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THE VALUATION PROFESSIONAL

YOUR INSIGHT JOURNAL

ICMAI REGISTERED VALUERS ORGANISATION

About ICMAI Registered Valuers Organisation

The Companies Act, 2013 brought into the light the concept of 'Registered Valuers' to regulate the practice of Valuation in India and to standardize the valuation in line with International Valuation Standards. Consequentially, The Ministry of Corporate Affairs (MCA) notified the provisions governing valuation by registered Valuers [section 247 of the Companies Act, 2013] and the Companies (Registered Valuers and Valuation) Rules, 2017, both came into effect from 18 October, 2017.

In view of the above, the Institute of Cost Accountants of India (Statutory body under an Act of Parliament) has promoted ICMAI Registered Valuers Organisation (ICMAI RVO), a section 8 company under Companies Act, 2013 on 23rd February 2018, which is recognised under Insolvency and Bankruptcy Board of India (IBBI) to conduct educational courses on Valuation for three different asset classes - Land & Building, Plant & Machinery and Securities or Financial Assets and to act as frontline regulator as Registered Valuers Organisation. ICMAI Registered Valuers Organisation is an Academic Member of International Valuation Standards Council.

INDEX

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FROM THE CHAIRMAN's DESK

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Uncertainty is part and parcel of the valuation process, both at the point in time that we value a business and in how that value evolves over time as we get new information that impacts the valuation. That information can be specific to the firm being valued, more generally about the sector in which the firm operates or even be general market information (about interest rates and the economy).

When valuing an asset at any point in time, we make forecasts for the future. Since none of us possess crystal balls, we have to make our best estimates, given the information that we have at the time of the valuation. Our estimates of value can be wrong for a number of reasons, and we can categorize these reasons into three groups.

- Estimation Uncertainty: Even if our information sources are impeccable, we have to convert raw information into inputs and use these inputs in models. Any mistakes or mis-assessments that we make at either stage of this process will cause estimation error.
- Firm-specific Uncertainty: The path that we envision for a firm can prove to be hopelessly wrong. The firm may do much better or much worse than we expected it to perform, and the resulting earnings and cash flows will be very different from our estimates.
- Macroeconomic Uncertainty: Even if a firm evolves exactly the way we expected it to, the macro economic environment can change in unpredictable ways. Interest rates can go up or down and the economy can do much better or worse than expected. These macroeconomic changes will affect value.

FROM THE PRESIDENT's DESK

CMA P. Raju Iyer
Nominee Director
ICMAI Registered Valuers Organisation

President
The Institute of Cost Accountant of India

Even at the end of the most careful and detailed valuation, there will be uncertainty about the final numbers, colored as they are by assumptions that we make about the future of the company and the economy in which it operates. It is unrealistic to expect or demand absolute certainty in valuation, since the inputs are estimated with error. This also means that analysts have to give themselves reasonable margins for error in making recommendations on the basis of valuations.

The corollary to this statement is that a valuation cannot be judged by its precision. Some companies can be valued more precisely than others simply because there is less uncertainty about the future. We can value a mature company with relatively few assumptions and be reasonably comfortable with the estimated value. Valuing a technology firm will require far more assumptions, as will valuing an emerging market company. In general, analysts should try to focus on making their best estimates of firm-specific information – how long will the firm be able to maintain high growth? How fast will earnings grow during that period? What type of excess returns will the firm earn? and steer away from bringing in their views on macroeconomic variables.

FROM THE MD's DESK

Dr. S. K. Gupta
Managing Director
ICMAI Registered Valuers Organisation

Startup founders should remember that valuations are temporary and values are forever, and they must focus on doing good and stay grounded. India has crossed the 100 unicorns mark, in a post on Twitter, he said it is "not just a milestone but a stepping stone that lays the path for the next 1,000 unicorns. We are now sprinting towards glory to make India the largest entrepreneurial ecosystem in the world. presence of entrepreneurs and markets in Tier II, III and IV towns in India; digitization of small and medium enterprises, and the support of the government by creating the right ecosystem as key factors for the growth of startups in the country.

Fund raising by companies at high valuations had led many to point out the lack of profits while those supporting the valuations are of the view that that it is the future potential which these businesses possess that should make someone overlook the conventional way of looking at a business. successful businesses are the ones which deliver tangible profits. trusty old concepts" like gross margins and cash flows will matter eventually even while valuations jump. ultimately unit economics will have to matter.

PROFESSIONAL DEVELOPMENT

ICMAI REGISTERED VALUERS' ORGANISATION

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PROFESSIONAL DEVELOPMENT PROGRAMS

April '2022 to June '2022	
Date	**PD Programs**
10th April 2022	Certificate Course on Valuation Report
13th -14th April 2022	Certificate Course on Valuation for Insolvency Professionals
15th April 2022	Learning Session Valuation approaches and techniques to find the fair value
17th April 2022	Certificate Course on Improving Valuation Competency
20th April 2022	Master Class on Valuation
21st April 2022	NATIONAL CONCLAVE ON PROFESSION AND PRACTICE OF VALUATION: VISION 2025
22nd -23rd April 2022	Professional Development Program -Enhancing Valuation Competency
23rd -24th April 2022	Certificate Course on Building Competency in Valuation
26th April 2022	Findings and Learnings of Peer Review
28th -29th April 2022	Master Class Revised International Valuation Standards Effective from 31st January 2022
1st May 2022	Valuation Bootcamp
02nd May 2022	Seminar on the Occasion of 5th Foundation Day ICMAI RVO
04th -05th -06th May-2022	Mastering Shades of Valuation
07th -08th May 2022	Workshop on Valuation
11th May 2022	Learning Session Emerging Business and Economic Environment
13th -14th May 2022	Master Class on Valuation
14th May 2022	Learning Session Current Trends of the Indian Economy with an objective lens
15th May 2022	Workshop on Valuation
19th -20th May 2022	Certificate Course in Valuation
22nd May 2022	Certificate Course in Valuation
24th -25th May 2022	Demystifying Valuation - Back to the Basics
29th May 2022	Specialized Certificate Course in Valuation
1st -2nd June 2022	Practical Aspects of Valuation
04th -5th June 2022	Certificate Course on Financial Modelling for Registered Valuers
04th-18th June 2022	Online Summer Bootcamp Certificate Course on Valuation from (Saturday-Sunday)

PROFESSIONAL DEVELOPMENT PROGRAMS

50 Hours Training Programs

April '2022 to June '2022	
Date	**Programs**
25th -27th March 2022 & 31st March 2022-03rd April 2022	50 hours Valuation Course on Land & Building and Plant & Machinery
25th -27th March 2022 & 31st March 2022-03rd April 2022	50 hours Valuation Course on Securities or Financial Assets
13th -15th May 2022 & 19th -22nd May 2022	50 hours Valuation Course on Land & Building and Plant & Machinery
27th 29th May 2022 to 01st -04th June 2022	50 hours Valuation Course on Securities or Financial Assets
3rd to 5th & 9th -12th June 2022	50 hours Valuation Course on Securities or Financial Assets
3rd to 5th & 9th -12th June 2022	50 hours Valuation Course on Land & Building and Plant & Machinery

Upcoming Professional Development Programs

Date	PD Programs
24th -26th June 2022 & 30th June 2022 -3rd July 2022	50 hours Valuation Course on Securities or Financial Assets
18th June 2022	17th Online COP


Articles

PERSPECTIVES ON VALUATION

Dr. S. K. Gupta
Managing Director
ICMAI Registered Valuers Organization

Introduction

Knowing what an asset is worth and what determines that value is a pre-requisite for intelligent decision making -- in choosing investments for a portfolio, in deciding on the appropriate price to pay or receive in a takeover and in making investment, financing and dividend choices when running a business. The premise of valuation is that we can make reasonable estimates of value for most assets, and that the same fundamental principles determine the values of all types of assets, real as well as financial. Some assets are easier to value than others, the details of valuation vary from asset to asset, and the uncertainty associated with value estimates is different for different assets, but the core principles remain the same. This introduction lays out some general insights about the valuation process and outlines the role that valuation plays in portfolio management, acquisition analysis and in corporate finance. It also examines the three basic approaches that can be used to value an asset.

A philosophical basis for valuation

A postulate of sound investing is that an investor does not pay more for an asset than it is worth. This statement may seem logical and obvious, but it is forgotten and rediscovered at some time in every generation and in every market. There are those who are disingenuous enough to argue that value is in the eyes of the beholder, and that any price can be justified if there are other investors willing to pay that price. That is patently absurd. Perceptions may be all that matter when the asset is a painting or a sculpture, but we do not and should not buy most assets for aesthetic or emotional reasons; we buy financial assets for the cash flows we expect to receive from them. Consequently, perceptions of value have to be backed up by reality, which implies that the price we pay for any asset should reflect the cash flows it is expected to generate. Valuation models attempt to relate value to the level of, uncertainty about and expected growth in these cash flows.

There are many aspects of valuation where we can agree to disagree, including estimates of true value and how long it will take for prices to adjust to that true value. But there is one point on which there can be no disagreement. Asset prices cannot be justified by merely using the argument that there will be other investors around who will pay a higher price in the future. That is the equivalent of playing a very expensive game of musical chairs, where every investor has to answer the question, "Where will I be when the music stops? Before playing. The problem with investing with the expectation that there will be a bigger fool around to sell an asset to, when the time comes, is that you might end up being the biggest fool of all.

Inside the Valuation Process

There are two extreme views of the valuation process. At one end are those who believe that valuation, done right, is a hard science, where there is little room for analyst views or human error. At the other are those who feel that valuation is more of an art, where savvy analysts can manipulate the numbers to generate whatever result they want. The truth does lies somewhere in the middle and we will use this section to consider three components of the valuation process that do not get the attention they deserve – the bias that analysts bring to the process, the uncertainty that they have to grapple with and the complexity that modern technology and easy access to information have introduced into valuation.

Value first, Valuation to follow: Bias in Valuation

We almost never start valuing a company with a blank slate. All too often, our views on a company are formed before we start inputting the numbers into the models that we use and not surprisingly, our conclusions tend to reflect our biases. We will begin by considering the sources of bias in valuation and then move on to evaluate how bias manifests itself in most valuations. We will close with a discussion of how best to minimize or at least deal with bias in valuations.

Sources of Bias

The bias in valuation starts with the companies we choose to value. These choices are almost never

random, and how we make them can start laying the foundation for bias. It may be that we have read something in the press (good or bad) about the company or heard from an expert that it was under or over valued. Thus, we already begin with a perception about the company that we are about to value. We add to the bias when we collect the information we need to value the firm. The annual report and other financial statements include not only the accounting numbers but also management discussions of performance, often putting the best possible spin on the numbers.

In many valuations, there are institutional factors that add to this already substantial bias. For instance, it is an acknowledged fact that equity research analysts are more likely to issue buy rather than sell recommendations, i.e., that they are more likely to find firms to be undervalued than overvalued. This can be traced partly to the difficulties analysts face in obtaining access and collecting information on firms that they have issued sell recommendations on, and partly to pressure that they face from portfolio managers, some of whom might have large positions in the stock, and from their own firms investment banking arms which have other profitable relationships with the firms in question.

The reward and punishment structure associated with finding companies to be under and over valued is also a contributor to bias. An analyst whose compensation is dependent upon whether she finds a firm is under or over valued will be biased in her conclusions. This should explain why acquisition valuations are so often biased upwards. The analysis of the deal, which is usually done by the acquiring firms' investment banker, who also happens to be responsible for carrying the deal to its successful conclusion, can come to one of two conclusions. One is to find that the deal is seriously over priced and recommend rejection, in which case the analyst receives the eternal gratitude of the stockholders of the acquiring firm but little else. The other is to find that the deal makes sense (no matter what the price) and to reap the ample financial windfall from getting the deal done.

Manifestations of Bias

There are three ways in which our views on a company (and the biases we have) can manifest themselves in value. The first is in the inputs that we use in the valuation. When we value companies, we constantly come to forks in the road where we have to make assumptions to move on. These assumptions can be optimistic or pessimistic. For a company with high operating margins now, we can either assume that competition will drive the margins down to industry averages very quickly (pessimistic) or that the company will be able to maintain its margins for an extended period (optimistic). The path we choose will reflect our prior biases. It should come as no surprise then that the end value that we arrive at is reflective of the optimistic or pessimistic choices we made along the way.

The second is in what we will call post-valuation tinkering, where analysts revisit assumptions after a valuation in an attempt to get a value closer to what they had expected to obtain starting off. Thus, an analyst who values a company at $ 15 per share, when the market price is $ 25, may revise his growth rates upwards and his risk downwards to come up a higher value, if she believed that the company was under valued to begin with.

The third is to leave the value as is but attribute the difference between the value we estimate and the value we think is the right one to a qualitative factor such as synergy or strategic considerations. This is a common device in acquisition valuation where analysts are often called upon to justify the unjustifiable. In fact, the use of premiums and discounts, where we augment or reduce estimated value, provides a window on the bias in the process. The use of premiums – control and synergy are good examples – is commonplace in acquisition valuations, where the bias is towards pushing value upwards (to justify high acquisition prices). The use of discounts – illiquidity and minority discounts, for instance – are more typical in private company valuations for tax and divorce court, where the objective is often to report as low a value as possible for a company.

What to do about bias

Bias cannot be regulated or legislated out of existence. Analysts are human and bring their biases to the table. However, there are ways in which we can mitigate the effects of bias on valuation:

- **Reduce institutional pressures:** As we noted earlier, a significant portion of bias can be attributed to institutional factors. Equity research analysts in the 1990s, for instance, in addition to dealing with all of the standard sources of bias had to grapple with the demand from their employers that they bring in investment banking business. Institutions that want honest sell-side equity research should protect their equity research analysts who issue sell recommendations on companies, not only from irate companies but also from their own sales people and portfolio managers.
- **De-link valuations from reward/punishment:** Any valuation process where the reward or punishment is conditioned on the outcome of the valuation will result in biased valuations. In other

words, if we want acquisition valuations to be unbiased, we have to separate the deal analysis from the deal making to reduce bias.

- **No pre-commitments** : Decision makers should avoid taking strong public positions on the value of a firm before the valuation is complete. An acquiring firm that comes up with a price prior to the valuation of a target firm has put analysts in an untenable position, where they are called upon to justify this price. In far too many cases, the decision on whether a firm is under or overvalued precedes the actual valuation, leading to seriously biased analyses.
- **Self-Awareness:** The best antidote to bias is awareness. An analyst who is aware of the biases he or she brings to the valuation process can either actively try to confront these biases when making input choices or open the process up to more objective points of view about a company's future.
- **Honest reporting:** In Bayesian statistics, analysts are required to reveal their priors (biases) before they present their results from an analysis. Thus, an environmentalist will have to reveal that he or she strongly believes that there is a hole in the ozone layer before presenting empirical evidence to that effect. The person reviewing the study can then factor that bias in while looking at the conclusions. Valuations would be much more useful if analysts revealed their biases up front.

While we cannot eliminate bias in valuations, we can try to minimize its impact by designing valuation processes that are more protected from overt outside influences and by report our biases with our estimated values.

It is only an estimate: Imprecision and Uncertainty in Valuation

Starting early in life, we are taught that if we do things right, we will get the right answers. In other words, the precision of the answer is used as a measure of the quality of the process that yielded the answer. While this may be appropriate in mathematics or physics, it is a poor measure of quality in valuation. Barring a very small subset of assets, there will always be uncertainty associated with valuations, and even the best valuations come with a substantial margin for error. In this section, we examine the sources of uncertainty and the consequences for valuation.

Sources of Uncertainty

Uncertainty is part and parcel of the valuation process, both at the point in time that we value a business and in how that value evolves over time as we get new information that impacts the valuation. That information can be specific to the firm being valued, more generally about the sector in which the firm operates or even be general market information (about interest rates and the economy).

When valuing an asset at any point in time, we make forecasts for the future. Since none of us possess crystal balls, we have to make our best estimates, given the information that we have at the time of the valuation. Our estimates of value can be wrong for a number of reasons, and we can categorize these reasons into three groups.

- **Estimation Uncertainty:** Even if our information sources are impeccable, we have to convert raw information into inputs and use these inputs in models. Any mistakes or mis-assessments that we make at either stage of this process will cause estimation error.
- **Firm-specific Uncertainty:** The path that we envision for a firm can prove to be hopelessly wrong. The firm may do much better or much worse than we expected it to perform, and the resulting earnings and cash flows will be very different from our estimates.
- **Macroeconomic Uncertainty:** Even if a firm evolves exactly the way we expected it to, the macro economic environment can change in unpredictable ways. Interest rates can go up or down and the economy can do much better or worse than expected. These macroeconomic changes will affect value.

The contribution of each type of uncertainty to the overall uncertainty associated with a valuation can vary across companies. When valuing a mature cyclical or commodity company, it may be macroeconomic uncertainty that is the biggest factor causing actual numbers to deviate from expectations. Valuing a young technology company can expose analysts to far more estimation and firm-specific uncertainty. Note that the only source of uncertainty that can be clearly laid at the feet of the analyst is estimation uncertainty.

Even if we feel comfortable with our estimates of an asset's values at any point in time, that value itself will change over time, as a consequence of new information that comes out both about the firm and about the overall market.. Given the constant flow of information into financial markets, a valuation done on a firm ages quickly, and has to be updated to reflect current information. Thus, technology companies that were valued highly in late 1999, on the assumption that the high growth from the nineties would continue into the future, would have been valued much less in early 2001, as the prospects

of future growth dimmed. With the benefit of hindsight, the valuations of these companies (and the analyst recommendations) made in 1999 can be criticized, but they may well have been reasonable, given the information available at that time.

Responses of Uncertainty

Analysts who value companies confront uncertainty at every turn in a valuation and they respond to it in both healthy and unhealthy ways. Among the healthy responses are the following:

- **Better Valuation Models:** Building better valuation models that use more of the information that is available at the time of the valuation is one way of attacking the uncertainty problem. It should be noted, though, that even the best-constructed models may reduce estimation uncertainty but they cannot reduce or eliminate the very real uncertainties associated with the future
- **Valuation Ranges:** A few analysts recognize that the value that they obtain for a business is an estimate and try to quantify a range on the estimate. Some use simulations and others derive expected, best-case and worst-case estimates of value. The output that they provide therefore yields both their estimates of value and their uncertainty about that value.
- **Probabilistic Statements:** Some analysts couch their valuations in probabilistic terms to reflect the uncertainty that they feel. Thus, an analyst who estimates a value of $ 30 for a stock which is trading at $ 25 will state that there is a 60 or 70% probability that the stock is under valued rather than make the categorical statement that it is undervalued. Here again, the probabilities that accompany the statements provide insight into the uncertainty that the analyst perceives in the valuation.

In general, healthy responses to uncertainty are open about its existence and provide information on its magnitude to those using the valuation. These users can then decide how much caution they should exhibit while acting on the valuation. Unfortunately, not all analysts deal with uncertainty in ways that lead to better decisions. The unhealthy responses to uncertainty include:

- **Passing the buck:** Some analysts try to pass on responsibility for the estimates by using other people's numbers in the valuation. For instance, analysts will often use the growth rate estimated by other analysts valuing a company as their estimate of growth. If the valuation turns out to be right, they can claim credit for it, and if it turns out wrong, they can blame other analysts for leading them down the garden path.
- **Giving up on fundamentals:** A significant number of analysts give up, especially on full-fledged valuation models, unable to confront uncertainty and deal with it. All too often, they fall back on more simplistic ways of valuing companies (multiples and comparables, for example) that do not require explicit assumptions about the future. A few decide that valuation itself is pointless and resort to reading charts and gauging market perception.

In closing, it is natural to feel uncomfortable when valuing equity in a company. We are after all trying to make our best judgments about an uncertain future. The discomfort will increase as we move from valuing stable companies to growth companies, from valuing mature companies to young companies and from valuing developed market companies to emerging market companies.

What to do about uncertainty

The advantage of breaking uncertainty down into estimation uncertainty, firm-specific and macroeconomic uncertainty is that it gives us a window on what we can manage, what we can control and what we should just let pass through into the valuation. Building better models and accessing superior information will reduce estimation uncertainty but will do little to reduce exposure to firm-specific or macro-economic risk. Even the best-constructed model will be susceptible to these uncertainties.

In general, analysts should try to focus on making their best estimates of firm-specific information – how long will the firm be able to maintain high growth? How fast will earnings grow during that period? What type of excess returns will the firm earn? and steer away from bringing in their views on macroeconomic variables. To see why, assume that you believe that interest rates today are too low and that they will go up by about 1.5% over the next year. If you build in the expected rise in interest rates into your discounted cash flow valuations, they will all yield low values for the companies that you are analyzing. A person using these valuations will be faced with a conundrum because she will have no way of knowing how much of this over valuation is attributable to your macroeconomic views and how much to your views of the company.

In summary, analysts should concentrate on building the best models they can with as much information as they can legally

access, trying to make their best estimates of firm-specific components and being as neutral as they can on macro economic variables. As new information comes in, they should update their valuations to reflect the new information. There is no place for false pride in this process. Valuations can change dramatically over time and they should if the information warrants such a change.

The Payoff to Valuation

Even at the end of the most careful and detailed valuation, there will be uncertainty about the final numbers, colored as they are by assumptions that we make about the future of the company and the economy in which it operates. It is unrealistic to expect or demand absolute certainty in valuation, since the inputs are estimated with error. This also means that analysts have to give themselves reasonable margins for error in making recommendations on the basis of valuations.

The corollary to this statement is that a valuation cannot be judged by its precision. Some companies can be valued more precisely than others simply because there is less uncertainty about the future. We can value a mature company with relatively few assumptions and be reasonably comfortable with the estimated value. Valuing a technology firm will require far more assumptions, as will valuing an emerging market company.

A scientist looking at the valuations of these companies (and the associated estimation errors) may very well consider the mature company valuation the better one, since it is the most precise, and the technology firms and emerging market company valuations to be inferior because there is most uncertainty associated with the estimated values. The irony is that the payoff to valuation will actually be highest when you are most uncertain about the numbers. After all, it is not how precise a valuation is that determines its usefulness but how precise the value is relative to the estimates of other investors trying to value the same company. Any one can value a zero-coupon default-free bond with absolute precision. Valuing a young technology firm or an emerging market firm requires a blend of forecasting skills, tolerance for ambiguity and willingness to make mistakes that many analysts do not have. Since most analysts tend to give up in the face of such uncertainty, the analyst who perseveres and makes her best estimates (error-prone though they might be) will have a differential edge.

We do not want to leave the impression that we are completely helpless in the face of uncertainty. Simulations, decision trees and sensitivity analyses are tools that help us deal with uncertainty but not eliminate it.

Are bigger models better? Valuation Complexity

Valuation models have become more and more complex over the last two decades, as a consequence of two developments. On the one side, computers and calculators have become far more powerful and accessible in the last few decades. With technology as our ally, tasks that would have taken us days in the pre-computer days can be accomplished in minutes. On the other side, information is both more plentiful, and easier to access and use. We can download detailed historical data on thousands of companies and use them as we see fit. The complexity, though, has come at a cost. In this section, we will consider the trade off on complexity and how analysts can decide how much to build into models.

- **More detail or less detail:** A fundamental question that we all face when doing valuations is how much detail we should break a valuation down into. There are some who believe that more detail is always better than less detail and that the resulting valuations are more precise. We disagree. The trade off on adding detail is a simple one. On the one hand, more detail gives analysts a chance to use specific information to make better forecasts on each individual item. On the other hand, more detail creates the need for more inputs, with the potential for error on each one, and generates more complicated models. Thus, breaking working capital down into its individual components – accounts receivable, inventory, accounts payable, supplier credit etc. – gives an analyst the discretion to make different assumptions about each item, but this discretion has value only if the analyst has the capacity to differentiate between the items.
- **The Cost of Complexity:** A parallel and related question to how much detail there should be in a valuation is the one of how complex a valuation model should be. There are clear costs that we pay as models become more complex and require more information.
- **Information Overload:** More information does not always lead to better valuations. In fact, analysts can become overwhelmed when faced with vast amounts of conflicting information and this can lead to poor input choices. The problem is exacerbated by the fact that analysts often operate under time pressure when valuing companies. Models that require dozens of inputs to value a single company often get short shrift from users. A model's output is only as good

as the inputs that go into it; it is garbage in, garbage out.

- **Black Box Syndrome:** The models become so complicated that the analysts using them no longer understand their inner workings. They feed inputs into the model's black box and the box spits out a value. This is often the case with commercial valuation models, where vendors have to keep a part of the model out of bounds to make their services indispensable.
- **Big versus Small Assumptions:** Complex models often generate voluminous and detailed output and it becomes very difficult to separate the big assumptions from the small assumptions. In other words, the assumption that pre-tax operating margins will stay at 20% (a big assumption that doubles the value of the company) has to compete with the assumption that accounts receivable will decline from 5% of revenues to 4% of revenues over the next 10 years (a small assumption that has almost no impact on value).

The Principle of Parsimony

In the physical sciences, the principle of parsimony dictates that we try the simplest possible explanation for a phenomenon before we move on to more complicated ones. We would be well served adopting a similar principle in valuation. When valuing an asset, we want to use the simplest model we can get away with. In other words, if we can value an asset with three inputs, we should not be using five. If we can value a company with 3 years of cash flow forecasts, forecasting ten years of cash flows is asking for trouble.

The problem with all-in-one models that are designed to value all companies is that they have to be set up to value the most complicated companies that we will face and not the least complicated. Thus, we are forced to enter inputs and forecast values for simpler companies that we really do not need to estimate. In the process, we can mangle the values of assets that should be easy to value. Consider, for instance, the cash and marketable securities held by firms as part of their assets. The simplest way to value this cash is to take it at face value. Analysts who try to build discounted cash flow or relative valuation models to value cash often mis-value it, either by using the wrong discount rate for the cash income or by using the wrong multiple for cash earnings.

Approaches to Valuation

Analysts use a wide spectrum of models, ranging from the simple to the sophisticated. These models often make very different assumptions about the fundamentals that determine value, but they do share some common characteristics and can be classified in broader terms. There are several advantages to such a classification -- it makes it is easier to understand where individual models fit in to the big picture, why they provide different results and when they have fundamental errors in logic.

In general terms, there are three approaches to valuation. The first, discounted cash flow valuation, relates the value of an asset to the present value of expected future cash flows on that asset. The second, relative valuation, estimates the value of an asset by looking at the pricing of 'comparable' assets relative to a common variable like earnings, cash flows, book value or sales. The third, contingent claim valuation, uses option pricing models to measure the value of assets that share option characteristics. While they can yield different estimates of value, one of the objectives of discussing valuation models is to explain the reasons for such differences, and to help in picking the right model to use for a specific task.

Discounted Cash flow Valuation

In discounted cash flows valuation, the value of an asset is the present value of the expected cash flows on the asset, discounted back at a rate that reflects the riskiness of these cash flows. This approach gets the most play in classrooms and comes with the best theoretical credentials. In this section, we will look at the foundations of the approach and some of the preliminary details on how we estimate its inputs.

Basis for Approach

We buy most assets because we expect them to generate cash flows for us in the future. In discounted cash flow valuation, we begin with a simple proposition. The value of an asset is not what someone perceives it to be worth but it is a function of the expected cash flows on that asset. Put simply, assets with high and predictable cash flows should have higher values than assets with low and volatile cash flows. In discounted cash flow valuation, we estimate the value of an asset as the present value of the expected cash flows on it. The cash flows will vary from asset to asset -- dividends for stocks, coupons (interest) and the face value for bonds and after-tax cash flows for a business. The discount rate will be a function of the riskiness of the estimated cash flows, with higher rates for riskier assets and lower rates for safer one.

Using discounted cash flow models is in some sense an act of faith. We believe that every asset has an intrinsic value and we try to estimate that intrinsic value by looking at an asset's fundamentals. What is intrinsic value? Consider it the value that would be attached to an asset by an all-knowing analyst with access to all information available right now and

a perfect valuation model. No such analyst exists, of course, but we all aspire to be as close as we can to this perfect analyst. The problem lies in the fact that none of us ever gets to see what the true intrinsic value of an asset is and we therefore have no way of knowing whether our discounted cash flow valuations are close to the mark or not.

Classifying Discounted Cash Flow Models

There are three distinct ways in which we can categorize discounted cash flow models. In the first, we differentiate between valuing a business as a going concern as opposed to a collection of assets. In the second, we draw a distinction between valuing the equity in a business and valuing the business itself. In the third, we lay out three different and equivalent ways of doing discounted cash flow valuation – the expected cash flow approach, a value based upon excess returns and adjusted present value.

Going Concern versus Asset Valuation

The value of an asset in the discounted cash flow framework is the present value of the expected cash flows on that asset. Extending this proposition to valuing a business, it can be argued that the value of a business is the sum of the values of the individual assets owned by the business. While this may be technically right, there is a key difference between valuing a collection of assets and a business. A business or a company is an on-going entity with assets that it already owns and assets it expects to invest in the future.

A financial balance sheet provides a good framework to draw out the differences between valuing a business as a going concern and valuing it as a collection of assets. In a going concern valuation, we have to make our best judgments not only on existing investments but also on expected future investments and their profitability. While this may seem to be foolhardy, a large proportion of the market value of growth companies comes from their growth assets. In an asset-based valuation, we focus primarily on the assets in place and estimate the value of each asset separately. Adding the asset values together yields the value of the business. For companies with lucrative growth opportunities, asset-based valuations will yield lower values than going concern valuations.

One special case of asset-based valuation is liquidation valuation, where we value assets based upon the presumption that they have to be sold now. In theory, this should be equal to the value obtained from discounted cash flow valuations of individual assets but the urgency associated with liquidating assets quickly may result in a discount on the value. How large the discount will be will depend upon the number of potential buyers for the assets, the asset characteristics and the state of the economy.

Equity Valuation versus Firm Valuation

There are two ways in which we can approach discounted cash flow valuation. The first is to value the entire business, with both assets-in-place and growth assets; this is often termed firm or enterprise valuation. The cash flows before debt payments and after reinvestment needs are called free cash flows to the firm, and the discount rate that reflects the composite cost of financing from all sources of capital is called the cost of capital. The second way is to just value the equity stake in the business, and this is called equity valuation.

The cash flows after debt payments and reinvestment needs are called free cash flows to equity, and the discount rate that reflects just the cost of equity financing is the cost of equity. Note also that we can always get from the former (firm value) to the latter (equity value) by netting out the value of all non-equity claims from firm value. Done right, the value of equity should be the same whether it is valued directly (by discounting cash flows to equity, the cost of equity) or indirectly (by valuing the firm and subtracting out the value of all non-equity claims).

Variations on DCF Models

The model that we have presented in this section, where expected cash flows are discounted back at a risk-adjusted discount rate, is the most commonly used discounted cash flow approach but there are two widely used variants. In the first, we separate the cash flows into excess return cash flows and normal return cash flows. Earning the risk-adjusted required return (cost of capital or equity) is considered a normal return cash flow but any cash flows above or below this number are categorized as excess returns; excess returns can therefore be either positive or negative. With the *excess return valuation* framework, the value of a business can be written as the sum of two components:

Value of business = Capital Invested in firm today + Present value of excess return cash flows from both existing and future projects

If we make the assumption that the accounting measure of capital invested (book value of capital) is a good measure of capital invested in assets today, this approach implies that firms that earn positive excess return cash flows will trade at market values higher than their book values and that the reverse will be true for firms that earn negative excess return cash flows.

In the second variation, called the *adjusted present value (APV) approach*, we separate the effects on value of debt financing from the value of the assets of a business. In general,

using debt to fund a firm's operations creates tax benefits (because interest expenses are tax deductible) on the plus side and increases bankruptcy risk (and expected bankruptcy costs) on the minus side. In the APV approach, the value of a firm can be written as follows:

Value of business = Value of business with 100% equity financing + Present value of Expected Tax Benefits of Debt – Expected Bankruptcy Costs

In contrast to the conventional approach, where the effects of debt financing are captured in the discount rate, the APV approach attempts to estimate the expected dollar value of debt benefits and costs separately from the value of the operating assets.

While proponents of each approach like to claim that their approach is the best and most precise, we will argue that the three approaches yield the same estimates of value, if we make consistent assumptions.

Inputs to Discounted Cash Flow Models

There are three inputs that are required to value any asset in this model - the *expected cash flow*, the *timing* of the cash flow and the *discount rate* that is appropriate given the riskiness of these cash flows.

Discount Rates: In valuation, we begin with the fundamental notion that the discount rate used on a cash flow should reflect its riskiness, with higher risk cash flows having higher discount rates. There are two ways of viewing risk. The first is purely in terms of the likelihood that an entity will default on a commitment to make a payment, such as interest or principal due, and this is called default risk. When looking at debt, the cost of debt is the rate that reflects this default risk.

