been favourable rulings supporting the position of the professional valuer, considering the recent spate of judgements and the increasing focus on due diligence and independence expectations around the Valuation process, one cannot rule out the possibility of a challenge to the work done by the valuer and it is in his/ her own interest to demonstrate appropriateness of the method selected, analysis undertaken in the given facts and adequately documenting the same.

Chapter 4

Valuation-Peculiarities of Valuing a Private Business

Background

In the Indian context, it is crucial to understand the nuances of valuing a private company. This is all the more crucial because the number of private businesses exceed the publicly listed businesses multi-fold times. This is evidenced by the fact that multiple business formats are available for private businesses, ranging from sole proprietorship to limited liability partnerships, in addition to private limited companies. The website of the Bombay Stock Exchange (https://www.bseindia.com/) also mentions that a total number of companies with listed equity capital on its stock exchange is only 4,713. Add a few hundred more listed on the small and medium enterprises' platform, and the number of publicly listed companies in India is forming a very small part of the universe of businesses in India. The Ministry of Corporate Affairs, had in November 2017, mentioned that a total of 17,11,806 companies have been registered in India. The registration of companies, limited liability partnerships (LLPs), partnerships and sole proprietorships are only increasing.

Given the Indian scenario, it is all the more necessary for a practicing valuer to understand the nuances that form part of the Valuation exercise of a private business.

Setting the Context

Fundamentally, the approaches that are considered for valuing a private business are similar to those used for valuing publicly listed companies. However, it is crucial to consider that the expectations of the investors are different in each transaction depending on the facts of each transaction. Broadly speaking, it is convenient to value publicly traded companies because of some assumptions that are inherently considered by the valuer. However, it is crucial to understand the outlook of the investors towards the target business being valued. It is certain that for the same business having

the same financial practices, an investor shall have separate outlook for the one which is a publicly traded business vis-à-vis the one which is a private business. Considering the varying outlook of the investors, it is crucial to evaluate the impact this outlook is likely to have on the cost of capital for the private business.

Diversification

Two entities having the same business and same financial practices shall have the same risk. However, two people looking at the same business can have different perspectives on the risk in the business. A very important assumption that underlies in the Valuation of a publicly traded company is that the investor in the publicly traded company is adequately diversified. The assumption supposes that the Investor is rational and attempts to maximise expected returns, given the risk taken. In the process, the investor ends up with diversified portfolios and uses information to make reasoned judgments on value. In the scenario of a private business, it is not always correct to assume that the investor has adequate diversification. To the extent that the investor in a business is not diversified, the investor may like to incorporate some or all firm-specific risk into its discount rates, thus reducing the value. This may be called lack of diversification discount. Accordingly, the cost of equity and the resultant cost of capital shall be different for a private business when compared to a publicly traded company.

When we use a beta to measure risk, we are measuring only that portion of the risk that cannot be diverted away. We are assuming that the remaining risk is ignored because it can be diverted. Hence, when valuing private business, this factor needs to be considered and addressed by a valuer while determining the discounting rate.

Liquidity and Control

What is lack of liquidity? Illiquidity can be simply put as a characteristic of asset of not easily getting converted into cash. Illiquidity for a market can be defined as one with few participants and a low volume of activity. Private businesses, when compared to publicly traded businesses, tend to be more illiquid. The ideal manner to look at this is that all assets are illiquid, with some assets being more liquid than others. There is no single yardstick to measure the liquidity of any asset. However, availability of a marketplace and

participants in the marketplace can be considered to be a reasonable yardstick for the liquidity of the asset. Having said that, it is to be understood that publicly traded companies amongst themselves also have varying degrees of liquidity. Treasury bonds and bills may be considered to be most liquid assets, whereas stock in publicly traded company with small float may be more illiquid than the stock in publicly traded company having wide trading. Real estate may be more liquid than a private business. Moreover, private business amongst themselves may also have varying degrees of liquidity, especially private businesses offering control (more liquid) vis-à-vis private businesses without control (less liquid).

This brings us to the next important characteristic of control in a transaction. Generally, while valuing a publicly traded business, the transactions are frequent and the intention of the buyer may not be to obtain control, and hence, the control characteristic in such transactions is not of paramount importance. However, when a private business is being valued, more often than not, the intention may always include control. Lack of obtaining control in a transaction involving a private business generally calls for suitable adjustment by factoring a discount for lack of control.

Addressing

It is important to understand that each characteristic is separate and needs to be treated as such. The degree and magnitude of each discount will vary not only across firms but also for the same firms, across time and for different transactions. Without valuing each one separately, one cannot estimate the correct discount. It is also crucial to understand that each needs to be counted separately. Trying to consolidate these discounts into one number is a dangerous exercise and can lead to miscounting and double counting of risks.

While valuing a target entity, the valuer needs to understand that each of the characteristic is negotiable. The fact that one can value something (lack of diversification, lack of control or lack of liquidity) does not mean that the same shall be included in the price too. While concluding on each of the above factors/characteristic, the valuer needs to exercise judgment and decide as per the facts of the case in a pragmatic manner.

The following can be the guiding principles for the valuer to take into account before addressing each of the above characteristic:

— Don't discount multiple times for the same factor: If the valuer has already upped the discount rate for a firm, because it is illiquid, the valuer should not again discount the resultant value for a lack of liquidity discount.

— Be aware of the assumptions in the cash flow model: While valuing a firm, the valuer must be aware as to how the cash flows have been estimated and what assumptions have been made about how the firm will be run. If the model has already incorporated the "sub-optimal" practices into cash flows, the valuer cannot apply a minority (control) discount to the estimated value.

— Consider but don't blindly apply the rule of thumb: It is generally observed that the lack of liquidity is adjusted at around 20-30% of the value derived. Well, the rule of thumb can naturally be taken as guidance, but should not be blindly applied. A valuer should exercise judgment and determine the discount to be applied to each case.

Best Buyer

This brings us to the next important characteristic in valuing a private business namely the buyer. The characteristic of the buyer also plays an important role in the Valuation exercise of a private business. The long-term buyer for a profitable cash flow generating business may not have the same illiquidity factor for the business as would a cash-constrained short term buyer have for the same business. Discount rate for the profitable cash flow generating business may not also be the same as that for unprofitable negative cash flow businesses.

Buyer Synergy: If the buyer is confident that the buyer can dramatically improve his/its own overall earnings by ownership of the target, he/it can afford to pay more. Synergy may come from simple cross sale of capabilities to a greater breadth of customers (buyer to seller and vice versa). It may come from ability to reduce overhead in the combination. It may come from dozens of possible benefits of combination. Regardless of specific source or reason, the buyer has value in synergy when he/it knows that he/it can add more to his/its overall performance than just the simple addition of combining his/its earnings with those of the seller.

Market positions and sentiment: This also plays an important role in determining the value. One cannot be away from the market while valuing a business. Discount at the time of the 2008 crisis and the one sometime later when things looked better, would not be the same. Even established businesses have trouble in raising funds in an economically negative situation. For private businesses, it is even worse. The discount varies across companies, buyers and time.

Moreover, in private businesses, sometimes, the choice to sell the business may not be to the best buyer. This can be understood with the help of an example. A general medical practitioner who has been practising as such for the past many years may want to retire and sell off her practice. For such a private business, the best available buyer shall be in the form of another medical practitioner. The choice for the seller to sell the business may not be to the best buyer. This is due to the inherent limitation of certain private businesses of not being able to approach the best buyer. Amongst the available choices for any transaction, the owner of a private business may not be able to approach all the possible options and carry out a 'price discovery' unlike a publicly traded company, which can generally afford to do so. In a transaction wherein Valuation of a publicly traded company's business is done, the underlying assumption is always there that the seller shall sell the business to the buyer who is likely to offer the highest price.

The exploration continues amongst various parties including:

— A private owner

— A private equity fund/venture capital fund

— A publicly traded company

Different buyers shall have a different measure of risk that is seen in the same business, resulting into different value.

Inherent Issues in Valuing Private Businesses

The process of valuing private companies is not much different from the one adopted for valuing publicly traded companies. Either the free cash flow to firm is discounted at the cost of capital (WACC) or the free cash flow to equity is discounted at the cost of equity. It is also necessary to appreciate and understand the most standard problems faced while valuing private companies. The same are enumerated below:

Absence of market value of equity and debt: Generally, in valuing a business, especially that relating to publicly traded companies, for calculating the weighted average cost of capital (WACC), market values of equity and debt are taken into consideration for assigning weights and deriving the WACC. This serves as a good benchmark and reliable information while working on value of publicly traded companies. Generally, private businesses do not have market value of either equity or debt, leading to the valuer to have to rely on the limited information that is available. Private businesses are generally funded significantly with promoter's money. The promoter of the private business may or may not be charging any interest on the said funding. Lack of even credit rating of the private businesses leads to a situation where significant judgment has to be exercised while deciding on various aspects.

Disclosure problems with private companies: Generally, publicly traded companies are subject to stringent corporate governance standards leading to adequate, timely and correct disclosures of financial information. Generally, there are significant disclosure problems with private firms as they have a limited historical period as well as lack of discipline in appropriate reporting of financial information.

Absence of market price: Inherent in a Valuation exercise is the fall back of the valuer on the market price of the asset. This can be called the inherent bias of the valuer. In case of a private company, there is no established stock price and hence, validation of the derived value with the market price is not available. Lack of market information plays a key role in Valuation of a private business.

Larger issues with the cash flow: Generally, private firms are not habituated with complex predictions considering multiple eventualities. Such exercises have hardly been undertaken by such firms. In such a case, the valuer has to consider the larger issues with the cash flow prediction and forecast, especially considering historical performance and prudence in achievability of the projected cash flow.

Shorter history: Generally, private firms have been in business for shorter periods of time as compared to publicly traded companies.

Accounting standards: Differences in Accounting Standards plays a key role in decision making about reliability of financial information. Periodic

accounting is prevalent largely in our country where people account for various items at periodic intervals.

Intermingling of personal and business expenses: While valuing a transaction, it is imperative for the valuer to broadly consider the intermingling of personal and business expenses. In our country, for private businesses, it is very common to have an overlap of personal and business expenses. Largely, selling promoters represent a larger than reality proportion of expenses to be personal in nature, trying to prove higher operating cash flows, which may result in a higher value to them. The valuer has to exercise adequate care in addressing this sensitive area.

Separating salaries from dividends: Generally, sole owners do not charge their salary. Moreover, sole owners do a lot of chores which may not be continued by them after a particular transaction. It is extremely important to understand that while projecting cash flows for a business, it should be considered as to which expenses shall continue beyond and which expenses shall add up if the owner is no longer the sole owner. Various roles such as accountant, marketing, etc. by owner can add up to costs after a particular transaction. What would cost one to replace the owner is important while valuing a private company as one may need multiple people to do what the owner did previously.

Key person value - Mainly CAs, Doctors, dentists, chefs, other professionals, have key person value. Key person value is the variable which can lead to loss of revenue due to the key person's absence. It can be understood by way of an example: If a dentist sells her practice to another dentist, a patient visiting after the transaction on not seeing the previous dentist may choose to walk out of the clinic rather than getting attended by the new dentist. Key person value mostly affects businesses having personal services. A valuer may have to clean up the financial statements for the purpose of Valuation. Cleaning up of financial statements includes adjusting cash flows for items such as expenses which shall increase/decrease post the transaction. Generally, in real life, the key person assists in transition. Also, non-compete needs to be factored into Valuation if it is factored into the transaction.

Related party transactions: Indian private businesses have a tendency to enter into multitude of related party transactions. More often than not, the said related party transactions are entered into at a price which may be calculated on the basis of some ulterior motive of the promoters of the

private business. The valuer should exercise due care while considering the quantum, implication and importance of the related party transactions on the business being valued. If adjustments are required to be made, appropriate adjustments after exercising due care must be done.

Royalty payments: Some private businesses might charge royalty on the use of the trademark of the promoter of the private business registered in any other personal's entity's/name. A valuer should consider such royalty payments and its implication on the value.

Different Purposes of Valuing Private Firms

The purpose of Valuation is also crucial for the private business' Valuation. There are multiple reasons for which a private business might require a Valuation:

— Regulatory requirement: Preferential issue, rights' issue, employee stock option, etc. as per the requirement of the Companies Act, 2013.

— Private businesses might sometimes ask for a Valuation out of curiosity to know what the business is worth?

— Sometimes, for split or family settlements, the Valuation is needed.

— Sometimes, fair value accounting, does not lead to any transaction.

— Sale of one partner's interest to the other partner, and so on.

Knowing the purpose of Valuation is crucial for the valuer for considering the relevant factors affecting the transaction purported and reliance of the said transaction on the value derived.

Conclusion

Broadly, Valuation is an exercise which is unique for every transaction and requires efforts, involvement, application of mind and thought for each assignment separately. Only guiding principles can be adopted and considered by the valuer while undertaking each assignment. A summary of some key factors to consider have been presented in this Chapter which can be taken into consideration in the next Valuation assignment for a private business by the readers.

Computing Beta — The Most Critical Input to the CAPM

Valuers/analysts across the globe adopt Capital Asset Pricing Model (CAPM) as one of the methodologies to arrive at the cost of equity and consequently the cost of capital. One of the most critical inputs to the CAPM is 'Beta' i.e. the sensitivity of the subject company/asset to the market. In this article we look at the ways to compute beta for listed as well as unlisted entities.

The method to arrive at beta is by taking the company's returns over a time period and compare the Index returns say Sensex or Nifty for the same period. Now, we have both data sets, we take the co-variance of the stock returns and the index returns for the same period and divide it by the variance of the index returns. This gives you a coefficient which measures the relative risk of your company with respect to the market, for example if the coefficient you arrive is at is 1.5, then if the index moves by 1% up or down then your company moves 1.5% in the respective direction.

Beta (β) = Covariance (X, Y)/ Variance (Y)

X = Stock Return

Y = Index Return

This is basically running a regression on both the data sets - returns on the stock and returns of the index, the slope of the line is your beta, this gives you a statistical answer to what is the beta for the company. This coefficient (beta) could come with a standard error and is just an estimate.

Let us try and compute beta with the help of an illustration. Given below is the data pertaining to Tata Steel's stock price and Nifty 50 for the period Oct 1, 2015 to September 30, 2016.

Tata Steel						
Date	*Open*	*High*	*Low*	*Close*	*Volume*	*Adj Close*
01-10-2015	215	215.5	210.25	212.25	4872900	212.25
05-10-2015	214.9	225.8	214.2	225	8121300	225
06-10-2015	227.7	229	223.15	227.5	7359800	227.5
07-10-2015	225	237.7	223.6	236.8	9838500	236.8
08-10-2015	237.9	242.7	236.2	240.8	8915500	240.8
09-10-2015	242.4	253	242.2	251.1	10520000	251.1
12-10-2015	255.1	261.95	249.8	250.85	10570000	250.85
13-10-2015	248	248.65	243.25	245	5821200	245
14-10-2015	244	253	243.55	248.35	6290100	248.35
15-10-2015	249.15	257.2	248.05	255.25	7008000	255.25
16-10-2015	255.9	256.7	248.4	252.9	5326500	252.9
19-10-2015	253.1	254.1	246.75	248.4	4478300	248.4
20-10-2015	247.05	248.9	240	240.8	5248500	240.8
21-10-2015	241.7	246.45	238.25	244.4	8042200	244.4
23-10-2015	247.4	251.6	244.15	246	5005800	246
26-10-2015	247.35	251.55	246.25	249.65	4188000	249.65
27-10-2015	248.85	250.3	244.05	245.95	3403600	245.95
28-10-2015	244.5	248.5	244	247.15	3436900	247.15
29-10-2015	246.3	251.45	244.7	247.6	4589000	247.6
30-10-2015	248.4	254.8	245.15	246.6	6173200	246.6
02-11-2015	246.5	246.6	236.3	238.9	4909500	238.9
03-11-2015	241.7	243	234.9	235.7	4492700	235.7
04-11-2015	239.15	240	233.85	235.4	4861300	235.4
05-11-2015	236	236	224.3	225.4	8801600	225.4
06-11-2015	218.9	221.85	215.1	220.25	9906300	220.25
09-11-2015	215	224.4	212.65	222.25	6272600	222.25
10-11-2015	220.8	222.25	217.15	218.05	4536400	218.05
11-11-2015	218.05	218.05	218.05	218.05	0	218.05
13-11-2015	218.7	223.6	216.6	222.65	4426900	222.65

16-11-2015	222.85	231.9	220.2	230.6	6923300	230.6
17-11-2015	231.9	235.75	230.9	234.55	5240900	234.55
18-11-2015	234.1	235	225.2	225.85	5283600	225.85
19-11-2015	227.5	229.7	225.6	228.75	3661100	228.75
20-11-2015	228.1	232.75	228.1	230	3859400	230
23-11-2015	230.85	230.85	223.1	224.45	4102300	224.45
24-11-2015	223.35	226.4	222.5	224.35	4179000	224.35
26-11-2015	225.5	230	224.2	227.9	4588000	227.9
27-11-2015	227.9	235	227.55	231.25	5393000	231.25
30-11-2015	232.4	234.4	228.8	229.6	4556700	229.6
01-12-2015	230.8	238.5	230.3	237.55	6586500	237.55
02-12-2015	239.95	245.9	238.1	243.85	8858300	243.85
03-12-2015	240.15	243.5	236.8	240.15	7107800	240.15
04-12-2015	238.05	244.25	237.1	240.25	5538100	240.25
07-12-2015	244.8	247.5	242.45	243.55	4936400	243.55
08-12-2015	242.05	243.05	233.5	234.75	4545900	234.75
09-12-2015	234	235.85	224.9	226.85	4727600	226.85
10-12-2015	227.25	234.75	226.5	233	4804800	233
11-12-2015	235.1	243.9	235.1	240.9	11922400	240.9
14-12-2015	239	248.9	238.45	245	11314400	245
15-12-2015	247	247.25	241.25	244.35	5218800	244.35
16-12-2015	246.55	248.6	242.1	244.7	5759800	244.7
17-12-2015	246.9	257.95	246.05	257.1	12112200	257.1
18-12-2015	256.5	257.95	254	255.65	6944200	255.65
21-12-2015	255.5	261.4	254.65	258.45	6195200	258.45
22-12-2015	259	261.8	256.55	257.4	4544200	257.4
23-12-2015	262.25	266.4	262.25	264.45	7702900	264.45
24-12-2015	266	266	260.6	263.35	3843700	263.35
28-12-2015	263.95	264.3	253	254.1	5317600	254.1
29-12-2015	255.8	257.15	253.35	255.3	3800500	255.3
30-12-2015	256.4	261.8	255.1	258.7	6812700	258.7

31-12-2015	260	260.8	256.95	259.8	4446600	259.8
04-01-2016	255	263.2	253.1	256.9	6981400	256.9
05-01-2016	257.55	276.4	257.55	274.3	15008900	274.3
06-01-2016	272.8	274.6	266	268.75	7454700	268.75
07-01-2016	263	263.3	248.2	249.9	9503700	249.9
08-01-2016	252	256.3	249.05	253.6	6299400	253.6
11-01-2016	247	253.35	244.25	251.65	6085300	251.65
12-01-2016	253.05	255.3	243.15	245.75	5425300	245.75
13-01-2016	248.5	251.8	237	246.6	7482400	246.6
14-01-2016	235	242.55	231.5	238.75	8884800	238.75
15-01-2016	242.5	243	228.1	229.7	5991600	229.7
18-01-2016	229.8	244	225.2	235.9	8417400	235.9
19-01-2016	237.55	240.95	231.25	238	6304100	238
20-01-2016	232.8	234	226.5	232	5486800	232
21-01-2016	234.7	239.35	231.25	235.6	6245300	235.6
22-01-2016	238.3	250.8	237.65	247.8	6510700	247.8
25-01-2016	249	256.4	248.8	254.9	5576500	254.9
27-01-2016	255	259.9	253.4	257.6	6235600	257.6
28-01-2016	257	258.45	252.4	254.2	6016700	254.2
29-01-2016	254.65	258.8	247.45	249.7	6747900	249.7
01-02-2016	248.9	254.95	246.5	249.3	4420700	249.3
02-02-2016	250.25	251	230.1	231.45	8388400	231.45
03-02-2016	227.9	233.9	221.45	224	7791500	224
04-02-2016	224.4	228.6	219	225.95	11709400	225.95
05-02-2016	216	238.3	216	233.85	25803300	233.85
08-02-2016	238.6	243.95	232.05	234.1	10332400	234.1
09-02-2016	230.9	237.3	230.1	235.5	7562800	235.5
10-02-2016	234.85	237.75	227.1	235.7	7616000	235.7
11-02-2016	235.95	237.3	220.85	224.5	6151600	224.5
12-02-2016	226	229.35	211.15	217.5	9373700	217.5
15-02-2016	222	248	222	246.7	13602300	246.7

