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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

ICMAI REGISTERED VALUERS ORGANISATION

RECOGNISED RVO UNDER INSOLVENCY AND BANKRUPTCY BOARD OF INDIA

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FROM THE CHAIRMAN's DESK

CS (Dr.) Shyam Agarwal
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ICMAI Registered Valuers Organisation

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
ICMAI Registered Valuers Organisation

President
The Institute of Cost Accountant of India

India has always been a growth market, meaning investors chase growth in this part of the world, offering the country a premium valuation over its peers globally. But ignoring 'value' in this market could be foolhardy. It is especially true, when valuations are polarised and that earnings growth may do little to rerate 'popular' stocks anymore amid questions of margin of safety.

In value investor Benjamin Graham's words, the market is a voting machine in the short run but a weighing machine in the long run. A focus on investing in sectors which are out of favour but offer long term value, many a time, proves to be rewarding. Here investment is made in a stock, which is trading below what an investor considers is the intrinsic value of the business, after considering margin of safety, to eliminate calculation inadequacies. Value investors believe that the market movements are emotionally triggered and may not always offer a fair view of the company's performance in the short term. As an investor it is important to recognise that no matter how expensive the market may be, there will always be pockets of opportunities across sectors. Hence, investors with long term horizon can consider investing in value funds for meeting their long term financial objectives

FROM THE MD's DESK

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

India's valuation premium over the other emerging markets has expanded in the last 12 months. This can be attributed to its resilient earnings growth and improvements in the quality of the balance sheet of India Inc. However, sustained inflation pressures in the western world and rising chances of a recession could mean further outflows, keeping the pressure on valuations. In this environment, quality companies at reasonable valuations will continue to perform well. Sectors such as Banking, Industrials, Autos, and Domestic Consumption plays will perform well.

With inflation rates hitting double-digits in many countries, the central banks of major developed economies have been hiking interest rates at an aggressive pace. This environment has had a significant negative impact on stock markets. Higher, more volatile inflation generally has negative effects on financial assets and neutral/positive effects on gold, collectibles and real assets. However, the impact of inflation and price changes on individual company values can vary dramatically. Inflation's effect on the value of your business comes down to the impact it has on expected cash flow/growth and risk. Companies with pricing power on the products/services offered, low cost of goods/input costs and short-term, flexible investments perform better during periods of high inflation. From a risk perspective, companies with large, stable earnings streams and less debt fare better in inflationary environments and will have better purchasing power amid higher prices.

PROFESSIONAL DEVELOPMENT

ICMAI REGISTERED VALUERS' ORGANISATION

Registered Office
The Institute of Cost Accountants of India
4th Floor, CMA Bhawan 3, Institutional Area
Lodhi Road, New Delhi – 110003

www.rvoicmai.in

PROFESSIONAL DEVELOPMENT PROGRAMS

August '2022 to October '2022	
Date	**PD Programs**
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)
28th -29th September 2022	Learning Program in Valuation
2nd October 2022	Master Class on Valuation
06th-07th October 2022	Building Valuation Practice
11th - 12th October 2022	Tool Kit for Registered Valuers
18th October 2022	National Conference Valuation Day
19th-20th October 2022	Byte Size Certificate Courses in Valuation

PROFESSIONAL DEVELOPMENT PROGRAMS

50 Hours Training Programs

August '2022 to October '2022	
Date	**Programs**
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
20th to 23rd October 2022 & 28th to 30th October 2022	50 Hrs. Educational Course on Valuation (Securities or Financial Assets)

Upcoming Professional Development Programs

Date	PD Programs
28th to 30th October 2022 & 3rd to 06th November 2022	50 hours Valuation Course on Land & Building


Articles

PERSPECTIVES ON 'COST APPROACH' TO VALUATION

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

The Perspective

By Definition, the cost method also known as the Depreciated Replacement Cost (DRC) method of valuation is a method of determining the value of a property or an asset by reference to the cost of replacing the property or asset as new, and then making allowance for depreciation to take care of age, wear and tear and other forms of obsolescence .Put simply, the cost approach is a method of real estate valuation where the value of real property is determined by what it would cost to rebuild the building if it was destroyed or to build an equivalent structure. It also factors in the worth of the land on which the building is situated, as well as the cost of any loss in value, or depreciation that occurs over time. This approach is based on the underlying logic that buyers will not pay more for the building than they would pay if they needed to cover the current cost of producing a similar property.

The cost approach is one of the three main methods used in calculating the value of real estate properties. The cost approach method is based on the assumption that a potential buyer of a property should pay a price that is equal to the cost of constructing an equivalent building. The market value of a real estate property is the sum of the value of the land and site improvements on the land, less any accrued depreciation.

Reasons for "resuscitating" this approach

Henry S. Harrison, in the Fall 2006 issue of his Real Estate Valuation Magazine Online, included an article titled "Let's Resuscitate the Cost Approach." Here are two quotes from that article that are still true today:

"How credible do you think a current estimate of market value will be if it is based solely on three sales made to low down-payment buyers at the height of the recent feeding frenzy?"

"The Cost Approach answers several key questions: What would it cost to build that house today? What should it be insured for? What would a reasonably well-informed buyer actually pay for that house—without the special market condition of a feeding frenzy?"

Is the cost approach realistic?

There are several advantages and disadvantages of the cost approach valuation method. Cost approach is used for properties that do not have many comparable properties available in the market. For example, if a property is unique, there won't be existing replicas of it in the broader market. The cost approach operates on certain assumptions that could prove to be faulty. When cost approach is used, it assumes the availability of sufficient land on which to build an identical property. A similar parcel of land may not be available, which would make the process of valuation inaccurate. It could also be challenging to find the exact building materials for the reproduction method, as certain construction materials become obsolete over time.

Steps in the Cost Approach Method

The formula for calculating the cost approach is as follows:

Property Value = Replacement/ Reproduction Cost – Depreciation + Land Value

Since the cost approach is not based on comparable properties or the property's ability to generate revenues, the method considers the amount that will be incurred to build a property today, assuming that the existing structure is to be destroyed and rebuilt afresh. Hence, it takes into account the value of the land where the property is built, less any loss in value.

The following is the process of the cost approach method of real estate valuation:

Estimate the reproduction or replacement cost of the structure

The step involves estimating the current cost of building the structure from scratch and the site improvements. The cost can be estimated using the following two methods:

- **Replacement method :** The replacement method estimates the cost of constructing a building with the same utility as

the structure being evaluated, using the current construction materials, standards, designs, and layouts.

- **Reproduction method :** The reproduction method estimates the cost of constructing a duplicate of the property, using similar materials and construction practices. It also uses the designs, standards, and layouts that were in place at the time the property was constructed.

Construction Costs

There are a lot of costs to take into consideration when determining the cost of building. Let's start off by differentiating between direct and indirect costs. Direct costs are any costs directly associated with the construction process (direct labour and material costs). Indirect costs are the other costs that come along with a construction project (insurance, taxes, administrative fees, etc.).

Whether you're using the replacement or reproduction cost approach, there are four main methods to choose from when finding total building construction cost:

- **Comparative Unit Method:** Start off with a lump-sum estimate per square foot. Then categorize costs according to construction materials. These categories can be narrowed down further based on quality.
- **Segregated Cost Method:** From the name, you can tell that costs are not taken from a lump-sum view. Here component costs are directly related to separate construction material and quality, then added up. So take individual costs of things like the roof, plumbing, flooring, etc. and then combine them to get the final cost.
- **Unit-in-Place Method:** This method is similar to the previous one but it breaks down each major cost material into its more detailed cost components. Include overhead costs in this method.
- **Quantity Survey Method:** This method requires the most time, but it is the most accurate. Here, each individual cost involved in construction/ renovation is estimated.

Estimate the depreciation of the improvements

Depreciation is the loss in value of the building and or its improvements, and it causes the difference between the value of improvements and the current contributing value of the improvements. When estimating the depreciation of the property, you should consider the physical, functional, and economic depreciation. There are three forms of depreciation :

- **Physical depreciation** is the wear and tear of buildings over time.
- **Functional depreciation** happens when a property's worth reduces due to outdated design and features. It is also affected by changes in consumer tastes and preferences.
- **Economic depreciation** is the decrease in the income value of the property due to influential economic factors. This can include: Recession, A general decrease in real estate properties, Development of properties such as a sewer treatment plant, a landfill, etc.

Estimate the market value of land

The next step is to estimate the value of the land on which the property is being built. The most appropriate method of estimating the land value is the direct comparison method, where the current price of land is obtained from the value of recently sold plots of land. It is the market value that you would pay for the land today if it was vacant.

Deduct accrued depreciation from the reproduction/replacement cost

After obtaining the total value of depreciation of the improvements, deduct the figure from the estimated reproduction or replacement cost obtained in step one.

Add the depreciated cost of the structure to the estimated value of the land

The final step is to add the depreciated cost of the structure and improvements to the estimated value of the land.

When to Use the Cost Approach?

There are several different contexts and scenarios in which a cost approach appraisal may be used to value a property.

- **Insurance Companies:** Insurance companies may use the cost approach to appraise a property in order to determine how much it would cost to replace the property in the event of damage or destruction.
- **Single Use Buildings:** The cost approach may be used to appraise single-use buildings such as office buildings, hotels, and warehouses.
- **Unique Properties:** The cost approach may also be

used to appraise properties that are unique or have been significantly customized. This is because it can be difficult to find comparable properties on the market.

- **Special Use Properties:** The cost approach may also be used to appraise exclusive use properties such as schools, libraries, hospitals, and museums.
- **New Construction:** The cost approach can also be used to appraise newly constructed properties. The cost approach works best when there is little depreciation to account for and similar land is available nearby. This means it can be especially useful for appraising new construction

Benefits of Cost Approach

This approach is accurate in evaluating special-use and unique buildings. The cost approach does not focus on the prices of similar homes. Rather, it calculates how much the building would be if it were created from scratch. This method factors in the worth of the land and already makes deductions for any loss in value. Another advantage of the cost approach is that it is a very solid capital valuation method supported by current market costs and operating environment. It provides a clear value for the tangible property, because that value has been clearly separated from all other assets. Used in conjunction with the income approach, the cost approach allows intangible assets to be valued indirectly. Tangible values established through the cost approach are subtracted from the enterprise value established by the income approach; the remainder is the value of the intangible assets.

Limitations of the Cost Approach

One of the limitations of the cost approach is that it assumes that the buyer is in a position to find a vacant plot of land where to build an identical property, and that is not always the case. If there is no vacant land, the estimated value of the property will be inaccurate. Also, an area can be fully developed, and local authorities can be restrictive on new developments, and so it will be impractical to estimate land values in that area. Another limitation is that it will be difficult to estimate the depreciation of older properties because there are many factors to take into account. For example, construction materials used during the construction of older property may no longer be available or in use. Estimating the value of such a property allows a lot of room for subjectivity.

Conclusion

Cost approach refers to the method of valuing a property (real estate) in which the accrued depreciation is deducted from the replacement cost of the property at current prices. It is one of the basic valuation methods, holding the premise that a potential real estate user should not pay more for a property than an equivalent would cost. The cost approach is also based on the fact that real estate components could be added together and summed to get an estimate of value when valued separately. This means that the cost of construction plus the land, less depreciation is the limit of the market value. When a property is new, it yields a more accurate market value. Similar to its counterparts, the cost approach may have other forces that prove it inaccurate. For example, if vacant land is not available to compare against, the professional valuing the property will have to derive an estimate, making the end value less accurate.

CONCERNS OF DIFFERENCE IN VALUE, OVERVALUATION AND UNDERVALUATION

O. P. Verma

IBBI/RV/02/2018/10022(Plant & Machinery)

IBBI/RV/02/2019/12230 (Land & Building)

'Difference in Value concerns to the large variation in value of property estimated by two or more Valuers.'

'Overvaluation implies assigning an excessive or too high a value on something and the Undervaluation refers to the act of deciding that something is less valuable than it really is.'

Sometimes, the lenders – public sector banks mostly – complain at various forums that due to overvaluation done by the Valuer at the stage of financing, they incurred losses on account of low recovery against outstanding loans.

However, concerns are raised after liquidation of NPA. Such questions are not raised at the stage of funding, i.e. sanction and disbursement of loans.

