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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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RECOGNISED RVO UNDER INSOLVENCY AND BANKRUPTCY BOARD OF INDIA

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FROM THE CHAIRMAN's DESK

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Valuation in India is on the higher side particularly when compared to peers. At 17,800 Nifty is trading more than 20 times forward earnings while PE ratios in the rest of the world are much lower. Even the S&P 500 is trading at only 17.5 times. India's earnings growth has been impressive since 2020. FY20 Nifty earning was 440. In the Covid year FY21, despite the lockdown, Nifty earnings grew 18 percent. In FY22 Nifty earnings exploded 48 percent to 750. Earnings are up 65 percent in 2 years. FY 23 Nifty earning is likely to be around 870 and at 17,800 Nifty is trading above 20 times.

In brief, even though valuations can be justified from the long-term perspective, there can be short-term triggers that can impact the market. Therefore, even while remaining optimistic investors may exercise some caution. broadly since valuations are above the fair range of valuations at this point of time, there is no need to chase the momentum in the market. Rather one should do staggered and disciplined investments over a period of time. From a 3-5-year perspective, India is very well placed in terms of the next trajectory and that is what one should be playing for.

FROM THE PRESIDENT's DESK

CMA P. Raju Iyer
Nominee Director
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President
The Institute of Cost Accountant of India

Startup valuations before raising new capital from investors have fallen from the previous three months, and there is a rising trend of companies taking a down round, valuing them lower than in previous ones. A funding drought ought to nudge startups to tweak their strategy where hyper scaling yields ground to sustainable business models as investors seek a clearer path to profitability. Companies will have to conceive, design and build products that have the ability to endure downturns by providing abiding value to customers. And this has to be accomplished efficiently, without blowing up big budgets.

India's new-age companies must prioritize value creation over valuation and chase 'profit pools' rather than 'capital pools' as they scale. The era (of playing the valuation game) is behind us – at least for some time until the next bubble. And I think people are going to be forced to really become hard core businesspersons, be extremely commercially savvy. The good news is, there are a lot of great solid founders out there who are not drunk on easy capital and who want to build solid, long-term businesses.

FROM THE MD's DESK

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

While there are many available methods to assess the same, there is no definite answer on whether a particular valuation multiple is justified or not. This is because each sector is different and no two companies are exactly the same even if they are in the same sector. One of the most widely used valuation methods is price multiple which includes Price/Earnings, Price/Book Value, EV/EBITDA and Price/Sales. Price/Earnings is one the most common multiple which is used for most sectors including including Auto, FMCG, Consumer Durables, Pharma, IT, and Capital Goods. For bank and lending companies, Price/Book Value is a more appropriate method as banks earn income based on their balance sheet size. For companies with high levels of debt, EV/EBITDA multiple is used for valuation. Metal and Cement sectors usually resort to EV/EBITDA multiple for valuation.

While Price multiples are good to use, it can sometimes be misleading as earnings per share isn't always reliable and it is difficult to compare companies in two different sectors. For instance, an investor cannot assign the same value for Metal and FMCG stocks. Metal as we all know is highly cyclical and more vulnerable to economic conditions. On the other hand, FMCG business is much less vulnerable to economic cycles. Hence, it would be justified to assign a higher multiple to FMCG stocks as compared to Metals. The alternate method which can be used is Discounted Cash Flow method wherein future cash flows are discounted based on projections to its present value to ascertain the fair value of the company.

PROFESSIONAL DEVELOPMENT

ICMAI REGISTERED VALUERS' ORGANISATION

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PROFESSIONAL DEVELOPMENT PROGRAMS

July '2022 to September '2022	
Date	**PD Programs**
6th -7th -8th July 2022	Workshop on Valuation
09th - 10th July 2022	Master Class - Achieving a Cutting Edge in Valuation
23rd July 2022	Online Certificate Course on Valuation
25th July 2022	17th Online Mandatory COP Program by ICMAI RVO
27th-28th July 2022	Master Class Imbibing RVs with Multiple Skills
30th & 3st July 2022	Short Learning Program - Valuation Practice
29th July 2022	Curating Future Ready Registered Valuers
30th- 31st July 2022	Crash Course Preparation for Valuation Examination
03rd-04th August 2022	Workshop on Valuation
11th-12th August 2022	Learning Program on Valuation
13th August 2022	Workshop on Valuation
13th-14th August 2022	Skill Development Program for RVs
17th-18th August 2022	Master Class Achieving excellence in Valuation
23rd-24th August 2022	Experiential Learning Session on Live Case Studies on Valuation
25th August 2022	Training in Valuation for Central Bank of India
27th-28th August 2022	Crash Course Preparation for Valuation Examination
29th-30th August 2022	Master Class Practical Aspects of Revised International Valuation Standards
29th-30th August 2022	Mastering Case Studies
6th-7th September 2022	Enhancing Valuation Competence
13th-14th September 2022	Master Class on Valuation
17th September 2022	Master Class on Valuation
17th September 2022	Post Graduate Certificate Program in Valuation
22nd -23rd September 2022	Experiential Learning Program & Learning from Registered Valuer Peers
24th -25th September 2022	Crash Course Preparation for Valuation Examination
24th -25th September 2022	Crash Course Preparation for Valuation Examination (Land & Building)

PROFESSIONAL DEVELOPMENT PROGRAMS

50 Hours Training Programs

July '2022 to September '2022	
Date	**Programs**
15th -17th July 2022 & 21st -24th July 2022	50 hours Valuation Course on Land & Building and Plant & Machinery
29th July to 31st July & 04th August to 07th August 2022	50 hours Valuation Course on Securities or Financial Assets
18th to 21st August 2022 & 25th to 28th August	50 hours Valuation Course on Plant & Machinery
09th to 11th September 2022 & 15th to 18th September 2022	50 Hrs. Educational Course on Valuation (Plant & Machinery, Land & Building & Securities or Financial Assets)
24th September 2022	19th Online Mandatory COP Program by ICMAI RVO for RVs

Upcoming Professional Development Programs

Date	PD Programs
26th Aug to 28th Aug & 01st Sept to 04th Sept 2022 (Seven Days Program)	50 Hrs. Educational Course on Valuation (Plant & Machinery, Land & Building & Securities or Financial Assets)
24th to 30th September 2022	50 Hrs. Educational Course on Valuation (Securities or Financial Assets)


Articles

THOUGHTS ON VALUATION

CS (Dr.) Shyam Agrawal
Chairman
ICMAI Registered Valuers Organization

The Perspective

"Value" refers to the worth of an asset, whereas "Price" is the result of a negotiation process between a willing but not an overeager buyer and a willing but not an overeager seller. In simple terms, valuation is a process of determining value of a company or an asset. Valuation is an art and not exact science. What the buyer thinks is whether the product is "worth the price" he has paid, this "worth" itself is the value of the product. Depending on the structure of the transaction, the management may want to value the entire business or a component of a business - such as division, a brand, distribution network, etc.

Types of Value

Analysts frequently refer to five types of value: book value, breakup value, liquidation value, fundamental value, and market value.

Book value refers to the accounting value of a company—that is, the value reported in the balance sheet. The book value of equity, also referred to as the company's net worth, is equal to its total assets minus its total liabilities. It represents a company's residual value, assuming that assets can be sold for their reported values and that the proceeds are used to satisfy all liabilities at their recorded values

Break-up value refers to the amount that could be realized if a company were split into saleable units that could be disposed of in a negotiated transaction. This concept is especially relevant for companies composed of a variety of individual business units, divisions, or segments.

Liquidation value refers to the amount that could be realized if a company were liquidated in a distress sale. A company's liquidation value is usually lower than its book and breakup values because assets that must be disposed of quickly are usually sold at a discount.

Fundamental value also called intrinsic value, refers to the value based on the aftertax cash flows that the company is expected to generate in the future, discounted at an appropriate rate that reflects the riskiness of those cash flows. It is a forward-looking concept and requires an assessment of a company's potential future cash flows

Market value refers to the value established in an orderly marketplace such as a securities market. For example, the market value of equity, also called the market capitalization, is equal to the share price multiplied by the number of shares outstanding.

Process of Valuation of a company

The process of valuing a company usually involves five steps:

- Identify and screen potential target candidates thoroughly to ensure that the proposed transaction is appropriate from a strategic standpoint.
- Analyse the historical performance of the target to ensure that it is an appropriate partner from a financial standpoint, as well as to gain a thorough understanding of the target's business model, operations, and capital structure.
- Forecast the future performance of the target by preparing pro forma financial statements. Nothing is more important in assessing a target's value than a complete and accurate modelling of the company's operations. This critical step requires a fine-grained understanding of the target's environment, its business model (including its revenue and cost drivers) and realistic assumptions about the target's future operations and, potentially, capital structure.
- Apply one or several valuation methods to get an estimate or estimates of the target's value.
- Assess the sensitivity of the key pro forma and valuation assumptions on the target's value. Step 4 requires the analyst to select one or several valuation methods.

Valuation methods

Several valuation methods are available, depending on a company's industry, its characteristics (for example, whether it is a start-up or a mature company), and the analyst's preference and expertise

These methods are classified into four categories, based on two dimensions. The first dimension distinguishes between direct (or absolute) valuation methods and indirect (or relative) valuation

methods; the second dimension separates models that rely on cash flows from models that rely on another financial variable, such as sales (revenues), earnings, or book value.

Relative Valuation Methods

The notion that "time is money" or, stated alternatively, that "time is an expensive and limited commodity" is one of the principal reasons for relative valuation methods. Other reasons are that they are simple to apply and easy to understand. In essence, relative valuation methods give corporate executives and analysts a "quick and dirty" way to estimate the value of a company.

Relative valuation methods rely on the use of multiples. A multiple is a ratio between two financial variables. In most cases, the numerator of the multiple is either the company's market price (in the case of price multiples) or its enterprise value (in the case of enterprise value multiples). The enterprise value of a company is typically defined as the market value of its capital (debt and equity), net of cash. The denominator of the multiple is an accounting metric, such as the company's earnings, sales, or book value

Multiples can be calculated from per-share amounts (market price per share, earnings per share, sales per share, or book value per share) or total amounts. • Note that whether the analyst uses per-share amounts or total amounts does not affect the multiple, as long as the same basis is used in both the numerator and the denominator.

Price Multiples – Price earning valuation model

The most popular price multiples are earnings multiples.The price-to-earnings (P/E) ratio , which is equal to a company's market price per share divided by its earnings per share (EPS), is the most widely used earnings multiple. It provides an indication of how much investors are willing to pay for a company's earnings. The Price/Earnings ratio or P/E ratio or PER is a ratio for valuing a company that measures its current share price, relative to its per share net earnings. This method is often used to value companies with an established profitable history

Another price multiple is the price-to-book (P/Book) ratio. It indicates the relative premium that investors are willing to pay over the book value of their equity investment in a company. Unfortunately, a company's book value is highly sensitive to accounting standards and management's accounting decisions

For this reason, the P/B ratio is used selectively; realistically, it is neither a valid nor viable valuation method for most companies, except perhaps for financial institutions and insurance companies. These companies have highly liquid assets and liabilities on their balance sheets, which makes book values more realistic proxies for market values

Enterprise Value Multiples

Price multiples are popular with buy-side and sell-side analysts interested in valuing a company's price per share—that is, the company's equity value per share. In the context of M&A however, corporate executives and analysts are often interested in assessing a target's total value, reflecting both debt and equity. In this case, the enterprise value is a better basis for the valuation, hence the reason enterprise value multiples are widely used when valuing an acquisition target

In the context of M&A however, corporate executives and analysts are often interested in assessing a target's total value, reflecting both debt and equity. In this case, the enterprise value is a better basis for the valuation, hence the reason enterprise value multiples are widely used when valuing an acquisition target. The most popular enterprise value multiple is the EV/EBITDA multiple, although the EV/Sales multiple can be used for unprofitable companies. For example, an EV/EBITDA multiple of 8 indicates that the acquirer is willing to pay eight times the target's current or future EBITDA

Direct Valuation Methods

As their name indicates, direct valuation methods provide a direct estimate of a company's fundamental value. In the case of public companies, the analyst can then compare the company's fundamental value obtained from that valuation analysis to the company's market value

The company appears fairly valued if its market value is equal to its fundamental value, undervalued if its market value is lower than its fundamental value, and overvalued if its market value is higher than its fundamental value. In contrast, relative valuation methods do not provide a direct estimate of a company's fundamental value

They do not indicate whether a company is fairly priced; they indicate only whether it is fairly priced relative to some benchmark or peer group. Because valuing a company using an indirect valuation method requires identifying a group of comparable companies, this approach to valuation is also called the comparables approach

Unlike the relative valuation methods, direct valuation methods give investors an explicit equity value per share or share price objective. Preeminent among the group of direct valuation methods are the discounted cash flow (DCF) models.

Discounted Cash Flow Models

DCF models are premised on one of the most fundamental tenets of

corporate finance: The value of a company today is equal to the present value of the future (but uncertain) cash flows to be generated by the company's operations, discounted at a rate that reflects the riskiness (or uncertainty) of those cash flows.

The most widely used version of the DCF model is sometimes referred to as the free cash flow to the firm model or weighted average cost of capital model. It provides an estimation of the company's total value, based on its free cash flows (FCFs) to the firm discounted at the weighted average cost of capital (WACC).

The FCFs of the firm are the cash flows from operations available to all capital providers, net of the required capital investments necessary to maintain the company as a going concern. • The WACC reflects the hurdle rate that providers of capital require, based on the risk they face from investing in the company

The equity value per share—that is, the value accruing to the common (or voting) shareholders—is given by the operating value of the company minus the value of any claims on the company's cash flows by debt holders, preferred shareholders, non - controlling (minority) interest shareholders, and any contingent claimants

A variant is the free cash flow to equity model which provides a direct estimate of a company's equity value per share. Instead of relying on the FCFs available to all capital providers, it considers the FCFs available to equity holders: the FCFs to the firm minus all the cash flows owed to claimants other than common shareholders. Because the focus is on equity holders, the discount rate is the cost of equity, or the hurdle rate for common shareholders

Non Discounted Cash Flow Models

Real option analysis is another valuation method that relies on cash flows, although it is grounded in option-pricing models instead of DCF models. Analysts rarely use real option analysis to value an entire company. However, this valuation method proves useful when a company has investment opportunities that have option-like features; these features are usually difficult, if not impossible, to capture using DCF models. For example, a company might have rights (but not obligations) to delay investments, expand into new markets, redeploy resources between projects, or exit investments

These rights are valuable options, particularly in an uncertain environment. Real option analysis, which applies to real assets some of the techniques used for valuing financial options, enables analysts to value the wide range of rights a company has. Economic income models also called residual income models, differ from DCF models and real option analysis, in that they rely not on cash flows, but on earnings to estimate a company's fundamental value. However, in contrast with price and enterprise value multiples that are based on accounting earnings, economic income models rely on economic income

Net Asset Value

The Net Assets Method represents the value of the business with reference to the asset base of the entity and the attached liabilities on the valuation date. The Net Assets Value can be calculated using one of the following approaches, viz.:

At Book Value While valuing the Shares/Business of a Company, the valuer takes into consideration the last audited financial statements and works out the net asset value. This method would only give the historical cost of the assets and may not be indicative of the true worth of the assets in terms of income generating potential. Also, in case of businesses which are not capital intensive viz. service sector companies or trading companies this method may not be relevant

At Intrinsic Value At times, when a transaction is in the nature of transfer of asset from one entity to another, or when the intrinsic value of the assets is easily available, the valuer would like to consider the intrinsic value of the underlying assets. The intrinsic value of assets is worked out by considering current market/ replacement value of the assets

FACTORING CLIMATE RISK INTO BUSINESS VALUATION

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Managing Director
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CMA Jagdeep Sharma
Consultant & Advisor

When determining the value of a business, one must consider all the risks and opportunities, of which climate change is one

The Perspective

Climate change presents a material risk to businesses and the economy. The impact of climate change is, therefore, an increasingly important consideration when making investment decisions and determining the value of businesses. Climate change and business valuations are inextricably linked. When determining the value of a business, one must consider all the risks and opportunities, of which climate change is one. It can, however, be difficult to assess climate change risks and opportunities if there is a lack of consistency in the information disclosed.

What is Climate Risk?

Climate change refers to long-term shifts in the earth's weather patterns that can be caused by natural phenomena or human activity. Today, the term is commonly used to mean rising average global temperatures caused by the concentration of greenhouse gas emissions (GHG) in the atmosphere

Risks created by climate change:

Global corporations are facing an era of unprecedented business disruption and transformation as a direct result of climate change. Given the increased investor and societal pressure, corporate leaders recognize it would be perilous to ignore this. Climate risks can impact revenues, costs and risk profiles of companies, generally in a negative direction, causing earnings and cash flow to vary from expectations with growing regularity.

According to the United Nations Intergovernmental Panel on Climate Change, climate change and associated extreme weather risks (e.g., flood, drought, fire, hail, wind, etc.) will continue to increase in frequency, intensity and duration, globally, throughout the 21 st century. The G20 Financial Stability Board's Task Force on Climate-related Financial Disclosures (TCFD) recommends treating climate risk on an equal basis with other material risks and guarding against the assumption that longer-term risks posed by climate change are irrelevant.

Companies are affected by climate change in different ways. Extreme weather could damage assets at a company facility or the introduction of new climate change policies could require technological change. Both effects have in common their ultimate influence on a company's balance sheet. Climate risk impacts the businesses in following ways:

Physical risks resulting from climate change include acute changes to the environment such as extreme heat and storms, drought, wildfires, as well as chronic impacts such as sea-level rise, desertification and changes in precipitation patterns. Climate change also gives rise to transition risks as a result of the actions needed by governments and consumers to manage or mitigate climate change. Both these risks have the potential to disrupt business operations and impact a company's revenues, costs, risk profile and ultimately its value.

Transition risks that relate to the process of adjustment towards a low-carbon economy. Whilst such an adjustment may be a necessary part of the global economy's response to climate change, shifts in policies designed to mitigate and adapt to climate change could affect the value of financial assets and liabilities.

Liability risks might arise when parties are held liable for losses related to environmental damage that may have been caused by their actions or omissions. To the extent that this might reduce the value of such firms' liabilities, it might also have implications for the financial system. Liability risks are of particular relevance to insurance firms. This is because some such risks can (at least in part) be transferred by means of liability protection insurance

The business is affected by climate change through three channels:

Operating decisions : Climate change will have significant and lasting impacts on economic growth and prosperity. It is a defining factor in companies' long-term prospects because of its effect on cash flow

assumptions, terminal values and exit values. These factors make it a business risk and a mainstream business issue. For many companies, climate risks are substantive financial risks because they have a direct and measurable impact on the production and distribution of their goods and services. Global efforts to reduce carbon emissions, for example, will place different levels of stress on the cash flows and valuations of businesses in different industries, depending on a company's ability to respond, shifts in consumer demand and the extent of changes in legislation.

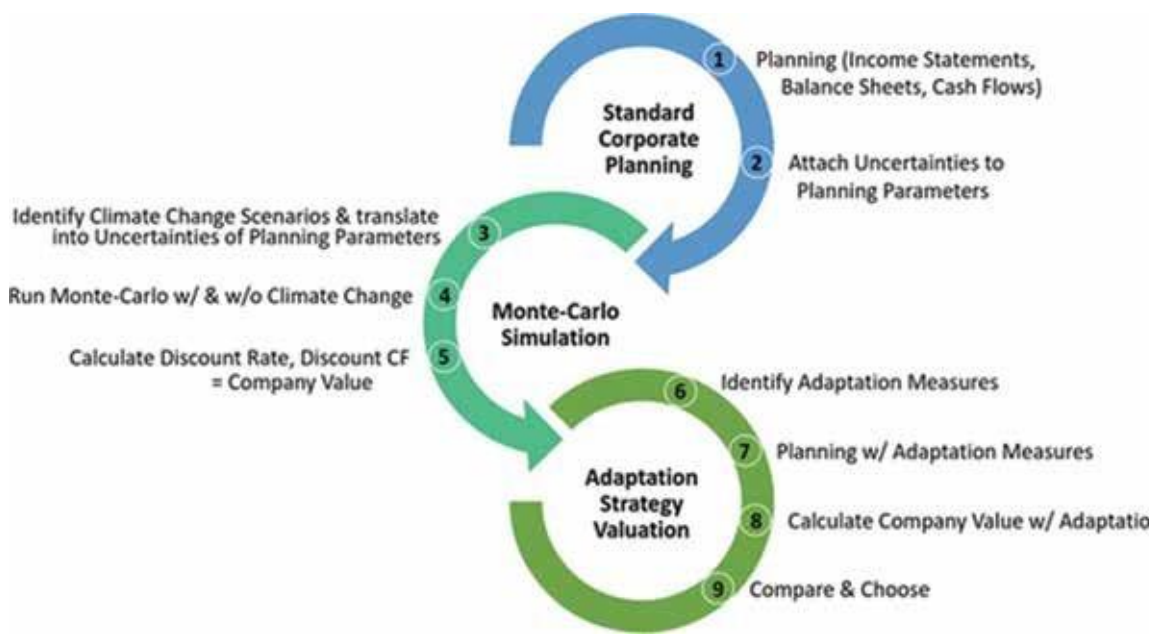
Investment decisions : Investors are asking how they should modify their portfolios and are seeking to understand both the physical risks as well as the ways climate policy, technology and changing consumer preferences will impact prices, costs and demand across the entire economy. This concern is leading to a reassessment of risk and asset values by investors worldwide as climate change considerations become embedded in investment decisions.

Link between Climate Risk and Business Valuation

Climate change risks and opportunities can impact revenues, costs and risk profiles of companies as well as investment attractiveness. The value of a company is defined by the present value of the stream of cash flows that can be produced in the future taking into account the size of the cash flows, their timing and the risk associated with achieving them. There is inherent uncertainty as to the exact impact climate change will have on a business's financial projections and future cash flows and how this needs to be considered in the company's valuation.

Current approach to incorporating Climate Risk in Valuations

To date the general approach to considering climate change in valuations has been qualitative in nature and focused on identifying climate change risks, opportunities and possible mitigants Many investors and companies consider potential climate change factors in their due diligence activities; some have begun to perform sensitivity analyses around key valuation assumptions (eg carbon pricing, financial cost of increased frequency and severity of extreme weather, renewable tax credits, etc); however, explicitly incorporating the impact of climate change has not yet become mainstream. It is, however, only a matter of time until climate change risks and opportunities are more explicitly priced into business valuations. In fact, it is becoming evident today that companies that have high ESG ratings trade at higher multiples than their peers. This implies they may have a lower cost of capital.



The Five step Climate Risk Valuation Framework

Identify : Identify the company's key value drivers. Identifying the key business value drivers will assist in identifying which climate-related risks or opportunities the company or asset may be exposed to and what adjustments, if any, may need to be made to the valuation. The key business drivers should help to identify the areas in which significant risks and / or opportunities are likely to be found.

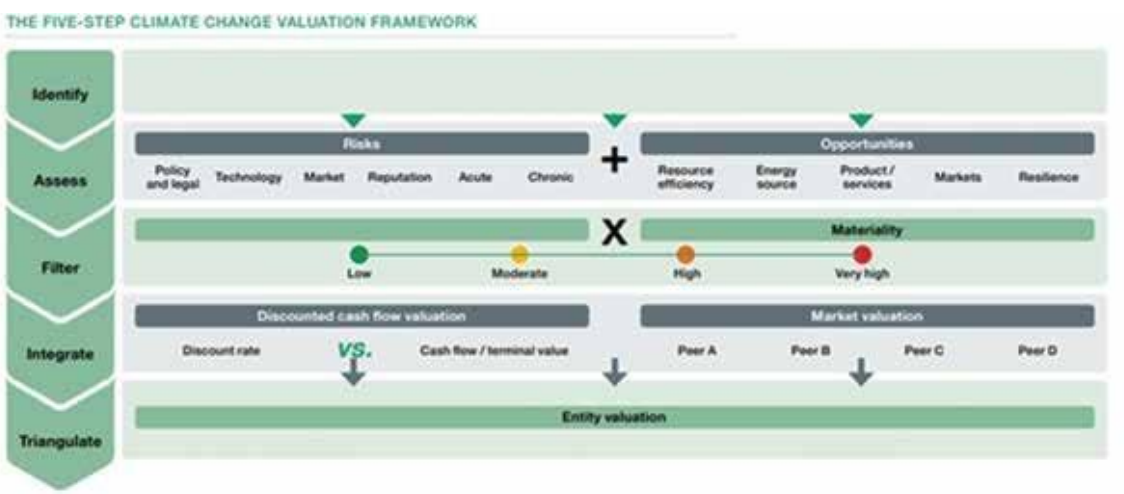
Assess: Assess sources of climate change risks and opportunities. Once the key business drivers of the subject entity have been

identified, an assessment of the climate change risks and opportunities should be performed. This is done by identifying relevant sources of these climate change risks and opportunities for the company or asset, identifying existing or potential sources of mitigation and enablers and relating findings to key value drivers and strategies

Filter: Filter the assessed sources of climate change risks and opportunities for those that should be evaluated more closely for incorporation into the valuation. This step in the framework filters the identified climate change risk and opportunities that a subject entity may encounter. The factors should be filtered, using available information and best judgement to arrive at the expected significant impacts for which the valuation impact can be estimated. For each risk and opportunity, the key two factors to be considered: the likelihood of occurrence and the determined level of financial impact the event may have.

Integrate: Integrate where appropriate the risks and opportunities into valuation models, including discounted cash flow (DCF) and market valuation approaches. Once the risks and opportunities associated with climate change have been filtered, the next point for consideration is how those risks and opportunities translate into a financial valuation impact. There are many approaches to valuation; this framework focuses on the integration of climate change risks and opportunities through the discounted cash flow (DCF) approach and market approach (specifically, comparable company relative analysis)

Triangulate: Triangulate the risks and / or opportunities and their related impacts on the subject entity versus its peers. Triangulation also includes iteration over time as risks / opportunities become more apparent and quantifiable with the improvement in data, disclosures and information generally. The final step of the framework is triangulation. Once the climate change risks and opportunities have been assessed, it is important for the valuator to assess the estimated value of the subject entity in relation to market considerations.



The Road Ahead

Corporate valuation methods have been well defined and applied. When valuing climate change risks however, much work has still to be done. We certainly need further attention to translating climate change into climate impacts and further into corporate valuations than mere risk analysis. Climate change is happening. We need to develop and deploy the best available tools to both mitigate and adapt to the new reality. Understanding and planning for the likely profound implications of climate change on your business is crucial. Investors want climate leadership, they want tangible transition plans, but at the same time they are only willing to reward companies that can do so without sacrificing returns.