The second way of viewing risk is in terms of the variation of actual returns around expected returns. The actual returns on a risky investment can be very different from expected returns; the greater the variation, the greater the risk. When looking at equity, we tend to use measures of risk based upon return variance. While the discussion of risk and return models elsewhere in this site will look at the different models that attempt to do this in far more detail, there are some basic points on which these models agree. The first is that risk in an investment has to perceived through the eyes of the marginal investor in that investment, and this marginal investor is assumed to be well diversified across multiple investments. Therefore, the risk in an investment that should determine discount rates is the *non-diversifiable or market risk* of that investment. The second is that the expected return on any investment can be obtained starting with the expected return on a riskless investment, and adding to it a premium to reflect the amount of market risk in that investment. This expected return yields the cost of equity.

The *cost of capital* can be obtained by taking an average of the cost of equity, estimated as above, and the after-tax cost of borrowing, based upon default risk, and weighting by the proportions used by each. We will argue that the weights used, when valuing an on-going business, should be based upon the market values of debt and equity. While there are some analysts who use book value weights, doing so violates a basic principle of valuation, which is that at a fair value, one should be indifferent between buying and selling an asset.

Expected Cash Flows : In the strictest sense, the only cash flow an equity investor gets out of a publicly traded firm is the dividend; models that use the dividends as cash flows are called *dividend discount models*. A broader definition of cash flows to equity would be the cash flows left over after the cash flow claims of non-equity investors in the firm have been met (interest and principal payments to debt holders and preferred dividends) and after enough of these cash flows has been reinvested into the firm to sustain the projected growth in cash flows. This is the free cash flow to equity (FCFE), and models that use these cash flows are called FCFE discount models.

The cash flow to the firm is the cumulated cash flow to all claimholders in the firm. One way to obtain this cash flow is to add the free cash flows to equity to the cash flows to lenders (debt) and preferred stockholders. A far simpler way of obtaining the same number is to estimate the cash flows prior to debt and preferred dividend payments, by subtracting from the after-tax operating income the net investment needs to sustain growth. This cash flow is called the free cash flow to the firm (FCFF) and the models that use these cash flows are called FCFF models.

Expected Growth : It is while estimating the expected growth in cash flows in the future that analysts confront uncertainty most directly. There are three generic ways of estimating growth. One is to look at a company's past and use the historical growth rate posted by that company. The peril is that past growth may provide little indication of future growth. The second is to obtain estimates of growth from more informed sources. For some analysts, this translates into using the estimates provided by a company's management whereas for others it takes the form of using consensus estimates of growth made by others who follow the firm. The bias associated with both these sources should raise questions about the resulting valuations.

We will promote a third way, where the expected growth rate is tied to two variables that are determined by the firm being valued - how much of the earnings are reinvested back into the firm and how well those earnings

are reinvested. In the equity valuation model, this expected growth rate is a product of the retention ratio, i.e. the proportion of net income not paid out to stockholders, and the return on equity on the projects taken with that money. In the firm valuation model, the expected growth rate is a product of the reinvestment rate, which is the proportion of after-tax operating income that goes into net new investments and the return on capital earned on these investments. The advantages of using these fundamental growth rates are two fold. The first is that the resulting valuations will be internally consistent and companies that are assumed to have high growth are required to pay for the growth with more reinvestment. The second is that it lays the foundation for considering how firms can make themselves more valuable to their investors.

DCF Valuation: Pluses and Minuses

To true believers, discounted cash flow valuation is the only way to approach valuation, but the benefits may be more nuanced that they are willing to admit. On the plus side, discounted cash flow valuation, done right, requires analysts to understand the businesses that they are valuing and ask searching questions about the sustainability of cash flows and risk. Discounted cash flow valuation is tailor made for those who buy into the Warren Buffett adage that what we are buying are not stocks but the underlying businesses. In addition, discounted cash flow valuations is inherently contrarian in the sense that it forces analysts to look for the fundamentals that drive value rather than what market perceptions are. Consequently, if stock prices rise (fall) disproportionately relative to the underlying earnings and cash flows, discounted cash flows models are likely to find stocks to be overvalued (under valued).

There are, however, limitations with discounted cash flow valuation. In the hands of sloppy analysts, discounted cash flow valuations can be manipulated to generate estimates of value that have no relationship to intrinsic value. We also need substantially more information to value a company with discounted cash flow models, since we have to estimate cash flows, growth rates and discount rates. Finally, discounted cash flow models may very well find every stock in a sector or even a market to be overvalued, if market perceptions have run ahead of fundamentals. For portfolio managers and equity research analysts, who are required to find equities to buy even in the most overvalued markets, this creates a conundrum. They can go with their discounted cash flow valuations and conclude that everything is overvalued, which may put them out of business, or they can find an alternate approach that is more sensitive to market moods. It should come as no surprise that many choose the latter.

Relative Valuation

While the focus in classrooms and academic discussions remains on discounted cash flow valuation, the reality is that most assets are valued on a relative basis. In relative valuation, we value an asset by looking at how the market prices similar assets. Thus, when determining what to pay for a house, we look at what similar houses in the neighborhood sold for rather than doing an intrinsic valuation. Extending this analogy to stocks, investors often decide whether a stock is cheap or expensive by comparing its pricing to that of similar stocks (usually in its peer group). In this section, we will consider the basis for relative valuation, ways in which it can be used and its advantages and disadvantages.

Basis for approach : In relative valuation, the value of an asset is derived from the pricing of 'comparable' assets, standardized using a common variable. Included in this description are two key components of relative valuation. The first is the notion of comparable or similar assets. From a valuation standpoint, this would imply assets with similar cash flows, risk and growth potential. In practice, it is usually taken to mean other companies that are in the same business as the company being valued. The other is a standardized price. After all, the price per share of a company is in some sense arbitrary since it is a function of the number of shares outstanding; a two for one stock split would halve the price. Dividing the price or market value by some measure that is related to that value will yield a standardized price. When valuing stocks, this essentially translates into using multiples where we divide the market value by earnings, book value or revenues to arrive at an estimate of standardized value. We can then compare these numbers across companies.

The simplest and most direct applications of relative valuations are with real assets where it is easy to find similar assets or even identical ones. The asking price for a Mickey Mantle rookie baseball card or a 1965 Ford Mustang is relatively easy to estimate given that there are other Mickey Mantle cards and 1965 Ford Mustangs out there and that the prices at which they have been bought and sold can be obtained. With equity valuation, relative valuation becomes more complicated by two realities. The first is the absence of similar assets, requiring us to stretch the definition of comparable to include companies that are different from the one that we are valuing. After all, what company in the world is remotely similar to Microsoft or GE? The other is that different ways of standardizing prices (different multiples) can yield different values for the same company.

Harking back to our earlier discussion of discounted cash flow valuation, we argued that discounted cash flow valuation was a search (albeit unfulfilled) for intrinsic value. In relative valuation, we have given up on estimating intrinsic value and essentially put our trust in markets getting it right, at least on average.

Variations on Relative Valuation : In relative valuation, the value of an asset is based upon how similar assets are priced. In practice, there are three variations on relative valuation, with the differences primarily in how we define comparable firms and control for differences across firms:

Direct comparison: In this approach, analysts try to find one or two companies that look almost exactly like the company they are trying to value and estimate the value based upon how these similar companies are priced. The key part in this analysis is identifying these similar companies and getting their market values.

Peer Group Average: In the second, analysts compare how their company is priced (using a multiple) with how the peer group is priced (using the average for that multiple). Thus, a stock is considered cheap if it trade at 12 times earnings and the average price earnings ratio for the sector is 15. Implicit in this approach is the assumption that while companies may vary widely across a sector, the average for the sector is representative for a typical company.

Peer group average adjusted for differences: Recognizing that there can be wide differences between the company being valued and other companies in the comparable firm group, analysts sometimes try to control for differences between companies. In many cases, the control is subjective: a company with higher expected growth than the industry will trade at a higher multiple of earnings than the industry average but how much higher is left unspecified. In a few cases, analysts explicitly try to control for differences between companies by either adjusting the multiple being used or by using statistical techniques.

As an example of the former, consider PEG ratios. These ratios are computed by dividing PE ratios by expected growth rates, thus controlling (at least in theory) for differences in growth and allowing analysts to compare companies with different growth rates. For statistical controls, we can use a multiple regression where we can regress the multiple that we are using against the fundamentals that we believe cause that multiple to vary across companies. The resulting regression can be used to estimate the value of an individual company. In fact, we will argue that statistical techniques are powerful enough to allow us to expand the comparable firm sample to include the entire market.

Applicability of multiples and limitations

The allure of multiples is that they are simple and easy to relate to. They can be used to obtain estimates of value quickly for firms and assets, and are particularly useful when there are a large number of comparable firms being traded on financial markets, and the market is, on average, pricing these firms correctly. In fact, relative valuation is tailor made for analysts and portfolio managers who not only have to find undervalued equities in any market, no matter how overvalued, but also get judged on a relative basis. An analyst who picks stocks based upon their PE ratios, relative to the sectors they operate in, will always find undervalued stocks in any market; if entire sectors are overvalued and his stocks decline, he will still look good on a relative basis since his stocks will decline less than comparable stocks (assuming the relative valuation is right).

By the same token, they are also easy to misuse and manipulate, especially when comparable firms are used. Given that no two firms are exactly similar in terms of risk and growth, the definition of 'comparable' firms is a subjective one. Consequently, a biased analyst can choose a group of comparable firms to confirm his or her biases about a firm's value. While this potential for bias exists with discounted cash flow valuation as well, the analyst in DCF valuation is forced to be much more explicit about the assumptions which determine the final value. With multiples, these assumptions are often left unstated.

The other problem with using multiples based upon comparable firms is that it builds in errors (over valuation or under valuation) that the market might be making in valuing these firms. If, for instance, we find a company to be undervalued because it trades at 15 times earnings and comparable companies trade at 25 times earnings, we may still lose on the investment if the entire sector is overvalued. In relative valuation, all that we can claim is that a stock looks cheap or expensive relative to the group we compared it to, rather than make an absolute judgment about value. Ultimately, relative valuation judgments depend upon how well we have picked the comparable companies and how good a job the market has done in pricing them.

Contingent Claim Valuation

There is little in either discounted cash flow or relative valuation that can be considered new and revolutionary. In recent years, though, analysts have increasingly used option-pricing models, developed to value listed options, to value assets, businesses and equity stakes in businesses. These applications are often categorized loosely as real options, but they have to be used with caution.

Basis for Approach: A contingent claim or option is an asset which pays

off only under certain contingencies - if the value of the underlying asset exceeds a pre-specified value for a call option, or is less than a pre-specified value for a put option. Much work has been done in the last few decades in developing models that value options, and these option-pricing models can be used to value any assets that have option-like features.

An option can be valued as a function of the following variables - the current value and the variance in value of the underlying asset, the strike price and the time to expiration of the option and the riskless interest rate. This was first established by Black and Scholes (1972) and has been extended and refined subsequently in numerous variants. While the Black-Scholes option-pricing model ignored dividends and assumed that options would not be exercised early, it can be modified to allow for both. A discrete-time variant, the Binomial option-pricing model, has also been developed to price options.

An asset can be valued as a call option if the payoffs on it are a function of the value of an underlying asset; if that value exceeds a pre-specified level, the asset is worth the difference; if not, it is worth nothing. It can be valued as a put option if it gains value as the value of the underlying asset drops below a pre- specified level, and if it is worth nothing when the underlying asset's value exceeds that specified level. There are many assets that generally are not viewed as options but still share several option characteristics. A patent can be analyzed as a call option on a product, with the investment outlay needed to get the project going considered the strike price and the patent life becoming the life of the option. An undeveloped oil reserve or gold mine provides its owner with a call option to develop the reserve or mine, if oil or gold prices increase.

The essence of the real options argument is that discounted cash flow models understate the value of assets with option characteristics. The understatement occurs because DCF models value assets based upon a set of expected cash flows and do not fully consider the possibility that firms can learn from real time developments and respond to that learning. For example, an oil company can observe what the oil price is each year and adjust its development of new reserves and production in existing reserves accordingly rather than be locked into a fixed production schedule. As a result, there should be an option premium added on to the discounted cash flow value of the oil reserves. It is this premium on value that makes real options so alluring and so potentially dangerous.

Applicability and Limitations

Using option-pricing models in valuation does have its advantages. First, there are some assets that cannot be valued with conventional valuation models because their value derives almost entirely from their option characteristics. For example, a biotechnology firm with a single promising patent for a blockbuster cancer drug wending its way through the FDA approval process cannot be easily valued using discounted cash flow or relative valuation models. It can, however, be valued as an option. The same can be said about equity in a money losing company with substantial debt; most investors buying this stock are buying it for the same reasons they buy deep out-of-the-money options.

Second, option-pricing models do yield more realistic estimates of value for assets where there is a significant benefit obtained from learning and flexibility. Discounted cash flow models will understate the values of natural resource companies, where the observed price of the natural resource is a key factor in decision making. Third, option-pricing models do highlight a very important aspect of risk. While risk is considered almost always in negative terms in discounted cash flow and relative valuation (with higher risk reducing value), the value of options increases as volatility increases. For some assets, at least, risk can be an ally and can be exploited to generate additional value.

This is not to suggest that using real options models is an unalloyed good. Using real options arguments to justify paying premiums on discounted cash flow valuations, when the options argument does not hold, can result in overpayment. While we do not disagree with the notion that firms can learn by observing what happens over time, this learning has value only if it has some degree of exclusivity. We will argue that it is usually inappropriate to attach an option premium to value if the learning is not exclusive and competitors can adapt their behavior as well. There are also limitations in using option pricing models to value long-term options on non-traded assets.

The assumptions made about constant variance and dividend yields, which are not seriously contested for short term options, are much more difficult to defend when options have long lifetimes. When the underlying asset is not traded, the inputs for the value of the underlying asset and the variance in that value cannot be extracted from financial markets and have to be estimated. Thus the final values obtained from these applications of option pricing models have much more estimation error associated with them than the values obtained in their more standard applications (to value short term traded options).

The Role of Valuation

Valuation is useful in a wide range of tasks. The role it plays, however, is different in different arenas. The following section lays out the relevance of valuation in portfolio

management, in acquisition analysis and in corporate finance.

Portfolio Management : The role that valuation plays in portfolio management is determined in large part by the investment philosophy of the investor. Valuation plays a minimal role in portfolio management for a passive investor, whereas it plays a larger role for an active investor. Even among active investors, the nature and the role of valuation is different for different types of active investment. Market timers use valuation much less than investors who pick stocks, and the focus is on market valuation rather than on firm-specific valuation. Among security selectors, valuation plays a central role in portfolio management for fundamental analysts, and a peripheral role for technical analysts.

The following sub-section describes, in broad terms, different investment philosophies and the roles played by valuation in each one.

Fundamental Analysts: The underlying theme in fundamental analysis is that the true value of the firm can be related to its financial characteristics -- its growth prospects, risk profile and cash flows. Any deviation from this true value is a sign that a stock is under or overvalued. It is a long-term investment strategy, and the assumptions underlying it are that:

- The relationship between value and the underlying financial factors can be measured.
- The relationship is stable over time.
- Deviations from the relationship are corrected in a reasonable time period.

Fundamental analysts include both value and growth investors. The key difference between the two is in where the valuation focus lies. Value investors are primarily interested in assets in place and acquiring them at less than their true value. Growth investors, on the other hand, are far more focused on valuing growth assets and buying those assets at a discount. While valuation is the central focus in fundamental analysis, some analysts use discounted cash flow models to value firms, while others use multiples and comparable firms. Since investors using this approach hold a large number of 'undervalued' stocks in their portfolios, their hope is that, on average, these portfolios will do better than the market.

Activist Investors: Activist investors take positions in firms that have a reputation for poor management and then use their equity holdings to push for change in the way the company is run. Their focus is not so much on what the company is worth today but what its value would be if it were managed well. Investors like Carl Icahn, Michael Price and Kirk Kerkorian have prided themselves on their capacity to not only pinpoint badly managed firms but to also create enough pressure to get management to change its ways. How can valuation skills help in this pursuit?

To begin with, these investors have to ensure that there is additional value that can be generated by changing management. In other words, they have to separate how much of a firm's poor stock price performance has to do with bad management and how much of it is a function of external factors; the former are fixable but the latter are not. They then have to consider the effects of changing management on value; this will require an understanding of how value will change as a firm changes its investment, financing and dividend policies. As a consequence, they have to not only know the businesses that the firm operates in but also have an understanding of the interplay between corporate finance decisions and value. Activist investors generally concentrate on a few businesses they understand well, and attempt to acquire undervalued firms. Often, they wield influence on the management of these firms and can change financial and investment policy.

Chartists: Chartists believe that prices are driven as much by investor psychology as by any underlying financial variables. The information available from trading measures -- price movements, trading volume and short sales -- gives an indication of investor psychology and future price movements. The assumptions here are that prices move in predictable patterns, that there are not enough marginal investors taking advantage of these patterns to eliminate them, and that the average investor in the market is driven more by emotion than by rational analysis. While valuation does not play much of a role in charting, there are ways in which an enterprising chartist can incorporate it into analysis. For instance, valuation can be used to determine support and resistance lines on price charts.

Information Traders: Prices move on information about the firm. Information traders attempt to trade in advance of new information or shortly after it is revealed to financial markets. The underlying assumption is that these traders can anticipate information announcements and gauge the market reaction to them better than the average investor in the market. For an information trader, the focus is on the relationship between information and changes in value, rather than on value, per se. Thus an information trader may buy an 'overvalued' firm if he believes that the next information announcement is going to cause the price to go up, because it contains better than expected news. If there is a relationship between how undervalued or overvalued a company is, and how its stock price reacts to new information, then valuation could play a role in investing for an information trader.

Market Timers: Market timers note, with some legitimacy, that the

payoff to calling turns in markets is much greater than the returns from stock picking. They argue that it is easier to predict market movements than to select stocks and that these predictions can be based upon factors that are observable. While valuation of individual stocks may not be of much direct use to a market timer, market timing strategies can use valuation in one of at least two ways:

- The overall market itself can be valued and compared to the current level.
- Valuation models can be used to value a large number of stocks , and the results from the cross-section can be used to determine whether the market is over or under valued. For example, as the number of stocks that are overvalued, using the valuation model, increases relative to the number that are undervalued, there may be reason to believe that the market is overvalued.

Efficient Marketers: Efficient marketers believe that the market price at any point in time represents the best estimate of the true value of the firm, and that any attempt to exploit perceived market efficiencies will cost more than it will make in excess profits. They assume that markets aggregate information quickly and accurately, that marginal investors promptly exploit any inefficiencies and that any inefficiencies in the market are caused by friction, such as transactions costs, and cannot exploited.

For efficient marketers, valuation is a useful exercise to determine why a stock sells for the price that it does. Since the underlying assumption is that the market price is the best estimate of the true value of the company, the objective becomes determining what assumptions about growth and risk are implied in this market price, rather than on finding under or over valued firms.

Valuation in Acquisition Analysis: Valuation should play a central part of acquisition analysis. The bidding firm or individual has to decide on a fair value for the target firm before making a bid, and the target firm has to determine a reasonable value for itself before deciding to accept or reject the offer.

There are special factors to consider in takeover valuation. First, there is synergy, the increase in value that many managers foresee as occurring after mergers because the combined firm is able to accomplish things that the individual firms could not. The effects of synergy on the combined value of the two firms (target plus bidding firm) have to be considered before a decision is made on the bid. Second, the value of control, which measures the effects on value of changing management and restructuring the target firm, will have to be taken into account in deciding on a fair price. This is of particular concern in hostile takeovers.

As we noted earlier, there is a significant problem with bias in takeover valuations. Target firms may be over-optimistic in estimating value, especially when the takeover is hostile, and they are trying to convince their stockholders that the offer price is too low. Similarly, if the bidding firm has decided, for strategic reasons, to do an acquisition, there may be strong pressure on the analyst to come up with an estimate of value that backs up the acquisition.

Valuation in Corporate Finance: There is a role for valuation at every stage of a firm's life cycle. For small private businesses thinking about expanding, valuation plays a key role when they approach venture capital and private equity investors for more capital. The share of a firm that a venture capitalist will demand in exchange for a capital infusion will depend upon the value she estimates for the firm. As the companies get larger and decide to go public, valuations determine the prices at which they are offered to the market in the public offering. Once established, decisions on where to invest, how much to borrow and how much to return to the owners will be all decisions that are affected by valuation. If the objective in corporate finance is to maximize firm value the relationship between financial decisions, corporate strategy and firm value has to be delineated.

Valuation for Legal and Tax Purposes: Mundane though it may seem, most valuations, especially of private companies, are done for legal or tax reasons. A partnership has to be valued, whenever a new partner is taken on or an old one retires, and businesses that are jointly owned have to be valued when the owners decide to break up. Businesses have to be valued for estate tax purposes when the owner dies, and for divorce proceedings when couples break up. While the principles of valuation may not be different when valuing a business for legal proceedings, the objective often becomes providing a valuation that the court will accept rather than the right valuation.

Conclusion

Valuation plays a key role in many areas of finance -- in corporate finance, in mergers and acquisitions and in portfolio management. The models presented will provide a range of tools that analysts in each of these areas will find of use, but the cautionary note sounded in this introduction is that valuation is not an objective exercise, and any preconceptions and biases that an analyst brings to the process will find their way into the value

VALUATION UNDER INCOME APPROACH AND ITS PREFERENCE DURING COVID-19 TIMES

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

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

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

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

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

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

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

Source: *Self*

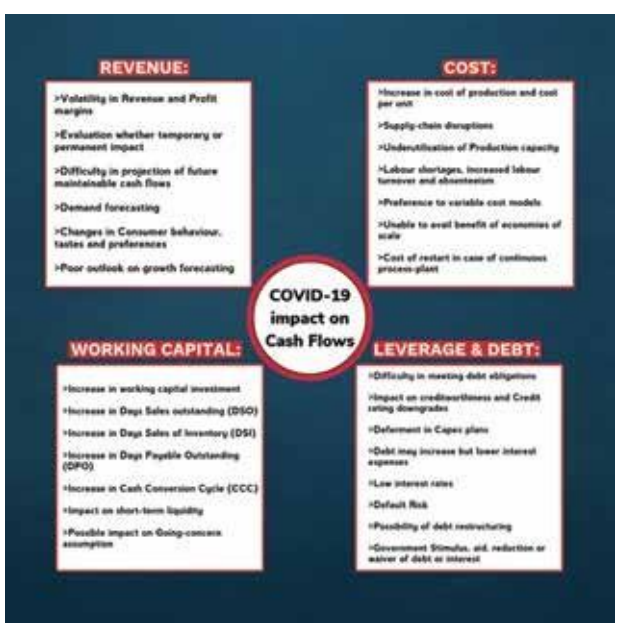
1. Cash Flow projections and adjustments:

Business valuation involves making cash flow projections

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

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

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



Source: *Self*

A. Revenue Considerations: The valuer shall take into consideration the volatility inherent in projections of revenue and profit margins due to the impact of COVID-19. It is significant to evaluate whether the fluctuations in revenue are temporary or permanent in nature to ensure appropriate forecasting for the next 5 years and also for perpetuity. Due to the difficulty in forecasting revenue for the forecasting period, estimating future maintainable cash flows becomes challenging. The valuer should quantify the impact of demand and growth forecasting with due consideration to the changes in consumer behaviour, taste and preference, if any, due to recurrent lockdowns and the vagaries of pandemic. Also, in compliance to the ethical standards and regulations of *The Companies (Registered Valuers and Valuation), Rules 2017*, the Valuer has to ascertain the reasonableness and appropriateness of the forecasted numbers and ensure a declaration is provided to that extent in the valuation report and he should not disclaim the responsibility and shift such burden of responsibility to the Management.

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

C. Working Capital Considerations: The Valuer should evaluate the impact of COVID-19 on the investment in working capital. Mostly, the requirement of investment in working capital should increase due to several factors such as the increase in the Cash Conversion Cycle (CCC) due to the increase in the number of days working capital remains invested in inventory (i.e. DSI) and trade receivables (i.e. DSO) before being realised into cash due to the slowdown in business operations due to lockdowns and other disruptions due to COVID-19. Unless the days of payable outstanding (i.e. DPO) increases too, there shall be a marked increase in the days of working capital investment which may have an adverse impact on the liquidity and the going concern assumption in case the Current Ratio or the Acid Test Ratio is between 0 to 0.99 and in that case the valuer, in a few cases, may have to consider its impact on the selection of the Valuation base, from

income approach to liquidation approach.

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

2. Industry and Geography specific adjustments:

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

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

SECTOR WISE SEVERITY OF COVID-19 IMPACT:

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

Source: *Self*

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

1. Minimal — consumer staples, technology and utilities;
2. Moderate — financials, health care, industrials and real estate; and
3. Significant — consumer discretionary, energy, retail and tourism and hospitality.

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

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

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

Source: *Self*

The various components of cost of equity:

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

A) Reduction in Risk-Free Rate:

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

Risk Free Rate (R_f)

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

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

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

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

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

United States of America-

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

Duff & Phelps also increased Recommended US ERP from 5.00% to 6.00% with effect from March 25, 2020 *(**Source:** https://duffandphelps.com/insights/publications/cost-of-capital)*

India-

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

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

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

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

In order to ensure all factors contributing to risk are considered in the discount rate, the valuer uses his professional judgement to estimate the company specific risk premium which is dependant on the internal factors

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

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

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

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

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

D) Elimination of Double Dip:

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

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

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

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

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

Therefore, the valuer should reasonably expect-

A lower Increase in Cost of Equity

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

Higher Increase in cost of Equity

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

E) Increased Volatility of Beta:

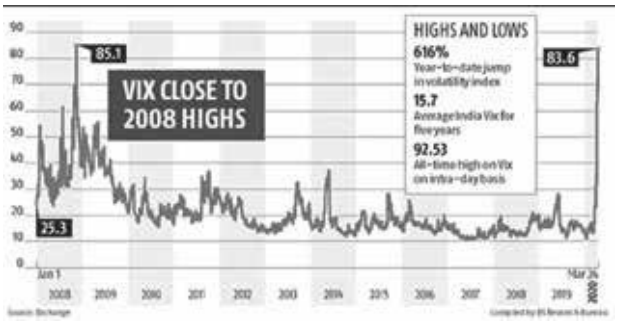
Estimating betas using weekly returns over the past two years shows that, on average, betas have increased substantially since the COVID-19 pandemic began in March 2020. An increase in beta, all other factors being unchanged, implies an increase in discount rate and a corresponding reduction in valuation.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

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

F) Levels of Volatility Index (VIX):

India VIX, which is also called the fear index, touched

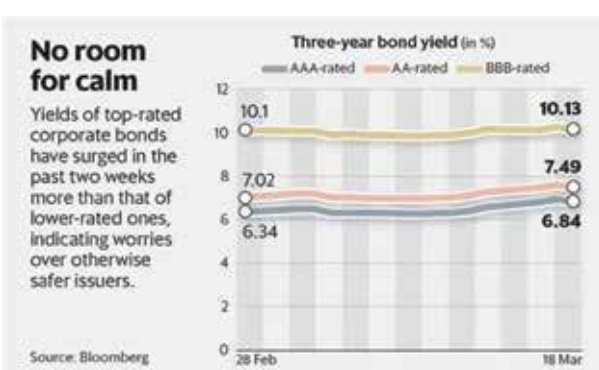
86.63 on 24th March, 2020, higher than its historic closing peak of 85.13 it reached during the global financial crisis in November 2008. The VIX Index is an apt indicator to gauge the investor sentiments and whether the market value is a true indicator of Fair Value or is indeed Fear Value. The VIX Index which usually trades at the level of 20, when trades at a level of 40 or above represents investor's anxiety and fear and such high levels of implied volatility indicate are acutely bearish.



G) Degree of spike in Credit Spread:

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

Therefore, the valuer takes into consideration the increase in the Credit spread due to the impact of COVID-19, in determining the cost of debt since a credit spread is the risk premium add-on to the base interest rate used when pricing corporate debt issues and reflects the credit rating or risk rating of the company, the maturity of the issue, current market spread rates, as well as other components such as security and liquidity.



H) Increase in cost of Debt (Kd):

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

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

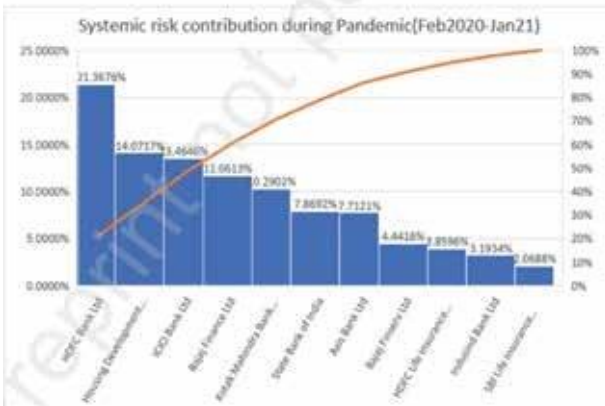
The same principle holds for the appropriate target debt/equity ratio which, in general, might be expected to be lower relative to equivalent historical ratios in certain sectors due to the constraints on debt financing packages during covid

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

As per the research paper titled *"Change in Systemic Risk in Indian Financial Market due to COVID-19 Pandemic" by Chandramani Jha and Dr. Utkarsh Goel, (IIIT), Allahabad, Department of Management Studies*, the marginal expected

shortfall of financial firms of NIFTY 50 for pre-COVID year 2019-20 and COVID year2020-21 were measured and found that the undercapitalization of Indian financial firm has increased 3 fold during COVID-19 Pandemic ensuing systemic risk had been increased during COVID-19 year to pre-COVID year. The result is also supported by daily stock return correlations of financial firms which is a simple and robust indicator of systemic risk. It has been found that the correlations of financial firm stock returns among themselves and market index as well is increased during COVID-19 pandemic that led to rise in systemic risk.

Figure 2. Systemic risk contribution during Covid Year.



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

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

4) Conundrum in Terminal Growth rate assumptions:

The valuer, usually, considers the growth rate of Gross Domestic Product of the country it is situated in as the terminal growth rate for the business. While economies worldwide had been hit hard, India had suffered one of the largest contractions. During the F.Y. 2020-21, the rates of decline in GDP for the world were 3.3% and 2.2% for emerging market and developing economies. The table hereunder summarises growth of GDP pre-covid i.e. F.Y. 2019 and post-covid for India i.e. FY 2020, along with a reference group of comparable countries and the world. The fact that India's growth rate in 2019 was among the highest, makes the drop due to Covid-19 even more noticeable. The valuer may assume the terminal growth rate in the range of 3.5%-4% which is a close approximation of the long-term growth rate for India's GDP at constant prices in 2019 i.e. pre-covid period.

Table 1: Summary of key macroeconomic indicators

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

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

Additionally, the valuer should acknowledge that the long-term growth rate assumptions should reflect market participants' long-term estimates for inflation and real economic growth, adjusted to reflect the outlook for the sector that a company is operating in as well as company specific factors. Typically, the effects of new industries and technologies and the impact of competition within industries may limit the company's specific long term growth rates to a lower level than for the economy as a whole to at least some degree. However, the long-term sector and company specific outlook may well have changed as a result of Covid-19, with some sectors demonstrating stronger growth such as online educational platforms i.e Byju's and Unacademy, online connectivity platforms i.e Zoom Meetings, digital payments platforms i.e. Phonepe, Bharatpe, Paytm etc., and more resilience and others being relatively weaker than previously expected. The overall drop-in risk-free rates, and indeed discount rates more broadly, is also arguably consistent with a reduction in long term economy wide nominal growth expectations to at least some degree, due to changing expectations of inflation and/or real economic growth. It is therefore important that the discount rate and long- term growth rate assumptions used within a valuation are internally consistent, otherwise the capitalization rates/multiples implied within terminal values may not be realistic or reconcilable with market data.

5) Importance of Sensitivity and Scenario Analysis:

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

over a single set of projections.