Though, no valuer can be perfect, they are highly trained professionals with several years of experience and have the required understanding for assigning fair value to any property. Most often than not, the valuers work diligently to make reasonably fair valuation because of the potentially severe consequences of doing their job poorly or by issuing a biased or misleading report.

Still, some biased, misleading valuation reports cannot be ruled out for which likely reasons could be one or more of the following:

- The lender was influenced with borrower and ignored to conduct due diligence of latter's fraudulent documents, background and credentials, or
- The lender ignored the overvaluation knowingly, with a view to meet the loan disbursal targets set by the management, or
- The Valuer was keen to oblige the borrower with overvaluation, due to palm greasing by the latter to seek illicit advantage from lender, or
- There was collusion of the lender's officials with borrower, and the both misled the Valuer to provide report with higher value to facilitate the borrower with higher than eligible funds, or
- Lender's official did not personally visit the property to verify its utility and value before release of funds to the borrower

Answer to the above questions would be required to find out whether the lenders' claim to blame the overvaluation of properties by Valuers is the sole reason for accounts turning non-performing or former's losses during liquidation.

Money advanced by Banks is public money and the bank officials are its custodians. Banks seek services of Valuers for fair valuation of borrower's properties before advancing loans. If the Valuer is found to be negligent in conduct of the Valuation, the Banks - after following due process - have the option to blacklist the Valuers for negligence besides the option to file criminal cases for fraud or cheating.

However, blacklisting of Valuers by banks, in the past, has been rare, which could be considered as enough evidence that blaming Valuers for NPAs is more of a tendency amongst the bankers than the truth. The bank managements cannot ignore that more bank officials have faced criminal charges for criminal conspiracy or fraud or negligence than an insignificantly small number of the Valuers in the Courts of Law.

Despite blames and countering by the Valuers, Differences in Value amongst Valuers, Overvaluation and Undervaluation are not uncommon and discussed hereunder:

Difference in Value amongst Valuers:

In case of C.B. Gautam vs Union of India (1993) 199 ITR 530, related to check proliferation of black money in real estate transactions, Supreme Court's judgment dated 17.11.1992, has quoted affidavit of Mr. H.K. Sarangi, Under Secretary, Central Board of Direct Taxes, Department of Revenue, Ministry of Finance, Govt. of India, which stated that "The provisions of Chapter XX-C ought to be resorted to only in cases of undervaluation of immovable properties in agreements of sale to the extent of 15% or more. The pre-emptive purchase has to be resorted to only if fair market value of the property concerned is found to be at least 15% more than the apparent consideration and this limit has not to be mechanically applied but a reasonable margin for probable error is to be taken into account."

Thus the Ministry of Finance can be said to have a view that Value difference between valuers to the extent of 15% would be reasonably acceptable. It also implies that the differences larger than 15% in value could be treated as over or under valuation.

It is not uncommon to find large differences in Value between the reports of different valuers. Not long ago, a Regulator, during a conference with

Valuers, was also curious to find out the reasons thereof.

The difference or variation in fair value assets can be of two types. One can be difference in fair value between the stage of funding and liquidation. The other could be the variation in fair value done at the same time by different valuers

The former, in most of the times, could be due to genuine reasons, like wear and tear, theft or removal or destruction in natural disaster, of assets financed.

The other, i.e. variation in value by different valuers during valuation of assets done at the same time is of vital importance and needs to studied deeper. These could emerge mostly in case of large land parcels or industrial projects, where share of cost of land and buildings is much lower than the machinery.

Usual mode of Valuation of Land is through comparison with sale instances of recent past, local enquiries or listings on websites, so large differences in value assessment by different valuers for small plots of land or built up flats and houses in urban area would be rare. However in case of large parcels, particularly in cases where land use has been changed from agricultural to non-agricultural, judgment of different valuers on land value may vary,. The differences could however be contained in small range, if all valuers adopt the same unit of measure of land – acre/ bigha/sq mt etc - in accordance with the measure which is prevailing in local deals for similar sized land parcels.

However, the field of Plant and machinery is vast with various types of machinery, different specifications, different metallurgy, automation in controls, different quality and quantity of output, technological variations etc, so every machine or plant has to be considered on its merits and shortcomings besides potential profitability from its use, and Valuer's knowledge about the ongoing changes or the innovations in the particular field which may sometimes lead to premature obsolescence of machinery, which makes the Valuation of Plant and machinery a very complex and difficult task.

Three approaches of Valuation, i.e. Income, market and Cost approach can be used for machinery valuation but due to limited or no availability of usable data, often, Valuation of machinery is done by Cost approach, wherein Depreciated replacement cost, subject to potential profitability, is considered as Fair Value.

Main factors, which impact the resultant value assessment in cost approach are Replacement Cost of new equipment, Depreciation including obsolescence, and the aspect of potential profitability. Each of the aforesaid factors of Valuation is subjective, as described hereunder:

Replacement cost should ideally be considered on the basis of fresh quotations of same machine or by some adjustment (subjective) in cost of similar new machine with same utility. But in actual practice, getting fresh quotation is not easy as suppliers usually do not respond to queries from persons other than the actual or potential users. So Valuer has to estimate Replacement cost by applying Cost index for the cost inflation over its age. For domestic equipment, data of wholesale price index is published by the Office of the Economic Advisor. Industrial units have mix of various machinery and equipment, therefore cost index is also applied subjectively. Precise data of import of comparable machinery is rarely available, so its replacement cost assessment also becomes subjective.

Depreciation assessment is also subjective. Straight line method or declining balance methods are usually applied which give different results over short periods, though depreciation for higher age may not have much difference. There is no binding on a valuer to consider a particular method, so it is subjective judgment.

Then there is a factor of Potential profitability. Since valuation exercise does not require assessment of financial viability, judgment on potential profitability is also subjective, which, for machines of obsolete technology, may sometimes result in higher DRC than prevailing market price of similar used machine.

Despite the difficult and complex exercise of Valuation of Plant & Machinery, valuers integrate information drawn from the verification of machinery & equipment, documents and information collected from owners, operators, market research and analysis of the data by the application of appraisal techniques to form a conclusion, which is effectively an opinion of value.

If impact of all factors considered by one valuer is on higher side while the other has considered the same on lower side the resulting depreciated replacement cost or value estimated by the two will have wide variation.

It also remains a fact that not only the Valuers may differ in estimation of fair value of used machinery, even the buyers are also found to be submitting bids with differences of more than 100% in the bid amount mainly due to varying assessment of bidders based on their views on demand and supply with respect to resale, their business links and reach, as also the synergy of some of them.

Overvaluation:

Overvaluation than real worth of properties causes reduction in security margin against outstanding loan and hence enhances risk in its recovery. Instances of overvaluation of Land and building are rare but can occur if the data collection of comparable sales and inquiries about market rates are not reliable or not undertaken or comparable data is non-existent. Sometimes, no sale of property is found to have taken place over last many years in the area, where property is situated, which may impact the perception of different valuers based on the local information. The difference in value in such properties could high too.

More commonly observed overvaluation occurs in plant and machinery. Many borrowers would like to get bills of machinery at higher amount than its actual price, some do it to cover their margin against loan, while some may have evil intentions to flee after taking loan. Usually at the stage of getting loan, the borrowers provide copy of bills of machines to the lender and the valuer for conducting valuation. However, when the loan account becomes NPA, the lenders often

inform the valuer that bills of machines are not available. Since name plates of machines are often not found on machines, it hinders the valuer to get its specifications and the quality aspect based on supplier's previous reputation.

Overvaluation may happen due to the following:

The Valuer bases Valuation on the copies of Bills produced but the Bills were over-invoiced. The over-invoicing may have been done by the Supplier as per instructions of borrower or the latter may have provided fake or forged bills.

In case of imported machinery, the valuer has limited options to find out replacement cost of similar new machine. Many a times, it is found that the foreign supplier company has been liquidated, merged or acquired by some other company. Instances of buying machine from one supplier in one country and getting its bill from someone in other country are also not uncommon. Incorrect or higher than actual replacement cost can happen in such cases and consequent depreciated cost or value may also not be fair.

Discount offers on the List price of machinery by domestic and foreign suppliers, both, are quite common. If the borrower availed the discount in cash and bills were raised on list price, the depreciated replacement cost estimation would be higher. Valuer cannot guess the extent of discount which supplier usually offers, the suppliers usually provide quotation on the list price and negotiate discounts thereafter. Used machinery dealers have knowledge of discounts offered on new machinery purchases and adjust used machinery price accordingly.

The depreciation considered by the Valuer for building or machinery is on the lower side than that being adopted by the market.

Undervaluation:

Sometimes, estimation of depreciated replacement cost leads to undervaluation, as under:

1. The Borrower seeks funding on existing assets already acquired from own resources and cost capitalized is lower than fair value.
2. Lenders have already put the assets of borrower on auction but did not get any offer. For revaluation, lenders often tell the Valuer beforehand that no offer was received against the previous auction implying that lower value is expected. In subsequent auction on reduced reserve price, if bidders turn up and during competition raise bids higher than original valuation, the Lender blames that Valuer had done undervaluation.
3. Many a times depreciated replacement cost of older workshop equipment – indigenous and imported both, injection moulding machine, SS equipment is less than prevailing price of similar used machinery in market.

Checks necessitated:

The Valuer has the responsibility to the Client who relied upon the former to provide a credible opinion on the Fair Value of property. Some safeguards to avoid over or under valuation could be as under:

1. Valuers of Land & Building should try to be updated by attending CEPs by RVOs, study of changes in development control regulations and zoning, gazette notifications on land use changes, books and publications of CBRE, Cushman & Wakefield, Knight Frank, HVS etc.
2. Valuers of machinery need to be more vigilant and aware of new developments in various sectors due to increasingly stricter pollution control measures, impact of shift towards green energy, induction of artificial intelligence, drones, information at websites of industry associations, IBEF, Bloomberg, CRISIL, ICRA, CARE, policy changes for import & export etc.
3. In case fresh quotations cannot be obtained within the turnaround time, and if similar equipment was not valued earlier, one can seek help from one's past clients to seek current price from suppliers, who usually provide current price of the machinery to their clients on phone or through email.
4. Suppliers of similar equipment can be contacted but no supplier will help us for being a Valuer, if we cannot convince them that we may be help to them in future. Price of used machinery and scrap can also be found from its dealers.
5. Import shipment data displayed at some websites, even if old, can be useful.

Valuer's Expectations:

1. Valuers do not claim perfection but they can claim expertise in the field of Valuation because of the accreditations acquired. Most of the Valuers possess superior qualification and experience than the officials seeking valuation, it is therefore expected that the latter should patiently study the observations in the report and be cautious not to impress upon the Valuer to provide some pre-determined value.
2. Lenders can abandon practice of reading only the Value given at last page of the report and must study reports fully to satisfy themselves whether methodology of Valuation process is followed and satisfactory reasoning for deviations, if any, from the practice has been given. However, if some errors or omissions are observed or suspected, the same should be brought to the knowledge of the Valuer for clarification and reconsideration.
3. AIBA and the Bank's guidelines state that All instructions to the Valuer are to be given in writing. All banks should follow these guidelines and send instructions through email. A supportive bonding between them will best serve the purpose of lending and the public interest.

CURRENCY SWAP VALUATION

CMA Shyamal Mukherjee

M COM, ACMA, RV(SFA)

A. INTRODUCTION:

The word swapping means to exchange. So, a currency swap is an agreement or a contract between the two parties. In such a swap they agree to trade their currencies at the terms and conditions. Thus, a currency swap or a cross-currency swap is an off-balance sheet transaction. Here, two parties exchange principal amount and interest that incur in different currencies.

PURPOSES OF CURRENCY SWAP:

- To hedge exposure to exchange rate risk
- To reduce the cost of borrowing a foreign currency.

The other and most popular form of currency swap agreement is between the central banks of the two countries. The swapping done by the central banks (RBI, in case of India) affects the economy and the exchange rates as well.

It is primarily done for the following two reasons:

- To maintain the value of the foreign exchange reserve
- To get the foreign currency from the issuing central bank at the predetermined terms and conditions, i.e. the volume of the foreign currency and the exchange rate.

In general swaps last for a long time. It mainly depends on the individual agreement and the prevailing exchange rates. It is also a fact that the exchange rates change very frequently over time. This is one of the reasons why parties use currency swaps. Swaps are useful particularly to those who know exactly how much money they will receive or payback in the future.