16-02-2016	249.6	251.6	243.15	244.85	9146800	244.85
17-02-2016	245	252.9	238	251.25	8295400	251.25
18-02-2016	255	256.5	243.2	250.85	9459300	250.85
19-02-2016	248.5	254.45	246.85	253.25	6770600	253.25
22-02-2016	253.6	257.5	251.7	255.25	4810300	255.25
23-02-2016	255.8	261.6	252.1	253.55	8452300	253.55
24-02-2016	250.6	253.75	246.95	247.9	4743800	247.9
25-02-2016	247.1	249.85	244.6	248.15	5588100	248.15
26-02-2016	249.5	251.7	243.15	248.45	5336800	248.45
29-02-2016	246.9	263.65	245.1	249.1	9850400	249.1
01-03-2016	250	258.15	246.55	257.05	7111200	257.05
02-03-2016	260	269.5	259.5	267.55	7645600	267.55
03-03-2016	273	289	272.1	287.05	17533000	287.05
04-03-2016	289	291.2	284.5	288.55	9170100	288.55
08-03-2016	287.8	296.7	287	291.8	9281500	291.8
09-03-2016	283.5	296.5	281.3	295.4	10158400	295.4
10-03-2016	296.3	301.25	293.3	296.7	8556900	296.7
11-03-2016	296	298.2	290.35	294.05	7633600	294.05
14-03-2016	295.95	300.25	295.25	296.7	4445300	296.7
15-03-2016	297	302	294.1	300.45	6978000	300.45
16-03-2016	300	302.75	294.2	299.5	7039300	299.5
17-03-2016	304.5	305.65	294.9	295.9	8005500	295.9
18-03-2016	299.7	302.75	296.95	302.2	7314400	302.2
21-03-2016	302	305.95	300.65	303.55	5651700	303.55
22-03-2016	303.1	311.8	301.35	309.8	6579000	309.8
23-03-2016	311.8	317.9	310.55	317.2	6377700	317.2
28-03-2016	318.4	318.4	297.4	299.15	9069700	299.15
29-03-2016	300	307.75	300	303.85	5937100	303.85
30-03-2016	309.45	325.75	305.3	324.3	12438800	324.3
31-03-2016	324.9	324.9	314.4	319.7	13349900	319.7

Nifty 50						
Date	Open	High	Low	Close	Volume	Adj Close
01-10-2015	7992.05	8008.25	7930.65	7950.9	156900	7950.9
05-10-2015	8005.1	8128.8999	8005.1	8119.3	183100	8119.3
06-10-2015	8180.45	8180.9502	8096.5	8152.9	178500	8152.9
07-10-2015	8146.2	8188.8999	8132.9	8177.4	193900	8177.4
08-10-2015	8196.75	8196.75	8105.85	8129.35	171700	8129.35
09-10-2015	8186.35	8232.2002	8139.65	8189.7	199700	8189.7
12-10-2015	8231.5	8244.5	8128.2	8143.6	199100	8143.6
13-10-2015	8121.95	8150.25	8088.6	8131.7	145900	8131.7
14-10-2015	8102.4	8139.2998	8096.35	8107.9	138900	8107.9
15-10-2015	8134.35	8190.5498	8129.8	8179.5	167200	8179.5
16-10-2015	8193.65	8246.4004	8147.65	8238.15	156400	8238.15
19-10-2015	8262.55	8283.0498	8239.2	8275.05	124500	8275.05
20-10-2015	8280.3	8294.0498	8229.2	8261.65	155100	8261.65
21-10-2015	8258.35	8294.4004	8217.15	8251.7	144800	8251.7
23-10-2015	8308.25	8328.0996	8280.75	8295.45	152000	8295.45
26-10-2015	8333.65	8336.2998	8252.05	8260.55	133900	8260.55
27-10-2015	8230.35	8241.9502	8217.05	8232.9	156700	8232.9
28-10-2015	8188.9	8209.0996	8131.8	8171.2	188900	8171.2
29-10-2015	8175.45	8179.6001	8098	8111.75	217500	8111.75
30-10-2015	8123.55	8146.1001	8044.4	8065.8	199500	8065.8
02-11-2015	8054.55	8060.7002	7995.6	8050.8	136100	8050.8
03-11-2015	8086.35	8100.3501	8031.75	8060.7	132500	8060.7
04-11-2015	8104.9	8116.1001	8027.3	8040.2	122100	8040.2
05-11-2015	8030.35	8031.2002	7944.1	7955.45	132100	7955.45
06-11-2015	7956.55	8002.6499	7926.15	7954.3	219500	7954.3
09-11-2015	7788.25	7937.75	7771.7	7915.2	211800	7915.2
10-11-2015	7877.6	7885.1001	7772.85	7783.35	165200	7783.35
11-11-2015	7838.8	7847.9502	7819.1	7825	21700	7825
13-11-2015	7762.45	7775.1001	7730.9	7762.25	160900	7762.25
16-11-2015	7732.95	7838.8501	7714.15	7806.6	149500	7806.6

17-11-2015	7848.75	7860.4502	7793	7837.55	145000	7837.55
18-11-2015	7823.15	7843.3999	7725.05	7731.8	143600	7731.8
19-11-2015	7788.5	7854.8999	7765.45	7842.75	132600	7842.75
20-11-2015	7841.9	7906.9502	7817.8	7856.55	151900	7856.55
23-11-2015	7869.5	7877.5	7825.2	7849.25	127000	7849.25
24-11-2015	7837	7870.3501	7812.65	7831.6	130600	7831.6
26-11-2015	7837.15	7897.1001	7832	7883.8	219800	7883.8
27-11-2015	7910.6	7959.2998	7879.45	7942.7	150300	7942.7
30-11-2015	7936.25	7966	7922.8	7935.25	216300	7935.25
01-12-2015	7958.15	7972.1499	7934.15	7954.9	138600	7954.9
02-12-2015	7976.7	7979.2998	7910.8	7931.35	126300	7931.35
03-12-2015	7902.3	7912.2998	7853.3	7864.15	125700	7864.15
04-12-2015	7817.6	7821.3999	7775.7	7781.9	152500	7781.9
07-12-2015	7816.55	7825.3999	7746.05	7765.4	137600	7765.4
08-12-2015	7738.5	7771.25	7685.45	7701.7	135100	7701.7
09-12-2015	7695.5	7702.8501	7606.9	7612.5	140000	7612.5
10-12-2015	7643.3	7691.9502	7610	7683.3	140800	7683.3
11-12-2015	7699.6	7703.0498	7575.3	7610.45	167800	7610.45
14-12-2015	7558.2	7663.9502	7551.05	7650.05	148900	7650.05
15-12-2015	7659.15	7705	7625.1	7700.9	134300	7700.9
16-12-2015	7725.25	7776.6001	7715.75	7750.9	154300	7750.9
17-12-2015	7783.05	7852.8999	7737.55	7844.35	175900	7844.35
18-12-2015	7828.9	7836.1499	7753.35	7761.95	191400	7761.95
21-12-2015	7745.65	7840.75	7733.45	7834.45	126300	7834.45
22-12-2015	7829.4	7846.2998	7776.85	7786.1	125700	7786.1
23-12-2015	7830.45	7871.4502	7826.1	7865.95	117900	7865.95
24-12-2015	7888.75	7888.75	7835.5	7861.05	93500	7861.05
28-12-2015	7863.2	7937.2002	7863	7925.15	122900	7925.15
29-12-2015	7929.2	7942.1499	7902.75	7928.95	113000	7928.95
30-12-2015	7938.6	7944.75	7889.85	7896.25	106800	7896.25
31-12-2015	7897.8	7955.5498	7891.15	7946.35	150900	7946.35
04-01-2016	7924.55	7937.5498	7781.1	7791.3	134700	7791.3

05-01-2016	7828.4	7831.2002	7763.25	7784.65	145200	7784.65
06-01-2016	7788.05	7800.9502	7721.2	7741	147100	7741
07-01-2016	7673.35	7674.9502	7556.6	7568.3	188900	7568.3
08-01-2016	7611.65	7634.1001	7581.05	7601.35	157400	7601.35
11-01-2016	7527.45	7605.1001	7494.35	7563.85	189000	7563.85
12-01-2016	7587.2	7588.2998	7487.8	7510.3	163900	7510.3
13-01-2016	7557.9	7590.9502	7425.8	7562.4	215200	7562.4
14-01-2016	7467.4	7604.7998	7443.8	7536.8	200800	7536.8
15-01-2016	7561.65	7566.5	7427.3	7437.8	197500	7437.8
18-01-2016	7420.35	7463.6499	7336.4	7351	233600	7351
19-01-2016	7381.8	7462.75	7364.15	7435.1	188300	7435.1
20-01-2016	7357	7470.8999	7241.5	7309.3	225600	7309.3
21-01-2016	7376.65	7398.7002	7250	7276.8	240700	7276.8
22-01-2016	7355.7	7433.3999	7327.6	7422.45	229200	7422.45
25-01-2016	7468.75	7487.1499	7421.2	7436.15	163156900	7436.15
27-01-2016	7469.6	7477.8999	7419.7	7437.75	187600	7437.75
28-01-2016	7426.5	7468.8501	7409.6	7424.65	274500	7424.65
29-01-2016	7413.35	7575.6499	7402.8	7563.55	298700	7563.55
01-02-2016	7589.5	7600.4502	7541.25	7555.95	200400	7555.95
02-02-2016	7566.65	7576.2998	7428.05	7455.55	230200	7455.55
03-02-2016	7392.45	7419.3999	7350.3	7361.8	192000	7361.8
04-02-2016	7411.45	7457.0498	7365.95	7404	222700	7404
05-02-2016	7418.25	7503.1499	7406.65	7489.1	249800	7489.1
08-02-2016	7489.7	7512.5498	7363.2	7387.25	171500	7387.25
09-02-2016	7303.95	7323.4502	7275.15	7298.2	212100	7298.2
10-02-2016	7264.3	7271.8501	7177.75	7215.7	246900	7215.7
11-02-2016	7203.6	7208.6499	6959.95	6976.35	292300	6976.35
12-02-2016	7023.65	7034.7998	6869	6980.95	333900	6980.95
15-02-2016	7057.35	7182.7998	7056.8	7162.95	354200	7162.95
16-02-2016	7201.25	7204.6499	7037.7	7048.25	253800	7048.25
17-02-2016	7058.85	7123.7002	6960.65	7108.45	260000	7108.45
18-02-2016	7177.4	7215.1001	7127.85	7191.75	246700	7191.75

19-02-2016	7170.55	7226.8501	7145.95	7210.75	192300	7210.75
22-02-2016	7208.85	7252.3999	7200.7	7234.55	154400	7234.55
23-02-2016	7240.3	7241.7002	7090.7	7109.55	194400	7109.55
24-02-2016	7075	7090.7998	7009.75	7018.7	199700	7018.7
25-02-2016	7029.85	7034.2002	6961.4	6970.6	283100	6970.6
26-02-2016	7039.3	7052.8999	6985.1	7029.75	206700	7029.75
29-02-2016	7050.45	7094.6001	6825.8	6987.05	473400	6987.05
01-03-2016	7038.25	7235.5	7035.1	7222.3	275100	7222.3
02-03-2016	7321.7	7380.3501	7308.15	7368.85	338500	7368.85
03-03-2016	7429.55	7483.9502	7406.05	7475.6	278600	7475.6
04-03-2016	7505.4	7505.8999	7444.1	7485.35	281700	7485.35
08-03-2016	7486.4	7527.1499	7442.15	7485.3	257000	7485.3
09-03-2016	7436.1	7539	7424.3	7531.8	245100	7531.8
10-03-2016	7545.35	7547.1001	7447.4	7486.15	224700	7486.15
11-03-2016	7484.85	7543.9502	7460.6	7510.2	198700	7510.2
14-03-2016	7542.6	7583.7002	7515.05	7538.75	166900	7538.75
15-03-2016	7535.85	7545.2002	7452.8	7460.6	193700	7460.6
16-03-2016	7457.05	7508	7405.15	7498.75	195400	7498.75
17-03-2016	7557.4	7585.2998	7479.4	7512.55	239600	7512.55
18-03-2016	7534.65	7613.6001	7517.9	7604.35	237400	7604.35
21-03-2016	7619.2	7713.5498	7617.7	7704.25	196800	7704.25
22-03-2016	7695.55	7728.2002	7643.8	7714.9	208900	7714.9
23-03-2016	7717.45	7726.8501	7670.6	7716.5	199600	7716.5
28-03-2016	7741	7749.3999	7587.7	7615.1	242400	7615.1
29-03-2016	7606.55	7652.8999	7582.25	7597	216800	7597
30-03-2016	7651.1	7741.9502	7643.45	7735.2	232600	7735.2
31-03-2016	7727.65	7777.6001	7702	7738.4	380100	7738.4

For computing the beta using the above information, we need to compute the daily returns both for the stock i.e. Tata Steel and the index i.e. Nifty 50 by applying the following formula:

% Daily Return =

(Current Day Adjusted Close Price - Previous Day Adjusted Close Price)/

The daily returns for Tata Steel as well as Nifty 50 have been computed below for demonstration purpose:

Tata Steel							
Date	*Open*	*High*	*Low*	*Close*	*Volume*	*Adj Close*	*Daily Returns*
01-10-2015	215	216	210	212	48,72,900	212	
05-10-2015	215	226	214	225	81,21,300	225	6%
06-10-2015	228	229	223	228	73,59,800	228	1%
07-10-2015	225	238	224	237	98,38,500	237	4%
08-10-2015	238	243	236	241	89,15,500	241	2%
09-10-2015	242	253	242	251	1,05,20,000	251	4%
12-10-2015	255	262	250	251	1,05,70,000	251	0%
13-10-2015	248	249	243	245	58,21,200	245	-2%
14-10-2015	244	253	244	248	62,90,100	248	1%
15-10-2015	249	257	248	255	70,08,000	255	3%
16-10-2015	256	257	248	253	53,26,500	253	-1%
19-10-2015	253	254	247	248	44,78,300	248	-2%
20-10-2015	247	249	240	241	52,48,500	241	-3%
21-10-2015	242	246	238	244	80,42,200	244	1%
23-10-2015	247	252	244	246	50,05,800	246	1%
26-10-2015	247	252	246	250	41,88,000	250	1%
27-10-2015	249	250	244	246	34,03,600	246	-1%

28-10-2015	245	249	244	247	34,36,900	247	0%
29-10-2015	246	251	245	248	45,89,000	248	0%
30-10-2015	248	255	245	247	61,73,200	247	0%
02-11-2015	247	247	236	239	49,09,500	239	-3%
03-11-2015	242	243	235	236	44,92,700	236	-1%
04-11-2015	239	240	234	235	48,61,300	235	0%
05-11-2015	236	236	224	225	88,01,600	225	-4%
06-11-2015	219	222	215	220	99,06,300	220	-2%
09-11-2015	215	224	213	222	62,72,600	222	1%
10-11-2015	221	222	217	218	45,36,400	218	-2%
11-11-2015	218	218	218	218	-	218	0%
13-11-2015	219	224	217	223	44,26,900	223	2%
16-11-2015	223	232	220	231	69,23,300	231	4%
17-11-2015	232	236	231	235	52,40,900	235	2%
18-11-2015	234	235	225	226	52,83,600	226	-4%
19-11-2015	228	230	226	229	36,61,100	229	1%
20-11-2015	228	233	228	230	38,59,400	230	1%
23-11-2015	231	231	223	224	41,02,300	224	-2%
24-11-2015	223	226	223	224	41,79,000	224	0%
26-11-2015	226	230	224	228	45,88,000	228	2%
27-11-2015	228	235	228	231	53,93,000	231	1%
30-11-2015	232	234	229	230	45,56,700	230	-1%
01-12-2015	231	239	230	238	65,86,500	238	3%
02-12-2015	240	246	238	244	88,58,300	244	3%
03-12-2015	240	244	237	240	71,07,800	240	-2%
04-12-2015	238	244	237	240	55,38,100	240	0%

07-12-2015	245	248	242	244	49,36,400	244	1%
08-12-2015	242	243	234	235	45,45,900	235	-4%
09-12-2015	234	236	225	227	47,27,600	227	-3%
10-12-2015	227	235	227	233	48,04,800	233	3%
11-12-2015	235	244	235	241	1,19,22,400	241	3%
14-12-2015	239	249	238	245	1,13,14,400	245	2%
15-12-2015	247	247	241	244	52,18,800	244	0%
16-12-2015	247	249	242	245	57,59,800	245	0%
17-12-2015	247	258	246	257	1,21,12,200	257	5%
18-12-2015	257	258	254	256	69,44,200	256	-1%
21-12-2015	256	261	255	258	61,95,200	258	1%
22-12-2015	259	262	257	257	45,44,200	257	0%
23-12-2015	262	266	262	264	77,02,900	264	3%
24-12-2015	266	266	261	263	38,43,700	263	0%
28-12-2015	264	264	253	254	53,17,600	254	-4%
29-12-2015	256	257	253	255	38,00,500	255	0%
30-12-2015	256	262	255	259	68,12,700	259	1%
31-12-2015	260	261	257	260	44,46,600	260	0%
04-01-2016	255	263	253	257	69,81,400	257	-1%
05-01-2016	258	276	258	274	1,50,08,900	274	7%
06-01-2016	273	275	266	269	74,54,700	269	-2%
07-01-2016	263	263	248	250	95,03,700	250	-7%
08-01-2016	252	256	249	254	62,99,400	254	1%
11-01-2016	247	253	244	252	60,85,300	252	-1%
12-01-2016	253	255	243	246	54,25,300	246	-2%
13-01-2016	249	252	237	247	74,82,400	247	0%

14-01-2016	235	243	232	239	88,84,800	239	-3%
15-01-2016	243	243	228	230	59,91,600	230	-4%
18-01-2016	230	244	225	236	84,17,400	236	3%
19-01-2016	238	241	231	238	63,04,100	238	1%
20-01-2016	233	234	227	232	54,86,800	232	-3%
21-01-2016	235	239	231	236	62,45,300	236	2%
22-01-2016	238	251	238	248	65,10,700	248	5%
25-01-2016	249	256	249	255	55,76,500	255	3%
27-01-2016	255	260	253	258	62,35,600	258	1%
28-01-2016	257	258	252	254	60,16,700	254	-1%
29-01-2016	255	259	247	250	67,47,900	250	-2%
01-02-2016	249	255	247	249	44,20,700	249	0%
02-02-2016	250	251	230	231	83,88,400	231	-7%
03-02-2016	228	234	221	224	77,91,500	224	-3%
04-02-2016	224	229	219	226	1,17,09,400	226	1%
05-02-2016	216	238	216	234	2,58,03,300	234	3%
08-02-2016	239	244	232	234	1,03,32,400	234	0%
09-02-2016	231	237	230	236	75,62,800	236	1%
10-02-2016	235	238	227	236	76,16,000	236	0%
11-02-2016	236	237	221	225	61,51,600	225	-5%
12-02-2016	226	229	211	218	93,73,700	218	-3%
15-02-2016	222	248	222	247	1,36,02,300	247	13%
16-02-2016	250	252	243	245	91,46,800	245	-1%
17-02-2016	245	253	238	251	82,95,400	251	3%
18-02-2016	255	257	243	251	94,59,300	251	0%
19-02-2016	249	254	247	253	67,70,600	253	1%

22-02-2016	254	258	252	255	48,10,300	255	1%
23-02-2016	256	262	252	254	84,52,300	254	-1%
24-02-2016	251	254	247	248	47,43,800	248	-2%
25-02-2016	247	250	245	248	55,88,100	248	0%
26-02-2016	250	252	243	248	53,36,800	248	0%
29-02-2016	247	264	245	249	98,50,400	249	0%
01-03-2016	250	258	247	257	71,11,200	257	3%
02-03-2016	260	270	260	268	76,45,600	268	4%
03-03-2016	273	289	272	287	1,75,33,000	287	7%
04-03-2016	289	291	285	289	91,70,100	289	1%
08-03-2016	288	297	287	292	92,81,500	292	1%
09-03-2016	284	297	281	295	1,01,58,400	295	1%
10-03-2016	296	301	293	297	85,56,900	297	0%
11-03-2016	296	298	290	294	76,33,600	294	-1%
14-03-2016	296	300	295	297	44,45,300	297	1%
15-03-2016	297	302	294	300	69,78,000	300	1%
16-03-2016	300	303	294	300	70,39,300	300	0%
17-03-2016	305	306	295	296	80,05,500	296	-1%
18-03-2016	300	303	297	302	73,14,400	302	2%
21-03-2016	302	306	301	304	56,51,700	304	0%
22-03-2016	303	312	301	310	65,79,000	310	2%
23-03-2016	312	318	311	317	63,77,700	317	2%
28-03-2016	318	318	297	299	90,69,700	299	-6%
29-03-2016	300	308	300	304	59,37,100	304	2%
30-03-2016	309	326	305	324	1,24,38,800	324	7%
31-03-2016	325	325	314	320	1,33,49,900	320	-1%