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

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

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

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

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

6) Increase Discount for Lack of Marketability (DLOM):

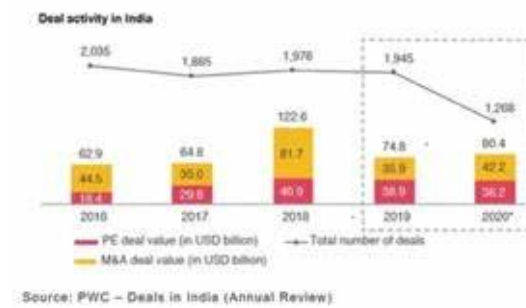
The valuer shall evaluate whether there is a significant impact of COVID-19 on the aspect of illiquidity or non-marketability of investment in the concerned company or whether there is a decrease in the ability on the part of the investors to access the Capital or Secondary Market to liquidate the investment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

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

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

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

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



Source: PWC – Deals in India (Annual Review)

Source: PWC – Deals in India (Annual Review)

Therefore, a higher discount for lack of marketability (DLOM) shall be required in the present COVID-19 environment since the transactions of businesses have decreased significantly and there is a drastic decrease in market activity and of the pool of interested, willing buyers, thereby leading to an increase in illiquidity and the DLOM.

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

India's Gross Domestic Product (GDP) contracted by

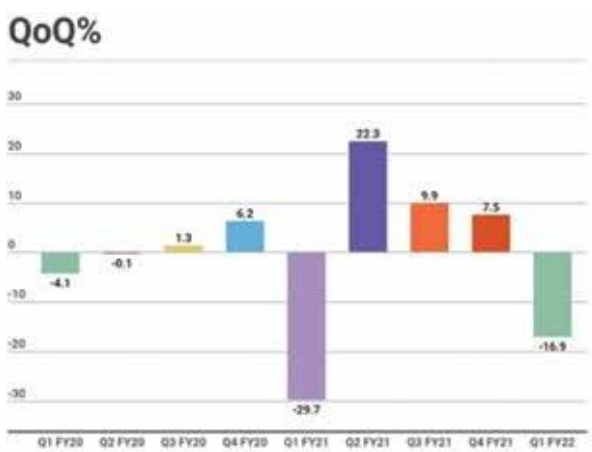
7.3% in F.Y. 2020-21.

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

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

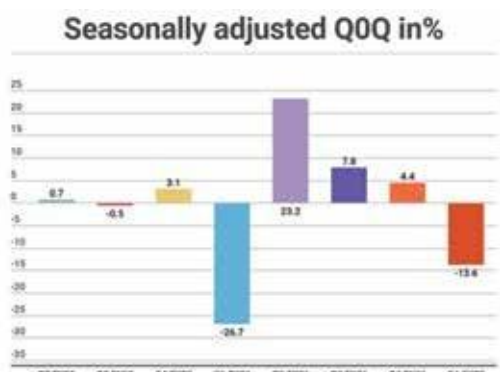
Also called the "double-dip recession", a W-shaped recovery sees an economy staging a brief comeback only to fall a second time. This scenario breaks consumer confidence and enters the full recovery period that can take up to 2 years. The economy will witness two recessionary periods.

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



Source: *Business Standard publication dated 7.10.2021*

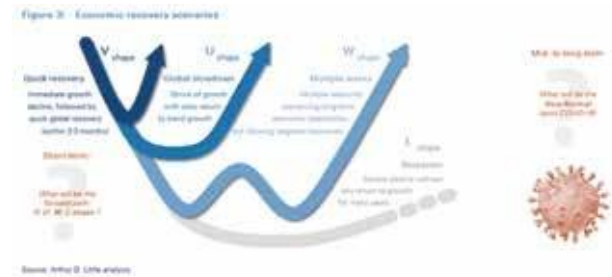
When growth is seen in the context of seasonally adjusted quarter-on-quarter, it seems to be W-shaped if it comes in the next quarters. This is the most appropriate measure in the current times.



Source: *Business Standard publication dated 7.10.2021*

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

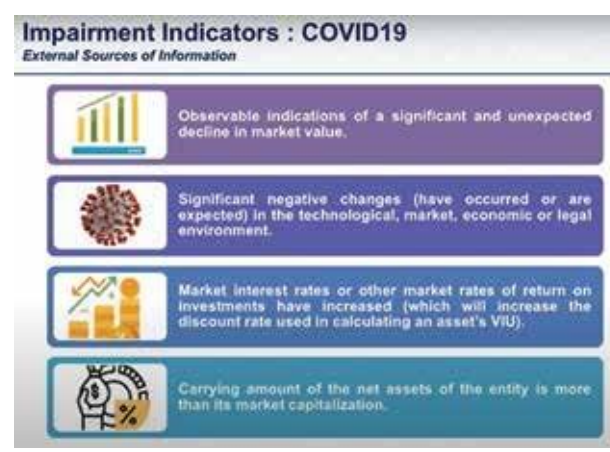
The following table explains the various types of economic recovery patterns in pictorial representation:



8) Impairment Testing and Financial Reporting:

Since, the financial and capital market environment across the globe has got affected by the rapid spread of COVID-19, there may be significant volatility or indications of significant decline in market prices of financial instruments. The valuer should evaluate whether the management has carried out the annual impairment testing of assets or cash generating units in compliance to the IND-AS 36, Impairment of Assets. The following external factors are indicative of requirement of impairment testing and the estimation of the recoverable amount of the asset, including non-financial assets,

(i.e. Recoverable value is the higher of Fair value less cost of selling and Value in Use.) As per IND-AS 36, Weighted Average Cost of Capital (WACC) derived from Capital Asset Pricing Model (CAPM) can be used as a discount rate after adjustments for COVID-specific risks, to derive the Value in Use of the asset.



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

COVID-19 global pandemic has caused substantial contraction in the entity's business since March 2020 and this depressed scenario is expected to continue over the next

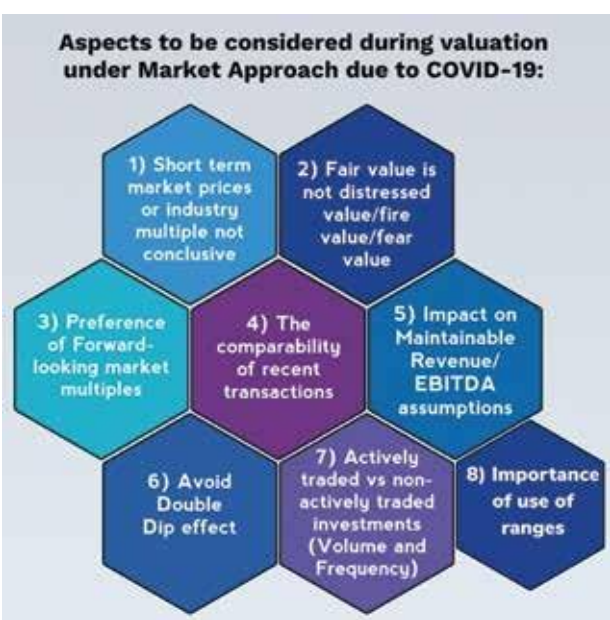
few quarters and onwards. Since entities are experiencing significant cancellation of business orders and bookings by its customers and the observable market value of the business as a whole has declined coupled with significant adverse changes occurring or are expected to occur in the technological, market and economy, are reasons enough for undertaking the impairment exercise and recognising impairment loss in case of long term or a permanent decline in the value of the assets.

The valuer acknowledges that cash flows may not be affected by impairment directly as the same is a non-cash transaction in nature. However, it directly affects the income statement and balance sheet in reducing the value of the assets to the recoverable amount in case of recognition of impairment loss.

Valuation under Market Approach:

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

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



1) Short Term Market prices or industry multiple not conclusive:

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

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

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

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

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

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

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

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

2) Fair value is not distressed value/fire value/fear value:

As per IND-AS 113, Fair Value is defined as the price that would be received to sell an asset or paid to transfer a liability in an orderly transaction between market participants at the measurement date.

Significant elements of Fair Value:

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

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

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

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

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

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

3) Preference of Forward-looking Market Multiples:

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

4) The comparability of recent transactions:

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

The valuer may prefer to use the Transaction Multiples method but special attention and caution is required to be provided on such comparable transactions occurred during the COVID-19 crisis period which may require downward adjustments to prevent overstatement of business valuation. The valuer may use his professional judgement to evaluate the degree of this adjustment which may need to be assessed on a case-to-case basis depending upon the industry and the level of stress.

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

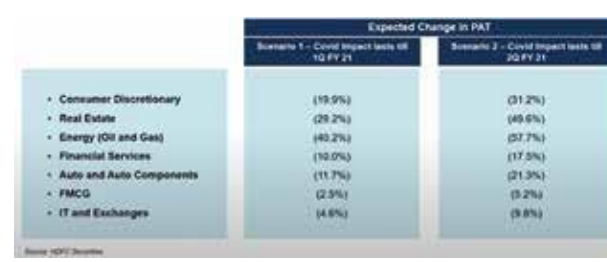
In usual practice, the comparable transactions pertaining to a time period of previous 2-3 financial years are considered and a longer duration is not preferred due to drastic changes in economy, industry and technology and other macro-economic factors.

5) Impact of maintainable revenue/EBITDA assumptions:

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

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

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



6) Avoid Double Dip Effect:

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

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

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

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

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

8) Importance of use of ranges:

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

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

Conclusion:

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

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

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

THE GUIDE TO VALUING START-UPS IN THE 21st CENTURY

CA Vijaykumar Puri
Chartered Accountant and Registered Valuer

Executive Summary:

The traditional approaches to valuation end up being inadequate when it comes to valuation of new age start-ups. The business model has undergone a fundamental change especially in the 21st century. Profitability is no longer a key value driver for new age start-ups. Listed start-ups like Paytm (which is not even a start-up anymore) openly submit that profitability is not their goal in the foreseeable future. In such a day and age, it is imperative that the parameters for valuing such start-ups be attuned to their business model. In this article, the author attempts to shed light on how to find the true value of a start-up.

Background

- By its very nature, valuation is highly subjective. For instance, let us consider the world-famous painting of Mona Lisa. The painting is worth billions for some whereas others may consider it as an average piece of work. Therein lies the beauty of valuation; it is in the eyes of the beholder.
- The three most common globally accepted methods of valuing a business are tabulated below for ease of understanding:

Method	Description
Income approach	Popularly known as the Discounted Cash Flow (DCF) method. In this approach, estimated cash flows for the foreseeable future are discounted to present value and business is valued accordingly.
Asset approach	This approach is generally used when the business is not a going concern viz. during liquidation, untimely losses etc. The assets and liabilities are valued based on their current realisable value and that is considered as value of the business
Market approach	This approach assigns the value of a business based on the value of comparable companies in same/ similar industries, adjusted for their specific parameters.

- These methods have been used in valuation of businesses since decades and have been accepted by businessmen, lawmakers, Courts and investors alike.
- However, one common feature in the above approaches is that it pre-supposes a business which is established and generating cash flows using its assets.
- Start-ups, by their very definition, are disruptors. They disrupt industries, products, processes using innovative means. It is difficult to call them "established" in any sense or assume that their cash flows (if not already spent on marketing) will remain constant. Profitability seems to be a cursed word in the start-up investor circles.
- As we will explore later in this article, the traditional methods find themselves inadequate to arrive at the value of a new age start-up.
- With the dawn of the 21st century, new methods have emerged which attempt to find the true value of a start-up. But a good valuer understands that the actual value lies less in the numbers and more in the story of the start-up.
- In this article, we look at the basics of valuing any business and how to go about valuing a new age start-up.

Valuation of start-ups

- The valuation of start-ups is often required for bringing in investments either by way of equity or debt. The biggest differentiating factor in valuation of a start-up is that there is no historical data available on the basis of which future projections can be drawn.
- The value rests entirely on its future growth potential, which, in many cases is based on an untested idea and may not have been based on adequate sampling of consumer behaviour or anticipated consumer behaviour. The estimates of future growth are also often based upon assessments of the competence, drive, and self-belief of, at times, very highly qualified and intelligent managers and their capacity to convert a promising idea into commercial success.
- The major roadblock with start-up valuation is the absence of past performance indicators. There is no 'past' track record, only a future whose narrative is controlled based on the skills of the founders. It

can be equated as founders walking in the dark and making the investors believe that they are wearing night vision goggles. While this is exciting and fun for the founders, this is risky for the investors.

- This is why valuation of start-ups becomes critical and the role of a professional comes in – it is a way of definitively helping investors navigate the dark using facts, rather than fairy tales.

Why traditional methods cannot be applied?

- Each of the commonly used methods discussed above pre-suppose an established business – which is profitable, has established competitors and generates cash using its assets.
- However, this is missing in new age start-ups whose value can lie majorly in the concept and potential, rather than numbers with a track record.
- The failure of each of the traditional methods in case of new age start-ups is tabulated below:

Method	Why does it fail in case of new age start-ups
Income approach	A vast majority of start-ups operate under the assumption of not generating positive cash flows in the foreseeable future. Off late, this business model has been accepted and normalised by the investor community as well. Since there are no or minimal positive cash flows, it is difficult to correctly value the business.
Asset approach	There are two reasons why this approach does not work for new age start-ups: 1. Start-ups have negligible assets – a large chunk of their assets are in form of intellectual property and other intangible assets. Valuing them correctly is a challenge and arriving at a consensus with investors is even more difficult. 2. Start-ups are new but they normally operate under the going concern assumption; hence their value should not be limited to the realisable value of assets today.
Market approach	New age start-ups are disruptors. They generally function in a market without established competitors. Their competition is from other start-ups functioning in the same genre. Lack of established competitors indicates that their numbers may be skewed and not be comparable enough to form a base. However, out of the three traditional approaches, we have seen few elements of the market approach being used for valuing new age start-ups as well, especially during advanced funding rounds.

As we have discussed above, the traditional methods fall short in recognising true value to new age start-ups. The inherent question that arises is what methods should we use for valuing new age start-ups. To understand that, we have to see what factors drive their value (no prizes for guessing – profitability is not one of them).

Value Drivers for start-ups

While every start-up can be vastly different, we now take a look at few key value drivers and their impact on the valuation of a start-up.

Drivers	Impact on valuation
Product	The uniqueness and readiness of the product or service offered by the start-up creates a large impact on the valuation of the company. A company which is ready with a fully functional product (or prototype) or service offering will attract higher value than one whose offering is still an 'idea'. Further, market testing and customer response are key sub-drivers to gauge how good the product is.
Management	More than half of Indian unicorn[1] start-ups have founders from IIT or IIM. While it may seem unfair prima facie, it is a fact that if the founders are educated from elite schools and colleges, the start-up is looked upon more favourably by the investors and stakeholders alike. Accordingly, it is imperative to consider the credentials and balance of the management. For instance, a team with engineers is not as well balanced as a team comprising of engineers, finance professionals, MBA graduates. Keeping aside the obvious subjectivity in evaluating the management, the profile of the owners plays a key role in valuing the start-up.
Traction	Traction is quantifiable evidence that the product or service works and there is a demand for it. The better the traction, the more valuable will be the start-up.
Revenue	The more the revenue streams, the more valuable the company. While revenues are not mandatory, their existence is a better indicator than merely demonstrating traction and makes the start-up more valuable.
Industry attractiveness	The industry attractiveness plays a key role in the value of a company. As good as the idea may be, in order to sustainably scale, various factors like logistics, distribution channels, customer base have a significant impact on the value of the start-up. For example, a new age start-up in the tourism industry will be less valuable, as innovative or unique their offering is, if significant lockdowns are expected in the future.
Demand - supply	If the industry is attractive, there will be more demand from investors which make the individual companies in the industry much more valuable.

[1]"Unicorn" is a term used in the venture capital industry to describe a privately held startup company with a value of over $1 billion. The term was first popularized by venture capitalist Aileen Lee, founder of Cowboy Ventures, a seed-stage venture capital fund based in Palo Alto, California.

Competitiveness	The lesser the competitors, the more valuable the start-up will be. There is no escaping the first mover advantage in any industry. While it is easier to convince the investors about a business which already exists (for example, it must have been easier for an Ola to convince investors when Uber was already running successfully), it also casts an additional burden on the start-up to differentiate itself from competition.

Methods for valuing start-ups

One key observation would be that most value drivers described above are highly subjective. Hence, there is a need for providing standard methods using value drivers above in order to value the start-up in a manner comparable to others.

There are many innovative methods for valuing start-ups which try to reduce the subjectivity in valuation of start-ups which have come in the recent times.

Let us take a look at the most common methods of valuing start-ups:

Method	Particulars
Berkus Approach	The Berkus Approach, created by American venture capitalist and angel investor Dave Berkus, looks at valuing a start-up enterprise based on a detailed assessment of five key success factors: (1) Basic value, (2) Technology, (3) Execution, (4) Strategic relationships in its core market, and (5) Production and consequent sales. A detailed assessment is carried out evaluating how much value the five key success factors in quantitative measure add up to the total value of the enterprise. Based on these numbers, the start-up is valued. This method caps pre-revenue valuations at $2 million and post-revenue valuations at $2.5 million. Although it doesn't take other market factors into account, the limited scope is useful for businesses looking for an uncomplicated tool.
Cost-to-Duplicate Approach	The Cost-to-Duplicate Approach involves taking into account all costs and expenses associated with the start-up and the development of its product, including the purchase of its physical assets. All such expenses are taken into account in order to determine the start-up's fair market value based on all the expenses. This approach is often criticised for not focusing on the future revenue projections or the assets of the start-up.
Comparable Transactions Method	Coming close to the traditional market approach, this approach is lucrative for investors because it is built on precedent. The question being answered is, "How much were similar start-ups valued at?" For instance, imagine that XYZ Ltd, a logistics start-up, was acquired for Rs 560 crores. It had 24 crore active users. That's roughly Rs 23 per user. Suppose you are valuing ABC Ltd which is another logistics start-up with 1.75 crore users. That gives ABC Ltd a valuation of about Rs 40 crores under this method. With any comparison model, one needs to factor in ratios or multipliers for anything that is a differentiating factor. Examples would be proprietary technologies, intangibles, industry penetration, locational advantages etc. Depending on the same, the multiplier may be adjusted.
Scorecard Valuation Method	The Scorecard Method is another option for pre-revenue businesses. It also works by comparing the start-up to others that are already funded but with added criteria. First, we find the average pre-money valuation of comparable companies. Then, we consider how the business stacks up according to the following qualities. • Strength of the team: 0-30% • Size of the opportunity: 0-25% • Product or service: 0-15% • Competitive environment: 0-10% • Marketing, sales channels, and partnerships: 0-10% • Need for additional investment: 0-5% • Others: 0-5% Then we assign each quality a comparison percentage. Essentially, it can be on par (100%), below average (<100%), or above average (>100%) for each quality compared to competitors/ industry. For example, the marketing team a 150% score because it is fully trained and has tested a customer base which has positively responded. You'd multiply 10% by 150% to get a factor of .15. This exercise is undertaken for each start-up quality and the sum of all factors is computed. Finally, that sum is multiplied by the average valuation in the business sector to get pre-revenue valuation.
First Chicago Method	This method combines a Discounted Cash Flow approach and market approach to give a fair estimate of start-up value. It works out • Worst-case scenario • Normal case scenario • Best-case scenario Valuation is done for each of these situations and finally multiplied with a probability factor to arrive at a weighted average value.

Venture Capital Method	As the name suggests, this method has been made famous by venture capital firms. Such investors seek a return equal to some multiple of their initial investment or will seek to achieve a specific internal rate of return based upon the level of risk they perceive in the venture. The method incorporates this understanding and uses the relevant time frame in discounting a future value attributable to the firm. The post-money value is calculated by discounting the rate that represents an investor's expected or required rate of return. The investor seeks a return based on some multiple of their initial investment. For example, the investor may seek a return of 10x, 20x, 30x, etc., their original investment at the time of exit.

Rising above numbers – The Story

An article about valuation about start-ups cannot be complete without understanding the importance of storytelling in valuation journey.

Professor Aswath Damodaran, widely regarded as the Dean of valuation, puts forth "If all you have are numbers on a spreadsheet, you don't have valuation, you just have a collection of numbers."

Let us attempt to understand the importance of stories in valuation by way of an example of valuing the shares of Rolex. We will attempt to value Rolex in three scenarios and the reader may assume the role of an investor on the verge of making an investment decision.

Scenario 1 - The earnings of Rolex are slated to grow at 9.5% for the next 8 years before dropping down to the GDP growth rate; the Operating Profit Margin will be 43%, the Net Profit Margin will be 16% and it will be able to generate Rs 2.54 for every rupee invested in the business.

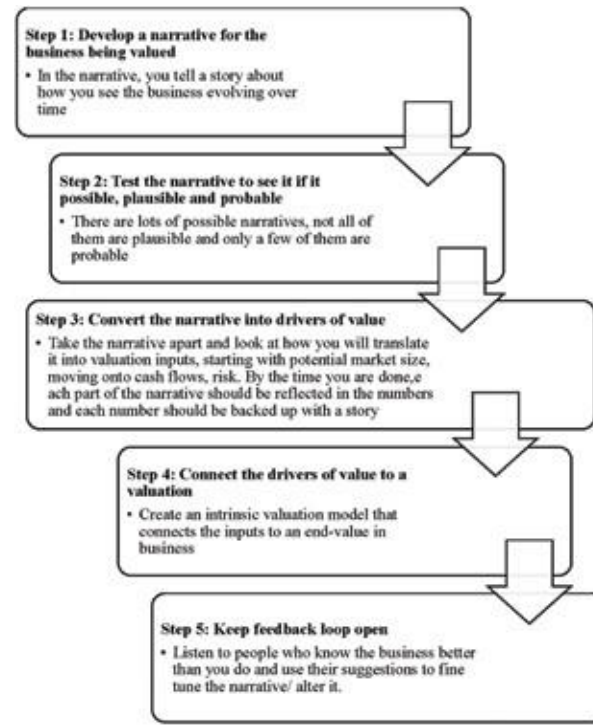
Scenario 2 – Rolex is a manufacturer of luxury watches that can charge astronomically high prices for its watches, earn huge profit margins due to scarcity of luxury watches available to an exclusive club of wealthy individuals.

Scenario 3 – Due to the need to maintain its exclusivity, the revenues of Rolex will grow at a low rate of 9.5% for the next 5 years. The same need for exclusivity also allows Rolex to earn an above-average operating margin and maintain stable earnings over time because the client base of Rolex is relatively unaffected by the highs and lows of the economy.

As the reader would notice, Scenario 1 deals exclusively with the numbers whereas scenario 2 deals with the story. Scenario 1 will not inspire an investor but scenario 2 will not help the investor reach a conclusion either.

It is only in scenario 3 where the value of the business is derived by tying the numbers to the story of the company. Here, the numbers get a backing and are easier to understand for the potential investor. Merging story-telling with the numbers is the real hallmark of a good valuation.

Prof. Aswath Damodaran has laid down a brief five-step process for integrating story into numbers. The same is explained below:



Valuation of start-ups – A cocktail

Nobody knows what the future holds and valuers are not astrologers, though their success is largely measured by how well they can predict the future.

It is said that valuation by itself is a combination of science and art. The author has a unique take – valuation is a scientific art. It is an art constructed by the valuer yet there is a definite method in the madness. The sanctity of a valuation is preserved by being able to back up the numbers using logical numbers, narratives and assumptions.

New age start-ups are disruptors in their own right and a necessary tool for global innovation and progress. By their very nature, start-ups disrupt set processes and industries in order to add value. In that process, they transcend traditional indicators of success like revenues, profitability, asset size etc. Accordingly, it is no lean feat to uncover the true value of a start-up.

While the traditional methods fall short, there is no dearth of new innovative methods used to value start-ups based on their value drivers. However, valuation of a start-up is much more than application of methods – it is about understanding the story of the future trajectory and being able to communicate that narrative using tangible numbers.

A good valuation of a start-up is a cocktail of the story and the numbers which can help the investors make informed decisions to navigate the uncertainty of the future.

ARTICLE

VALUATION OF DATA CENTRES

Shubhendu Saha, MRICS
IBBI Registered Valuer

Data Centres (DC) – An Introduction

According to credit rating agency, ICRA, capacity expansion of Indian data centres is likely to witness a five-fold increase with expected investments worth ₹1.05 lakh to ₹1.2 lakh in the next five years, making it potentially the largest non-residential asset class in terms of capital expenditure. As a strongly emerging real estate asset class, it is going to be increasingly important for valuation professionals to comprehend the physical and commercial dimensions of a Data Centre to logically arrive at value of Data Centres which can credibly be relied upon by investors and owners alike, for various purposes ranging from secured lending to financial reporting.

Although Data Centres had been existing in some form or shape since 1990s when the IT and Telecom revolution dawned globally, it received an exponential fillip with the increasing digitization of data, voice and images in recent past. What used to be an exclusive sub-component of the overall IT infrastructure of any enterprise, over the years have evolved as a mission critical digital infrastructure developed and operated as a specialised real estate productive.

Simply put, a data centre is a physical space where organizations place and maintain their critical IT network and resources. Given the nature of critical IT hardware maintained at these Data Centres, and their operational requirements, the concomitant building infrastructure apart from very specific site attributes makes Data Centres very specialised and investment heavy asset class within real estate.

A typical data centre may be divided into – (a) core operating part and (b) the building shell with requisite electro-mechanical infrastructure to support uninterrupted operations of the IT infrastructure. The core operating part would comprise IT hardware like routers, servers, switches, cables, storage systems, and application delivery controllers. The building shell and infrastructure are designed to cater to the physical load of the IT hardware to be placed there, HVAC systems for temperature and humidity control, power delivery systems with adequate power back up for uninterrupted functioning of the data centre.

Data Centres may be categorised according to the ownership/usage in the following broad categories

- ***Corporate***: These are owner-occupied, managed and often purpose-built centres exclusively used by governments or large companies for their internal use and are also known as *Hyperscale data centres*, given the extensive scale of operations and expansion requirements.
- ***Colocation***: Also known as *Multi-tenanted Data Centre (MTDC)*, these facilities offer physical space to companies to place their IT hardware including serves and networking infrastructure to multiple users.
- ***Carrier owned***: These data centres are owned and operated by data carriers and connected to the network of that carrier. Users tend to be the carriers themselves and/ or small and medium enterprises (SME) that lease rack (a frame of standard design and dimensions used as an enclosure for data storage equipment) space in the centre.
- ***Wholesale operators***: These data centre owners offer data storage typically to larger companies requiring long-term security and a degree of autonomy over their space.
- ***Managed services providers***: These companies usually operate from smaller data centres or wholesale space in larger centres. They offer fully fitted out data storage facilities to smaller users.

Power and telecommunication links are two most critical infrastructure for operations of a DC. It is the availability of sufficient capacity of power that determines a site's suitability for development and operations of a DC. Similarly, the site also needs connectivity to more than one telecommunication network service providers for successful operations of a DC.

Building Infrastructure

Following physical and infrastructural attributes drive the potential of a site as a suitable location for operations of a Data Centre

Power: Availability of a power supply of sufficient capacity is of prime importance for potential use as a data centre of a location or site and hence to its value. Power supply to a site for data centre use has two essential elements – *Capacity and Resilience*. The power supply should meet N+1 specification, i.e., by having at least two power feeds and parallel infrastructure.

Telecom: In addition to power supply, telecom connectivity is a critical success factor for operations of a data centre, and hence site for a potential data centre need to have direct links to at least two telecommunication networks.

Topography: Given the mission critical operations supported by Data centres, topography of the site where the risk of flooding is minimal becomes another critical consideration, as any form of waterlogging would have a disastrous effect on the equipments within the data centres and power and telecommunication networks feeding it.

Apart from the above-mentioned factors, issues like seismic risks, electro-magnetic interference from power transmission lines and any environmentally hazardous activities in vicinity has a significant bearing on suitability of a site for its development as a data centre.

Building specification, efficiency and cost

Although data centres require specialised design, they can be housed in buildings formerly used for industrial, warehouse or office purposes, by repurposing them while taking care of some critical design and building infrastructure, like:

- floor loading of at least 4 kN/m²

and preferably up to 10 kN/m

- slab to ceiling height of at least 3.5m;
- raised access flooring of at least 600mm, although 1000mm may be required for some air-conditioning installations,
- N+1 power backup utilising batteries and emergency generators; sufficient fuel storage to provide emergency power

Given the scale and configuration of building infrastructure and structural design, build costs are significantly higher than a standard commercial office building, and thus have a major impact on the residual value for the underlying land. Since, a developer seeks a target return on total development expenditure, build costs can also influence the level of required rent to make the completed centre commercially viable. Apart from the initial build cost, some elements of plant and machinery, for example chillers and emergency generators, may need to be replaced at least once during a building's lifetime. Thus, estimates of the remaining lifespan of a data centre's essential plant and the future costs of maintenance and replacement requires due consideration while assessing the value of either an operational/completed DC or even the underlying land for a proposed DC.

Operationally, a key parameter is the Power Usage Effectiveness (PUE), which is driven by the building design and infrastructure of the data centre. More efficient the data centre, lower the PUE figure, which would reduce energy costs of a data centre, the biggest expense item of operating a DC.

Commercial Drivers – Leases and service agreements

From valuation perspective, the other dimension apart from the development and operational costs, is the revenue potential of the completed DC. Revenue model for a DC generally remain akin to a rental revenue model, though the benchmark may not be directly linked to the area occupied unlike commercial office space. An affordable rent from a DC occupier's or user's perspective depends significantly upon the amount of power available per unit of area, since higher the ratio, greater the density of data storage racks and thus higher the rent payable per unit area.

Typically, large organisations requiring a significant amount of space and purpose-built accommodation will need longer leases to ensure continuity of occupation, thereby giving a DC much more sustainable revenue streams than typical office leases. However, not every DC is developed or occupied by large corporates or wholesale operators for hyperscale operations. Many of the DCs house operations of multiple users, namely colocation centres.

Occupiers of such data centres let on a colocation basis are typically subject to service agreements, wherein rental is replaced with service charge, arrived at by taking into account the actual cost of services provided, together with due allowance for depreciation and replacement of plant and equipment. Since colocation space is often not individually metered, so an average rate per rack may be charged.

Rental analysis of comparable transactions on a conventional basis per unit of carpet or leasable area is therefore of little use, except when comparing rents of individual units within a single centre. Instead, the rental assessment needs to be based around cost and power supply factors.

Conduct of Valuation

The Royal Institution of Chartered Surveyors (RICS), UK, published a guidance note on Valuation of Data Centres, as part of its Global Practice Standards, which prescribes some good practices towards valuing data centres. Though these guidance notes are not mandatory on the members of RICS, adherence to them reinforces the credibility of valuation process and its results.

Sit and Building Inspection

Fundamental to any valuation exercise of a real estate asset is the physical inspection of the subject property and its dimensions. Whether it is the underlying land for a potential DC or an operational DC, evaluation of the local environmental conditions and topography becomes very important to identify potential hazards to data centre use, especially risk of flooding.

Power availability and quality being a key determinant of viable operations of a DC, evidence of the capacity and number of power supplies to the site becomes an important data point to collect for an to arrive at an informed opinion on the operations of the subject DC and its resultant value.

Additionally, review of security measures restricting access to the site also needs to be recorded, given the mission critical sensitive installations that DCs are.

For operational DC buildings, the following elements of building infrastructure, require due attention:

- specification, age and capacity of back-up power supply and air-conditioning plants
- net power supply to core data room/server location space (kW per m^2);

In case of DCs, onsite inspections need to supplement the information received from the developer or DC owner/operator diligently, as many critical information may not be readily visible or perceptible. For instance, it is necessary to undertake appropriate checks to assess the accuracy of data related to power supply and efficiency (PUE) rating figure, which has a significant bearing on operational efficiency of a DC.

Though DCs are not typical commercial office space, they do need to have provisions for ancillary services, such as private office space and meeting rooms, which need to be recorded and measured separately.

Measurement Metric

As mentioned earlier, floor areas of data centres are rarely directly used in assessing rental potential, unless comparisons are being made within the same building/centre for a space that may be over or under rented at the time of valuation. Key driver of rental revenue for a DC is the "Technical Area" or "White Space", is the enclosed area (usually the raised floor area) where servers can be located and is, in effect, the floor area of server accommodation excluding the area occupied by major items of plant and machinery

Valuation Analysis and Estimate

Valuation Approach

Income Approach tends to be the most suitable approach for valuation as value of a DC primarily depends upon its ability to produce an income, by way of rent, fees or other sources of similar nature from its occupiers or users. For an operational DC,

income from contractual rents or fees and the future income including any future escalation is taken into account to arrive at the value of the DC.

The conventional method of Direct Capitalisation, wherein net rental or operating income is capitalised using an appropriate yield or year's purchase (YP) figure works best for properties let on long leases to a single occupier, who is primarily responsible for maintenance and upgradation costs of building infrastructure.