B. HISTORY OF SWAP IN INDIA:

Swap came in India in the early 1980 as a hedging and risk mitigation tools. It would base on comparative advantage theory. In early 1984, the first swap contract in India was done by Oil and Natural Gas Corporation Limited (ONGC) and Foreign banks to hedge some foreign currency risk. However swaps were not popular in Indian market till mid 1990. From 1995, RBI started to allow the usages of swap by counterparties on a case-by case basis. In those days needed RBI approval for every transaction. By developing the market, RBI relaxing the rule and in the year 1999 RBI had started to allowing bank to entered into swap and obliged to place the report to RBI in periodically. While the RBI allowed to usages of swap for risk mitigation purposes, it was to be needed for legal framework to smooth control of swap market. The law governing securities trading had not been amended to make over the counter (OTC) derivative is legal in India. Finally in 2005, the Finance Minister was given approval in the parliament that the swap related transaction is legal in India.

C. TYPE OF CURRENCY SWAP:

a. Fixed for Fixed Currency Swap: This involve to exchanging the principle and interest payment at the fixed rate in one currency for principle and interest payment at fixed rate in another currency.

b. Fixed for Floating Currency Swap: Where to exchanging the principle and interest payment at fluctuation rate in one currency for principle and interest payment at fixed rate in another currency.

c. Floating for Floating Currency Swap: Where to exchanging the principle and Interest at fluctuation rate in one currency and also principal and Interest in another currency at fluctuation rate.

D. HOW TO WORK CURRENCY SWAP:

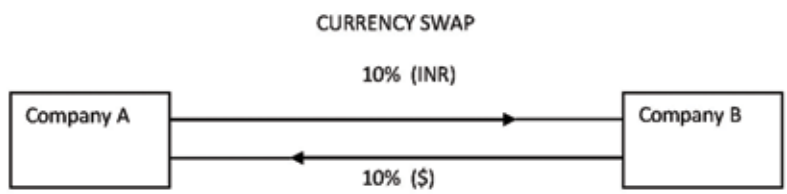
A currency swap agreements required the principal amount are to be specified in two currencies. Normally assign the value by considering the exchange rate. The principle amount are usually exchanged at the beginning and at the end

of the life of the swap. When the amount are to be exchanged at the end of the life of swap, the value may be quite different.

Suppose Company A and Company B are constituted in India and USA, they agree to entered into 3 years Fixed to Fixed currency swap agreement, the details are given below,

Principle	Com-A	Com-B
Received:	$10M	
Payment:		INR 800M
Risk free Rate(Rf)	12.50%	7.5%
Interest Payment obligation:	Yearly	Yearly
IR on FI for Swap agreement	10%	10%
Annual Interest paid by company A to B	$1M	
Annual Interest paid by company B to A		INR 80M

The both companies are maintaining fixed interest rate for their respective currency. So this is known as Fixed –for- Fixed currency swap. The currency swaps between Company A and Company B are shown in below,



A swap can be used to convert the borrowing in one currency to borrowing in another currency. Suppose Com-A can issue dollar dominated bond $10M at 10% interest. The swap has the effect of transforming this transaction where the company B has borrowed INR 800M at 10% interest. The initial exchange of principal converts the US dollar into INR. In subsequent exchange in swap have the effect of swapping the interest and principal payments from US $ to INR. Swap can also be used to transform the nature of assets. Here we shown the cash flow to company A in currency swap,

Cash Flow to Company A In Currency Swap

(Millions)

Date	INR Cash Flow	Dollar($) Cash Flow
Base Year	-800	+10
1st Year	+80	-1
2nd Year	+80	-1
3rd Year	+80	-1
3rd Year	+800	-10

E. Valuation of fixed-for-fixed currency swap can be divided in two parts,

a. Difference between two bonds.

b. Portfolio of Forward Contract.

a. VALUATION IN TERMS OF BOND PRICES:

Value in US dollar of an outstanding swap where Dollars are received and a foreign currency is paid, then we denoted as,

Vswap = Bd -S0*Bf,

Where, Bf= Foreign currency Value of the bond defined by the foreign cash flow on the swap

Bd= Value of the bond defined by domestic cash flow on the swap.

S0= Spot exchange rate in between foreign currency and domestic currency

Therefore the value of the swap can be determined from interest rates in two currencies and the spot exchange rate.

Again the value of swap where foreign currency is received and dollar are paid,

V(swap)=S0*Bf-Bd

Where, Bf= Foreign currency Value of the bond defined by the foreign cash flow on the swap

Bd= Value of the bond defined by domestic cash flow on the swap.

S0= Spot exchange rate in between foreign currency and domestic currency

Situtation -1: Valuation of Currency swap in terms of Bonds (All amounts are in Million)

Situtation -1:

Valuation of Currency swap in terms of Bonds

Time	CF of Dollar Bond	PV($)	CF of INR	PV(INR)
1	1.00	0.8889	80	74.4186
2	1.00	0.7901	80	69.2266
3	1.00	0.7023	80	64.3968
3	10.00	7.0233	800	643.9685
	Total	9.4047		852.0105
	Vswap	1.2455		

b. VALUATION AS PORTFOLIO OF FORWARD CONTRACT:

By considering forward currency contract from the perspective of a US investor (Company A, the Indian Company). H ere the underlying assets is one unit of foreign currency, i.e.INR. Again, we determine the Spot rate (S0) by applying the exchange rate of $ and INR, here S0 = 1/80 (Exchange Rate: INR 80 per $). Again the F0 is forward and future price in US Dollar Per INR.

The holder of the foreign currency can earn interest at Risk Free Interest rate (rf) prevailing on that country. In India, the rf is 7.5%. The investor can invest the currency in a foreign denominated bond. However, rf as the value of foreign risk-free interest rate for the money invested for time T. Again r is the risk-free rate for money invested in $.

We can rewrite by,

F0 =S0*e^(r-rf)xT

This is known as interest rate parity relationship in international Finance.

Situation-2, Valuation of currency swap as a portfolio of forward contract						
Time	Dollar CF	INR CF	Forward*	Dollar Value	NCF ($)	Present**
			ER	of INR CF		Value
1	-1	80	0.0131	1.0513	0.0513	0.0452
2	-1	80	0.0138	1.1052	0.1052	0.0819
3	-1	80	0.0145	1.1618	0.1618	0.1112
3	-10	800	0.0145	11.6183	1.6183	1.1123
						1.3507
			Adjustment			0.1052
			Vswap			1.2455

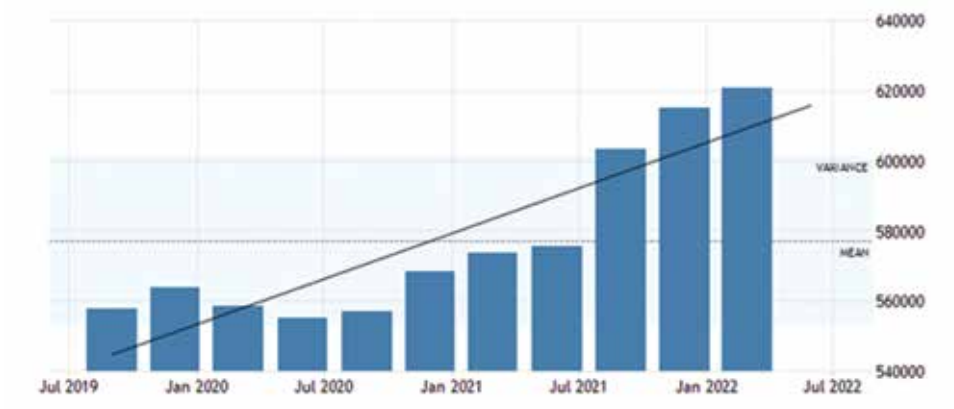
WORKING:

FER*	PV of NCF**
S0*e^(12.5%-7.5%)*T	Ncf*e^(-12.5%)*T
0.0125*e^(12.5%-7.5%)*1.	0.0513*e^(-12.5%).
0.0125*e^(12.5%-7.5%)*2.	0.1052*e^(-12.5%)x2
0.0125*e^(12.5%-7.5%)*3.	0.1618*e^(-12.5%)x3
0.0125*e^(12.5%-7.5%)*3.	1.6183*e^(-12.5%)x3

Note: 1.Approximate value ‘e’=2.718

2. Exchange Rate(ER): 1/80 =0.0125

F. Indian external Debt: Diagram



External Debt in India (All figure are in Million $)

G. Information about India External Debt: % of GDP

- India External Debt accounted for 19.9% of the country's Nominal GDP in 2022, Compared with the ratio of 21.2 % in the previous year.
- The data reached an all-time high of 38.2 % in Mar 1992 and a record low of 10.9 % in Mar 1980.

H. INITIATIVE FOR CURRENCY SWAP BY INDIAN GOVERNMENT:

Our economies facing the risk of debt default, India could try an innovative method of currency swap backed by trade in mineral resources.

For the currency fluctuations, it will be crucial for the Global South to enter into currency swap agreements and link them to projects and trade in minerals and other commodities, A Currency swap between two cross-border entities allows them to procure loans in foreign currency at more favorable interest rates than might be available when they borrow directly in a foreign market.

Access to critical minerals from abroad has become essential for India to build up its semiconductor chip industry and expand renewable energy to push growth.

India has already extended the term of a $400 million currency swap facility with Sri Lanka this year. Currency swaps have become a much sought-after facility for extending support to developing countries hamstrung with low foreign exchange reserves. Since 2018, India has in principle agreed to have swaps with 23 nations. To formalise it, the union cabinet has also approved an amended "Framework on Currency Swap Arrangement for SAARC Member Countries", which came into force in 2019. The Framework includes a standby swap of $400 million, within an overall size of the facility of $2 billion.

I. RBI REGULATIONS FOR CURRENCY SWAP:

For strengthen financial stability and economic cooperation, the Reserve Bank of India has revised the framework on currency swap arrangement for SAARC countries till 2022.

As per the new framework:

1. RBI will continue to offer swap arrangement within the overall corpus of $2 billion.
2. RBI would enter into bilateral swap agreements with SAARC central banks, who want to avail swap facility.
3. The drawals can be made in US dollar, euro or Indian rupee.
4. The currency swap facility will be available to all SAARC member countries, subject to their signing the bilateral swap agreements.

CONCLUSION:

The currency swap agreement is an important measure in improving the confidence in the Indian market and it would not only enable the agreed amount of capital being available to India, but it will also bring down the cost of capital for Indian entities while accessing the foreign capital market. The swap arrangement should aid in bringing greater stability to foreign exchange and capital markets in India. With this arrangement in place, prospects of India would further improve in tapping foreign capital for country's developmental needs. This facility will enable the agreed amount of foreign capital being available to India for use as and when the need arises.