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PIPE LINE COLOUR CODE IDENTIFICATION FOR SELECTED FLUIDS

Beware –Valuers of Piping & Plant & Machinery before valuation

H.K. Narang

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IOVRVF No.-IOVRV01229PM

(Vasai, Maharashtra)

Before physical inspection of any Pipe line of a Chemical Plant or Pharma Plant for various said purposes, specifically when the plant is in operation, carefully observe the base ground colour of pipe, colour of first colour band & second colour band, etc. before the process of valuation begins.

The industrial pipes may contain strong acid or alkali which might lead to serious burn injury to the body of the respective Inspector or Engineer carrying out the process of valuation or any other type of inspection.

Here my sincere advice to my fellow Valuers of Plant & Machinery will be to go through PipeLine Colour code for at least selected fluids in order to avoid any hazardous event.

In this regard the Bureau of Indian Standards (BIS) has a publication on

Indian Standard on Pipelines – Identification - Colour Code (IS 2379:

1990). This standard covers the colour scheme for the identification of the contents of pipelines carrying fluids/ gases in domestic/ industrial buildings and such industrial installations where a specific colour code does not exist. For detailed information refer the said Standard (copies of the Standard can be procured from BIS Headquarters at New Delhi or any of its Regional / Branch/ Inspection offices). The system of colour coding consists of a ground colour with colour bands superimposed on it.

The ground colour identifies the basic nature of the fluid carried and also distinguishes one fluid from another, for example water from oil. The various ground colours are indicated in Tables given below.

Table 1 : Ground Colours

Substance	Colour	
Water	Sea Green	
Steam	Aluminum to IS 2339	
Mineral, Vegetable and Animal Oils, combustible liquids	Light Brown	
Acids	Dark Violet	
Air	Sky Blue	
Gases	Canary Yellow	
Alkalies	Smoke Gray	
Other liquids/Gases which do not need identification	Black	
Hydrocarbons / Organic Compounds	Dark admirality Gray	

Colour Bands shall be superimposed on ground colour at different location and to distinguish:

i) One kind or condition of a fluid from another kind or condition of the same fluid, or

ii) One fluid from another but belonging to the same group, for example carbon monoxide from coke oven gas or diesel fuel from furnace fuel.

The colour bands shall be arranged in the sequence shown in Table 2,3,4& 5 and the sequence follows of flow. Herewith, we are giving colour code for the selected fluids.

Table 2 : Colour Code for General Services.

Contents	Ground Colour	FirstColour Band	Second Colour Band	Second Colour Band
Water				
Cooling	Sea Green	French Blue	-	
Boiler Feed Water	Sea Green	Gulf Red	-	
Condensate	Sea Green	Light Brown	-	
Drinking	Sea Green	French Blue	Signal Red	
Fire Water	Fire Red	Crimson Red	-	
Hydraulic Power	Sea Green	Black	-	
Sea, River, untreated	Sea Green	White	-	
Chilled Water	Sea Green	Black	Canary Yellow	
Sprinkle and Hydrant Water	Sea Green	White	Signal Red	
Waste Water	Sea Green	-	-	
AIR				
Compressed up to and including 15 kg/cm2	Sky Blue	-	-	
Compressed to over 15 kg/cm2	Sky Blue	Signal Red	-	
Plant Air	Sky Blue	Silver Grey	-	
Instrument Air	Sky Blue	French Blue	-	
Very high pressure steam	Aluminum to IS 2339	Signal Red	-	
High Pressure Steam	Aluminum to IS 2339	French Blue	-	
Low Pressure Steam	Aluminum to IS 2339	Canary Yellow	-	
Drainage	Black	-	-	
OILS / FUELS				
Light Diesel Fuel	Light Brown	Brilliant Green	-	
High Speed Diesel Fuel	Light Brown	-	-	
Furnace Fuel	Light Brown	French Blue	-	
Lubricating Oil	Light Brown	Light Gray	-	
Hydraulic Power	Light Brown	Dark Violet	-	
Transformer Oil	Light Brown	Light Orange	-	

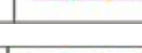
Table 3 : Colour Code for Industrial Gases

Contents	Ground Colour	First Colour Brand	Second Colour Brand	
Ammonia	Canary Yellow	Dark Violet	-	
Chlorine	Canary Yellow	Dark Violet	Light Orange	
Hydrocyanic Acid	Canary Yellow	Dark Violet	Post Office Red	
Phenole	Canary Yellow	Dark Violet	Smoke Grey	
Sulphur Dioxide	Canary Yellow	Dark Violet	Golden Brown	
Acetylene	Canary Yellow	Service Brown	-	
Flare Gases	Canary Yellow	-	-	
Hydrogen Sulphide	Canary Yellow	Gulf Red	-	
Argon	Canary Yellow	French Blue	-	
Blast Furnace Gas	Canary Yellow	Signal Red	Light Grey	
Butane	Canary Yellow	Signal Red	-	
Coal Gas	Canary Yellow	Signal Red	Brilliant Green	
Carbon Dioxide (Temperate)	Canary Yellow	Light Grey	-	

Contents	Ground Colour	First Colour Brand		Second Colour Brand
Carbon Monoxide	Canary Yellow	Signal Red	White	
Coke Oven Gas	Canary Yellow	Signal Red	Dark Violet	
Ethylchloride (inflammable	Canary Yellow	Light Grey	Signal Red	
Ethylchloride(non-inflammable)	Canary Yellow	Light Grey	White	
Ethylene	Canary Yellow	Dark Violet	Signal Red	
Ethylene Oxide	Canary Yellow	Dark Violet	Brilliant Green	
Hydrogen	Canary Yellow	Signal Red	French Blue	
Methane	Canary Yellow	Signal Red	Light Brown	
Methylbromide	Canary Yellow	French Blue	Black	
Methylchoride (Inflammable)	Canary Yellow	Brilliant Green	Signal Red	
Methylchloride (non-inflammable)	Canary Yellow	Brilliant Green	French Blue	

Contents	Ground Colour	First Colour Brand	Second Colour Brand	
Nitrogen	Canary Yellow	Black	-	
Oxygen	Canary Yellow	White	-	
Propane	Canary Yellow	Signal Red	Black	
Phosgene	Canary Yellow	Black	white	

Table 4 : Colour Code for Hydrocarbons, Naptha, Other Chemicals and Allied Products.

Contents	Ground Colour	First Colour Brand	Second Colour Brand	
Benzene	Dark Admirality Grey	Canary Yellow	-	
Acetone	Dark Admirality Grey	Black	Canary Yellow	
Methanol	Dark Admirality Grey	Deep Buff	-	
Neptha	Dark Admirality Grey	Light Brown	Black	
	ACIDS			
Phosphoric	Dark Violet	Silver Grey	-	
Hydrofluoric	Dark Violet	Signal Red	French Blue	
Sulphuric	Dark Violet	Brillant Green	Light Orange	
Nitric	Dark Violet	French Blue	Light Orange	
Hydrochloric e	Dark Violet	Signal Red	Light Orange	
Acetic	Dark Violet	Silver Grey	-	
	CHEMICAL & ALLIED PRODUCTS			
Caustic Solution	Smoke Grey	Light Orange	-	
Mercury	Black	White	Brillant Green	
Carbon Disulphide	Black	Light Orange	-	
Strong Caustic	Smoke Grey	French Blue	White	
Sodium Sulfide	Black	Brillant Green	Canary Yellow	

ARTICLE

ECONOMICS OF REAL ESTATE VALUATION – DIGITAL-BASED INFRASTRUCTURE SURVEY

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Abstract:

- The real Estate Sector is the second primary business segment next to the Agricultural
- Urban Land economics functions a major role in the country's development
- Infrastructural expansion takes part every day based on land use
- Conversion of agricultural and other bare land tracts tends to the demarcation of boundaries
- Identification of properties has been ensured with web portal applications
- A minor deviation in the assessment may become a biased report
- The use of digital instruments encouraged to ensure error-free appraisals
- The degree of the accuracy of reports is essential in the valuation process
- Since loans/purchases/selling of assets are based on Valuation reports, must be hassle-free
- This article discusses some of the important devices and digital tools

Introduction: Infrastructure (Land & Building) Survey:

- Refers to marking the boundaries of the land to a larger extent
- Identification of pinpointing the boundary limits and corners of any land piece
- To confirm the boundary configuration and shapes of certain land pieces as per revenue maps
- Benchmarking geological features, monuments, archeological sites, etc
- To demarcation of ownership documents into the bifurcation of land parcels in required sizes
- To settle disputes that arise between adjacent land owners legally by measuring the boundary dimensions followed by proceedings of a court of law to avoid conflicts
- To align the road stretches in new formations and also widening of existing roads
- To sort out the improvements horizontally & developments thereon
- To check easement rights and would cover access for utility installation and maintenance, ingress and egress, or could even solve an encroachment issue
- To find suitable plain surfaces for installation of Helipads, Meteorological remote sensing stations, Telecommunication Towers, Electricity transmission towers, tunnels, Defence use, etc

Objectives:

- International valuation Standards IVSC 2022 prescribes property identification and demarcation at first before proceeding to the affirmation of asset ownership
- This article discusses various digital instruments available to create a high degree of accuracy
- The authors explain how these digital instruments can be utilised for survey
- Also, the electronic services provided by Governmental agencies for obtaining online information and permission for downloading the documents and certificates
- These documents are to be certified by a Registered Valuer and to be attached with valuation reports

Survey involves:

Global Positioning System (GPS):

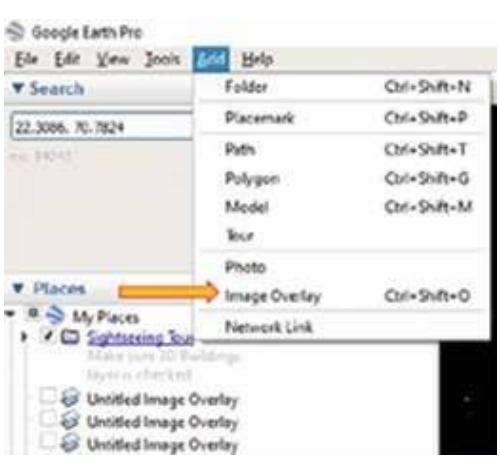
- consists of sets of satellite links that give coordinates of a handheld receiver positioned on a ground point with a degree of accuracy of within 1 meter (1000mm).
- Collected coordinates in each nodal point of a large tract of land over the boundary when limits are accessible, in terms of a street address, postal code, or forest stand identifier as they are applied to geographic models and
- This can be fed into an image mapping computing system that provides video and image data of the earth
- Distance, proximity, contiguity, affiliation, and the area contained in a specific boundary can be computed in a 3D image of the surface of Earth's plane
- GPS is useful in Military navigation, mapping or geodetic survey activities, the study of the atmosphere, geodynamics, meteorology, logistic movements, weather forecasting, examining climate conditions, urban planning, disaster response management, and so on.
- GPS has weaknesses as the limited function if it is used in areas that cannot receive GPS signals by the antenna of the ground station receiver. For example, under a tunnel, in space, or underwater.
- The visualizations can include maps, graphs, statistics, and cartograms that show historical changes and current shifts which adds timing (days to years) and location to traditional types of data and this additional context allows for a more complete picture of events.
- Multinational Companies use these data to forecast future risk associated and contingency plans.

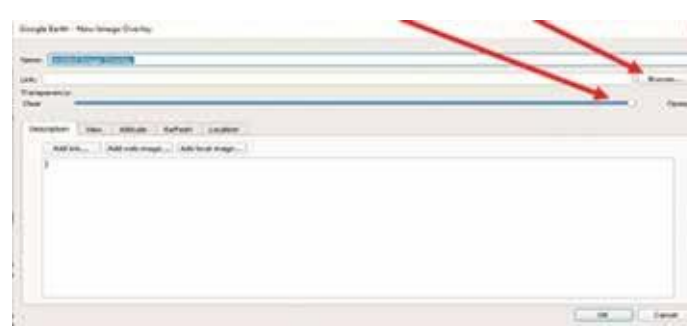
Google map:

- Satellite imagery, aerial photography, street maps, 360° interactive panoramic views of streets, real-time traffic conditions, diversions & traffic jams, and route planning for traveling by foot, car, bicycle, air (in beta), and public transportation.
- Google Maps allows API to be combined with any other website benefits around the world
- Smartphones can download Google Maps and other connected apps available in the play store.
- All mappings available in Google map services utilise drone or satellite images like Birds eye views with the use of high-resolution cameras and aerial photography taken from aircraft flying at 800 to 1,500 feet (240 to 460 m)
- Google Maps for Android and iOS devices was made available in September 2008
- Various other uses are available, like money transfers, games, etc

Google Earth Pro.

- Mapping overlay of the land surface can be done with this app available free download permitted
- To overlap the existing combined FMB on the Google Earth Pro, it is necessary to understand some parameters as follows
- Google Earth. Pro to be opened to that particular zone using coordinates such as Longitudes and Latitudes. The feature is available
  - Add option
  - Image Overlay option





- The transparency level of the image to be overlaid, 50% is ideal.
- If the shape resembles/matches exactly with the sketch prepared by the Autocad file is quite correct.
- Then by typing AREA in the command box, the included area in the combined FMS sketch can be measured by pointing or clicking all corners with the mouse device from the start point.
- The exact included area of the shape of a piece of the land parcel will be displayed in the dialog box when the pointing ends at the start point
- If the shapes contained in combined FMB are a combination of trigonometrical shapes such as rectangle, triangle, semi-circular, circular, etc, then concern formulas can be best utilized provided the measurements are error-free.
- In case, any doubt on mismatch arises, then planimeter or computer methods are selected according to the case.
- In this procedure, a larger extent of land portions can be best surveyed and can be presented without bias to the highest degree of accuracy possible
- The Google images [NASA images] are available from the year 1930 and are up to date

Forensic audit:

- Images of the same location between 1930 to 2022.
- In case the building is said to be constructed a certain previous year, which can be confirmed by turning to a particular and subsequent period, up to today.

- From the above pictures, we can realize the true photo snapshots of 4/2009 and 3/2019, for the same location
- HP Petrol pump installation is seen in the 3/2019 picture.
- This feature is useful when forensic audits are conducted while land acquisition activities as proof of existence.

Geospatial coordinates (Geo-code) system:

- Refers to both Latitudes & Longitudinal coordinates of a specific location of an infrastructure asset
- Tagging and pinpointing the exact spot nearest land or asset
- What3words, google Map, and Google Earth Pro are available to the web- apps currently

What3words is a proprietary geo-code system designed to identify any location with a resolution of about 3 meters (9.8 ft).

- It is owned by What3words Limited, based in London, England.
- The system encodes geographic coordinates into three permanently fixed dictionary words.
- For example, the front door of 10 Downing Street in London is identified by ///slurs.this.shark.
- Founded by **Chris Sheldrick**, **Jack Waley-Cohen**, **Mohan Ganesalingam,** and **Michael Dent**, what3words was launched in July 2013.

- **Design principles**:
- What3words differs from most location encoding systems in that it uses words rather than strings of numbers or letters, and the pattern of this mapping is not obvious; the algorithm mapping locations to words is proprietary and protected by copyright.
- The company has a website, apps for iOS and Android, and an API for bidirectional conversion between what3words addresses and latitude/longitude coordinatesWhat3words divides the world into a grid of 57 trillion 3-by-3-meter squares, each of which has a three-word address.
- The addresses are available in forty-seven languages.
- Translations are not direct, as direct translations to some languages could produce more than three words.
- Rather, territories are localized considering linguistic sensitivities and nuances.
- Each what3words language uses a list of 25,000 words (40,000 in English, as it covers sea as well as land).
- The lists are manually checked to remove homophones and offensive words.
- For this, there are 4 factors to be incorporated into each and every square grid.
- Similarly, there are the grouping of squares having the same values that can be combined to show similar values

3D scanners:

- A surveying instrument that can accurately measure and collect data from objects, surfaces, buildings, and landscapes.
- This tool collects information in the form of point cloud data, which consists of millions of 3D coordinates.
- These coordinates can be used to create 3D computer-aided design (CAD) models, which can then help analyze topographic features and structures.
- The high accuracy of 3D scanners helps reduce project costs
- 3D scanners work by creating point clouds based on images taken of a solid surface or object - basically huge numbers of data points that denote where an object is - to create a 3D model of the scanned part.
- Millions of individual data points make up the model, which can then export as an STL, OBJ, or other file type and imported to CAD software, or 3D printed via a slicer.
- 3D scanning includes several different technologies, such as Structured Light scanning and Laser Triangulation, while some are stationary and some are handheld.
- Creality has fitted the CR-Scan 01 with both a handheld mode and a stationary turntable mode, each with its own set of advantages: In handheld mode, the scanner quickly works through larger objects, offering flexibility and on-the-fly capture.
- Switch to turntable mode, and the tripod-mounted Creality CR-Scan 01 creates an automated, higher-accuracy 360° scan as the object rotates on the turntable.
- Both modes offer accuracy of 0.1 mm, a resolution of 0.5 mm, 24-bit high-fidelity color mapping, and marker-free scanning thanks to a clever alignment algorithm.

GLM 250 VF Professional Measure distances fast and easily: The Bosch GLM 250 VF Professional laser measure precisely measures distances ranging from 0.05 m to 250 m with an accuracy of ±1 mm.

- To measure irregular shapes, Horizontal & vertical distances
- For measuring flat surfaces in the factory/Plant floor
- For laying out and layout of any shape or surface

Placom Digital Planimeter KP – 90 N series:

- koizuimi Placom Planimeter India, Placom Digital Planimeter KP – 90 N series roller type
- **A Digital planimeter** is an electronic version of the mechanical planimeter, which is to pivot at any point of a scale-drawn map and then runs the end pin all over the perimeter of the area to measure.
- It has got a flexible linkage which allows it to move without any effort in all directions.
- The digital planimeter is made up of a large number of small counters that can be programmed to display the area of any plane figure and is convenient to use for any kinds of irregular or regular plane surface measurements like walls, rooms, houses, and farmland, etc
- A Digital planimeter has hundreds, thousands, or even millions of counters which enable to the calculation of the area with great precision, accuracy up to 0.25 mm/min
- The pointer is moved in response to the rotation of a handle or dial
- Planimeter is the best land surveying app and field area measure tool.
- Measure distance, perimeter, bearing, angle, and GPS coordinates in different formats on Google Maps.
- Can save, edit, label, view, and share your measurements as KML data files and screenshots
- **Multilingual**: English, Portuguese, Russian, German, Italian
- The app has many positive comments from users and has been successfully used in different areas:
- **Outdoor activities**: sports, golf (distance between two points or holes), bike tours, trail planning, traveling, quick path measure, mapping our run
- **Garden and yard**: landscape planning, grass cutting, lawn care, and mowing, fencing, grass seeding.
- **Agriculture, poultry, and farming**: harvesting, fertilizing, crops (corn, wheat, maize, beet, etc.) planning and estimation, crop fields labeling for the records, field area measure, paddocks, and area fencing for cows, horses, chickens, rabbits, etc.
- **Solar energy**: area estimation for solar panels, flat roof area estimation
- **Construction**: land survey, road sealing, parking lot repairing
- The Planimeter is also used in the manufacturing industry to measure objects in factories
- **Forestry**: objects and tree mapping, damage area estimation, measuring land area

- **Other**: ponds size and area measure; pole lines planning; directions and navigation to the marked/shared point; movement tracking; getting exact GPS coordinates of way-points; fence calculation; measure distance on google map, geocaching.

By Using Measuring Wheel:

- A measuring wheel is another method of measuring the area.
- In principle it is like a planimeter that one has to go over the perimeter of the area with it, only to do it on the actual land.
- Built like a single bicycle wheel, it has to be run all over the edges of the land to be measured and it gives the reading in units chosen when you reach the starting point.

Value Contour diagram:

- The role of a valuer has increased rapidly.
- Not only is he indispensable in dealing with compensation and betterment but he can be of great assistance in presenting an analysis of the valuation aspect of planning proposals, and his work should be closely integrated with that of a Valuer
- The Land value is used to visualize and explore property value patterns across the community

- This map includes value for parcels of land that do not have improved infrastructural facilities
- The graphical version of mapping assists in planning strategy and helps the Government in identifying the socio-economic backward areas and additional care to be taken by Government planners
- Map showing land values in the different sections of the town prepared
  WARD wise,
  REGION wise,
  DISTRICT wise,
  STATE wise, and for the WHOLE country.
- Areas are shaded by colors of different codes in zones of known ranging prevailing market values along with survey numbers.
- This will help the valuer to compare and analyze the land value fixed by him during valuation to be in consonance with the existing ranging values.
- The Land value is used to visualize and explore property value patterns across the community
- This map includes value for parcels of land that do not have improved infrastructural facilities
- The graphical version of mapping assists in planning strategy and helps the Government in identifying the socio-economic backward areas and additional care to be taken by Government planners
- The lines are carved based on the equal values of that property which are available as data points.
- The values to be contoured are 10, 25, 40, 55, and so on.
- Specifying a base contour does not prevent contours from being created above or below that value. Contour type is used to produce either contour lines or polygons.
- announced those features would be transferred to the Google Local Guides program.
- By connecting points of equ- prices may form a closed link of concentric polygons
- The Land Value map is used to visualize and explore property value patterns across the Community.
- This map includes value for parcels that do not have improved structures, the improved structure attribute is derived from the land value field.
- By connecting points of equal prices may form a closed link of concentric polygons
- The contour lines are generated based on the z-values in the input raster, which are often measured in units of meters or feet.
- With the default value of 1, the contours will be in the same units as the z-values of the input raster.
- A two-variable function f of x, y.
- And this one is just gonna equal x times y.
- So, we can visualize this with a contour map just on the x- y plane

Government of India and Government of Tamilnadu State: jointly created web portals: e-Service

Patta: Chitta is a land revenue record specifying land area, property owner name, type of land, etc. The Village Administrative Officer (VAO) and the Office in the Taluk are responsible for the maintenance of the document. Details available in Chitta are 1. Owners Name & 2. Survey number of the property.

A Patta is a revenue record, while a Chitta enlists the area, size, and ownership details of the property. Both these documents pertaining to Tamil Nadu land records were merged in a single document called Patta Chitta in 2015. If you are planning to buy a property in Tamil Nadu, a patta chitta certificate will be of significant use. Patta records are recently computerized and available through on line website/e- services. Tamilnadu Government

Step 2: Select District, Taluk & Village

Step 3: Choose an option from Strap Number/ Survey Number Or Name Wise as the criteria for viewing the Chitta details.

Step 4: Enter the authorization code or the captcha and click on Submit

Step 5: Once you receive a certificate with the property information from the Land Registrar, you can take a printout of the document. This certificate includes details, such as the locality, nature, survey number, and other details related to the property.

How to verify Patta Chitta online?

If want to verify the Patta Chitta certificate, go to the Verification status of Patta Chitta page and submit the Reference Number to check its veracity easily through the following steps:

Step 1: Visit the Tamil Nadu Patta Land Record Official Portal

Step 2: Select the option Check Patta / Chitta details.

Step 3: Enter your Reference number (The reference number is generated at the time of application submission) and click on submit button.

Step 4: After the submission of all the required details, you will be able to see your Patta Chitta verification status.

Field Map Book Sketch: Maps can be created interactively from FMB (Field Measurement Book) data and tippon sketch. Once the map is created it will be similar to any other map in Bhunaksha. It can be linked with ROR data, further subdivided, and exported to a shape file.

Field Measurement Book (FMB) sketch is a compilation of map data that is stored in volumes by the Government at the respective Tahsildar office. In FMBs, the individual survey number sketches are maintained at a scale of 1:1000 or 1:2000. Each sub-division number is owned by a property owner.

TSLR - Town Survey Land Register is a document that is similar to pasta that's provided for gramathu natham land from the tahsildar office

Adangal is a type of land record that is maintained by the Village Administrate Officer. Adangal is also known as Village account No.2. and is written each year by the Village Administrative Officer. The documents contain the following details: Patta lands.

SLR Patta: This is an extract issued from the Register of Landholdings maintained, usually at the Office of the Tahsildar concerned. This is issued in the name of the person or persons in whose name the records relating to the holdings are maintained or may be available the issuance of patta signifies the lawful possession.

Village Map: Currently we are having 15979 village map information on our website. Ariyalur Coimbatore Cuddalore Dharmapuri Dindigul Erode Kancheepuram Kanniyakumari Karur Krishnagiri Madurai Nagapattinam Namakkal Perambalur Pudukkottai Ramanathapuram Salem Sivaganga Thanjavur The Nilgiris Theni Thiruvallur Thiruvarur Thoothukkudi Tiruchirappalli Tirunelveli

Combined FMB: Actually Field Measurement Sketchbook is an A4-sized notebook containing Sub division portions of various survey numbers drawn in a Not to scale Format. Measurements are true and the shape does not reflect the exact shape as in the ground earmarked by boundary stones. Simply saying, it is a free-hand sketch. The degree of accuracy is poor. But it will resemble a ground situation. The area contained or drawn is normally in Cents or a few Acres only. But not larger extents, say 50 Acres, 100 Acres, etc

In such a case, the corresponding FMBs are collected either online or by Revenue Authorities of concerned Villages along with Village Map by remitting charges prescribed

These FMBs are then plotted in an AutoCAD drawing file and see the proper connectivity in every nook and corner. If required minor adjustments can be made to replicate the shape as in Village Map

Drone Survey: In Bengaluru: Bruhat Bengaluru Mahanagara Palike (BBMP) has tied up with Bangalore Electricity Supply Company (BESCOM) to share data on residential properties, that have not paid Property Tax. Ex. A Plot in Koramangala was shown as vacant and paid very nominal property tax whereas through data available BESCOM was found to draw electricity. This was a clear indication that the property owner was faking the records to the civic agency. So now, the civic agency is planning to verify the properties across the city using data exchange and using drone surveys.

Valuation criteria:

- Government and energy organizations that depend on geographic boundaries benefit from geospatial analytics by knowing instantly and accurately where municipal lines are drawn and the location of underground pipes, power poles, and their relation to populated areas
- Geospatial analytics benefits transportation and manufacturing sectors when it comes to logistics and supply chain management
- Determine how growing populations affect energy, transportation, and housing resources.
- Geospatial big data analytics helps planners visualize large datasets at speed and scale.
- It also allows for compiling and cross-filtering data

from many sources to see how crime, public health, education, and housing/real estate outcomes vary by location.