In case of DCs, landlord's outgoings in developing the centre, providing power, air conditioning, backup and other services, and replacing plant are also very high making it necessary to have a clear understanding of cash flows produced and costs incurred to arrive at an opinion of value, which will be based on the net income flow receivable. When it comes to valuation of a site for DC, given the costs of developing a DC are much higher those for an equivalent office or industrial facility, residual valuation approach may not be appropriate because of the major impact that small changes in build costs may have on the site value produced, necessitating an analysis of the cash flows attributable to the said data centre. Thus, a Discounted Cash Flow (DCF) approach seem to be most appropriate for valuing DC sites and premises.

Evaluation of potential rent

In case of an operational DC, the valuer therefore needs to take into account of current and, possibly, the expected future net income when assessing its value. For a vacant/non-operational DC the estimation of potential rental is required to proceed with any valuation analysis.

While in most property markets it is the level of tenant demand rather than return on cost that determines rental levels, for highly specialised space for which supply is limited, the cost of providing the facility can be more relevant. Thus, for a DC, technical considerations are likely to outweigh the physical dimensions of the demised space.

The rent or service charge that an occupier/user may be prepared to pay for equipment space within a data centre will depend upon the amount of equipment (usually the number of racks) that the demised space will accommodate which is driven by.

- amount of power available
- cooling capacity and power consumption of air-conditioning equipment
- amount of emergency power generation available to provide adequate backup
- bandwidth of data cabling.

For these reasons, assessment of potential rent by reference to comparable transactions analysed on a rent per unit area basis may not be appropriate for data centre space and needs to be assessed in the context of the building specification and costs, power supply, efficiency, backup and other relevant technical factors. In addition to the rent or service charges paid for using the technical areas, there may have other sources of income generation for a DC building, like

- profits on the provision of power and other services;
- letting of meeting rooms and ancillary office space; and
- other licences, such as income from roof mounted satellite dishes, telecom towers etc

Reversionary income

In order to assess the reversionary income, i.e., the income which a property is expected to generate once the incumbent tenancies expire, valuer will therefore need information concerning

- Age of equipment, and
- Estimated lifespan
- Plans to refurbish or replace it.
- Costs and time frame of upgradation

Given the mission critical nature of Data centre and the investments involved, tenants more often than not renew their leases on expiry rather than move to an alternative facility for cost optimisation, which incentivises the landlord to undertake ongoing maintenance and replacement of the facilities within the data centre to remain competitive and ensure steady flow of income. In absence of certainty around reversionary incomes for data centres, unlike commercial office space, where market rent is directly correlated to demised area, empirical evidence suggests valuers tend to make little, if any, allowance for potential rental increase from passing levels following the expiry of existing leases, barring any inflation adjustments.

Capitalisation and Discount Rates

In spite of the increasing interest in Data Centres, both by operators and investors, the market for DC as investment properties is still very nascent, almost non-existent in India This constrains the availability of credible evidence of investment yields and discount rates for DCs as a separate category. This lack of transactional evidence makes the assumptions regarding the yield applied to a rental income, or the discount rate, growth rate etc to be used in a DCF largely a matter of judgment

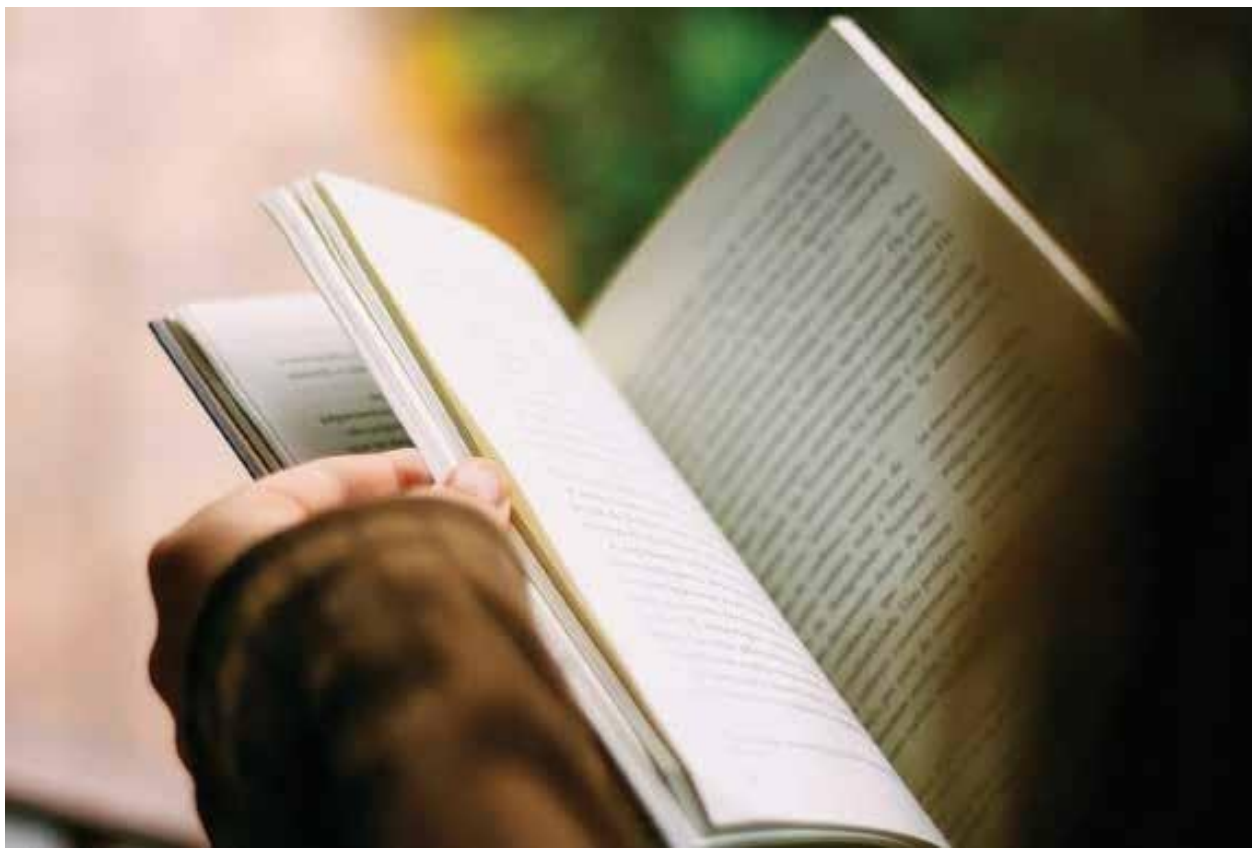
As it happens in cases with limited direct market inputs it boils down to assessment of various factors that influence the sustainability and profile of the cash flow expected from the subject DC, which include:

- Tenure and terms of tenancies, including rental escalation terms
- Lease covenants;
- Service agreements covering maintenance and equipment/ infrastructure upgrades
- Diversity of income, especially for co-location facilities
- Marketability in terms of locational acceptability and building services/infrastructure quality

Summary

Data Centres, an emerging real estate asset class, have certain features and imperatives concerning location, built up infrastructure, services and income drivers. Although demand for Data Centre is rising exponentially owing to increasing digitization of businesses and consumer behaviour, locations and sites that may satisfy the specialised requirements of a DC is likely to remain constrained. In this scenario the market for DC, as an investment asset shall remain shallow limiting the availability of adequate and credible evidences to benchmark their value on a uniform parameter. This makes the domain understanding of development and operations of DC more critical than merely the functional expertise of undertaking a valuation exercise. However, DCs being a specialised form of commercial property rather than a unique class of asset, the established principles, approaches and methodology can still very well be employed while taking into account their specialised nature.

OTHER READINGS



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Draft Guidance Note on Valuation of Plantations *(With specific reference to tea plantations) Prepared by Secretariat ICMAI RVO*

Introduction

Plantation Industry plays an important role in Indian economy both in terms of addition to economic value as well employment generation since the Indian economy is still predominantly an agrarian economy. Plantation Industry is very vast and represented by many crops such as tea, coffee, rubber, coconut, cardamom, cashew, cinnamon, cloves, cocoa, tobacco, mango, oil palm, pepper etc. Further, the following three industries constitute a major share of the total plantationindustry:

i. Tea plantation
ii. Rubber plantation
iii. Coffee plantation

In terms of turnover, these three industries contribute maximum to Plantation Industry. Besides this, plantation industry, particularly, Tea and Coffee are also the two major foreign exchange earners of the country.

Plantation Industry is the employment provider to a large mass of people, particularly, in the areas inhabited by backward classes and tribes whose level of skill is much lower in comparison to the skill of urban industrial labour. In some part of the country, for example, North-Eastern Region, economy mostly revolves around the plantation industry.

Unique features of Plantation Industry:

1. Plantation Industry is the only Industry where the total activities, starting from the agricultural activities involving the production of raw-materials to the manufacturing activities for finished products are located at the same place under the umbrage of the single management. In case of most of the organization engaged in plantation industry, the organization handles all activities pertaining to production of raw-materials, production of finished products and marketing of the finished products also.

2. There is considerable time lag (sometimes many years) between the time of planting and being ready for commercial harvesting, for example:

Tea:	3-5 years
Coffee:	3-4 years
Rubber:	6-7 years

3. The Commercial harvesting may be for many years,

Tea:	30-35 years
Coffee:	20-25 years
Rubber:	25-32 years

4. At the Estate level, the strength of the managerial staff is much less as compared to the total number of workers engaged. Also the total number of managerial staff as compared to total number of workers is much lower than the other industries. At the Estate level, most of the managerial staff has to handle multiple operational functions like overseeing the agricultural activities, manufacturing, labor management, office administration etc.

5. Plantation Industry is highly labor intensive. Majority of the workforce directly attached with the plantation industry reside in the labor quarters situated within the Estate. As a result, the Management has to look after the total maintenance of the labor quarters, maintenance of law and order situation as well as general administration of labor and smooth provisioning of the entitlements to which workers are entitled to statutorily.

6. The plantation products pass through a single or a few intermediate marketing points for the purpose of further processing, standardization or bulking/storage before they reach to end consumer.

7. The plantation industry requires large amounts of fixed capital investment in tree crops, processing/ packaging, transportation facilities or special port facilities.

8. The output in plantation industry is also highly dependent on the climatic condition.

The major activities of the tea plantations can be classified into the following:

1. Maintenance of Nursery: Tea plantations maintain nursery for tea saplings and shade tree saplings for being planted in the fields. Separate nurseries are maintained for tea saplings andshade tree saplings. At the tea sapling nursery, the saplings are grown either from the seeds sown on the nursery bed (seed nursery) or from the cuttings taken from a tea bush known as the 'mother bush' (propagation nursery). The seeds used in the nursery may be taken from the tea bushes or purchased from the market. The seeds are sown in different sections in the 'seed nursery' according to the grades. Growing tea saplings from cuttings, also known as vegetative propagation or 'clonal planting', is preferred to seed plantation because of the uniform growth of the tea bushes in case of 'clonal planting'. Tea saplings grown in the nurseryrequire adequate care until these attain suitable growth when these are planted in the field. Similarly, in shade tree nursery, shade tree saplings are maintained from where these are planted in the field as and where necessary.

2. Tea planting: Planting is done under following circumstances –

a. New plantation is done in vacant land (which may

be reclaimed) never used earlier for plantation. In this connection it may be noted that many tea estates in India which came into existence in the pre-independence period have large areas which have not been brought under tree plantation for various reasons.

b. Re-plantation is done by clearing a section, by up-rooting aged trees, which are no longer suitable for growing satisfactory quantity and quality of tea leaves and thus are not commercially viable (tea bushes gives the optimum production between 10 and 30 years but can be plucked upto 80 years or more but the productivity goes down), or

c. Planting to fill gaps in various sections of the tea estate, resulting from occasional uprooting of tea bushes, necessitated by death or destruction of individual bushes. The plantation area in tea estates are divided into various sections and in each section tea of the same grade or variety (determined by the seed or clone) are planted which enables better maintenance and administration of the plantation. In each section a specific distance between the tea plants are maintained referred to as 'spacing', during plantation and when some of the tea trees are uprooted gaps are created which are sometimes filled by plantation of younger trees.

New plantation or total re-plantation in a section starts with ground preparation which involves:

i. Uprooting of old plants using heavy machinery which is normally hired. The uprooted tea bushes may be used for 'mulching' to reduce the soil erosion, to maintain soil moisture and check weed growth. These tea bushes over a period of time decompose and serve as manure.

ii. Ploughing, harrowing and leveling the ground are done using implements and tractors.

iii. During this time the PH factor of the soil is tested at the Government approved laboratories (Tea Research Association Lab or others) and if the PH factor is high (PH factor between 4.5 and 5.5 is ideal for tea cultivation) gypsum or aluminum sulphate is applied to make the soil less alkaline. When the PH factor is less than the ideal, then dolomite is applied to make the soil less acidic.

iv. Subsequently, citreonela grass or Guatemala grass may be planted and kept for 18 to 20 months to improve the soil fertility (to increase the soil nutrients and carbon status andmicro organism and to reduce the oil toxicity caused by years of using inorganic fertilizers.

v. Thereafter saplings from the nursery are planted. The planting can be done in two ways, one by shifting the plant along-with the roots and soil, from the bed of the nursery and another by shifting the sapling without the soil. Moreover, depending on the spacing to be maintained between the tea plants, plantation is done by either of the two methods of 'Pit planting' or 'Trench planting'. Spacing between plants depend on the type of plants being planted (some types grows upwards and are less bushy while some spreads side-wise requiring more space) but normally, 15000 to 18000 plants are planted per hectare. Saplings from seed are preferred in geographical areas where there is more gravel in the soil or the ground water level is low because these plants will have stronger roots, where as in most area of Assam clones are used. Seeds variety gives tea which will be blacker and clones are fibrous and brownish in color.

vi. The planting is followed by 'mulching' which is an activity of covering the ground with green vegetative matter, like tea leaves, twigs and bark of tea plants, leaving a gap of 10cm from the collar of the plant. Mulching helps in maintaining the moisture of the ground improves soil fertility and prevents growth of weeds.

vii. These saplings are to be nurtured for at least three years before the tea bushes are matured for plucking. During this period along with the normal activities of weeding, manuring, pest and disease control, irrigation and drainage, efforts are to be made to ensure that the tea plants attain the desirable frame once it is ready for plucking. The proper frame signifies uniform, radial, all-round growth of the tea plant which is achieved by periodically removing the main stem beyond 20 cm from the ground and other methods.

3. Shade for tea plants: Another important feature of tea plantation are the 'shade trees' which protect the tea bushes from direct sunlight and ensures that the moisture in the leaves are not lost easily and provides scores of other benefits for the tea plants. Shade trees once matured, do not require as much attention as the tea bushes but when new shade trees are tobe planted (with the samplings being nurtured in the shade tree nursery), these are to be reared till they are full grown.

The shade trees also help in preventing soil erosion and increasing soil fertility while providingfor plantation and fire woods, once it's utility as shade tree is lost.

4. Irrigation and Drainage: Tea plantations require adequate supply of water and during dry seasons when there is not sufficient spells of rain (ideally between 2000 to 3000 mm per annum, in Assam) irrigation becomes necessary. Even during winter season when rainfall is less, irrigation becomes necessary. Irrigation is done by pumping water from nearby water sources like river or water bodies, rain

water storage tanks, boring well (it is expensive to borea well which may give water upto 11 years) etc. However, stagnation of water in tea plantations is harmful for proper growth and therefore proper drainage system should be maintained to drain out surplus water.

5. Manuring: The depletion of nutrients in the soil occurs with repeated cultivation as the plantsdraw nutrition from the soil. In some cases the soil is inherently deficient in nutrients. In either situation the soil is to be provided with nutrients on regular basis for healthy growth of the tea plants, which is done through manuring.

6. Pest and Disease control: The tea plants are prone to various types of diseases and attacks bypests (the most common and dangerous among them being 'blights'). The plants are kept under regular watch for any indication of disease or attack by pests and chemicals and pesticides are sprinkled or sprayed either as a preventive measure or to cure any disease or ward-off any pest attack.

7. Weeding: Growth of weeds around the tea bushes is a natural phenomenon which needs to be controlled. This is done by hand-picking

8. Plucking: Plucking refers to the harvesting of the tea leaves produced for manufacture of 'Made Tea'. There are different type of plucking on which depends the quantity and quality ofthe green leaves plucked and also the shoots that come out after plucking. The common typesof plucking are '*Janam*' (scale leaf plucking), standard plucking and Black plucking. Ideally two leaves and the terminal bud are picked by hand periodically and the frequency of the plucking rounds depends on the pruning type (discussed below), regeneration of the leaves and bud, plucking type and the management policy. Plucking is generally done when the plant has budsand leaves at the terminals which are commonly known as 'flushes'. Flushes refer to the top 1-2 inches of a mature plant that contains the bud and the leaves. A plant will grow a new flush every seven to 15 days during the growing season, and leaves that are slow in development tend to produce better-flavoured teas. In India the flushing period is divided into the early flush, between ends of March to May, the Main flush, between mid-June to mid September and the back end flush, between mid-September to the end of the season, beyond which the tea bushes are pruned and allowed to grow again, till the next flush. Plucking is a labour intensive activity and due to shortage of labour in several tea estates timely plucking isaffected which results in lesser number of plucking rounds having a bearing on both the timely availability of green leaves and quality of the leaves. To tackle this situation, plucking bymachines has been carried out on experimental basis by many tea estates but has not turn out to be successful.

9. Pruning: This is a vital activity in tea plantations which has two main objectives, namely, to control the vertical growth of the tree within manageable limit and to stimulate vegetative growth resulting in horizontal expansion with vigorous branching pattern. The quantity and quality of tea leaves largely depend on the pruning-routine and constitute a major part of management of tree plantation. Pruning is done with pruning shears and is primarily of the following types, each type having different objective, bringing in different benefits and necessitated under different situations:

a. Collar prune
b. Heavy prune
c. Medium prune
d. Light prune/Top prune/Cut across prune
e. Skiff prune/Lung prune

Skiff prune is again classified into:

a. Deep skiff [DSK]
b. Medium skiff [MSK]
c. Light skiff [LSK]
d. Level off skiff [LOSK]
e. Unpruned [UP]

The pruning cycle (the interval between two prunes) and the type of pruning are decided bythe Management of the tea estate depending on the following and other factors:

a. Crop & yield required
b. Growth time required
c. Rest period required
d. Nutrient status
e. Damage done by sun scorch, blister, pest etc.

Soil rehabilitation:

The yield of the tea bushes which have crossed the prime gradually falls and these old tea bushes are uprooted for re-plantation. But due to years of growing tea, physio-chemical as well as the biological properties of the soil deteriorates. To recover from this situation, after uprooting of old tea bushes, the land is put under rehabilitation crop for a period of 18-24 months. Some of the most common rehabilitation crops are Guatemala grass and citronella grass. Rehabilitation crops require manuring with cow dung. Soil rehabilitation program is followed by ground preparation for re-plantation.

Other prominent activities ancillary to tea production that is witnessed in the Tea Estates in India involves:

1. The majority of the tea estates have large areas of vacant land which are not used for tea plantation for various reasons. The Management of several tea estates uses these areas for different type of cultivation with commercial proposition. Several tea estates have got into cultivation of spices like black pepper and cardamom. Even rubber and other trees are also planted. These small scale parallel activities

ensure productive use of vacant land with limited use of other resources.

2. Another trend in tea plantation is *Tea Tourism'* which has gained immense popularity, particularly in the Dooars region. Under this concept, well furnished and beautifully designed bungalows are built with kitchen garden, overlooking lush green tea gardens, which are offered to tourists for stay. Superior hospitality and tours of the tea gardens and manufacturing facilities provide for added attraction in 'Tea Tourism'. This new concept has caught up with foreign tourists and helps the tea estates to earn additional revenue while providing additional opportunity for marketing their brand of tea.

Valuation of Plantations

Plantation estate owners or managers often separately engage the services of land and plantation valuers to assist in the provision of an independent fair value opinion of their plantation estate (land plus trees). Inconveniently, land and tree crop values are not simply additive. Plantation valuation standards place the responsibility to provide an aggregate estate value opinion with the plantation valuer. In the absence of clear land value definitions and land valuation processes, the valuation process for the plantation estate as a whole may become frustrated, at worst risking a misstatement of fair market value.

Land valuers rely on sales comparison evidence in developing an opinion of the fair market value of land. The mix of transaction evidence in the sales comparison basket is an important consideration. The number of pure plantation land transactions in any given market may be limited, hence sales comparison evidence may be skewed towards the inclusion of agricultural land transactions, as a common example. These properties are typically traded in a pastured, fenced and watered (PFW) state, unlike plantation plantation land which is typically in a planted or cutover condition (i.e. poorly fenced or unfenced, with stumps, no pasture improvements and no or limited water infrastructure for livestock). In this circumstance, the land valuer needs to take improvements into consideration by deducting the costs associated with achieving a PFW state from the sales comparison derived value to estimate the fair value of plantation plantation land

In valuing properties, valuation standards call for the valuer to consider the highest and best use (HBU) of the land. It is likely that some plantation estates may include a mix of HBU, where plantation forestry is the HBU for some properties whereas another use (e.g. grazing livestock, horticulture, residential) is the HBU for other properties. The valuation process for the estate needs to take this detail into consideration. In the event that forestry is not the HBU, a decision needs to be made as to the likely timing for HBU conversion. This needs to be considered from a market perspective. Where land is to be converted to another use immediately, the current fair value of the land needs to take conversion (or reversion) to HBU condition into consideration. In the broadacre grazing example the adjustment formula may be fair value = PFW agricultural value less the cost of conversion or reversion.

Tree crops must "pay" for its use of the land to account for opportunity costs through the application of a notional land rental to be applied by plantationvaluers. Notional rent should be based on market evidence as provided by the land valuer. In a situation where forestry is the HBU, the notional land rental is derived by applying a commercial rate of return to the plantation land value. In situations where forestry is not the HBU and where the land is not to be converted immediately to HBU, the value in its HBU is to be used as the basis for applying the rental calculation and the future treatment of conversion / reversion costs needs to be considered.

A commercial rate of return for land (economic rent) has in the past ranged from 3-6%, but market rental or lease evidence can be difficult to obtain as it is often confidential. A time allowance to market and sell the land must also be considered in the cash flows.

Through the application of a notional land rental, tree crop and land values become additive in developing an opinion on the plantation estate value.

In summary, the plantation valuer needs to obtain the following specific information from the land valuer to bring tree crop and land values together in expressing an opinion about the fair value of a plantation estate as a whole:

- basis of the land valuer's sales comparison valuation. What is the composition of the comparative sales evidence and does the derived land value represents an opinion on agricultural land value(s) or plantation plantation land value(s)
- applicable market-based land rental rate(s)
- the estimated current cost of PFW restoration works
- the HBU status of each property being valued and conversion/reversion assumptions where appropriate assumptions on the time required to market and sell land

There is generally no active market for tea plantations in India. How will tea plantations be fair valued ? The most appropriate approach will be calculation of net present value of future cash flows associated with tea plantations. This will include estimating Future yield rates; Selling prices are based on expected future costs; Growing, processing and selling costs which could be based on long term average levels; Cash flows are to be discounted at a pre tax rate, that takes into account the cost of capital plus a suitable risk factor; and an appropriate rental charge is included to represent the use of the developed land on which the trees are planted.

Detailed map and record of the estate: At every estate

a detailed map should be available showing the location and measurement of the total area under control of the estate. The map shall present the area under cultivation with identification (number or alpha-numeric) for the various sections, area not under cultivation, area used for nurseries & other plantations, the buildings, labor hutments and other structures, network of roads, culverts, bridges, water bodies etc.

Review of the land and its utilization: The Estate Manager along with concerned officials should periodically review the following and keep record of the decisions taken and executed, duly signed by the reviewer:

i. Whether any litigation exists, to free any land from encumbrance, the status/progress of the court case.

ii. Whether any unutilized land is being vested to the State Government and if so, steps to be taken to recover the land or to avail compensation as per law.

Scope for bringing more land under plantation or for setting up of seed nurseries or shade tree nurseries with commercial prospect thus ensuring optimal utilization of the land and steps to be taken in that direction

1. Management of agricultural activity: Agricultural activity is the largest activity in an estate in terms of involvement of time and other resources. Normally the land in an estate is segregatedinto zones, areas and sections which are depicted clearly in the map/plan which helps better administration. The management at the estates in consultation with the Corporate Office/Head Office periodically reviews the program for production of tea/ coffee/rubber which is aimed at better compliance of the corporate policies that revolve around the primary objective of maximization of the earning of the shareholders. The earnings from the plantation products depend *inter alia* on the quantum of sales and the quality of the products sold. The quantity and quality of the tea/coffee/rubber may also depend on the variety of seeds or clones plantedto grow the bushes/rubber trees. Any change in the programme leads to change in the timing and the procedures to be adopted for activities like pruning/tapping and plucking/crop collection, utilization of resources and ultimately the expenditure to be incurred. The major activities involved are:

a. Providing proper irrigation as per the garden inspection report and for that arrangements have to be done. Where motor pumps with supply pipes and generator to run the pumps (where connection for electricity is not available) are required, necessary arrangements for the same either through new purchase or hiring, has to be made, if these are not already available or are engaged elsewhere. Requisition for issue of pump, generator and HSD is to be made under proper authorization. On receipt of the requisition the availability of pump and generator shall be looked into by referring to the asset control register and if not available requisition shall be given for procurement through hiring or purchase. In case of hiring the capacity and the hiring charges shall be approved by the Estate Management.

b. Treating each section with manure, timely and regularly, ascertainment of labour required for

c. Any tea/coffee/rubber estate maintains a plant nursery where the tea/coffee/rubber plants and the shade tree plants which are either from seeds or are clones developed from research, are nurtured. The plant nursery needs manures and pesticides, supply of water, gardening implements and labour.

d. Where a section of the estate is not being used for growing any one of the plantation products then it may be used for other crops like cinnamon, vanilla, banana etc. having commercial value, the materials and labour utilized to maintain and the revenue earned needs to be traced.

2. Upkeep, repairs and maintenance of assets: An estate needs to make efforts for the upkeep of the internal roads, culverts and bridges, all-around the estate, the labor hutments and the plant nursery beside the repairs and maintenance of the Civil structures, electric installations, machineries and motor vehicles. An estate can have an annual maintenance program (which might be periodical, based on hours/KMs run or some other appropriate aspect) or contingent plan for maintenance might be made based on necessity. Plantation crops are seasonal, for some time of the year, the production of tea/coffee/rubber and accordingly manufacturing activities remain either low or nil.

During this lean period keeping the plant and machineries in working condition require special attention. When there is no production overall repairs and maintenance is carried out. Repairs and maintenance may be done in- house with material from the stores and using own labor. Alternatively, the work can be assigned to external agencies. While every such work needs to be properly authorized, for in- house job, requisition for issue of stores, implements etc. along with the labor engaged and paid for, should be co-related with the work authorized.

Where external agency is engaged, to verify whether their selection has been done in accordance with the established procedure andthe management approved terms and conditions of such appointment, have been adhered. The propriety of the expenditure incurred, the quantum of expenditure booked and paid for needs to be examined. The maintenance activities are generally of the following types:

a. The roads, culverts and bridges connecting every nook and corner of the estate are subject to wear and tear and may also be damaged by unforeseen incidents.

b. The labor hutments, arrangement for potable water and sanitation facility provided to the laborers need

to be maintained as per the established internal standards or the requirement of legislation.

c. To arrange for upkeep of the nurseries: the shades made of bamboo and polythene.

d. The buildings within the estate like factory building, warehouse, garage, office building, quarters of the staff and other civil constructions along with their electrical and mechanical installations require regular repairs and maintenance.

e. The mechanical and electrical tools and implements including motors, pumps and generators used for various plantations, manufacturing and other activities need to berepaired and properly maintained to keep these functional. Measuring equipments like weighing scales need to be similarly maintained and also periodically calibrated byaccredited agencies.

f. The machineries at the factory and the motor vehicles need regular repairs andmaintenance.

3. Materials Management: Procurement/Purchase of material whether centralized or local, their storage and management, assumes high importance since the amount of fund involved is considerable. The materials primarily required in an estate having both plantation and manufacturing activity include:

a. Samplings and seeds and shade tree samplings for plantation in the estate.

b. Manure, pesticide, weedicide/herbicide and chemicals for direct application in theestates.

c. Fuel like petrol, HSD, Furnace oil, Coal and fire wood.

d. Mechanical and electrical equipment/implements, their spares and spares for plant

A. Land Matters:

i. Review the status of Land holdings of the Estate –
   b. Whether free hold land; or
   c. Grant obtained from Government for plantation.

ii. In case of Grant obtained from Government for plantation, to check whether it is
   a. Simple Grant; or
   b. Special Cultivation Grant;
   c. Area covered under extension planting;
   d. Area covered under uprooting and re-plantation

iii. Whether the documents of freehold land and Grant in the form of Leasehold Land (Patta) obtained from Government or copies thereof (where original documents are preserved atH.O.) are available at the Estate;

iv. Review the status of payment of Land Rent or Leasehold Rent -whether payment of rent is up-to-date;

v. To verify whether the statutory payments have been made and necessary information/returns have been submitted timely to the authorities;

vi. Whether Grant Map produced by Govt. approved Surveyors from the Govt. Cadastral Survey are available and boundaries are properly marked;

To check whether the Estate lands are periodically surveyed by Government approved Surveyors to update Estate's maps showing boundaries, estate facilities and areas under plantation (with area statement) - this is required to prevent encroachment and unauthorized occupation of Estate's land by outsiders as well as by the Estate workers

Prior to the land being afforested, its value was relatively easily referenced to the sale or rent of similar type land in the general locality with national and specialist media reporting land and rental prices on a regular basis. Once planted, the value of the newly established plantation / plantation asset is not widely known

Valuation of Plantations Challenges

a. plantations valuations have a number of features related or common to other asset classes, however they present some uniquechallenges in terms of: Biological processes and their performance over time;

b. The ability, within limits, to defer plantations harvesting and resultant revenues to take advantage of market prices;

c. The evaluation of risk that can impact on plantation volumes and revenues e.g. storms, disease, pests and climate change;

d. Impact of an increasing regulatory framework on the management of forests, the timing and scale of activities notleast harvesting operations;

e. The apportionment of value between the plantation crop and the underlying land (may be required for taxation purposes);

f. The impact of external roading infrastructure and access and distance to market

g. Imperfect information.

Factors Affecting the Valuation of Plantations

Irrespective of the actual method used to determine the value of a forest, there are a number of factors which can either singly or in combination impact on the particular valuation. Thus before one selects the most appropriate valuation methodology, it is important to have an understanding of these factors and their influence on any valuation.

The factors fall into a number of main categories (*19*):

a. Physical factors;

b. Plantation crop details;

c. Legal and regulatory factors;

d. Plantation policy and support measures; and
e. Market considerations.

Physical Factors

Physical factors may either serve to increase or decrease the value of a plantation depending upon the particular situation. The more obvious physical factors are the area of the plantation, geographic location, infrastructure (access) and site characteristics. Dwellings and buildings which may be present may influence the overall market value but their valuation are outside the scope of the guidance provided in this guide and owners are advised to seek professional specialist advice as to their value.

Area (Size)

Plantation area (size) offers economies of scale and allows the owner to place reasonably sized plantation sales packages onthe market which are attractive both to the purchaser and the harvesting contractor. Thus larger plantations will tend to attract an added price premium to reflect the possible economies of scale and ease of management that they afford.However, care needs to be taken because of issues such as potential limits on felling coupe sizes and variation in qualityand growth within larger plantations.

Notwithstanding this, there are a number of potential purchasers who are more influenced by lifestyle choices and non-plantation values than by commercial considerations. Thus, small plantation properties can achieve prices beyond theirvaluation for commercial plantation production.

Fragmentation

While in the 1990s, a significant proportion of private afforestation was 'whole farm' planting, in recent years, plantinghas been to a considerable degree within individual agricultural holdings and often can comprise of a number of geographically separate small plots. The degree of fragmentation of the plantation holding can impact on the costs of futureplantation activities such as harvesting and roading with consequent impact on value. Purchasers prefer larger single blocks rather than a series of fragmented plantation areas.

Infrastructure (Access)

Infrastructure considerations are closely related to location. Plantation properties are typically located adjoining third or fourth class roads, many of which can have legal or practical (physically incapable) weight limits. Such restrictions limit access and may require additional travel distance to market. On occasion, this may involve an intermediate step to get the harvested material to a suitable location for normal road transport. Such double handling or additional transport distance represents an extra cost potential potential purchasers must bear and would be reflected in their price offer for any plantation put up for sale. This reduced price would be reflected in any plantation valuation.

The presence of an existing internal plantation road, provided it is fit for purpose, will eliminate the need for expenditureon road construction and make the plantation more valuable.