Nifty 50							
Date	Open	High	Low	Close	Volume	Adj Close	Daily Returns
01-10-2015	7,992	8,008	7,931	7,951	1,56,900	7,951	
05-10-2015	8,005	8,129	8,005	8,119	1,83,100	8,119	2%
06-10-2015	8,180	8,181	8,097	8,153	1,78,500	8,153	0%
07-10-2015	8,146	8,189	8,133	8,177	1,93,900	8,177	0%
08-10-2015	8,197	8,197	8,106	8,129	1,71,700	8,129	-1%
09-10-2015	8,186	8,232	8,140	8,190	1,99,700	8,190	1%
12-10-2015	8,232	8,245	8,128	8,144	1,99,100	8,144	-1%
13-10-2015	8,122	8,150	8,089	8,132	1,45,900	8,132	0%
14-10-2015	8,102	8,139	8,096	8,108	1,38,900	8,108	0%
15-10-2015	8,134	8,191	8,130	8,180	1,67,200	8,180	1%
16-10-2015	8,194	8,246	8,148	8,238	1,56,400	8,238	1%
19-10-2015	8,263	8,283	8,239	8,275	1,24,500	8,275	0%
20-10-2015	8,280	8,294	8,229	8,262	1,55,100	8,262	0%
21-10-2015	8,258	8,294	8,217	8,252	1,44,800	8,252	0%
23-10-2015	8,308	8,328	8,281	8,295	1,52,000	8,295	1%
26-10-2015	8,334	8,336	8,252	8,261	1,33,900	8,261	0%
27-10-2015	8,230	8,242	8,217	8,233	1,56,700	8,233	0%
28-10-2015	8,189	8,209	8,132	8,171	1,88,900	8,171	-1%
29-10-2015	8,175	8,180	8,098	8,112	2,17,500	8,112	-1%
30-10-2015	8,124	8,146	8,044	8,066	1,99,500	8,066	-1%
02-11-2015	8,055	8,061	7,996	8,051	1,36,100	8,051	0%
03-11-2015	8,086	8,100	8,032	8,061	1,32,500	8,061	0%
04-11-2015	8,105	8,116	8,027	8,040	1,22,100	8,040	0%
05-11-2015	8,030	8,031	7,944	7,955	1,32,100	7,955	-1%
06-11-2015	7,957	8,003	7,926	7,954	2,19,500	7,954	0%
09-11-2015	7,788	7,938	7,772	7,915	2,11,800	7,915	0%
10-11-2015	7,878	7,885	7,773	7,783	1,65,200	7,783	-2%
11-11-2015	7,839	7,848	7,819	7,825	21,700	7,825	1%

13-11-2015	7,762	7,775	7,731	7,762	1,60,900	7,762	-1%
16-11-2015	7,733	7,839	7,714	7,807	1,49,500	7,807	1%
17-11-2015	7,849	7,860	7,793	7,838	1,45,000	7,838	0%
18-11-2015	7,823	7,843	7,725	7,732	1,43,600	7,732	-1%
19-11-2015	7,789	7,855	7,765	7,843	1,32,600	7,843	1%
20-11-2015	7,842	7,907	7,818	7,857	1,51,900	7,857	0%
23-11-2015	7,870	7,878	7,825	7,849	1,27,000	7,849	0%
24-11-2015	7,837	7,870	7,813	7,832	1,30,600	7,832	0%
26-11-2015	7,837	7,897	7,832	7,884	2,19,800	7,884	1%
27-11-2015	7,911	7,959	7,879	7,943	1,50,300	7,943	1%
30-11-2015	7,936	7,966	7,923	7,935	2,16,300	7,935	0%
01-12-2015	7,958	7,972	7,934	7,955	1,38,600	7,955	0%
02-12-2015	7,977	7,979	7,911	7,931	1,26,300	7,931	0%
03-12-2015	7,902	7,912	7,853	7,864	1,25,700	7,864	-1%
04-12-2015	7,818	7,821	7,776	7,782	1,52,500	7,782	-1%
07-12-2015	7,817	7,825	7,746	7,765	1,37,600	7,765	0%
08-12-2015	7,739	7,771	7,685	7,702	1,35,100	7,702	-1%
09-12-2015	7,696	7,703	7,607	7,613	1,40,000	7,613	-1%
10-12-2015	7,643	7,692	7,610	7,683	1,40,800	7,683	1%
11-12-2015	7,700	7,703	7,575	7,610	1,67,800	7,610	-1%
14-12-2015	7,558	7,664	7,551	7,650	1,48,900	7,650	1%
15-12-2015	7,659	7,705	7,625	7,701	1,34,300	7,701	1%
16-12-2015	7,725	7,777	7,716	7,751	1,54,300	7,751	1%
17-12-2015	7,783	7,853	7,738	7,844	1,75,900	7,844	1%
18-12-2015	7,829	7,836	7,753	7,762	1,91,400	7,762	-1%
21-12-2015	7,746	7,841	7,733	7,834	1,26,300	7,834	1%
22-12-2015	7,829	7,846	7,777	7,786	1,25,700	7,786	-1%
23-12-2015	7,830	7,871	7,826	7,866	1,17,900	7,866	1%
24-12-2015	7,889	7,889	7,836	7,861	93,500	7,861	0%
28-12-2015	7,863	7,937	7,863	7,925	1,22,900	7,925	1%
29-12-2015	7,929	7,942	7,903	7,929	1,13,000	7,929	0%
30-12-2015	7,939	7,945	7,890	7,896	1,06,800	7,896	0%

31-12-2015	7,898	7,956	7,891	7,946	1,50,900	7,946	1%
04-01-2016	7,925	7,938	7,781	7,791	1,34,700	7,791	-2%
05-01-2016	7,828	7,831	7,763	7,785	1,45,200	7,785	0%
06-01-2016	7,788	7,801	7,721	7,741	1,47,100	7,741	-1%
07-01-2016	7,673	7,675	7,557	7,568	1,88,900	7,568	-2%
08-01-2016	7,612	7,634	7,581	7,601	1,57,400	7,601	0%
11-01-2016	7,527	7,605	7,494	7,564	1,89,000	7,564	0%
12-01-2016	7,587	7,588	7,488	7,510	1,63,900	7,510	-1%
13-01-2016	7,558	7,591	7,426	7,562	2,15,200	7,562	1%
14-01-2016	7,467	7,605	7,444	7,537	2,00,800	7,537	0%
15-01-2016	7,562	7,567	7,427	7,438	1,97,500	7,438	-1%
18-01-2016	7,420	7,464	7,336	7,351	2,33,600	7,351	-1%
19-01-2016	7,382	7,463	7,364	7,435	1,88,300	7,435	1%
20-01-2016	7,357	7,471	7,242	7,309	2,25,600	7,309	-2%
21-01-2016	7,377	7,399	7,250	7,277	2,40,700	7,277	0%
22-01-2016	7,356	7,433	7,328	7,422	2,29,200	7,422	2%
25-01-2016	7,469	7,487	7,421	7,436	16,31,56,900	7,436	0%
27-01-2016	7,470	7,478	7,420	7,438	1,87,600	7,438	0%
28-01-2016	7,427	7,469	7,410	7,425	2,74,500	7,425	0%
29-01-2016	7,413	7,576	7,403	7,564	2,98,700	7,564	2%
01-02-2016	7,590	7,600	7,541	7,556	2,00,400	7,556	0%
02-02-2016	7,567	7,576	7,428	7,456	2,30,200	7,456	-1%
03-02-2016	7,392	7,419	7,350	7,362	1,92,000	7,362	-1%
04-02-2016	7,411	7,457	7,366	7,404	2,22,700	7,404	1%
05-02-2016	7,418	7,503	7,407	7,489	2,49,800	7,489	1%
08-02-2016	7,490	7,513	7,363	7,387	1,71,500	7,387	-1%
09-02-2016	7,304	7,323	7,275	7,298	2,12,100	7,298	-1%
10-02-2016	7,264	7,272	7,178	7,216	2,46,900	7,216	-1%
11-02-2016	7,204	7,209	6,960	6,976	2,92,300	6,976	-3%
12-02-2016	7,024	7,035	6,869	6,981	3,33,900	6,981	0%
15-02-2016	7,057	7,183	7,057	7,163	3,54,200	7,163	3%
16-02-2016	7,201	7,205	7,038	7,048	2,53,800	7,048	-2%

17-02-2016	7,059	7,124	6,961	7,108	2,60,000	7,108	1%
18-02-2016	7,177	7,215	7,128	7,192	2,46,700	7,192	1%
19-02-2016	7,171	7,227	7,146	7,211	1,92,300	7,211	0%
22-02-2016	7,209	7,252	7,201	7,235	1,54,400	7,235	0%
23-02-2016	7,240	7,242	7,091	7,110	1,94,400	7,110	-2%
24-02-2016	7,075	7,091	7,010	7,019	1,99,700	7,019	-1%
25-02-2016	7,030	7,034	6,961	6,971	2,83,100	6,971	-1%
26-02-2016	7,039	7,053	6,985	7,030	2,06,700	7,030	1%
29-02-2016	7,050	7,095	6,826	6,987	4,73,400	6,987	-1%
01-03-2016	7,038	7,236	7,035	7,222	2,75,100	7,222	3%
02-03-2016	7,322	7,380	7,308	7,369	3,38,500	7,369	2%
03-03-2016	7,430	7,484	7,406	7,476	2,78,600	7,476	1%
04-03-2016	7,505	7,506	7,444	7,485	2,81,700	7,485	0%
08-03-2016	7,486	7,527	7,442	7,485	2,57,000	7,485	0%
09-03-2016	7,436	7,539	7,424	7,532	2,45,100	7,532	1%
10-03-2016	7,545	7,547	7,447	7,486	2,24,700	7,486	-1%
11-03-2016	7,485	7,544	7,461	7,510	1,98,700	7,510	0%
14-03-2016	7,543	7,584	7,515	7,539	1,66,900	7,539	0%
15-03-2016	7,536	7,545	7,453	7,461	1,93,700	7,461	-1%
16-03-2016	7,457	7,508	7,405	7,499	1,95,400	7,499	1%
17-03-2016	7,557	7,585	7,479	7,513	2,39,600	7,513	0%
18-03-2016	7,535	7,614	7,518	7,604	2,37,400	7,604	1%
21-03-2016	7,619	7,714	7,618	7,704	1,96,800	7,704	1%
22-03-2016	7,696	7,728	7,644	7,715	2,08,900	7,715	0%
23-03-2016	7,717	7,727	7,671	7,717	1,99,600	7,717	0%
28-03-2016	7,741	7,749	7,588	7,615	2,42,400	7,615	-1%
29-03-2016	7,607	7,653	7,582	7,597	2,16,800	7,597	0%
30-03-2016	7,651	7,742	7,643	7,735	2,32,600	7,735	2%
31-03-2016	7,728	7,778	7,702	7,738	3,80,100	7,738	0%

By applying the formula Beta (β) = Covariance (X, Y)/ Variance (Y) where, X = Stock Return and Y = Index Return, we get the Beta as 1.72.

> Unlevered Beta = Beta(β)/[1+Debt/Equity*(1-Tax Rate)]

The above-mentioned method is applicable if the company you are valuing is listed. What if you want to value a private company, where the stock returns are not available. In such a case, the first step is to identify the sector that the company you are valuing is operating within. Then identify the comparable listed peers of the company in the respective sector on the basis of product profile, geography of operations and the risk that they are exposed to. After identifying the peers, we have to compute their beta which would give us the relative risk of the comparable companies. However, as the comparable companies wouldn't necessarily have an identical capital structure as the unlisted company, we need to remove the impact of leverage by unlevering the beta. The formula for unlevering the beta is :

> Levered Beta = Unlevered Beta*[1+Debt/Equity*(1-Tax Rate)]

After we have collated the unlevered beta for all the comparable companies, we compute the industry average/median unlevered beta. The industry average/median unlevered beta is then re-levered using the unlisted company's debt-equity ratio to arrive at the beta of the unlisted company. The formula for re-levering the beta is mentioned below:

Now that, we have walked through the process of computing beta for listed as well as unlisted entities, the input needs to be inserted in the CAPM model, to arrive at the cost of equity using the below mentioned formula:

> Cost of Equity = Risk-Free Rate + Beta x (Market Return - Risk-Free Rate)
>
> $Ke = Rf + β * (Rm-Rf)$

Valuation of Preference Shares

With the Indian accounting requirements moving from Indian Generally Accepted Accounting Principles ('I-GAAP') to Indian Accounting Standards ('Ind AS'), a critical change is the requirement to recognize financial instruments at their fair value (albeit with few exceptions) in the financial statements as at the reporting date. This Chapter attempts to discuss Valuation of preference shares, a common financial instrument appearing in the financial statements. The following Ind AS standards apply to them:

- **Ind AS 32**: Presentation and classification of financial instruments;

- **Ind AS 109**: Recognition, de-recognition, classification and measurement of financial instruments;

- **Ind AS 113**: Principles of fair value measurement that would be applicable to financial instruments;

- **Ind AS 107**: Disclosures required with respect to financial instruments.

With respect to fair value measurement of preference share, we rely primarily on the principles discussed in Ind AS 113 and terms of its measurement as indicated in Ind AS 109.

Key Characteristics of Preference Shares

There are 3 main characteristics which define and drive a preference share Valuation – nature of coupon, redemption terms and conversion terms.

1. *Coupon:* Coupon can be zero, cumulative or non-cumulative. Additionally, one might see instances involving moratorium in accrual/ payment of coupon for a part of the preference share tenure.

2. *Redemption:* Redemption is the settlement in cash, either at maturity or in an amortizing fashion over multiple redemption dates. Redemption may be defined in terms of a fixed redemption premium, but far more popular option is to define it by an effective IRR requirement, with redemption premium quantum getting adjusted for coupon payments already made prior to redemption.

3. *Conversion:* Conversion indicates settlement in equity shares of the Issuer. Conversion may be defined in terms of a fixed or formula driven conversion ratio/ price.

Combinations of the above characteristics lead to various types of preference shares and this Chapter discusses Valuation of the following:

1. Redeemable preference shares ('RPS');

2. Compulsorily convertible preference shares ('CCPS');

3. Optionally convertible preference shares ('OCPS');

Valuation

Before we discuss Valuation of preference shares, it will be useful to have a quick look at three classical Valuation approaches and some thoughts on Valuation approach, which are typically applied in business Valuation and can be extended to financial instruments as well.

Income Approach: The discounted cashflow (DCF) analysis is the primary methodology used for Valuation of preference shares. Two inputs to the DCF model are cash-flows and the discount factor. Cash-flows are defined as per coupon, redemption and conversion terms of the underlying preference share. A Valuer must assess the achievability of the cash-flows required to service the coupon and redemption premiums indicated in the term sheet of preference shares. For the purpose of our discussions in this Chapter we have assumed that the company issuing the preference shares would have access to sufficient cash-flows. Discount factor is based on market yield that a comparable instrument will need to offer to raise funds as at the Valuation Date.

Market Approach: Convertible preference shares issued in the time vicinity of the Valuation date can be used as indicators of price, especially in case of redeemable preference shares. However, our quick assessment of the listed preference shares market in India indicates that the market lacks the depth. Most of the preference shares are privately placed and full feature disclosure is not available in the public domain. Further, trade information/ frequency in case of listed preference shares is low. This poses a challenge to carrying out any meaningful analysis based on comparable transaction method.

Cost Approach: Ind AS 109 allows recognizing financial asset/ liabilities through the amortized cost method, under specific circumstances, when the

concept of SPPI (Solely held to collect principal and interest) is fully satisfied. This approach is not discussed further here.

Also, it would be relevant to observe that Valuation of certain preference shares (especially those involving conversion) could require business/ equity Valuations, which is outside the scope of this Chapter. We assume that the reader is aware of business/ equity Valuation principles and the required Valuation numbers are available with the Valuer. Secondly, this Chapter discusses Valuations largely from the perspective of investor who has invested in to the preference shares.

Valuation of Preference Shares

Redeemable Preference Share (RPS)

Three variations can be noted on the basis of the nature of the coupon and redemption premium:

1.   Zero coupon redeemable preference share;

2.   Non-cumulative redeemable preference share;

3.   Cumulative redeemable preference share.

We have provided hereunder the illustrative workings on how each type, listed above, can be fair valued.

1.   Company A has issued a redeemable preference share to Company B. The RPS is zero coupon, with redemption IRR of 0%. It was issued on 31 March 2017 and will mature 5 years from the Issue date, i.e., 31 March 2022. A fair Valuation is required as at 29 March 2019.

In order to estimate the fair value of the RPS on 29 March 2019, the fair value yield as on 29 March 2019 has to be re-estimated. Further, as discussed earlier, it is assumed that the Company A has sufficient cash-flows to honor these preference shares.

Re-assessment of the yield can be done from two starting points:

Option 1: If comparable preference shares (w.r.t. features) has been issued close to the Valuation date, then the yield indicated by the transaction can be referred. The Valuer must ensure that the aforesaid preference share transaction should be recent, should be at arm's-length and in the same currency as those issued by Company A.

Option 2: If Option 1 cannot be applied (due to non-availability of data), bond yields for comparable credit rating as that of Company A can be used as a starting point. Bond yield can be based on comparable bonds (of similar credit rating as Company A), if recently traded data as at the Valuation date is available. However, if sufficient/ reliable data is not available, the Valuer may choose to compute the bond yield based on methodology prescribed in the FIMMDA Valuation of Investments circular dated 29 March 2019. The bond yield is thereafter grossed up for the tax benefit (dividend on preference shares is tax free in the hands of the investor), in accordance with the guidance presented for tax free bonds in the FIMMDA Valuation of Investments circular dated 29 March 2019, in the case where there is no redemption premium[13]. The bond yield is thereafter adjusted for subordinated status to bonds[14] to arrive at the yield that can be used for the fair Valuation of the Company A RPS as at the Valuation date.

Re-assessed yield determination - in case of no redemption premium

Particulars	31-Mar-19	Comments
Residual tenor	3 years	
Risk free rate	6.77%	*Based on zero coupon yield curve published on the FIMMDA website*
Credit spread	5.96%	*say Company A has a BBB- rating*
	12.73%	
Grossed up for tax rate (no redemption premium)	8.15%	Assumed 35.95% tax rate
Adjusted for subordinated status to bonds	10.15%	Assumed 2% top up

	In INR
Dates	**Cashflows**
31-Mar-17	(100.0)
29-May-19	-
31-Mar-22	100.0
IRR	0.0%
Valuation date	29-Mar-19
Re-assessed yield*	10.2%
Fair value of RPS	**76.0**

* Valuer re-assessed yield as at the Valuation Date

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[13] In cases where there is a redemption premium, the bond yield will need to be assessed in view of long term capital gains tax applicability.

[14] In our experience, the Valuers have made an addition of 1-2% to discount rate to adjust for subordinated status of preference shares to bonds/ debt instruments.

2. The RPS has a non-cumulative coupon of 15%. It was issued on 31 March 2017 and will mature 5 years from the Issue date, i.e., 31 March 2022. A fair Valuation is required as at 29 March 2019.

    It would be relevant to observe that dividend on preference shares, if not paid, does not accrue. Depending on cash-flows generation in the business, it is possible to argue that dividend for certain years may not be paid. In such a case, dividend not expected to be paid, should be excluded from the RPS cash-flows, as no compensatory payment can be made in the future years.

    The yield assessment is in-line with the options available to ZCRPS as mentioned above. The key point of difference is the usage of the par yield (i.e. bonds which have regular coupon payment frequency) instead of the zero coupon yield data. The zero coupon yield curve will be at a premium to the par yield curve, mainly because the absence of regular coupon payment increases the credit risk of the instrument and hence, the choice of curve is important to note.

		In INR
Dates	**RPS Contractual Cashflows**	**Cashflows if dividend not expected to be received for FY19**
31-Mar-17	(100.0)	(100.0)
31-Mar-18	15.0	-
29-Mar-19	-	-
31-Mar-19	15.0	-
31-Mar-20	15.0	15.0
31-Mar-21	15.0	15.0
31-Mar-22	115.0	115.0
IRR	15.0%	
Valuation date	29-Mar-19	
Re-assessed yield	10.0%	
Fair value estimates	**127.3**	**112.3**

3. The RPS has a cumulative coupon of 15%. It was issued on 31 March 2017 and will mature 5 years from the Issue date, i.e. 31 March 2022. A fair Valuation is required as at 29 March 2019.