- Improve efficiencies in exploration and field operations for oil and gas industries, and helps inform every phase of upstream exploration and production from mapping to drilling.
- Through data visualization, companies can see spatial data points clearly to understand where and why events happened to determine the suitability of a location for business purposes, interpret and understand change, detect patterns, and predict outcomes.
- Application - agriculture, defense/security, energy analytics/energy business intelligence, engineering/ construction, environment monitoring, government data analytics, healthcare, insurance, mining/manufacturing, and natural resources.
- Zip code data, businesses can see where competitors are about customers and decide where to locate a new store.

Conclusions:

- To achieve a high degree of accuracy in land and other infrastructure parameters, the use of digital instruments is highly appreciated
- Whar 3 words can be best utilized by incorporating other useful information related to
- 1. Tamil Nadu Guideline/ Circle of that particular plot
- 2. Market comparable sales rate per square available on current websites
- 3. Current Cost of Construction pertaining to a particular zone
- 4. Tamilnadu PWD plinth area rates of construction as per Govt Circular
- The geospatial imagery analytics market is expected to have a revenue of $9 billion by 2026, driven by demands from the mining/manufacturing and engineering/construction industries.
- **Skyhook** - The mobile positioning and location provider uses geospatial analytics to run up to 10 billion transactions daily and map billions of data points in real time.
- **Simulmedia** - Uses geospatial analytics to process more than 300 million viewing events per day from 20 different sources to show national advertisers the effectiveness of ad campaigns.
- The Economic benefits derived by proper utilization of particular tools avoids extra unwanted cost i.e. waste expenditures can be positive factors

Source: HEAVY.AI Geospatial Analytics

IBM Geospatial data: the really big picture, Protecting the environment, wildlife, and business takes a lot of data — and the ability to visualize it, too, By John Ciempa | 4 minute read | July 8, 2021

alteryx & WhatIs.com

Investopedia Fuzzy Logic, By GORDON SCOTT, Updated November 02, 2021

FREESTONE PROPERTIES What Is a Survey in Real Estate? Understanding the Scope and Value of a Property Survey
October 9, 2021 by Scott Russell

YaleTools Types of Land Measuring Instruments and Their Functions

School of PE Six of the Most Common Surveying Instruments, 16 July, 2021

SOURCED Best 3D Scanners (2022): In Every Use & Price Range, By: 3dsourced: June 14, 2022

What is Planimeter? Advantages & Applications of Planimeter Types of Planimeter| Digital Planimeter| Uses & Benefits of Planimeter August 2, 2021

99acres NATIONAL GOVERNMENT SERVICES PORTAL Directorate of E-governance Tamil Nadu E-Governance Agency

magicbricks Patta Chitta: View Status Online, Tamil Nadu Land Records @ eservices.tn.gov.in
Updated: Jul 18, 2022, 15:00 IST By: Anirudh Singh Chauhan

Significance of revenue land records in valuation and use of technology, CEP 24th July 2022, IIV Registered Valuers Foundation by **Anbazhagan Appandairajan** ME, MSc (REV), LLB, Registered Valuer (Companies Act & WT Act), Chairman, IOV Puducherry Branch

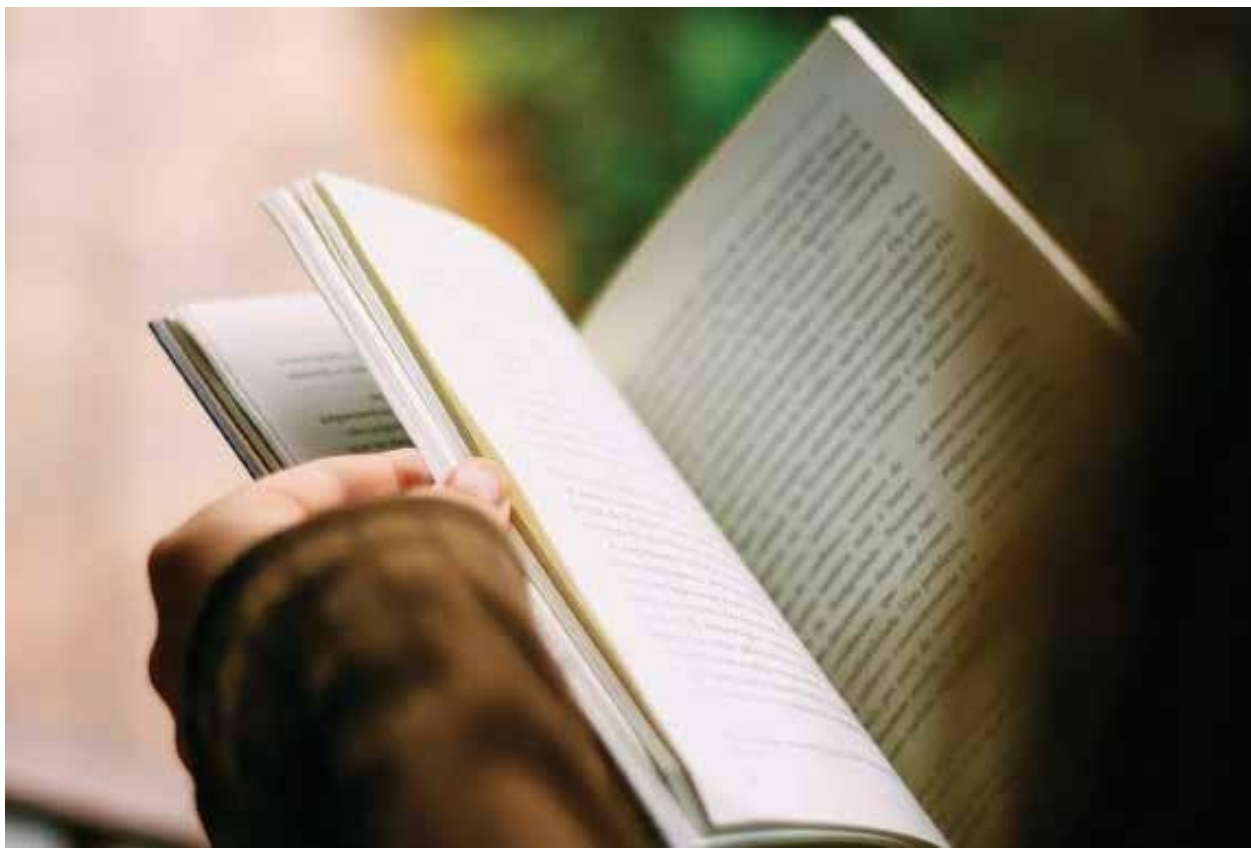
Bright Hub Engineering Land Area Calculator or Measurement Methods: Planimeter, Geometric, Measuring Wheel Methods

Tamilnadu State Government, Revenue and Disaster Management Department, Survey and settlement Wing, [SS -II (2)] Section Order G.O.(Ms) No. 450 dated 21.11.2019 – Using e- service for downloading Village Maps

Bengaluru: BBMP to share data, conduct drone survey to boost property tax collection

In a first, the BBMP has tied up with BESCOM to share data on residential properties. Recently, during data verification, BBMP officials found that a plot in Koramangala was shown as vacant land and hence the owner was paying a nominal property tax.

OTHER READINGS



ICMAI REGISTERED VALUERS' ORGANISATION

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Information Value of the Current Impairment Test: Leading or Lagging Indicator?

The IVSC issues Perspectives Papers from time to time, which focus on pertinent valuation topics and emerging issues. Perspectives Papers serve a number of purposes; they initiate and foster debate on valuation topics as they relate to the International Valuation Standards (IVS); they provide contextual information on a topic from the perspective of the standard setter; and they support the valuation community in their application of IVS through guidance and case studies.

Perspectives Papers are complementary to the IVS and do not replace or supersede the standards. Valuers have a responsibility to read and follow the standards when carrying out valuations.

By: Kevin Prall, BV Technical Director, in consultation with the IVSC Business Valuation Standards Board

Amortisation of Goodwill Revisited

The IVSC has received a number of questions from constituents asking whether the principles underlying business valuations are compatible with the concept of goodwill amortisation. The IVSC Boards have discussed the topic and concluded that the best way to aid public discussion is by publishing a three-part article series to explore the fundamental perspectives with the goal of aiding capital markets by informing financial statement preparers, reviewers, and users.

Questions the IVSC explore in the three- part article series include:

Part 1: Is goodwill a wasting asset with a readily determinable life, or an indefinite lived asset?[1]

Part 2: What is the information value of the current impairment framework?

Part 3: What are practical solutions to enhance the current goodwill impairment framework?

In this, the second of three articles, the IVSC explores the information content of the goodwill impairment test and highlights some reasons for its perceived flaws and limitations as a leading indicator. As the below demonstrates, the current goodwill impairment framework provides inconsistent results as a leading indicator. Rather than attempt to analyse historical observations or draw a consensus from the existing academic studies on the topic, the IVSC has instead analysed the accounting framework to better understand why goodwill impairments in certain situations fail to be a leading indicator. In doing so, we identify four primary reasons for why goodwill impairments often lag market sentiment, and utilise a number of examples to articulate the fact patterns which lead to these outcomes. In the third article in this series, we will then discuss some practical solutions to enhance the current goodwill impairment framework.

Finally, the below clearly indicates that goodwill amortisation would exacerbate the lagging character of the goodwill impairment test.

Information Content of the Current Impairment Test

The existing goodwill impairment framework provides financial statement users[2] with a range of valuable information. Various studies and articles have analysed the information value of the content produced and disclosed as part of the goodwill impairment framework.i However, the current debate is not about whether the goodwill framework provides valuable information, but rather about how much. In this sense, the debate relates to the relative "benefit" in the "cost/ benefit" paradigm in which all financial reporting standards are assessed.

While studies show the importance of the goodwill framework, there is a persistent view that the information value is limited by the test's inability to consistently serve as a leading indicator of future cash flows and returns.[3] A good example which shows how the above may not be a leading market indicator is discussed in

Leading Indicators of Goodwill Impairment by Hayn & Hughes (2006).ii This finding is, however, not supported by more recent studies, like Causes and consequences of goodwill impairment losses by Li, Shroff et al. (2011).iii A potential reason for the difference in conclusion of both studies (a lagging versus a leading indicator) may be in the sample period used. Hayn & Hughes almost exclusively rely on data before the introduction of SFAS 142, whereas Li, Shroff et al. don't. Additional articles such as Market reaction to goodwill impairments by Knauer & Wöhrmann (2016) iv and Has goodwill accounting gone bad? by Li & Sloan (2017) v also provide useful insights, but no definitive evidence to resolve the question of leading or lagging indicator. Finally, Trigger Warnings: When is Goodwill Impairment Disclosure Informative? by Maria Nykyforovych (2017) finds significant price and volume market reactions, but only in certain defined fact patterns.vi

In summary, while in certain instances goodwill impairments are undoubtably a leading indicator, impairments do not appear to consistently serve as a leading indicator of future cash flows and returns.

This article examines potential reasons why goodwill impairment may not be a leading indicator in certain instances, with the goal of identifying accounting and

valuation solutions to improve the current impairment

[1] See: Is Goodwill a Wasting Asset?
https://www.ivsc.org/files/file/view/id/1599

[2] Users may include, among others, equity analysts and investors, credit analysts and investors, Board of Directors, Company Executives, and regulators.

[3] IFRS - *Better information about business combinations (September 2019):*
https://www.ifrs.org/-/media/project/goodwill- and-impairment/ in-brief-goodwill-and- impairment-factsheet.pdf?la=e

framework and alter the resulting cost/benefit equation.

The remainder of this article examines four potential reasons for the persistent timing lag in the disclosure of goodwill impairments:

1. Impairment Shielding – internally generated headroom

2. Artificial Headroom – amortisation of acquired intangible assets

3. Impairment Triggers – overly broad and outward looking

4. Behavioural Considerations – A reluctance to take impairment

What Should Constitute a Goodwill Impairment?

Before examining limitations of the impairment test and exploring areas for improvements, it's helpful to first examine a more conceptual question: when should a goodwill impairment occur?

Most acquisitions are done with the purpose to create value. It follows that a goodwill impairment should result if the aspired value creation cannot be created in a sustainable way. In other words, the price paid for the target was such that the value of the combination (the acquirer's

legacy Tested Unit[4] operations plus target value) falls below the value of the acquirer's legacy Tested Unit operations plus the price paid for the target. Such a definition represents a simple yet rigid view, as the complexities and nuances of goodwill testing often cloud the issue. For example, should a Tested Unit be impaired anytime it falls behind expectations? Or alternatively, should it not be impaired if management sees the situation as temporary or has implemented a strategy to remediate? If the latter, and the Tested Unit is not impaired immediately upon the downturn, when is it appropriate to conclude that the downturn is not temporary and/or the turnaround plan has not succeeded?

The reason for a failure to create incremental value through M&A could be threefold: (i) the target company could be underperforming compared to expectations at the time of the acquisition, (ii) the legacy Tested Unit operations of acquirer did not perform as expected or (iii) a combination of both.

Regardless of whether one has a more mathematical view of when impairment should occur, or one more nuanced with

qualitative considerations, for reasons we explain in this article the current goodwill impairment framework allows for the fair value of the:

1) acquired business,

2) legacy business, or

3) combination of the two

to permanently, and in some cases significantly, decline below the fair value at the acquisition date without triggering an impairment to goodwill. Additionally, when an impairment is ultimately taken, the amount of the impairment charge is often significantly different to the actual diminution in value of the acquired business, legacy business, or combination of the two.

Most financial statements users, preparers, and reviewers, are unaware of this outcome. The potential consequences for users and the capital markets are most significant, as a lack of goodwill impairment is typically interpreted as implicit confirmation that an acquisition is performing as planned, or better than planned, at the acquisition date. A choice to revert to past accounting policies to amortise goodwill, would make these consequences even more severe.

Impairment Shielding – Internally Generated Headroom

Acquired goodwill can be shielded from impairment by unrecognised headroom of the legacy business that becomes part of the Tested Unit post acquisition. Internally generated headroom primarily consists of self-generated and unrecognised intangible assets and goodwill of the legacy business of the Tested Unit.[5] Because these assets are not recognised on the balance sheet, there exists a difference in basis between the fair value of the legacy business of the Tested Unit which implicitly includes the value of such assets, and the carrying value (i.e., book value) of the legacy business of the Tested Unit which does not recognise the assets. As a result of the internally generated headroom, the purchased goodwill can only be impaired once the internally created goodwill and intangibles have been exhausted. By this time, the company has likely made a series of communications regarding the underperformance of the acquisition and/or Tested Unit, or broader industry and market trends have been identified and accounted for by investors. This concept is displayed below in Table 1. Despite the immediate and sustained decline in the performance of the acquired business (row D), the initial headroom and stable performance from an existing business shields the downturn in the acquired business.[6]

Ref		2019	2020	2021	2022	2023	2024
[A]	Legacy Business of Tested Unit Fair Value	100	100	100	100	100	100
[B]	Legacy Business of Tested Unit Carrying Value	75	75	75	75	75	75
[C]	Internally Generated Headroom [A] less [B]	25	25	25	25	25	25
[D]	Value of Acquired Business	100	95	90	85	80	75
[E]	Cumulative Economic Impairment to Acquired Business		5	10	15	20	25
[F]	Tested Unit Fair Value [A] + [D]	200	195	190	185	180	175
[G]	Tested Unit Carrying Value [B] + Purchase Price of 100	175	175	175	175	175	175
[H]	Net Tested Unit Headroom for Impairment Test [F] - [G]		20	15	10	5	0

While, the above table displays a scenario in which the acquisition is of equal value to the legacy business of the Tested Unit, often the legacy business of the Tested Unit is substantially larger than the target. For example, if the legacy business of the Tested Unit fair value was 1,000, it would have

[4] The term "Tested Unit" is used throughout the article for simplicity. Tested Unit should be considered synonymous with a Reporting Unit for US GAAP or Cash Generating Unit under IFRS

[5] While the book value and fair value of other assets and liabilities may diverge (e.g., economic depreciation is not equal to book depreciation), such differences are typically minor as compared to intangible assets and goodwill as the book value is typically zero.

[6] The below examples are for demonstration purposes only and make certain simplifying assumptions such as they do not consider any changes to the carrying value of the Tested Unit.

250 of internally generated headroom at acquisition[7]. Under this fact pattern, the acquired company could be completely dissolved without recognising a goodwill impairment for the Tested Unit. In this context, the unit of account for the impairment test is critically important. If one were to increase the unit of account, the impact of internally generated headroom becomes more severe.

Table 2 (below) shows how internally generated goodwill can also act to delay the recognition of impairment. In the table, the acquired business suffers a decline immediately after acquisition (row D); however, the financial reporting impairment (row F) is not recognised until two or three years after the economic impairment. Additionally, the initial internal headroom of the legacy business of the Tested Unit causes the amount of recorded impairment to be understated. In 2022, a goodwill impairment of 5 would be recorded, yet the Fair Value of the Tested Unit has declined by 30. After 2022, the impairment framework may act to exacerbate the market downturn as the mechanics of the test indicate an increasing rate of decline for the Tested Unit (Impairment of 10 in 2023 compared to 5 in 2022) despite there being a constant and steady decline in value for the Tested Unit.

Ref		2019	2020	2021	2022	2023	2024
(A)	Legacy Business of Tested Unit Fair Value	100	95	90	85	80	75
(B)	Legacy Business of Tested Unit Carrying Value	75	75	75	75	75	75
(C)	Internally Generated Headroom [A] less [B]	25	20	15	10	5	0
(D)	Value of Acquired Business	100	95	90	85	80	75
(E)	Cumulative Economic Impairment to Acquired Business		5	10	15	20	25
(F)	Tested Unit Fair Value [A] + [D]	200	190	180	170	160	150
(G)	Tested Unit Carrying Value [B] + Purchase Price of 100 less cumulative impairments in prior years	175	175	175	175	170	160
(H)	Net Tested Unit Headroom for Impairment Test [F] - [G]		15	5	-5	-15	-25

The inability of the current test to timely identify impairment, and the tendency to under report any impairments when they first occur, may be supported by historical observations as evidence from the Duff & Phelps 2018 U.S. Goodwill Impairment Study is also indicative of this matter. Reviewing the results by industry provides valuable insights. For example, the study found that 56% of energy companies with goodwill on the balance sheet recorded an impairment in 2015, and such impairments wrote off 14.9% of the total goodwill balances at those companies.[8] However, the S&P 500 energy index fell by almost half from June 2014 to January 2016. Despite this drastic decline, 44% of companies in the energy sector with goodwill were able to avoid recording an impairment. Furthermore, as most energy companies likely have more than one reporting unit and may have only recorded impairment in a single reporting unit, the frequency of impairments is actually even lower. Additionally, despite index market values falling by almost 50%, the average impairment of goodwill balances was only 14.9% or 0.7% of total assets.[9]

These broad market observations can be contrasted with the fact pattern for Kraft Heinz and its recently announced impairments. In February 2019 Kraft Heinz announced a goodwill impairment of $7.3 billion and an $8.7 billion impairment to its intangible assets. Immediately following the announcement, Kraft Heinz share price fell 27%. The reduction in market cap was $16.2 billion, almost equivalent to the combined impairment. The events led Warren Buffet to subsequently state that "I overpaid for Kraft Heinz."

An examination of the Kraft Heinz case shows why the recognition of goodwill impairment was a leading indicator in this instance. From April 2013 to December 2017, the company's goodwill balance increased from $3 billion to $45 billion. In the 2017 10-K, the company wrote *"As a majority of our goodwill was recently recorded in connection with the 2013 Merger and the 2015 Merger, representing fair values as of those merger dates, there was not a significant excess of fair values over carrying values as of April 2, 2017."* In other words, the unit of account for the impairment test was similar to the unit of account for the acquisitions and there was little internally generated goodwill and intangibles to shield potential impairments.

Unlike this example, in most instances the purchased company and related goodwill is subsumed into an existing Tested Unit. The internally created goodwill and intangibles create a buffer that either completely shields the reduction in purchased goodwill in the event of a downturn, or at a minimum delays the timing and lowers the amount of the impairment.

In the third and final article, the IVSC plans to analyse how the impact of internally generated headroom could be mitigated, outline the various considerations around increasing or decreasing the unit of account for the impairment test, and consider solutions that more directly examine value creation/ diminution of subject acquisitions.

Artificial Headroom – Amortisation of Acquired Intangible Assets

Although much of the public discussion on the shielding of goodwill impairment has focused on how goodwill can be obscured by unrecognised headroom of the legacy business of the Tested Unit, the current impairment framework also creates a natural headroom over time as acquired intangible assets are amortised and new intangibles are not recognised on the balance sheet.[10]

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[7] The Table 1 example assumes unrecognized intangible assets and goodwill equal to 25% of the legacy business Tested Unit fair value. Assuming a 1,000 fair value for the legacy business of the Tested Unit, and the same 25% assumption, the internally generated intangible assets and goodwill would be 250.

[8] Duff & Phelps 2018 U.S. Goodwill Impairment Study: https://www.duffandphelps.com/-/media/assets/pdfs/publications/valuation/gwi/2018-us-goodwill-impairment-study.ashx

[9] Duff & Phelps 2018 U.S. Goodwill Impairment Study: https://www.duffandphelps.com/-/media/assets/pdfs/publications/valuation/gwi/20 18-us-goodwill-impairment-study.ashx

[10] While acquired tangible assets are depreciated after acquisition, they are replaced by newly acquired tangible assets that, unlike intangibles, are capitalised on the balance sheet. While financial depreciation will differ from economic depreciation and result in book value versus fair value differences, such differences are typically minor as compared to intangible assets.

As discussed in the first article, many of the components of goodwill enable the generation of future intangible assets. Intangible assets are the primary drivers of value creation for most going concern businesses. However, the current impairment model effectively allows for the assessment of goodwill without consideration of the newly generated intangible assets, which replace the amortising acquired intangible assets that over time. For example, in Table 3 the decline in the value of the acquired business is slower than the annual amortisation of the intangible assets. Therefore, despite being unable to drive new intangible asset value creation post acquisition to maintain or grow the value of the acquired business, the goodwill is not impaired.

Ref		2019	2020	2021	2022	2023	2024
[A]	Value of Acquired Business	100	97	94	91	88	85
[B]	Carrying Value of Tested Unit	100	94	88	82	76	70
[C]	Cumulative Economic Impairment to Acquired Business *Purchase price of 100 less line [A]*		3	6	9	12	15
[D]	Net Tested Unit Headroom for Impairment Test *[A] - [B]*		3	6	9	12	15
	Financial Reporting Impairment		No	No	No	No	No

The amortisation of intangible assets has a greater tendency to shield impairments as time passes, thus leading to decreased information value of the goodwill framework the further away from the acquisition date. Furthermore, an examination of the components of goodwill from the first article shows that the vast majority of goodwill is assumed to be indefinite in nature. It follows that while the current impairment framework is better able to identify impairments shortly after acquisition, the components of goodwill are modeled to exist indefinitely, and thus not likely to be impaired in the years immediately after acquisition. In other words, the current test has decreasing utility as time passes, yet goodwill is economically more likely to be impaired as time passes.

While the above example assumes the acquired business becomes a separate Tested Unit, the amortisation of intangible assets has the same effect if combined with legacy operations.

Revisiting the scenario from Table 2, but with consideration of the amortisation of acquired intangible assets, the result (table 4, below) is that the economic impairment is not delayed but rather totally shielded from impairment.

Ref		2019	2020	2021	2022	2023	2024
[A]	Legacy Business of Tested Unit Fair Value	100	95	90	85	80	75
[B]	Legacy Business of Tested Unit Carrying Value	75	75	75	75	75	75
[C]	Internally Generated Headroom *[A] less [B]*	25	20	15	10	5	0
[D]	Value of Acquired Business	100	95	90	85	80	75
[E]	Carring Value of the Acquired Business	100	94	88	82	76	70
[F]	Headroom Created by Amortisation	0	6	12	18	24	30
[G]	Tested Unit Fair Value *[A] + [D]*	200	190	180	170	160	150
[H]	Tested Unit Carrying Value *[B] + [E]*	175	169	163	157	151	145
[I]	Net Tested Unit Headroom for Impairment Test *[G] - [H]*		21	17	13	9	5
	Financial Reporting Impairment		No	No	No	No	No

Leveraging the conclusions outlined above, one can clearly see how a move to amortise goodwill would severely reduce the information value of the goodwill impairment process and exacerbate the shortcomings of the test (shielded impairment and a lagging indicator).

Revisiting the example above, Table 5 below shows show amortisation of goodwill over a 10-year life would shield an even greater downturn in the acquired business. While the business suffers a steep decline in value, incremental headroom created by the annual amortisation further shields the decline in the acquired business.

Ref		2019	2020	2021	2022	2023	2024
[A]	Legacy Business of Tested Unit Fair Value	100	95	90	85	80	75
[B]	Legacy Business of Tested Unit Carrying Value	75	75	75	75	75	75
[C]	Internally Generated Headroom *[A] less [B]*	25	20	15	10	5	0
[D]	Value of Acquired Business	100	95	90	85	80	75
[E]	Carring Value of the Acquired Business	100	92	84	76	68	60
[F]	Headroom Created by Amortisation (Including Goodwill)	0	8	16	24	32	40
[G]	Tested Unit Fair Value *[A] + [D]*	200	190	180	170	160	150
[H]	Tested Unit Carrying Value *[B] + [E]*	175	167	159	151	143	135
[I]	Net Tested Unit Headroom for Impairment Test *[G] - [H]*		23	21	19	17	15
	Financial Reporting Impairment		No	No	No	No	No

In addition to exacerbating the most significant shortcoming of the impairment test, the knock-on effect of amortising goodwill would also reduce the frequency of the other information content components. For instance, as goodwill impairment is further shielded by amortisation, it will lower the frequency in which Tested Units fall within the margin for 'at-risk' disclosures.

Finally, the introduction of goodwill amortisation would also further reduce the test's utility significantly as time passes from the date of acquisition. As noted above, the accumulation of amortisation has a compounding effect to shield impairment over time.

Solutions to mitigate the impact of an amortising asset base have not been recently explored within the goodwill impairment framework. However, an obvious possible solution may include an adjustment to the carrying value, or fair value, for the cumulative acquired amortised assets to provide for a more like-for-like comparison of goodwill. Much like the possible solutions for internally generated headroom, the IVSC will consider solutions that more directly examine value creation/ diminution of subject Tested Units in the third and final article.

Impairment Triggers – Overly Broad and Outward Looking

The shortcomings of the current impairment model as a leading indicator can be evidenced by how regularly stock price deterioration is cited as the trigger for a goodwill assessment. The goal of the goodwill impairment process is not to react to market sentiment, but rather to inform market sentiment.