Some sites due to their configuration and or their distance from a county road may have very high roading requirement in terms of linear metres of road per stocked hectare of forest, perhaps even to the extent that it would only be worthwhile to build the road at the time of clea rfell. The high road costs coupled with the absence of any thinning revenues willneed to be factored into the plantation valuation.

Within a plantation property, the presence of obstacles to road construction such as streams, rivers, rock outcrop, ravines or deep gullies which need to be traversed will add to road construction and maintenance costs and will need to be reflected in the valuation.

Site Characteristics

The site characteristics which influence plantation valuation are soil type, elevation, exposure, slope, ground roughness and drainage capacity. These factors influence potential harvesting costs combining to either increase costs as for example where there are steep slopes or reduce costs where there are dry mineral soils on level sites which can be worked at anytime of the year.

Soil type is closely correlated to the potential of the site to produce plantation. This plantation production potential is referred to as yield class (YC) and is defined as the number of cubic metres per hectare per annum that a site will produce over the rotation of maximum mean annual increment (MMAI). Yield class, for a given tree species, will vary being generally higher for mineral soils than for organic (peat) soils. There is also a discernible decrease in yield class with increasing elevation on any given soil type. A site's ability to produce volume i.e. its yield class, is closely linked with its ability to generate plantation revenues which form a major input to the determination of plantation value. Thus, all things being equal and ignoring any potential impact of high growth rates on plantation quality and or product outturn, the higher the site productivity (yield class) the greater the plantation value.

Elevation, soil type and exposure either in isolation or combination can limit the potential of the site to grow trees imposing a maximum height beyond which trees will be more subject to potential wind throw. Plantation crops on exposedwet mineral sites are inherently less stable than their counterparts on sheltered, low elevation and drier sites. Such cropseven though they may have a similar yield class, will have a reduced volume production capacity through a managementrequirement to fell such crops either at the onset of wind damage or in anticipation of wind blow. The ground preparation technique at time of planting may also influence stability. Single or double mould board ploughing, which to a large degree have been replaced by mounding, can predispose a crop to the early onset of wind throw. On sites where drainage is not maintained or where it is impeded, crops can be predisposed to wind throw damage. Inappropriate thinning practices can significantly increase wind risk and the valuer should consider this when valuing

thinned properties.

Slope and ground roughness (occurrence of rocks, rock outcrop and other impediments to travel) will impact on harvesting methods and costs. On steep slopes, felling may be limited to chainsaw and extraction only possible using cable systems rather than ground based plantation extraction systems like forwarders or skidders. This will increase harvesting costs and will be reflected in the plantation price and ultimately the market value for the forest.

Dwellings and Buildings

Many plantations contain abandoned cottages and or farm buildings / outhouses and their value should be included to arrive at the overall market value for the plantation. The state of repair and access to such buildings is extremely variable. Notwithstanding this, some may have potential for development. The valuation of such assets is outside the scope of this guide and where such assets are present, owners are recommended to seek independent professional adviceas to their market value.

Plantation Crop Details

There are a number of aspects relating to the plantation crop that will impact on market value. The first and most obvious is the stage of development of the crop as this has a major impact on the timing of future revenues and costs. Crops whichhave yet to reach canopy closure will have lower market value than crops which have reached pole stage (mid rotation).

Plot Size and Layout: - The layout of the various forests plots within the plantation or plantation holding is an important consideration. A good plot layout should facilitate harvesting and help minimize roading and other costs, therebycontributing to value; otherwise layout could effectively limit the scope of harvesting resulting in dead hauls through areas not ready for thinning. The larger the individual plot sizes, the greater the scope for economies of scale and the more marketable the harvested plantation.

Stocking (the degree to which the plantation crop covers the ground) is directly related to the site's capacity to produce plantation. Fully stocked sites will attract a higher value than under stocked plantations or those sites where for one reason or another part of the crop has failed or is in check.

Diseases and pests when present serve to reduce the volume production from a plantation, the extent of this reduction is related to the type and degree of damage. Plantations which show the presence of disease or attack by insect pests, while they will generally survive will show reduced vigor and may also have lower plantation quality. Such crops will have a reduced market value. Deer are now a major presence in parts of the country and can do significant damage to young plantations. Where there is evidence of significant damage, crops will be marked down in value as plantation quality and potential product recovery will be reduced.

Management

How the crop has been managed to date in terms of the quality of plantation establishment, the extent or otherwise of maintenance, the road density and alignment, the thinning practice adopted including rack layout, whether pruning has been undertaken and if so the appropriateness of the stem selection, will all influence value. All other things being equal, well managed plantations under active management and supported by a current management plan and good silvicultural records (including production) will tend to attract higher market values than crops which have been neglected and are inneed of costly management interventions. The cost of any immediate remedial activity required to maintain the crop, facilitate future harvesting and or security of the plantation should be included in any projected future cash flows.

Legal and Regulatory Factors

The legal and regulatory framework around forestry is becoming increasingly complex and can serve in specific circumstances to significantly restrict the range, scale and or timing of planned plantation activities including fertilization, drainage, road construction, plantation harvesting and reforestation.. An informed view is required to determine the impact, if any, on the plantation valuation.

Title

The Plantation Service requires that all turbary and grazing rights on lands to be planted are relinquished prior to approval for grant aid. However, there are some older plantation properties where this was not a requirement and care is needed to ensure that any burden on the land is identified and taken into consideration in determining the market value of the plantation. Where small areas of bare land are contained within the plantation area they may be subject to burdens.

The terms of any leasehold, joint venture or joint management arrangement for the plantation property in question are important in determining market value with any restrictions or onerous burden(s) having a negative impact. It is important to be aware that burdens on land may not always be exercised and as such may not be obvious on a site visit. Adequacy and proof of title may be relevant but are outside the scope of this guide and an appropriate comment should be includedin the Valuation Report.

Rights of Way

Access to third parties or the public in general that is granted by way leaves, easements and rights of way (ROW), together with liabilities for the maintenance of other features needs to be carefully assessed and any cost or revenue implications reflected in the market value. Access that is exercised irresponsibly can result in additional management costs from fire, trespass or vandalism .

Access to many plantations may be by ROW or along shared roads. Enquiries need to be made where accessis not directly from a public road and due account taken of the position in the valuation. Historical or unregistered ROWs may be difficult to determine and problems may only come to light at the time of road construction. In someinstances the right of access provided may not be appropriate for the normal range of plantation activities or operations. All of the issues and practicalities around ROWs should be considered when determining the valuation and appropriate comment included in the Valuation Report. Where access to the plantation is

via a shared road with an adjoining plantation owner or land owner, it is important to beaware of any conditions that may apply e.g. limits on the timing of access, charge per m^3 for use of the access or repair covenants. Conditions should when quantifiable be incorporated into any projected cash flows.

Market Considerations

Investment in plantations has a number of attributes which differentiate it from other types of investment. As an asset classit tends to exhibit less volatility and even during recession or downturns in the economy, forests will continue to grow and put on volume increment. Notwithstanding this, the value of forests is influenced by various market factors including:

a. The general state of the economy but in particular the state of the construction sector;
b. The domestic and export demand for plantation and plantation based products;
c. Government policies around renewable energy and the use of woody biomass;
d. Supply and demand for forests;
e. Availability and cost of finance; and
f. Performance of alternative investments.

3. Methods of Plantation Valuation

There are a variety of methods used to estimate plantation value. Some are based on accounting practices, while others owe their origin to either modern economic theory or are rooted in the approaches adopted by such foresters as Cotta and Faustmann in the first half of the nineteenth century .

The four main methods for valuing plantations are:

a. Transactions Method;
b. Cost Based Methods;
c. Lump Sum Method ; and
d. Expectation Value (Present value method or DCF)

A variation of the present value method which is perhaps more commonly referred to as the discounted cash flow is the real option method which seeks to place an additional value on the flexibility of the harvesting decision to respond to changes in plantation prices.

In addition, the International Accounting Standard for biological assets (IAS 41) recognizes a particular situation where if an active market exists, the price quoted in the market is the appropriate basis for determining the fair value ofthat asset.

Transaction Method

The transaction based approach involves the analysis of recent market transactions and historical trends regarding the prices achieved for plantation sales. In principle, it is the most satisfactory basis for determining plantation value as it is based on the evidence provided by the market .

No two plantations are the same and in comparing transaction results it is necessary to consider which attributesinfluenced the sale value and to what extent. Important attributes include but are not necessarily limited to:

a. Degree of maturity;
b. Size (area);
c. Species composition;
d. General growth rates (yield class);
e. Management history;
f. Plantation quality and stocking;
g. Accessibility;
h. Proximity to market; and
i. Location and general terrain.

Each of these may have an important influence on plantation market value and on the sales price recorded in the market.Given the range of factors it is unlikely that plantations can be found that are exactly similar or wholly comparable to theplantation being valued. This is especially so when the number of transactions are relatively few and insufficient to provide meaningful guidance. Notwithstanding this, some of these factors can be taken into account quantitatively by adjusting for differentials that are well established in the market, such as the added cost of plantation haulage from a more remote location or the average yield class (growth rate).

There can be practical difficulties, in analyzing transaction information and in extrapolation to the plantation of interest:

- **Heterogeneous Forests**: No two plantations are identical. They may differ in species composition, productivity, maturity, past silviculture and other factors which will influence their value.
- **Timing**: Prices provide market information at a particular point in time and reflect the underlying market conditionswhich may have changed in the interim.
- **Lack of Information**: Plantation sales information is often not available either for confidentiality reasons or because theplantation represents one component of a 'bundled' sale involving other significant assets.

Illiquid Market: There are relatively few buyers in the market especially for smaller plantations and immature forests

Notwithstanding the fact that it may not be possible to find transaction evidence for comparable forests, transactionswhen available can provide useful information or indicators. One particular use is the estimation of the implied discount rate (IDR). Estimation of the discount rate used by purchasers involves the development of a credible cash flow model for the plantation in question using the best information available. The discount rate at which the discounted cash flows equate to the purchase price is the implied discount rate. This can be used as an input to the discount rate used in expectation-based valuations.

Cost Based Methods

The cost-based approach to plantation valuation is based upon the principle of substitution. The value of a plantation asset isestimated on the basis of the cost to put in place a

similar asset i.e. the cost to bring the plantation to a similar stage of development. Cost based methods can provide a basis for determining value for example for insurance purposes, or for very young plantations

Cost based methods fail to take account for accretion of growth on standing trees and the substantial unrealized increase in value of the plantation over the remainder of the rotation to the time of clearfell. Notwithstanding this, costs based approaches have had appeal for a number of reasons:

a. A preference in some cases to value young stands on the basis of replacement cost rather than future expectations (DCF); and

b. The influence of accounting practice and the concept of objectivity.

A high-cost plantation does not necessarily imply a high value plantation and a low cost plantation does not imply a low value forest, in fact commonly the opposite can be true. Plantation establishment costs are a function of site type, terrain, location, vegetation, and the necessity for operations such as deer fencing, vegetation control, trespass removal and fire protection. Value is a function of site productivity, location relative to markets, species and management regime. Inflating costs does not necessarily inflate value. Cost and value are therefore only loosely related , especially when biological factorscome into play.

Cost based methods can be divided into two main categories:

a. Historic Cost; and

b. Current Replacement Cost.

Historical Cost

The historic cost method equates plantation value to the sum of the historic costs incurred in developing it . Thus a plantation would be valued as the sum of the land cost, establishment costs (net of any grant payments) and the cost of maintenance and any management costs to bring it to its current stage of development. There is no adjustment for inflation. The costs refer to the particular technology in use at the time of occurrence and any cost efficiencies through the use of improved equipment and or working practices are not considered. Costs should be recorded annually as partof good management practice.

The costs to be capitalized should be limited to those that enhance or can enhance the plantation asset. This can lead to different practices as to the treatment of some costs – for instance insurance is a risk reduction annual cost rather than an asset enhancing cost. Construction and maintenance of fire lines could also be viewed as risk reduction costs but there is also a valid view that they enhance the protected plantation, in the same way as an alarmsystem might enhance a building. Other costs that need to be considered carefully are filling-in (replacement of dead plants) especially extreme values; trespass control and fertilizing.

In general, exceptional costs arising from some non-routine activity (such as additional maintenance following trespass) should be considered very carefully as to whether they are valid development costs. The costs for the historic cost method should not be significantly out of line with thenorm for similar plantations. This can be checked by looking at the Current Replacement Cost as described in the nextsection.

There are a number of variations relating to (a) eligible development costs, (b) inclusion / exclusion of maintenance costs and (c) inclusion / exclusion of interest (debt financing) costs (*4*). It is worth repeating the caveat in relation to allcost methods of valuation that a high cost does not necessarily equate to a high value.

Financial statements relating to young forests are typically prepared under the historical cost convention. Oncethe forests have reached a certain stage of development – effectively established and free growing or alternatively approaching canopy closure - then the plantation value is more generally based on anticipated revenues and costs. Where a young plantation valued periodically (say annually) over a number of years (during which time it progresses to canopy closure) a valuer can be faced with a discontinuity when changing to a different value methodology e.g. changing to anexpectation value approach.

Current Replacement Cost

The current replacement cost method equates plantation value to the accumulation of costs incurred in developing the forest.There are two variations, the first where plantation value equates to the sum of costs incurred without any consideration thatan owner would require a return on the sums invested - this is the simple replacement cost. The second is where there is a recognition that any owner or investor requires some form of return on their investment and in this instance the costs are compounded forward from the time of occurrence to the present day - this is the current compounded replacement cost. Standard costs representing current best practice are used for each particular plantation activity. The plantation value is therefore the price that owners would have to receive if they were to obtain a satisfactory rate of return on their investmentto date .

Use of replacement method requires clarity around:

a. The level of overhead costs;

b. The treatment of taxation, where relevant; and

c. Compound rate (when compounded replacement costs is used).

A limitation with the current compounded cost replacement method is the need to determine a specific compound rate. The compound rate used represents the opportunity cost of capital as distinct from the interest rate on borrowed funds. Often a conservative rate has been used which is lower than the rate used to discount future revenues (*35*).

The replacement cost approach has been used for some valuations for insurance purposes. If the insured value is based on the biological asset value then it may be an underestimate of the true replacement cost for two main reasons.

a. There would be a cost for clearing the young

plantation if it was destroyed by fire, as the salvage value would beminimal.

b. The replaced plantation would be some years behind the plantation it is replacing and that will impact on the timing of future plantation volumes and future cash flows.

The current replacement cost has been considered as inappropriate for merchantable plantations. While it may be preferable in some respects to historic cost because it does recognize the cost of capital and changes in operational efficiency, it still fails to take account of the increase in tree growth with tree age and the impact this has on overall growing stock volumes and value.

The plantation value obtained using this method may differ from the accumulated book value using the historical cost method due to a combination of improved or increased unit costs and the inclusion of compounding.

Lump Sum (Liquidation) Method

In the lump sum / liquidation method, the plantation value equates to the value that would be realized if all of the growing stock (standing plantation) in the plantation was harvested and the material placed on the market, less the cost of harvesting, transport and sales i.e. the stumpage value.

The method assumes that all stands in the plantation can be liquidated immediately and sold at current stumpage prices. While this may be true for the typical scale of plantations where large areas are involved, the market maynot be able to absorb the volumes concerned with a consequent impact on price and by inference value. Thus for large areas, the method can provide an optimistic estimate of market value.

The use of this method however generally gives a conservative value as (a) young stands which have not reached thinning stage are valued at zero and (b) no account is taken of future volume production. As plantation stands or plantations approach financial maturity, the marginal rate of value growth of the growing stock can be significant. An informed and rational owner will recognize the economic opportunity of holding the growing trees rather than selling them at current value

The approach, sometimes also referred to as the 'stumpage' method, was one of those considered during an evaluationof valuation methods for a number of European countries . This analysis came down in favor of present valuemethods as a general approach although it did recognize that liquidation value had some application in Germany and Austria but proved unreliable in France.

Use of the method can result in significant variation in value year on year in line with changes in plantation prices.

One difficulty with the approach is that it does not indicate or specifically provide for a value of the bare land following harvesting. In some countries where there is no replanting obligation, it may be possible to apply a market value to the land. However in other countries where there is a replanting obligation, then the value to apportion to the underlying land can be problematic.

Large plantation companies avoid use of this method as it is unlikely to reflect either the buyer's or seller's analysis

Expectation Value Approach (Present Value Method)

The method is not new and the idea of valuing a plantation, or valuing a parcel of bare land on which a plantation has still to be established, by calculating its net present value (NPV) using a discounted cash flow (DCF) approach, found widespread theoretical support in all countries.The approach is more commonly attributed to Faustmann who in 1849 showed that the value of a plantation can be expressed as a sum of discounted net cash flow over an infinite time period (*38*).

However according to Scorgie, Sir Thomas Culpeper, the Elder, in his political writing dating back to the year 1621, was concerned that plantation owners in Britain would disinvest from forestry by postponing harvests, as the cash-flows from immediate felling would exceed the future cash flows discounted at the usual interest rate. Richards, a land surveyor, applied techniques of discounting future cash flows in multiple variations in 1730, explicitly using the term 'present value' for the outcome of his calculations which he used to solve the valuation problems of standing plantation under both sustained and intermittent management

In the expectation approach, plantation value equates to the discounted value of future net cash flows. The future plantation volumes are estimated based on the planned management regime (thinning and rotation length) and revenues are then calculated by multiplying the volume by the relevant plantation price. Costs are then subtracted from the revenues to provide future net cash flows. These are then discounted to give the plantation value.

There are a number of variations depending on whether:

a. A single rotation or perpetual series of rotations are assumed; or

b. The analysis framework of an estate level or a stand level is adopted.

The present value of a perpetual series of plantation rotations is referred to as the soil or land expectation value and is based on the Faustmann formula. The basic logic of this formula is that for even aged plantation production, the net present value is basically formed by a perpetual periodic series of clear-cutting revenues at the end of every rotation of t years. By compounding each rotation's regeneration / reforestation and other possible costs (as well as possible revenues from thinnings to the end of rotation), all (compounded) cash flows can be added to the end of rotation and apply a general present value formula for a perpetual periodic series,

PV = a / (1 + i)t - 1

where:

PV = Present value of a perpetual periodic annuity;

a = Value of fixed payment received every t years in perpetuity; t = Years between annuity payments (rotation length); and

i = Interest rate, expressed as a decimal.

Where a plantation comprises a number of properties or stands or plots, there are two approaches in how the present value is calculated. In the **estate based approach** the plantation is valued as a single entity. The net cash flows of all stands areforecast and discounted to give an estimate of plantation value. These cash flows are associated with an underlying management and harvesting strategy which applies to the whole estate (*4*). The approach varies depending on:

a. Assumptions or constraints placed on the level of harvesting. There may be a requirement to supply a minimum annual plantation volume or constraints on the area of clearfells or no constraint in which instance the value of eachstand can be optimized.

b. Assumptions about replanting requirements and the species used for second and or subsequent rotations

In the **stand based approach** the plantation value equates to the sum of the value of each individual stand. The net cashflows of each stand are forecast and discounted to give stand value. As for the estate based approach, assumptions are made about the underlying management and harvesting regime . The strategy varies depending on:

- Rotation age - the optimum financial rotation can be assumed;
- Silvicultural regime; and
- Replanting costs (typically no replanting is adopted in stand based expectation method (4)).

A characteristic of the present value approach is that it uses price information from markets in which transactions are frequently occurring i.e. the plantation market, in contrast to the market for plantations where transactions are relatively few and irregular in comparison. The price information comes from either current or historical plantation sales data or a combination of both whereas the value which is being assessed will derive from future market prices (this is an issue with most capital appraisal projects).

The other features of the present value method are that it requires:

a. Forecast of future plantation production from the stand or stands being valued;

b. Assumptions about plantation prices;

c. Assumptions about costs; and

d. The determination of the appropriate discount rate.

Present Value and Annual Equivalent

It is not possible to compare the present values of two forestry investments unless both investments have the same life spans. This arises from the fact that the present value varies considerably depending on the length (lifespan) of the particular investment which in this case refers to a plantation. To overcome this, the present values can be annualized or expressed in terms of € per year. This then makes it possible to compare investments of different length. The investment with the larger annuity or annual equivalent is the more profitable.

Real Options Pricing

The present value or DCF approach assumes a fixed investment path where decisions are made in advance, and remain unchanged over the rotation, even when unexpected favorable (price increase) or unfavorable (price decrease) eventsarise. It ignores the value that alternative (unexpected) opportunities and choices may bring to the investment and to theplantation value.

Option value can only arise where there is the flexibility to change the date of harvest in response to new information. If the plantation is subject to supply commitments or if the site types are unstable, then the plantation manager may have to harvest irrespective of whether prices are favorable or otherwise.

Real option pricing is technically demanding and the underlying stochastic processes and its application at individual stand or plantationlevel represent significant challenges .

When there is a degree of irreversibility attached to the decisions being made, it may be optimal for plantation owners and their managers to remain flexible about the harvesting decisions. If plantation prices are low at the 'expected' time of harvest, owners may want to delay harvest. Likewise, if plantation prices are unusually high before the 'expected' time of harvest, owners may want to harvest early.

Real options analysis extends the present value and DCF analyses by attempting to value flexibility in managerial decision making when managers make decisions that are at least partially irreversible (such as the case with plantation harvests

In the real option pricing approach, plantation value is a function of future harvest volume, future harvest cost, plantation price, plantation price volatility, the time to harvest and the discount rate. Plantation price volatility is modelled using a number of possible methods and or assumptions as is the decision to harvest. By adopting a flexible approach to harvestingdecisions, it is possible to increase the plantation valuation. This has been demonstrated for the sale of the State's plantation assets in New Zealand where option pricing showed a 15% increase over the more traditional DCF approach.

Determine Valuation Method

There is no one single valuation method that can be applied universally to plantations. The most appropriate method depends on an examination of:

a. Purpose of valuation;

b. Plantation age;

c. Plantation size; and

d. Relevant Issues / Site Factors

The following table is not exhaustive but it provides some initial guidance on the determination of the most appropriate valuation method. Irrespective of the method chosen, the plantation valuer should become familiar with the method and any implicit assumptions and or shortcomings associated with it.

Checklist for Valuation Method

Plantation Size	
Few Stands	Can generally value each stand or plantation plot separately and combine the values as with few stands there are generally no complex yield scheduling considerations. The mostappropriate approach is generally present value. If the stands are approaching maturitythe lump sum approach may be relevant. If there have been recent transactions ofbroadly similar types of plantations, then comparable sales in combination with present value may be the most appropriate.
Many Stands	Whether the area is being managed as a plantation nor as a series of separate stands cansometimes be a matter of semantics and opinion. For valuing a plantation that includes many stands the most appropriate approach is generally present value.
Plantation Age	
Young Immature	Replacement cost may be the most appropriate if the valuation is for insurance purposes.If the valuation is not for insurance and the crop is young then historical cost may haveapplication. However discounted present value may be more appropriate when the cropis approaching canopy closure. It depends on the reason for the valuation being carried out.
Mature	If there are only a few stands then lump sum value may be appropriate providing accessto markets is available and assured. As the discounting period is likely to be smallpresent value approaches will generally provide similar values.
Mixed Ages	Provided there are no requirements for minimum annual or periodic yield, then presentvalue is appropriate although for the younger age classes, historical cost may haveapplication.
Reason for Valuation	
Insurance	Replacement cost may be the most appropriate for younger crops. The policy wordingshould be reviewed as it may determine the valuation basis.
Sale	Ideally transaction approaches should be used, but as discussed earlier transactions maybe limited and difficult to interpret. Present value approaches are generally used.
Investment	Present value is probably the most appropriate. However taxation considerations oftenare the primary concern of the investor and may even drive the investment decision.
Financial Reporting	The cost basis may be required for compliance but financial statements may includevaluations – usually based on net present value.
Financial Management	Present value is the most common.
Probate	Present value is the most common approach.
Compensation	The method depends upon the specific case for compensation. Where this involvesloss or deferment of future income, then present value method is the most appropriate.

Calculating and Modelling

Provided that the data collection and validation has been completed, the valuation method or methods determined and any factor which would materially influence the valuation been identified, the next step is to undertake the calculations and growth modelling which will lead to the valuation. The type and extent of the calculations is dependent on the valuation method.

To forecast volumes, a choice will need to be taken between the use of Forestry Commission (FC) yield models or GROWFOR dynamic models. Where the plantation crops are relatively young, it is not possible to use GROWFOR as it requires stand data as a starting point. Under such circumstances the FC models can be used provided reliable estimatesof yield class have been taken. An alternative is to use the first entry of the FC model as input to the GROWFOR model And then grow the crop on in line with the specified future management regime.

This provides a more flexible approach as non standard treatments can be accommodated. However dynamic models are not yet available for all species. Whenthe plantation crop is at first thinning stage or has been thinned, then the stand data collected can be input to GROWFOR andthe crop grown on to reflect the specified management regime. The alternative is to use the nearest FC model and adjustthe volumes to reflect any non standard treatment. This latter approach requires a good understanding and expertise in growth and yield modelling and is not generally recommended.

The next step is to adjust the volume yields to reflect the findings of the site visit. This includes an allowance for unproductive areas and harvest losses. The use or otherwise of an attrition factor is a case for professional judgement and should be decided upon on a site by site basis.

The choice of plantation price information is an important consideration. In general terms current prices should be used for mature crops while for young and immature crops, price trend data is preferred. The basis for the prices used should be clearly identified and explained.

Where present value method is being used, the choice of discount rate and its basis should be explained.

In deciding on costs, the basis for their determination should be explained and any relevant market standard costs included as a supporting reference. Any once off costs should be clearly identified and possible impact analyzed. Assumptions about grants from the State should be set out clearly.

The main risks should be stated and how they are incorporated into the valuation.

The final step is the calculation to determine the valuation and this should be explained including the influencing factors. Sensitivity analysis should be undertaken in relation to the major factors which impact on the valuation e.g. discount rate, plantation prices.

ICMAI Registered Valuers Organization
Draft Guidelines for Valuation under IBC *Asset Class: Plant and Machinery*

I. Assumptions and Special Assumptions for Valuation under IBC:

Valuers make assumptions that are considered proper to assume in the circumstances based on the scope of the engagement, valuers also may make assumptions premised on the base of the Value chosen. There are two categories under which the set of assumptions may fall.

1. Those, which are consistent with the state of things as on the date of valuation.
2. Those, which are not consistent or differ with the state of things as on the date of valuation but are assumed nevertheless.

Those, that are consistent materially with the state of things on the date of valuation are called Assumptions and the ones that are not consistent with state of things on the date of valuation are known as Special assumptions.

Examples of Assumptions are, when Valuation is based on plant being operational, assuming corporate debtor's plant is under CIRP and the plant is in physical operation on the date of Valuation by virtue of facts known, this will be called an assumption consistent with facts on ground.

A. One of the objectives of the corporate insolvency process under IBC is to keep the Corporate Debtor a Going concern thus, an underlying assumption in a CIRP process valuation the valuer, may need to assume that the hypothetical exchange of all the assets of the CD take place under the assumption that CD is a going concern.

B. Now, in case, the Valuer conducting Valuation under CIRP regulations under IBC, is witness to a state of things which indicates that the company resembles a closed plant. In such a case valuer may use an assumption that plant restarts within X months of date of valuation after meeting important restart obligations, like cure of assets, removal of non-compliances, additional capitalization, ensuring availability of raw materials, all of these requiring capital additions.

C. Any valuation arrived in this manner above is contingent upon an assumption that the plant would restart in X months from date of Valuation. Therefore, this assumption which is inconsistent with the state of things as evident on the date of Valuation is call a Special assumption as the plant is closed on date of valuation.

D. A valuer may use in his report special assumptions as an example that the cost to cure the subject assets for want of deferred maintenance is based on reliable information but he should clearly indicate that if this special assumption is not met it is likely to have an effect on the final value determined.

E. To consider another example, if a plant has been disconnected from its main Power source because of non- payment of dues and factory had to be temporarily closed due to shortage of working capital funds, an assumption that the plant will restart upon restoration of connection and additional working capital infusion will be a special assumption for the purpose of Valuation.

F. In some instances, where the plant is complex and in-operational on valuation date, reliance may be necessary on a third party independent latest technical evaluation report / Engineering analysis carried out at the behest of management, such reliance on third party report or management information for special assumptions must be captured in the report.

G. Similarly, if a plant needs to set up a conveyor system to transport raw material from mines instead of using an existing method using Trucks for transport by road shall be a special assumption under which a plant may be able to run, since the CD may be non - compliant of environmental provisions if it were to continue to move the raw material / minerals by Road. Thus, an assumption that plant would have this set up, in this case the hypothetical exchange value is true in Value only if the special assumption taken is valid, otherwise the risk and cost of non-compliance would need to be adjusted by the users of the report

H. Often, a Valuer may be aware of a few or more non-compliances related to specific regulatory obligations required to be met by the management, this may be visible from the documents available or in-operational processes or machineries. It is logical that the non- compliances that need to be resolved to make plant operational are necessary or plant would have to assume the risk of operating without compliance which can lead to severe devaluation of the plant

I. Any special assumptions leading up to computation of the total costs and time relating to removal of non-compliances that exist on the ground on date of valuation necessary for the plant to restart must be clearly stated. Some of these assumptions may seem to be hypothetical at the time of valuation but are assumed.

J. In case Value opinion is sensitive to variations in an assumption scenario, these may be treated as **significant assumptions**, these may be assumptions dependent on management actions or contingent on a course of action or may be based on unobservable data. Significant assumptions must be clearly mentioned in the report and Valuer may try to provide a sensitivity analysis based on possible scenarios.

K. Valuer must see that the significant assumptions are not inconsistent withthe related industry, regulatory or other external factors, and must not be inconsistent

with overall economic conditions.

L. Valuers may also come across data related to plant outages and cost imposed on production by such outages. In order to estimate the value impact of such outages, assumptions may be made in respect of historical average of outages and each major contributory factors such as shortage of critical raw materials or services, technical outages to derive such costs that may be treated as some form of functional Obsolescence. If the outages assumed are too conservative this may lead to disparity on due diligence.

M. Valuer must state the Assumptions and Special assumptions in the report specifically. And explicitly state both types of assumptions and the basis of reliance on these assumptions for the purpose of the Valuation.

N. IVS suggests that: All assumptions and special assumptions must be reasonable under the circumstances, be supported by evidence, and be relevant having regard to the purpose for which the valuation is required. (Para 200.5 ref IVS 104)

O. The Report by the valuer must indicate assumptions and special assumptions that were used to develop the value conclusions. Valuer must "clearly and conspicuously" write all special assumptions and should highlight how the Opinion results could be affected by changing conditions. Valuer must discuss as to why the hypothetical conditions and special assumptions were used.

II. Premise of Valuation:

Background of Premise: Valuers are often asked to do valuation of Corporate Debtors' assets either under regulation 35 of the IBBI(Corporate Persons Insolvency Process)Reg 2016 or under Regulation 35(2) of the IBBI , (Liquidation process Regulations) 2016 35(2)

A premise under IBC valuation may be understood as the Corporate Debtors circumstance under which the hypothetical transaction is restricted and imagined to take place, examples of premises are CD being sold on a Going concern basis, or under the circumstances of Liquidation in which assets are to be sold on a piecemeal basis, or sold in a slump sale where a composite price is computed for the slump sale as also conceived under Reg 32 A. When the business is transferred on sale of Assets basis, the sale is considered itemized and each asset is valued separately.

A. The premise of value should be consistent with the intended use therefore when the Corporate Debtor is under CIRP, the premise of the Valuation must be consistent with the intended use, i.e. the use must be based on a Going concern value.

B. However, if the premise of the Valuation is Liquidation under Asset sale, the use of the same to liquidate the Corporate Debtor as a going concern will be inconsistent with the Premise .

C. When a business of the CD is sold on a Going concern basis, limited to a unit or more units, it is assumed to be a sale not of the entire Corporate Debtor but of identified business units. Say a CD has two product lines or business units, A and B, it may only be a business transfer of the product line A along with all its intangibles and tangibles and not involve business of the Unit B. The premise of valuation for Unit B may be Asset sale instead.

D. In case of sale of assets under Asset sale, the assets selected for sale are considered sold itemized to the hypothetical buyer. In this case assets are valued itemized. They would usually be sold on a removal basis for instance, vehicles or a set of machines. Assets can also be sold collectively, e.g. a group of machines used in a set of processes or a batch of same machines sold with any complementary assets.

E. When the premise is that the Corporate Debtor is sold on a Going concern basis, the valuation of the CD is a composite one and the CD is considered sold on the basis that the all tangible & intangible assets including its employees, trademarks, patents, technologies, contracts are assumed to have been transferred to the benefit of the hypothetical buyer.