    The yield assessment is in-line with the options available to non-cumulative yield. The table below presents the contractual cash-flows and cash-flows considering FY18 dividend, which is expected to be received together with FY19 dividend.

Valuation: Professionals' Insight

<div align="right">In INR</div>

Dates	Contruactual cashflows	Cashflows - FY18 cashflows expected to come in FY19
31-Mar-17	(100.0)	(100.0)
31-Mar-18	15.0	-
29-Mar-19	-	-
31-Mar-19	15.0	30.0
31-Mar-20	15.0	15.0
31-Mar-21	15.0	15.0
31-Mar-22	115.0	115.0
IRR	15.0%	
Valuation date	29-Mar-19	
Re-assessed yield	10.0%	
Fair value estimates	**127.3**	**142.3**

Compulsorily Convertible Preference Shares (CCPS):

The variation in the nature of coupons – i.e., zero, non-cumulative and cumulative remains relevant in the case of CCPS as well and should be assessed in line with the discussions presented in the RPS section of this note.

A further step in the CCPS fair Valuation is the factoring in of the conversion terms. Conversion terms could be of the following types:

1. Conversion price is equal to fair value of the underlying share;

2. Conversion ratio is 1:1;

3. Either conversion ratio or conversion price is based on a formula (generally linked to revenue or profit achieved at maturity)

We have provided below illustrative working on how each type, listed above, can be fair valued.

1. Company A has issued a Compulsorily Convertible Preference Share ('CCPS') to Company B. The CCPS has a cumulative compounding coupon of 0.1%. The CCPS will be compulsorily convertible into equity shares of Company A at the maturity date. The Conversion price is equal to the fair value of the equity share of Company A. CCPS was issued on 31 March 2017 and will mature 5 years from the Issue date, i.e. 31 March 2022. A fair Valuation is required as at 29 March 2019.

    In this example, the accrued dividend and principal on the maturity date would be divided by the then fair value per share of Company A to arrive at the number of shares. The fair value of the CCPS is therefore nothing but the rolled up (for coupon) principal amount as at the Valuation date.

2. Company A has issued a Compulsorily Convertible Preference Share ('CCPS') to Company B. The CCPS has a cumulative coupon of 0.1%. The CCPS will be compulsorily convertible into equity shares of Company A at the maturity date. Conversion ratio is 1:1, i.e., each preference share shall convert into one equity share of Company A. CCPS was issued on 31 March 2017 and will mature 5 years from the Issue date, i.e., 31 March 2022. A fair Valuation is required as at 29 March 2019.

   The above instrument is considered quasi equity. Since the conversion ratio is fixed at 1:1, the fair value of each CCPS is nothing but the fair value per share of Company A as at the Valuation date. There is an argument to consider discount to the fair value per share of Company A to reflect the lack in marketability till the maturity date.

3. Company A has issued a Compulsorily Convertible Preference Share ('CCPS') to Company B. The CCPS has a cumulative compounding coupon of 0.1%. The CCPS will be compulsorily convertible into equity shares of Company A at the maturity date. Conversion ratio is linked to achievement of actual performance (say, EBITDA) by Company A at maturity date, i.e., each preference share shall convert to X equity shares of Company A. And, X is based on EBITDA at maturity date. CCPS was issued on 31 March 2017 and will mature 5 years from the Issue date, i.e. 31 March 2022. A fair Valuation is required as at 29 March 2019.

   Expected conversion ratio as at the maturity date, needs to be estimated on the Valuation date. There are two solutions (while many other variants may be considered) on how the EBITDA at maturity should be determined

   Solution 1: Deterministic: EBITDA based on future projections as prepared by the management of Company A. The expected conversion ratio is worked out based on this expected EBITDA in FY22. The fair value of the CCPS on the Valuation date is the aforementioned expected conversion ratio multiplied with fair value per share of Company A as at the Valuation date.

   Solution 2: Simulated: Possible equity values of Company A as at the maturity date can be simulated using Monte Carlo simulations – Black Scholes framework. For each EBITDA, a simulated conversion

ratio is computed. The fair value of the CCPS on the Valuation Date is the average of the aforementioned expected conversion ratios multiplied with fair value per share of Company A as at the Valuation Date.

Note: Sensitivity of the end result to the profitability multiple should be assessed and quantified.

The usage of either solutions enumerated above is debatable. One might argue that Solution 1 is easy to implement and regular re-Valuation exercise takes it closer to the payoff achieved at maturity. Solution 1 however does not consider probability of occurrence weighted scenarios for the EBITDA values at maturity and therefore is generally further away from the true price than Solution 2 on a given Valuation Date. Solution 2 requires technical knowledge w.r.t implementation of the Monte Carlo simulation.

The examples above make a simplistic assumption w.r.t the conversion being allowed only at maturity. There might be cases of conversion at the option of the Investor, which adds to the complexity of the fair Valuation of the CCPS. Option models which allow for scenario analysis such as Binomial model and Monte Carlo models can be used to model these complexities.

Optionally convertible redeemable preference shares (OCRPS)

The variations in the nature of coupons – i.e zero, non-cumulative and cumulative remain relevant in the case of OCRPS as well and should be assessed in line with the discussion presented in the RPS section of this Chapter.

A further step in the OCRPS fair Valuation is the factoring in of the choice between redemption and conversion that the investor is faced with. The following are the types:

1. Redemption value at maturity date is assessed at the accrued unpaid value, conversion is at fair value of the underlying share;

2. Redemption value at maturity date is assessed at the accrued unpaid value, conversion ratio is 1:1;

3. Redemption value at maturity date is assessed at the accrued unpaid value, either conversion ratio or conversion price is based on a formula (generally linked to revenue or profit achieved at maturity)

We have provided hereunder illustrative working on how each type, listed above, can be fair valued

1. Company A has issued an optionally convertible redeemable preference share (OCRPS). The OCRPS has a cumulative compounding coupon of 10%. The OCRPS will be can be either redeemed or converted at the option of Company B. Redemption value at the maturity date is the accrued value of the investment. Conversion is the accrued value of investment divided by the fair value of the underlying share as at the maturity date. OCRPS was issued on 31 March 2017 and will mature 5 years from the Issue date, i.e., 31 March 2022. A fair Valuation is required as at 29 March 2019. As OCRPS are convertible into equity shares at fair value of equity shares, accrued amount of OCRPS is equal to their fair value as on Valuation Date.

2. Company A has issued an optionally convertible redeemable preference share (OCRPS) to Company B. The OCRPS has a cumulative compounding coupon of 10%. The OCRPS will be can be either redeemed or converted at the option of Company B. Redemption value at the maturity date is the accrued value of the investment. Conversion ratio is 1:10. OCRPS was issued on 31 March 2017 and will mature 5 years from the Issue date, i.e. 31 March 2022. A fair Valuation is required as at 29 March 2019.

Valuation: Professionals' Insight

	In INR

Dates	Accrued value
31-Mar-17	(100.0)
31-Mar-18	110.0
31-Mar-19	121.0
31-Mar-20	133.1
31-Mar-21	146.4
31-Mar-22	161.1

Face value/ preference share	10	INR
# preference shares	10	(A)
Value derived through redemption (as at maturity date)	161.1	(B)
Value derived through conversion (as at maturity date)	161.1	(C)
Discount factor (@ 7%, as at 31-Mar-19 for residual tenor)	0.8163	(D)
Fair value of OCRPS/ share	13.1	(B)*(D)/(A) or (C)*(D)/(A)

Dates	Accrued value	
31-Mar-17	(100.0)	
31-Mar-18	110.0	
31-Mar-19	121.0	
31-Mar-20	133.1	
31-Mar-21	146.4	
31-Mar-22	161.1	(A)

Face value/ preference share	10	INR
# preference shares	10	(B)
Value derived through redemption/ preference share (as at maturity date)	13.1	(C) = Present Value ((A)/(B))
Fair value/ share of Company B @ Valuation Date	12.0	
Strike price	13.1	(C)
Risk free rate	7.0%	
Dividend yield	0.0%	
Volatility	20.0%	
Residual tenor	3.0	
Call option value	1.2	(D)
Fair value of OCRPS/ share	14.4	(C)+(D)

The call option captures the upside that the investor might get to participate over and above the value accrued through the redemption route.

3. Company A has issued an optionally convertible redeemable preference share (OCRPS) to Company B. The OCRPS has a cumulative compounding coupon of 10%. The OCRPS will be can be either redeemed or converted at the option of Company B. Redemption value at the maturity date is the accrued value of the investment. Conversion ratio is linked to achievement of a particular EBITDA by Company A at maturity, i.e each preference share shall convert to X equity shares of Company A. And X is defined based on EBITDA at maturity date. OCRPS was issued on 31 March 2017 and will mature 5 years from the Issue date, i.e 31 March 2022. A fair Valuation is required as at 29 March 2019.

The solutions offered in CCPS (3) are available fora Valuation of a financial instrument of this type. However the introduction of the redemption feature payout acts as a floor against which the payout of the conversion feature needs to be tested against. Option models such as binomial model and Monte Carlo model, with provision for defining a floor (based on redemption value) can be considered in carrying out the fair Valuation exercise.

Chapter 7

Fair Value Measurement-Ind AS 113 : Definition

Fair value is the mantra of today in financial reporting across borders. In India also, the Institute of Chartered Accountants of India (ICAI) converged its accounting standards with IFRSs and accordingly, corporate financial statements beginning accounting year 2016-17 started disclosing financial figures based on fair value measurement. One of the purposes of fair value measurement is to narrow the gap between the balance sheet value and market value of a company. Fair value measurement aims at fair recording of a business transaction so that the financial statements are able to show a true and fair view of the profitability and financial position.

Indian Accounting Standard (Ind AS) 113 is a dedicated standard which provides guidance on Fair Value Measurement (FVM). In this Chapter we will discuss about the objective, scope, key concepts and definitions, as prescribed in Ind AS 113 on Fair Value Measurement.

A. Objective of Ind AS 113

This Ind AS:

- Defines Fair Value

- Sets out a Framework for measuring Fair Value

- Requires Disclosures about fair value measurements

B. Scope

This Ind AS applies when another Ind AS requires or permits fair value measurements or disclosures about fair value measurements

The *measurement and disclosure* requirements of this Ind AS do not apply to the following:

- Share based payment transactions within the scope of *Ind AS 102, Share based Payment*

- Leasing transactions within the scope of *Ind AS 17, Leases*

- Measurements that have some similarities to fair value but are not fair value, such as net realisable value in *Ind AS 2, Inventories*, or value in use in *Ind AS 36, Impairment of Assets*

The *disclosure* requirements by this Ind AS do not apply to the following:

- Plan assets measured at fair value in accordance with *Ind AS 19, Employee Benefits*

- Assets for which recoverable amount is fair value less costs of disposal in accordance with *Ind AS 36, Impairment of Assets.*

C. Definitions

1. Fair Value (FV)

"Fair Value is the *price* that would be *received to sell an asset or paid to transfer a liability in an orderly transaction between Market participants at the Measurement Date.*

1	FV is Exit Price	Fair Value is the price to sell an asset or transfer a liability, and therefore represents an exit price, not an entry price
2	FV is *Not* Transaction Price	The transaction price is NOT presumed to represent the fair value of an asset or liability on its initial recognition
3	FV in *Principal Market*	Fair value is an exit price in the principal market (or in absence of a principal market, the most advantageous market) in which reporting entity would transact
4	FV is *Market based measurement*	Fair Value is a market based measurement, not an entity specific measurement
5	FV *excludes* Transaction Costs	Fair Value measurements should not be adjusted for transactions costs

Note: *The definition of fair value focuses on assets and liabilities because they are a primary subject of accounting measurement. In addition, this Ind AS shall be applied to an entity's own equity instruments measured at fair value.*

2. Active Market

A market in which transactions for the asset or liability take place with sufficient frequency and volume to provide pricing information on an ongoing basis.

3. The Asset or Liability

A fair value measurement is for a particular asset or liability. An entity shall take into account the characteristics of the asset or liability at the time of measurement of fair value as if market participants would take those characteristics into account when pricing the asset or liability at the measurement date. Such characteristics include, for example, the following:

- the condition and location of the asset; and

- restrictions, if any, on the sale or use of the asset

4. Entry Price

When an asset is acquired or a liability is assumed in an exchange transaction for that asset or liability, the transaction price is the price paid to acquire the asset or received to assume the liability.

5. Exit Price

The fair value of the asset or liability is the price that would be received to sell the asset or paid to transfer the liability.

D. Key Concepts

Transfer of Liability versus. Settlement of Liability

1. When liability is transferred to market participants then it *continues and not settled.*

2. "Transfer" reflects market-based measurement & excludes firm specific efficiencies or inefficiencies

Fair Value may not be equal to Transaction Price

1. When transaction is between related parties

2. Where transaction occurs under duress or force

3. Unit of account represented by the transaction is different from that of the asset or liability

4. Market in which the transaction occurs is different from the principal or most advantageous market

Fair value for Financial Reporting vs. Fair Market Value (FMV)

1. Fair value has a hierarchy of inputs for Valuation but FMV does not have it

2. Fair Value uses HABU for non – financial assets Valuation resulting in maximising value against consensus value under FMV

3. DLOM adjustments may be required in certain cases under Fair Value but DLOC is doubtful

4. Fair value disregards blockage discount (decline in value due to size)

Particular asset or liability that is the subject of measurement

A fair value measurement is for a particular asset or liability. The characteristics of the asset or liability that market participants would take into account when pricing the asset or liability at the measurement date shall be taken into account. Such characteristics include:

*   the condition and location of the asset

*   restrictions, if any, on the sale or use of the asset

The asset or liability measured at fair value might be either of the following:

*   a stand-alone asset or liability (e.g. a financial instrument or a non-financial asset); or

*   a group of assets, a group of liabilities or a group of assets and liabilities (e.g. a cash-generating unit or a business).

Principal (or most advantageous) market

The transaction to sell the asset or transfer the liability takes place either:

*   in the principal market or

*   in the absence of a principal market, in the most advantageous market.

Highest and best use for a non-financial asset

A fair value measurement of a non-financial asset takes into account a market participant's ability to generate economic benefits by using the asset in its highest and best use. The highest and best use of a non-financial asset takes into account the use of the asset that is

a.   Physically Possible

b.   Legally Permissible

c.   Financially feasible

Highest or best use is usually (but not always) the current use – if for competitive reasons an entity does not intend to use the asset at its highest and best use, the fair value of asset still reflects its highest and best use by market participants (defensive value).
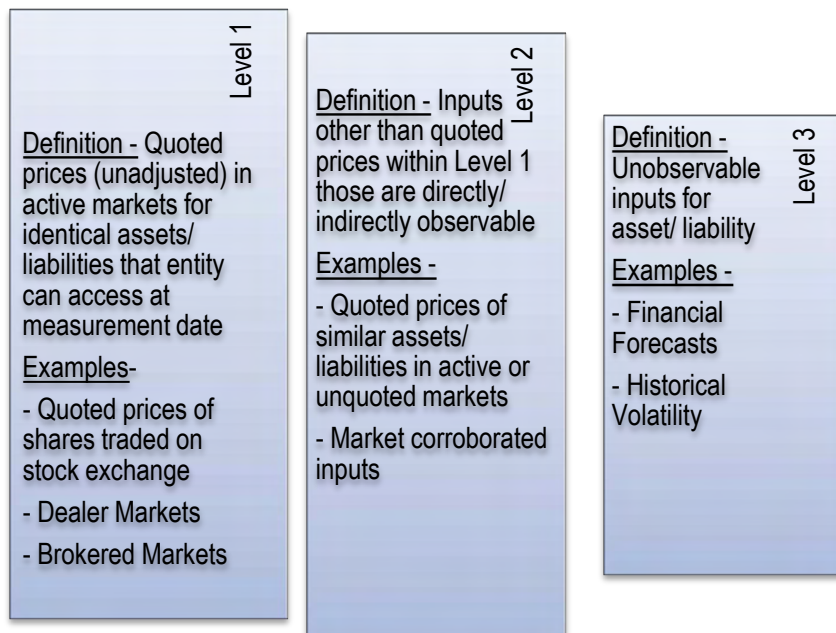
Fair Value Hierarchy

To increase the consistency and comparability in fair value assignments and related disclosures, fair value hierarchy categorises inputs into three levels as defined below.

- *Input Level 3 (Unobservable)*

  Inputs that reflect management's own assumptions about the assumptions that a market participant would make (E.g. Projected cash flows used to value a business or non-controlling interest in an unlisted entity)

- *Input Level 2 (Indirectly Observable)*

  a.   Prices in active markets for similar assets / liabilities

  b.   Quoted prices for identical / similar items in markets that are not active.

  c.   Inputs other than quoted prices (E.g. Interest Rates and yield curves, implied volatilities etc.)

- *Input Level 1 (Directly Observable)*

  Quoted prices in active markets for identical assets / liabilities (E.g. Quoted prices for an equity security on the BSE/ NSE).

Level 1

Definition - Quoted prices (unadjusted) in active markets for identical assets/ liabilities that entity can access at measurement date

Examples-

- Quoted prices of shares traded on stock exchange

- Dealer Markets

- Brokered Markets

Level 2

Definition - Inputs other than quoted prices within Level 1 those are directly/ indirectly observable

Examples -

- Quoted prices of similar assets/ liabilities in active or unquoted markets

- Market corroborated inputs

Level 3

Definition - Unobservable inputs for asset/ liability

Examples -

- Financial Forecasts

- Historical Volatility

*Quoted prices are given the highest priority and unobservable inputs the least

Cost of Capital in Goodwill Impairment

Impairment means the state of being diminished, weakened, or damaged. Goodwill impairment is a charge that companies record when goodwill's carrying value on financial statements exceeds its fair value. In accounting, goodwill is recorded after a company acquires assets and liabilities, and pays a price in excess of their identifiable value. Goodwill impairment arises when there is deterioration in the capabilities of acquired assets to generate cash flows, and the fair value of the goodwill dips below its book value.

Indian Accounting Standard (Ind AS) 36, Impairment of Assets (the standard) sets out the requirements to account for and report impairment of most non-financial assets. As a result, goodwill impairments have inevitably increased and companies have placed an additional focus on their impairment testing procedures.
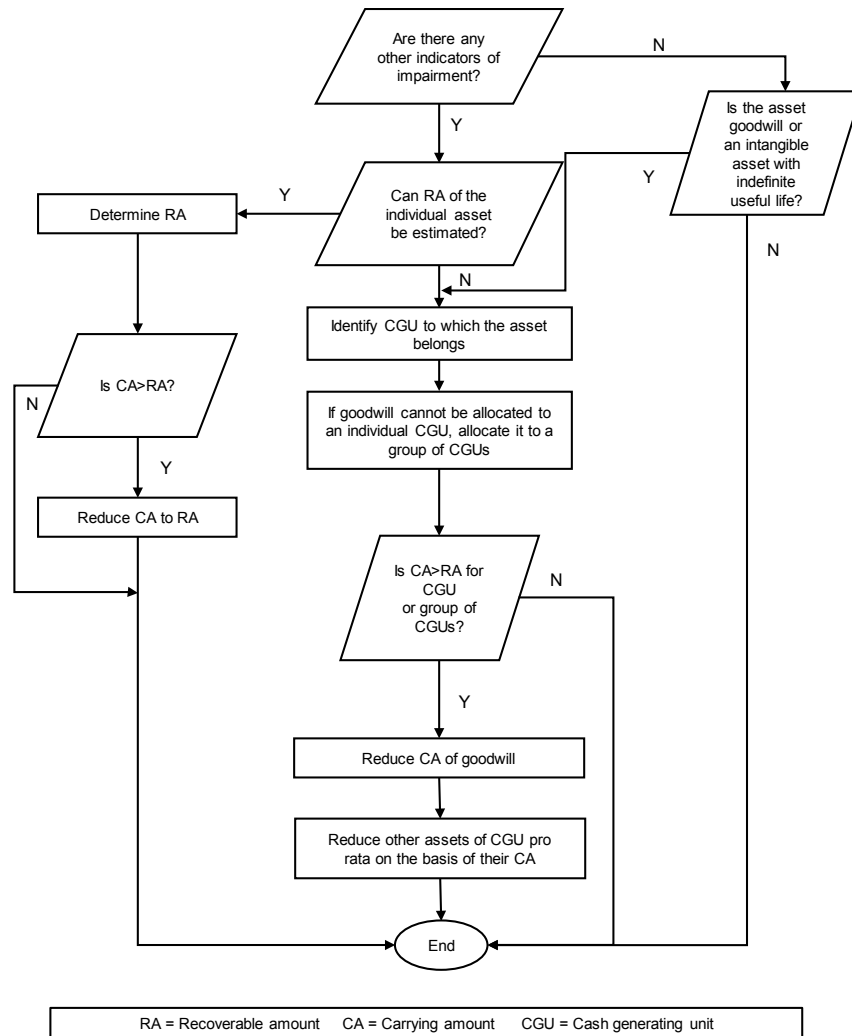
One of the key inputs while performing the impairment test is the cost of capital or discount rate. Determining the appropriate cost of capital is often like a pandora box, but in uncertain economic conditions, its difficulty even compounds due to volatile share prices affecting betas; risk free rates reaching record lows; and reduction in debt liquidity affecting the cost of debt for many companies.