A review of the example triggers cited in accounting standards shows them to be overly broad and primarily focused on external market and industry conditions. In some cases, such as stock price, the triggers themselves are a lagging indicator.

The study "Trigger Warnings: When is Goodwill Impairment Disclosure Informative?" [11] examines the information content of financial statement disclosures

related to goodwill impairment testing. The paper contends that impairment reasons can be grouped into three categories: firm, industry, or economy- related. The study finds significant price and volume market reactions to a firm's decision to impair goodwill, but only if a firm discloses firm-specific triggering events. The author concludes that these results indicate that financial statement users require more detailed firm-specific disclosures related to goodwill impairment testing. However, these conclusions are

[11] *Trigger Warnings: When is Goodwill Impairment Disclosure Informative: https://pdfs.semanticscholar.org/e0cd/06224109bebae4471cac895e90872229707a.pdf*

also relevant for the reassessment of appropriate triggering events.

As the current triggers are primarily focused on external market and industry conditions, it stands to reason they are thus more likely to identify impairments that are industry or economy related. As the study shows, these types of impairments have far less information value than firm specific events because investors are often able to identify the impact of economic and industry trends on the company prior to disclosure of goodwill impairment. In other words, the goodwill impairment triggers systematically identify lagging indicators which result in impairments that are already priced by investors.

The observation that the current impairment triggers may systematically identify types of impairments that have less information value, points to a clear opportunity to enhance the benefit of the impairment framework with little or no incremental costs. Additionally, as accounting standard setters are actively considering forgoing the requirement for annual impairment tests in favour of a trigger-only based test, the effectiveness of impairment triggers may become significantly more important to ensuring timely impairment disclosures. In the third and final article of this series, the IVSC will explore how impairment triggers and related disclosures may be revised to help identify impairments in a timelier fashion.

Behavioural Considerations – A Reluctance to Take Impairment

Anecdotal evidence shows that goodwill impairment charges are often accompanied by a change in management, overall strategy and/or a decision to restructure or sell all or a part of an acquired business. Given this reality, impairment charges often involve significant input from senior management and executives, unlike many other accounting judgements. These changes are often fundamental to the outlook for the Tested Unit and thus can result in a meaningful change in the financial projections and the resulting estimate of fair value. As a result, these actions are often not taken until more tactical moves have proven ineffective.

The catalyst which causes management to decide to change direction is difficult to forecast and may also be influenced by the fact that goodwill impairment is a one-way downside test. If the test allowed for the recovery of impaired goodwill, it may encourage more timely impairment charges. It may also reduce both preparation and review efforts.

As goodwill impairment often requires input from senior management and executives, some users also believe an agency problem exists. The CFA Institute has noted this reluctance to take goodwill impairments and highlighted what it perceives to be a moral hazard. Those responsible for conducting and overseeing the goodwill impairment process, in most cases are also part of the investment evaluation and decision process. As such, these individuals may have an inherent bias, thus raising a potential principle-agent issue. Specifically, CFA Institute recently stated: "*Sophisticated investors (i.e. price makers) will generally write-off goodwill long before management, understanding the moral hazard of management's assessment."*[12]

The current mechanics of the goodwill framework which creates artificial headroom through the amortisation of intangible assets, may also have an impact on management's reluctance to take goodwill impairments. For example, rather than recognise an impairment, management may attempt to delay the impairment charge in hopes that the additional cushion created by intangible amortisation the following year will take pressure off the calculation. If true, the introduction of goodwill amortisation would exacerbate the reluctance to take goodwill impairment charges. All else equal, goodwill amortisation would act to further reduce the carrying value year to year (see Table 5 above), and further encourage management to delay an impairment charge in the hope that the additional cushion will create the needed headroom. In the third and final article, the IVSC will explore options to mitigate some of the behavioural considerations that drive a reluctance to take impairment, including considerations of how the ability to restore previously impaired goodwill balances may result in more timely impairments.

Conclusions

As concluded in the first article, goodwill is not a wasting asset. Additionally, while the current impairment model provides significant information content (both quantitative and qualitative) to a diverse group of users, it provides inconsistent results as a leading indicator. However, based on the current limitations of the goodwill model as a leading indicator identified above, the final article will look to provide practical solutions to enhance the information value of the goodwill impairment test.

The IVSC will continue to consider the topics in this article and feedback outside our formal consultations is always welcome. You can share your thoughts with the Board, or contribute to the discussion through the IVSC LinkedIn group page.

You can contact the author through the IVSC Business Valuation Board: contact@ivsc.org

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[12] CFA Institute comment letter to the UK Competition and Markets Authority (CMA) related to the Statutory Audit Service Market Study

i The extensive research in this area shows that goodwill impairments provide inconsistent results as a leading indicator. The content can be specific to a subject transaction(s) or more broadly related to the overall performance of a subject Tested Unit. The content of the goodwill impairment framework includes:

- *Disclosure of at-risk Tested Unit.*
  - *o Such disclosures often provide key insights into Management's thought process and*
  - *assumptions for the Tested Unit performance.*
- *Disclosure of goodwill impairment.*
  - *o Impairment disclosures may provide previously unknown information which cause investors to re-evaluate the future earnings of the business and thus result in price and/or volume changes.*
  - *o In the event the impairment charge is not a leading indicator (i.e. investors have already incorporated such information into their expectations for the future earnings of the business), the disclosure provides confirmatory evidence that supports the mbarkets' perception that a transaction and/or Tested Unit has not performed as expected at acquisition.*
- *Lack of goodwill impairment and lack of at-risk Tested Unit disclosures.*
  - *o While a disclosure of at-risk Test Units and goodwill impairment provide insights of underperformance, the lack of disclosure alternatively in some cases provides insights on managements' ability to exercise good governance in M&A and/or the effective management of the Tested Unit business.*

ii Leading Indicators of Goodwill Impairment by Hayn & Hughes (2006), finds that disclosures on acquired entities (mainly through the impairment test) do not provide sufficient information to predict future goodwill write-offs. As a result, goodwill impairments often come too late, allowing managers to time the write-off, using their discretion when basing their impairment test for a significant amount on non-verifiable information, a feature inherent to fair value accounting.

iii Causes and consequences of goodwill impairment losses by Li, Shroff et al. (2011), finds that (1) the announcement of a goodwill impairment leads the market to revise its expectations for the company downwards as reflected in a significant negative share price reaction, (2) this negative revision is stronger when the impairment is larger, and (3) an important cause of an impairment seems the amount of overpayment for the target company, using observable measures which are known to infer overpayment indications.

iv Market reaction to goodwill impairments by Knauer & Wöhrmann (2016), covers both companies reporting goodwill impairments under US GAAP and IFRS during the 2005-2009 period. The study clearly reports negative capital market reactions to goodwill impairments; however, these reactions seem larger in countries where managerial discretion may be more likely, due to an environment with lower investor protection. Furthermore, the less verifiable the information provided by management is, the more negative the reaction.

v Has goodwill accounting gone bad? by Li & Sloan (2017), uses a sample of US firms only, however, during a larger period (1996-2011), and thus seeks to compare the pre-SFAS 142 years with the post ones. The study concludes that goodwill impairments have become less timely after the introduction

Fundamentals of the Asset-Based Business Valuation Approach

Weston C. Kirk and Kyle J. Wishing

Valuation analysts ("analysts") value closely held business and business ownership interests for various transaction, financing, taxation, accounting, litigation, and planning purposes. Analysts should consider the application of all three generally accepted business valuation approaches in these analyses: the income approach, the market approach, and the asset-based approach. However, most analysts rarely apply the asset-based approach, at least in valuations of going-concern operating companies. This discussion describes the theory and application of the asset-based approach. And, this discussion explains how this approach can be used to value operating companies—as well as asset-holding investment companies—on a going-concern basis. The asset-based approach is not usually recommended as the sole basis for the business valuation. However, due to data or other constraints, the income approach and the market approach are not always available to value an operating company. In addition, the asset-based approach may be used as a complementary or confirmatory analysis in conjunction with both income approach and market approach valuation analyses.

Introduction

Valuation analysts ("analysts") are often asked by clients, by their clients' legal counsel ("counsel"), or by their clients' other professional advisers to value closely held businesses and professional practices, business ownership interests, and securities for various reasons. The value of the closely held busi- ness or professional practice may be important for a variety of client purposes.

These client purposes may include transaction pricing and structuring, taxation planning and com- pliance, financing collateralization or securitization, forensic and economic damages analyses, corporate strategy and personal financial planning, financial accounting and public reporting, and regulatory compliance or controversies.

The value of the business, business ownership interest, or security could be important to the client (or counsel) with regard to business estate plan-ning, a business ownership transition, or a business merger and acquisition structuring. In addition, the current and ongoing value of the business may be important when the client (or counsel) is designing or implementing buy/sell agreements or other share- holder agreements.

The business or security value can be important for various taxation planning, compliance, and con- troversy reasons. These taxation-related reasons include gift tax, estate tax, generation-skipping transfer tax, and income tax.

Some of the income tax issues may include worthless stock deductions, charitable contribu- tions, stock or asset basis determination, insol- vency related to debt cancellation income, inter- company transfer price determination, reasonable- ness of shareholder/employee compensation, and others.

The value of the business or security may be important when the client is involved in a family

law dispute, commercial bankruptcy matter, share-holder dispute, lender liability claim, infringement claim, many types of breach of contract claims, and many types of breach of fiduciary duty or other tort claims.

Such litigation-related matters may include dis- senting shareholder appraisal rights claims and shareholder oppression claims.

Generally Accepted Business Valuation Approaches

Regardless of the purpose of the closely held busi- ness or security valuation, analysts should con- sider all three generally accepted business valuation approaches. These approaches (or categories of related business valuation methods) are as follows:

1. The income approach
2. The market approach
3. The asset-based approach

Although less commonly applied than the income approach or the market approach, the asset-based approach is a generally accepted business valuation approach. The asset-based approach is described in most comprehensive business valuation text- books. In addition, consideration of the asset-based approach is required by most authoritative business valuation professional standards.

For example, professional standards such as the American Institute of Certified Public Accountants ("AICPA") Statement on Standards for Valuation Services ("SSVS") and the Uniform Standards of Professional Appraisal Practice ("USPAP") require the valuation analyst to at least consider the appli- cation of the asset-based approach (in addition to other business valuation approaches).

That is to say, such professional business valu- ation standards require the consideration of—but not necessarily

the application of—the asset-based approach.

In practice, however, many analysts (and many clients and legal counsel) immediately reject the use of asset-based approach methods in a busi- ness, professional practice, or security valuation. These analysts conclude that this approach is too difficult, too time consuming, too client disrup- tive, or simply (and only without adequate expla- nation) not applicable to the subject closely held company.

In truth, many analysts (and clients and counsel) do not seriously consider applying the asset-based approach in the typical closely held business or security valuation. This is because these analysts (and clients and counsel) are not sufficiently famil- iar with the generally accepted methods and proce- dures within this business valuation approach.

In addition, many analysts (and clients and counsel) labor under misconceptions about when— and when not—to apply this valuation approach. And, many analysts (and clients and counsel) also hold misconceptions about interpreting the quantitative results of the asset-based valuation approach.

Hopefully, this discussion will correct many of the common misconceptions about this business valuation approach. This discussion will present the most important considerations that analysts, cli- ents, and clients' professional advisers need to know with regard to the asset-based approach valuation of closely held companies, professional practices, and business securities.

As will be discussed below, the proper applica- tion of this business valuation approach requires a slightly different set of skills than does the application of the income approach or the market approach. Not all analysts have the experience or expertise to perform a comprehensive asset-based approach business valuation analysis.

It is also true that the completion of the asset- based approach often requires more analyst time and associated cost than other business valuation approaches. That additional analyst time typically translates into additional professional fees charged to the client. Therefore, clients often discourage the use of the asset-based approach when they come to learn of both (1) the additional elapsed time and (2) the additional costs associated with this particular valuation analysis.

Also, the successful performance of this valua- tion approach often requires more data from—and more involvement by—the subject closely held company executives. Again, when these additional commitments are understood, many clients may discourage the use of the asset-based approach.

In many dispute-related business valuation assignments, the analyst may not be granted suf- ficient access to the closely held company facilities or to the closely held company executives in order to practically implement this valuation approach.

In addition, particularly in a retrospective assignment, the subject company data that the analyst needs—and the subject company personnel that the analyst needs access to—are simply no longer available. In many of these controversy- related contexts, it may simply be impractical for

the analyst to perform some asset-based approach valuation methods.

This first discussion in this three-part series of Insights discussions relates to the application of the asset-based business valuation approach within a transaction, taxation, or controversy con- text. This Insights discussion describes the theory of—and the general application of—the asset-based approach.

The second discussion in this three-part series of Insights discussions describes and illustrates a common asset-based approach valuation method— the asset accumulation ("AA") method. The AA method involves the identification and valuation of each individual category of the company assets (both tangible and intangible).

And, the final discussion in this three-part series of Insights discussion describes and illustrates the adjusted net asset value ("ANAV") method. The ANAV method involves a single aggregate allocation of all of the company's total collective assets.

Theory of the Asset-Based Approach

The asset-based approach is sometimes called the asset approach to business valuation. Either name for this approach is generally accepted among valu- ation analysts and in the valuation literature.

The asset-based approach encompasses a set of methods that value the company by reference to its balance sheet. In contrast, income approach and market approach valuation methods primarily focus on the company's income statement and/or cash flow statement.

One of the very first procedures in any closely held business valuation is to define the business ownership interest subject to valuation. That is, the assignment should specify whether the valuation intended to conclude a defined value for the subject company:

1. total assets,
2. total long-term interest-bearing debt and total owners' equity,
3. total owners' equity, or
4. one particular class of owners' equity.

Each of the above descriptions is a valid objec- tive of a business valuation. And, each conclusion is often referred to as a "business value." Yet, each of these business value conclusions will be quanti- tatively different for the same company. And, each of these business value conclusions will be perfect- ly appropriate in the right circumstance—usually based on the actual or hypothetical

transaction that is being analyzed.

For example, knowing the company's total asset value is necessary in an acquisition structured as an asset purchase (instead of as a stock purchase). The company's total invested value ("TIC")—often called the market value of invested capital (or "MVIC")—is the value of all long-term debt plus all classes of owners' equity. Knowing the value of the TIC is important in a deal structure where the buyer will acquire all the company's equity and assume all of the company's debt.

Knowing the value of the total owners' equity is important when only the company's equity securi- ties (say all common stock and all preferred stock) are at issue in the transaction.

And, knowing the value of one particular class of equity only (say only the company's common stock) is important when only that class of security is the subject of the proposed transaction.

In any event, the asset-based approach is based on the principle that the value of the subject com- pany is equal to:

the value of the subject company's total assets
minus
the value of the subject company's total liabilities

If properly applied, this valuation formula can be used to indicate the value of any of the valuation objectives listed above. There are two particularly important words in the asset-based approach valua- tion formula defined above:

1. Value
2. Total

First, the asset-based approach is based on the value of (and not the recorded balance of) all of the assets and all of the liabilities of the subject com- pany. The standard of value in the analysis has to be defined. And, the valuation date of the analysis has to be defined. The standard of value is determined by the assignment.

Common standards of value for various business valuation purposes include fair market value and fair value. Other common standards of value include the following

- Investment value
- Owner value
- Use value
- User value

"In the information age, . . . intangible asset categories often represent the major sources of value for any subject business entity."

Whatever the assign- ment-specific standard of value is, the value conclu- sion is likely going to be different from the recorded account balances present- ed on the subject compa- ny's balance sheet. Those balance-sheet-recorded account balances are proba- bly presented in compliance with GAAP, which typically includes a combination of historical cost-based measures and GAAP-based fair value measures.

Second, the asset-based approach is also based on the total of all of the subject company's assets and liabilities. GAAP-based balance sheets typically exclude major categories of company assets and company liabilities. For example, GAAP-based bal- ance sheets do not record most internally created intangible assets.

In the information age, such intangible asset cat- egories often represent the major sources of value for any subject business entity. This statement is obvious for technology-related entities. However, this statement is also true for most companies.

Under U.S. GAAP, the values of an entity's inter- nally created employee relationships, supplier rela- tionships, customer relationships, and goodwill are not recorded on the entity's balance sheet. Likewise, the value of the entity's contingent liabilities are not recorded under U.S. GAAP. Therefore, employee lawsuits, environmental claims, unresolved income tax audits, and other claims against the company are typically not recorded on the entity's balance sheet.

Unlike the company's GAAP-based balance sheet, the asset-based approach value-based balance sheet recognizes the current value of:

1. all of the company's assets (tangible and intangible) and
2. all of the company's liabilities (recorded and contingent).

To conclude the assignment—defined value for the company's assets and liabilities (whether individually or collectively)—the analyst applies generally accepted asset (and liability) valuation methods.

These valuation methods are categorized into the three categories of generally accepted property valuation approaches: the income approach, the market approach, and the cost approach.

When to Apply the Asset- Based Approach

First, it is noteworthy that, under most business valuation professional standards, the analyst should consider the application of generally accepted valu- ation approaches. Accordingly, the relevant analyst question is not: when should I perform the asset- based approach? Rather, the relevant analyst ques- tion should be: when can I not perform the asset-based approach?

That is, as a general principle, the asset-based approach should at least be considered (if not completed) in every business valuation assign- ment. The reasons why an

asset-based approach analysis is not performed should be described in the business valuation report. And, these reasons should be substantive and not perfunctory. In other words, the statement that "the subject company is an operating company" may not be a sufficient explanation.

Second, the analyst's selection of the applicable valuation approach is a function of four primary factors:

1. The type of subject company
2. The type of subject business interest
3. The type of subject transaction
4. The availability of necessary data

Many clients (and their counsel and other pro- fessional advisers) believe that the asset-based approach is only applicable to so-called asset- intensive companies. This statement is technically correct. However, this conclusion ignores the reality that virtually every company is an asset-intensive company.

The fact is that the asset-based approach is applicable to tangible-asset-intensive companies and to intangible-asset-intensive companies.

Virtually all companies are either tangible-asset-intensive or intangible-asset-intensive (or a combi- nation of both asset types). Therefore, at least for analysts who are qualified to perform intangible asset valuations, the asset-based approach is appli- cable to most types of companies.

Many clients (and their counsel and other pro- fessional advisors) also believe that the asset- based approach is only applicable to so-called asset holding (or investment management) companies.

Rather, this valuation approach is applicable to any company that owns assets. Therefore, the asset-based approach may apply in the valuation of asset holding companies, and the asset-based approach may apply in the valua- tion of asset operating companies. And, just about every company falls into one (or both) of these two descriptive categories.

In other words, at least for analysts who are qualified to per- form asset valuations on a going- concern premise of value basis, the asset-based approach is appli- cable to the valuation of most types of closely held companies or professional practices.

The type of valuation subject interest may influence the selec- tion of the valuation approach.

This is because the asset-based approach (without adjustment) concludes a controlling, marketable ownership interest level of value. Therefore, asset- based approach is particularly applicable to the val- uation of an overall business enterprise—a valuation objective that often relates to a business purchase or sale transaction.

Alternatively, the asset-based business valua- tion approach is not particularly applicable to the valuation of a nonmarketable, noncontrolling block of nonvoting common stock—a valuation objective that often relates to (say) a tax planning, compli- ance, or controversy assignment.

As the previous paragraphs imply, the type of the subject transaction (or the type of the subject assignment) influences the selection of the valua- tion approach.

An overall business valuation is well-served by the asset-based valuation approach. That is, this valuation approach is particularly applicable to a company merger and acquisition analysis, a stock exchange ratio analysis, a fairness opinion, a sol- vency opinion, or to the analysis of any other trans- action involving the overall business enterprise.

It is noteworthy that the asset-based approach is particularly applicable to the analysis of a company acquisition that is structured as an asset purchase transaction (as compared to a stock purchase trans- action). This is because the deal price is directly related to the value of the subject company tangible assets and intangible assets.

The asset-based approach is also applicable to the analysis of any transaction that is structured as a taxable transaction (as compared to a nontaxable transaction tax structure). This is because the trans- action deal price will depend on the prospective depreciation and amortization expense and income tax rates associated with the revalued tax basis of the transferred assets.

The asset-based valuation approach is particu- larly applicable to analyses performed for asset- based secured financing purposes. In such an instance, different creditors could have different claims on different asset classes. And, this valua- tion approach is particularly applicable for various taxation-related assignments, such as a closely held company conversion from C corporation tax status to S corporation tax status.

Finally, the quantity and quality of available data affects the analyst's selection of a business valuation approach. For example, the fact that there are no sufficiently comparable publicly traded companies in the subject industry sector affects the analyst's ability to use the market approach guideline pub- licly traded company method.

The fact that there are no sufficiently compa- rable merger and acquisition transactions in the subject industry

sector affects the analyst's ability to use the market approach precedent transaction method.

Likewise, the fact that there is no prospective financial information in existence at the subject company affects the analyst's ability to use the income approach discounted cash flow method.

If the analyst has no access to company asset-specific information (e.g., no available information regarding the company's individual tangible assets or intangible assets), this fact will affect the ana- lyst's ability to use the asset-based approach AA method.

If the analyst is working for the outside party in a transaction or in a litigation proceeding, this fact may affect the analyst's ability to obtain suffi- cient data (or sufficient asset access) to use the AA method. And, if the valuation is retrospective—and all of the company's tangible and intangible assets have materially changed since the valuation date— this fact may affect the analyst's ability to use the AA method.

Nonetheless, the above-mentioned data limita- tions primarily relate to the AA method. Asset- specific data limitations, asset access limitations, and retrospective valuation dates are less important in the application of the ANAV method (than they are to the application of the AA method).

Therefore, these issues may affect the analyst's selection of which asset-based approach valuation method to apply. But, these issues do not neces- sarily eliminate the application of all asset-based approach considerations.

Finally, the most relevant reasons why analysts do not apply the asset-based valuation approach in law-related engagements are as follows:

1. There are additional costs and time require- ments associated with this approach.

2. The audience for the valuation (including company board of directors, legal counsel, and the judicial finder of fact) may not be particularly familiar with asset-based valua- tion analyses.

The Asset-Based Approach Is Not the Cost Approach

The asset-based approach is a generally accepted business valuation approach. The cost approach is a generally accepted property valuation approach. This is a very important distinction.

The objective of the asset-based approach is to estimate a business equity (or total net asset) value. The objective of the cost approach is to estimate the value of an individual tangible asset or intangible asset.

In the asset-based approach, the individual asset categories may be valued using the cost approach, the market approach, or the income approach. In the typical asset-based approach analysis, the ana-lyst may expect that all of the property valuation approaches will be used.

Some asset categories will be valued by reference to cost approach methods. Some asset categories will be valued by reference to market approach methods. And, some asset categories will be valued by reference to income approach methods.

In fact, as a general rule, at least one of the sub- ject company's asset categories will be valued by reference to an income approach property valuation method, typically either:

1. a capitalized excess earnings method ("CEEM") or
2. a multiperiod excess earnings method ("MEEM").

In the typical asset-based approach analysis, these income approach property valuation methods are used to conclude whether:

1. there is intangible value in the nature of goodwill for the subject company (i.e., a positive CEEM indication) or
2. there is an economic obsolescence adjust- ment that needs to be made to the cost approach tangible and intangible asset val- ues (i.e., a negative CEEM indication).

There are several generally accepted cost approach valuation methods. The following cost approach methods can be used to value many tangible asset categories and intangible asset cat- egories:

1. Reproduction cost new less depreciation method
2. Replacement cost new less depreciation
3. Trended historical cost less depreciation method

However, these cost approach methods are not particularly applicable to all tangible and intangible asset categories. Many tangible and intangible assets are more efficiently valued by reference to the mar- ket approach. And, in particular, many intangible assets are more efficiently valued by reference to the income approach.

For example, in a business valuation, it is possible to value a company's goodwill by reference to the cost approach (e.g., the capitalization of the lost income opportunity cost during a total asset recreation period). However, in the typical business valuation, it is more common for analysts to value a company's goodwill using the CEEM of the income approach.

In summary, the cost approach can be used to value various categories of company tangible assets (e.g., machinery and equipment) or intangible assets (e.g., a trained and assembled workforce). However, it is practically impossible to value all of the assets of a going-concern company by using the cost approach exclusively. Such an analysis may ignore the income generation capacity of the company, and it may not appropriately encompass either:

1. the company's goodwill (positive capitalized excess earnings) or
2. the company's economic obsolescence

(negative capitalized excess earnings).

The asset-based business valuation approach typically incorporates cost approach property valu- ation methods to value certain tangible and intan- gible asset categories. However, the asset-based approach also incorporates other property valua- tion approaches (i.e., the income approach and the market approach) to value certain other tangible and intangible asset categories of the subject com- pany.

Analysts (and clients and counsel and other pro- fessional advisers) who confuse the nomenclature or the methodology of the cost approach versus the asset-based approach may not understand either valuation approach.

The Asset-Based Approach Is Not Limited to Asset Holding Companies

The premise of the asset-based approach is that the value of the company's assets minus the value of the company's liabilities equals the value of the company's equity.

This formula doesn't only work for the valuation of holding companies that passively own investment assets. This formula also works for the valuation of operating companies that both own and operate tangible and intangible property.

In practice, the asset-based approach often works as well for operating companies as it does for investment holding companies. The primary differ- ences in the two types of companies are the catego- ries of the individual assets that are included in the valuation analysis.

For example, the illustrative categories of assets and liabilities included in an investment holding company valuation analysis may include the items listed in Exhibit 1.

Exhibit 1
Client Investment Holding Company
Illustrative Asset and Liability Categories

	Assets
	Cash and money market instruments
	Publicly traded stocks and bonds
	Oil and gas exploration/production interests
	Land and land improvements
	Options and other derivative securities
	Interests in private entities
Less:	Liabilities
	Accounts payable and taxes payable
	Mortgages payable
	Notes payable
Equals:	Net asset value

An alternative example applies the same asset- based approach valuation formula to an operating company. Illustrative operating company categories of assets and liabilities may include the items listed in Exhibit 2 on the following page.

All assets can be valued using the generally accepted property valuation approaches and meth- ods. This statement is equally true for tangible assets and for intangible assets. And, this statement is equally true for investment assets and for operat- ing assets.

When an analyst asserts that the asset-based approach is only applicable to investment holding companies, often the assertion should really be: "I only know how to apply the asset-based approach to investment holding companies; I really don't know how to value operating tangible and intangible assets."

The more correct analyst assertion may be: "The asset-based approach is ideally suited to the valua- tion of investment holding companies; however, the asset-based approach is also applicable to the valua- tion of operating companies."