F. The larger point being that the Valuation of the CD is done in a composite way as a base of Value known as the Enterprise value. According to ICAI Valuation Standards Going concern value is the value of a business enterprise that is expected to continue to operate in the future. (ICAI Valuation standards 2018).

G. Enterprise Value, is normally computed from the present value of cash flows based on the anticipated life of the business available to service the debt and equity investors. Thus, when value is derived by computing CD's Enterprise Value, it is implied that any exchange hypothetically is assumed to take place at the Enterprise value, it accounts for Value of the CD as a whole considering its entire business.

H. If the Plant and machinery Valuer separately computes Value of P & M assets based on Income method, this would provide the contribution of the plant and machinery assets to the Enterprise value, in other words it's the value theoretically determined by reducing contributory value of real property interest and intangible assets and current assets from the Enterprise Value.

I. Under IBC's Compulsory Liquidation process, Assets or the Business of the CD or the CD can be sold under various independent assumptions as defined under Reg 32 of the Regulations, 2016

1. Sale of the Corporate Debtor as a going concern
2. Business (es) of the CD get sold as a Going concern
3. Assets are sold in a slump sale
4. Assets are sold collectively
5. Assets are sold on standalone basis.
6. Assets are sold in parcels

J. Further a valuer may be asked to conduct Valuation/s

under one premise or a set of premises that are considered applicable to the hypothetical transaction between a seller and a buyer. As also suggested by Reg 35(2) of the Liquidation process. Under all of these premises, the base of value. is the Net Realizable Value.

K. Liquidation as a Going concern envisages that the entity by itself is liquidated as soon as the assets are transferred and sales proceeds are used for distribution.

L. A premise of Value may also capture some other circumstances determining the use of assets at the existing location or on a removal basis or for a highest and best use which may not be the existing use, some examples of these premises of Valuation are:

I. Assets are used for existing use in place (in situ)

II. Assets are used for – the highest and best use*

III. Assets are for sale ex -situ, i.e. (this is when assets are sold on the basis of removal)

IV. Assets sold on "As is where is Basis"

M. When assets are sold on the basis of removal (ex-situ basis), collectively or piecemeal, the decommissioning costs, crating , shipping , reinstallation, reconfiguration costs may be incurred by the hypothetical buyer ,therefore while computing value on a replacement cost basis any design & engineering costs or installation or foundation costs and logistics borne as part of historical costs cannot be included for valuation while computing the replacement cost of the asset and finally all decommissioning and removal costs should be reduced from the value.

N. * Highest and best use should be used when the use is physically, legally and financially viable. It may be the existing use of the asset or it could use of assets for another use. A fleet of trucks used to transport coal to a plant lying idle may be sold for carrying another type of load to a Commercial transport operator which may be its highest and best use.

III. Assumptions or different premises of valuation for assets for the same CD under Valuation

A. A sub class of assets or a group of assets of a Corporate Debtor may be valued under different **Example:**

a) A CD having a lead acid battery plant one each in two cities under liquidation, varying in age by 10 years, the older units' machines which are considerably depreciated may be assumed to be sold on itemized basis while the new running plant may be valued on a going concern basis.

b) For example, consider 3 units of CD 's Power plant all at one place, each of 150 MW size, the plant has a common Coal handling plant and a common water treatment plant and an ear marked land parcel for ash disposal, one of the units is only 20 % partially complete. The CD has come under Liquidation but has a power purchase agreement for two of its units to sustain the cash flows of the company and the two units were operational.

c) It is conceivable that the two units of 150 MW's each are sold on the basis of a slump sale valued whereas the remaining assets may be sold on an itemized removal basis.

IV. Guidelines on how to justify assumptions item-wise with proper reasoning:

A. When a premise is used for Valuation, it must be justified by the circumstances or the state of things, if the CD is under CIRP, Going concern assumption is made unless COC has concluded to liquidate the CD. If the CD is assumed to be a Going concern but plant is closed for other reasons. The reasons that seem to have caused the plant to be close must be probed and valuer must delve into the background of CD, industry and performance track of the CD. Therefore, any special assumption that assumes stable performance or restart of operations must be clearly outlined with sufficient reasoning and evidence. All these factors therefore that impose economic obsolescence can be captured. And reliance if any placed on an Engineering analysis done by a third party must be captured.

B. Assumptions that are borne on the ground as factual on the date of valuation may also be backed by data that relates to production performance, employees at work, sales invoices, purchase of supplies or raw materials.

C. If two sets of assets of a CD are to be sold on different premises of valuation, the relevant reasons in support of the same needs to be captured, for instance existence of customer contracts for a production line but lack of customer demand for another production line, lack of use of assets for production, old condition, discontinuation of supplies, non-compliance at the plant leading to assets sale.

V. Assumptions for discounting (Obsolescence) factors (under different asset classes, under different circumstances etc)

A. Quite often, Obsolescence factors are to be accounted for in Valuation of Plant and machinery, obsolescence may be of Functional/ operational or Economic in nature. Functional obsolescence factors are related to old age, or factors that increase inefficiency in terms of

production capacity, quality, outages or caused by depleting performance of the machine lower than the design rated performance or where simply more energy or other resources are being used as compared to a modern replacement, compared to a modern replacement.

B. When a Valuer discounts the value based on Functional obsolescence factors and assumes factors of obsolescence based on actual performance data of the production line, process or machinery with its design data or compared with the known performance of modern replacements. Outage data of a plant is one such factor, the average time the plant is likely to be out of production causes lack of production efficiency, known average of costs incurred for restart of the plant or restart of the process is leads to computation of these factors.

C. While computing economic obsolescence any assumptions related to the cost imposed, must be based on both industry average and larger economic factors, e.g. inability of plants to get contracted supply of fuel sources due to industry wide shortage to achieve plants utilization are external factor outside control of the plant being valued. The net result being poor productivity of the plant. An average availability of fuel supply known for years and likely trends can help lead to an assumption.

D. Stringent environmental regulations imposed on a running plant due to emissions can cause a cost impact on a running plant in the form of additional capital investment, this may even be treated as an economic obsolescence since these are caused by external factors, the computation of this must be based on data available towards the likely cost and time required to meet the new obligation, and factors are considered if plant will need to be shut sown to meet such obligations. The valuer must give evidence on what data was the cost computed or assumed.

E. In all cases if a certain obsolescence factor is applied, the Valuer should briefly explain how it was calculated and why it is applicable.

VI. Assumptions for different purposes (Fair Value, Enterprise Value, Liquidation Value etc)

Assumptions while enterprise value is computed

Enterprise Value is normally computed using the present value of free cash flows and terminal value. The Plant and machinery valuation is derived by subtracting the contribution of real, intangible and current assets (working capital) to the enterprise value from the Enterprise value. Enterprise Value assumes a Going concern assumption. This value accounts for all sorts of intangible components of the business, e.g trained manpower, Intellectual property, trademarks, permits and licenses etc. apart from tangible assets and working capital.

A. **Assumption in a cash flow forecast** : Computed usually on the basis of sales forecast and margins, it assumes a capacity utilization trend, based on historical and conceivable forecasts given an understanding of the industry and likely prospective trends in the future, these may be based on a management forecast, it is important that the Valuers while accepting or constructing a forecast state all important assumptions e.g. capacity utilization, overall net margins, cyclical cash flows or weighted scenarios and how they may be compared with historical trends with comparable units and industry performance and foreseeable factors significant to the industry.

B. These important assumptions made must be recorded and reflected as special assumptions or hypothetical conditions projected through a Management forecast and Values are true under these conditions being realized, valuers often indulge in a sensitivity analysis based on assumptions around Utilization based on a few discrete scenarios. These scenarios, must seem feasible based on the industry.

C. The computation of Discounting factor must be based on a proven model by a Buildup method , CAPM method and derivation must be substantiated stating clearly any unobservable / unverifiable assumptions

Fair value assumptions:

A. Fair Value is computation of an asset value based on an Orderly transaction assuming sufficient time to market and due diligence by a hypothetical buyer.

B. The second assumption that ought to be clarified when computing Fair value is if an Asset is valued on a standalone basis without being installed, tested and commissioned or as part of a group of assets along with complementary asset as part of a production line or process.

C. If a Fair value of an asset is based on existing use, the assumption must be stated in the report, similarly if the asset is being valued for a purpose on a standalone basis and held for sale, then the Fair Value based on its highest and best use needs to be computed.

D. If fair value of assets beyond its life is computed reasons for the remaining life assumption must be stated.

E. If a Fair value of an asset is being computed but asset is under completion and a special assumption is made for completion, supporting reasons for the same must be provided.

Liquidation Value assumptions:

Assumptions in Liquidation are largely around the circumstances and conditions under which Liquidation is expected. Circumstances can vary from a Going concern

sale, slump sale on a "as is where is basis" to an Asset sale often based on removal of assets.

These assumptions must be agreed to in a scope of work with the Client.

A. IVS suggest two conditions under which Liquidation will take place, one of an Orderly Liquidation where an appropriate time is available for sale for proper marketing another under which sales can takes place under Forced Liquidation. Under Orderly liquidation there is enough time of exposure to the market as far as the asset goes.

B. The second condition being forced transaction, under this there is no due diligence possible by the buyer, there is lack of time and is therefore on "as is where is basis ", assets being removed from place. Auction of assets in Liquidation are an example of a Forced Liquidation and there are consequences of sale not going through in leading to further decline in sales price, in other words lower realization for creditors in Insolvency and delayed distribution of assets.

Guidelines on selection of approach

(a) How to select the appropriate approach under different circumstances

(b) Scope for using more than one approaches and methodology for cross-checking the valuation

(c) limitations on various approaches under different circumstances

The International Valuation Standards (IVS) are standards for undertaking valuation assignments using generally recognized concepts and principles that promote transparency and consistency in valuation practice. The objective of the IVS is to increase the confidence and trust of users of valuation services by establishing transparent and consistent valuation practices. The IVS consist of mandatory requirements that must be followed in order to state that a valuation was performed in compliance with the IVS. Certain aspects of the standards do not direct or mandate any particular course of action, but provide fundamental principles and concepts that must be considered in undertaking a valuation.

The IVS mandates the valuers to select the bases of value appropriate for the assignment. Bases are fundamental premises on which the reported values are based. The bases of valuation are elaborated in the IVS 104.

Valuation Approaches are a way of estimating the value that employs one or more specific valuation methods. The approaches are defined in IVS 105.

The valuation of Plant & Machinery is defined in IVS 300.

One or more valuation approaches may be sued in order to arrive at the value in accordance with the basis of value. The two basis of value defined in IBC 2016 is Fair Value and Liquidation Value as on CIRP commencement date. IVS defines three main approaches used in valuation. They are based on economic principles of price equilibrium (Market), anticipation of benefits (Income) or substitution (Cost).

A) Market Approach

B) Income Approach

C) Cost Approach

No one approach is suitable in every possible situation. One has to find the most appropriate method under particular circumstances. The selection process should consider :

1. Bases and premises of value defined in the purpose. For IBC cases, the bases would be Fair Value, Liquidation Value and the premises would be, current use/ existing use, orderly liquidation. Other premise - highest and best use is not to be used for Fair Value estimation as the resolution is to be done for the existing scheme of assets. Forced sale is not to be used for not to be used, since the IBC provides for sufficient time period to ensure best liquidation value is realized.
2. Th respective strengths and weaknesses of the possible valuation approaches and methods.
3. The appropriateness of each method in view of the nature of the asset and the approaches or methods used by participants in the relevant market
4. Availability of reliable information related to apply the methods.

Valuers are not required to include more than one approach/ method in their conclusion if they are confident of the accuracy and reliability of a single method. However, they should consider using other approaches as well especially when the information is not fully available or reliable for one single approach.

The three approaches could be utilized in the following scenarios :

a) **Market Approach**- For subcategory assets like vehicles, office equipment, computers, Furniture & Fixtures for which there is sufficient market sale data is available for identical or similar assets. For certain stand-alone Plant & Machinery items like motors, pumps, transformers ,market sale data could be available and utilized.

b) Adopting **income approach** for Plant & Machinery item is suitable if the Plant & Machinery assets are by themselves generating cash without assistance of other class of assets like the Land & Building and SFA. If these other two class of assets are also involved then attributing certain amount of cash generation to P&M only will be difficult. However, in cases where the P&M assets have been given on operating lease and information on terms of lease along-with the salvage value of the asset is known, the income approach can be used reliably. In this approach the elements of value attributable to intangible assets, goodwill should be excluded.

c) The **Cost approach** is suitable when the Market Approach and the Income Approach are not found

suitable. The cost approach involves estimation of replacement cost or reproduction cost of the subject asset. This is further depreciated for physical, functional, technological, economical obsolescence. When the information on the original cost components is available, the same is indexed to the current time periods to arrive at the reproduction cost followed by depreciation as above. For calculating the reproduction costs, all components of costs need to be considered as were incurred for the subject asset, for example costs of imports, transportation, erection/ commissioning etc. For an imported asset, if there is an indigenous less costly asset providing same utility, the replacement cost of this asset is taken as Fair Value. The Cost approach often employ cost to capacity method as well, where replacement cost of an asset can be estimated by referring to the cost of a similar but different capacity asset. It should be noted that the relationship between cost and capacity is not a linear one, so the cost to capacity method should be sparingly used when other methodology is not reliable.

Nature and sources of information used or relied upon

a) Guidelines on how to list the principal source of information

i. Purpose of Valuation: IBC-2016 (Insolvency & Bankruptcy Code)

ii. Basis of Valuation is to be determined by Valuer on the basis of the Data provided by the Resolution Professional/ Liquidator

iii. According to Approach using waterfall method (starting with Comprehensive List and then striking out whichever is not available)

a. Cost Approach: Fixed Asset Register (with Itemized Date & Cost of Acquisition), Bills & Invoices proving Ownership & Purchase of Plant & Machinery, Capitalization Sheet (Itemized), List of Assets (Grouping) along with Technical Specifications, Itemized Date of Installation, Age and Balance Life

b. Market Approach: List of Assets (Grouping) along with Technical Specifications

c. Income Approach: Historical Revenue Statement, Revenue Flow Estimate

b) Scope for obtaining information from other sources available in public domain

i. Primary

a. Fixed Asset Register (with Itemized Date & Cost of Acquisition)

b. Bills & Invoices proving Ownership & Purchase of Plant & Machinery

c. Capitalization Sheet (Itemized)

d. List of Assets (Grouping) along with Technical Specifications

e. Aging of Assets, Country of Origin, Cost of Freight

f. Historical Revenue Statement, Revenue Flow Estimate, etc

ii. Physical Inspection Based

a. Present Condition of the Asset

b. Usage Pattern & Wear and Tear

c. Function and Utility of Asset in Overall Production Process

d. Obsolescence – Technological, Functional or Economic

e. Flexibility of Use and above all,

f. Prevailing Industrial Scenario, etc

iii. Secondary

a. Replacement Cost New for the Assets (as per Technical Specifications)

b. Reproduction Cost New for the Assets (as per Technical Specifications)

c. Current Market Prices for Both New as well as Used Machinery

iv. Tertiary

a. Any useful Information about the Machinery or the Industry or the Company found through any other means such as Market Survey, Locality Survey or Internet

c) Procedure for conducting market survey to obtain additional information

i. No single procedure can be prescribed or used for this purpose – the methodology comprises a mix and combination of multiple techniques such as but not limited to Internet, localised physical market surveys, etc

d) Guidelines on conditions for using additional information and its limitations

i. Annual Maintenance Contract for Machinery (Grouping wise)

ii. History of Repairs and Refurbishment

iii. History of Replacement of Parts of Machinery

e) How to prepare the list of items to be valued and discounting principles for each identified item

i. List of Assets to be arranged before Physical Inspection by seeking the same from Appointing Authority

ii. Thereafter, only the physically verified Assets to be considered for Valuation

iii. Depreciation Approach to be used either as Straight-Line (SLM) or Written-Down-Value (WDV) method with the Salvage Value clearly indicated

iv. Obsolescence to be considered on the basis of conditions/ circumstances of each Item as well as on other macro-basis such as industry factors,

market factors, local factors, etc such as:

a. Technological: factors related to upgrade and/or evolution of technology used by that machinery that have set back the technological usefulness of that machinery

b. Functional: factors related to the loss in functionality of that machinery in the relevant industry(s)

c. Economic: market and industry factors e.g. whether that industry has evolved into some other form resulting in changing the demand trend

Guidelines on Valuation Standard

The Corporate Insolvency Resolution Process ('CIRP') is a recovery mechanism for the Creditors of a Corporate Debtor. A Corporate Debtor means a company or Limited Liability Partnership ('LLP') that owes a debt to its creditors. The discussion here is to frame the guidelines on Valuation Standards to be adopted for Valuation of Corporate Debtor's Plant & Machinery/ Equipment Assets whether in use or are in idle condition as on date of Valuation. The purpose is to arrive at the Fair Market Value and Liquidation Value under their best use as on date of Valuation.

(a) Selection of specific valuation standards (reasons, options available etc.)

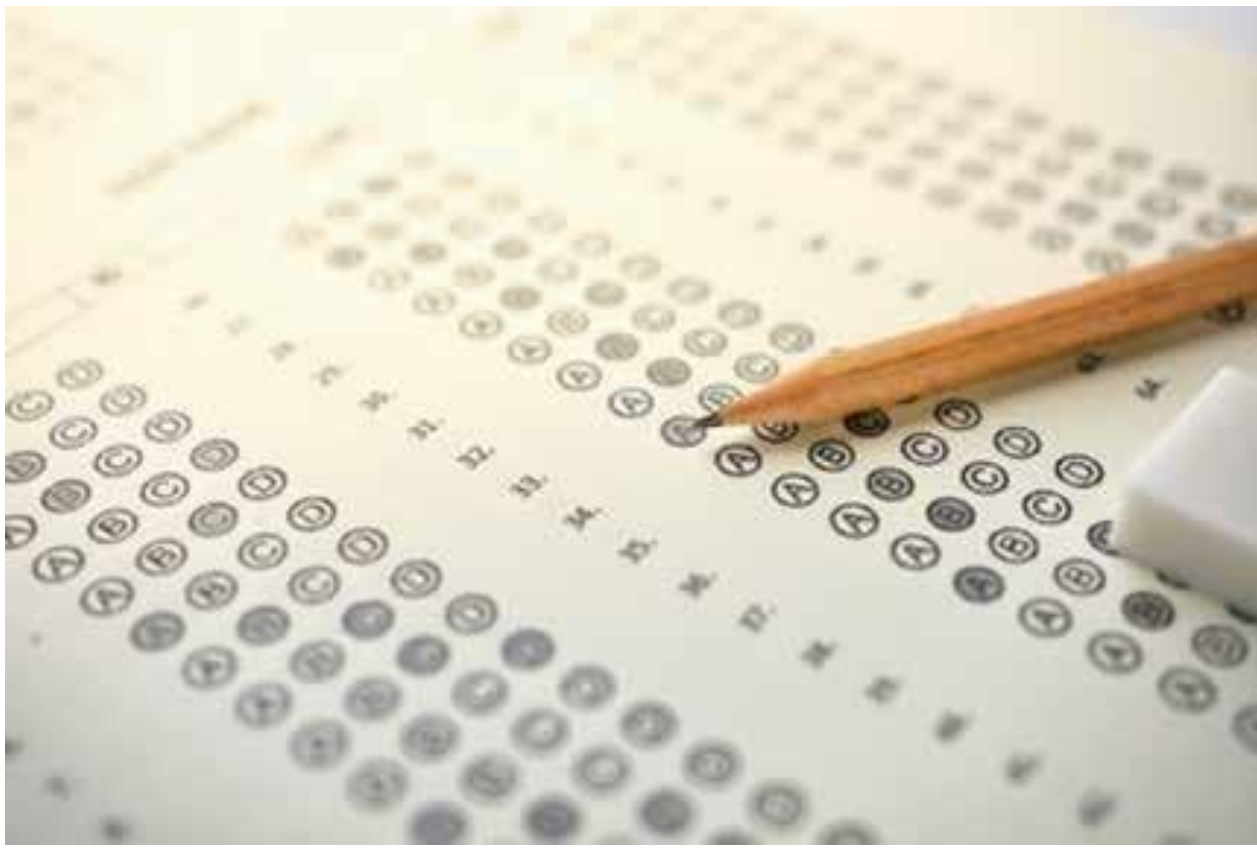
The International Valuation Standards (IVS) are standards presently in practice and best available tool for undertaking valuation assignments using generally recognized concepts and principles that promotes transparency and consistency in valuation practice. These set forth requirements for the conduct of all valuation assignments including establishing the terms of a valuation engagement, bases of value, valuation approaches and methods, and reporting. They are designed to be applicable to valuations of all types of assets and for any valuation purpose. The Asset Standards include requirements related to specific types of assets. In this case it should be used/ considered for Valuation of Plant & Machinery & Equipment installed in a Company undergoing process of CIRP (Corporate Insolvency Resolution Process). The requirements mentioned in IVS must be followed in conjunction with the General Standards when performing a valuation of a specific asset type. These Standards are Internationally recognized and in practice all over the world as they have been well defined after collecting inputs from various Recognized Valuer Organizations including RICS. The valuation of Plant & Machinery is defined in IVS 300.

(b) How to record the Departures and Deviations from the said standards with reasons in details

- As per IVS, "departure" is a circumstance where specific legislative, regulatory or other authoritative requirements must be followed that differ from some of the requirements within IVS. The requirement to depart from IVS pursuant to legislative, regulatory or other authoritative requirements takes precedence over all other IVS requirements. The nature of any departures must be identified (for example, identifying that the valuation was performed in accordance with IVS and local tax regulations)

- The scope of work in the letter of engagement is valuation of Assets, i.e. Plant & Machinery/ Equipment to know the Fair Market Value & Liquidation Value under CIRP.
- The Asset Standards include certain background information on the characteristics of each asset type that influence value and additional asset-specific requirements on common valuation approaches and methods used.
- In case of Valuation under CIRP, Assets undergoing Valuation on Going Concern Basis, the condition of Plant & Machinery & Equipment, Age, Number of Shifts it was in use, Nature of Maintenance done on all Plant & Machinery/ Equipment done must be looked into first apart from relying only on set rules, i.e. depending entirely on Capitalized Costs, Book Values (Depreciated Values in the Books of Accounts). These Values cannot be relied upon as the entries are based on set percentages of depreciation as per the Accounting Norms in use and not based on actual usage.
- It may first be clearly understood that the purpose of Valuation under CIRP is to fetch maximum market value under best use of assets and liquidation value to repay the amount collected by way of sale to Creditors with minimal haircut.
- The subject valuation do not fall under desk top valuation.
- Avenues may be looked into by bifurcating one class of assets i.e. Land & Building from other class of assets, i.e. Plant & Machinery in order to fetch out maximum benefit. Examples are for those land parcels that has now fallen into Mix Land Use (better than Industrial Use). In those cases, Valuation for Plant & Machinery should be done on EX-Situ basis discounting for foundations of Machineries & de-erection charges. In such cases IVS 300 norms may get deviated.
- It is desired from a Registered Valuer (RV) to carry out all due diligence in selecting the best approach which will result in fetching maximum amount from sale of Assets.

MULTIPLE CHOICE QUESTIONS



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MULTIPLE CHOICE QUESTIONS

MCQ FOR SFA

1. Twin deficit in a economy means

a) high current account deficit and high fiscal deficit.

b) high capital account deficit and high fiscal deficit.

c) high current account deficit and high capital account deficit.

d) high budget deficit and high fiscal deficit.

Ans) high current account deficit and high fiscal deficit.

2. Govt. taxing and spending policies are called:

a) Monetary policy

b) Commercial policy

c) Fiscal policy

d) Finance policy

Ans) Fiscal policy

3. With reference to deficit financing, monetized deficit is the part that is financed through

a) borrowings from public sector scheduled commercial banks

b) external commercial borrowings

c) borrowings from RBI

d) borrowings from private sector

Ans) borrowings from RBI

4. Which of the following may not be a part of projected Financial Statements?

a) Projected Income Statement

b) Projected TrialBalance

c) Projected Cash Flow Statement

d) Projected Balance Sheet.

Ans) Projected Trial Balance

5. Stock split is a form of

a) Dividend Payment

b) Bonus Issue

c) Financial restructuring

d) Dividend in kind

Ans) Financial restructuring

6. A preliminary prospectus is known as a

a) golden parachute.

b) red herring.

c) blue sky.

d) green shoe.

Ans) red herring.

7. First rating agency of India is

a) CRISIL

b) ICRA

c) SMERA

d) MOODY

Ans) CRISIL

8. The process of protecting oneself against future price changes by shifting some or all of the risk to someone else is called:

a) speculating

b) investing

c) hedging

d) gambling

Ans) hedging

9. Organised markets that enable new issues of equity and debt to be traded.

a) Secondary markets

b) Primary capital markets

c) BSE

d) NSE

Ans) Primary capital market

10. Which of the following is termed as Liquidity Decision?

a) Raising funds

b) Investing funds in assets

c) Distributing returns earned from the assets to shareholders

d) Balancing cash inflows and outflows

Ans) Balancing cash inflows and outflows

11. Which of the following is included in short term assets:

a) Raw Material

b) Debtor

c) Cash

d) All of the above

Ans) All of the above

12. Financing Decision determines:

a) Fixed Assets

b) Equity

c) Current Assets

d) Mixed Finance

Ans) Mixed Finance

13. Two alternative expected returns are compared with the help of:

a) Coefficient of standard

b) Coefficient of variation

c) Coefficient of return

d) Coefficient of deviation

Ans) Coefficient of variation

14. The charging section of the income under the head capital gains is:

a) Section 15

b) Section 17

c) Section 45

d) Section 22

Ans) Section 45

15. Mohan received a watch worth Rs 60,000 from his cousin grandfather (brother of his grandfather). What will be the taxable amount?

a) Nil

b) Rs 10,000

c) Rs 60,000

d) Rs 50,000

MULTIPLE CHOICE QUESTIONS

Ans) Nil

16. Loss due to fire of hired machinery is:

a) Capital Loss
b) Revenue Loss
c) Capital Expenditure
d) None of the above

Ans) Capital Loss

17. Embezzlement of cash by a cashier is:

a) A revenue loss
b) A capital loss
c) A casual loss
d) None of the above

Ans) A revenue loss

18. Perquisites to employees are covered in the Income Tax Act 1961 under

a) Sec 2a
b) Sec 17b
c) Sec 28a
d) Sec 36c

Ans) Sec 17b

19. Which of the following gifts is taxable?

a) Gift in kind from relatives
b) Gift from wife
c) Gift from son
d) Gift from office college

Ans) Gift from office college

20. Municipal taxes are deductible on ..... :

a) Accrual basis
b) Due basis
c) Payment basis
d) Not allowed

Ans) Payment basis

21. In case of individuals, the exempted limit of income for assessment year 2017-18 is:

a) 250000
b) 210000
c) 200000
d) 150000

Ans) 250000

22. Bad debts allowed earlier and recovered later on is:

a) Business income
b) Non business income
c) Exempted income
d) Income from other resources

Ans) Business income

23. Income from sale of rural agricultural land is:

a) Taxable capital gain
b) Exempted capital gain
c) Taxable income
d) None of the above

Ans) Exempted capital gain

24. Salary under section 17(1) of the Income Tax Act, 1961, does not include:

a) Wages
b) Pension
c) Interest
d) Gratuity

Ans) Interest

25. Unabsorbed depreciation can be carried forward for:

a) Any number of years
b) 8 years
c) 4 years
d) 7 years

Ans) Any number of years

26. When did the Insolvency and Bankruptcy Code 2016 receive the President's assent?

a) 5th August 2016
b) 28th May 2016
c) 5th May 2016
d) 15th June 2016

Ans) 28th May 2016

27. The Insolvency and Bankruptcy Code, 2016 is applicable to corporates if the default is?

a) 1 lakh or more
b) Above 1 lakh
c) 5 lakh
d) 5 lakh or more

Ans) 1 lakh or more

28. The term related party is defined in of the Insolvency and Bankruptcy Code, 2016:

a) Section 5 (22)
b) Section 5 (23)
c) Section 5 (24)
d) Section 5 (25)

Ans) Section 5 (24)

29. Who can initiate the Corporate Insolvency Resolution Process under the Insolvency and Bankruptcy Code, 2016:

a) Financial Creditor
b) Operational Creditor
c) Corporate Creditor
d) All of the above

Ans) All of the above

30. Which of the following does not fall under financial asset:

a) A mortgage, charge, hypothecation or pledge of movable property
b) Any right or interest in the security, whether full or part underlying such debt or receivables
c) Any financial assistance
d) Prepaid expenses undertaken with respect to a movable or immovable property

Ans) Prepaid expenses undertaken with respect to a movable or immovable property

MULTIPLE CHOICE QUESTIONS

31. Financial assets permit all of the following except _____.

a) elimination of risk

b) separation of ownership and control

c) allocation of risk

d) consumption timing

Ans) elimination of risk

32. Which of the following does not fall under financial asset:

a) technologies

b) patents

c) intellectual properties

d) bonds

Ans) bonds

33. Which of the following intangibles is/ are prohibited from being recognised as an asset?

a) Home grown goodwill

b) Separately acquired intangible

c) Internally generated intangibles & Home grown goodwill

d) Goodwill acquired as part of an on-going business

Ans) Internally generated intangibles & Home grown goodwill

34. A business merger differs from a business consolidation because_

a) a merger dissolves all but one of the prior entities, but a consolidation dissolves all of the prior entities.

b) a consolidation dissolves all but one of the prior entities, but a merger dissolves all of the prior entities.

c) a merger is created when two entities join, but a consolidation is created when more than two entities join.

d) a consolidation is created when two entities join, but a merger is created when more than two entities join.

Ans) a merger dissolves all but one of the prior entities, but a consolidation dissolves all of the prior entities.

35. As an appraiser and in order to avoid bias in valuation, you would normally use_

a) One approach

b) Two different approaches

c) Better approach

d) Best approach

Ans) Two different approaches

36. Valuation done under Enterprise Model (DCF) and Economic Profit Model lead to identical results?

a) The Statement is True

b) The Statement is False

c) The Statement is conflicting as they are not used in valuation models

d) One cannot comment

Ans) The Statement is True

37. When valuing equity of high-growth companies, the bulk of the value will come from the_

a) Market value

b) Intrinsic value

c) Terminal value

d) Fair value

Ans) Terminal value

38. The difference between going concern value and liquidation value at the valuation date refers to:

a) Adjusted Book Value Method

b) Arbitrage Pricing Theory

c) Absolute risk

d) Asset based approach

Ans) Absolute risk

39. what are the types of Valuation Reports?

a) Comprehensive Valuation & Report Estimate Valuation Report

b) Comprehensive Valuation Report & Calculation Valuation Report

c) Calculation Valuation Report & Estimate Valuation Report

d) Calculation Valuation Report , Estimate Valuation Report & Comprehensive Valuation Report

Ans) Calculation Valuation Report , Estimate Valuation Report & Comprehensive Valuation Report

40. Comprehensive Valuation Report_

a) Based on a comprehensive review and analysis of the business, its industry and all other relevant factors,

b) Based on limited review, analysis and corroboration of relevant information,

c) Based on minimal review and analysis and little or no corroboration of relevant information.

d) Generally set out in a brief Valuation Report.