Indian Accounting Standards require the annual impairment testing of goodwill and other assets in accordance with Ind AS 36. Ind AS 36 specifies when an entity needs to perform an impairment test, how to perform it, recognition of any impairment losses and the related disclosures.

Ind AS 36 deals with impairment testing for all tangible and intangible assets, except for assets that are covered by other Ind AS. Ind AS 36 requires that assets should be carried at no more than their recoverable amount. To meet this objective, the standard requires entities to test all assets that are within its scope for potential impairment when indicators of impairment exist or, at least, annually for goodwill and intangible assets with indefinite useful lives.

The process for measuring and recognising impairment loss under Ind AS 36 could be presented in a flowchart:

```
                                    ┌─────────────────────┐
                                   /   Are there any      /
                                  /  other indicators of /─────── N ────────┐
                                 /    impairment?       /                    │
                                 └─────────────────────┘                     │
                                          │                          ┌───────────────────┐
                                          Y                         /  Is the asset      /
                                          │                        /   goodwill or      /
                                          ▼                       /   an intangible    /
┌──────────────────┐          ┌─────────────────────┐      Y    /    asset with      /
│  Determine RA    │◀── Y ──  /  Can RA of the      /◀──────────/    indefinite      /
└──────────────────┘         /   individual asset   /           \    useful life?   \
         │                  /    be estimated?     /             └───────────────────┘
         │                  └─────────────────────┘                       │
         ▼                           │                                     N
┌──────────────────┐                 N                                    │
/  Is CA>RA?       / N               │                                    │
└──────────────────┘  │              ▼                                    │
         │            │    ┌─────────────────────────┐                    │
         Y            │    │ Identify CGU to which    │                    │
         ▼            │    │  the asset belongs       │                    │
┌──────────────────┐  │    └─────────────────────────┘                    │
│  Reduce CA to RA │  │              │                                    │
└──────────────────┘  │              ▼                                    │
         │            │    ┌─────────────────────────┐                    │
         │◀───────────┘    │ If goodwill cannot be    │                    │
         │                 │ allocated to an          │                    │
         │                 │ individual CGU, allocate │                    │
         │                 │ it to a group of CGUs    │                    │
         │                 └─────────────────────────┘                    │
         │                           │                                    │
         │                           ▼                                    │
         │                 ┌─────────────────────┐                        │
         │                /  Is CA>RA for        /  N                      │
         │               /   CGU                /─────────┐                │
         │              /    or group of       /          │                │
         │             /     CGUs?            /           │                │
         │             └─────────────────────┘            │                │
         │                      │                         │                │
         │                      Y                         │                │
         │                      ▼                         │                │
         │            ┌────────────────────┐              │                │
         │            │ Reduce CA of       │              │                │
         │            │  goodwill          │              │                │
         │            └────────────────────┘              │                │
         │                      │                         │                │
         │                      ▼                         │                │
         │            ┌────────────────────┐              │                │
         │            │ Reduce other       │              │                │
         │            │ assets of CGU pro  │              │                │
         │            │ rata on the basis  │              │                │
         │            │ of their CA        │              │                │
         │            └────────────────────┘              │                │
         │                      │                         │                │
         └──────────────────►  ( End ) ◀──────────────────┴────────────────┘
```

| RA = Recoverable amount | CA = Carrying amount | CGU = Cash generating unit |

Key components/requirements as presented in the diagram above are discussed below.

Key Requirements of IND AS 36

The entity assesses, at each reporting date, whether there is any indication that an asset may be impaired.

- If there is an indication that an asset may be impaired, the recoverable amount of the asset (or, if appropriate, the cash generating unit (CGU) which is defined by the standard as "the smallest identifiable group of

assets that generates cash inflows that are largely independent of the cash inflows from other assets or groups of assets" [Ind AS 36, Para 6]) is determined.

- The recoverable amount of goodwill, intangible assets with an indefinite useful life and intangible assets that are not available for use on the reporting date, is required to be measured at least on an annual basis, irrespective of whether any impairment indicators exist.

- The asset or CGU is impaired if its carrying amount exceeds its recoverable amount.

- The recoverable amount is defined as higher of the 'fair value less costs to sell' and the 'value in use'.

- Any impairment loss is recognised as an expense in the profit or loss for assets carried at cost. If the affected asset is a revalued asset, as permitted by Ind AS 16 Property, Plant and Equipment and Ind AS 38, Intangible Assets, any impairment loss is recorded first against previously recognised revaluation gains in other comprehensive income in respect of that asset.

- Extensive disclosure is required for the impairment test and any impairment loss recognised.

- An impairment loss recognised in prior periods for an asset other than goodwill is required to be reversed if there has been a change in the estimates used to determine the asset's recoverable amount.

Indicators of impairment

The standard requires an entity to assess, at each reporting date, whether there are any indicators that assets may be impaired. An entity is required to consider information from both external sources (such as market interest rates, significant adverse changes in the technological, market, economic or legal environment in which the entity operates, market capitalisation being lower than net assets) and internal sources (such as internal restructurings, evidence of obsolescence or physical damage to the asset). Notwithstanding whether indicators exist, recoverability of goodwill and intangible assets with indefinite useful lives or those not yet in use are required to be tested at least annually.

Recoverable amount

The recoverable amount of an asset is the greater of its 'fair value less costs to sell' and its 'value in use'. To measure impairment, the asset's carrying amount is compared with its recoverable amount. The recoverable amount is determined for individual assets. However, if an asset does not generate cash inflows that are largely independent of those from other assets, the recoverable amount is determined for the CGU to which the asset belongs. A CGU is the smallest identifiable group of assets that generate cash inflows that are largely independent of the cash inflows from other assets or groups of assets.

Fair value less cost to sell

Fair value less costs to sell (FVLCS) is the amount obtainable from the sale of the asset in an arm's length transaction between knowledgeable and willing parties, less the costs of disposal.

Value in use

Value in Use (VIU) in effect assumes that the asset will be recovered principally through its continuing use and ultimate disposal. VIU is therefore 'entity-specific' in that it reflects the entity's intentions as to how an asset will be used. VIU therefore differs from fair value because fair value reflects the assumptions that market participants would use when pricing the asset. Value in use (VIU) is the present value of the future cash flows expected to be derived from an asset or a CGU. When considering Value in Use, Ind AS 36 lays down prescriptive rules around the use of discounted cash flow methodologies, including guidance on the explicit forecast period, appropriate terminal growth rates, and the determination of the discount rate.

Estimating the Future Cash Inflows and Outflows

The starting point for estimating future cash flows is the most recent financial budget or forecast approved by management. From this starting point, the budget or forecast typically needs to be both adjusted and extrapolated. Ind AS 36 specifically requires that these budgets/forecasts are adjusted to:

• exclude any estimated future cash inflows/outflows expected to arise from future restructuring or improving or enhancing the asset's performance (Para 33)

- exclude cash inflows or outflows from financing activities or income tax receipts/payments (Para 50)

- include costs for day-to-day servicing, future directly attributable overheads (Para 41) and cash flows necessary to maintain the level of economic benefits expected to arise from the asset in its current condition (Para 49)

- cover a maximum period of five years (unless a longer period can be justified). Cash flow projections needed beyond the period covered must be estimated by extrapolating the budget/ forecast projections using a steady or declining growth rate for subsequent years (unless an increasing rate can be justified) (Para 33)

- incorporate net cash flows, if any, to be received (or paid) for the disposal of the asset at the end of its useful life (Para 39).

This list of adjustments is not exhaustive. The specific adjustments required in each case will naturally vary depending upon the basis of the budgets or projections used as a starting point and the nature of expected cash flows. It is also essential to ensure that the estimates and projections are based on reasonable and supportable assumptions.

Applying the Appropriate Discount Rate

The discount rate applied to the estimated cash flows should reflect the return that investors would require if they were to choose an investment that would generate cash flows of amounts, timing and risk profile equivalent to those that the entity expects to derive from the asset (Para 56). In other words, the estimated cash flows in the VIU calculation are entity-specific, but the discount rate is not.

Pre-tax versus post-tax discount rate

While Ind AS 36 requires the use of 'a pre-tax discount rate' for the discounting of cash flows, it has long been accepted by Valuation practitioners that the direct determination of a pre-tax cost of capital is difficult if not impossible to derive.

When valuing a firm or business, the most widely used method for determining a discount rate is the weighted average cost of capital ("WACC"). In theory, this is calculated by weighing the costs of debt and equity capital at a target or optimal capital structure. The capital asset pricing

model ("CAPM") is most often used as the basis for determining the cost of equity. The data needed to build up the cost of equity using CAPM is generally based on observable market-based information. As companies pay tax in the real world, the equity market data observable to derive inputs such as beta, gearing, etc. is all based on post-tax observations. Pre-tax equivalents are not directly observable.

How to calculate Pre-Tax Rate

One solution to this problem could be simple grossing up your post-tax market rate and tax rate, like in the following formula:

PRE-TAX RATE = POST-TAX RATE / (1 – TAX RATE)

Although this method is very simple, it should be used rarely.. For example, when the asset or CGU is not that material to your company, or variance in a discount rate does not cause any material errors in value in use.

Why not use this simple method as the basic one? The main reason is that in most cases, the timing of your tax payments is never the same as the timing of your tax base (income and expenses). Many entities pay taxes one year after obtaining taxable revenues and expenses. And that might cause significant difference in your real pre-tax rate and pre-tax rate calculated this way. You should bear in mind that pre-tax rate must take not only assets' / CGU's post-tax rate and relevant tax rate into account, but also assets' / CGU's useful life and timing of future cash flows.

So how to calculate pre-tax rate more precisely? If you have obtained market rate that is post-tax and you have pre-tax cash flow projections for your asset / CGU under review, you can try to use this method. It's kind of other way round and involves the following 3 steps:

Step 1: Estimate post-tax cash flows

First of all, we shall calculate asset's / CGU's value in use with application of post-tax rate. But hang on for a minute – we have post-tax rate and pre-tax cash flows and this inconsistency would not give us the answer even close to correct. Therefore, we need to do the following:

- Estimate future tax payments from our pre-tax cash flow projection. Do it on a year-by-year basis. But be careful here. If you want to be really precise, you should take various tax issues into account – for example, future tax allowances related to asset / CGU, utilization of future tax

> losses, temporary differences, etc. Simply – try to estimate tax payments as realistic as possible, not by multiplying tax base and tax rate.

- Deduct estimated future tax payments from pre-tax cash flows. And also do it on a year-by-year basis.

Step 2 – Calculate value in use on post-tax basis

That is clear. You have post-tax cash flows in your table and you also have post-tax discount rate. So, using discounting technique, get present value of your post-tax cash flows.

When calculating value in use, you should be consistent to avoid double counting. And, you should arrive to the same result. So, when you calculate value in use using post-tax cash flows and post-tax discount rate, that rate shall be the same as calculated from pre-tax values. In other words:

= post-tax cash flows discounted by post-tax rate

= pre-tax cash flows discounted by pre-tax rate

= value in use

Step 3 – Calculate pre-tax rate from value in use and pre-tax cash flows

We just need to work out the rate at which the present value of pre-tax cash flows equals the value in use. This is not as easy as it seems, because it requires using certain iteration technique. But all is doable!

Conclusion

Generally, companies and their advisors have accepted that the practical solution to this problem is to determine the value in use using post-tax cash flows and a post-tax WACC. The pre-tax WACC needed for disclosure as required by Ind AS 36 can then be determined by eliminating tax from the cash flows and back solving (an iterative process) to determine the pre-tax WACC that equates to the same value in use.

It should be noted that simply grossing up the post-tax WACC based on the marginal tax rate will not, in most circumstances, result in the same pre-tax WACC.

Further, International Accounting Standard 36 Para BCZ 85 states that in theory, discounting post tax cash flows at a post-tax discount rate and discounting pre-tax cash flows at a pre-tax discount rate should give the

same result, as long as the pre-tax discount rate is the post-tax discount rate adjusted to reflect the specific amount and timing of the future tax cash flows. The pre-tax discount rate is not always the post-tax discount rate grossed up by a standard rate of tax. The same paragraph in the "Basis for Conclusions" provides an example as to how both approaches might differ and result in different indications for value in use.

As a result, a supportable impairment review requires that the discount rate and the long-term growth rate are both technically correct and also consistent with each other and the forecast cash flows. Industry norms can therefore provide a benchmark, but a rigorous review of the specific circumstances of the asset being valued and the risk associated with the expected cash flows is still required.

Chapter 9

Brand Valuation

"If this business were to be split up, I would be glad to take the brands, trademarks and goodwill and you could have all the bricks and mortar - and I would fare better than you"

-John Stuart, Former Quaker Oats Chairman

"Your brand is what people say about you when you are not in the room"

Jeff Bezos, CEO Amazon

Introduction

Brands and their underlying trademarks are an important element of the value of a business. They are intangible assets that contribute to the increasing gap between observed market capitalizations versus reported book values of companies. In today's world of new age technology and consumer awareness, the scope of brand for an organization is not just limited to a name or a logo but much more than that. This is all because of the impact a brand can have on the customer choices, investors, company's image etc.

The term 'brand', refers to names, signs, symbols, colors, logos etc. that help to identify goods, services or companies. It is something which a consumer associates itself with and considers as a promise by the brand that they will conform to the expectations that they have created over time in the minds of their customers.

World's five most valuable brands as recognized by Forbes magazine for 2018 are :

➢ Apple: $182.8 billion

➢ Google: $132.1 billion

➢ Microsoft: $104.9 billion

➢ Facebook: $94.8 billion

➢ Amazon: $70.9 billion

Reasons/ Need For Brand Valuation

A study by Interbrand in association with JP Morgan concluded that on an average brands account for more than one-third of shareholder value. Thus, brands are one of the most important strategic assets of an organization and may require Valuation under following circumstances:

- Financial Reporting - Purchase Price Allocation
- M&A Decisions
- Licensing
- Tax Planning
- Dispute Resolution
- Liquidation
- Litigations
- Raising Funds etc.

Brand Valuation Approaches/ Methods

There are various ways to approach the Valuation of a brand, and many of them are debatable. The concept of brand Valuation often can be a difficult concept to understand. This is because image of the brand in the minds of its customers may be different for different people. This is somewhat similar to works of art, these works of art have a market, but the values at which they change hands are not computed mechanistically.

Popular brand Valuation methods and approaches include:

A. Cost Approach

This approach is primarily concerned with the cost in creating or replacing the brand. It comprises of following two methods:

1. Reproduction Cost Method

This method aggregates all the historical marketing costs as the value of the brand. In other words, the method involves historical cost of creating the brand as the actual brand value. It is often used at the initial stages of brand creation when specific market application and benefits cannot yet be identified.

2. Replacement Cost Method

This method values the brand by considering the expenditures and investments necessary to replace the brand with a new one that has an equivalent utility to the company. Although this method is easy in terms of calculation, it neglects the success of an established brand. The first brand in the market has a natural advantage over the other brands as they avoid clutter and with each new attempt, the probability of success diminishes.

This approach is generally not considered because there is no direct correlation between cost incurred in creating the brand and market value of the brand.

B. Market Approach

In this approach a comparison with the other brands in the market is done. For example, if a person wishes to buy a property in place A, it is quite likely that the price at the neighborhood would be checked before arriving at a conclusion on the existing property, leading to an approach based on the market. This Valuation method relies on the estimation of value based on similar market transactions (e.g. similar license agreements) of comparable brand rights.

This approach contains two methods namely:

1.   Sales Comparison Method

2.   Market Multiples Method

Both of these methods involve Valuation of the brand by looking at the recent transactions involving similar brands in the same industry and referring to comparable multiples.

This approach is generally not considered due to non-availability of reliable data for comparable brands. Also, the price paid for a similar brand includes the synergies and the specific objectives of the buyer and it may vary leading to the value of similar brand not being directly comparable to the brand being valued.

C. Income Approach

It is the most common approach to measure the value of a brand. This approach estimates the price an asset could be sold for in an arm's length transaction on the basis of the asset's expected future income stream. This involves estimating the present value of future economic benefits attributable

to the owner of an asset and incorporating as much observable market data into the Valuation as possible. In the Income Approach, expected future returns from an investment in the form of cash flows are discounted to present value at an appropriate rate of return for the investment. The selected discount rate or rate of return should reflect the degree of uncertainty or risk associated with the future returns and returns available from alternative investments. Higher uncertainty or risk leads to higher expected rate of return, which produces a lower value for the investment.

This approach can be characterized by six methods which are explained below:

1. Relief from Royalty Method

This is the most widely resorted method used to determine the value of the brand. This method assumes that the brand is not owned by the branded business but is licensed from a third party. If brand has to be licensed from a third-party, a royalty rate on turnover will be charged for privilege of using the brand. Thus, the brand value is deemed to be the present value of the royalty payments saved by virtue of owning the brand.

2. Relative Discounted Cash Flow Method

The incremental cash flow method identifies all cash flows generated by the brand in a business, by comparison with comparable businesses with no such brand. Cash flows are generated through both increased revenues and reduced costs. However it is rare to find conditions for this method to be used since finding similar unbranded companies can be difficult.

3. Residual Value Method

The method entails segregation of the value of the total tangible assets from the total business value. The residual value after deducting the value of tangible assets from the business value is attributable to the intangible assets.

4. Premium Price Method/ Profit Differential Method

Under this method, the asset is valued by considering the premium profit generated by a company, using intangible assets and comparing it with a business not utilizing a comparable intangible asset. The resultant figure is then capitalized to form a value for the intangible assets.

5. *Multi-Period Excess Earnings Method (MEEM)*

The Multi-Period Excess Earnings Method is commonly used when a reliable direct measurement of future economic benefits generated by an intangible asset is not possible. However, revenue and earnings to those assets can be readily determined. The method adopts a 'residual approach' for estimating the income that an intangible is expected to generate. The premise of the excess earnings method is that the value of an asset is represented by the discounted future earnings specifically attributed to that asset, that is, in excess of returns for other assets that contributed to those earnings. The excess earnings method examines the economic returns contributed by all assets utilized in generating earnings, and then isolates the excess return that is attributed to the specific asset being valued.

MEEM is applied to a wide variety of intangible assets, especially those that are close to the 'core' of the business model. Customer relationship assets, technology, and IPR&D are among the intangible assets which are frequently valued using MEEM.

Under this method, the value of an asset is a function of:

- Projected revenue and earnings generated by the asset;

- Expected economic life of the asset;

- Contributory asset charges that would be paid to the requisite operating assets; and

- A discount rate which reflects risk associated with receiving future cash flows.

6. *Favourable Contract Method*

A favourable contract arises from an arrangement that affords one of the parties a below-market rate for a good or service. This may be from paying rent for a building at below-market rates or being granted the use of a trademark for a royalty rate that is lower than the going market rate. Similar to the "with and without" method to value the arrangement, cash flows are computed using market rates and also under the present arrangement. The difference between these values is the value of the asset.

In the next section, Royalty Relief Method is explained in detail which is the most widely used method to determine the value of the brand.

Relief from Royalty Method (RRF)

This is the most widely used method to determine brand cash flows, the reason being that it is grounded in commercial reality and can be easily benchmarked against real world transactions. This method is a combination of market and income approach where value is determined on the basis of avoided cost.

Key factors to be considered while using this method are:

a) Appropriate Royalty Rate

b) Revenue Projections

c) Discount Rate

Various steps involved in RRF are as presented below:

Step 1: Ascertaining the Brand Specific Financial and Revenue Data

For brand Valuation via RRF, firstly we need to ascertain the brand revenue to be generated from utilizing the brand over its projected life. Projected brand revenue is generally estimated after considering the historical revenue trends of the company, doing industry analysis and discussion with the management. Further market demand of the company's products in relation to its competitors should also be taken into account along with long term GDP growth of the country.