Exhibit 2
Client Operating Company
Illustrative Asset and Liability Categories

	Assets
	Cash, receivables, and inventory
	Land and buildings Machinery and equipment
	Trademarks and trade names Trained and assembled workforce
	Current customer (contract) relationships
	Goodwill
Less:	Liabilities
	Accounts payable and accrued expenses
	Taxes payable
	Bonds, notes, and mortgages payable
	Contingent liabilities
Equals:	Net asset value

The Asset-Based Approach Does Not Conclude a Liquidation Value

Many analysts (and clients and counsel) believe that the application of the asset-based approach con- cludes a liquidation value (that is, not a going-con- cern value) for the subject company. These analysts (and clients and counsel) maintain this (erroneous) belief whether the asset-based approach is applied to an investment holding company or to an operat- ing entity.

These analysts (correctly) believe that the asset- based approach is based on a defined value for the subject assets. And, the defined value (whatever standard of value applies) is usually based on the expected sale price of the subject asset between some defined parties.

However, these analysts (incorrectly) assume that any sale of any asset is a liquidation transaction that yields a liquidation value. This analyst belief is simply misplaced.

Let's use the fair market value ("FMV") stan- dard of value as an example. An FMV transaction occurs between a hypothetical willing buyer and a hypothetical willing seller. Presumably, the asset buyer is always willing to enter into the subject FMV transaction.

If the asset seller decides to sell the subject asset by the end of the week (say, because a loan payment is coming due), that transaction may result in a liquidation value. Even if the seller exposes the subject asset for sale during a normal market exposure period—if the buyer will not continue to operate the asset in a going-concern business—that asset sale transaction may result in a liquidation value.

Now, let's extend the example to assume that the seller has been operating the subject asset as part of a going-concern company. Let's assume that the seller exposes the asset for sale during a nor- mal market exposure period. The buyer acquires the subject asset and then uses the acquired asset as part of the buyer's going-concern company. Certainly, even the above-mentioned analysts would recognize these asset sale transaction-based FMV indications as going-concern value (and not liquida- tion value) indications.

In addition to individual operating assets being sold from one going-concern seller to one going-con- cern buyer, going-concern companies themselves are often bought and sold. The purchase price allo- cation of that company sale price will indicate the going-concern value of the acquired assets. These overall company transaction-based FMV indications obviously conclude going-concern value (not liqui- dation value) conclusions.

In summary, it is true that the asset-based approach may conclude a liquidation value for the subject company if all of the individual asset values were concluded on a liquidation premise of value basis.

Likewise, it is also true that the asset-based approach will conclude a going-concern value for the subject company if all of the individual tangible asset and intangible asset values were concluded on a going-concern premise of value basis.

Valuation of Liabilities in the Asset-Based Approach

Most analysts (and clients and counsel) focus on the valuation of the company assets during the applica- tion of any asset-based approach valuation method. However, the valuation of the company liabilities can also be an important procedure in this valuation approach.

The first procedure in the liability valuation is to understand the appropriate standard of value objective and the subject assignment purpose. That is, the analyst may conclude a different value for the same liability if the standard of value is fair value versus fair market value versus investment value versus some other standard of value.

For example, if the valuation purpose is a solven- cy analysis prepared within a bankruptcy context, then the analyst will typically consider the recorded balances in the company liability accounts. After all, those are the liability amounts that the credi- tors can claim in a bankruptcy proceeding. And, one objective of the bankruptcy solvency analysis is to determine if the value of the debtor company assets (based on a fair valuation amount) exceeds the amount of the debtor company liabilities (based on a recorded amount).

Outside of a bankruptcy solvency analysis, however, the analyst may be more concerned with the current value of the company liabilities than with the recorded balance of the company liabilities. Depending on the applicable standard of value, the analyst may be more concerned with an expected trading price for the company's debt instruments.

That is, the analyst may conclude: how much would an investor pay to own, say, the company's note payable? Or, the analyst may conclude: how much would the debtor have to pay to the credi- tor (i.e., how much would the creditor be willing to receive) to extinguish the company's note payable?

In an analysis of the current value of the subject company liabilities, the analyst typically considers factors such as the following:

1. The debt instrument's term to maturity
2. The entity's historical debt service record
3. The debt instrument's embedded interest rate versus a current market interest rate
4. The debt instrument's liquidation prefer- ence
5. Whether the debt instrument is callable (and what are the call triggers)
6. Any security interests related to the debt
7. The company's current credit rating
8. The company's current financial condition
9. The company's budget or financial projec- tions
10. Any prepayment or other penalties related to the debt
11. Any recent trades of guideline debt instru- ments
12. The subject debt amortization (payment) schedule
13. The existence and timing of any debt bal- loon payments

So, as one part of the asset-based approach, the analyst may revalue all of the company recorded bond, note, mortgage, and debenture liabilities. This analysis would include the entirety of the company liability accounts, including any long-term debt amounts that are recorded as a current liability for financial accounting purposes.

In addition, the analyst may identify and value all of the company contingent liabilities. Such contingent liabilities do not meet the GAAP requirements to be recorded on the company balance sheet for financial accounting purposes. Nonetheless, such unrecorded liabilities could have a material effect on the value of the subject company's equity.

There are several generally accepted methods that may be used to value contingent liabilities. Often, the analyst attempts to estimate the net pres- ent value ("NPV") of the expected future cash pay- ments associated with extinguishing that liability. That NPV analysis considers the expected amounts of—and the expected timing of—the future cash payments.

Such an NPV analysis typically considers the probabilities associated with the company future contingent liability payments. This consideration may be quantified either through scenario analysis or through a risk-adjusted present value discount rate.

Such contingent liabilities may include the fol- lowing types of claims against the subject company:

1. Tax audit or other taxation-related disputes
2. Employee-related disputes
3. Environmental claims and other clean-up issues
4. Tort (such as infringement) litigation claims
5. Breach of contract litigation claims

Unlike liabilities that are recorded on the com- pany balance sheet, there is no single data source for the analyst to identify off-balance-sheet contin- gent liabilities. If such interviews are available, the analyst may interview the company management and legal counsel.

In addition, analysts often review board of directors meeting minutes, company management committee meetings records and documents, and company financial plans and forecasts in order to identify possible contingent liabilities.

Treatment of Income Taxes in the Asset-Based Approach

There is a diversity of practice with regard to the treatment of income taxes in the asset-based approach analysis. The issue is this: The asset- based approach assumes the sale (not a liquidation sale, but a going-concern transfer) of the company assets. Such an asset sale would normally be a tax- able event.

In an actual sale transaction, the asset seller would be responsible for income taxes related to any gain on the sale. And, that gain on the sale would be calculated as (1) asset sale price (based on the concluded asset value) minus (2) the asset tax basis.

For many of the intangible assets included in the valuation analysis, the tax basis for such assets is often zero.

Most analysts implement one of three alternative procedures with regard to the treatment of income taxes in the asset-based approach:

1. Ignore all income tax consequences related to the revaluation of the company assets
2. Calculate the expected income tax liability associated with the asset revaluation and recognize that specific liability on the reval- ued balance sheet
3. Calculate a deferred income tax liability account based on the present value of the expected future income tax payments

The use of the first procedure is often justified by several explanations.

Some analysts may say that they often do not have the data they need to calculate the exact income tax liability related to the asset revaluation.

Some analysts may also say that they are not income tax accounting experts, and they do not have the expertise to calculate the implied income tax liability.

And, some analysts may say that the company assets will not actually be sold and the income tax payment will not actually be made. The company asset revaluation is just a hypothetical transaction that is part of a theoretical valuation exercise.

The use of the second procedure is often justified by several explanations.

These analysts recognize that they may need data from company management or technical assistance from the company (or other) accountants. However, these analysts recognize that the hypothetical asset

revaluation in the asset-based approach will not be tax-free to the hypothetical transaction participants.

That is, if the company assets are hypotheti- cally sold by the asset seller, then that asset seller will incur a corresponding hypothetical income tax liability. And, these analysts conclude that if the asset revaluation occurs on the valuation date, then the corresponding tax liability should be recognized on the valuation date.

The use of the third procedure is also justified by several explanations.

These analysts recognize that there is a built- in capital gain associated with the asset-based approach revaluation of the company assets. This built-in capital gain is analogous to the built-in gain ("BIG") valuation discount that is often asso- ciated with stock valuations prepared for federal gift, estate, and generation-skipping transfer tax purposes.

These analysts recognize that an actual asset revaluation (that would occur in, for example, post- bankruptcy fresh start accounting) would result in a deferred federal income tax liability being recorded on a GAAP balance sheet.

And, these analysts recognize that there is some uncertainty as to:

1. how much income tax will ultimately be paid (i.e., what the company's effective income tax rate will be) and

2. when the income tax liability will ultimately be paid (i.e., when the asset would actually be sold in real life).

Since there is a divergence of analyst practice regarding the treatment of income taxes in the asset-based approach, this discussion does not rec- ommend a right or wrong procedure. However, this discussion does recommend that each analyst make a conscious decision as to which income tax liability convention to implement.

And, the analyst should document the rationale for this decision in the valuation work paper file. In the asset-based approach analysis, the default deci- sion (to ignore income taxes) has a direct impact on the valuation analysis and on the net asset value conclusion.

Why the Asset-Based Approach Is Not More Commonly Used

For most types of closely held companies—and for most business valuation assignments—the asset-based approach is the less commonly applied valu- ation approach. That is, in most engagements per- formed for legal, transaction, or taxation purposes, analysts more commonly gravitate to the income approach and the market approach.

That said, the asset-based approach is still a generally accepted business valuation approach. And, both the professional literature and the profes- sional standards guide analysts to consider applying the asset-based approach in a business valuation analysis.

Although particularly applicable for many close- ly held business, professional practice, and security valuation assignments, the asset-based approach is less commonly applied for the following reasons:

1. Analysts need more data to perform this approach than they may otherwise need to perform other valuation approaches.

2. This valuation approach is more client- intrusive than other valuation approaches.

3. This approach typically takes more ana- lyst time to complete than other valuation approaches.

4. Due to the increased analyst time required, this approach typically costs more to com- plete (in terms of client fees) than other valuation approaches.

5. This approach requires the analyst to dem- onstrate expertise in the valuation of both assets and liabilities.

6. This approach requires the analyst to iden- tify and value both tangible assets and intangible assets.

7. This approach requires the analyst to iden- tify and value both recorded liabilities and contingent liabilities.

8. This approach requires the analyst to dem- onstrate some expertise with regard to both financial accounting matters and income tax accounting matters.

9. Compared to other valuation approaches, the application of this approach typically requires a much more comprehensive dis- cussion in the written or oral valuation report.

10. This approach is less well known to (and less understood by) lenders, potential trans- action participants, lawyers, and judicial finders of fact.

The above-stated observations should not invali- date the use of the asset-based approach. And, these observations should not discourage the analyst from performing the asset-based approach.

However, analysts should be aware of these considerations when performing the asset-based approach analysis, reaching the value conclusion, and preparing the business valuation report.

The Asset-Based Approach and the Valuation Synthesis and Conclusion

In valuations performed for transaction, taxation, controversy, or many other purposes, analysts should consider asset-based approach value indi- cations—along with income approach and market approach value indications.

It is unlikely (but possible) that the analyst will rely solely on the asset-based approach value indica- tion. Likewise, it is unlikely (but possible) that the analyst will rely solely on the income approach or market approach value indications.

As with any other business valuation synthesis and conclusion, the analyst may assign either a quantitative weighting or a qualitative ranking to each value indication.

The analyst may assign either this explicit weighting or implicit weighting to the asset-based approach value indication based on:

1. the quantity and quality of available data for this approach,

2. the degree to which market participants consider this approach in the subject indus- try transactions,

3. the degree of confidence the analyst has in the analyses performed,

4. the degree of confidence the analyst has in the value conclusions reached, and

5. the amount of due diligence the analyst was able to perform with regard to the applica- tion of this approach.

Ideally, the asset-based approach value indica- tions will reconcile reasonably well with other value indications. When there are differences in value indications between approaches, these value differ- ences should be explainable.

If there are material differences between value indications,

the analyst may have to perform addi- tional due diligence with regard to all of the business valuation analyses.

If the asset-based approach value is materially lower than other value indications, that may indi- cate one or more of the following:

1. The company owns additional intangible assets that were not included in the valua- tion.

2. One of the intangible assets—such as good- will—could be undervalued.

3. One or more of the company liabilities could be overvalued.

If the asset-based approach value is materially greater than other value indications, it may indicate one or more of the following:

1. There is unrecognized economic obsoles- cence that should be considered in both the tangible asset and the intangible asset valuations.

2. One or more intangible assets may be over- valued (potentially due to the double count- ing of intangible asset value).

3. The values of the company liabilities (par- ticularly contingent liabilities) could be understated.

The analyst's additional due diligence proce- dures should be able to identify and correct any of these situations.

Summary

The asset-based approach is a generally accept- ed business valuation approach. The asset-based approach to business valuation should not be con- fused with the cost approach to property valuation.

The cost approach is a generally accepted approach to value individual tangible assets and intangible assets. In the application of the asset- based approach, analysts often use the cost approach to value certain categories of the company tangible assets or intangible assets.

The asset-based approach is based on the follow- ing relationship:

the value of the total company assets
(both tangible and intangible)
minus
the value of the total company liabilities
(both recorded and contingent)
equals
the value of the total company equity

Since the values of the company tangible assets and intangible assets are typically estimated based on a value in continued use premise of value, the asset-based approach normally concludes a going- concern value for the subject company. However, with numerous specific adjustments, the asset- based approach value may be adjusted to conclude a liquidation value for the subject company.

Normally, the asset-based approach will con- clude a controlling, marketable ownership interest level of value for the company equity. If the subject assignment calls for a noncontrolling, nonmarket- able ownership interest level of value, then the analyst may have to consider a discount for lack of control and a discount for lack of marketability to the unadjusted value indication.

There are several generally accepted asset- based approach business valuation methods. The most common methods within this approach are the AA method and the ANAV method.

Both of these methods are intended to conclude the value of all of the owned and all of the operated assets of the company. Therefore, while this valu- ation approach is applicable to the valuation of an asset holding company, it is also applicable to the valuation of an operating company.

The conduct of the asset-based approach may require additional data, additional client disrup- tion, and additional analyst time and associ- ated cost—compared to other business valuation approaches. There are numerous instances when the asset-based approach is perfectly applicable to the business, practice, or security valuation engagement.

Relevant valuation professional literature and valuation professional standards guide the analyst to consider the asset-based approach in every busi- ness valuation.

Accordingly, the analyst should conclude and document the reasons for performing—or for not performing—the asset- based approach in each business valuation analysis.

Still A Long Way To Value-Based Patent Valuation

The Patent Valuation Practices of Europe's Top 500

By Martin A. Bader and Frauke Rüether

Innovations and patents make important contri- butions towards corporate success. A survey on the top 500 patent applicants of the European Patent Office on behalf of PricewaterhouseCoopers conducted by the Institute of Technology Manage- ment at the University of St.Gallen, Switzerland and its innovation and intellectual property management advisor y spin off BGW reveals the status quo of valua- tion procedures and methods.

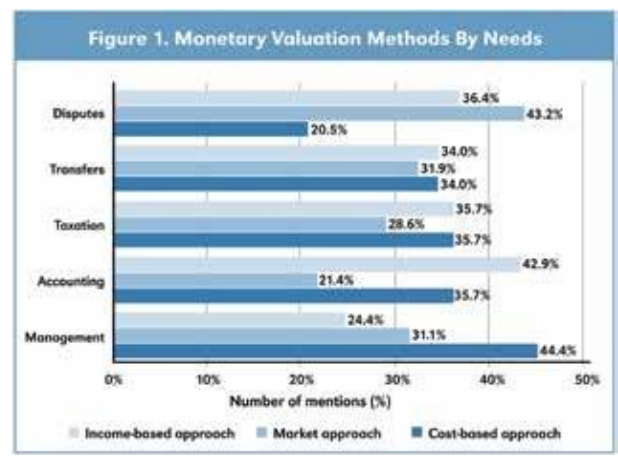
Success Factors for Companies

Since innovations are of immense significance in the attainment of a competitive edge today, their protection may create durable corporate success. Innovations and patents are therefore considered to be success factors for companies of all sizes and in- dustries. In view of companies' increasing capital re- quirements, and growing exploitation opportunities on inter-national financial markets, patents are also of considerable interest for stakeholders and investors. Accordingly, the management of immaterial assets is an important element of strategic management that is constantly increasing in significance.

As a consequence of the introduction of the International Financial Reporting Standards (IFRS) and the palpably increasing interest of the capital market in immaterial assets, a Europe-wide study was conducted seeking to investigate the status quo of patent valuation in corporate practice. The questionnaire was sent to the top 500 Europe-based patent applicants before the European Patent Office. In particular, the investigation focused on the current general importance of technologies and patents, valuation motives and valuation methods in companies, and the position of the value-oriented management of technologies and patents.

Status Quo of Valuation in Europe More than 90 percent of the inter viewees empha-sized the importance of innovations and patents for corporate success. Innovative products account for 66 percent of the interviewees' turnover and for 60 percent of their profits. Patents, which are one segment of the overall field of innovation, are also held in high esteem as drivers of success. Fifty-eight percent of the interviewees confirmed the impor- tance of patents. Correspondingly, 57 percent of the companies interviewed indicated that value-oriented innovation management is firmly entrenched in their organization; only 12 percent answered this ques- tion in the negative.

To determine the contributions of patents to corporate success patents should be managed and valued. This could happen through monetar y and non-monetar y valuation methods. While the costs for the issuance of a patent can be determined with relative ease, the actual valuation of a patent requires an appropriate set of tools. Monetar y valuation can be carried out with the help of capital value, market price and cost oriented methods (a more detailed description is given in the last sections of this article). This high number of methods, combined with the non-standardized specific procedures they involve, result in a great deal of uncertainty in the valuation of patents.



The results with regard to monetar y valuation methods came as a surprise. For one thing, the in- terviewees indicated that monetar y valuations are conducted relatively rarely. For another, 44 percent of the companies stated that they use a cost oriented valuation process, sometimes even for management events (see Figure 1).

This result is surprising since particularly the management who frequently asks to be informed about the potential value contribution of their patents will find it difficult to infer it from this method. It is also surprising in the light of the importance of valueoriented innovation management.

Even if all the monetary valuation processes are applied more frequently or more rarely depending on the various occasions, there appears to be a wide dispersion of their application (see Figure 2). On the strength of this wide spread it can be deduced, however, that cost and market-price-oriented processes tend to be used as specialized instruments, whereas capital-value-oriented procedures tend to fulfill more of a broadband function.

Still a Long Way To Go

The results of the study thus confirm that patents no

longer are solely used for protection but started to be seen as a corporate success factor and as an asset. Even though companies are more aware of patents and their value proposition, the study's results identified still many problems and uncertainties regarding the valuation of patents. The uncertainty in valuation methods leads not only to a loose management of patents but also to insufficient utilization of potential values in patents. The path from a currently dominating risk and cost approach in patent portfolio management and patent valuation to an at least application dependent opportunity and market or income based approach still seems to be steep and breathtaking for Europe's top enterprises. Cresting this task aids to manage patents and patent portfolios suitable and also fosters the utilization of patents.

Appendix: Valuation Approaches

As a final completion to the interested reader, some general information is given in the following about the state-of-art in valuation approaches.

In order to valuate intangible assets, in principle, three valuation approaches can be used (source: IDW ES 5):

a) market approach,

b) income approach,

c) cost approach.

*Within these appro*aches, several valuation methods can be applied (see Figure 3).

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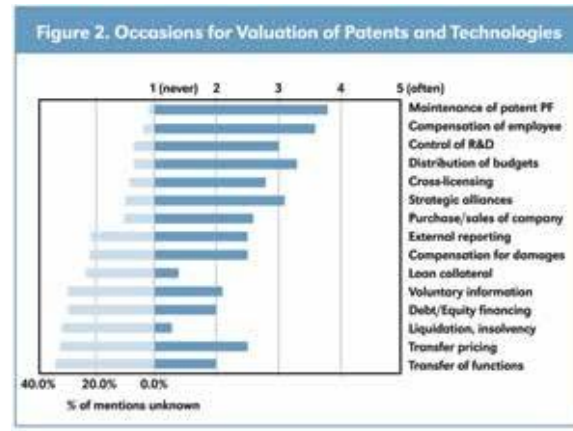
a) Market Approach

In case a reason for valuation calls for a valuation which draws on market prices this is generally only possible if and to the extent the market prices concern sufficiently comparable assets. In addition, the market concerned must be active.

A market is active if all the following conditions are fulfilled:

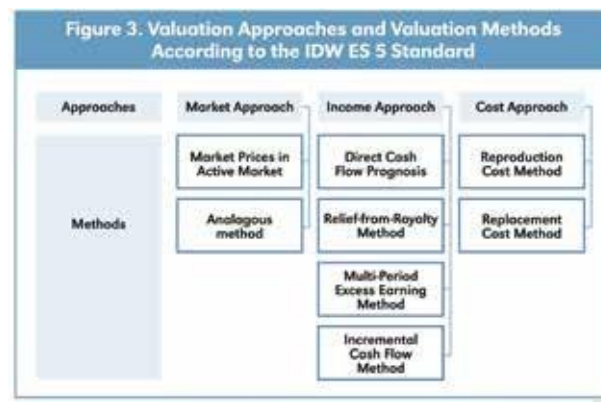
a) the goods in the market are homogenous;

b) purchasers and sellers willing to enter into agreement can generally be found at any time; and



c) prices are publicly known.

Since intangible assets are generally not traded in active markets, it must be determined whether comparable transactions can be drawn upon for the valuation of an intangible asset. By means of analogies a compari- son between the observable price for a comparable object and the value sought for the (to be valuated) intangible asset can be made. Since adequate data from comparable transactions are ver y rarely acces- sible, it is necessar y to provide a detailed background and reasoning for the choice of comparable transac- tions and the key indicators deducted therefrom.



b) Income Approach

The income approach is based on the assumption that the value of an intangible asset results from the future success which will be generated by the asset in the form of cash flows.

The value of an asset is considered to be the sum of the present value of the future cash flows that can be generated as of the day of valuation (Discounted Cash Flow) from the use of the intangible asset within the expected economic useful life and possibly its divest- ure/disposal. The central tasks within a valuation are therefore the prognosis of the cash flows relevant for the valuation and the determination of the capitaliza- tion interest rate/capitalization cost rate depicting the risk of the concerned intangible asset.

A major task in connection with the valuation of single assets is isolating the specific cash flows that can be credited

to the asset to be evaluated. These cash flows are a type of added value to the cash flows that could be generated without the specific asset.

The planning period for the cash flows is to be based on the economical useful life of the intangible asset or its remaining useful life. The useful life of intangible assets is usually limited wherefore a valu- ation may not consider revenues in perpetuity from such an asset. In exceptional cases, revenues in perpetuity may be considered in case the useful life of the asset is sufficiently long so that it becomes irrelevant whether the present value of a limited series of cash flows is considered or whether the present value of cash flows in perpetuity is considered.

The income approach al- lows valuations from different perspectives. Aside from stan- dardized concepts of value, e.g. the fair value, which are relevant for company external objectives, it is possible to in- clude individual and subjective components and thereby reach strategically relevant decision values. This is relevant in cases in which the valuation is carried out not only for tax or ac- counting purposes, but for example shall be used for a purchase price finding or shall facilitate other decision making processes.

There are basically four different methods to evalu- ate intangible assets based on an income approach each of which allows for a different way of isolating the specific cash flow for the relevant intangible asset. These methods are generally equivalent. In individual cases, one method or the other may be better suited than another due to the importance of the specific intangible asset for a company or the fact that the information required for the application of one spe- cific method may be difficult to come by.

Within the income approach, the following methods are applicable:

- Direct Cash Flow Prognosis Method,
- Relief-from-Royalty Method,
- Incremental Cash Flow Method and
- Multi-Period Excess Earnings Method.

c) Cost Approach

The third approach for the evaluation of intangible assets consists of the Reproduction Cost Method and the Replacement Cost Method. However, this approach has a major conceptual weakness since it is not use driven and since the data used always refers to the past. For these reasons, the cost approach for the valuation of intangible assets can generally only be used to verify plausibility or to determine minimum price thresholds, e.g. in purchase price negotiations.

In applying the cost approach, either the costs required to create an exact duplicate of the asset in question (Reproduction Cost Method) or the costs for the manufacture or acquisition of a use- equivalent asset (Replacement Cost Method) can be used. It has to be verified whether discounts are to be applied to properly consider economical, technical or functional obsolescence.

The depreciation must be oriented towards the ex- pected useful life defined by economical criteria.

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Common Business Valuation Terminology

Adjusted Book Value The book value that results after one or more asset or liability amounts are added, deleted, or changed from the respective book amounts.

Annuity Investment that produces a level stream of cash flows for a number of periods.

Appraisal The act or process of determining value. It is synonymous with valuation.

Appraisal Approach A general way of determining value using one or more specific appraisal methods.

Appraisal Date The date as of which the appraiser's opinion of value applies.

Appraisal Method a specific way to determine value.

Appraised Value The appraiser's opinion or determination of value.

Asset Approach A general way of determining a value indication of a business's assets and/or

equity interest using one or more methods based directly on the value of the assets of the business less liabilities.

Book Value

1. With respect to assets, the capitalized cost of an asset less accumulated depreciation,

depletion or amortization as it appears on the books of account of the enterprise.

2. With respect to a business enterprise, the difference between total assets (net of depreciation, depletion and amortization) and total liabilities of an enterprise as they appear on the balance sheet. It is synonymous with net book value, net worth and shareholders' equity.

Business Appraiser A person who by education, training and experience is qualified to make an appraisal of a business enterprise and/or its intangible assets.

Business Valuation The act or process of arriving at an opinion or determination of the value of a business enterprise or an interest therein.

Capitalization

1. The conversion of income into value.

2. The capital structure of a business enterprise.

3. The recognition of an expenditure as a capital asset rather than a period expense.

Capitalization Factor Any multiple or divisor used to convert income into value.

Capitalization Rate Any divisor (usually expressed as a percentage) that is used to convert income into value.

Capital Structure The composition of the invested capital (debt plus equity).

Cash Flow Net income plus depreciation and other non-cash charges.

Control Premium The additional value inherent in the control interest, as contrasted to a minority interest, which reflects its power of control.

Discount Factor Present value of one dollar received at a stated future date.

Discount Rate A rate of return used to convert a monetary sum, payable or receivable in the future into present value.

Economic Life The period over which property may be profitably used.

Equity The owners' interest in property after deduction of all liabilities.