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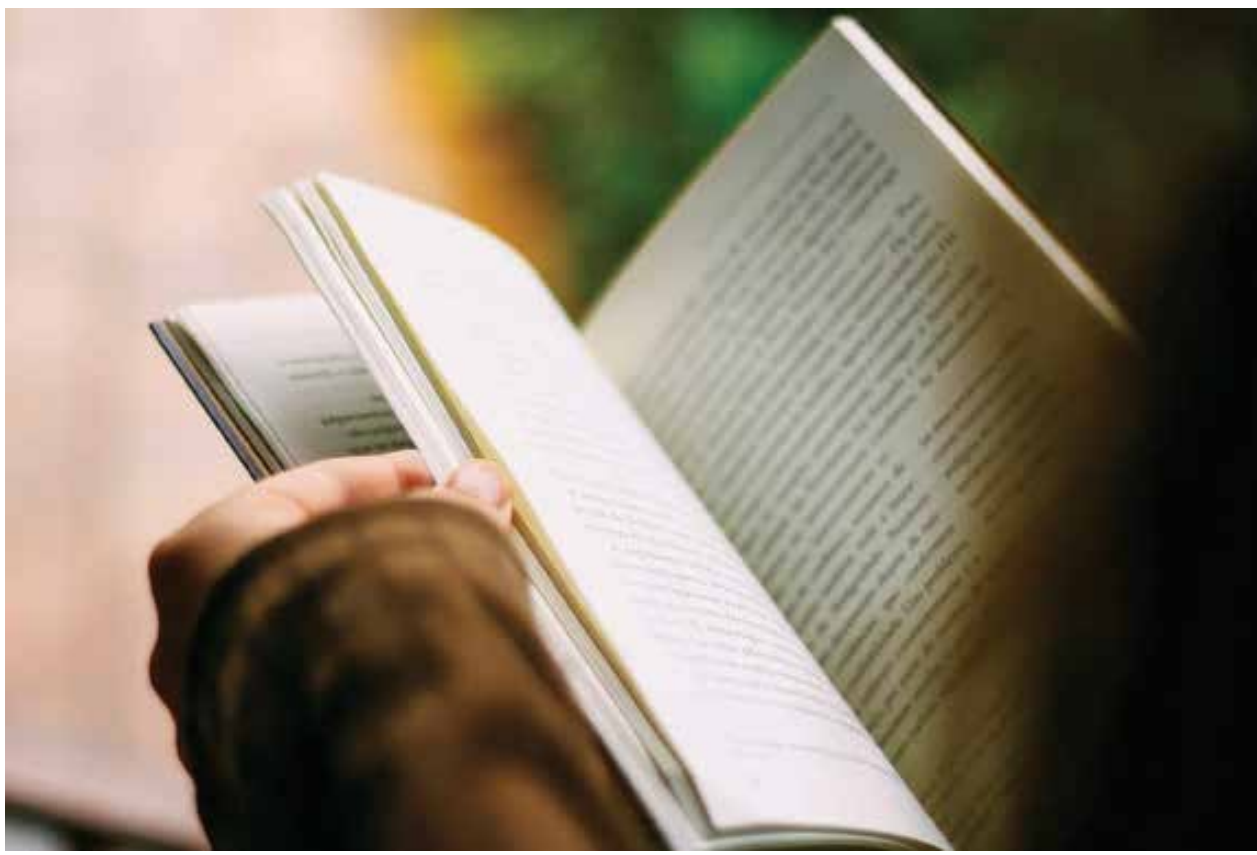
OTHER READINGS



ICMAI REGISTERED VALUERS' ORGANISATION

Registered Office

The Institute of Cost Accountants of India
4th Floor, CMA Bhawan 3, Institutional Area
Lodhi Road, New Delhi – 110003

www.rvoicmai.in

PERSPECTIVES PAPER
TIME TO GET TANGIBLE ABOUT INTANGIBLE ASSETS
PART 3: RETHINKING BRAND VALUE

By: Kevin Prall and members of the IVSC's Business Valuation Board

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.

The ideas and opinions set out the IVSC's Perspectives Papers do not necessarily reflect the views of the firms represented amongst the author group.

The limitation of the current reporting frameworks to convey value creation and preservation activities is largely because the prevailing value creation strategies that existed when the standards were enacted decades ago, have evolved. As many current business models have evolved over decades, namely, to rely more heavily on intangible assets at the expense of tangible, the standards and the economics have become misaligned. This article series looks to contribute to realigning accounting and reporting standards with the value creation and preservation strategies utilised in modern business models.

In Parts 1 and 2 of our series, we examined the Case for Realigning Reporting Standards with Modern Value Creation and took a deep dive into human capital value creation and measurement. In this paper, Part 3 of our series, we take a deeper dive into brands and reputation value creation.

Brand Insights at a Glance:

- Due to multiple factors brands have become the most critical competitive advantage for many enterprises.
- To assess brand value creation, one must consider the full impact of the brand in its primary market as well as the interrelationship with other assets, especially intangible assets.
- The emergence of ESG suggests that investors require more information on the impact brand has on enterprise value.
- As the role of brand in enterprise value creation evolves, the techniques and assumptions to measure its value may need to change as well.

Introduction

In this paper we will:

- Examine how brands generate value for organizations and the attributes of such value creation,
- Analyze how investors assess the enterprise value creation attributable to brands; and
- Discuss the value measurement techniques and assumptions used to estimate the value of brands.

Of any group of intangible assets, brands likely have the most diverse impact on enterprise value creation. Brands are simultaneously capable of increasing revenues, reducing costs, and lowering risk.

Like most intangible assets, the definition of brand can mean different things to different people. Brands can be thought of narrowly, such as trademarks and trade names. Investors tend to prefer a view that encompasses broader considerations. While such broad considerations may not meet the definition for recognition as an asset for accounting purposes, disclosures as part of financial and sustainability reporting are an achievable goal that is also directly responsive to investor feedback [i]. As such, in the below discussion we focus on a broader definition inclusive of brand.

How do brands create value?

Central to brand value creation is its enduring ability to generate incremental revenue as compared to unbranded and lesser branded substitute products via enhanced prominence, expectation of superior performance, and trust as perceived by stakeholders. Therefore, incremental revenue from a strong brand can be generated in two ways. Most typical is through the ability to charge a higher price or achieve a consumer preference as compared

[i] *CFA Institute Report Highlights Investor Views on Goodwill Accounting and the Importance of a Global Approach*

to a similar unbranded or lesser branded product (i.e., price or market share premium).

Additionally, strong brands can also be leveraged to enable entrance into new sectors, markets, and geographies (i.e., the scalability of the brand). Scalability may take the form of direct entry into new markets by the enterprise, or through one of numerous forms of licensing. The scalability of a brand, and therefore its potential to create value, is unlike any other intangible asset. For example, even the most valuable technology is limited to finite applications and market segments.

Brand can also create value through cost reduction. The most direct form of cost reduction is the ability of a strong brand to lower the amount of sales and marketing expenses needed to generate a certain amount of revenue.

However, a brand's impact on cost reduction can go much further. As noted in the previous article, a strong brand likely attracts workforce to the enterprise and reduces recruiting and hiring costs. A strong brand can also enable the enterprise to achieve more favorable terms with suppliers, especially as it relates to suppliers of capital (e.g., better access to capital, better terms, and lower cost of capital).

Finally, a strong brand can lower the risk of achieving future cash flows as compared to unbranded or lesser branded enterprises and products. A strong brand achieves the lower risk by enabling an enterprise to create and maintain an effective barrier from competition (i.e., an economic moat).

An economic moat is often an advantage that is difficult to duplicate.

Despite these benefits, there are risks unique to brands, as brands exhibit a non-linear downside risk. The value of a brand can be quickly and permanently impaired despite taking a long time to build. As the value of brands has risen in modern intangible driven economies, so too has investors desire to understand and monitor the risk factors that could lead to such impairments. In this context, we believe there is a strong connection between the relative importance of brand and reputation value creation and the rise of ESG factors which attempt to assess this downside event risk for an enterprise's brand.

Like most intangible assets, it's also critically important for one to consider the relationship with other complimentary assets. As discussed in our previous article on Human Capital, there exist interrelationships with other assets such as technology, human capital, and relationship assets.

Therefore, the ability to create value from brand and reputational assets is both a function of the assets' own characteristics, but also the complementary nature of the other intangible assets. For example, strong human capital will likely have a positive synergistic effect with a strong corporate brand. Less valuable human capital may diminish the brand value of an enterprise or increase the risk of impairment. As an illustration, perhaps the greatest risk to banking institutions are cyber security breaches that threaten their brand. As such, the banking industry invests substantially to train their personnel (i.e., enhance Human Capital) on information technology risk to protect the firm's resources and information. The value of brand and human capital aiire inextricably linked.

Somewhat surprisingly, the empirical evidence from business combinations shows that brands account for relatively less value than other intangible assets.

As one moves from narrow definitions of brand to more holistic considerations, the shift results in stark differences in the nature and capacity for value creation. Therefore, as the role of brand in enterprise value creation evolves, as explored further below, the techniques to measure its value may need to change as well.

Investor Insights on Brand Value Creation

While the current financial reporting regimes take a narrow view on the recognition and disclosures for brands, investors are clearly desiring more information on broader value creation and risk considerations. To fill this gap between the information reported and the information desired by investors, ESG reporting has begun to collect and synthesize these inputs. However, as noted in the previous article, in its current state ESG lacks standardization, attestation, and harmonization.

Similar to Human Capital, the lack of relevant information has led investors to seek creative solutions to obtain relevant information on brand value creation and risks.

For example, sell side equity research analysts harvest, cleanse, and connect data from various sources for investment insights. These include monitoring social media channels such as Instagram, Google, TikTok, etc. for insights related to brand value including recognition and sentiment.

As one example, UBS has a process to determine absolute performance across various metrics. The metrics are then compared over time and across peer group to determine trends and relative performance. Such absolute and relative performance metrics provide value relevant insights. For example, in a June 2022 report on Nike Inc., UBS notes how Nike's strong brand position can drive sales growth, reduce cost, and reduce risk. See excerpts below:

- **Higher Price –** "The market may not realize Nike's brand image in China is still strong despite last year's boycotts and it is lapping very easy

[ii] *JPMorgan Chase & Co. Form 10-l for the fiscal year ended December 32, 2021, p. 145.*

compares. UBS Evidence Lab Pricing data indicates Nike products continue to sell through at high prices with fewer promotions y/y in North America and Europe."

- **Lower Costs-** "UBS Evidence Lab survey and pricing data reveal the Nike brand currently has #1 in mindshare globally and the company has significant room to reduce promotions [and associated expenses]."
- **Lower Risk –** "We believe Nike has the brand strength, strategy, skills, and resources to outperform peers through a potential recession."

Licensing arrangements between third parties can provide additional insights on brand value creation, and the importance of complimentary assets. The first example comes from the apparel industry.

In 2019, Arezzo Indústria e Comércio S.A reached an agreement to become the exclusive distributor of VF Corporation's brand Vans in Brazil under a licensing agreement. The agreement more than doubled Vans gross sales in Brazil from 2019 to 2021. UBS states that the Vans "brand has benefited from Arezzo's local sourcing, eCommerce infrastructure, and its solid relationship with malls, which enabled a faster store expansion." They continue to suggest additional value creation is possible through "licensing of further brands, either from VF Corp or other international brands, which, although may have appeal with customers, historically struggled to operate and scale in Brazil, partially due to the complexity of its tax system." [iii] In this instance, the complementary assets held by Arezzo were critical to extracting maximum value of the Vans brand. Accordingly, the value creation is split between the two companies.

A second example comes from the toy and entertainment industries. Mattel, Inc. has multiple examples of in-licensing brands from the entertainment industry, and out licensing its own brands to various other industries. BMO Capital Markets and JP Morgan provide insights on the respective cases for value creation. Mattel has licensing agreements with numerous entertainment companies, including Disney, Universal, Nickelodeon and more.

In January 2022, Mattel announced a multi-year global licensing agreement with Disney to produce and sell toys based on Disney Princesses, winning the license back after losing it to Hasbro in 2015. BMO believes "the deal will be accretive by about+12%, give or take a movie year, with further accretion over time given synergies with MAT's doll infrastructure." In addition to the complimentary[iv] assets to design, manufacture, and distribute toys, BMO also notes the complimentary nature of one of MAT's product brands.

For insights on Mattel's out-licensing JP Morgan notes the potential for additional value creation from its owned brands, as it sees a significant opportunity to leverage the strength of its brands to drive additional revenue and profit through licensed partnerships and is actively looking to add new partners, enter new categories, and grow its retail footprint. "The company is collaborating with partners such as L'Oreal, General Mills, Zara, and Nike… Licensing IP is highly accretive for a margin standpoint as MAT receives a royalty with the supermajority flowing through to the bottom line." Much like Disney lacks the complementary assets to manufacture and sell tvoys, Mattel lacks the complementary assets to manufacture and sell cosmetics, branded food, and clothing. As such, the value creation is split between the licensee and licensor.

Value Measurement

While the analyst insights above help to show the importance of brands in corporate value creation, it does highlight some potential inconsistencies between market economics and the assumptions utilized in common value measurement methods.

Given the value creation characteristics discussed above, value measurement methods typically rely on the income approach. However, consideration of the investment to develop and maintain a brand, particularly in a brand's infancy, should not be overlooked.

The most common method to value brands is the Relief from Royalty Method, a form of the Income Approach. The Method estimates the cash flows the user would have to make to the owner of the asset in return for the rights to use that asset. The primary assumption in the application of the Relief from Royalty Method is the royalty rate (typically expressed as a percent of revenue) that would be paid for use of the brand. Royalty rates observed in licensing transactions between third parties are typically used as the primary evidence for determining the royalty rates used in the Relief from Royalty Method.

As seen in the examples discussed above, brand owner's out-license in markets in which they don't have the complimentary assets to extract the full value of the brand. It is more advantageous for the brand owner to license to an entity which can extract the brands full value with in-place complementary assets and split the resulting value creation. The implication is that the royalty rates observed in market licensing transactions may only reflect a portion of the brand's value creation capacity, the portion that accrues to the licensor in the form of a royalty.