Ans) Based on a comprehensive review and analysis of the business, its industry and all other relevant factors,

41. Which of the following valuation methods is based on "Going concern concept_

a) Market value method

b) Book value method

c) Liquidation method

d) Salvage value method

Ans) Book value method

42. Who shall bear the cost of proving the claims under the liquidation process:

a) Claimant

b) Liquidator

c) Corporate Debtor

d) Creditors

Ans) Claimant

43. Which of the following reports is the liquidator required to prepare and submit under the liquidation process:

a) Preliminary Report or Progress Report

b) Preliminary Report and Progress Report

c) Preliminary Report and Annual Report

d) Sale Memorandum and Asset Report

MULTIPLE CHOICE QUESTIONS

Ans) Preliminary Report an Progress Report

44. Is liquidator fee part of the liquidation cost of corporate debtor_

a) Yes, liquidator fee is part of the liquidation cost of corporate debtor

b) No, liquidator fee is not a part of the liquidation cost of the corporate debtor

c) Depends on the agreement between liquidator and corporate debtor

d) Depends on the agreement between the financial creditors and liquidator

Ans) Yes, liquidator fee is part of the liquidation cost of corporate debtor

45. The key sources of value (earning an excess return) for a company can be attributed primarily to _____

a) Competitive advantage and access to capital

b) Quality management and industry attractiveness

c) Access to capitals and quality management

d) Industry attractiveness and competitive advantage

Ans) Industry attractiveness and competitive advantage

46. Which of the following procedure you would adopt while valuing nascent high-growth company?

a) Start backward

b) Start backward and work out the future

c) Start from future

d) Start from future and work backward

Ans) Start from future and work backward

47. Which of the following is the first and most important step when forecasting future financial statements?

a) Estimate the levels of investment in current and fixed assets

b) Determine the rate of interest that will be required for borrowed funds

c) Project the firm's sales revenues for the planning period

d) Determine the depreciation expense levels

Ans) Project the firm's sales revenues for the planning eriod

48. A commercial, industrial, service, or investment entity (or a combination thereof) pursuing an economic activity means:

a) Business Ownership Interest

b) Business Enterprise

c) Business Valuation

d) Business

Ans) Business Enterprise

49. A strategy to develop capabilities in company value chain is called_

a) Value resource

b) Substitute resource

c) Strategic resource

d) Resource modelling

Ans) Strategic resource

50. Monetizing an idea to make money with some method of operations is known to be_

a) Strategy

b) Scope

c) Business model

d) Business system

Ans) Business model

51. A tool to identify operational areas where competencies and capabilities exist is known to be_

a) Value proposition

b) Value chain

c) Profitability

d) Logistic margin

Ans) Value chain

52. A sustainable business model requires investment for_

a) Innovation & Human resources

b) Productivity & Innovation

c) Only Human resources

d) Innovation, Human resources & Productivity

Ans) Innovation, Human resources & Productivity

53. Level of strategy that uses capabilities and competencies for competitive advantage, is said to be at the_

a) Model level

b) Operational level

c) Corporate level

d) Competitive level

Ans) Competitive level

54. Quantitative components of a business model includes revenue sources, profitability and_

a) Cost

b) times

c) Quality

d) Efficiency

Ans) Cost

55. Which pricing model provides no guidance concerning the determination of the risk premium on factor portfolios?

a) The CAPM

b) The multifactor APT

c) Both the CAPM and the multifactor APT

d) Neither the CAPM nor the multifactor APT

Ans) The multifactor APT

56. An arbitrage opportunity exists if an investor can construct a _____ investment portfolio that will yield a sure profit.

a) positive

b) negative

c) zero

d) positive & zero

MULTIPLE CHOICE QUESTIONS

Ans) zero

57. Which of the following equation better represents value of intangible asset?

a) Intangible asset value = amortizable identified asset value – non-amortizable identified asset value + goodwill

b) Intangible asset value = amortizable identified asset value + non-amortizable identified asset value + goodwill

c) Intangible asset value = amortizable identified asset value – non-amortizable identified asset value - goodwill

d) Intangible asset value = amortizable identified asset value + non-amortizable identified asset value - goodwill

Ans) Intangible asset value = amortizable identified asset value + non-amortizable identified asset value + goodwill

58. Which of the following assets is not an intangible asset?

a) Patent

b) Brand name

c) Inventory

d) Goodwill

Ans) Inventory

59. The value of a franchise is directly related to the capacity to generate_

a) Returns

b) Normal returns

c) Excess returns

d) Not related to returns alone

Ans) Excess returns

60. Which of the following method, you would consider appropriate while valuing the intangible assets?

a) Multiple

b) relative

c) consistent

d) exclusive

Ans) relative

61. Which of the following intangibles is the only one which may be capitalised, at least initially, though (i) it is not separable (ii) there is no active market in it and (iii) flow of economic benefit from it is not probable?

a) Government granted intangible

b) Separately acquired brand

c) Home grown goodwill

d) Goodwill acquired with a business

Ans) Goodwill acquired with a business

62. Which of the following is not a reason for a company to expand through a combination, rather than by building new facilities?

a) A combination might provide cost advantages

b) A combination might provide fewer operating delays

c) A combination might provide easier access to intangible assets.

d) A combination might provide an opportunity to invest in a company without having to take responsibility for its financial results

Ans) A combination might provide an opportunity to invest in a company without having to take responsibility for its financial results

63. When accounting for a business combination any future costs associated with restructuring of an entity_

a) should be estimated and included as part of the acquisition cost

b) should be provided for as part of the cost of the combination

c) should be capitalised and amortised across the restructuring period

d) should be recognised only when the acquiree has an existing liability for restructuring

Ans) should be recognised only when the acquiree has an existing liability for restructuring

64. Allocation of available funds in various types funds are balancing risk & return is called ……

a) Portfolio diversification

b) Investment

c) Gambling

d) Checking

Ans) Portfolio diversification

65 .....Is a trust that pools the savings of a number of investors.

a) Financial derivatives

b) Mutual fund

c) Swaps

d) Real estate

Ans) Mutual fund

66. An insurer uses balanced scorecards as a strategic management tool. The main purpose of this is to_

a) calculate insurance premiums.

b) calculate its financial strength.

c) measure performance

d) reduce its costs.

Ans) measure performance

67. Which department within an insurance company will primarily be responsible for analysing potential mergers and acquisitions?

a) Finance.

b) Internal audit.

c) Investment.

d) Strategy.

Ans) Strategy.

68. When reserving for claims under long-tail insurance classes, the amounts can be discounted to allow for

a) Corporation Tax

b) cost savings

c) investment income.

d) market risk.

Ans) investment income.

69. Which financial ratio gives an indication of an insurer's

MULTIPLE CHOICE QUESTIONS

underwriting year performance?

a) Claims ratio.

b) Combined ratio

c) Credit turnover ratio.

d) Current ratio.

Ans) Combined ratio

70. Which type of activity in the Standard and Poor's insurance ratings frame work is most likely to be classified as a modifier?

a) Committee voting.

b) Enterprise risk management.

c) Gearing ratio analysis.

d) Industry and country risk.

Ans) Enterprise risk management.

71. Who arranges for a credit rating agency to produce a financial security rating on an insurance company?

a) External auditors.

b) The Government.

c) The insurance company

d) The regulator

Ans) The insurance company

72. An insurer intends to assess its position via a use test, to comply with proposed changes in regulations. This forms part of the rules relating to

a) capital adequacy.

b) . claims reserves.

c) internal audit

d) risk tolerance.

Ans) capital adequacy.

73. How will the recent acquisition of the subsidiary be shown on the insurer's cash flow statement?

a) As a cash inflow from financing activities.

b) As a cash inflow from investment activities

c) As a cash outflow from financing activities

d) As a cash outflow from investment activities

Ans) As a cash outflow from investment activities

74. The use of claims development tables provides valuable information about the_

a) ability to charge higher prices.

b) level of unrealised gains and losses.

c) nature of breaches of internal controls

d) prior estimates of outstanding amounts.

Ans) prior estimates of outstanding amounts.

75. The change in the combined ratio is most likely to indicate that the insurer has_

a) increased its administration expenses.

b) increased its long-term borrowing.

c) improved its investment returns.

d) improved its underwriting results.

Ans) improved its underwriting results.

76. The result of the recent liquidity calculation indicates that since last year the insurer's liquidity has_

a) become more volatile

b) worsened.

c) improved.

d) been unaffected.

Ans) improved.

77. In Swift Formulations Private Ltd., In. re (2004 121 Comp Case 27 (Punjab and Haryana), held that:

a) Where the shareholders of two companies in their collective wisdom had accepted the share exchange ratio worked out by experts and if mistake was pointed out, then it was not for the court to interfere with the decision of shareholders

b) Where the shareholders of two companies in their collective wisdom had not accepted the share exchange ratio worked out by experts and if mistake was pointed out, then it was not for the court to interfere with the decision of the shareholders

c) Where the shareholders of two companies in their collective wisdom had accepted the share exchange ratio worked out by experts and if no mistake was pointed out, then it was not for the court to interfere with the decision of shareholders

d) None of the above

Ans) Where the shareholders of two companies in their collective wisdom had accepted the share exchange ratio worked out by experts and if no mistake was pointed out, then it was not for the court to interfere with the decision of shareholders

78. In Gulmohar Finance Limited, In.re., (1995) 5 SCL 207 (Del) Delhi High Court held that:

a) Valuation and exchange ratio can be accepted if the shareholders, creditors and liquidation etc., have approved the scheme, even when Central Government has raised objections to exchange ratio

b) Valuation and exchange ratio can be accepted if the shareholders, creditors and liquidation etc., have not approved the scheme, even when the Central Government has not raised objections to exchange ratio

c) Valuation and exchange ratio can be accepted if the shareholders, creditors and liquidation etc., have approved the scheme, even when Central Government has not raised objections to exchange ratio

d) None of the above

Ans) Valuation and exchange ratio can be accepted if the shareholders, creditors and liquidation etc., have approved the scheme, even when Central Government has raised objections to exchange ratio

79. No person shall practice as a registered valuer without obtaining a:

a) Certificate of practice

b) Certificate of recognition

c) Certificate of registration

d) Certificate of association

MULTIPLE CHOICE QUESTIONS

Ans) Certificate of registration

80. A person shall not be eligible to be a registered valuer if he:

a) Is not a valuer member of a registered valuers organisation

b) Is a minor

c) Is not a discharged bankrupt

d) All of the above

Ans) All of the above

Use the following information to answer Questions 81-82

Sally Curten, Valuer, has gathered the following information on Jameston Fiber Optics, Inc., (JFOI) and industry norms

Selected Financial Data for JFOI (in millions)

Total sales:	$2,044	(fiscal year 2016)
Total assets:	$1,875	(FYE 2015)
Net income:	$322	(fiscal year 2016)
Total debt:	$1,465	(FYE 2015)
Industry ratios:	Net profit margin	= 15.7%
	Total asset turnover	= 1.1
	Return on equity	= 40.5%

81. **The return on equity for JFOI is closest to:**

a)17.2%.

b)37.4%.

c)78.5%.

d)none of the above

Ans) 78.5%.

82. **Using DuPont analysis, Curten determines that the most influential factor(s) that management used to increase the ROE for JFOI compared to the industry is:**

a) asset efficiency.

b) profitability.

c) leverage.

d)none of the above

Ans) leverage.

Use the following information to answer Questions 83-90

Gianna Peters is an investment analyst who focuses on dividend-paying stocks. Peters uses a discounted cash flow (DCF) approach to stock selection. She is meeting with her staff to evaluate portfolio holdings based on a bottom-up screening of stocks listed in the United State and Canada. Peters and her staff begin by reviewing the characteristics of the following portfolio candidates.

Company ABC

A Canadian company in the consumer staples sector with a required rate of return of 7.35%. Recent media reports suggest that ABC might be a takeover candidate. Peters and her team estimate that if the incumbent Canadian prime minister's party retains its power, the company's current annual dividend of C$0.65 per share will grow 12% a year for the next four years and then stabilize at a 3.5% growth rate a year indefinitely. However, if a new government takes office in Canada, then the team estimates that ABC will likely not experience the elevated 12% short-run growth because of new regulatory and tax changes, and instead will grow by 3.5% indefinitely.

Company XYZ

A mid-sized US company in the utilities sector with a required rate of return of 10%. Peters and her team believe that because of a recent restructuring, the company is unlikely to pay dividends for the next three years. However, the team expects XYZ to pay an annual dividend of US$1.72 per share beginning four years from now. Thereafter, the dividend is expected to grow indefinitely at 4% even though the current price implies a growth rate of 6% during this same period.

Company JZY

A large US company in the telecom sector with a required rate of return of 8%. The stock is currently trading at US$32.76 per share with an implied earnings growth rate of 5.3%. Peters believes that because JZY is mature and has a stable capital structure, the company will grow at its sustainable growth rate. Over the past 10 years, the com- pany's return on equity (ROE) has averaged 8.17% and its payout ratio has averaged 40%. Recently, the company paid an annual dividend of US$0.84 per share.

Peters asks a newly hired analyst, Kurt Thomas, to comment on the evaluation approach for these three stocks. Thomas makes the following statements:

1. A free cash flow valuation model would not be appropriate to evaluate Company ABC if the firm becomes a takeover candidate.

2. A dividend discount model cannot be applied to Company XYZ if dividends are suspended for a few years.

3. A dividend discount model is suitable for evaluating the stock of Company JZY because of the historically consistent payout ratio.

MULTIPLE CHOICE QUESTIONS

Peters then asks the team to examine the growth opportunities of three Canadian stocks currently held in the portfolio. These stocks are listed in Exhibit 1. Peters believes that the stocks are fairly valued.

Exhibit 1 Selected Stock Characteristics

Stock	Required Rate of Return	Next Year's Forecasted EPS (C$)	Current Price per Share (C$)
ABTD	10.5%	7.30	80.00
BKKQ	8.0%	2.12	39.00
CPMN	12.0%	1.90	27.39

83. **Which of the following statements made by Thomas is *correct*?**

a)Statement 1
b)Statement 2
c)Statement 3
d)none of the above

Ans) Statement 3

84. **Assuming the incumbent government retains office in Canada, Peters and her team estimate that the current value of Company ABC stock would be closest to:**

a)C$22.18.
b)C$23.60.
c)C$25.30.
d)none of the above

Ans) C$23.60.

85. **Assuming a new government takes office in Canada, Peters and her team estimate that the current intrinsic value of Company ABC would be closest to:**

a)C$9.15.
b)C$16.88.
c)C$17.47.
d)none of the above

Ans) C$17.47.

86. **Assume that a new government takes office in Canada. If Peters and her team use the Gordon growth model and assume that Company ABC stock is fairly valued, then which of the following would most likely be true?**

a)The total return of ABC stock will be 10.85%.
b)The dividend yield of ABC stock will be 3.85%.
c)The stock price of ABC will grow at 7.35% annually.
d)none of the above

Ans) The dividend yield of ABC stock will be 3.85%.

87. **If the team uses the dividend discount model, the current intrinsic value of Company XYZ stock would be closest to:**

a)US$19.58.
b)US$20.36.
c)US$21.54.
d)none of the above

Ans) US$21.54.

88. **The dividend growth rate implied in the stock price of Company XYZ suggests that XYZ's stock price is most likely:**

a)undervalued.
b)fairly valued.
c)overvalued.
d)need more information to answer

Ans) overvalued.

89. **Based on the relationship between the implied growth rate and the sustainable growth rate, Peters' team should conclude that Company JZY's stock price is most likely:**

a)undervalued.
b)fairly valued.
c)overvalued.
d)need more information to answer

Ans) overvalued.

90. **Based on Exhibit 1, the growth component of the leading P/E is largest for:**

a)ABTD.
b)BKKQ.
c)CPMN.
d)need more information to answer

Ans) CPMN.

Source : Judicial Pronouncements in Valuation, Published by Valuation Standards Board and ICAI Registered Valuers Organization, The Institute of Chartered Accountants of India

Case No. 1 Pr. Commissioner of Income Tax-2 Vs Cinestaan Entertainment Pvt. Ltd. (DEL HC)(2021)

IN THE HIGH COURT OF DELHI
Appellant: Pr. Commissioner of Income Tax-2 Vs.
Respondent: Cinestaan Entertainment Pvt. Ltd.

ITA 1007/2019 and CM Appl. 54134/2019
Decided On: 01.03.2021

1. Brief Facts of the Case

M/s. Cinestaan Entertainment Pvt. Ltd. (Respondent) was incorporated on 19.09.2013 and was engaged in the business of entertainment. During the AY 2015-16, the Respondent allotted shares at a very high premium to various persons and filed return of income for the Assessment Year with Nil income.

Pursuant to notice under 143(2) of the Income Tax Act, 1961 (herein after referred to as 'the Act') along with the notice under Section 142(1), the Respondent filed a Valuation Report dated 15.12.2014.

Assessment Order was issued under Section 143(3) of the Act and the total income of the Respondent-Assessee was assessed as Rs. 90,95,46,200/-. The findings of the Assessing Officer ('AO') were as follows:-

i. No effort was made by the assessee for achieving the projections made in the Valuation Report as per Section 11UA of the Act. Assessee company had invested share capital and share premium received during the year in 0% debenture of associate companies. Hence, the projection made to issue the shares on premium as per Rule 11UA report is not justified with the actual working of the company.

ii. The assessee failed to provide any scientific basis for adopting the projections/estimated figure used in valuation.

iii. Assessee company booked a loss of Rs. 71,99,40,002/- in P&L A/c for the year ended 31st Mar 2017 on account of loss on sale of investment in unsecured compulsorily convertible debenture of Rs. 1000 each in M/s. Script Stories Media P. Ltd. Since, the investment was in zero percent debentures there was no scope of any income rather the transactions resulted in the loss of Rs. 71,99,40,002/-.

iv. Even in 2017-18, the assessee company kept raising share capital on premium and at the same time booked losses on account of sale of zero percent debentures which are in contradiction of each other. Hence, the premium taken by the assessee is not justified even on merits.

Aggrieved by the assessment order, the Respondent preferred an appeal before the Commissioner of Appeals [CIT (A)], who upheld the additions made by the AO.

The second appeal before the ITAT was allowed in favour of assessee and the order of the CIT (A) was set aside.

Revenue appealed against the aforementioned order on the grounds that the Ld. ITAT has erred in law and on facts in deleting the addition made u/s 56(2)(vii)(b) of the Income Tax Act, 1961, by ignoring the sound reasoning and detailed analysis of the AO that the Cash Flow projections considered in the Discounted Cash Flow Method by the assessee are nothing but paper plans that have no relation with the reality.

2. Key Observations and Decision of ITAT

- It is the prerogative of assessee as to how much capital is to be raised based on its long-term and short-term funding requirements for the purpose of running its business.
- Any businessman or entrepreneur visualise the business based on certain future projections and undertakes all kinds of risks. It is the risk factor alone that gives a higher return to a businessman and the Income Tax Department or Revenue Official cannot guide a businessman in which manner risk has to be undertaken. Such an approach of the revenue has been judicially frowned by the Hon'ble Apex Court on several occasions.
- At the time when valuation is made, it is based on reflections of the potential value of business at that particular time and also keeping in mind underline factors that may change over the period of time and thus, the value which is relevant today may not be relevant after a certain period of time.
- In DCF method, the value is based on estimated future projection and these projections are based on various factors and projections made by the management and the Valuer, like growth of the company, economic/market conditions, business conditions, expected demand and supply, cost of capital and host of other factors. These factors are considered based on some reasonable approach, and they cannot be evaluated purely based on arithmetical precision as value is always worked out based on approximation and catena of underline facts and assumptions.
- Section 56(2)(vii)(b) of the Income Tax Act,1961 is not applicable to genuine business transactions and the genuineness and creditworthiness of the strategic investors were not doubted by either the

AO or the CIT(A). In accordance with sub clause (i) of explanation, the Respondent- Assessee had an option to carry out a valuation and determine the fair market value (FMV) only on the Discounted Cash Flow method (DCF), which was appropriately followed by the Respondent-Assessee.

- The shares were issued based on the valuation received from the prescribed expert i.e., a Chartered Accountant who used the DCF method which is one of the methods stipulated under Section 56(2)(vii)(b) of the Income Tax Act, 1961 read with Rule 11UA(2)(b) of the Income Tax Rules, 1962.
- Section 56(2)(vii)(b) of the aforesaid Act is a deeming provision and one cannot expand the meaning of scope of any word while interpreting such deeming provision. There has to be some enabling provision under the Rule or the Act where Assessing Officer has been given a power to tinker with the Valuation Report obtained by an Independent Valuer as per the qualification given in the Rule 11U of the IT Rules, 1962. Rule 11UA(2) of the said Rules does not give any power to the Assessing Officer to examine or substitute his own value in place of the value determined or requires any satisfaction on the part of the Assessing Officer to tinker with such valuation.
- The shares have not been subscribed by any sister concern or closely related person, but by outside investors who are one of the top investors

Pr. Commissioner of Income Tax-2 Vs Cinestaan Entertainment Pvt. …

and businessmen of the country and if they have seen certain potential and accepted this valuation, then how AO or Ld. CIT(A) can question their wisdom.

3. Cases relied upon

- In the case of SA Builders and also in case of **CIT vs. Panipat Woollen and General Mills Company Ltd,** the Hon'ble Apex Court has held that Income Tax Department cannot sit in the armchair of businessman to decide what is profitable and how the business should be carried out. Commercial expediency has to be seen from the point of view of businessman.
- In the case of **Securities & Exchange Board of India & Ors.** [2015] [ABR 291] the Hon'ble Bombay High Court has held that:-
  - ➢ It is a well settled position of law with regard to the valuation that valuation is not an exact science and can never be done with arithmetic precision.
  - ➢ The attempt on the part of SEBI to challenge the valuation which is by its very nature based on projections by applying what is essentially a hindsight view that the performance did not match the projection is unknown to the law on valuations.
  - ➢ Valuation being an exercise required to be conducted at a particular point of time has of necessity to be carried out on the basis of whatever information is available on the date of the valuation and a projection of future revenue that Valuer may fairly make on the basis of such information.
- In the case of Rameshwaram Strong Glass Pvt. Ltd. Vs. ITO the learned ITAT has held that :-
  - ➢ DCF Method is essentially based on the projections (estimates) only and hence, these projections cannot be compared with the actuals to expect the same figures as were projected.
  - ➢ The Valuer has to make a forecast on the basis of some material but to estimate the exact figure is beyond its control.

Judicial Pronouncements in Valuation

- ➢ At the time of making a valuation for the purpose of determination of the fair market value, the past history may or may not be available in a given case and therefore, the other relevant factors may be considered.

4. Decision

- DCF methodology adopted by the Respondent is a well-recognized and well-accepted method. The Approach of Revenue that the performance did not match the projection slacks material foundation is irrational.
- Appellant-Revenue is unable to show that the assessee adopted a demonstrably wrong approach, or that the method of valuation was made on a wholly erroneous basis, or that it committed a mistake which goes to the root of the valuation process.
- Valuation is intrinsically based on projections which can be affected by various factors. We cannot lose sight of the fact that the Valuer makes forecast or approximation, based on potential value of business. However, the underline facts and assumptions can undergo change over a period of time.
- The Courts have repeatedly held that valuation is not an exact science, and therefore cannot be done with arithmetic precision. It is a technical and complex problem which can be appropriately left to

the consideration and wisdom of experts in the field of accountancy, having regard to the imponderables which enter the process of valuation of shares.

- The shares have not been subscribed by any sister concern or closely related person, but by outside investors. Indeed, if they have seen certain potential and accepted this valuation, then Appellant-Revenue cannot question their wisdom.
- The appeal was dismissed and the order of Ld. ITAT was upheld.

5. Key Take Away for Valuers from the above Case

i. DCF Method is essentially based on the projections (estimates) only and hence, Income Tax Authorities cannot adopt a hindsight view and compare these projections with the actuals to expect the same figures as were projected.

Pr. Commissioner of Income Tax-2 Vs Cinestaan Entertainment Pvt. …

ii. The value which is relevant today may not be relevant after certain period of time. At the time when valuation is made, it is based on reflections of the potential value of business at that particular time and also depends upon various underlying factors that may change over the period of time.

iii. Courts have repeatedly held that valuation is not an exact science, and therefore cannot be done with arithmetic precision. It is a technical and complex problem which can be appropriately left to the consideration and wisdom of experts in the field of accountancy, having regard to the imponderables which enter the process of valuation of shares.

iv. In DCF method, the value is based on estimated future projection and these projections are based on various factors and projections made by the management and the Valuer, like growth of the company, economic/market conditions, business conditions, expected demand and supply, cost of capital and host of other factors. These factors considered shall be based on some reasonable approach as they cannot be evaluated purely based on arithmetical precision.

v. Valuation, other than rule-based, is an estimation and hence, the forecasts and projection cannot match the actual performance. Valuation at two different dates cannot be same due to change in the various internal and external socio-economic factors that impact the concerned asset. However, a Valuer and Assessee both shall analyse the variance between the actual and projections and prepare a just and proper reason to justify their valuation assumptions to AO.

vi. Any Valuer when working on any projections and estimations works with some inherent limitations. A valuer can use various tools and analysis like regression analysis or trend analysis to limit risks of these assumptions and to determine the fairness of projections.

vii. A valuer shall maintain documentation which provides:

   a. sufficient and appropriate record of the basis of the Valuation Report; and

   b. evidence that the valuation assignment was planned and performed in accordance with the ICAI Valuation Standards, 2018 or other applicable Valuation Standards along with other applicable legal and regulatory requirements.

Case No. 2. Cushman and Wakefield India Private Limited and Ors. Vs Union of India and Ors. (DEL HC)(2019)

IN THE HIGH COURT OF DELHI
Appellants: Cushman and Wakefield India Private Limited and Ors.
Vs.
Respondent: Union of India and Ors.

W.P.(C) 9883/2018, CM No. 38508/2018
Decided On: 31.01.2019

1. Brief Facts of the Case

The petitioners were engaged in the business of real estate consultancy services including provision of real estate valuation services. Being a subsidiary of a reputed body corporate they were universally recognized as a lauded leader in providing valuation service.

On October 18, 2017, Section 247 of the Companies Act, 2013 was notified along with the Companies (Registered Valuers and Valuation) Rules, 2017 (herein after referred to as Registered Valuers Rules, 2017), which provided that where a valuation is required to be made in respect of any property, stocks, shares, debentures, securities or goodwill or any other assets or net worth of a company or its liabilities under the provision of the Companies Act, 2013 it must be valued by a Registered Valuer.

Rule 3(2) of the Registered Valuers Rules, 2017 and in particular the rule 3(2)(a) of the said Rules explicitly provides that a company shall not be eligible to be a Registered Valuer, if it is a subsidiary, joint venture or associate of another company or body corporate.

Hence, it ousts the petitioner from being a Registered Valuer on the ground of it being a subsidiary of a body

corporate.

Cushman and Wakefield India Private Limited and Ors. Vs Union of …

Petition was filed to declare Rule 3(2) of the Companies (Registered Valuers and Valuation) Rules, 2017 as unconstitutional for violating Article 14, Article 19(1) (g) and Article 301 of the Constitution of India. The aforementioned rule 3(2) is reproduced as under:

"(2) No partnership entity or company shall be eligible to be a Registered Valuer if-

(a) it has been set up for objects other than for rendering professional or financial services, including valuation services and that in the case of a company, it is a subsidiary, joint venture or associate or another company or body corporate."

2. Issues raised by the Petitioner

i. The petitioner held that it has over the years been instrumental in setting benchmark for high standards, transparency and fairness with respect to valuation services in India. Further, the petitioner had invested time, money and experience in creating a pool of resources to carry out quality valuation services in India.

ii. The subsidiaries or joint ventures or associates of foreign and Indian companies will continue to impart more professionalism, quality, high standards and transparency in valuation industry.

iii. The advent of Section 247 of the Companies Act, 2013, has impaired the right of the petitioners to carry on trade and business, which is guaranteed by the Constitution of India and it imposes unreasonable restriction on the petitioner's right to carry on trade and business.

iv. The petitioner is not only discriminated against individuals and partnership entities but also such companies which are not subsidiaries, joint ventures or associates of other companies/body corporates.

3. Submission of the Respondent

i. Explanation to Rule 1(3) of the Companies (Registered Valuers and Valuation) Rules, 2017 clearly stipulates that the conduct of valuation under any other law other than the Companies Act, 2013 shall not be affected by the coming into the effect of the Rules in question.

ii. Valuers had been adopting divergent methodologies resulting in vast differences in their conclusions. Due to divergent valuation outcomes and criteria, asset valuation in India was not considered credibly. Credible valuation of assets is critical to the efficient working of the financial market. Till the commencement of the Act and the Rules, there had not been any generally accepted and uniform standards in asset valuation system in India.

iii. It is in order to regulate valuation profession under a regulatory regime and to guide and develop the same, the Parliament decided to bring in uniformly acceptable norms and generally accepted global valuation practices in India by incorporating a separate Chapter in the Companies Act, 2013 to set regulatory norms for various classes of asset valuation for the purposes of Companies Act, 2013.

iv. Given the importance of valuation in fairness of business transactions, every effort has been made by the respondents to avoid situation of conflict of interest with an entity conducting the valuation. The endeavour of the Rules is to introduce a class of professionals where the focus is on the professional skills of the individuals rather than a business venture.

v. There is a rational nexus to the object of disqualifying all entities with interest in other professions or business/enterprises so that the integrity of the profession be maintained and there is no conflict of interest. Hence, the Rules do not suffer from the vires of excessive delegation.

vi. If a Registered Valuer Company is a subsidiary, joint venture or associate of another company, the said entity may not be able to stand out as an independent professional body. Hence, if valuation is allowed to be undertaken as a business by such entities, independence and credibility cannot be ensured.

Judicial Pronouncements in Valuation

4. Decision

The objective and intention behind laying down the impugned Rule is clearly to introduce higher standards of professionalism in valuation industry, specifically in relation to valuations undertaken for the purpose of Companies Act, 2013 and IBC, 2016. The impugned Rule obviates the possibility of conflict of interest on account of divergent interests of constituent/associate entities which resultantly shall undermine the very process of valuation, being one of the most essential elements of the proceedings before NCLT.

The court also relied upon the judgment of the Supreme Court in the case of **Dr. Haniraj L. Chulani** and held that the exclusion of a subsidiary company, joint venture or associate of other company, for purpose of eligibility for registration as a Valuer is reasonable.

IMPORTANCE OF VALUATION - BUILDING AATM NIRBHAR BHARAT

DEFINITION OF VALUATION

As per Investopedia, valuation is the analytical process of determining the current (or projected) worth of an asset or a company. An analyst placing a value on a company looks atthe business' management, the composition of its capital structure, the prospect of future earnings, and the market value of its assets, among other metrics.

Key takeaways:

- Valuation is a quantitative process of determining the fair value of an asset or a firm.
- In general, a company can be valued on its own on an absolute basis, or else on a relativebasis compared to other similar companies or assets.
- There are several methods and techniques for arriving at a valuation—each of which mayproduce a different value.
- Valuations can be quickly impacted by corporate earnings or economic events that force analysts to retool their valuation models.

NEED FOR VALUATION

Valuations are needed for many reasons such as investment analysis, capital budgeting, merger and acquisition transactions, financial reporting, for determination of tax liability and in litigation.

IMPORTANCE OF VALUATION OF A BUSINESS OR COMPANY

On the lines of the views of Ms Carla McCabe, the importance of valuation of a business or acompany may be examined under the following points:

1. **Valuations provide a baseline.** Regular valuations provide a baseline. They serve as an indication of what is being done right and what could be done better. The valuation could goup or down, say due to market corrections. But without knowing the baseline, there is no solid evidence of how the business or the company is doing.
2. **Valuations help chart the course for the future.** Simply put, valuations help a business getits bearings right which, then, determines the way forward and improvements from there. Perhaps a valuation will indicate the need for a technology investment or hiring an employee or reducing or eliminating an expense. Valuations can often help an owner make a change tothe business or assist with a difficult decision.
3. **Valuations measure progress.** Performed regularly, valuations provide a pretty good measure of how the business is doing compared to the path set. To be most effective, valuations should be utilized in tandem with the strategic business plan and should be referred to as a component of any significant decision.
4. **Valuations can identify gaps.** A comprehensive valuation will utilize key performance indicators (KPIs) to look at the non-financial aspects of a business that are actually the underlying value drivers. Examples are corporate structure, client demographics, technologyusage, and firm infrastructure. KPIs are instrumental in identifying areas of potential improvement for the business – and ultimately provide ways to increase value.
5. **Valuations help you manage your business.** Valuations can and should be used as a powerful driver of how the business should be managed. The purpose of a valuation is to trackthe effectiveness of the strategic decision-making process and provide the ability to track performance in terms of estimated change in value, not just in revenue. This helps the management to take a holistic look at the business and make decisions that are highly impactful for the bottom line. It allows them to understand the subtle dynamics of the business and avoid unforeseen consequences of seemingly insignificant decisions.
6. **Valuations create accountability**. Once a valuation has been utilized to identify gaps and set a path for the future (with measurable goals), the management has, in essence, made itself accountable for achieving those goals and can create discipline around them. Of course,this should be used as a component of its strategic business plan – because if they can measure it, they can manage it.
7. **Valuations provide a benchmark.** With little public data available on what businesses sell for (the vast majority of deals are never published), knowing the business' baseline value canallow the management to benchmark the business (via KPIs) against its peers, as well as "Best Practices" standards.
8. **Valuations provide a perspective on price.** When it comes times to transition (and all businesses *will* eventually transition), the business' historical valuations provide a starting point for price. Whether it is an external sale or internal next-generational transfer, the management now has an idea of what the business could be worth to a prospective buyer. Having a baseline valuation and understanding the value drivers can help eliminate any surprises for owners with unrealistic valuation expectations.
9. **Valuations can provide the gateway to capital.** If the company is considering borrowing capital for an acquisition or other business investment, any lender will want to know what leverage lies in the business. Its valuation is the first step in the process of securing capital.
10. **Valuations are part of the estate plan.** For an owner, the business value typically represents 50-70% of their personal net worth. More often than not, owners fail to diversify the concentrated stock position they hold in their own business. Knowing how the business value impacts the owner's personal financials can help him or her better plan for the family'sfuture.