Fair Market Value The amount at which property would change hands between a willing seller

and a willing buyer when neither is acting under compulsion and when both have reasonable knowledge of the relevant facts.

Going Concern Value

1. The value of an enterprise, or an interest therein, as a going concern.

2. Intangible elements of value in a business enterprise resulting from factors such as having a trained workforce, an operational plant, and the necessary licenses, systems and procedures in place.

Goodwill That intangible asset which arises as a result of name, reputation, customer patronage, location, products and similar factors that have not been separately identified and/or valued but which generate economic benefits.

Income Approach A general way of determining a value indication of a business or equity interest using one or more methods wherein a value is determined by converting anticipated benefits to present value or date of valuation.

Invested Capital The sum of the debt and equity in an enterprise on a long-term basis.

Market Approach A general way of determining a value indication of a business or equity interest using one or more methods that compares the subject to similar investments that have been sold.

Marketability Discount An amount or percentage deducted from an equity interest to reflect lack of marketability.

Minority Discount The reduction, from the pro rata share of the value of the entire business, which reflects the absence of the power of control.

Net Assets Total assets less total liabilities.

Opportunity cost of capital (hurdle rate, cost of capital) Expected return that is forgone by investing in one investment opportunity or project rather than in comparable alternative investment opportunities.

Perpetuity Investment offering a level stream of cash flows

in perpetuity.

Present Value Discounted value of future cash flows.

Rate of Return An amount of income realized or expected on an investment, expressed as a percentage of that investment.

Replacement Cost New The current cost of a similar new item having the nearest equivalent utility as the item being appraised.

Report Date The date of the report. May be the same as or different from the appraisal date.

Reproduction Cost New The current cost of an identical new item.

Terminal Value The value of an asset or investment at the end of some specified time period.

The most common errors in Valuation

1. Errors in the discount rate calculation and concerning the company's riskiness

A. Wrong risk-free rate used for the valuation

1. Using the historical average of the risk-free rate.

2. Using the short-term Government rate.

3. Wrong calculation of the real risk-free rate.

B. Wrong beta used for the valuation

1. Using the historical industry beta, or the average of the betas of similar companies, when the result goes against common sense.

2. Using the historical beta of the company when the result goes against common sense.

3. Assuming that the beta calculated from historical data captures the country risk.

4. Using the wrong formulae for levering and unlevering the beta.

5. Arguing that the best estimation of the beta of a company from an emerging market is the beta of the company with respect to the S&P 500.

6. When valuing an acquisition, using the beta of the acquiring company.

C. Wrong market risk premium used for the valuation

1. The required market risk premium is equal to the historical equity premium.

2. The required market risk premium is equal to zero.

3. Assume that the required market risk premium is the expected risk premium.

D. Wrong calculation of WACC

1. Wrong definition of WACC.

2. The debt to equity ratio used to calculate the WACC is different from the debt to equity ratio resulting from the valuation.

3. Using discount rates lower than the risk-free rate.

4. Using the statutory tax rate, instead of the effective tax rate of the levered company.

5. Valuing all the different businesses of a diversified company using the same WACC (same leverage and same Ke).

6. Considering that WACC / (1-T) is a reasonable return for the company's stakeholders.

7. Using the wrong formula for the WACC when the value of debt is not equal to its book value.

8. Calculating the WACC assuming a certain capital structure and deducting the outstanding debt from the enterprise value.

9. Calculating the WACC using book values of debt and equity.

10. Calculating the WACC using strange formulae.

E. Wrong calculation of the value of tax shields

1. Discounting the tax shield using the cost of debt or the required return to unlevered equity.

2. Odd or ad-hoc formulae.

F. Wrong treatment of country risk

1. Not considering the country risk, arguing that it is diversifiable.

2. Assuming that a disaster in an emerging market will increase the beta of the country's companies calculated with respect to the S&P 500.

3. Assuming that an agreement with a government agency eliminates country risk.

4. Assuming that the beta provided by Market Guide with the Bloomberg adjustment incorporates the illiquidity risk and the small cap premium.

5. Odd calculations of the country risk premium.

G. Including an illiquidity, small-cap, or specific premium when it is not appropriate

1. Including an odd small-cap premium.

2. Including an odd illiquidity premium.

3. Including a small-cap premium equal for all companies.

2. Errors when calculating or forecasting the expected cash flows

A. Wrong definition of the cash flows

1. Forgetting the increase in Working Capital Requirements when calculating cash flows.

2.Considering the increase in the company's cash position or financial investments as an equity cash flow.

3. Errors in the calculation of the taxes that affect the FCF.

4. Expected Equity Cash Flows are not equal to expected dividends plus other payments to shareholders (share repurchases…)

5. Considering net income as a cash flow.

6. Considering net income plus depreciation as a cash flow.

B. Errors when valuing seasonal companies

1. Wrong treatment of seasonal working capital requirements.

2. Wrong treatment of stocks that are cash equivalent.

3. Wrong treatment of seasonal debt.

C. Errors due to not projecting the balance sheets

1. Forgetting balance sheet accounts that affect the cash flows.

2. Considering an asset revaluation as a cash flow.

3. Interest expenses not equal to D Kd.

D. Exaggerated optimism when forecasting cash flows

IESE Business School-University of Navarra - 29

3. Errors in the calculation of the residual value

A. Inconsistent cash flow used to calculate perpetuity.

B. The debt to equity ratio used to calculate the WACC to discount the perpetuity is different from the debt to equity ratio resulting from the valuation.

C. Using ad hoc formulas that have no economic meaning.

D. Using arithmetic averages instead of geometric averages to assess growth.

E. Calculating the residual value using the wrong formula.

F. Assume that a perpetuity starts a year before it really starts.

4. Inconsistencies and conceptual errors

A. Conceptual errors about the free cash flow and the equity cash flow

1. Considering the cash in the company as an equity cash flow when the company has no plans to distribute it.

2. Using real cash flows and nominal discount rates, or vice-versa.

3. The free cash flow and the equity cash flow do not satisfy ECF = FCF + ΔD – Int (1-T).

B. Errors when using multiples

1. Using the average of multiples extracted from transactions executed over a very long period of time.

2. Using the average of transactions multiples that have a wide scatter.

3. Using multiples in a way that is different to their definition.

4. Using a multiple from an extraordinary transaction.

5. Using ad hoc valuation multiples that conflict with common sense.

6. Using multiples without using common sense.

C. Time inconsistencies

1. Assuming that the equity value will be constant for the next five years.

2. The equity value or the enterprise value does not satisfy the time consistency formulae.

D. Other conceptual errors

1. Not considering cash flows resulting from future investments.

2. Considering that a change in economic conditions invalidates signed contracts.

3. Considering that the value of debt is equal to its book value when they are different.

4. Not using the correct formulae when the value of debt is not equal to its book value.

5. Including the value of real options that have no economic meaning.

6. Forgetting to include the value of non-operating assets.

7. Inconsistencies between discount rates and expected inflation.

8. Valuing a holding company assuming permanent losses (without tax savings) in some companies and permanent profits in others.

9. Wrong concept of the optimal capital structure.

10. In mature companies, assuming projected cash flows that are much higher than historical cash flows without any good reason.

11. Assumptions about future sales, margins, etc. that are inconsistent with the economic environment, the industry outlook, or competitive analysis.

12. Considering that the ROE is the return to the shareholders.

13. Considering that the ROA is the return of the debt and equityholders.

14. Using different and inconsistent discount rates for cash flows of different years or for different components of the free cash flow.

15. Using past market returns as a proxy for required return to equity.

16. Adding the liquidation value and the present value of cash flows.

17. Using ad hoc formulas to value intangibles.

18. Arguing that different discounted cash flow methods provide different valuations.

19. Wrong notion of the meaning of the efficient markets.

20. Applying a discount when valuing diversified companies.

21. Wrong arbitrage arguments.

22. Adding a control premium when it is not appropriate.

5. Errors when interpreting the valuation

A. Confusing Value with Price.

B. Asserting that “the valuation is a scientific fact, not an opinion”.

C. A valuation is valid for everybody.

D. A company has the same value for all buyers.

E. Confusing strategic value for a buyer with fair market value.

F. Considering that the goodwill includes the brand value and the intellectual capital.

G. Forgetting that a valuation is contingent on a set of expectations about cash flows that will be generated and about their riskiness.

H. Affirming that “a valuation is the starting point of a negotiation”.

I. Affirming that “a valuation is 50% art and 50% science”.

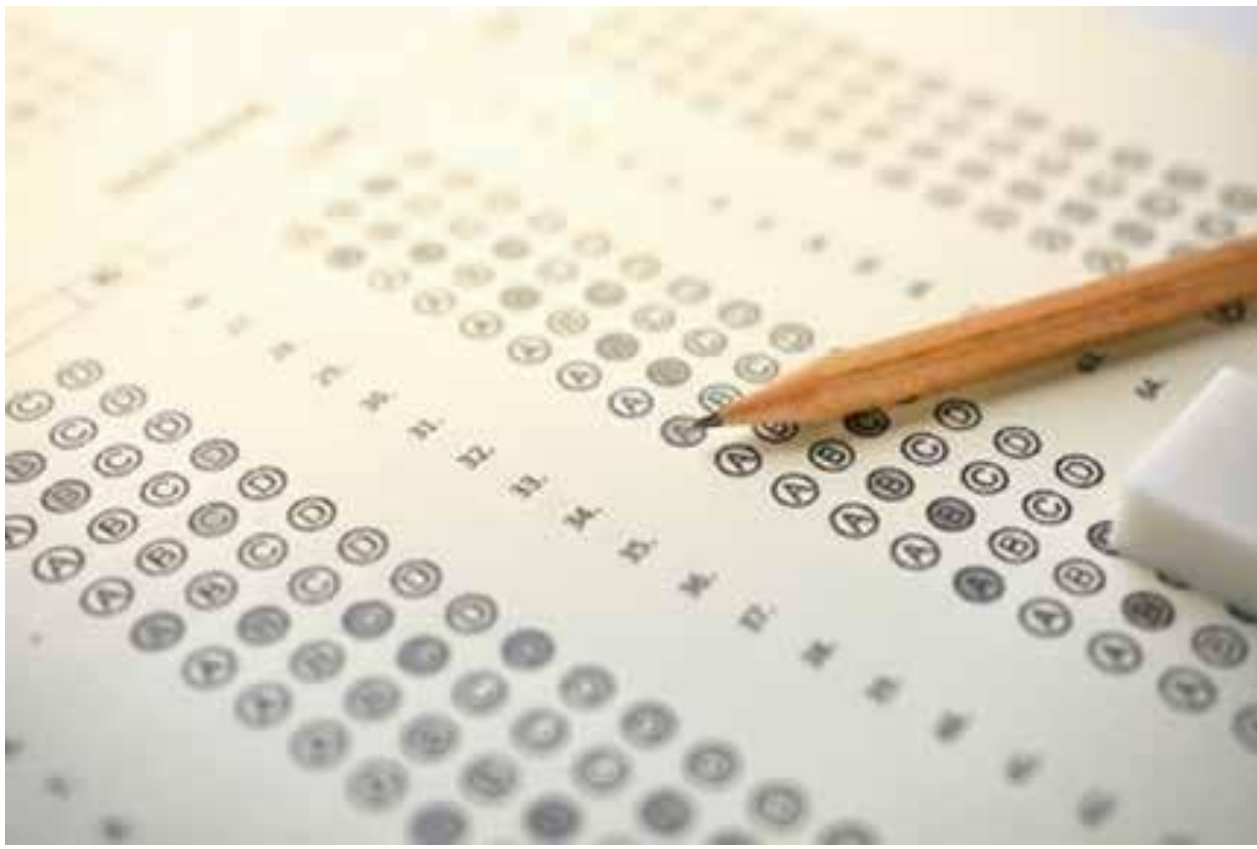
6. Organizational errors

A. Making a valuation without checking the forecasts made by the client.

B. Commissioning a valuation from an investment bank without having any involvement in it.

C. Involving only the finance department in valuing a target company.

MULTIPLE CHOICE QUESTIONS



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MULTIPLE CHOICE QUESTIONS

MCQ FOR SFA

1. If we compare GDP and GNP, then:

a)GNP = GDP - net income from abroad

b)GNP = GDP + net income from abroad

c)GNP = NNP - net incomefrom abroad

d)GNP = NNP + net income from abroad

Ans) GNP = GDP + net income from abroad

2. The value of national income adjusted for inflation is called

a) Per capita income

b)Disposable income

c)Inflation rate

d) Real national income

Ans) Real national income

3. The net value of GDP after deducting depreciation from GDP is

a) Net national product

b) Net domestic product

c) Gross national product

d)Disposable income

Ans) Net domestic product

4. Risk in capital budgeting implies that the decision maker knows _ of the cash flows.

a) Variability

b)Certainity

c)Probability

d)UnCertainity

Ans) Probability

5. Retained earnings are

a) an indication of a company's liquidity

b) the same as cash in the bank.

c) not important when determining dividends.

d) the cumulative earningsof the company after dividends.

Ans) the cumulative earningsof the company after dividends.

6. The market value of the firm is the result of_____

a) dividend decisions

b) working capital decisions

c) capital budgeting decisions

d) trade off betweenrisk and return

Ans) trade off between risk and return

7. Dividends are the----------of a company distributed amongst members in proportion to their shares

a) Divisible profits

b)Indivisible profits

c)Reserves

d)Fund

Ans) Divisible profits

8. Financial decision involve Investment decision, Dividend decisions, Financing decisions or Liquidity decisions

a) Investment, financingand dividend decisions

b) Investment and financing

c)Investment,financing and liquidity decisions

d)financing and liquidity decisions

Ans) Investment, financingand dividend decisions

9. Which of the following is not a capital budgeting decision?

a) Expansion Programme

b)Merger

c) Replacement of an Asset

d)Inventory Level

Ans) Inventory Level

10. What type of audit opinion is preferred when analyzing financial statements?

a)Qualified

b)Adverse

c)Unqualified

d) All of the above

Ans) Unqualified

11. Which of the following helps in analyzing return to equity shareholders?

a) Net Profit Ratio

b) Earnings Per Share

c) Return of Assets

d) Return on Investments

Ans) Earnings Per Share

12. In 'Percentage of Sales' Method of preparation of projected financial statements, the operating expenses should be projected on the basis of:

a) % of Gross Profit

b) % of Cost of Goods Sold

c) % of Profit before Tax

d) % of Sales

Ans) % of Sales

13. The best ratio to evaluate short-term liquidity is:

a) Cash Ratio

b) Current Ratio

c) Working Capital Ratio

d) Debt to Asset Ratio

Ans) Cash Ratio

14. Under which of the following kinds of business concepts it is assumed that the organization will last for a long time.

a) Accounting Entity

MULTIPLE CHOICE QUESTIONS

b) Going Concern Entity

c) Money Measuring Entity

d) Accounting Period

Ans) Going Concern Entity

15. The going concern concept is concerned with the following:

a) Accounting for all enterprises as a going concern

b) Allowing predictions to be used in the preparation of financial statements

c) Valuing assets at their realisable amounts

d) Preparing financial statements based on the assumption that they will operate into the foreseeable future, and abandoning the concept if this assumption does not hold

Ans) Preparing financial statements based on the assumption that they will operate into the foreseeable future, and abandoning the concept if this assumption does not hold

16. Companies not disclosing an immanent bankruptcy would violate the_

a) Business Entity Concept

b) Going Concern Concept

c) Consistency Concept

d) Monetary Unit Assumption

Ans) Going Concern Concept

17. A declaration of solvency is required to be signed by the directors of the company in order for:

a) the liquidation to proceed as a creditors voluntary winding-up;

b) the liquidation to proceed as a members voluntary winding-up;

c) the court to make an order for liquidation;

d) a liquidator to resign and the company to continue trading.

Ans) the liquidation to proceed as a members voluntary winding-up;

18. Under which of the following condition can an Adjudicating Authority order the liquidation of corporate debtor:

a) When the committee of creditors of corporate debtor decides to liquidate after thconfirmation of resolution plan

b) When half of the committee of creditors of corporate debtor decides to liquidatebefore the confirmation of resolution plan

c) When half of the committee of creditors of corporate debtor decides to liquidate after the confirmation of resolution plan

d) When the committee of creditors of corporate debtor decides to liquidate before the confirmation of resolution plan

Ans) When the committee of creditors of corporate debtor decides to liquidate before the confirmation of resolution plan

19. What is the nature of liquidation order:

a) Deemed to be a notice of discharge to the officers of the corporate debtor

b) Deemed to be a notice of discharge to the financial creditor

c) Deemed to be a notice of discharge to the officers and workmen of the corporatedebtor

d) Deemed to be a notice of discharge to the officers, employees and workmen of the corporate

debtor

Ans) Deemed to be a notice of discharge to the officers, employees and workmen of the corporate debtor

20. The fees for the liquidation process shall be paid to the liquidator from the proceeds of _____:

a) Realised liabilities of corporate debtor

b) Liquidation estate

c) Liquidation fund

d) Capital Reserves of the corporate debtor

Ans) Liquidation estate

21. Which of the following assets are included in the liquidation estate:

a) assets held in trust for any third party

b) bailment contracts

c) tangible assets, whether movable or immovable

d) sums due to any workman or employee from the provident fund, the pension fund and the gratuity fund

Ans) tangible assets, whether movable or immovable

22. Which of the following assets are not included in the liquidation estate:

a) tangible assets, whether movable or immovable

b) contractual arrangements which do not stipulate transfer of title but only use of theassets

c) assets that may or may not be in possession of the corporate debtor including but not limited to encumbered assets

d) assets subject to the determination of ownership by the court or authority

Ans) contractual arrangements which do not stipulate transfer of title but only use of the assets

23. Which of the following is to be recovered first from the proceeds of liquidation estate

a) insolvency resolution process costs and the liquidation costs

b) debts owed to a secured creditor

c) workmen's dues for a period of twenty-four months preceding the liquidation commencement ate

d) preference shareholders

Ans) insolvency resolution process costs and the liquidation costs

24. Which of the following is to be recovered last from the proceeds of liquidation estate:

a) debts owed to a secured creditor

MULTIPLE CHOICE QUESTIONS

for any amount unpaid following the enforcementof security interest

b) any remaining debts and dues

c) workmen's dues for the period of twenty-four months preceding the liquidation commencement date

d) equity shareholders or partners

Ans) equity shareholders or partners

25. The Indian Stamp Act, 1899 came into force on:

a) 1st June 1899

b) 1st July 1899

c) 1st November 1899

d) 1st December 1899

Ans) 1st July 1899

26. Any mark of seal or endorsement by any agency or person duly authorized by the state government, for the purpose of duty chargeable under Indian Stamp Act, 1899 is called ..... :

a)Bond

b)Receipt

c) Bill of Exchange

d)Stamp

Ans) Stamp

27. Every instrument written upon paper stamped with an impressed stamp shall be written in such manner that the stamp may appear on the..... and cannot be used for or applied to any other instrument:

a) Face of the instrument

b) Back of the instrument

c) Both (a) and (b)

d) None of the above

Ans) Face of the instrument

28. All instruments chargeable with duty and executed by any person in India shall be stamped ..... :

a) Before execution

b) At the time of execution

c) Before or at the time of execution

d) None of the above

Ans) Before or at the time of execution

29. Every instrument chargeable with duty executed only out of India, and not being a bill of exchange or promissory note, may be stamped within .....after it has been first received in India:

a) One month

b) Two months

c) Three months

d) Six months

Ans) Three months

30. In which of the following instruments, expenses of providing proper stamp shall be borne by the person drawing, making or executing such instrument?

a) Bill of exchange

b)Debenture

c)Promissory note

d) All of the above

Ans) All of the above

31. Who has the adjudicating authority with respect to proper stamping?

a)Magistrate

b)Collector

c) Bank Official

d) None of the above

Ans) Collector

32. Fair value is focused on the assumptions of the market place and is not entity specific. Which of the following assumptions does Ind AS113 take into account?

a) It takes into account any assumptions about the highest price that can be paid

b) It takes into account any assumptions about reliability

c) It takes into account any assumptions about risk

d) It takes into account any assumptions about going concern

Ans) c

33. IFRS 13 does not specify the unit of account for measuring fair value. This means that it is left to the individual standard to determine the unit of account for fair value measurement. What is meant by the 'unit of account'?

a) The collection of assets or liabilities of which these elements form part

b) The market value of the asset or liability

c) The single asset or liability or group of assets or liabilities

d) The value of the asset or liability

Ans) c

34. Prices to be used under Ind AS113 are those in 'an orderly transaction'. what is meant by an orderly transaction?

a) One that assumes exposure to the market for a period before the date of measurement to allow for normal marketing activities and to ensure that it is a forced transaction

b) One that assumes exposure to the market for a period before the date of measurement to allow for normal marketing activities and to ensure that it is not a forced transaction

c) One that assumes exposure to the market for a period before the date of measurement to allow for normal marketing activities and there has been significant trading in the asset or liability

d) One that assumes no exposure to the market for a period before the date of measurement to allow for normal marketing activities and to ensure that it is not a forced transaction

Ans) b

35. Fair value measurements are categorised into a three-level hierarchy, based on the type of inputs

MULTIPLE CHOICE QUESTIONS

to the valuation techniques used. What inputs are required for a fair value measurement to be classified as level 3 inputs?

a) Inputs other than quoted prices that are directly or indirectly observable for that asset or liability

b) Unadjusted quoted prices in active markets for items identical to the asset or liability being measured

c) Inputs based on the highest and best use of the asset as determined by a market participant

d) Inputs which must be developed to reflect the assumptions that market participants would use when determining an appropriate price for the asset or liability

Ans) d

36. The guidance includes enhanced disclosure requirements that could result in more work for reporting entities. Which of the following disclosures are not required by IFRS 13?

a) Transfers between Levels 2 and 3

b)Information about the hierarchy level into which fair value measurements fall

c) Disclosures for Level 3 measurements that include a reconciliation of opening and closing balances

d) Methods and inputs to the fair value measurements

Ans) a

37. Fair value is based on, which of the following concept?

a)Market

b)Cost

c) Market or cost which ever is lower

d) Market or cost which ever is higher

Ans) Market

38. Which of the following is external factors that can affect value?

a) Product or service diversification

b)Management competence

c)Inflation

d)Inventory control

Ans) Inflation

39. Principal methods of Valuation are:

a) Market approach, Asset approach, Income approach

b) Discounted cash flow method,Net assets method, Market price method

c) Market approach, discounted cashflow method, Asset approach

d) Asset approach, Income approach, discounted cash flow method

Ans) Market approach, Asset approach, Income approach

40. Investment value is the value

a) to a particular investor

b) to a hypothetical investor

c) in the marketplace

d) in tax valuations

Ans) to a particular investor

41. What are price-earnings valuations usually based on?

a) Gross profit.

b)Operating profit.

c)EBITDA

d)Free cash flow.