[iv] 27 JAN 22 — SSR: BMO Capital Markets: BMO Research Today - January 27, 2022

[v] 16 JUN 22 — SSR: JPMorgan: Toy Time : Sector/Company Deep Dive (HAS, MAT, FNKO)

Therefore, relying on royalty rates observed in licensing transactions between third parties implicitly assumes a brand would not be deployed with the complimentary assets to create its maximum value and therefore may not be valued at its highest and best use.

This conclusion highlights the limitations of leveraging observed royalty rates when one considers the requirements for many standards of value. For example, Fair Value as defined by the FASB and IASB requires the use of market participant assumptions. However, the observed licensing transactions are between parties that are not market participants in the same market (i.e., geography, product, segment). In other words, license transactions occur because the two parties are not in the same market.

Yet, it's common to leverage these agreements without consideration of whether the terms would be different if the parties operated in the same market. The result may be a mismatch of inputs to the Relief from Royalty Method, in which revenue forecasts for the primary market are utilized but are coupled with a royalty rate derived from a transaction outside of the brand's primary market.

The difference between observed royalty rates from secondary markets and the royalty rate that captures the full value creation in the primary market value chain will depend on multiple factors. For example, the more removed the secondary market from the primary market, the greater the value share will shift to the licensee (e.g., lower royalty rate). The more closely aligned the primary and secondly markets, the more likely the licensor is to have many of the contributory assets and thus would be unwilling to license the brand but for a greater share of the economic profit (e.g., higher royalty rate).

The absolute difference is also impacted by the amount of profit available in that market. As such, the difference would be lower in industries in which company brands are not the primary driver of value creation, such as business to business industries as well as low margin industries. Alternatively, this difference may be vast in highly branded industries with high margins. We look at an example of the latter in the below.

A review of EBITDA margins for a set of publicly traded branded food companies shows an average LTM EBITDA margin of 22%. However, the largest publicly traded private label food manufacturer has consistently earned an

average EBITDA margin of 9% for the last four years. The difference in EBITDA margins is 13%, which implies the extent of excess profitability of branded products to unbranded products. [vi]

However, third party licensing data in this industry via a search of ktMINE shows an average royalty rate of 4%. Comparing the excess profitability of

13% in the industry to the average royalty rate of 4%, suggests that reliance on licensing transactions may not capture the full value creation in instances where brand is the primary asset driving incremental returns. The reason is that the license arrangement may only capture a portion of the value creation capacity of the brand. [1] This proposition is further supported by data from purchase price allocations, which show that brands on average are only valued at 3% of the total deal consideration. [vii]

An obvious alternative in such instances would be to leverage the Multi Period Excess Earnings Method (MPEEM). Alternatively, to continue use of the Relief from Royalty Method, some have started to more fully recognize the value of brands in certain instances by estimating a synthetic or simulated royalty that equates to the excess earnings generated by the business. The synthetic royalty rate derivation follows a similar process as the MPEEM, by subtracting charges from operating profit for contributory assets such as working capital, tangible assets, human capital, IP, and customer assets. Instead of asset charges, functional returns may also be used. In instances in which the brand is a key intangible asset for the enterprise, the calculated synthetic royalty would typically be higher than the observed royalties from licensing transactions. The advantages of the synthetic royalty approach are that it can better account for the full value of the brand that is not observed in licensing transactions, while still leveraging the preferred method for valuing brands.

Conclusions and Next Steps

We believe the above insights can help spur additional dialogue, help inform standard setters and similar stakeholders in order to drive value relevant policies, and ultimately improve value measurement considerations. Brands are more important and require more thoughtful consideration on the way in which they create value, and which methods and assumptions are most appropriate to inform value conclusions.

In our next article we will explore technology assets. The IVSC would be interested to hear your feedback on the subject discussed in this paper.

[vi] *Source S&P Capital IQ*

[vii] *2019 and 2020 Purchase Price Allocation Study (hl.com), page 21*

[1] *It's common to compare the royalty rate of royalty bearing assets to a rule-of-thumb of 25% to 33% of operating profit. This practice acknowledges that a majority of value is attributed to another asset, yet brands are often the differentiated asset which is primarily driving excess returns.*

VALUATION OF WATER RESOURCES AND WATER INFRASTRUCTURE ASSETS

Peter Comisari
Lilina Feng
Brendan Freeman

Executive Summary

1. The SNA and SEEA both include water resources within the asset boundary of the (monetary) balance sheet. The ABS, therefore, has undertaken a smallstudy of selected water suppliers to see if a value for water resources owned by major water suppliers could be produced using a methodology based on the NPV of expected resource rents. As expected, this approach largely gave zero or negative values for these water resources (except for hydropower suppliers, where a positive value was observed for the units selected). However, the exercise did highlight the importance of how we value water infrastructure assets - which has been an ongoing issue internationally. It is also an issue where the London Group can provide leadership.

2. Generally, there is no market-based evidence of fair value for water infrastructure assets - because of the specialised nature of these assets and the fact that they are rarely sold, except as part of a continuing business. Therefore, most water businesses estimate fair value based on the NPV of expected incomes or on depreciated replacement cost (current replacement cost, net of accumulated depreciation).

3. These two approaches yield significantly different results - or at least they do in Australia, where the water supply business is highly regulated. Australian water prices are deliberately and strictly determined by regulatory authorities, whose goal is to keep water prices as low as possible, while still allowing the water supplier to operate as a (government owned) business entity. In practice, water suppliers are permitted to earn enough to cover operating costs, a measure of depreciation, and a modest return on these assets, so that these businesses usually earn little or no operating surplus.

4. We suggest that when the business operation is effectively not-for-profit,it is inappropriate to value water supply infrastructure assets on the basis of future expected earnings. Water supply earnings will generally not meet the substantial cost of putting these assets in place. However, governments continue to operate and build water infrastructure assetsbecause of the significant benefits associated with providing a reliable, clean and safe water supply for households and businesses. A valuation based on depreciated replacement cost gives a better idea of the future expected benefits arising from holding these assets (benefits largely related to a well-functioning water supply, rather than to expected earnings of the business). It also provides a better idea of the exposure of the government/ community to catastrophic loss of these assets.

Finally, it provides a more meaningful notion of return on the community's investment in these assets.

Introduction

5. Both the System of National Accounts 2008 (2008 SNA) and the system of Integrated Environmental and Economic Accounting 2003 (SEEA-2003)recommend monetary valuation of water resource stocks, while providing limited practical insight into how this could be achieved. SEEA–Water Resources does not address the issue of monetary valuation of water resource stocks. A number of practical issues and conceptual questions need to be assessed if such estimates are to be generated in a meaningful way.

6. This paper is made up of two parts. The first part provides a report of a small studyinto the area of valuation of water resource stocks. Itdescribes the derivation of monetary values based on expected resource rents for certain large bodies of water resources in Australia in 2009-10and also discusses sources, methods and issuesrelated to the compilation ofthese estimates.A critical decision in valuing water resource stocks is to determine the most appropriate valuation approach for the water infrastructure assets used in capturing, storing and distributing water. The second part of this paper provides a discussion of issues related to the most appropriate way to value these assets.

7. The valuation basis used for water infrastructure assets varies, often markedly, between Australian water supply businesses and this underlies the importance of the choice of valuation basis.The relevant international statistical standards do not provide definitive guidance on this question. While this issue is important to our exercise of valuing water resource stocks, it is also an important question in its own right.

8. The Australian Bureau of Statistics is committed to publishing annual Water Accounts and it is proposed that the value of Australia's water infrastructure assets be included in the ABS Water Account.This paper,therefore,discusses reasons forwanting to separately identify and value water infrastructure assets, recognising that the purpose or motivation for valuing an asset will provide key guidance to the preferred basis for its valuation.Water exhibits unique properties and the water business in Australia similarly has unique characteristics. This paper provides a description of these features, since they have potential implications for the way we choose to value both water infrastructure assets and water resource stocks.

9. A range of possible valuation bases for water infrastructure assets are then described and a valuation basis

is recommended that reflects the characteristics of water, the general nature of water trading and the specific features of the water supply business in Australia. In choosing a valuation basis, it is important to recognise what information can, in practice, be extracted from the accounts of water suppliers as this sets practical limits on our preferred valuation basis for these assets.

Why value water resources?

10. Many countries commit to producing physical measures of water flows and water stocks, since these measures clearly have the potential to inform critically important policy questions. A number of countries also generate official monetary estimates of various water flows and, again, the motivation for doing this is entirely clear. However, it is perhaps less obvious why policymakers might want to determine the monetary value of stocks of water resources.

11. It is important to establish clear reasons for the monetary valuation of water resource stocks.

These reasons should reflect a desire for evidence-based decision-making and the reasons for undertaking the valuation will most likely influence the choice of estimation methodology.

12. Economic valuation of water resource stocks can, therefore:

- Support estimation of the contribution of water resources to the overall wealth of the nation. Water resources are economic assets according to the System of National Accounts (SNA);
- Derive a solid real economic rate of return on the water infrastructure assets for public budget planning and project management purposes;
- Provide a basis for developing ongoing measures of efficiency of water use i.e. to determine whether, over time, these assets are being used productively;
- Indicate whether water pricing policies currently support a positive economic value for stocks of water resources; and
- Provide a basis for the evaluation of trade-offs necessary in allocating water between competing uses.

Statistical standards and the valuation of water resources

13. The 2008 SNA is the international statistical standard underpinning much of Australia's official economic statistics; in particular the Australian System of National Accounts. This standard provides the basis for Australia's official measures of wealth as recorded in the national balance sheet.

14. SEEA 2003 is currently a satellite system of the SNA and, as such, generally utilises the principles and methods used in the SNA—though a satellite system may choose to focus on aspects that are not exhaustively dealt within the 'core' of the SNA.

15. Both the 2008 SNA and SEEA 2003 include water resources as a category of economic asset.

Both recommend that a monetary value of water resource stocks be included in the national balance sheet.

16. The 2008 SNA states that water resources consist of:

> "Surface and groundwater resources used for extraction to the extent that their scarcity leads to the enforcement of ownership or use rights, market valuation and some measure of economic control." (paragraph 10.184)

17. SEEA 2003 provides some general guidance on the valuation of water resources (see paragraphs 7.300 – 7.307) but no specific guidance on the valuation of water resources as an economic asset. SEEA 2003 acknowledges the practical difficulties in valuing water resource stocks and provides a default position, which is to include the value of these resources (indistinguishably) as a component of the broader SEEA asset category of 'Land'. The water-specific module of the SEEA (System of Environmental-Economic Accounting for Water, or SEEA-Water) contains standard asset accounts related to water (page 162), but in physical terms only. In Chapter 8, it discusses valuation of water resources,without specifically addressing valuation of water resource stocks.

18. In short, both the SNA and SEEA recommend inclusion of monetary values of water resource assets in the national balance sheet, but provide little or no specific guidance as to how this should be done.The preferred approach to valuation of assets in the SNA and SEEA is market value, that is, the value that would be achieved if the asset were sold in the open market in an arm's length transaction. Large bodies of water are rarely sold in this way and alternative valuation methods must generally be used. The 2008 SNA (paragraph 13.19) suggests other approaches when observable market prices are unavailable and the approach used in this study utilises one such suggestion i.e. that an asset may be valued according to the discounted value of future economic benefits expected from owning and using a given asset.

19. The authors acknowledge that a range of other approaches to determine the economic value of a water resource are available (both in theory and practice), a notable example being the opportunity cost technique. However, investigations into such approaches are beyond the scope of this paper.

Valuation of water resource stocks according to the 2008 SNA

20. For the purpose of this study, the value of the water resource stock is based on its implicit expected contribution to the income of water suppliers. While it is in accordance with the principles set out in the 2008 SNA,this is a narrow view of the economic value of water. A slightly broader view might consider, for example, the impact of water on agricultural income. Under such a view, the value of irrigated water might be seen as equivalent to the additional agricultural income subsequently arising from the use of this water.

21. The valuation of water resources is beset with conceptual and methodological difficulties.

Furthermore, non-consumptive use values, indirect values and, especially, non-use values present enormous challenges. Accordingly, the estimates generated in this study follow the asset boundary of the 2008 SNA and associated valuation principles and, therefore, relate to a strictly and narrowly defined range of consumptive use values.