Step 2: Ascertaining the Royalty Rate in Relation to the Brand

Royalty rates cannot be evaluated in vacuum. Arm's length licensors and licensee negotiate royalties within a dynamic matrix of strategic, economic and legal considerations, each term and condition in a license agreement may shift the risk from one party to the other and therefore shall be considered in determining the appropriate royalty rate or range thereof.

There are various sources, both internal and external which help the valuer in the determination of royalty rate.

1) Some of external sources are listed below:

•   License agreement covering a similar patent or trademark granted by the licensor owning the subject property to a third party

    These agreements can be extracted from various royalty data bases such as: Royaltystat, Royalty source, ktMINE etc.

- News articles and magazines such as Financial World which provide an annual survey of some top value Brands names.

  Royalty rates extracted above need to be adjusted (up or down) to fit the particular facts and circumstances. For this, their compatibility is evaluated on various factors such as:

  ➢ Industry/ Subject Business

  ➢ Nature of Product/ Service

  ➢ Geography

  ➢ Exclusivity- exclusive arrangements may command higher rates

  ➢ Market Positioning – brands with better market positioning may command higher rates

2) Internal source includes using the price premium method for calculating the royalty rates.

   - In this Royalty rates are computed based on the price premium commanded by company in each product category/ segment. In order to calculate the price premium, prices for company's product is compared with the prices of similar products of other competitors. Please note, prices to be considered here should be the price at which product is sold to the first party and nor the retail price of the product which are generally adjusted for discounts. Further, to get a better understanding of prices and to confirm the price premium, discussion with the various industry participants such as wholesalers, retailers etc. should be done if possible.

   - Further an effective product premium for each product segment is calculated by multiplying the price premium with the sales proportion of the respective geographies.

   - The price premium calculated above can't be entirely attributable to Brand. There are various other factors which contribute to this price premium. Accordingly, based on various factors associated with the industry such as customer reach, distribution, scale of operations etc. and on the basis of the discussion with the management and industry participants (wholesalers & retailers) an appropriate weightage for brand is assumed and final royalty rate is selected.

Step 3: Ascertainment of Net Royalty Saving Post Tax

Royalty rates computed above is applied on the brand revenue to calculate the royalty savings on account of owning the brand. This royalty saving is then reduced by the estimated brand promotion and marketing expenses which are incurred by the owner of the brand. These expenses are generally considered on the basis of percentage of sales on account of historical trends of the company, to calculate the net royalty savings.

Net royalty savings are further reduced by the marginal income tax, to calculate net royalty savings post tax.

Step 4: Ascertainment of Appropriate Discount Rate

An appropriate discount rate needs to be ascertained which can be applied on the post-tax royalty savings to calculate their present value

The calculation of the appropriate discount rate to estimate an intangible asset's fair value requires certain considerations which are as follows:

- The discount rate should be determined considering the market-participant assumption

- The discount rate should reflect the risks commensurate with the intangible asset's individual cash flows

In general, the risk profile of each asset category should be considered when estimating the appropriate rates of return. The valuer should consider the liquidity of the assets on the balance sheet on a spectrum from working capital (most liquid) to the intangible assets (least liquid). In addition, the valuer can consider the assets based on their ability to be financed by debt or equity.

Therefore, the weighted average cost of capital (WACC) is calculated and further an appropriate risk premium is adjusted to calculate the discount rate.

Step 5: Ascertainment of Brand Value

The discount rate calculated as above is applied on the net royalty savings to calculate their net present value. These net present values for explicit years are added to calculate the value of the brand. Further notional benefit of tax amortization benefit ("TAB") is added to calculate the final value of the brand.

The above method can be explained through an illustration as presented hereunder:

Particulars	FYE 31-Mar-19	Year Ending March 31:								
		2020	2021	2022	2023	2024	2025	2026	2027	2028
Revenues	500,000	510,000	520,200	530,604	541,216	552,040	563,081	574,343	585,830	597,546
% Growth Rate		2.00%	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%
Royalty Expense	2.50%	12,750	13,005	13,265	13,530	13,801	14,077	14,359	14,646	14,939
Less: Effective Tax Rate	30.00%	(3,825)	(3,902)	(3,980)	(4,059)	(4,140)	(4,223)	(4,308)	(4,394)	(4,482)
After Tax Royalty		**8,925**	**9,104**	**9,286**	**9,471**	**9,661**	**9,854**	**10,051**	**10,252**	**10,457**
Discount Period (Mid Year Convention)		0.50	1.50	2.50	3.50	4.50	5.50	6.50	7.50	8.50
Discounting Factor	15.00%	0.9325	0.8109	0.7051	0.6131	0.5332	0.4636	0.4031	0.3506	0.3048
Present Value of Cash Flows		**8,323**	**7,382**	**6,547**	**5,807**	**5,151**	**4,568**	**4,052**	**3,594**	**3,188**

Sum of Present Values	48,612		Discount Rate (WACC)	15%
Add: Tax Amortization Benefit (TAB)	11,909		Perpetuity Growth Rate	2%
Concluded Value	**60,521**			

Sensitivity Analysis

		Discount Rate		
		14%	**15%**	**16%**
Royalty Rate	**2.0%**	48,417	48,417	48,417
	2.5%	60,521	60,521	60,521
	3.0%	72,625	72,625	72,625

Other Points to be Considered

1. Tax Amortization Benefit

In the Valuation exercise of individual intangible assets, the future amortization of an individual intangible asset must be considered as a component of the aggregate value of the subject intangible asset. In the context of valuing intangible assets, the tax amortization benefit is an uplift to reflect the value of the tax-shield afforded by the amortization of capitalized intangible assets.

This exercise assumes that a hypothetical buyer could capitalize the intangible asset and reduce future taxable income through amortization over a certain period pursuant to the applicable tax regulations. This tax shield is discounted to present value and added to the pre-amortization value to determine the fair value.

2. Remaining Useful Life

Economic and useful lives are key inputs to Valuation and generated income of acquired assets. The key considerations include:

- Longevity: The period over which the asset is expected to be used and contributing to the cash flows

- Typical product life cycle of the asset: Any legal, regulatory or contractual provisions that may limit the useful life must also be considered

- Historical experience of using a similar acquired asset

- The impact of anticipated changes in consumer demands, preferences and tastes along with the impact of other economic and industry changes

- The level of expenditures (including ongoing marketing and advertising) required to maintain the asset

- The life of other related assets

- Technical, technological, commercial or any other type of obsolescence

Factors that impact the amortization period of an asset should also be considered in determining the period of cash flows to be used in valuing the asset. For this reason, companies typically look for the period over which cash flows used in the asset's Valuation are forecasted in order to determine an appropriate amortization period or reach to an indefinite-life classification.

Valuation of Intangibles

What is an Intangible Asset?

The International Glossary of Business Valuation Terms describes intangible assets as non-physical assets such as franchises, trademarks, patents, copyrights, mineral rights, customer contracts or relationships, etc. that grant rights and privileges, and have value for the owner.

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

- *Identifiability* - they are separable or may arise from contractual or other legal rights,

- *Future economic benefits* – their existence depends on expectation of future benefit such as revenue or cost savings or other benefits resulting from their use; and

- *Control* - the owner can control the use or restrict the access to the future economic benefit

Need for Valuation of Intangibles

Intangibles are an increasingly key component in determining the value of an enterprise. In industries such as pharmaceuticals, technology, fashion and consumer goods, to name a few, intellectual property is a major enterprise value driver.

Furthermore, the convergence of Indian Accounting Standards with IFRS has brought Valuation of intangible assets to the fore as they comprise a significant asset class in the allocation of the purchase price in case of Business Combinations under Ind AS 103 and Ind AS 38 which deal with the accounting treatment of intangible assets.

Besides financial reporting, intangible assets such as patents, brands, technical know-how, etc. are also bought and sold / transferred; albeit

through usually confidential agreements; which obscures the basis on which its value is determined. How then, is the value of such an asset determined?

Principle for Measurement

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

Valuation Approaches and Methodologies

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

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

(1) **Market Approach:** This approach uses market-based indicators of value. It is based on the premise of efficient markets and supply & demand. It estimates fair value by reference to observable market price data or transactions of comparable intangible assets. However, given that there is no active market for trading in intangible assets, comparable transactions may be used under this approach.

Comparable Transaction Method: Transactions occurring in a free and open market between knowledgeable and willing buyers and sellers conducted on an arm's length basis can be used to determine benchmark metrics for the purpose of valuing the comparable intangible asset. While evaluating comparability, factors such as age of the asset, applicability of use, locational / geographical access or use, risk and expected return characteristics, etc. are considered. Typical benchmarks include multiples of revenue or profitability.

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

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

(2) **Income Approach:** The income approach uses estimates of future estimated economic benefits or cash flows and discounts them for the associated time and risks involved to a present value. The method is founded on the principal of anticipation – whether of revenue streams or cost savings or other economic benefit. Thus, it finds maximum applicability in the Valuation of intangible assets such as brands, customer relationships, copyrights, patents, etc. which generate a future income or cash inflow stream. However, a key area of difficulty under this approach lies in separating the cash flows exclusively pertaining to the asset under Valuation from that of the enterprise as a whole.

The discount factors typically used in such instances are the weighted average cost of capital (WACC), or weighted average return on assets (WARA), or the Internal Rate of Return (IRR) of the investor specific to the asset being valued. Thus, depending on the risk and return profile

of the asset, a suitable discount factor would be applied to the cash flow stream to arrive at the present value.

This approach includes the following commonly used methods:

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

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

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

Pitfalls with rules of thumb: It may be the case that past or current transactions for royalty rates for similar assets may not be available. In such instances, a generally accepted heuristic is the "25%-profit split" method. The 25% Rule as defined by Goldscheider et al (2002) suggests that a licensee should pay a royalty rate equivalent to about 25 % of the expected profits for the product that incorporates the subject IP. The genesis of the 25 % rule was an observation by Robert Goldscheider that the average royalty from a small sample of licensing agreements for a bundle of IP from one company, Philco, reached in the 1950s was about 25 % of operating profit. However, this is not backed by reliable evidence. Empirical evidence suggests extremely wide variation depending on the industry. Nevertheless, it still enjoys wide-spread acceptance. Thus, the valuer should be

cautious in its use, and should employ it as a cross-check with suitable up/down adjustment and in addition to other data sources to arrive at an appropriate royalty rate.

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

(iii) *With and Without Method/ Premium Profits Method:* This method measures the economic contribution of the asset by calculating the net present value of the incremental cash flows to be derived from the use of the asset. This method requires the determination of the future cash flows from the existing business with the asset and the future cash flows from a notional business without the asset. Non-compete arrangements are commonly valued using this method.

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

The approach is best used in valuing intangible assets such as technical drawings or internally developed software that do not generate a direct cash inflow stream, or assembled workforce; which

although not separately recognized on the balance sheet, is used to arrive at the fair value of other assets). There are two commonly used methodologies under this approach:

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

(ii) *Replacement Cost Method*: The method considers estimating the costs to recreate / replace an asset with equivalent functionality at current prices and costs, including adjustments for factors like physical deterioration and functional / economic obsolescence, wherever applicable. It is based on the premise that a prudent third-party would pay no more for an asset than its replacement cost.

Tax Amortization Benefit (TAB)

Based on the above methodologies, the valuer arrives at the value of an asset on a stand-alone basis, which is its pre-tax value. However, tax jurisdictions allow an intangible asset to be amortized over its useful life. The present value of such tax benefit is considered in the fair Valuation of the asset. The process is iterative taking into account the amortization period, the discount factor and the applicable marginal tax rate to arrive at the fair value of the asset post TAB.

Conclusion

Generally, the valuer will use more than one method for determining the fair value depending on the nature of the intangible asset and data availability. A summary of the commonly used approaches in Valuation of intangible assets is as follows:

Asset	Primary	Secondary	Tertiary
Patent, Brand, Technical know-how, Copyright	Income	Market	Cost
Customer relationship	Income	Cost	Market
Internally developed software	Cost	Market	Income
Assembled workforce	Cost	Income	Market

ILLUSTRATIVE EXAMPLES OF STAND-ALONE INTANGIBLE ASSET VALUATION

Assembled Workforce - Replacement Cost Method

Particulars	INR Mn
Current Annual CTC of Assembled Workforce	215
Hiring Cost (1 month's CTC)	18
Training Cost (1.5 month's CTC)	27
Inefficiency Cost (50% for 2 month's CTC)	18
Replacement Cost of Workforce	**278**

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

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

- *Royalty Rate is based on prevailing rates charged for brand licence by company to franchisees.*

- *Discount factor is based on company WACC with adjustment for risk premium for asset*

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

Particulars		2020	2021	2022	2023	2024
Cash flows (with Non-compete)		19	24	32	35	40
Cash flows (without Non-compete)		2	5	17	25	33
Difference in Cash flows		17	19	15	10	7
Discount factor	17.50%	0.85	0.72	0.39	0.23	0.16
PV of Differential Cash Flows		**14**	**14**	**6**	**2**	**1**
Sum of Differential Cash Flows	38					
Probability of competing	50%					
Fair Value of Non-compete	**19**					

Cash flow with Non-compete

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

Cash flow without Non-compete

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

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

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

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

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

Chapter 11

Nuances on Valuation of Intangible Assets

As investment in intangible assets continues to grow globally across industries, investment in intangibles often matches or exceeds investment in traditional capital such as plant and equipment, machinery and buildings. Intensified global competition, emergence of new business models in the world of startups and increasing importance of the services sector have amplified the prominence of intangibles. Global gaints such as Apple, Microsoft, Starbucks, Prada, Gucci, BMW etc. rely heavily on intangible assets to drive firm value. In Indian context it has also been seen that certain brands despite having zero or no sales have still been transacted at a value, e.g. Dalda, Cibaca, Ambassador

Ind AS 38-Intangible Assets, defines an intangible asset as "an identifiable non-monetary asset without physical substance". Intangible assets represent a company' right or claim to future benefits arising from their use. Brands, trade names and trademarks, customer relationships, franchises, patents, copyrights, contracts and goodwill etc. are commonly recognised intangible assets. Examples of some of the generally considered intangibles in various industries include:

- *IT industry:* Patents, technical know-how, internet domain names, technology, software codes etc.;

- *Pharmaceutical industry:* Product molecules, in-process research & development, licensing agreements, trade names and trademarks etc.;

- *Telecommunication industry:* spectrum licenses, software, customer relationships, trademarks etc.;

- *Business services industry:* customer/ vendor relationships, order backlogs, non-compe agreements etc.

The adoption of Ind AS in India has also increased the importance of intangible assets on a company's reported financials. Intangible assets have to be fair valued in case the Ind AS 103-Business Combinations is applicable in a controlling transaction. Furthermore, financial statement implications

associated with amortization and impairment testing (under Ind AS 36-Impariment of Assets) have to be carefully accessed with respect to the intangible assets of a company.

The recent advances in the Indian Valuation landscape, has warranted a greater emphasis on the accurate Valuation of intangible assets, as these assets become critical drivers of corporate value. The common approaches considered in Valuation of intangible assets are:

(A)   Income approach – considers the future expected cash flows derived from the asset;

(B)   Market approach – based on market based metrics, such as prices paid in actual transactions with similar characteristics and functionality; and

(C)   Cost approach – based on cost to purchase or replace an asset of equal utility.

Among these Valuation approaches, the Income approach is widely utilized as it considers the future benefits from use of the subject intangible asset. Due to the paucity of market data that would form a reliable proxy of the specific attributes of a subject intangible asset, the Market approach, though utilized often, has limited application in the Valuation of intangible assets. The Cost approach assumes that the value of an intangible can be determined based on its replacement cost. As such the Cost approach is often utilized in valuing specific intangibles such as assembled workforce and internally developed software. However, the Cost approach also assumes that intangible assets can be rapidly recreated and a market participant will not be willing to pay a significant premium for the ability to use the subject asset immediately. Thus this approach is normally used to value intangible assets that are not primary or significant in nature from market participants' point of view.

While there is variability in the nuances of application, depending on the subject intangible that needs to be valued, three common methods for valuing intangibles using the Income approach are:

(A) *Relief-from-royalty method* – This method is based on a hypothetical royalty (typically calculated as a percentage of the forecasted revenue) that the owner will otherwise be willing to pay in order to use the asset assuming it was not already owned. Thus, the royalty savings are considered as the expected future cash flows from the subject intangible asset.

(B) *With and without method* – The fundamental concept underlying this method is that the value of the subject intangible asset is the difference between an established, ongoing business and one where the subject intangible asset does not exist. This results in a stream of incremental cash flows in terms of either incremental revenue (on account of charging a premium by the owner of the subject intangible asset), and/or cost savings (as the subject intangible asset allows its owner to lower the cost). Key inputs of this method are the assumptions to what extent and how long the cash flows of the business get affected (adversely) in the absence of the subject intangible asset.

(C) *Excess earnings method* – This method calculates the value of an asset based on the expected revenue and profits related to that particular asset, adjusted for the portion of profits attributable to other assets (tangible and intangible) that contribute to the generation of cash flow (for example, working capital, fixed assets, assembled workforce, etc.). This method is typically used in order to determine the value of the primary cash generating intangible of the business.

While valuing intangible assets, consideration needs to be given to key aspects such as:

(i)   Isolating future cash flows associated exclusively with the subject intangible assets which are independent of the other assets and liabilities of the company. This can often be challenging to ascertain given that a company's management usually provides overall cash flows of the company as a starting point. The Valuation professional has to work closely with the management of the company to isolate the cash flows pertaining to the subject asset including assumptions such as obsolescence/ attrition rates, add backs with respect to sales and marketing/ research and development expenses yet to be incurred based on the nature of the subject intangible asset.

(ii)   Charges for supporting/ contributory assets – how do the company's other assets help contribute to the cash flow generation of the subject intangible? Identifying these supporting assets and separating them from the other assets/ liabilities is critical in the application of the excess earnings method. A return for these 'supporting assets' should be reflected in the Valuation of the primary intangible. Additionally, the excess earnings method is not typically used to value both the primary intangible as well as other supporting intangibles due to the potential

double counting of cash flows as well as issues related with 'cross charging'. Furthermore, the supporting assets should also be considered at fair value while assessing the fair value of the subject intangible.

(iii)   The discount rate applied to estimate the present value of future cash flows of an intangible asset should be considered based on the stage, type and nature of the asset, and an assessment of the inherent risks embedded in the future cash flows of the subject intangible.

(iv)   The economic life of an intangible asset plays a crucial role in Valuation, as the future cash flows from the asset are considered over its economic life. Thus, the Valuation appraiser needs to analyse the company's assumption regarding the future use of the subject intangible, market participants' view point on the potential future use and should corroborate the fact pattern with an industry benchmark analysis.

In conclusion it can be said that intangible assets play an increasingly pivotal role in enhancing firm value. As such it is imperative to correctly estimate the value of intangible assets utilizing globally accepted Valuation methodologies in order to protect and enhance shareholder value.

Practical Solutions to Situations faced while carrying out Valuation Exercises

How do you compute the number of equity shares, for the purpose of determining the value per share? How do you value respective instruments, once the enterprise value is computed? How do you treat different instruments for this purpose such as -

(a)   Compulsory convertible debentures (CCD)

(b)   Non-convertible debentures (NCD),

(c)   Partially convertible debentures (PCD),

(d)   Optionally convertible debentures (OCD),

(e)   Compulsorily convertible preference shares (CCPS),

(f)   Redeemable preference shares (RPS)

(g)   Equity shares issued with reverse vesting conditions,

(h)   Options issued under an Employees Stock Option Plan (ESOP)

(i)   Options issued which are attached to debt or other instruments

(j)   Convertible notes

(k)   Equity issued with differential voting rights

(l)   Restricted stock unit plans

(m)   Share warrants

(n)   Others.

APPROACH TO FOLLOW

The simpler approach to Valuations, typically, is to compute enterprise value, apportion the value to debt like instruments, and thereafter apportion the value to equity like instruments. For this purpose, one needs to identify the instruments as debt and equity, to allocate values. To ascertain the nature of the instruments the following characteristics need to be assessed:

(a)   Rate of interest payable on the instrument

(b)　Rate of dividend payable on the instrument, and whether cumulative

(c)　Liquidation preference

(d)　Anti-dilution protection

(e)　Right to vote on major decisions taken by the company, whether restricted to the class of instruments or in expanded form and combination with other classes

(f)　Right to board seats / board observer seats / advisor status

(g)　Right to have their prior approval for certain decisions.

(h)　Right to convert into equity shares, drag along and tag along rights.

(i)　Treatment of such instruments by regulatory bodies such as RBI, and accounting treatment as per GAAP.

After assessing these characteristics, we could identify instruments as being near equity, if the rate of interest or dividend payable on the instrument is marginal, meaning that the return to the investor comes out of the other characteristics; if there is anti-dilution protection, right to vote similar to equity shares, rights to board seats in proportion to fully diluted status of equity, etc. In fact, based on the proportion of shareholding of such instruments, one can even assess whether there is a controlling interest residing in such instruments.