Ans) EBITDA

42. For which of the following types of company would Net AssetValue (NAV) probably be an unsuitable basis for valuation?

a) A property investment company like Land Securities.

b) An investment trust like Alliance Trust.

c) An advertising agency like M&C Saatchi

d) A mining company like BHP Billiton

Ans) An advertising agency like M&C Saatchi

43. Allowing for bankruptcy costs and an increasing probability of bankruptcy with increasing financial leverage, we should expect _____ than would be the case without bankruptcy costs.

a) the premium for business risk to be higher

b) the premium for business risk to be lower

c) the premium for financial risk should rise by less

d) the premium for financial risk should rise by more

Ans) the premium for financial risk should rise by more

44. .....is the use of historic data to determine the direction of future trends:

a) Due diligence

b) Due care

c)Forecasting

d)Projected report

Ans) Forecasting

45. What is forecasting?

a) A random target set as per the current performances

b) A scientific guesswork based upon serious study

c) Guessing the future outcome as per whims and whence of the forecasting

d) None of the above

Ans) A scientific guesswork based upon serious study

46. Which of the following is not a forecasting tool?

a) Cash Flow Statement

b)Production chart

c)Organization

d)None of the above

Ans) None of the above

MULTIPLE CHOICE QUESTIONS

47. assume that a relationship exists between one or more items and that a change in one item will cause a change in the other:

a) Scenario writing
b) Time series analysis
c) Causes model
d) Delphi technique

Ans) Causes model

48. Which of the following is/are a forecasting technique?

a) Judgemental
b) Time series
c) Associative
d) All of the above

Ans) All of the above

49. .....elements of a time series sit above or below the trend line and may recur for a year or longer:

a) Cyclical
b) Trend
c) Seasonal
d) Irregular

Ans) Cyclical

50. One of the quantitative techniques of forecasting is:

a) Causes model
b) Time series analysis
c) Delphi technique
d) Scenario writing

Ans) Time series analysis

51. .....assumes that forecasts from a group of individuals, with relevant expertise and experience, working in a systematic way, will be more useful than those from unstructured discussion group, where the individuals will have little opportunity to

a) Delphi Technique
b) Causes model
c) Time series analysis
d) Scenario writing

Ans) Delphi Technique

52. In cash flow statement, the item of interest is shown in:

a) Financing Activities
b) Investing Activities
c) Operating Activities
d) Both (a) and (b)

Ans) Both (a) and (b)

53. An example of a cash flow from a financing activity is:

a) Receipt of cash from sale of land
b) Receipt of cash from collection of accounts receivable
c) Payment of cash for acquisition of treasury stock
d) Payment of cash for new machinery

Ans) Payment of cash for acquisition of treasury stock

54. Which of the following is not a cash inflow?

a) Decrease in creditors
b) Decrease in debtors
c) Sale of fixed assets
d) Issue of shares

Ans) Decrease in creditors

55. Which of the following is not a cash outflow?

a) Increase in stocks
b) Increase in prepaid expenses
c) Increase in creditors
d) Increase in debtors

Ans) Increase in creditors

56. Discounted cash flow analysis is also classified as:

a) Time value of bonds
b) Time value of money
c) Time value of gold
d) Time value of stock

Ans) Time value of money

57. Where cash flows are more than capital invested for rate of return than Net Present Value will be:

a) Positive
b) Independent
c) Zero
d) Negative

Ans) Positive

58. In capital budgeting, a technique which is based upon Discounted Cash Flow is classified as:

a) Net future value method
b) Net equity budgeting method
c) Net present value method
d) Net capital budgeting method

Ans) Net present value method

59. If compounding is done quarterly in a year, the effective rate of interest is equal to:

a) (1+nominal rate of interest)/4
b) (1+nominal rate of interest/4)4
c) 4*nominal rate of interest
d) (Nominal rate of interest)/4

Ans) (1+nominal rate of interest/4)4

60. Which of the following statements is correct concerning the weighted average cost of capital (WACC):

a) The WACC may decrease as a firm's debt-equity ratio increases
b) In the computation of WACC, weight assigned to the preferred stock is based on the coupon rate multiplied by the par value of the stock
c) A firm's WACC will decrease as the corporate tax rate decreases
d) The weight of the common stock used in the computation of the WACC is based on the number of shares outstanding multiplied by the book

MULTIPLE CHOICE QUESTIONS

value per share

Ans) The WACC may decrease as a firm's debt-equity ratio increases

61. is to provide a foundation for developing future expectations about the subject company by eliminating non-recurring, non-operating or discretionary items and to present the past results of the subject company on a consistent basis:

a) Normalizing adjustments
b) Valuation premises
c) Valuation base
d) None of the above

Ans) Normalizing adjustments

62. is based on the premise that an asset which is readily marketable commands a higher value than an asset which requires longer marketing period to be sold or an asset having restriction on its ability to sell:

a) Discount for Lack of Control (DLOC)
b) Discount for lack of marketability (DLOM)
c) Both (a) and (b)
d) None of the above

Ans) Discount for lack of marketability (DLOM)

63. Higher the liquidity and control, ... would be the discount on valuation of the financial instrument:

a) Higher
b) Lower
c) Both ways
d) None

Ans) Lower

64. Funding Cost adjustment adjusts:

a) Value for the implied benefit of upfront payments on derivatives
b) Value for implied cost of upfront payments on derivatives
c) The cost/benefit of interest on cash collateral
d) The cost of providing initial margin

Ans) Value for implied cost of upfront payments on derivatives

65. Which of the following is the major difference between fixed maturity plans and fixed deposits?

a) Fixed period investments
b) Guaranteed returns
c) Maturity periods options
d) All of the above

Ans) Guaranteed returns

66. Which of the following is not the feature to invest in fixed income securities:

a) Liquidity
b) Can be used as a collateral
c) Diversification
d) Cannot be used as a collateral

Ans) Cannot be used as a collateral

67. Which of the following is a fixed income security?

a) PPF
b) NSE
c) Post office monthly income scheme
d) All of the above

Ans) All of the above

68. A fixed income security is issued by:

a) Government
b) Corporations
c) Other entity
d) All of the above

Ans) All of the above

69. Medium-term bonds have a maturity of:

a) 1 to 3 years
b) 1 to 5 years
c) 3 to 5 years
d) 3 to 10 years

Ans) 3 to 10 years

70. A bond whose price is equal to its face value is called to be sold at:

a) Par
b) Below par
c) Above par
d) None of the above

Ans) Par

71. Treasury bills are issued at:

a) Face value
b) Discount
c) Market value
d) Maturity value

Ans) Discount

72. Treasury bills pay interest at:

a) Coupon rate monthly
b) Coupon rate semi-annually
c) Coupon rate yearly
d) Bank rate yearly

Ans) Coupon rate semi-annually

73. Government securities commonly referred as:

a) G-Secs
b) Govt Securities
c) G Securities
d) Government Securities

Ans) G-Secs

74. A commercial paper can be issued for the maximum duration of:

a) 45 days
b) 90 days
c) 180 days
d) 364 days

Ans) 364 days

MULTIPLE CHOICE QUESTIONS

75. What is the minimum maturity of a commercial paper:

a) 3 days

b) 7 days

c) 15 days

d) 30 days

Ans) 7 days

76. Interest rate and bond prices are:

a) Move in same direction

b) Move in opposite direction

c) Have no relationship

d) Sometimes in same direction, sometimes in opposite direction

Ans) Move in opposite direction

77. Which of the following risk is involved in debt instrument?

a) Liquidity risk

b) Reinvestment risk

c) Default risk

d) All of the above

Ans) All of the above

78. Who or what is a person or institution designated by a bond issuer as the official representative of the bondholders?

a) Indenture

b) Debenture

c) Bond

d) Bond Trustee

Ans) Bond Trustee

79. What is the zest of the Supreme Court decision in the case of Hindustan Lever Employee's Union (Supra) (1995) Supp (1) SCC 499:

a) The Jurisdiction of the court in sanctioning a claim of merger is not to ascertain mathematical accuracy if the determination satisfied the arithmetical test

b) A company court does not exercise an appellate jurisdiction. It exercises a jurisdiction founded on fairness

c) Both (a) and (b)

d) None of the above

Ans) Both (a) and (b)

80. In the case of Hindustan Lever Employee's Union (Supra) (1995) Supp (1) SCC 499, the Supreme Court accepted the ratio of ..... as income, market and asset approach on which the valuation was based:

a) 0.042372685185

b) 0.043078703704

c) 0.084733796296

d) 0.084050925926

Ans) 0.084733796296

The following information relates to Questions 81-84

Darshan is an analyst and is responsible for issuing either a buy, hold, or sell rating for the shares of Company A and Company B. The appropriate valuation model for each company was chosen based on the following characteristics of each company:

Company A is an employment services firm with no debt and has fixed assets consisting primarily of computers, servers, and commercially available software. Many of the assets are intangible, including human capital. The company has a history of occasionally paying a special cash dividend.

Company B operates in three unrelated industries with differing rates of growth: tobacco (60% of earnings), shipbuilding (30% of earnings), and aerospace consulting (10% of earnings). The company pays a regular dividend that is solely derived from the earnings produced by the tobacco division.

Darshan considers the following development in making any necessary adjustments to the models before assigning ratings:

Company B has finalized the terms to acquire 70% of the outstanding shares of Company X, an actively traded tobacco company, in an all- stock deal.

Darshan assigns ratings to each of the companies and provides a rationale for each rating. The director of research asks Darshan: "How did you arrive at these recommendations? Describe how you used a top- down approach, which is the policy at our company."

Darshan replies, "I arrived at my recommendations through my due diligence process. I have studied all of the public disclosure documents; I have participated in the company conference calls, being careful with my questions in such a public forum; and I have studied the dynamics of the underlying industries. The valuation models are robust and use an extensive set of company- specific quantitative and qualitative inputs."

81. Based on Company A's characteristics, which of the following absolute valuation models is most appropriate for valuing that company?

a) Asset based

b) Dividend discount

c) Free cash flow to the firm

MULTIPLE CHOICE QUESTIONS

d) none of the above

Ans) Free cash flow to the firm

82. Based on Company B's characteristics, which of the following valuation models is most appropriate for valuing that company?

a) Asset based

b) Sum of the parts

c) Dividend discount

d) none of the above

Ans) Sum of the parts

83. Which of the following is most likely to be appropriate to consider in Company B's valuation of Company X?

a) Blockage factor

b) Control premium

c) Lack of marketability discount

d) none of the above

Ans) Control premium

84. Based on Darshan's response to the director of research, Darshan's process could have been more consistent with the firm's policy by:

a) incorporating additional micro- level inputs into her valuation models.

b) evaluating the impact of general economic conditions on each company.

c) asking more probing questions during publicly available company conference calls.

d) none of the above

Ans) evaluating the impact of general economic conditions on each company.

The following information relates to Questions 85-87

Company	Book Value of Equity 2015 (millions of $)	Sales 2015 (millions of $)	Shares Outstanding 2015	Price ($) (millions)
Pfeiffer, Inc.	19,950	32,373	6,162	31.37
Mapps, Inc.	61,020	32,187	10,771	25.63

Peer Group	Mean P/B	Median P/B	Mean P/S (sales in millions of $)	Me ian P/S (sales in millions of $)
Medical-Drugs	5.622	4.250	8.708	4.530
Applications Software	4.100	2.140	3.420	1.440

Pfeiffer belongs to the Medical-Drugs group and Mapps belongs to the Applications Software group.

85. The current price-to-book and price-to-sales ratios for Pfeiffer are closest to:

P/B P/S

a) 3.238 5.254

b) 3.238 5.971

c) 9.688 5.971

d) none of the above

Ans) 3.238 5.971

86. The current price-to-book and price-to-sales ratios for Mapps are closest to:

P/B P/S

a) 4.524 8.578

b) 5.665 2.988

c) 4.524 2.988

d) none of the above

Ans) 4.524 8.578

87. Which of the following statements is most accurate, given the financial data on Pfeiffer, Mapps, and the two industries?

a) Both stocks are relatively overvalued.

b) Both stocks are relatively undervalued.

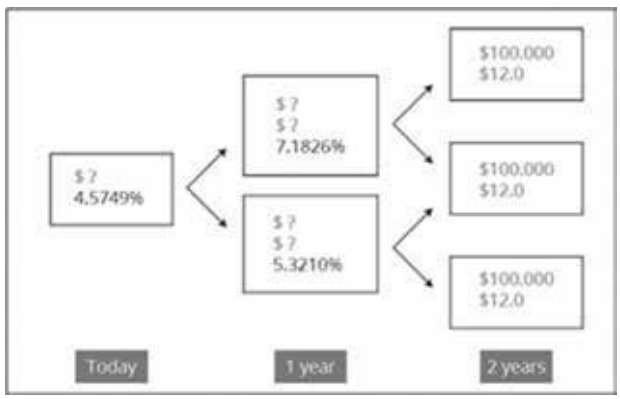
c) One stock is relatively overvalued and the other is relatively undervalued.

d) none of the above

Ans) Both stocks are relatively overvalued.

MULTIPLE CHOICE QUESTIONS

The following information relates to Questions 88-90



88. The value today of an option-free, 12% annual coupon bond with two years remaining until maturity is closest to:

a) 110.525.

b)111.485.

c)**112.282.**

d)none of the above

Ans) 112.282.

89. The value of the bond and the value of the embedded call option, assuming the bond in Question 2 is callable at $105 at the end of Year 1, are closest to:

	Callable bond value	Embedded call option value
a)	110.573	1.709
b)	110.573	0.642
c)	111.640	0.642
d)	none of the above	

Ans) 111.640 0.642

90. The value of the bond and the value of the embedded put option, assuming the bond in Question 2 is putable at $105 at the end of Year 1, are closest to:

	Putable bond value	Embedded put option value
a)	112.523	0.241
b)	112.523	1.646
c)	113.928	1.646
d)	none of the above	

Ans) 112.523 0.241

Source : Judicial Pronouncements in Valuation, Published by Valuation Standards Board and ICAI Registered Valuers Organization, The Institute of Chartered Accountants of India

Case No. 01

Sanction to the Scheme of Amalgamation - Shrey Promoters Private Limited with EMAAR MGF Land Private Limited (DEL HC)

(2006)

IN THE HIGH COURT OF DELHI

In the matter of the Companies Act, 1956

under Sections 391(2) to 393 of the Companies Act, 1956

Scheme of Amalgamation of Shrey Promoters Private Limited with

EMAAR MGF Land Private Limited

CP No. 134/2006

Date of Decision: October 9, 2006

1. Brief Facts of the Case

- A petition under Section 391(2) to 393 of the Companies Act, 1956 (hereinafter referred to as the Act) was filed by M/s Shrey Promoters Private Limited (hereinafter referred to as the transferor company) and M/s EMAAR MGF Land Private Limited (hereinafter referred to as the transferee company).
- Both the transferor and transferee companies were owned and controlled substantially by the same group of shareholders. The transferor company and transferee company were private limited companies and had two and three shareholders respectively as on 15th Dec 2005.
- The transferor company was incorporated on 6th Oct 2005 and the transferee company was incorporated on 18th Feb 2005. The transferee Company was incorporated in terms of joint venture agreement dated 18th Feb 2005 between Emaar Properties PJSC Dubai and MGF Group Ltd.
- The transferee company had transferred huge funds to the tune of Rs. 1,617 Crores to the 31 subsidiaries of the transferor companies before 6 th Dec 2005 i.e., within about two months, when the transferor company was incorporated.
- The transferor company itself did not own any land and the land was owned by 31 subsidiaries of the transferor company who were flushed with money and funds provided by the transferee company.
- The investment/advances given by the transferee company of Rs. 1,617.82 crores as on 15th December, 2005 was much more than the paid-up share capital of Rs. 7 crores of the transferor company. This paid- up share capital was utilized by the transferor company for purchase of shares in the 31 subsidiary companies at cost price of Rs. 6.60 crores. Thus, the 31 subsidiary companies of the transferor company used advance/investment made by the transferee company to purchase land.
- Total net value of investments made by the 31 subsidiary companies on or before 15th December, 2005 was Rs. 6.93 crores (the specific dates on which these investments have been made have not been stated). Within about two months from incorporation of the transferor company on 6th October, 2005 till 15th December, 2005, the market value of the said investments of Rs. 6.93 crores made by the 31 subsidiary companies is stated to have increased to Rs. 1,662.80 crores.
- On the basis of the market value of the investments made by the 31 subsidiary companies as per the valuation report, within about two months, value of each issued share of the transferor company went up from Rs.10/- to Rs. 2376/- per share.
- After 15th December 2005, the transferee company had issued 2,96,00,000 shares of Rs.10 each @ Re.1 paid up value to two foreign companies and 30,00,000 shares of Rs.10 each to Mr. Shravan Gupta at paid up value of Re.1. It was not stated that the said shares have been issued at premium, though earlier the joint venture partner had agreed to purchase shares of the transferee at premium of Rs. 540/- per share and another investor had agreed to purchase shares at a premium of Rs.1547.84 per share.
- The post-merger shareholding pattern shows that the two foreign companies held about 45% shares and the Indian group about 60% shares in the transferee company.

2. Objections raised by the Regional Director and **Official Liquidator**

The official liquidator was of the view that the affairs of the transferor company were/are not being conducted in a manner which is prejudicial to the interest of public. The Regional Director raised the following objections: -

- The first objection raised by the Regional Director was with respect to increase in authorised share capital of the company, which is possible only as per the prescribed procedure under the Act and on payment of requisite fee and stamp duty. However, the said objection was overruled by the Hon'ble court in view of its decision in the case of ***Hotline Hol Celdings Pvt. Ltd. and Ors.*** Further, the transferee company agreed to give an undertaking to that and any allotment and paid-up share capital shall be within the authorised share capital as per the scheme and the allotment, if any, shall be made in accordance with the law.
- The Second objection raised was with respect to the issues arising out of the balance sheet of the company. The transferee company had given advances of Rs.1,617.82 crores to the 31 subsidiary companies of the transferor company for the joint venture projects and the said companies have, therefore, used the share application money for business purpose for purchase of land.
- The next contention was on Valuers Report. As per the Valuer each issued and paid-up equity share of Rs 10/- of the transferor company was valued at Rs. 2,376/-per share. This was on account of the value of land purchased by the 31 subsidiary companies of the transferor company. The Valuer in his Valuation Report expressed as under which is not correct: -

- "The ultimate test of value is the willingness of the parties to enter into the contract at an agreed price"

3. Submission by the Applicant Companies

- With regards to the second objection on advances given by the transferee company to the subsidiary of transferor company, it has been stated that these advances have been given in normal course of business and are in conformity between the understanding and arrangement between the transferor company and the transferee company.
- Sanction to the Scheme of Amalgamation - Shrey Promoters Private…
- It was further submitted that both the transferor and transferee companies were owned and controlled substantially by the same group of shareholders and, therefore, valuation of share and determination of share exchange ratio has to be considered in light of same. Reference was also made to the unequivocal and unanimous consent letters given by the shareholders to the scheme of amalgamation and the exchange ratio mentioned therein.
- In respect of the third objection, it was submitted that the valuer had acted on the basis of land valuation report of a government-approved valuer. It was also submitted that the valuer determined the value of each share of the transferor company at Rs.2,376/- by following an accepted method of valuation and has furnished cogent reasons for adopting the said valuation. With regard to the share exchange ratio, it was also submitted that the shareholders of transferor company and transferee company are substantially the same persons and, therefore, the share exchange ratio cannot be a valid ground to object to the scheme of amalgamation.

4. Key Observations in the Case

i. The transferor is a shell company doing no activity of its own. The entire paid-up capital of Rs. 7 Crores stands transferred as subscribed and paid capital of the 31-subsidiary company.

ii. It is also quite apparent that there is a tacit understanding between the two joint venture partners, the exact details and particulars have not been brought out and have been hidden under the veil of secrecy. Why and for what reason funds from the transferee company were transferred to the 31 subsidiaries remains unknown. Nothing prevented and it defies logic why the transferee company did not float and incorporate these 31 subsidiary companies or purchase land on its own?

iii. It is also not explained why one promoter/joint venture partner of the transferee company did not invest and purchase shares in the transferor company itself? This has not been done but a cumbersome and difficult procedure to obtain the sanction of this Court with the proposed scheme has been resorted to. It is obvious that the transferor company and the transferee company seek, seal of approval from this court on the scheme. They have in mind the proposed initial public offering.

iv. The dates on which subsidiary companies were incorporated have not been stated and how and when the said 31 companies became subsidiaries of the transferor company is also not mentioned. The dates on which subsidiary company purchased land have also not been mentioned.

v. The valuer had justified valuation of shares of the transferee company on book value basis as the said company was passing through a transitional phase. Value of each issued share of the transferor company on 15th December 2005 has been done on market value of investments made by the 31 subsidiary companies. The valuer probably overlooked that the transferor company was incorporated two months back only on 6.10.2005 and the transferee company was incorporated earlier on 18.2.2005 and was the joint venture vehicle as per the terms of the joint venture agreement.

vi. The Valuation report is a well-guarded and evasive document, which neither affirms nor negates the valuation made. The Report and the "limitations" mentioned by the Valuer have been quoted below.

In the course of valuation, Valuer was provided with both written and verbal information, including market, technical, financial and operating data. "*We have evaluated the information provided to us by the management of Emaar through broad inquiry, analysis and review. We have not independently investigated or otherwise verified the land valuation reports. Through the above valuation, nothing has come to our attention to indicate that the factual information provided was materially misstated/incorrect or would not afford reasonable grounds upon which to base our report. We do not imply, and it should be construed that we have verified any of the information provided to us, or that our inquiries could have verified any matter, which a more extensive examination might disclose. The terms of our engagement were such that we were entitled to rely upon the information provided by the managements of Emaar/Shrey/MGF without detailed inquiry. Also, we have been given to understand by the management that it has not omitted any relevant and material factors and it has checked out relevance or materiality of any specific information to the present exercise with us in case of any doubt. Accordingly, we do not express any opinion or offer any form of assurance regarding its accuracy and completeness. Except where specifically stated otherwise, our conclusions are based on the assumptions, forecasts and other information given by/on behalf of the company. Emaar MGF has indicated to us that it hasnunderstood that any omissions, inaccuracies or misstatements may materially affect our valuation analysis/results. Accordingly, we assume no responsibility for the technical/financial information furnished by Emaar/MGF/Shrey and believed by us to be reliable."*

5. Court's Decision and Judgement

- The Hon'ble High Court held that it would not have gone into all these aspects knowing fully well the jurisdiction of this Court, but it cannot close its eyes especially in view of the fact that the transferee company is, in the near future,

going to invite public to invest in its shares at a premium.

- It was held that a valuer is required to give fair, objective and an independent report as he is fully aware that the report shall form basis of the order for sanction of the scheme. In view of the reservations and limitations expressed by the approved valuer, the valuer himself is uncertain and full of skepticism about his own valuation. A hesitating report is meaningless.
- It is difficult to act on this report and accept that within two months from October, 2005 to December, 2005 the value of each share of the transferor company increased from Rs. 10/- to Rs.2376/-. It is like hitting repeated jackpots in derbies or winning series of lottery tickets.
- The Hon'ble High Court further placed reliance on its decision in the case of ***Mihir Chakarborty V/s Multi tech Computers Pvt. Ltd. and Ors. (2001)*** and held that normally Courts accept Valuation Reports given by experts, but this cannot be done in an impetuous manner unconcerned and oblivious of the reservations expressed and the guarded language used in the Report.
- The Hon'ble High Court held that it is conscious of the role of the Court under section 391 -394 of the Act, while deciding the question whether a scheme should be sanctioned. Opinion of the shareholders and creditors have to be given due weight. Their collective wisdom should not be substituted. However, such opinion is not conclusive. The court not only has inquisitorial or supervisory role but has to also ensure that the scheme is genuine, bonafide and in good faith. Without acting as a carping critic and being fastidious, the court can independently apply its mind to satisfy itself that the scheme is prima facie reasonable as a whole. The scheme must be such, as a reasonable man of business would approve. The Hon'ble high court also cited the words of the Hon'ble Apex Court in the case of ***Employees' Union V/s Hindustan Lever Ltd. (1995)*** that the scheme shall pass the "prudent business management test".
- The Court relied upon the decision of Hon'ble Apex Court in the case of Miheer H. Mafatlal v. Mafatlal Industries Ltd., (1997) and held that it is in the public interest to over-ride the scheme. Public policy can have many connotations but in the present case, it is contrary to justice, detrimental to commercial morality and interest of public at large.
- The Hon'ble High Court lastly held that the scheme is also rejected for failure to disclose all material facts. Pursuant to the Daphtry Sastry Committee report, proviso to section 391(2) of the Act was inserted. The petitioners must candidly place all relevant facts before the court to judge the scheme on its own merits.

6. Key Learnings for Valuers from the above Case

(i) In the given case the Hon'ble High Court held that *"**a Valuer is required to give fair, objective and an independent report** as he is fully aware that the Report shall form basis of the order for sanction of the scheme."*

Further in Para 17-18 of **Framework of ICAI Valuation Standards, 2018**

it has been stated that:-

"17. To be reliable, the information presented in a valuation report must represent faithfully what it purports to represent. Faithful representation has three characteristics, namely, error-free, neutrality and completeness.

18. Sometimes the information in the valuation report is subject to some risk of being less than a faithful representation of that which it purports to portray. This is not due to bias but may arise due to inherent difficulties either in identifying the appropriate method, approaches or techniques to be applied in valuation."

A Valuer shall always remember that the right to practice a profession carries a duty to protect the society and is not a privilege for the benefit of the professional. A professional should not only be competent to practice, but he must also enjoy the trust and respect of his stakeholders.

(ii) In the above case the respondents contended that the valuer had acted on the basis of land valuation report of a government approved valuer. But nowhere in his report the Valuer provided the reason as in how within two months from October, 2005 to December, 2005 the value of each share of the transferor company increased from Rs. 10/- to Rs.2376/-.

While relying upon the work of an expert a valuer shall evaluate the skills, qualification, and experience of the other expert in relation to the subject matter of his valuation.

Further Para 40-43 of ICAI Valuation Standard 201- Scope of Work, Analyses and Evaluation clearly lays down the guidelines for valuers while placing reliance upon the work of other experts.

"40. A valuer shall evaluate the skills, qualification, and experience of the other expert in relation to the subject matter of his valuation.

A valuer must determine that the expert has sufficient resources to perform the work in a specified time frame and also explore the relationship which shall not give rise to the conflict of interest.

If the work of any third-party expert is to be relied upon in the valuation assignment, the description of such services to be provided by the third- party expert and the extent of reliance placed by the valuer on the expert's work shall be documented in the engagement letter. The engagement letter should document that the third-party expert is solely responsible for their scope of work, assumptions and conclusions.

A valuer shall specifically disclose the nature of work done and give sufficient disclosure about reliance placed by him on the work of the third- party expert in the valuation report."

(iii) In the above case the Hon'ble high Court held that"*normally courts accept valuation reports given by experts, but this cannot be done in an impetuous manner unconcerned and oblivious of the reservations expressed and the guarded language used in the report."*

"The Valuation report is a well-guarded and evasive document, which neither affirms nor negates the valuation made."

Hence, a valuer shall always remember that a Valuation Report should not carry a disclaimer or limitation which has the potential to dilute the responsibility of the Registered Valuer

or makes the valuation unsuitable for the purpose for which the valuation was conducted. In this regard one can also refer to the Guidelines issued by the Insolvency and Bankruptcy Board of India (IBBI) on Use of Caveats, Limitations and Disclaimers by the Registered Valuers in Valuation Reports.

Case No. 02

Dinesh Vrajlal Lakhani Vs. Parke Davis (India) Ltd. (BOM HC) (2003)

IN THE HIGH COURT OF BOMBAY

Appellant: Dinesh Vrajlal Lakhani Vs.

Respondent: Parke Davis (India) Ltd.

Appeal No. 261 of 2003 and Company Application No. 894 of 2002

Decided On: 23.07.2003

1. Brief Facts of the Case

Under the Scheme of Amalgamation, the undertaking of Parke-Davis (India) Ltd. were transferred and vested in Pfizer Ltd. pursuant to the provisions of Section 394 of the Companies Act, 1956, (now substituted by the Companies Act, 2013) as a going concern with effect from 1st December, 2001.

Pfizer, the transferee was incorporated on 21st November, 1950 with the object of carrying on the business of the manufacture of and of a dealer in pharmaceutical, medical, chemical, industrial, and other preparation and articles.

Parke Davis, the transferor, was incorporated on 18th April, 1958, with the main object to manufacture, refine, import, export, buy, sell and deal in drugs, medicines and chemicals, pharmaceutical, herbal, bacteriological and biological products and the preparation of all kinds of toilet articles and cosmetic articles.

- **The benefits** of **the amalgamation were cited** as **under:**

i. Since both the transferor and transferee are manufacturers of pharmaceutical formations, and of nutritional and supplementary products the amalgamation would provide synergistic linkages and economies in cost by combining the total business functions and related activities;

ii. As a result of enhanced capabilities and resources, the amalgamated Company will have greater flexibility to market and meet customer needs and will be able to compete more effectively thereby strengthening its market position;

iii. The amalgamated Company will have the benefit of the combined reserves, manufacturing and other assets, manpower and cash flows of the two companies;

iv. The Scheme will make available the benefit of financial resources, as well as the managerial, technical, distribution and marketing expertise of each of the Companies;

v. The amalgamated Company will be able to source and absorb new technology and its capacity to spend on Research and Development will be enhanced;

vi. A larger and growth-oriented company will mean enhanced financial and growth prospects for the people and organisations connected with the Company and will be in public interest; and

vii. The amalgamated Company will have a balanced portfolio of products, thereby insulating the business from dependence on one or two product areas.