22. The majority of the literature devoted to valuation of water is focussed on valuation of various water flows. The valuation of a body of water presents some unique difficulties. A body of water, such as might be held behind a dam wall, may be used only partially during an accounting period—or it might be used many times over. It is possible, or may even be expected, that the body of water will disappear completely for periods of time; that is, the body of water may be expected to have a finite asset life. In countries with unpredictable rainfall, this asset life may be entirely unpredictable.

What is unique about the Australian water supply industry?

23. Water and the Australian water supply business have a number of special characteristics. Water is an extremely heavy product, which, combined with its very low price, means that it can only be traded readily where gravity supports its bulk movement. Accordingly, water is rarely sold outside the catchment area into which it falls.

24. Since water is truly an essential product, governments often take a special interest in the security of water supply and in water pricing. For a major urban area to run out of water would be a human and political catastrophe and governments go to considerable lengths to avoid this outcome. By international standards, the per capita volume of water stored by Australia's urban water suppliers is very large. This reflects not only the highly variable rainfall experienced over much of Australia, but also a commitment by Australian governments to maintain an assured supply of water to its major urban centres. Nevertheless, water prices are very low in Australia and, therefore, any necessary reductions in water consumption in major urban areas have been achieved largely through voluntary or mandatedwater restrictions.

25. While water is often supplied by corporations in Australia, water prices are tightly controlled by the various state and territory governments and are certainly kept lower than would be the case if these corporations operated in an unrestricted market. For example, water prices in the state of New South Wales (NSW) are regulated by the Independent Pricing and Regulatory Tribunal (IPART); in Victoria by the Essential Services Commission (ESC); and in Western Australia (WA) by the Economic Regulatory Authority (ERA). Within the Commonwealth sphere the Australian Competition and Consumer Commission (ACCC) contributes to the broader issue of water pricing policy.

26. The following example illustrates the degree of control. The ESC finalised a water price review in mid-2009 to determine water prices and service standards for the following four years. The preface to the final decision states that:

> "In reaching its final decision, the Commission's main focus has been to ensure that prices are fair and reasonable, that is, as low as possible but still sufficient to recover the businesses' efficient costs of providing services." (Emphasis added.)

27. A 2011 report by the Productivity Commission into Australia's urban water sector found that while increasing levels of financial hardship reported by community organisations are the result of broader-based price increases (food, housing, petrol, other utility services) they are not generally related to price changes in the urban water sector.

28. A brief examination of the revenue required to meet current and capital costs of the water suppliers illustrates the basis of the pricing determination and the critical role that valuation of water infrastructure assets plays in this determination. Table 1 details the revenue requirements implied by the ESC's final decision.

Table 1 ESC 2009 water pricing final decision: revenue requirement ($ million, Jan 2009 prices)

	Operating expenditure	Return on existing assets[4]	Return on new assets	Regulatory depreciation	Taxes	Total
City West Water	1 124.5	186.0	72.3	108.4	28.8	1 519.9
South East Water	1685.6	363.0	78.7	173.4	41.9	2 342.8
YarraValley Water	1 706.6	420.6	141.5	193.5	0.0	2 462.2
Melbourne Water	1 416.8	849.9	434.7	416.4	83.7	3 201.6
All businesses	5 933.6	1 819.5	727.3	891.7	154.4	9 526.4

Source: Essential Services Commission, Final Decision: Metropolitan Melbourne Water Price Review 2009, page 29, Table 3.2

29. The table provides a 'total' which represents the amount that must be recouped through water sales if the operator is to effectively break-even. Victorian water prices are set by the regulator (ESC) at a level expected to achieve this break-even outcome. That is, the water supplier will only be allowed to charge a price that covers its expected operating expenditures;

its expected taxes; its expected depreciation; and allows the operator to realise a return on the produced capital it owns. In this review, the return on capital is set only to meet financing costs of the business. There is, effectively, no return related to the risk of holding these assets. The weighted average cost of capital assumed in 2009 is only 5.1 per cent; considerably below the return typically expected on a capital asset used in an unrestricted market. The regulatory experience in Victoria is mirrored across the rest of Australia.

30. In short, the water supply business in Australiais tightly controlled. And there is sound reasoning for this control, notably to prevent price gouging by water suppliers who tend to occupy a monopoly position in their catchment/market; and for reasons of social equity. Regarding the latter, the2011urban water sector report by the Productivity Commission found that a key objective of current water pricing policy to be: *'social welfare and equity considerations, including community service obligations, the availability of goods and services to consumers and the social impact of pricing practices'* (emphasis added).

31. In relation to water supply, Australian government concerns mainly relate to: reliable and safe supply of water to urban centres and the significant cost of building and maintaining water supply infrastructure assets. In contrast, any government earnings from water sales are generally an insignificant component of total government revenue.

32. Water reservoirs can serve multiple purposes and,in some cases, conflicting purposes. For example, Brisbane's Wivenhoe Dam performs dual roles of flood mitigation and urban water supply. Such dual roles tend to further compromise the water supplier's ability to act as a free market operator in the water supply business.

33. In Australia, water supply assets are rarely, if ever, sold. Water supply businesses are also rarely sold as they are unlikely to be attractive to potential buyers under present regulatory conditions. The water supply business in Australia is, therefore, quite different to most businesses in Australia and this has potential implications in attempting a monetary valuation of water resource stocks.

34. The implications for the present study are clear: urban water pricing policyin Australia ensures that prices charged by urban water suppliers barely cover the sum of: operating expenses, tax obligations, and a modest return on produced capital. Therefore,they could be expected to struggle to support any notion of resource rent on the water resource i.e. the water resource itself will have no apparent value and therefore its owner need receive no financial return for putting this resource to use in a process of production. The point of this study is to test this hypothesis by examining publicly available data for selected Australian water suppliers. More generally, the study also aims to draw out methodological and other issues associated with measuring the value of water resource stocks.

The value of water stocks for selected entities

Summary of the study

35. A total of 13 water suppliers were profiled. These were comprised of five urban water companies from across Australia and eight regional councils in NSW. The comprehensive and uniform reporting requirements laid down by the NSW government for water suppliers underpinned our decision to extensively profile regional councils from that state. In addition to the water providers, two hydroelectric power suppliers were also profiled for comparison purposes.

Methodology used

36. Data from the water utility businesses were taken from their respective 2009-10 annual financial statements. These data were then placed into a methodological framework designed to estimate the value of the water resource stock of each business.

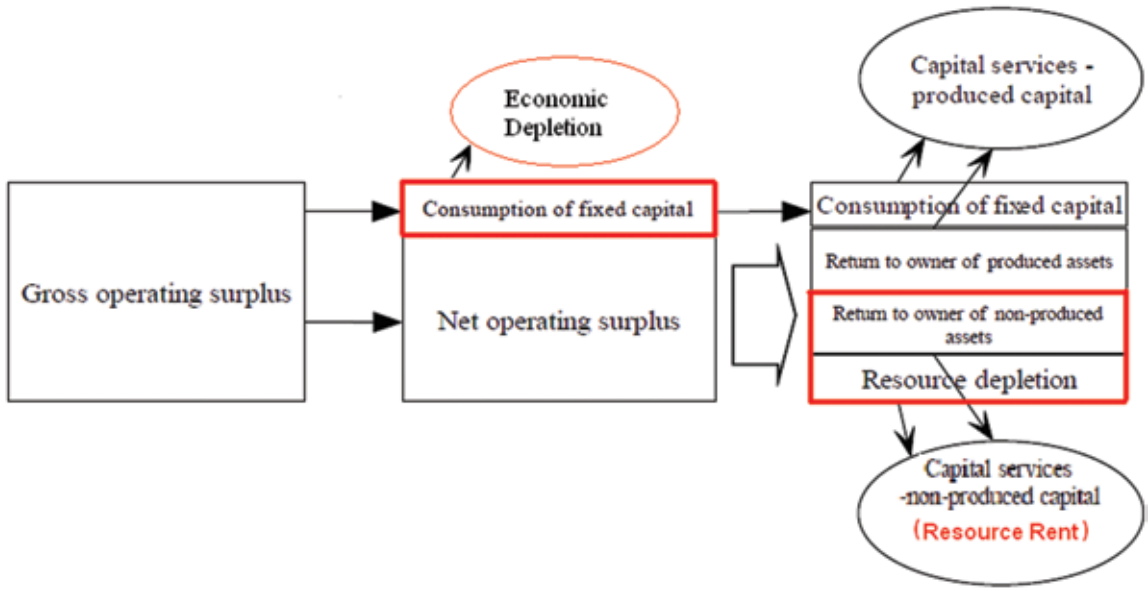
37. Gross Operating Surplus (GOS) is the starting point from which to calculate resource rent, as illustrated by Diagram 1 below. GOS is similar to the commercial accounting concept of profit except that it excludes transfers such as dividend payments and receipts, and includes depreciation expense. GOS is also recorded before payment of income tax, however, interest receipts and payments require special attention.

38. In the national accounts, interest receipts and payments are not treated as output and intermediate expense (respectively). Instead, it is the imputed financial service charge that must be deducted from the output of the water supplier in deriving GOS. The 2008 SNA (paragraphs 6.163-6.169) describes the concept and derivation of the Financial Intermediation Service charge Indirectly Measured (FISIM). It is the FISIM that is deducted from output in the derivation of GOS (financial institutions that undertake financial intermediation can also generate FISIM output, but this doesn't apply to water suppliers). The Australian System of National Accounts derives a full matrix of FISIM i.e. showing the generation of this service charge and who consumes it, including by industry and by sector. However, it does not record FISIM for individual businesses or for water suppliers as a group. For the purpose of our case study analysis, an approximation of FISIM was calculated for each of the selected businesses.

39. Diagram 1 illustrates that by adjusting GOS for consumption of fixed capital Net Operating Surplus (NOS) is calculated. In SEEA, NOS is interpreted as the return to capital.

[4] *These assets follow the Regulatory Asset Base valuation. It excludes, for example, those assets gifted by government and those funded by customers' contributions.*

Diagram 1: Decomposition of the operating surplus for an entity using natural resources



40. Produced capital relates to assets owned by the firms that contribute, either directly or indirectly, towards the supply of water. Since a firm has invested in assets, it would expect a financial return on all related assets currently in operation. In the case of a water utility, this definition extends beyond dams and pipes etc. to include buildings, office equipment, software, and so on. Work-in-progress and non-revenue producing completed infrastructure are, however, excluded because assets matching this definition are not operational and, therefore, no return can justifiably be expected from them in the current accounting period. Nevertheless, work on major dams can be very expensive and may take place over an extended period of time.

41. An appropriate 'rate of return' on relevant infrastructure assets must be determined. Generally speaking, a higher risk operation will expect a higher return on investment. The operation of utilities for urban household consumers is typically one of the lower risk, lower return operations, in which case it would be appropriate to assign a rate a little above the interbank lending rate (around 5 per cent for the period in question). However, the risk – return assumptions for water supply business could change. There appears to be a growing expectation that water users should pay prices that influence the use of an increasingly scarce resource. Any shift of water business to the private sector would likely reinforce this expectation, since private sector operators could be expected to be less receptive to artificially low prices for the product.

42. The NOS measure will contain an element described in the study as 'resource rent', which could be thought of as the 'return' to the owner of the natural resource. Resource rent is calculated as the residual part of NOSafter a return on produced capital for the current year's operations has been deducted. It is recognised that NOS may not capture all resource rent as some of the benefits from the supply of water do not accrue to the owners of the resource, but to the users. This is partially recognised in the provision of government grants to water suppliers in recognition of community service obligations. These grants are included in the revenues of water suppliers and hence have a positive contribution to NOS. However, these grants may not fully represent the benefits to households accrued from the provision of low cost water.

43. The value of the water stock is determined as being the expected resource rents arising from the supply of water over the expected life of the water asset. It should be noted that the rents are dependent on both the physical extraction of water from water storages and the revenue earned from the supply of this water. The NPV method used to determine the present value of net cash flows is represented in equation 1. In the absence of information or insight on how the business of a water supplier will change going into the future, we have assumed for the purposes of this paper that the observations of resource rents and business operations for 2009-10will continue into the future. Ideally an average of these would be used to help smooth the year-to-year variation in these measures.