Instruments to be considered as part of the pre-money number of equity shares outstanding on a fully diluted basis, are likely to be the following –

(a)　CCDs

(b)　Convertible portion of PCDs

(c)　OCDs, if the likelihood of conversion is greater than 50%

(d)　CCPS

(e)　The option pool under ESOP, whether granted or not

(f)　Options attached to other instruments

(g)　Share warrants, assuming that the likelihood of calling for equity shares is greater than 50%

(h)　Convertible notes, if they are likely to be converted and terms are clear.

Instruments more likely to be considered as debt are as follows –

(a)   NCDs

(b)   Non-convertible portion of PCDs

(c)   OCDs if unlikely to be converted

(d)   Redeemable preference shares

(e)   Other instruments that are unlikely to be converted, including convertible notes.

While computing the weighted average cost of debt, it is necessary to identify the cost of debt for each of the instruments assessed as debt, as above. For instance, the cost of RPS would be higher on post-tax basis as compared to NCDs on post-tax basis, as dividends are not tax deductible.

Allocation of enterprise value to each of the debt instruments outstanding on the Valuation date can be done, by computing the value of each instrument, given its characteristics

(a)   In the case of NCDs, PCDs, OCDs treated as debt – the cash flows due to the instruments can be computed, net of tax, comprising the interest payouts, and the premium, if any, on redemption of debentures

(b)   In the case of RPS, the rate of dividend can be used as the capitalization rate to arrive at the value of the RPS, and suitably increased for the premium on redemption, if any.

The Valuation model should also factor in the time at which redemption is likely to take place. Once the value of each debt instrument is computed and reconciled with the value of debt, from the enterprise Valuation, one can deduct and arrive at the value of the equity instruments.

Allocation of Values to Equity-Like Instruments

(a)   *CCPS* - If the rate of dividend on CCPS is negligible (say 0.01%), the value attribution to this dividend is marginal. Value attribution to liquidation preference is also likely to be small, if the cash flows show low probability of liquidation. In this situation, the real value is attributable to the rights that are very similar to the rights of the equity shares. Value of the CCPS is dependent on the ratio at which the CCPS will convert into equity shares, and the value per equity share, is likely to be very similar to the value of CCPS, subject to a marginal adjustment for dividend.

(b)   *CCD* – Here again, if the rate of interest on CCD is negligible (say 0.01%), the value attribution to the interest is marginal. Similarly, value attribution to liquidation rights will be as above. Value per CCD is likely to be very similar to the value of equity shares, subject to a marginal adjustment for interest.

(c)   *ESOP* – There is an interesting question to be addressed, namely whether value attribution should be given to options earmarked for grant to employees, but not yet granted.

The option pool is typically adjusted by investors from the pre-money Valuation, rather than from the post-money Valuation. Similarly, whether options granted but not vested, or vested but not exercised, will have a similar value as equity shares outstanding.

Also, in the Valuation of options, one should consider the fair value of options or the intrinsic value of options. The suggested approach to Valuation is to consider the entire option pool in the pre-money computation of the number of shares outstanding. The value of the ESOP can be adjusted for the grant price/expected grant price of unexercised options, with suitable discounting for the time at which options are likely to be exercised.

The value of the option itself, will be the intrinsic value, in case this method is used, and the fair value of the options (which should typically be higher than the intrinsic value).

In order to handle the issue of fair Valuation of options – let's look at the perspective from which the Valuation of options is done.

"Fair Valuation of options is done from the perspective of arriving at an accounting value for stock option grants. However, from the viewpoint of the enterprise, it is to be kept in mind that it is writing the options that are being granted. The Valuation from this perspective is therefore what we have stated above, i.e., the option pool has value which is similar to the value of the other shares of the enterprise, less the amount receivable for the grant price of the options."

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1.   When Valuation of options granted under an ESOP is to be done? What are the factors to be kept in mind while issuing Valuation reports for ESOP?

Applicability of Legal Framework

(a)   Section 61(1)(b) of Companies Act, 2013 and Rule 12 of the Companies (Share Capital and Debentures) Rules, 2014 cover the issue of employee stock options. A reference is also to be made to SEBI regulations under sub-rule (11), in the case of listed companies.

(b)   SEBI (Share based Employee Benefits) Regulations, 2014 cover issue of employee stock options by listed companies.

(c)   Section 17(2)(vi) of the Income Tax Act, 1961 and Rule 3(8) of the Income tax rules.(perquisite)

(d)   Ind AS 102 on Share-Based Payment and Guidance Note on Accounting for Employee share-based payments (2005).

It would be a good practice for a company to get a Valuation of the company's equity shares and its option grants done every year, for the purpose of determining the intrinsic value/ fair value of options. This serves the purposes of substantiating the accounting treatment of stock option costs, and computation of the perquisite value on exercise of options. In the latter case, the Valuation may have to be done by a merchant banker, rather than a registered valuer, in the case of unlisted companies.

The valuer needs to collate basic data such as -

(a)   Volatility of the stock

(b)   Risk free rate

(c)   Expected dividend yield

(d)   Expected option life

(e)   Market price of the stock

(f)   Exercise price of the option.

A choice has to be made between the appropriate Valuation model to be followed –

(a)   Binomial Model or

(b)   Black Scholes Model (BSM)

Theoretically, the value derived under either model should converge, if multiple steps are assumed in the binomial model. The Binomial Model is preferable for valuing American options, though, as stated, with sufficient

number of steps, the value under the BSM should converge with the BSM model Valuation.

Obtaining Data

(a) **Volatility of the stock** – The measure of volatility used in option pricing models is the annualized standard deviation of the continuously compounded rates of return on the stock over a period of time. In some circumstances, historical data may not be available, e.g., in the case of a start-up enterprise. It may not be appropriate to choose overall market volatility for a start-up enterprise, since it is likely suppress the estimation of volatility. A sectoral average or the volatility for similar enterprises may be more appropriate. The historical volatility of the stock over the most recent period that is commensurate with the expected life of the option being valued, could be used.

(b) **Risk free rate** – Current yield on government securities with similar residual maturity could be considered.

(c) **Exercise price and Expected dividend yield** will be provided by management

(d) **Expected option life** – While estimating the expected option life, it is sensible to segregate employees into homogenous groups if possible, since there could be a difference in behavior between groups. Thereafter, estimating the life of the options could be kept simple (e.g., (min life plus max life)/2 to arrive at the average life).

The next step is *computing the value of the option,* for which we may even use any option calculator, that is available online. It is important that the Valuation report outlines the scope of work, the methodology followed, parameters used, the references to public databases, assumptions made, and suitable disclaimers.

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2.   How much of credence needs to be given to cost optimization plans outlined by the management?

It is possible that an acquisition transaction is based on the premise that there will be cost synergies in the acquisition. As a part of the assessment of the synergy, the selling enterprise may share information that major cost optimization drives have been identified and initiated, and the enterprise Valuation correspondingly is higher, assuming that benefits of these cost savings accrue to the selling enterprise.

An independent valuer is faced with assessing the situation where huge enterprise value is created by assuming large incremental cash flows from these cost savings. There has to be *a critical analysis of the enterprise in comparison to others in the industry*, and the performance of the enterprise over time. This requires approaching the enterprise using the EIC model, i.e., assessing the economy, the industry and then the company.

A common size analysis would enable comparison of the enterprise with other enterprises in the same industry and against itself over time. Based on the analysis, we get insights about the industry growth rates vs the company's growth rate, the high performers and laggards in the industry, the cost structures in the industry, industry segmentation, customer segmentation, assessment of product features and positioning in relation to competition. Once we have common size analysis of the company's cost structure, we would be better placed to assess the likelihood of cost optimization initiatives resulting in savings. Thereafter, an assessment of management's capability in delivering on these initiatives needs to be done, and a probability assigned to the likelihood of success of these initiatives.

> *Is there a conflict, if reports for allocation of purchase price, indicate that Valuations at which acquisitions have been done are overpriced? Is there a possibility of there being a charge to the P&L account immediately based on the purchase price allocation report due to impairment of assets?*

Post-acquisition, it would be essential for an enterprise to obtain a purchase price allocation (PPA) report, which provides an independent assessment of the values at which the purchase price is to be allocated to the various tangible and intangible assets that have been acquired, and the resulting goodwill. Since the auditors need to frame an independent viewpoint on these reports and the values at which assets and liabilities are stated, the PPA report would be done by independent valuers. Hence, there are likely to be multiple viewpoints with significant differences in approach, to the Valuation of the business being acquired.

Management's Valuation includes synergies that could result from the acquisition. The expert involved in the PPA may not have been involved in the acquisition process and may have been brought in solely for the PPA report. The auditors need to assess that financial statements are true and fair. In this situation, if the PPA report allocates significant values to goodwill,

there would have to be an assessment of whether the goodwill is impaired, from the outset, however improbable. The allocation of goodwill to the cash generating units to which the goodwill is attributable would be done in the PPA report. Impairment testing of the goodwill can be done in accordance with Ind AS 36, at the cash generating unit level, and if the testing indicates that there is an impairment, the asset values need to be written down.

Is it necessary to obtain a Valuation report for a rights issue?

a) Section 62(1)(a) of Companies Act, 2013 requires any further issue of shares to be made to the existing shareholders in proportion to their existing holdings and shall be deemed to include a right to renounce the shares in favor of any other party.

b) Section 56(2)(vii) of the Income Tax Act applies to a rights issue only if it is not a *bona fide* business transaction, and if the rights issue is not in proportion to the existing shareholding.

c) FEMA regulations state that the rights issue to a person outside India should not be at a price that is less than the price offered to a person resident in India.

Hence, based on the existing legislative framework, there is no need for a Valuation report in the case of a rights issue.

<div align="right">**Chapter 13**</div>

Investment Terms vis-a-vis Valuation

Generally, any discussion on Valuation would be mostly concentrated on the Valuation or its concepts as relatable to a large corporations/ listed entities the only exception being the recent buzz about the start up Valuation. The Valuation of a closely held company with few investors (whether professional or otherwise) is a completely different play where few generally accepted norms of Valuation do not work, some essential requirements would not be at the reach in the right way and so on. In this Chapter, we would try to understand one of the areas of closely held company's Valuation namely the Investment Terms.

Private Equity/ Venture Capital funding will be bound by specific set of terms and conditions which form the basis of investment decision making and price negotiation, of course apart from the core business considerations and the business environment. This is in contrast to the investment in publicly traded securities which would be guided by regulated market prices. These investment terms and conditions would be agreed upon by and amongst the shareholders (including promoters) and the company through Shareholder's Agreement or Share Purchase Agreement or Investment Agreement, as may be relevant.

Herein, impact of the Investment Terms on the Valuation of the Company/ Shares, along with background and intent of such terms and all aspects to be considered while undertaking the Valuation exercise are discussed.

Firstly, we will see certain adjustments to be made for determining the value of closely held companies including for PE, VC and Angel investments. Amongst them, Discount for Lack of Marketability (DLOM), Control Premium and DLOC are most important and have a play in almost every closely held company Valuation. Ensuing few paragraphs discuss the meaning, need and impact of DLOM and DLOC in Valuation exercise.

DLOM is based on the premise that an asset which is readily marketable commands a higher value than an asset which requires longer marketing period to be sold or an asset having restriction on its ability to sell *(Para 38, ICAI Valuation Standard – 103: Valuation Approaches and Methods)*.

Traded price of a publicly traded stock would usually reflect Value of a Marketable Minority Share. Application of DLOM on such value would derive Value of a Non-Marketable Minority Share – which is relevant in case of an unlisted closely held company.

Control premium is an amount that a buyer is willing to pay over the current market price of a publicly traded company to acquire a controlling interest in an asset. It is opposite of DLOC to be applied in case of Valuation of a non controlling/minority interest *(Para 43, ICAI Valuation Standard – 103: Valuation Approaches and Methods)*.

Control premium would usually be applied in cases where the Investor acquires ability to control operational decision making and/or financial decision making of the company. In converse situations, DLOC would be applied to derive value of minority shareholding from value of control stake.

In addition to the general considerations given for determination of DLOM, Control Premium and DLOC as above, specific consideration is to be given to the terms of investment as per the Investment Agreements and their impact on Valuation.

Key Investment Terms and Valuation Considerations

Following are the investment terms which are generally sought after by the Investors/ preferred by the promoters.

A. Conversion Rights

Most of the private equity and venture capital investors prefer to invest in dilutive securities such as compulsorily or optionally convertible preference shares/ debentures to pure equity shares for investment in early stage and start-up companies for various reasons including flexibility and down-side investment protection which these instruments offer.

Conversion ratio for a dilutive security can be agreed upon upfront (say, in the ratio of 1:1) or it may be linked to the Valuation that instruments can claim in the future investment rounds (say, 30% discount to the next round of investment) or any other business performance linked conditions. It may be noted that none of the regulations in India provide for any specific direction on treatment of these terms of investment, except for the rules to Companies Act, 2013 as discussed herein.

Rule 13 of Companies (Share Capital and Debentures) Rules, 2014 prescribes that where convertible securities are offered on a preferential basis with an option to apply for and get equity shares allotted, the price of the resultant shares pursuant to conversion shall be determined-

−　　either upfront at the time when the offer of convertible securities is made, on the basis of Valuation report of the registered valuer given at the stage of such offer, or

−　　at the time, which shall not be earlier than thirty days to the date when the holder of convertible security becomes entitled to apply for shares, on the basis of Valuation report of the registered valuer given not earlier than sixty days of the date when the holder of convertible security becomes entitled to apply for shares

It is important to note that the company shall take a decision on the above at the time of offer of convertible security itself and make appropriate disclosure of the same.

Further, conversion of the instrument can be either compulsory or optional at the will of investor. However, you may see in many instances that investment terms shall be drafted in such a manner to mandate conversion at the end of an agreed time period, with an option of conversion at the will of investor at any time during such agreed time period. This offers down-side investment protection to investors for any happening of liquidation events during the agreed time period.

While Optionally Convertible Securities are generally treated on par with Debt Securities, application of Option Pricing Models appropriately factors the impact of optionality clauses and conversion terms on Valuation. Though none of the regulations in India, including ICAI Valuation Standards mandate application of Option Pricing Model, it is the most preferred methodology of valuing hybrid securities.

B.　　Distribution Rights

Proportionate claim to dividend and liquidation proceeds can differ from instrument to instrument based on face value, paid-up value, conversion and differential rights of respective instruments.

Distribution rights may also differ from Investor to Investor based on liquidation preference and minimum return claim held by such Investor (as deliberated further). These are the rights relating to the special treatment to

be provided to one or more of the investors or classes of instruments in comparison to the rest with respect to claim in dividend and liquidation distribution.

The valuer, while determining dilution effect of each class of instrument and thereby the value of instrument, should duly consider and factor in specific distribution rights of such instruments or investors holding such instruments.

C.   Minimum Guaranteed Return

Venture capital and private equity funds procure funds from investors offering minimum guarantee return (IRR) on investment. In order to achieve the agreed IRR and for few other reasons, such venture capital and private equity funds in turn set minimum IRR benchmarks to companies for every investment made (this is to put it in very simple terms and only to provide a context – though the constraints and aspects to be considered here are numerous).

In certain instances, achievement/ non-achievement of such minimum guaranteed IRR by the investee company may lead to automatic alteration of any specific terms of investment, including conversion ratio, distribution rights, voting rights or liquidation preference.

Minimum guaranteed IRR restriction can have two-way impact on Valuation of the instruments:

–   Minimum guaranteed IRR reflects risk rating of the equity investment made from investor's perspective and thereby the return expectations. Such IRR may act as a better indicator of cost of capital (of course after duly adjusting for investor specific considerations or aspects relating to the investee company), than a market determined cost of capital.

–   Upon achievement or otherwise of minimum guaranteed IRR by the investee company, the conversion, distribution or liquidation preference terms would get altered. This would in-turn have the impact on the enterprise value and also the proportionate instrument value. In such a scenario, option pricing models needs to be adopted to factor in the probability impact of minimum guaranteed IRR on Valuation, with scenarios built for both down-side and up-side probability.

D.   Voting Rights:

As per the regulatory framework under Companies Act, 2013, equity

shareholders alone shall be vested with voting rights in proportion to respective holding of paid-up equity share capital. However, when it is approved by the shareholders, a company can issue equity shares with differential voting rights, i.e higher, lower or nil voting rights.

Dilutive securities, i.e. convertible preference shares or convertible debentures shall not have voting rights as per the Regulatory framework unless in instances where rights of such instruments are directly impacted.

In order to gain decision making powers and bridge the control gap, investors who generally prefer Dilutive Securities for investment may subscribe to and hold nominal equity shares with differential (higher) voting rights and holding of such equity shares can be tied to holding of Dilutive Securities.

While determining value of any Dilutive Instrument, to which holding of equity shares with differential voting rights is tied up to, DLOC is to be determined considering voting rights and control held by respective holding of Equity Shares.

E.   Lock-in, Drag along, Tag along and related restrictions

One of the major considerations for Angel or VC or PE Investors for investment in any early-stage or start-up entity is strength and reliability of the management, i.e., the promoter group. Value propositions of an investment might change based on continuance or discontinuance of such promoters with the company and in most cases there may not be any value left in the company if the promoters are not there.

In order to ensure continuing of management of the investee company, as a part of investment terms usually lock-in restrictions will be placed on promoter shareholding, i.e., promoter cannot dispose/transfer their shareholding in the company until completion of an agreed period or unless approved by the investors and restrictions would impact liquidity of the instruments part of promoter shareholding. The Valuer should consider the same appropriately for determining DLOM specific to such instruments.

In addition to lock-in restrictions on promoter holding, investors in general would be provided with tag along, drag along rights and right of first refusal. If promoters or any other shareholders of the company are undertaking any transactions involving sale of their respective shareholding. Tag along right gives option to investor or holder of respective instrument to participate in such sale transaction along with promoter or selling shareholder and offer their shareholding for sale. If such option is exercised, promoter or selling

shareholder shall ensure that the instruments with tag along rights are sold at the same value that is offered to their shareholding and as per same terms.

Conversely, drag along right gives right to the investor or holder of respective instrument to force the promoters or other shareholders of the company, as may be agreed upon, to sell their shareholding to a third-party buyer in a sale transaction through which holder of drag along instruments is selling respective shareholding.

If any of the shareholders are intending to undertake a transaction involving sale of their respective shareholding, the right of first refusal provides an opportunity to the Investors or holders of such right to purchase the shares of transferring shareholders at the same price and terms as that would be offered under the intended transaction with third party. This would benefit the investors by helping them to retain control over the company and protect against potential dilution.

Holders of tag along, drag along rights and right of first refusal would have liquidity benefit over other shareholders whose holding is subject to such tag along or drag along rights and same is to be appropriately considered while determining DLOM for respective instruments.

F.   Liquidation Preference

Liquidation preference is one of the primary considerations for venture capital and private equity investment. Liquidation preference terms summarise the sequence of preference of various classes of instruments or investors over the liquidation proceeds of the company.

As per general regulatory framework under Companies Act, 2013, in case of liquidation of company, liquidation proceeds of the company shall be first distributed to debenture holders along with other creditors/borrowers. Thereafter, balance proceeds shall be distributed to preference shareholders any leftover proceeds shall be distributed to equity shareholders. Here the claims of debentures and preference shareholders shall be limited to their nominal value and unsettled interest or dividend, unless otherwise provided.

However, in majority of the instances venture capital and private equity investors acquire dilutive instruments at a premium and would seek liquidation preference even for the component of premium, along with agreed return if any. To accommodate this, liquidation preference as a part of investment terms would be set in following manner:

- Liquidation proceeds (after remittance of all the debts and external commitments of the company) would be first distributed to investors to settle their claim of preference, i.e repayment of investment amount (nominal value plus premium paid) along with minimum guarantee return if any (for example, 1.5 times of the amount invested).

- In case liquidation proceeds are not sufficient to settle preference claims of all the investors, such liquidation proceeds shall be distributed to investors in proportion to their inter-se shareholding or preference amount.

- Liquidation proceeds remaining after settlement of preference claims of investors shall be distributed to promoters or other non-preference holders.

- Investors shall have an option to forgo liquidation preference claim and participate in the distribution on fully converted basis, i.e assuming their holding of dilutive instruments are converted to equity shares if such basis of distribution is beneficial.

Liquidation preference significantly affects proportionate value of instruments held by investors and shareholders/ other non-preference holders. In these situations, option pricing model – waterfall distribution approach needs to be adopted for allocation of equity value for appropriately factoring in the impact of liquidation preference.