2. Scheme of Events

i. The Scheme of Amalgamation was proposed and approved by the Boards of Directors of the transferor and transferee in separate meetings held on 27th June, 2002.

ii. The proposed Scheme of Amalgamation provided for a share exchange ratio wherein the Transferee was required to issue and allot 4 equity shares of Rs.10/- each to every equity shareholder of the Transferor whose name appears in the Register of Members on the record date for every 9 equity shares of Rs.10/- each held in the Transferor. The Board of Directors of the Transferor and the Transferee accepted the suggested ratio worked out by the two Valuers.

iii. On 21st August, 2002, a meeting of the equity shareholders of the transferor was convened. 53 shareholders representing in the aggregate 55,43,479 shares or 99.94% in terms of the total percentage/value, voted in favour of the resolution, 46 shareholders representing 2872 shares voted against the resolution. There were 15 invalid votes.

iv. Before the Learned Company Judge, there were 16 objectors who opposed the Scheme of Amalgamation. The objections raised by the objectors were:

   a. The swap ratio proposed in the Scheme of Amalgamation was unfair to the shareholders and against the interest of minority shareholders of the Transferor;

   b. The detailed valuation report of the Chartered Accountant was not made available to the objectors;

   c. Shri Lakhani had moved a resolution for amendment of the swap ratio but the amendment was rejected by the Chairman without putting it to vote;

   d. The Chairman had not conducted the proceedings properly; he was the Chairman of the Board of Directors of the Transferor and an alternate Director of the Transferee, besides being a partner of Solicitor of both the Transferor and Transferee. It was contended that the Chairman had a vested interest in the Scheme of Amalgamation and his acting as Chairman of the meeting was prejudicial to the interest of the members of the Company;

   e. The Chairman had not disclosed in his report to the Court that 18 persons had spoken against the resolution, nor did he mention that the amendment to the resolution had been moved;

   f. There were discrepancies in the report of the scrutineers and several votes had been shown as

invalid without assigning any reason;

g. Several persons had voted more than once in the Meeting which was impermissible under the law;

h. Objections had been filed that there were workmen of the Transferor whose services had been terminated and on whose behalf, proceedings were pending before the Deputy Commissioner of Labour.

v. The Learned Single Judge has allowed the Company Petition and sanctioned the proposed amalgamation.

3. The Hon'ble High Court's Observations and Decision

- The swap ratio or exchange ratio that forms the basis of the compromise or arrangement is a matter of expert determination. The judgments of the Supreme Court in Hindustan Lever Employees Union's case (supra) and in Miheer H. Mafatlal v. Mafatlal Industries Ltd. [1996] (supra) held that the swap ratio is an expert determination, often made by Chartered Accountants of repute by which the valuation which is adopted is reflected in the exchange ratio.
- It is entirely for the members in their commercial wisdom to determine whether the Scheme of Amalgamation as proposed should be accepted or rejected. The members are entitled to determine as to whether the swap or exchange ratio ought to be accepted or rejected. The members have to decide whether the exchange ratio which forms the basis of the Scheme of Amalgamation is or is not in their interest. That is a matter of their commercial wisdom.
- The swap ratio is an integral part of the proposal which is before the meeting and an amendment to the swap ratio will operate to nullify the basis of the Scheme of Amalgamation. Whether the Scheme of Amalgamation should or should not be accepted is for the members of the Company to decide but, there can be no gain saying that an amendment to the swap ratio would nullify basis and foundation of the Scheme of Amalgamation. Consequently, the Chairman of the meeting was justified in his ruling that the amendment to the swap ratio that was proposed by Shri Lakhani had to be ruled as not in order.
- In so far as the objections filed by the workers were concerned, the Learned Judge noted that they were no longer in the employment of the Company and their matters were pending either before the appropriate Court or the Commissioner of Labour. There was an averment in the petition that all pending litigation of the transferor would be contested by the transferee and all liabilities that may be incurred by the transferor would be taken over by the transferee.
- In view of the above, it was held that the interests of these workers were duly protected. Having regard to these facts and circumstances, the Learned Single Judge had allowed the Company Petition and sanctioned the proposed amalgamation.
- It was ruled that the Court will not for instance interfere only because the valuation adopted by the valuer may have been improved upon had another method been adopted. The Court is neither a valuer nor an appellate forum to re-appreciate the merits of the valuation. What the Court has to ensure is that the determination should not be contrary to the law or unfair to the shareholders of the company which has been merged.
- The Court held that the Learned Company Judge was correct in sanctioning the Scheme of Amalgamation. There is no merit in the objections raised by the Appellant.

4. Key Learnings for Valuers from the above Case

i. The Scheme of Amalgamation has received an overwhelming support of 99.94% of the shareholders. The shareholders in their commercial wisdom have thought it fit that the Scheme should be approved.

ii. The jurisdiction of the Court in such matters is not appellate in nature but is founded on fairness. The Court will not interfere only because the valuation adopted by the Valuer may have been improved upon had another method been adopted. The Court is neither a valuer nor an appellate forum to reappreciate the merits of the valuation.

iii. What the Court has to ensure is that the determination should not be contrary to law or unfair to the shareholders of the Company which has been merged. In Hindustan Lever Employees Union s case (supra), the Supreme Court held that it is not a part of the judicial process in such a matter "to examine entrepreneurial activities to ferret out flaws".

iv. Where more than 95 per cent of the shareholders had agreed to the valuation determined by the Chartered Accountant, the procedural irregularities which were present in it could not vitiate the determination.

v. In the case of Miheer H. Mafatlal vs. Mafatlal Industries, the Supreme Court has laid down that the sanctioning Court has to consider whether:-

a. the requisite statutory procedure has been complied with;

b. the scheme is backed up by the requisite majority;

c. the creditors or members had the relevant material to enable the voters to arrive at an informed decision;

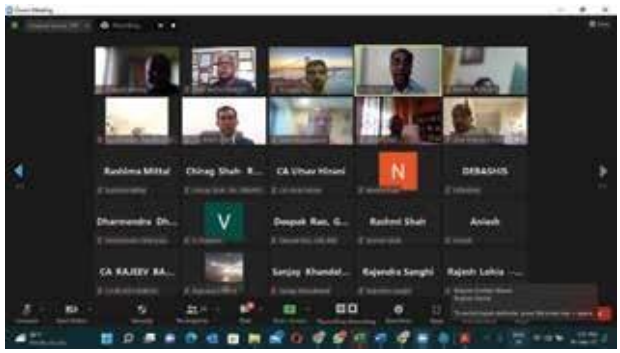
d. the requisite material is placed before the Court by the applicant seeking sanction;

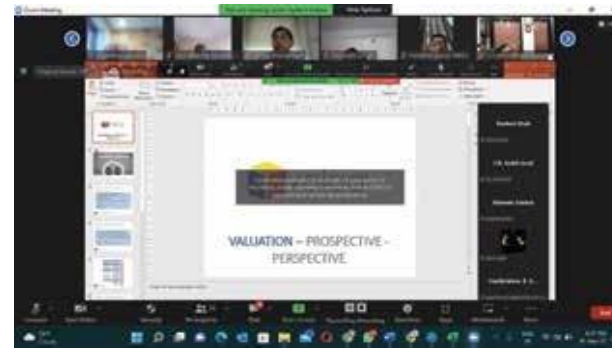
e. the proposed scheme is violative of law and contrary to public policy; and

f. the majority of creditors or members is acting bona fide and in good faith and is not coercing the minority in order to promote any interest adverse to the latter.

Once the requirements of the law are fulfilled, the Court has no further jurisdiction to sit in appeal over the commercial wisdom of the creditors or as the case may be the members of the Company.

ICMAI REGISTERED VALUERS ORGANISATION
In Association With
INSOLVENCY AND BANKRUPTCY BOARD OF INDIA
Organises: E-Charcha Valuation: Perspectives and Prospects on 16th September 2022

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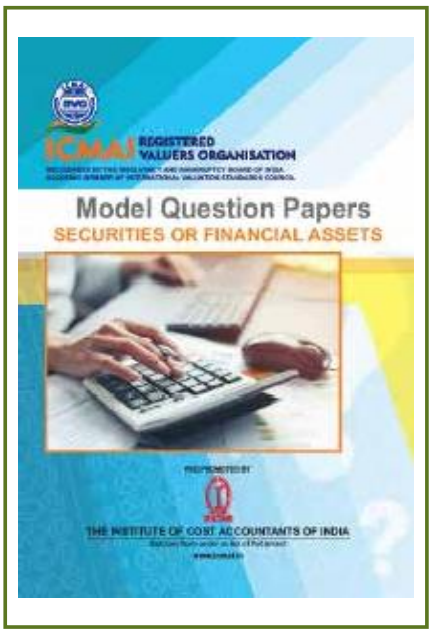
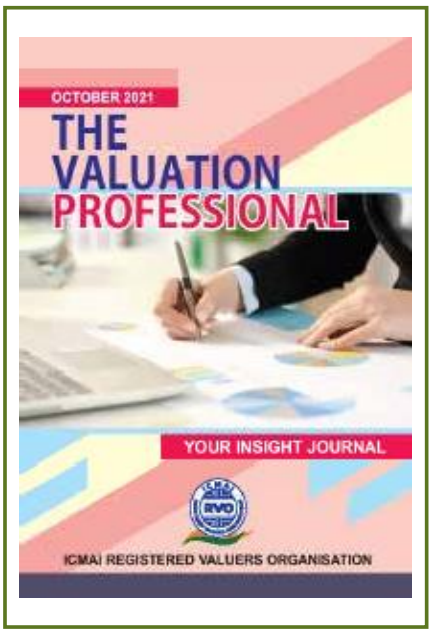
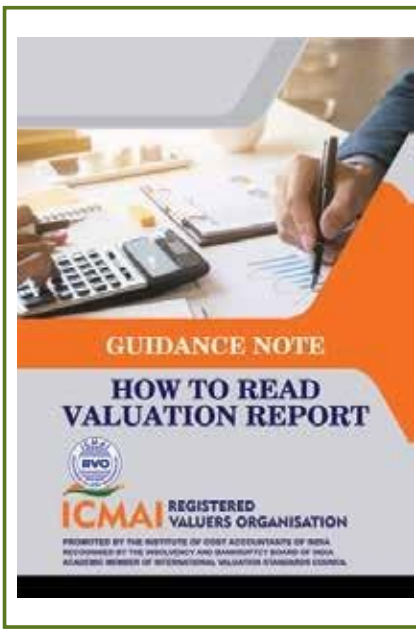


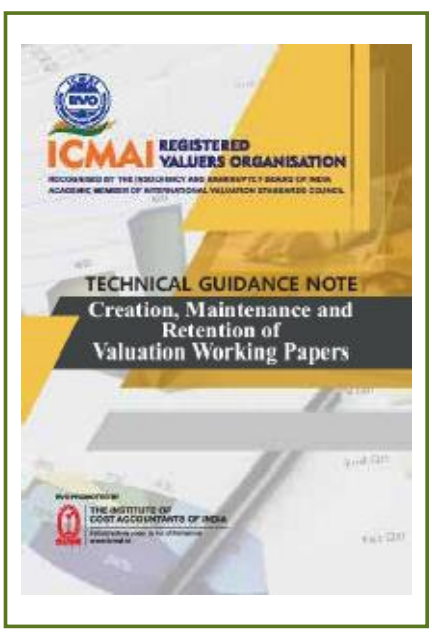
Model Question Papers
Securities or Financial Assets



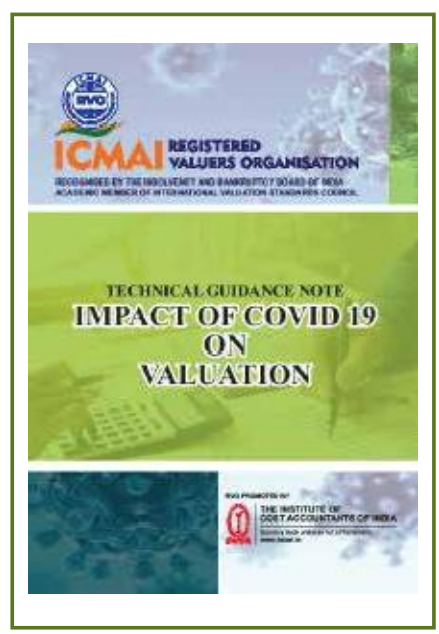
The Valuation Professional



Guidance Note
How to Read Valuation Report



Technical Guidance Note
Creation Maintenance and
Retention of Valuation Working
Papers



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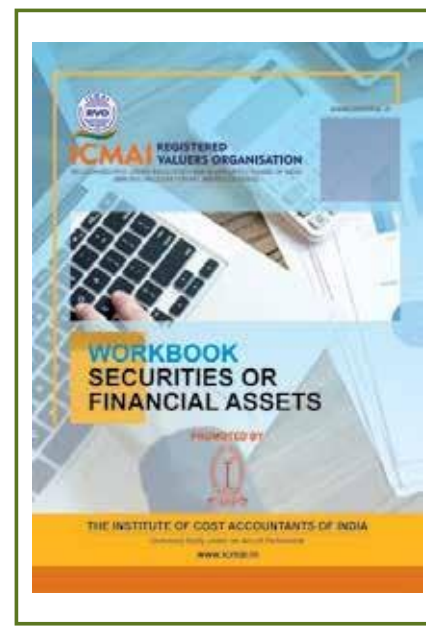
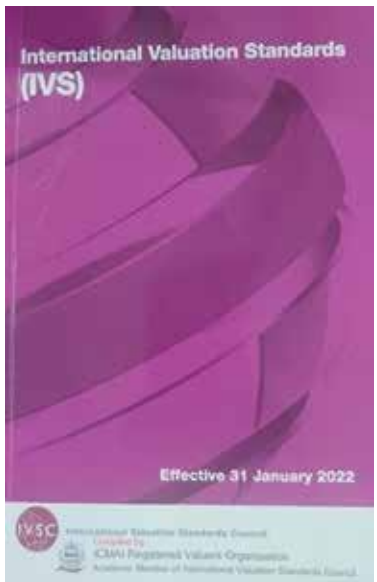


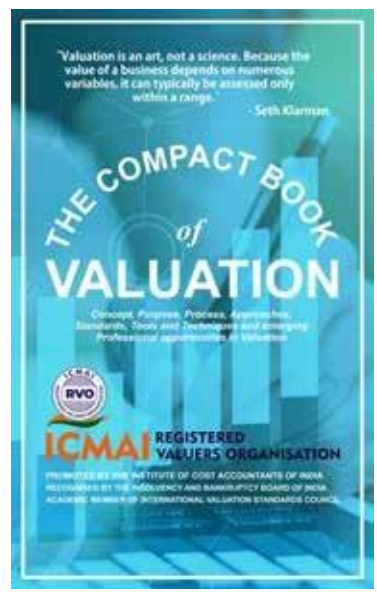
Work Book
Securities or Financial Assets

Link:- https://www.rvoicmai.in/publication/

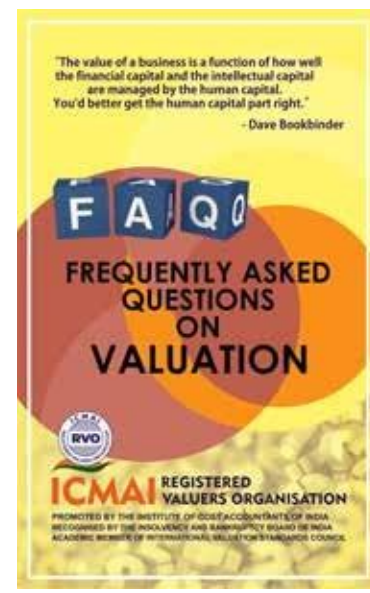
PUBLICATIONS



International Valuation Standards

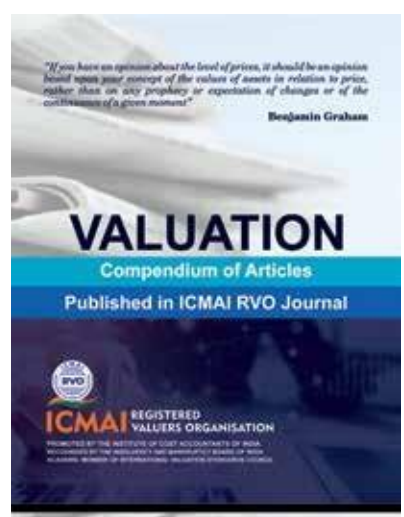


The Compact Book of Valuation

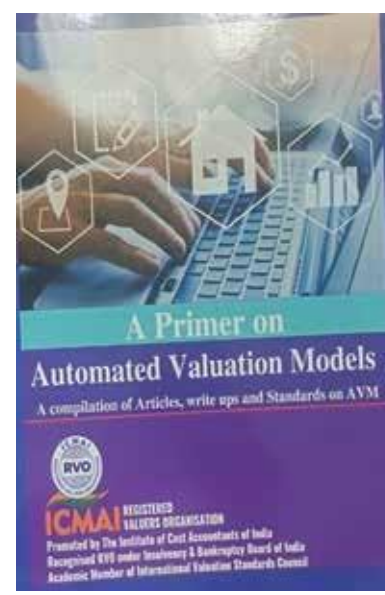


FAQ
Frequently Asked Questions on Valuation

Compendium of Perspective Papers



Compendium of Articles



Automated Valuation Models

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Ambassadors-ICMAI RVO

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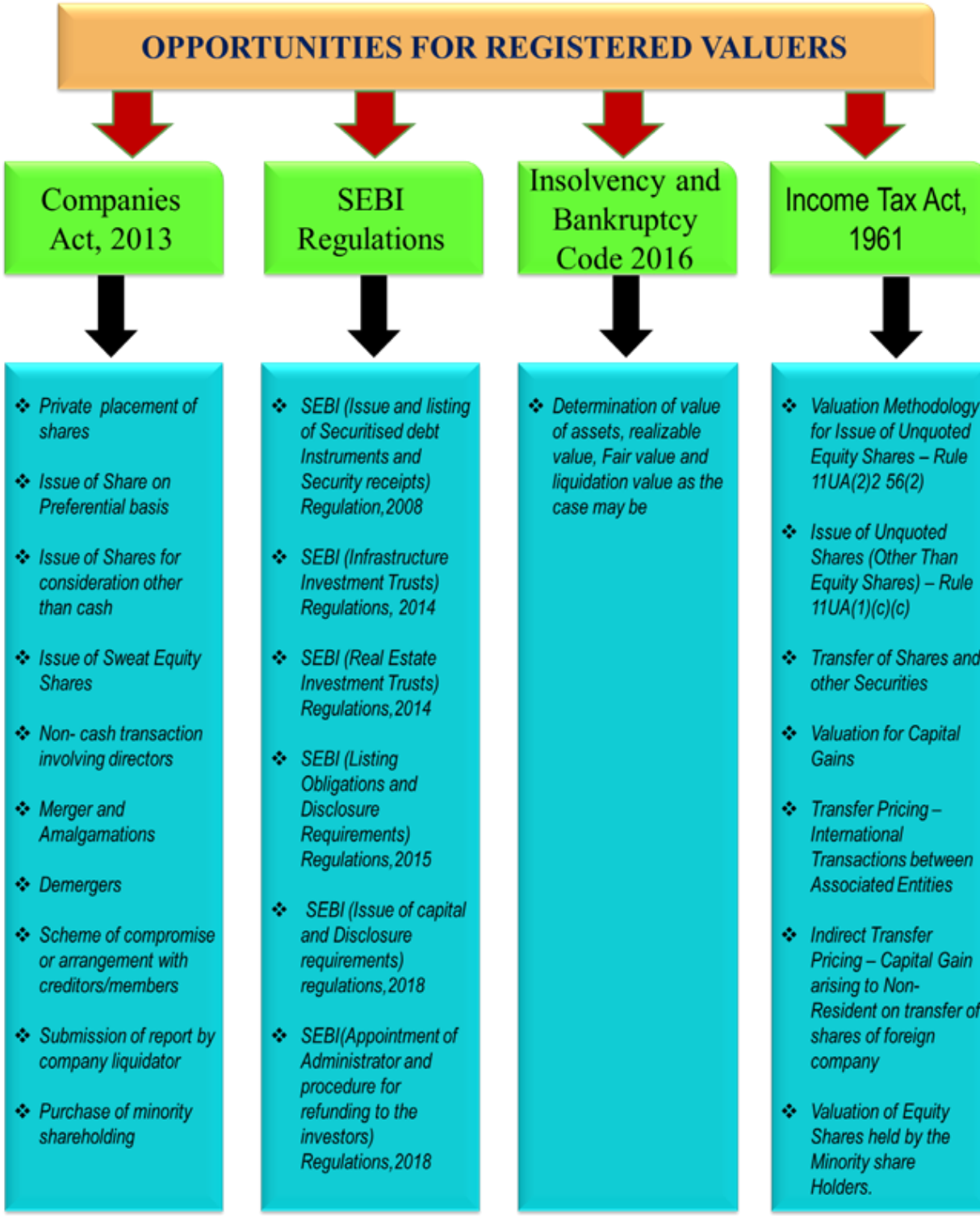
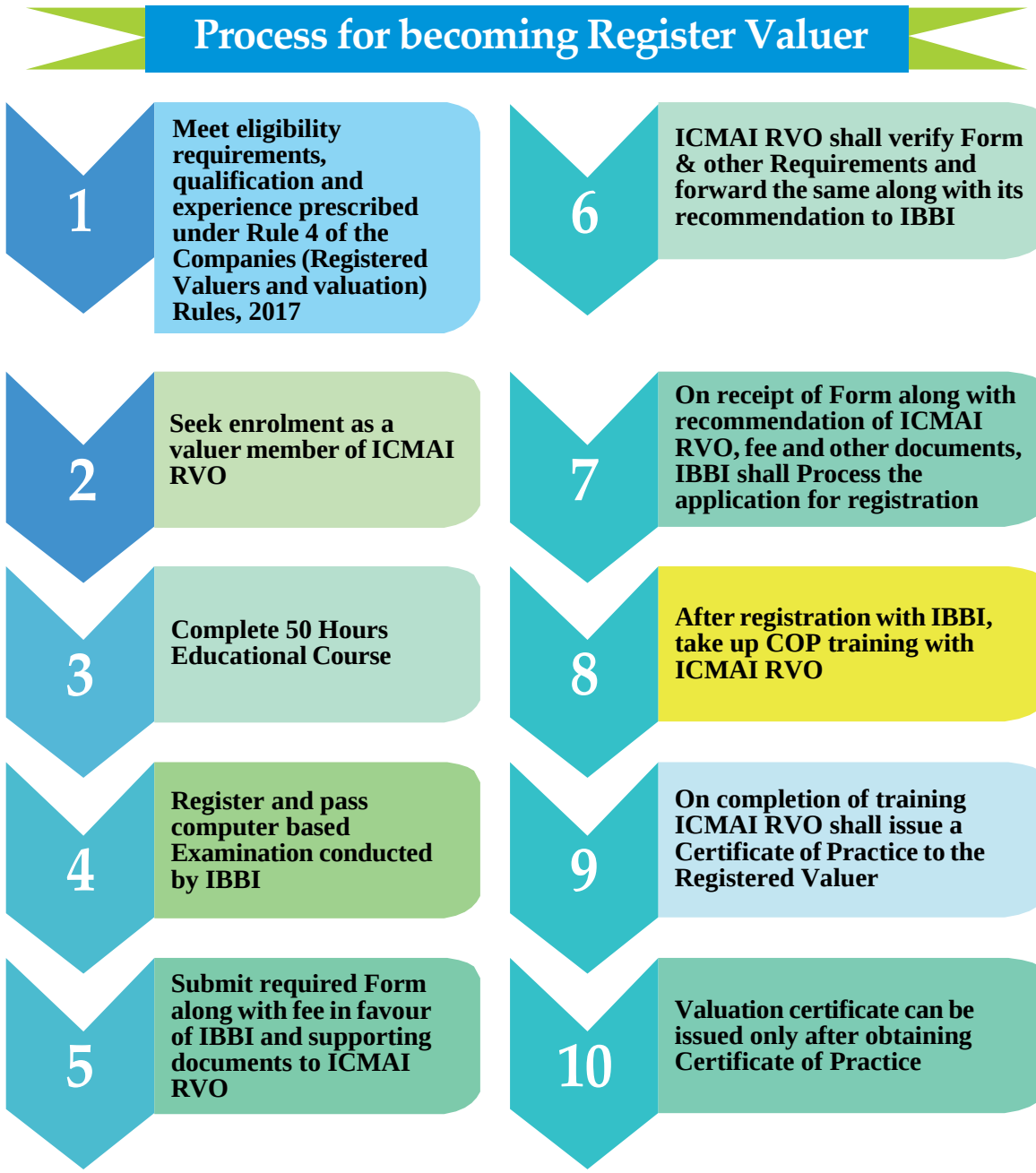

OPPORTUNITIES FOR REGISTERED VALUERS
Companies Act, 2013
Private placement of shares
Issue of Share on Preferential basis
Issue of Shares for consideration other than cash
Issue of Sweat Equity Shares
Non- cash transaction involving directors
Merger and Amalgamations
Demergers
Scheme of compromise or arrangement with creditors/members
Submission of report by company liquidator
Purchase of minority shareholding
SEBI Regulations
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
Insolvency and Bankruptcy Code 2016
Determination of value of assets, realizable value, Fair value and liquidation value as the case may be
Income Tax Act, 1961
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.

Insolvency and Bankruptcy Board of India
Limited Insolvency Examination Division
Valuation Examinations Division

No. EXAM-13016/1/2022-IBBI
Dated: 06th June 2022

CIRCULAR

To,
All Test Administrators
All Insolvency Professional Agencies
All Registered Valuer Organisations
All candidates registered in the examination system
(Through IBBI website)

Dear Sir/Madam

Subject: Improvement to the scheme of examinations - frequency of attempts in Limited Insolvency Examination/ Valuation Examinations

IBBI conducts the Limited Insolvency Examination (LIE) in pursuance to regulation 3 of the Insolvency and Bankruptcy Board of India (Insolvency Professionals) Regulations, 2016. The said Regulations *inter-alia* empowers IBBI to determine the syllabus, format and frequency of the examination, to be published at least three months before the examination.

2. IBBI, as the designated Authority, also conducts Valuation Examinations in terms of rule 5 of the Companies (Registered Valuers and Valuation) Rules, 2017(Valuation Rules). The said rule *inter-alia* empowers IBBI to determine the syllabus, format and frequency of the examination, to be published at least three months before the examination.

3. In order to bring in objectivity and improvements in the scheme of above examinations, it has been decided that frequency of attempt in an LIE or valuation examination, as the case may be, for every candidate, shall be determined after taking into account a cooling off period of 2-months between each consecutive attempts of such candidate, thereby making a total of 6 attempts in a period of 12 months.

4. You are, therefore, advised to implement/ follow the above requirements in LIE/ Valuation Examinations conducted/ attempted after expiry of the period of 3 months from the date of this circular.

5. This circular is being issued in exercise of the powers conferred under the provisions of section 196 of the Insolvency and Bankruptcy Code, 2016, Regulations made thereunder and the Valuation Rules.

Yours faithfully

Sd/-
Rajesh Tiwari
General Manager
Tel: 011 2346 2864
Email: trajesh.74@ibbi.gov.in

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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