Equation: 1

$$\text{WATER RESOURCE STOCK VALUE} = NPV_{CF} = \sum_{n}^{1} \frac{\text{Resources Rent}_t}{(1+r)^t}$$

Where: r = discount rate, n = asset life

44. The asset life for water resources is not straightforward in either concept or practice. Since major urban water supplies have rarely, if ever, run dry in the modern history of Australia, we suggest assuming an indefinite life for the asset. In any case, using a discount rate of 6 per cent means that the benefits

accruing beyond the 25 years into the future are almostnegligible. The discount rate used here was based on an interbank lending rate of 5 per cent plus a small risk premium (1 per cent). Of the water suppliers that did provide details of applied discount rates, the levels varied considerably.

Issues

45. Determining accurate and appropriate values for each utility's produced capital is essential to the robustness of the assessment. Water supply revenue-related produced capitalis a key component of the methodological process and variations in its value can significantly influence water resource valuations. A decision on appropriate valuation for these assets, however, is not always straightforward.

46. The choice of valuation basis can result in significantly different valuation figures for the same asset. The nature of the water supply business means that market-based evidence of fair value is unlikely to exist. In addition, water infrastructure assets can legitimately be described as specialised in character, meaning that the Australian accounting standards allow fair value to be generated using either income or discounted replacement cost approaches. This is discussed in some detail below.

47. Isolating the appropriate produced capital values for water utilities with multiple business lines can be troublesome. Some firms, while separately identifying their water infrastructure assets, put the entire amount of their non-current assets such as property plant and equipment into a single group, without separately identifying various business lines. To address this situation, combined groupings ofassets are split into various business lines on the basis of the firm's revenue from these various business lines.

48. While work in progress (WIP) was excluded from calculations of produced capital values, due to the non-functioning nature of the asset, it should be noted that not all financial reports make a clear distinction between WIP and functioning water production assets. For some firms, further investigations were required in order to strip out all non-functioning assets.

49. Water supply revenues and expenses are used in the composition of GOS. Most firms with multiple business lines readily isolate water supply revenues from other revenue streams in their reports. This is not always the case for business expenses, with many firms grouping all expenses together. Again, the share of those expenses attributable to water supply business is approximated on the basis of the corresponding share of the firm's revenue from the water business line.

50. There is also some uncertainty over what precisely constitutes water supply revenues. For instance, income from capital works relate to future, not current, revenue generation. There are, therefore, solid arguments for the exclusion of such revenues. In the study, capital works income was included, becausein most cases the inclusion of such questionable revenue streams was offset by corresponding (and unavoidable) inclusion of such costs in business expenses.

51. The study assumed a discount rate of 6 per cent. Of the water firms that did provide some indication of applied discount rates, the levels varied considerably. A number of factors could drive this. One could be the level of a firm's debt, with the more indebted firms using a higher estimated rate of return. Likewise, the discount rate applied to a desalination plant asset might also be higher, given the more intermittent nature of its use—i.e. much higher use during drought periods.

Summary of results

52. Data wereobtained from balance sheet valuations for the water resource stocks of selected Australian water suppliers. In the absence of information or insight on how the water firms' business will change going into the future, we assume that resource rents and business operations will continue into the future on the basis of what we observed in 2009-10.

53. Average operating surpluses from the water business; the average value of water infrastructure assets from which operating surpluses was generated; and the average rate of financial return firms receive from their respective water infrastructure assets were calculated. Resource rents, if any, arising from the use of the natural resource in its current capacity were also considered. Results were grouped by urban water suppliers, rural water suppliers and hydroelectric power providers.

54. For the majority of water suppliers, no positive resource rent valuations were generated.

Results

55. There was considerable variation in the rates of return (RoR) on water infrastructure across the water suppliers profiled. Despite this, the overall trend was for a comparatively low RoR. This was particularly evident amongst rural water suppliers, where the average RoR was just 1.3 per cent. While also low, the average RoR for urban water firms was higher at 4.6 per cent.

56. The NOS of many water firms were low relative to the value of the water infrastructure assets used in the production process. This infers that water prices, particularly amongst regional councils, barely allow a return on assets and never deliver an implied value on their respective water stocks.

57. Two Hydro-electricity suppliers were included in the review as a point of comparison. In contrast to water suppliers, returns on produced capital for the hydroelectric power businesses were significantly higher. The likely explanation is that the degree of autonomy hydroelectricity power suppliers have in setting the prices they chargeis considerably higher thanfor water suppliers. This enables the hydroelectricity suppliers to earn a significantly higher return on their water infrastructure assets than is the case for urban water suppliers. Since hydroelectric power is substantially carbon-free, higher electricity prices arising from a scheme to place a price on carbon, is likely to deliver a higher resource rent value on the water used by hydroelectricity power generators.

The Valuation of Water Infrastructure Assets

How and why to value water infrastructure assets?

58. Returning to the important question of how to value water infrastructure assets, the quantum of asset value can vary dramatically depending on the valuation basis and nature of the assets involved. Therefore, we must consider our reason for measuring this asset value.

59. Possible reasons for valuing water infrastructure assets:

To measure the net worth of the firm;that is,to informthe owners(who may be individuals, shareholders, government etc.) of their wealth held in the firm;

To establish a possible sale price for the assets in question– as either the expected benefits from selling the assets; or as a component of the value of the entity as a going concern;

To apprise owners of the likely replacement cost of the asset in the event of its destruction or damage;

To generate estimates of return on asset; and

As a basis for generating ongoing measures of productivity.

What bases could be used to value water infrastructure assets?

60. There is a wide range of bases by which these assets might be valued. Broadly speaking, these bases tend to fall into one of two broad categories of valuation: historic cost or revaluation ('fair value').

61. Fair value can be determined on the basis of market value. For many purposes and for many assets this is the preferred valuation—within both commercial accounting and economic accounting; the latter, as described in the SNA.

62. Australian Accounting Standards (AASBs) require the assets be valued to the extent as providing a relevant and faithful ground for economic decision-making.Although the AASB 116 Property, Plant and Equipment recognises both the cost model and the revaluation model in the valuation of non-current assets, the revaluation model is still preferred as it reflects the true economic worth of the asset. The ideal proxy of fair value, both in terms of SNA or AASBs, is an observed market price. However, water infrastructure assets are highly specialised; and if sold, would only be sold as part of a cash-generating business. In order to determine the most appropriate valuation basis for water infrastructure assets in Australia, this section illustrates the key concepts and discusses available valuation methodologies underpinning fair values adopted by water businesses.

A. Key economic and accounting concepts

i. Fair value

"The amount for which an asset could be exchanged, or a liability settled, between knowledgeable, willing parties in an arm's length transaction." (AASB 1 First-time adoption of the Australian Accounting Standards, para.23)

"If there is no market-based evidence of fair value because of the specialised nature of the item of property, plant and equipment and the item is rarely sold, except as part of a continuing business, an entity may need to estimate fair value using an income or a depreciated replacement cost approach."(AASB 116 Property, Plant and Equipment, para. 33)

ii. Return on water assets (ROA)

$$ROA = \frac{Net\ Income\ from\ Water}{Total\ Value\ Water\ Infrastructure\ Assets}$$

Viable valuation basesinclude:

i. Current Replacement Cost (CRC)

The cost to construct or replace the exact same asset today, regardless of the depreciation incurred.For water assets with no active market, it provides an indication of the investment required to replace the asset; for example, in the event of catastrophic loss.

ii. Depreciated Replacement Cost (DRC)

The current replacement cost, net of accumulated depreciation. It is generally a more reliable measure of the remaining economic benefits of the asset compared to current replacement cost.[5]

iii. Net Present Value(Value in use, discounted cash flow, internal rate of return)

"The present value of future cash flows expected to be derived from an asset or cash- generating unit" (AASB 136 Impairment of Assets).

63. Market valuation is not always used, either because such valuation is not possible; or because it is considered inappropriate in the circumstances. In the absence of a clear market value, authorities in Australia have adopted alternative measurement bases for water infrastructure assets. For instance, the National Water Commission uses the DRC method for infrastructure assets operated by urban water entities.

64. In commercial accounting, either a DRC or an income approach is generally used where market values are not available or are considered inappropriate. For example, Melbourne Water values its water infrastructure assets using the income approach, while many other water suppliers have applied a valuation based on DRC.

65. There is a further consideration of the 'recoverable amount' associated with an asset. AASB 136 Impairment of Assets states that the carrying amount of an asset should not exceed its recoverable amount. If the entity is for-profit, recoverable amount is the present value of expected future cash inflows. If the entity is not-for-profit, the recoverable amount is referred to as 'value in use'. For specialized assets, such as water infrastructure assets, value in use equates to DRC (AASB 136 para. Aus 32.1).

66. Investigations recently undertaken by the ABS suggest that many entities markedly write down the value of their water infrastructure assets following application of the impairment test. This is entirely reasonable given that the water suppliers are classified as 'for-profit' organisations and the expected benefits from using these assets may not match the often substantially higher cost of putting these assets in place. The expected benefits arising from holding and using these assets are, of course, profoundly

[5] *The net present value approach is synonymous with the income approach referred to later in the document*

affected by the highly regulated pricing of urban water.

67. Nevertheless, the often substantial reduction in asset value following application of the impairment test does not reflect the cost of putting these assets in place. It also delivers a higher measured rate of return on water infrastructure assets compared to a valuation based on actual investment or DRC. For example, the operating return on infrastructure assets in 2009 for one of the water suppliers selected for the study is approximately 7.2 per cent (close to the yield of a 10-year Commonwealth bond) when water infrastructure assets are valued on a post- impairment test basis; and 4.2 per cent (close to the prevailing Reserve Bank of Australia cash rate) when valued on the pre-impairment test basis.

68. A number of Australian water suppliers publish estimates of water infrastructure assets on multiple valuation bases. For example, the annual report of one water supplier reveals that the value of its water infrastructure assets (excluding work in progress) at 30 June 2010 was $2,473 million using a DRC valuation and $1,459 million under an income approach to asset valuation. Corresponding figures from the annual report of another business are $760 million and $533 million—and these sets of results are typical for businesses reporting water infrastructure asset values on both DRC and income bases. As observed above, the choice of reporting basis has a potentially significant impact on the reported value of these assets and the choice of valuation basis can considerably influence such things as return on assets.

Does a current replacement cost valuation provide useful information?

69. A further possible valuation basis is the Current Replacement Cost (CRC). This is the cost to construct or replace the exact same asset today, regardless of any depreciation incurred. It typically delivers the highest asset value among all the valuation methods discussed here. Technically, current replacement cost is less relevant for a business because there is no need to replace water infrastructure assets during a normal business cycle. However, it would provide an appropriate basis for an asset insurance reserve account to meet the cost of replacing water infrastructure in the event of loss or major damage. At the very least, it provides state governments with a realistic idea of the cost to quickly replace these assets in the event of a catastrophic loss.

70. The following example demonstrates the potentially wide gulf between a carrying amount based on DRC, and the cost of completely replacing the existing asset stock in the event of catastrophic loss.

Example of Comparison between Different Valuations	
State Water (NSW) at 30 June 2009	
DRC/Carrying Amount	CRC/insurance reserve
$296 394 419	$3 488 203 131

Source:National Water Commission National Performance Reports 2009-10

71. The replacement cost valuation basis provides valuable information to a very specific policy interest. However, it should be used as supplementary information only for this specific policy question and should notform the primary basis for valuation of water infrastructure assets in the ABS Water Account.

International Statistical Standardsand the valuation of fixed capital

72. The2008 SNA is the international statistical standard underpinning much of Australia's official economic statistics; in particular the Australian System of National Accounts. This standard provides the basis for Australia's official measures of produced capital as used in the national balance sheet, estimates of capital stock, and productivity measures.

73. The ABS Water Account follows the concepts and methods set out in the SEEA 2003 module related to water accounts (SEEA-Water). In general, the principles used to value fixed capital in the SNA and the Australian System of National Accountsshould therefore also provide the valuation basis for water infrastructure assets to be published in the ABS Water Account. It follows that we must consider 2008 SNA recommendations on the valuation of fixed capital assets.

74. The SNA 2008 states that:

In addition to values observed in markets or estimated from observed prices, values may be approximated from balance sheet valuation in two other ways. In some cases, values may be approximated by accumulating and revaluating acquisitions less disposals of the type of asset in question over its lifetime and adjusted from changes such as consumption of fixed capital; this generally is the most practical and also the preferred method for fixed assets, but it can be applied to other assets as well. In other cases, values may be approximated by the present, or discounted, value of future economic benefits expected from a given asset; this is the case for a number of financial assets, natural resources and even for fixed assets.