Option Pricing Model

In multiple places above we have discussed about option pricing model – so it would be pertinent to look at this and understand it. Following paragraphs summarise the basic understanding of key methodologies of OPM and how the same can be implemented.

A. Binomial Model

Binomial call option pricing model (American/ European as may be relevant) can be applied for factoring the impact of investment terms on Valuation, including:

- Conversion of optionally convertible instruments;

- Conversion linked to future conditions;

- Achievement/non-achievement of minimum guaranteed IRR and resultant alternation of terms of investment;
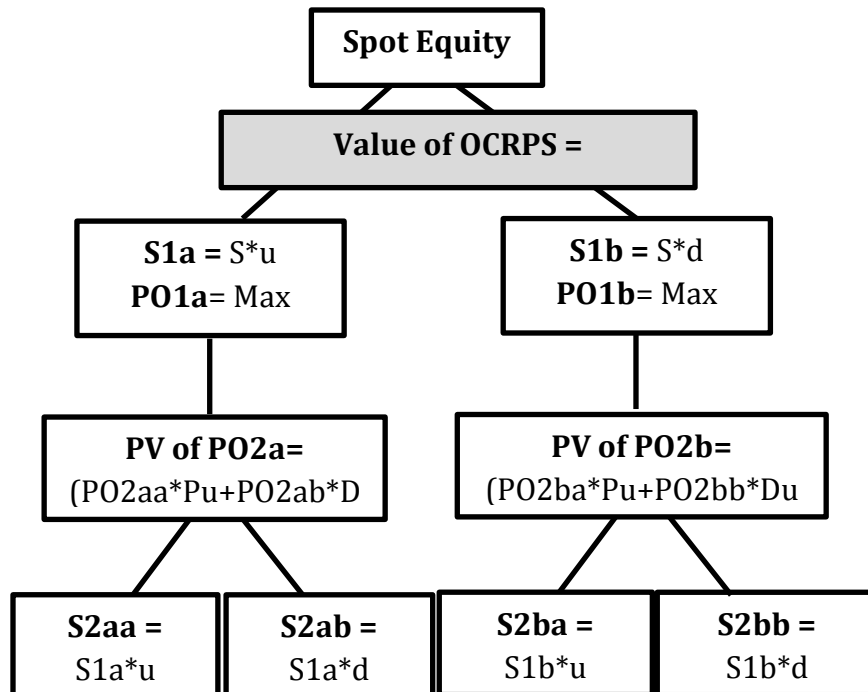
Under Binomial option pricing model, scenarios can be built for probability of upside or downside movement of underlying asset value for multiple periods and iterations.

Final outcome under this model is based on iterations of such upside and downside probability, where in probability is in-turn dependent on underlying risk (volatility) and risk-free return.

Key Inputs for Binomial call option pricing model

Time to Expiry	Time period between Valuation date and date of lapse of optionality condition
Number of Nodes	Number of Iterations
Time Interval of Node (DeltaT)	Time to Expiry/Number of Nodes
Risk Free Return (r)	Benchmark Risk Free Rate
Volatility (v)	Volatility of underlying Equity
Uptick (u)	e ^ (v* Square-root of DeltaT)
Downtick (d)	1/u
Upside Probability (Pu)	[{e^(r*DeltaT)}-d]/[u-d]
Downside Probability (Du)	(1-Pu)
Current Stock Price (S)	Value of Equity/Instrument on Valuation Date
Exercise Price (E)	Price to be paid to exercise the Option

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                    ┌─────────────────────┐
                    │    Spot Equity      │
                    └─────────┬───────────┘
          ┌───────────────────┴───────────────────┐
          │           Value of OCRPS =             │
          └───────┬──────────────────────┬─────────┘
                  │                      │
      ┌───────────┴────────┐   ┌─────────┴──────────┐
      │  S1a = S*u         │   │  S1b = S*d         │
      │  PO1a= Max         │   │  PO1b= Max         │
      └──────────┬─────────┘   └─────────┬──────────┘
                 │                       │
    ┌────────────┴─────────┐   ┌─────────┴────────────┐
    │  PV of PO2a=         │   │  PV of PO2b=         │
    │ (PO2aa*Pu+PO2ab*D    │   │ (PO2ba*Pu+PO2bb*Du   │
    └────┬───────────┬─────┘   └────┬────────────┬────┘
         │           │              │            │
   ┌─────┴───┐  ┌────┴────┐   ┌─────┴───┐  ┌─────┴────┐
   │ S2aa =  │  │ S2ab =  │   │ S2ba =  │  │ S2bb =   │
   │ S1a*u   │  │ S1a*d   │   │ S1b*u   │  │ S1b*d    │
   └─────────┘  └─────────┘   └─────────┘  └──────────┘
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Illustration:

Valuation of Optionally Convertible Preference Shares ("OCRPS") with Redemption Value 'X'

1. *For the purpose of illustration 2 iterations are considered. Accuracy of the outcome would improve with the number of iterations.*
2. *It is assumed that OCRPS is redeemable or convertible at any time during the Time to Expiry and hence, American call option pricing model is applied.*

B.   Black-Scholes Model

Black-Scholes call option pricing model is widely used for allocation of equity value amongst current value method, probability weighted expected return method and option pricing model.

For allocation of equity value under Black-scholes call option pricing model, breakpoints of distribution of assumed liquidation proceeds is to be determined in line with conversion, distribution and liquidation preference terms of various dilutive instruments of the company. Breakpoint is where the distribution proportion of assumed incremental liquidation proceeds changes.

Implied value of each such breakpoints is then determined using Black-Scholes call option pricing model considering transition values of the break points as strike prices and equity value as spot price. Incremental of implied value of breakpoints so determined above represents equity value allocated to each of such breakpoint, which shall further be allocated to various classed of dilutive instruments based on their respective distribution claims at such breakpoints. Value of each of class of Instrument is equivalent to equity Value so allocated to such instruments divided by number of Dilutive Instruments under such class.

Key Inputs for Black-option pricing model for Equity Allocation

Time to Liquidity (T)	Time period between Valuation Date and Likely Date of Liquidity Event as per Investment Terms
Risk Free Return (r)	Benchmark Risk Free Rate
Volatility (v)	Volatility of underlying Equity
Spot Price (S)	Current Equity Value
Strike Price (K)	Transition Value of Breakpoint

Black-Scholes Call Option Pricing Model = SD1-(D2*K*e^(-r*T))

d1 = [N.Log(S/K)+((r+(v^2)*0.5)*T]/(v*Square root of T);
d2 = d1-(v*Square root of T);
D1 = Normal Distribution(d1); **D2 =** Normal Distribution(d2);

Chapter 14

Tax Amortisation Benefit

The term 'Tax amortisation benefit' has not been explicitly defined anywhere but as a concept is widely accepted by all global professional bodies. In India too, TAB is commonly applied, especially by valuers who regularly carry out Valuations for the purpose of financial reporting. TAB in a layman's term is a benefit that is availed by claiming amortisation of an acquired asset as an allowable expense under tax laws. As an expert however, one would define TAB as a hypothetical benefit arising from future amortisation of an acquired intangible asset that could be available to an acquiring entity which is recording such an intangible asset in its books of accounts. The Indian Valuation Standard 302 on Intangible Assets issued by The Institute of Chartered Accountants of India in 2018 explains TAB as a hypothetical benefit available to a market participant by way of amortisation of the acquired intangible asset, thereby reducing the tax burden.

The points below are relevant to correctly understand, apply and calculate TAB.

1.   TAB is a hypothetical concept

The premise of TAB arises from the assumption that while acquiring the asset, hypothetically the acquirer would have factored in the determination of the acquisition price, such amortisation benefit that would be available on acquisition of the asset in the future. The premise of TAB is thus hypothetical and is applied irrespective of whether such amortisation is actually claimed or not. While its premise is hypothetical, its applicability is not. If there is reason to believe that the structure of a transaction or the purpose of the Valuation or the tax laws are such that there may not be any amortisation benefit available, then TAB would not be available.

2.   The asset should be seen to be acquired in isolation and not as part of a business

TAB is based on the premise that the benefit would be available on amortisation of an asset, and hence it is implied that only if the asset can be isolated and recorded separately, it can be amortised. If the asset is taken as part of a business, the asset loses its identity and cannot be recorded

separately and will not be amortised and the question of TAB would not arise. There is some confusion among valuers as to whether this implies that TAB would be applicable only on asset purchase transactions and not on stock purchase transactions. However it has been settled that TAB should be applied irrespective of whether the transaction is an asset purchase or a stock purchase, as long as the asset is being accounted and recorded separately.

3. The applicability of TAB depends on the purpose of the Valuation

Just like any other Valuation, the purpose of Valuation is also important to assess when TAB should be applied. TAB being a hypothetical benefit, it is important that TAB is not arbitrarily applied as it would erroneously inflate the value of the asset. TAB is therefore applied only if the intangible asset is being valued separately which generally it is when a purchase price allocation has been carried out (either to account for a business combination for the purpose of financial reporting or at the time of a slump / group sale for tax reporting) or when the intangible is been sold / acquired separately. For financial reporting, the inherent assumption under which the Valuation is carried out assumes a hypothetical sale of the intangible asset; in case of a purchase price allocation for a slump / group sale, the very reason the purchase price allocation is carried out is to claim tax amortisation.

4. The applicability of TAB depends on the Valuation approach followed

When the cost or market approach is used to value an asset, it is understood that the estimated cost to create / replace the subject asset and the market price used to realise the value of the subject asset respectively takes into account the value of all benefits and therefore there is no reason to additionally add the value of TAB when valuing an asset under these approaches. However when an income approach is used to value an asset, because the cash flows / earnings / cost savings pertain only to the use of the subject asset, the amortisation benefit does not get captured in the calculation and hence the need to add TAB separately when valuing an asset under the income approach.

As amortisable tangible assets are valued using either the cost approach or the market approach or both, it is by implication clear that TAB is applicable only when valuing intangible assets and that too only if they are valued using the income approach.

5.   TAB applicability depends on the tax amortisation laws of the country in which the asset is used

Although the amortisation is claimed in the books of the acquirer entity, it is the location where the asset is used that determines the applicability and the amount of TAB. For eg. if an acquirer in India buys an intangible asset used in Europe, if the European tax laws do not allow for amortisation of the acquired intangible asset, TAB should not be applied even if the acquired intangible asset is allowed to be amortised as per Indian tax laws.

6.   The value of TAB is calculated as per the amortisation method allowed by the laws of the country in which the asset is used

As mentioned earlier, once it is established that TAB is applicable, the method of amortisation to calculate TAB would also depend on the location where the asset is used. For eg. if an intangible asset used in India, is acquired, as per the tax laws of India, such an intangible asset would be amortised at the rate of 25% per annum based on the written down value method. However if the asset was being used in the US, the amortisation method would be the straight line method and the number of years over which the asset could be amortised would be different. The value of TAB would hence be different in different countries for the same intangible asset.

7.   Calculation of TAB

The four primary inputs that go in the calculation of TAB are the amortisation rate, the discounting rate, the tax rate and the duration.

Amortisation Rate

As mentioned earlier, the amortisation rate is dependent on the situs where the intangible asset is used. Depending on the amortisation laws, the amortisation policy and the amortisation method, the amortisation rate should be decided.

Discounting Rate

Intangible assets are perceived to be riskier than the company as a whole and hence the discounting rate used to value an intangible asset is higher than that used to value a company. There is hence some debate over which discounting rate should be used to present value the tax savings for calculating TAB.

While some valuers use the company's discount rate commonly referred to as the weighted average cost of capital ('WACC') to discount the tax savings

to calculate the present value of TAB, some others discount the tax savings using the discounting rate of the intangible asset. The school of thought which uses WACC to calculate TAB is of the view that as the amortisation benefit can be used to reduce the tax burden of the entire company, it is appropriate to use the WACC of the company. Proponents of the other school of thought believe that as the amortisation benefit is calculated on an intangible asset which is valued based on its own attributable cash flows /earnings / cost savings which are separate from the business, the intangible asset specific discounting rate should be used.

Both approaches are followed and are in vogue. The Valuation Standards issued by the Institute of Chartered Accountants of India as well the International Valuation Standards issued by the International Standards Valuation Council allow the use of both approaches. However one needs to be careful that the same is applied consistently in the entire Valuation process. For example, where an intangible asset specific discounting rate is being used to calculate TAB, the tax rate used to calculate TAB also should be the one pertaining to the intangible asset and not the business as a whole and vice versa.

Tax Rate

As mentioned earlier, depending on what discounting rate is being used for calculation of TAB, the tax rate should be considered so as to be consistent with the logic.

Duration

The duration for which TAB is calculated is directly related to the amortisation rate. Where the amortisation method followed is the straight line method, the duration would be inversely proportionate to the amortisation rate. For eg. if the amortisation rate prescribed is 10%, then the duration over which the benefit would accrue would be 10 years. In some countries, the life itself is prescribed such as the US where the amortizable life prescribed is 15 years. In countries like India, the amortisation rate prescribed is 25% per annum and the method prescribed is the written down value method. As the method prescribed is a reducing balance method, TAB is generally calculated for a duration by which the present value of the tax savings becomes negligible.

Although transactions involving intangible assets have increased, Valuation of intangible assets is not as widely accepted or understood as say a

business or an equity Valuation and because the information available in public domain about intangible assets exchanging hands is limited. In India, it is easy to err. In India, the value of TAB can constitute almost 25% to 30% of the value of the intangible asset and hence it is a double edged sword that should be understood and applied with caution depending on the purpose of the Valuation, the Valuation approach and the tax laws of the relevant jurisdiction.

Valuation of a Financial Service Company

India has a diversified financial sector undergoing rapid expansion, both in terms of strong growth of existing Financial Service Companies and new entities entering the market. The sector comprises of Commercial Banks, Insurance Companies, Non-Banking Financial Companies, Co-operatives, Pension Funds, Mutual Funds and other smaller Financial Entities. The Government of India has introduced several reforms to liberalise, regulate and enhance this industry. But valuing such companies has its own challenges.

The two major challenges in valuing a Financial Service Company are:

Debt: The debt of a Financial Service Company is difficult to define and measure, making it difficult to estimate firm value or cost of capital. In a non-Financial Service Company, funds are raised through equity as well as from debts to make its investment. When we value the firm, we value the assets owned by the firm and not just the equity value of the firm. But for most of the Financial Service Companies, debts are raw material rather than a source of capital. The Financial Service Company raises debt to fund its operation and earn operating revenue. Thus, defining debt in a Financial Service Company is extremely difficult.

Estimating cash flow: Financial Service companies are highly regulated. The regulatory authority governs where they can invest their fund and how much they can invest. Two major reinvestment items are net capital expenditure and change in working capital. However, financial company has its own challenges. Unlike a non-financial company which invests in plant and machinery, land and building and other fixed assets, a Financial Service Company primarily invests in marketing, human capital and other intangible assets like brand name. Such investments are often categorized as operating expenses and are expensed out in books. With, working capital we face a different problem i.e. to categorise debt and investment into current or non-current, inter-changing such number can give a bizarre Valuation.

Thus, due to the above mentioned challenges in debt and cash flow, "Discounted Cash Flow Method" – the method which is most commonly used for valuing a firm is not suitable for valuing a Financial Service Company.

Under "Discounted Cash Flow Method" we value firms by discounting expected After Tax Cash Flows prior to debt payments at the weighted average cost of capital and we value equity by discounting cash flows to equity investors at the cost of equity. Estimating cash flows prior to debt payments at weighted average cost of capital is problematic as the nature of debt cannot be easily identified. To value equity, we have to estimate free cash flow to equity, defined as follows:

Free Cash flow to Equity = Net Income available to Equity Shareholders + Depreciation – Change in non-cash working capital – Net Capital Expenditure – Net Debt repayment.

Since we cannot estimate capital expenditure, working capital and nature of debt in a Financial Service Company as discussed before, we cannot clearly estimate the Free Cash flow to Equity.

We now look at the different Valuation methodology which can be used to value a Financial Service Company.

(a) *Excess Return Model:* The Value of Equity under the "Excess Return Method" can be derived as the sum of Value of Equity as on the date of Valuation and the present value of expected excess returns to the Equity Investors.

The given model focuses on just the value of equity in a firm, thus eliminating the difficulty in defining the nature of debt in a financial company.

Value of Equity = Value of Equity as on the date of Valuation + Present Value of Expected Excess Returns to the Equity Investors.

The model focuses on its excess returns earned by the equity investors of the company over the fair market rate of return on such investments. A firm that earns below the market return on its equity investment will see its equity value dip below the equity capital currently invested and *vice versa.*

The Value of Equity as on the date of Valuation is usually the Book Value of Equity of the company. The Book Value of Equity of the Financial Service Company is more reliable measure to consider as the Value of Equity for various reasons. First, unlike in a Non-Financial Service Company where depreciation plays a major role in determining the Book Value of Firm,

depreciation is often negligible in a Financial Service Company. Secondly, the assets of a Financial Service Company are often financial assets and hence are marked up to market, thus eliminating the deviation between book value and market value of such assets.

The Excess Returns can be stated as the difference between Profit after tax to equity shareholders and equity cost.

Excess returns = Profit after tax to Equity Shareholders – Equity Cost

The profit after tax to Equity Shareholders can be derived based on mutli-year forecast, similar to the projections as required for "The Discounted Cash Flow Method".

The equity cost shall be determined by the general market expectation for such investments. To ascertain the equity cost, cost of equity shall be multiplied by the average book value of equity.

Cost of Equity shall be derived based on Capital Assets Pricing Model and is computed as under:

Cost of Equity = Risk Free Rate of Return + Beta (Market Risk Premium)
Equity Cost = Cost of Equity * Average Book Value of Equity

The Terminal Value of Excess Returns to Equity Investor can then be computed by applying Gordon Growth Model.

Terminal Value = $\dfrac{\text{Expected Excess Return of Explicit forecast period} * (1+g)}{CoE - g}$

Where: CoE = Cost of Equity

g = constant growth rate beyond the forecast horizon

Terminal Value is then discounted to its present value using the discounting factor for the last year of the forecast horizon.

(b)   Assets Based Valuation: In this model, we value assets of the Financial Service Company, netting off the debt and other liabilities and the difference is the value of equity.

The biggest merit of this model while valuing a Financial Service Company is that the assets held by a financial service company are often financial assets and hence are marked up to market, thus eliminating the need to revalue the assets as on the Valuation date.

But this model has its own limitations, in as much as it ignores the growth potential of the company, thereby ignoring the future earning potential of the business. It is also difficult to arrive at the value of intangible assets, like brand name, human capital, etc.

(c)   *Relative Valuation:* Under the Relative Valuation Approach, series of multiplies are used to value firms.

Multiplies such as "Value to EBITDA" or "Value to EBIT" cannot be easily used to value Financial Service Companies, as neither Value nor Operating Income can easily be estimated for Financial Service Companies.

For valuing a Financial Service Company, the multiples which can be used must be equity linked multiplies like price earnings ratio and price to book value ratios.

Price Earnings Ratio: Also known as the price multiple or the earnings multiples, the ratio for valuing a company that measures its current share price relative to its per-share earnings.

$$\text{Price Earnings Ratio} = \frac{\text{Market Value Per Share}}{\text{Earnigs Per Share}}$$

An issue, specific to valuing a Financial Service Company using P/E ratio is the use of provisions for expected losses: eg provision for non- performing assets by banks. Such provisions reduce the reported income and affect the reporting P/E ratio. Banks which are more conservative about categorizing bad loans will report lower earning and have higher P/E ratio, whereas banks that are less conservative will report higher earnings and lower P/E ratio.

Price to Book Value Ratio: This ratio expresses the relationship between the price of share to the book value of equity per share.

The higher growth rates in earnings, lower cost of equity and higher returns on equity all results in lower price to book ratios. The strength of the relationship between price to book ratios and return on equity should be stronger for Financial Service Company than for Non-Financial Service Company, as the book value of equity of Financial Service Company is much likely to be in line with market value of the equity invested in existing assets.

CONCULSION

Valuation principles for valuing a Financial Service Company are the same as those of Non-Financial Service Company. However, the methodologies used in both the companies are quite different. This is mainly because, first

in a Financial Service Company it is difficult to categorize the nature of debt and secondly estimating cash flow has it's own challenges with capital expenditure and working capital, which are not easily estimated in Financial Service Company. Excess Return Method which focuses on excess return earned by equity investor on the equity investments is by far the most suitable method under income approach for a Financial Service Company.

 Under relative Valuation we face challenges in using multiplies like Value to EBITDA or Value to EBIT as neither value nor operating income can be easily estimated for Financial Service Company. Hence, price to earnings ratio and price to book value ratio are the most suitable methods under the relative approach.