IMPORTANCE OF VALUATION IN MERGER AND ACQUISITION

On the lines of the explanation by Nagasvaran Tamma, it may be discussed as below:

- **Baseline** − Valuation serves as an indicator and tells about what can be done. Valuationtells how you are doing in business.
- **Future course** − Valuations tells about the improvements/ changes in business, technology needs and employees' requirements.
- **Progress** − Valuation tells about business progress compared with forecasted to actual/real. It plays a significant role in decision making.
- **Gap identification** − Key performance indicators are used in identifying gaps and for potential improvements in business.
- **Manage** − Valuation helps business to have a holistic view and helps in making strategicdecisions, which have impact on the bottom line of business.
- **Accountability** − After gaps are identified, there occurs accountability in achieving thegoals.
- **Benchmark** − Helps in creating benchmarks (if no data available) against theircompetitors.
- **Price** − Past valuations help in fixing base price. By knowing the base price, one can estimate the worth of the product/ service.
- **Capital** − In borrowing a capital, financial institutions/ private parties/ banks will ask forvaluation first.
- **Property plan** − With the valuation, owners can plan to increase their/ business financialsfor the future.

IMPORTANCE OF VALUATION OF ASSETS

Source: Brainkart

1. **Showing the Actual Financial Position**

   Balance Sheet is prepared to show the actual financial position. If proper valuation is not made, such Balance Sheet does not provide true and fair information. So verification and valuation of assets are essential.

2. **Ascertaining the Real Position of Profit or Loss:**

   Depreciation and other expenses on assets will be incorrect if proper valuation of assets is not made. So, to calculate the actual amount of profit or loss, proper valuation of assets andliabilities is necessary.

3. **Increase Goodwill**

   Proper valuation gives fair information about profitability and financial position of a business.This creates positive attitude towards company which can increase the goodwill of the concern.

4. **Assures Safe Investment to Shareholders**

   Verification and valuation provide actual information about assets and liabilities to the shareholders which assure safety of their investment.

5. **Easy for Sale**

   At the time of sale of the company, it can be sold at the price which is stated in the Balance Sheet, but assets without valuation need valuation before selling the company.

6. **Easy to Get Loan**

   Companies disclose the Balance Sheet proved by auditor for public knowledge which increases the trust of the company. Hence, companies can easily obtain loan from financial institutions.

7. **Easy to Get Compensation**

   Whenever the loss occurs due to any accident, the insurer provides compensation on the basis of valuation of assets. So the company can easily get compensation.

Source: Anjali J

- **Accurate Cost**

  Correct valuation of assets is necessary to identify the accurate value of the asset so that at the time of selling such assets appropriate value gets received and at the time of purchasing assets also relevant asset value will get paid.

- **Payment of Taxes**

  Companies holding assets are required to pay the amount of tax imposed on such assets, andfor computing the precise amount of tax to be paid, proper valuation of assets is mandatory.

- **Amalgamation of companies**

At the time of the amalgamation of two companies, valuation of assets becomes an essentialaspect as it helps both the companies to evaluate the business.

- **Getting Loan**

  At the time of need of a loan from the bank or any other financial institution, valuation of anasset is required by the bank to ascertain the amount of loan the company can get on a guarantee of their assets.

- **Auditing**

  For auditing, the financial statement of a company an auditor performs the valuation of assetsthoroughly so that they reflect the true and fair value in the statement.

IMPORTANCE OF VALUATION OF SHARES

Prachi Juneja has appropriately bifurcated this discussion.

Importance of Equity Valuation: Systemic

The system of stock markets is based upon the idea of equity valuation. There are a wide variety of stocks on offer, whose perceived market value changes every minute because of the change in information that the market receives on a real time basis.

Equity valuation, therefore, is the backbone of the modern financial system. It enables companies with sound business models to command a premium in the market. It also ensures that companies, whose fundamentals are weak, witness a drop in their valuation. The art andscience of equity valuation therefore enables the modern economic system to efficiently allocate scare capital resources amongst various market participants.

Importance of Equity Valuation: Individual

Markets receive information every moment and make an attempt to factor the financial effectof this information in the stock price. Individual estimates of the effect vary and as such different people may come up with different stock prices. Therefore, there can be a differencebetween the market value of a company and what investors call its true or "intrinsic value".

Investors, stand to gain a lot of money if they are able to correctly identify this difference. Warren Buffett has made his fortune correcting and applying the art of equity valuation. In fact, the theory of equity valuation has been heavily influenced by the work of Warren Buffettand his mentor.

NEED FOR VALUATION OF SHARES

Valuation of shares is the process of determining the fair value of the company shares. Sharevaluation is defined as the technique for calculating the estimated value of companies and their stock, with a specific end goal to foresee moves in the market and resulting share costs.In most cases, shares are quoted on the stock exchange; and for ordinary transactions in shares or debentures or Government securities, the price prevailing on the stock exchange may be taken as the proper value. Share valuation is done based on quantitative techniques and share value will vary depending on the market demand and supply. There are various reasons for adopting a particular method for share valuation; it generally depends upon the purpose of valuation.

The following are the circumstances where the need for the valuation of shares arises:

1. For formulating an amalgamation scheme. Where companies amalgamate or are similarlyreconstructed, it may be necessary to arrive at the value of shares held by the members of the company being absorbed or taken over.
2. For purchase or sale of controlling shares (stock exchange quotations are valid only for regular lots). Where shares are held jointly by the partners in a company and partnership firmdissolved, it becomes necessary to value shares.
3. Where a portion of the shares is to be given by a member of the proprietary company to another member as the member cannot sell it in the open market, it becomes necessary to certify the fair price of these shares by an auditor.
4. For the valuation of the assets of a finance or an investment trust company. When a loanadvanced on the security of shares, it becomes necessary to know the value of shares on thebasis of which loan has been advanced.
5. For security purposes, e.g., where loans are raised on the security of shares of a company.When shares are given in a company as a gift, it may be necessary for the purpose of assessinggift tax, to place a value on the shares.
6. When preference shares or debentures are converted into equity shares, it becomes necessary to value the equity shares for ascertaining the number of equity shares required tobe issued for debentures or preference shares that are to be converted.
7. When equity shareholders are to be compensated on the acquisition of their shares by thegovernment under a scheme of nationalization then it is necessary to value the equity shares.

IMPORTANCE OF VALUATION OF INVENTORIES

As per the views of Abby Jenkins, the way a company values its inventory directly affects its cost of goods sold (COGS), gross income and the monetary value of inventory remaining at the end of each period. Therefore, inventory valuation affects the profitability of a companyand its potential value, as presented in its financial statements.

According to Accounting Coach, having an accurate valuation of inventory is important because the reported amount of inventory will affect:

1. the cost of goods sold, gross profit, and net income on the income statement, and
2. the amount of current assets, working capital, total assets, and stockholders' or owner'sequity reported on the balance sheet.

In fact, an incorrect inventory valuation will cause two income statements to be incorrect. The reason is the ending inventory of one accounting period will automatically become the beginning inventory in the subsequent one.

IMPORTANCE OF VALUATION OF LIABILITIES

Proper valuation of all liabilities is required to ensure true and fair financial position of the business entity. Under or over

valuation of liabilities may not only affect the operating results and financial position of the current period but will affect these for the next accounting period.

IMPORTANCE OF VALUATION OF INTANGIBLE ASSETSIMPORTANCE OF VALUATION OF GOODWILL

Borrowing the crux from Sanjay Kumar, we may encapsulate that valuation of goodwill may be made due to any one of the following reasons:

a) In the Case of a Sole-Proprietorship Firm:

i. If the firm is sold to another person;

ii. If it takes any person as a partner and

iii. If it is converted into a company.

b) In the Case of a Partnership Firm:

i. If any new partner is taken;

ii. If any old partner retires from the firm;

iii. If there is any change in profit-sharing ratio among the partners;

iv. If any partner dies;

v. If different partnership firms are amalgamated;

vi. If any firm is sold and

vii. If any firm is converted into a company.

c) In the Case of a Company:

i. If the goodwill has already been written-off in the past but value of the same is to berecorded further in the books of accounts.

ii. If an existing company is being taken with or amalgamated with another existing company;

iii. If the Stock Exchange Quotation of the value of shares of the company is not available inorder to compute gift tax, wealth tax etc.; and

iv. If the shares are valued on the basis of intrinsic values, market value or fair value methods.

IMPORTANCE OF VALUATION OF BRAND

Latana has explained succinctly what makes a brand valuable:

- Highly recognizable (people know them)
- Positively perceived (people have a good view of them)
- Popular (people actually buy and use the products or services)
- Have a loyal following (customers are ambassadors of the brand)

Why Is Brand Value Important?

Let us imagine a company is negotiating the acquisition or merger of a major brand.

If it was taking over Coca-Cola, it would be buying a lot more than the recipe for a caffeinated,sugary drink. It would be benefiting from the name, logo, and other brand elements that consumers instantly recognize and trust.

With the emergence of modern marketing, companies could choose to associate themselveswith positive characteristics such as style, elegance, trustworthiness, security, and innovation. This is essentially building a brand — a key element of any marketing strategy today.

Pretty much everyone agrees a strong brand is valuable – it is putting a figure to it that is a daunting task.

IMPORTANCE OF VALUATION FOR BUILDING AATM NIRBHAR BHARAT

Valuation shall play a pivotal role in building Aatm Nirbhar Bharat in the following ways, among others:

a. **Import substitution of products and services**: If currently India is importing certain products or services as a whole, valuation shall help it determine whether the same or close substitutes can be manufactured or provided from India itself at a comparable cost;

b. **Import substitution of components**: Even if the whole product cannot be manufactured in India, valuation can help determine whether certain components can be manufactured in India.

c. **Determination of reasonableness of royalty rates**: India, as a developing country, has to pay royalty for technology transfer in many significant and critical areas to developed countries. Valuation techniques can prove useful to ascertain reasonableness of the rates.

d. **For selling off, divesting or monetising Government assets**: Whether the Government wishes to sell-off its assets (like Air India) or divest its stake (like in LIC) or monetise its assets(say, Railway land), appropriate valuation (including embedded value as for LIC) shall be the bedrock of such initiatives.

e. **For infrastructural development**: Long-term accuracy of valuation techniques is crucial forawarding projects for infrastructural development, fixing toll rates and period for which the same may be recovered, and so on.

f. **Taxation**: The importance of appropriate valuation in case of direct and indirect taxationand estimating the inflow to the Government cannot be over-emphasised.

g. **For merger of Government companies, banks or insurers**: Detailed valuation reportswhich evoke consensus are vital.

To conclude, appropriate valuation will enable “Make in India for the World”.

SUMMER BOOTCAMP
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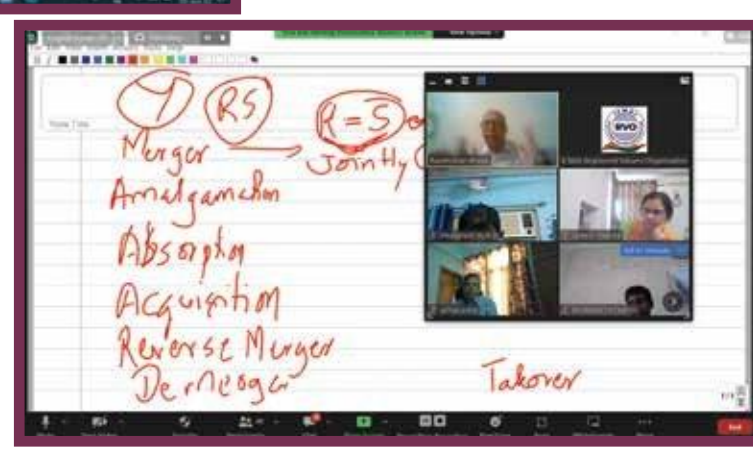

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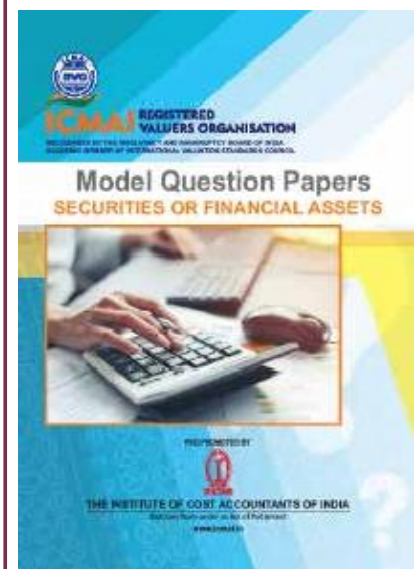
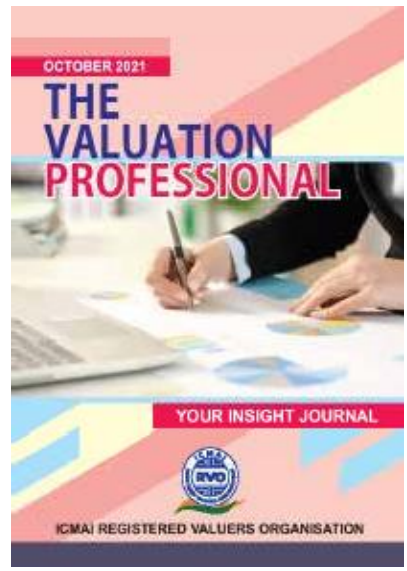
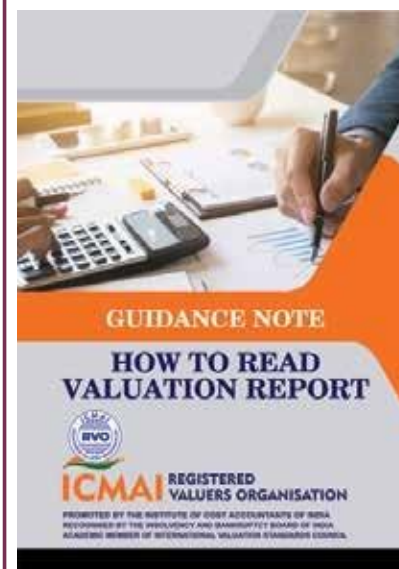


Model Question Papers
Securities or Financial Assets



The Valuation Professional



Guidance Note
How to Read Valuation Report

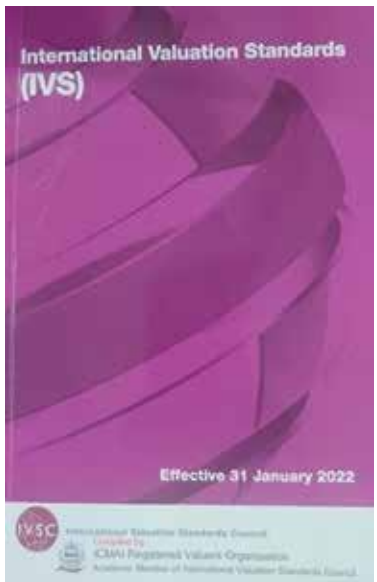
Technical Guidance Note
Creation Maintenance and
Retention of Valuation Working
Papers

Technical Guidence Note
Impact of Covid 19
on Valuation

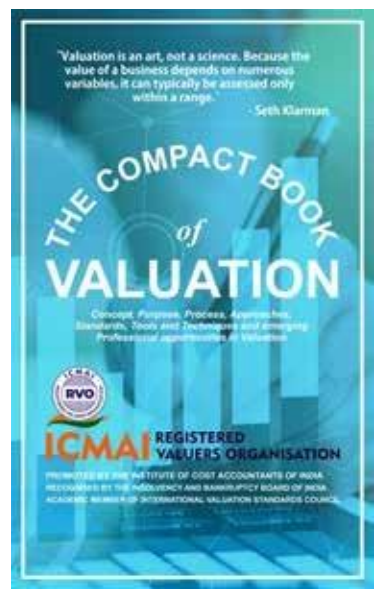
Work Book
Securities or Financial Assets

Link:- https://www.rvoicmai.in/publication/

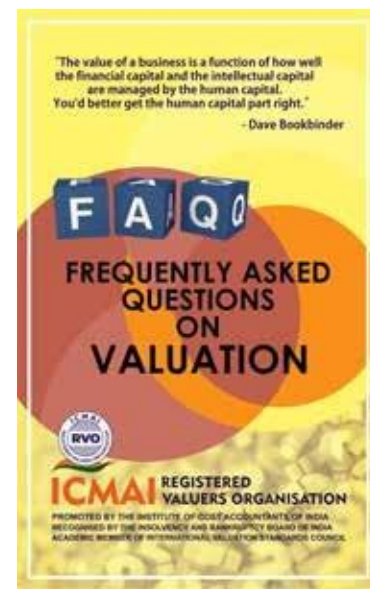
PUBLICATIONS



International Valuation Standards

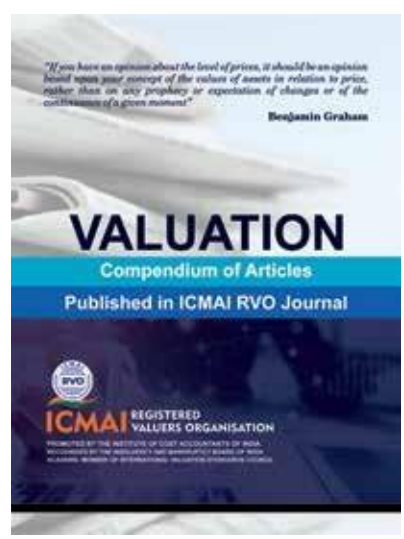


The Compact Book of Valuation

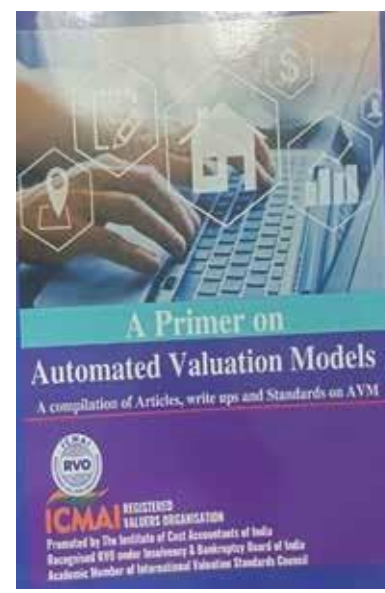


FAQ
Frequently Asked Questions on Valuation

Compendium of Perspective Papers



Compendium of Articles



Automated Valuation Models

Link:- https://www.rvoicmai.in/publication/

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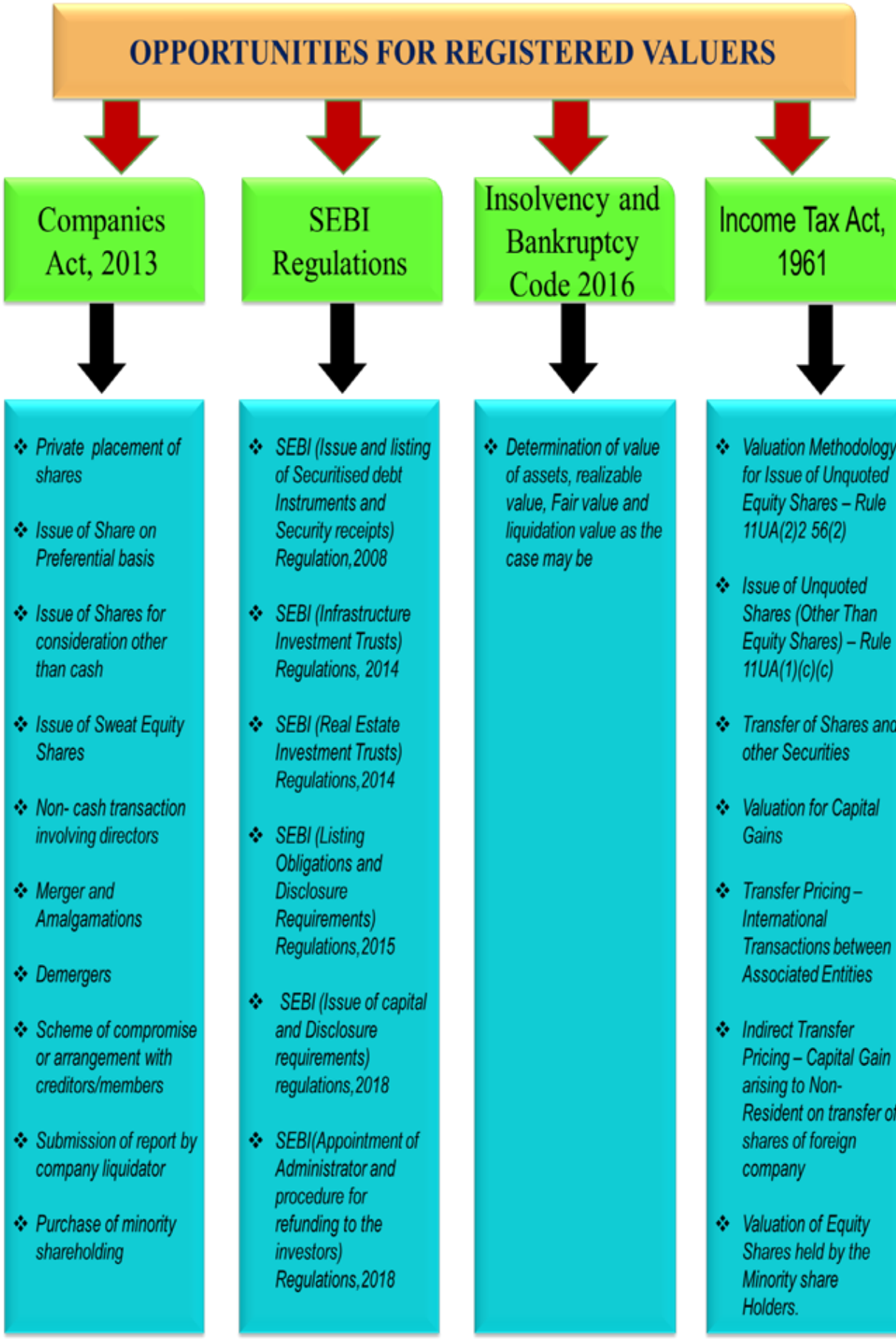
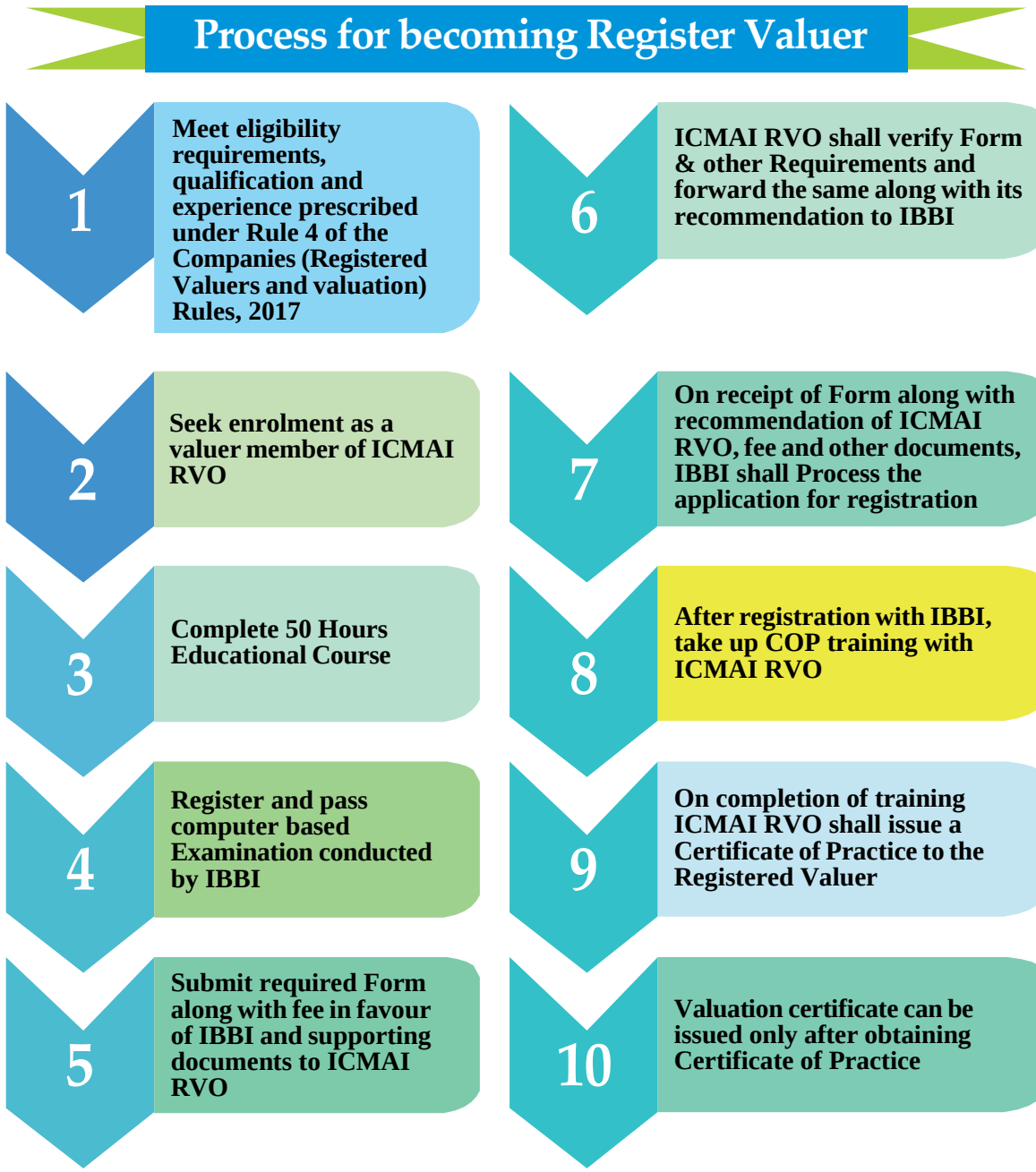

OPPORTUNITIES FOR REGISTERED VALUERS
Companies Act, 2013
SEBI Regulations
Insolvency and Bankruptcy Code 2016
Income Tax Act, 1961
Private placement of shares
Issue of Share on Preferential basis
Issue of Shares for consideration other than cash
Issue of Sweat Equity Shares
Non- cash transaction involving directors
Merger and Amalgamations
Demergers
Scheme of compromise or arrangement with creditors/members
Submission of report by company liquidator
Purchase of minority shareholding
SEBI (Issue and listing of Securitised debt Instruments and Security receipts) Regulation,2008
SEBI (Infrastructure Investment Trusts) Regulations, 2014
SEBI (Real Estate Investment Trusts) Regulations,2014
SEBI (Listing Obligations and Disclosure Requirements) Regulations,2015
SEBI (Issue of capital and Disclosure requirements) regulations,2018
SEBI(Appointment of Administrator and procedure for refunding to the investors) Regulations,2018
Determination of value of assets, realizable value, Fair value and liquidation value as the case may be
Valuation Methodology for Issue of Unquoted Equity Shares – Rule 11UA(2)2 56(2)
Issue of Unquoted Shares (Other Than Equity Shares) – Rule 11UA(1)(c)(c)
Transfer of Shares and other Securities
Valuation for Capital Gains
Transfer Pricing – International Transactions between Associated Entities
Indirect Transfer Pricing – Capital Gain arising to Non-Resident on transfer of shares of foreign company
Valuation of Equity Shares held by the Minority share Holders.


Process for becoming Register Valuer
1
Meet eligibility requirements, qualification and experience prescribed under Rule 4 of the Companies (Registered Valuers and valuation) Rules, 2017
2
Seek enrolment as a valuer member of ICMAI RVO
3
Complete 50 Hours Educational Course
4
Register and pass computer based Examination conducted by IBBI
5
Submit required Form along with fee in favour of IBBI and supporting documents to ICMAI RVO
6
ICMAI RVO shall verify Form & other Requirements and forward the same along with its recommendation to IBBI
7
On receipt of Form along with recommendation of ICMAI RVO, fee and other documents, IBBI shall Process the application for registration
8
After registration with IBBI, take up COP training with ICMAI RVO
9
On completion of training ICMAI RVO shall issue a Certificate of Practice to the Registered Valuer
10
Valuation certificate can be issued only after obtaining Certificate of Practice

EDUCATIONAL QUALIFICATION & EXPERIENCE

FOR 50 HOURS EDUCATIONAL COURSE

Asset Class	Eligibility/ Qualification	Experience in specified discipline.
Plant and Machinery	(I} Graduate in Mechanical, Electrical, Electronic and Communication, Electronic and Instrumentation, Production, Chemical, Textiles, Leather, Metallurgy, or Aeronautical Engineering, or Graduate in Valuation of Plant and Machinery or equivalent; (ii) Post Graduate on above courses.	(i) Five years (ii) Three years
Land and Building	(i) Graduate in Civil Engineering, Architecture, or Town Planning or equivalent; (ii) Post Graduate on above courses and also in valuation of land and building or Real Estate Valuation (a two-year full time post-graduation course).	(i) Five years (ii) Three years
Securities or Financial Assets	(i) Member of Institute of Chartered Accountants of India, Member of Institute of Company Secretaries of India, Member of the Institute of Cost Accountants of India, Master of Business Administration or Post Graduate Diploma in Business Management (specialisation in finance). (ii) Post Graduate in Finance	Three years
Any other asset class along with corresponding qualifications and experience in accordance with rule 4 as may be specified by the Central Government. *Note: The eligibility qualification means qualification obtained from a recognized Indian University or equivalent Institute whether in I ndia or abroad.".*		

PROCESS FOR IBBI EXAMINITION

a. The candidate may enroll for the examination on payment of the fee as prescribed by IBBI
b. Online examination with objective multiple-choice questions
c. The duration of the examination is 2 hours
d. Wrong answer attracts a negative mark of 25% of the assigned for the question
e. A candidate needs to secure 60% of marks for passing.

FORMAT AND FREQUENCY OF EXAMINATION

a. The examination is conducted online (computer-based in a proctored environment) with objective multiple-choice questions;
b. The examination centers are available at various locations across the country;
c. The examination is available on every working day;
d. A candidate may choose the time, the date and the Examination Centre of his choice for taking the Examination. For this purpose, he needs to enroll and register at https://certifications.nism.ac.in/nismaol/
e. A fee of Rs.1500 (One thousand five hundred rupees) is applicable on every enrolment;
f. The duration of the examination is 2 hours;
g. A candidate is required to answer all questions;
h. A wrong answer attracts a negative mark of 25% of the marks assigned for the question;
i. A candidate needs to secure 60 % of marks for passing;
j. A successful candidate is awarded a certificate by the Authority;
k. A candidate is issued a temporary mark sheet on submission of answer paper;
l. No workbook or study material is allowed or provided;
m. No electronic devices including mobile phones and smart watches are allowed; and
n. Use of only a non-memory-based calculator is permitted. Scientific Calculators (memory based or otherwise) are not allowed.

ICMAI REGISTERED VALUERS ORGANISATION

RECOGNISED RVO UNDER INSOLVENCY AND BANKRUPTCY BOARD OF INDIA

GUIDELINES FOR ARTICLES

The articles sent for publication in the journal "The Valuation Professional" should conform to the following parameters, which are crucial in selection of the article for publication:

- The article should be original, i.e. Not Published/ broadcasted/hosted elsewhere including any website.
- A declaration in this regard should be submitted to ICMAI-RVO in writing at the time of submission of article.
- The article should be topical and should discuss a matter of current interest to the professionals/readers.
- It should preferably expose the readers to new knowledge area and discuss a new or innovative idea that the professionals/readers should be aware of.
- The length of the article should not exceed 2500-3000 words.
- The article should also have an executive summary of around 100 words.
- The article should contain headings, which should be clear, short, catchy and interesting.
- The authors must provide the list of references, if any at the end of article.
- A brief profile of the author, e-mail ID, postal address and contact numbers and declaration regarding the originality of the article as mentioned above should be enclosed along with the article.
- In case the article is found not suitable for publication, the same shall be communicated to the members, by e-mail.

ICMAI REGISTERED VALUERS ORGANISATION

RECOGNISED RVO UNDER INSOLVENCY AND BANKRUPTCY BOARD OF INDIA

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