(paragraph 13.19, emphasis added)

75. The 2008 SNA is therefore recommending an asset valuation, in the absence of observed market values, equivalent to the DRC method.

76. The 2008 SNA further specifies that:

The value of such an asset at a given point in its life is given by the current acquisition price of an equivalent new asset less the accumulated depreciation. This valuation is sometimes referred to as the "written-down replacement cost". ... (paragraph 13.23, emphasis added).

77. The International Monetary Fund's (IMF)Government Finance Statistics Manual 2001 (2001 GFS) forms part of the suite of international economic statistics standards and is largely consistent with the SNA. However, the 2001 GFS provides additional guidance on the valuation basis to be used for various asset types. The 2001 GFS states that the income approach may be used to value assets in certain circumstances (certain financial assets; naturally occurring assets; and intangible assets) but that in the absence of observable market prices "most fixed assets are recorded in the balance sheet at their written down replacement cost" (para 7.27). This is the original acquisition

value of the asset, adjusted by an allowance for price changes and written down for accumulated depreciation and is equivalent to depreciated replacement cost. That is, for typical Australian water infrastructure assets, the GFS appears to provide clear support for valuation based on depreciated replacement cost.

78. In practice, the Australian System of National Accounts compiles estimates for water infrastructure assets using the Perpetual Inventory Method (PIM). The PIM indexes the annual construction cost of the asset, net of subsequent depreciation. The principles and techniques used in the PIM are entirely consistent with the 2008 SNA and also with the notion of DRC.

79. The SEEA and SEEA-Water provide no direct guidance on the question of valuation of water infrastructure assets. For example, SEEA-Water acknowledges that water infrastructure can be a substantial component of costs in the supply and use of water resources (para 8.41) but provides no specific guidance on how such capital should be valued. SEEA-2003 (paras 2.132 - 2.133) re-affirms the SNA preference to use market prices wherever practicable, though it acknowledges that this is not always possible and that alternative methods must then be sought. SEEA-2003 specifically mentions an alternative technique of asset valuation based on the discounted value of the future expected stream of income arising from use of the asset. However, there is no specific recommendation that this alternative asset valuation be preferred in the absence of market values. We must therefore refer to the SNA for the conclusive preferred alternative to market valuation.

Practical considerations for the ABS

80. Both Commercial Accounting Standards (AASB) and Economic Accounting Standards (SNA, SEEA)must be considered in selectinga preferred valuation basis for water infrastructure assets. Commercial accounting standards determine what is available from business accounts and the terminology used is also what respondentsto ABS surveys are familiar with. ABS statistics must support informed economic decision making and integrated environmental-economic analyses.

81. Therefore, the ABS' choice of valuation basis must reflect both what data are available from standard business accounts in the water supply industry and also the concept most useful to decision-makers in this field.

Assessment of valuation options: water infrastructure assets

82. The nature of the water supply business means that market-based evidence of fair value is unlikely to exist. In addition, water infrastructure assets can legitimately be described as specialised in character, meaning that the Australian accounting standards allow fair value to be generated using income or DRC approaches.

83. The question then arises, which of the two approaches–income or DRC–is mostappropriate to valuing Australia's water infrastructure assets? The answer is determined by the type of economic benefits expected from holding and operating these assets.If the assets are expected to earn a commercial return in the form of a cash flow reflecting the risk of holding these assets, then an income approach to asset valuation may be appropriate.

84. Alternatively, the expected economic benefit of the water infrastructure assets may primarily take the form of a safe, reliable and cheap water supply for Australian businesses and households, inwhich case the (considerable) benefits expected from holding these assets will not be reflected in the income stream of the water supplier and the income approach to asset valuation is therefore not appropriate.

85. Ideally, the valuation basis would be determined on a case-by-case basis, reflecting on the nature and operation of each enterprise engaged in water supply. However, the ABS does not generally have the luxury of following or enforcing this approach. Instead, a judgement must be made about which approach is appropriate for the industry as a whole—at the same time acknowledging that some businesses may not follow the 'norm' for the broader industry.

86. The following observations and questions are made about the water supply business in Australia:

Australian water suppliers operate under a regulatory regime which aims to ensure that water prices are kept as lowas possible while at the same time covering suppliers' current and capital costs.

AreAustralian water infrastructure assets typically held for the primary objective of generating net cash inflows?

Are Australian water suppliers usually classified as for-profit or not-for-profit, as per Australian Accounting Standards?

How often are Australian water infrastructure assets retired for generating insufficient cash return?

87. Also, who are the owners of water infrastructure assets and do theyview these assets primarily as money generators? Alternativelyare they seen primarily as the means by which a cheap, safe and reliable supply of water is delivered to households and businesses in the catchment?

88. As we have seen in preceding sections of this paper, businesses in the Australian water supply industryusually generate minimal or no profit (and therefore no return on assets) even thoughthese businesses would view themselves as 'for-profit' entities. The economic benefits of water infrastructure assets donot appear to reside in their ability to generate a commercial return. Instead, much of the economic benefit appears to reside with the multitude of Australian businesses and households who receive a clean and reliable water supply at a price kept artificially low by a dedicated regulatory regime.

89. Considering all of the above, it would generally be difficult to support an income approach to the valuation of Australia's water infrastructure assets;thatis, much of the benefit expected from holding and using these assets will not be reflected in expected future income streams of water suppliers. An income approach would, therefore, understate the value of these assets and provide a higher measured return on assets. An income approach,on the other hand,would be appropriate for a prospective buyer of these assets in assessing the value of the entity as a going concern.

90. DRC approximates the (written down)cost of putting water infrastructure assets in place and, therefore, the investment in

these assets. In many cases, the very large capital cost of commissioning water infrastructure assets is at least partlymet by the broader community through government contributions. Consequently, DRC provides a meaningful basis for deriving estimates of the return on this investment.

91. As noted earlier, the DRC method is entirely consistent with the preferred valuation basis of the 2008 SNAfor those assets where market values for the assets in question are not readily observable. Adoption of the DRC method as the preferred valuation basis for Australia's water infrastructure assets is, therefore,in linewith the principles underpinning Australia's official economic statistics. It is also consistent with the principles and methods set out in SEEA 2003 (the satellite system of the SNA which focuses on environmental concerns) andtherefore provides the preferred basis to value water infrastructure assets within the ABS Water Account.

92. In short, it is recommended that water infrastructure assets be valued on the basis of DRC. As a secondary recommendation, it wouldalso be worthwhile investigating possible inclusion of supplementary data series in the ABS Water Accountbased on the full replacement cost of water infrastructure assets. This would provide an indication of the community's exposure to the loss or damage of these essential assets.

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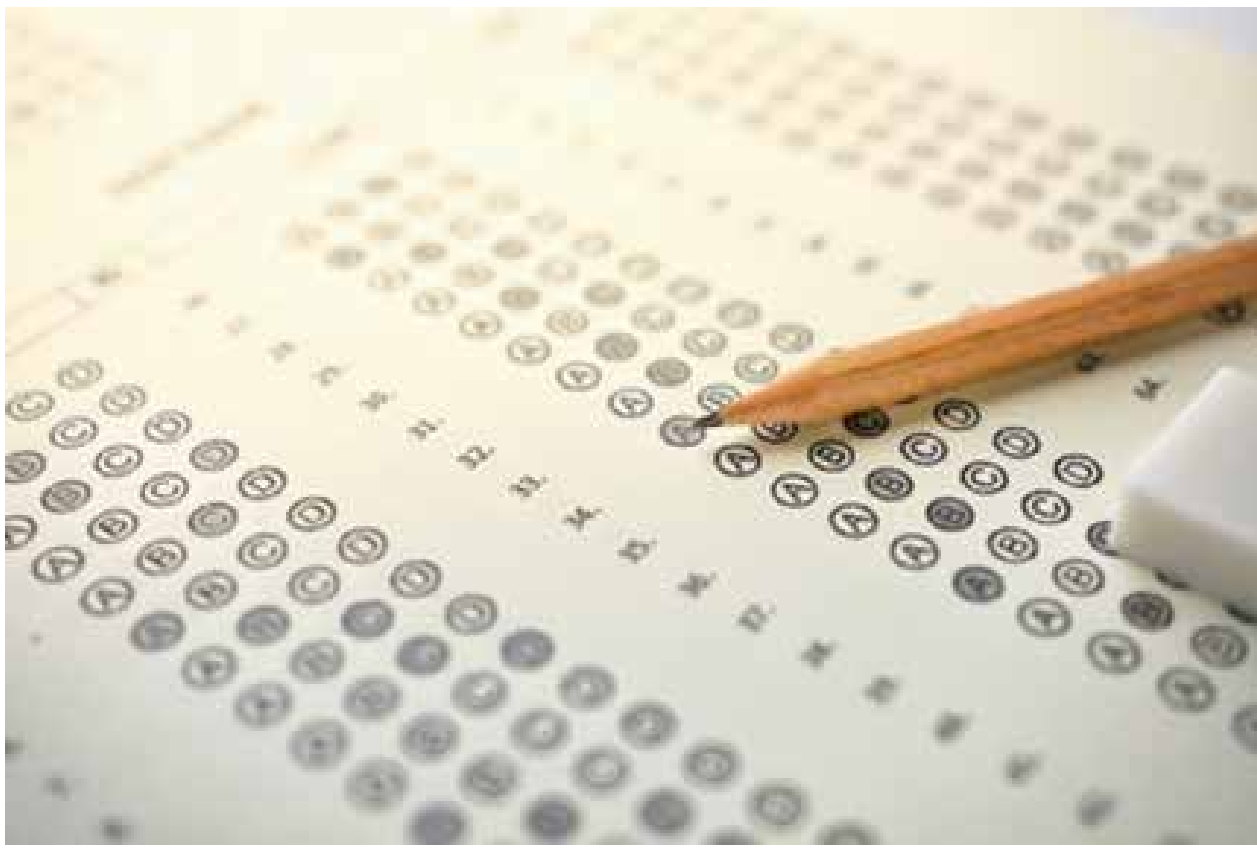
MULTIPLE CHOICE QUESTIONS



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The Institute of Cost Accountants of India
4th Floor, CMA Bhawan 3, Institutional Area
Lodhi Road, New Delhi – 110003

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MULTIPLE CHOICE QUESTIONS

MCQ FOR SFA

1. **The national income estimation is the responsibility of**
a) NSSO
b) CSO
c) Finance Ministry
d) National Income Committee

Ans) CSO

2. **The most appropriate measure of a country's economic growth is**
a) GDP
b) NDP
c) Per capita real income
d) GNP

Ans) Per capita real income

3. **To avoid double counting when GDP is estimated, economists**
a) Use GDP deflator
b) Calculate value added at each stage of production
c) Use retail prices
d) Use price of only intermediategoods

Ans) Calculate value added at each stage of production

4. **Capital Budgeting Decisions are based on:**
a) Incremental Profit
b) Incremental Cash Flows
c) Incremental Assets,
d) Incremental Capital

Ans) Incremental Cash Flows

5. **Operating leverage helps in analysis of:**
a) Business Risk,
b) Financing Risk
c) Production Risk
d) Credit Risk

Ans) Business Risk,

6. **Which of the following cost of capital require tax adjustment?**
a) Cost of Equity Shares
b) Cost of Preference Shares
c) Cost of Debentures
d) Cost of Retained Earnings.

Ans) Cost of Debentures

7. **Financial Leverage arises because of:**
a) Fixed cost of production
b) Variable Cost,
c) Interest Cost
d) manufacturing cost

Ans) Interest Cost

8. **Dividend Payout Ratio is**
a) PAT÷ Capital
b) DPS ÷ EPS
c) Pref. Dividend ÷ PAT
d) Pref. Dividend÷ Equity Dividend

Ans) DPS ÷ EPS

9. **Dividend Distribution Tax is payable by**
a) Shareholders to Government
b) Shareholders to Company
c) Company to Government,
d) Holding to Subsidiary Company

Ans) Company to Government,

10. **Stock split is a form of:**
a) Financial Restructing
b) Bonus Issue
c) Dividend Payment
d) Dividend in kind

Ans) Financial Restructing

11. **Retained earnings are:**
a) Not important when determining dividends
b) The same as cash in the bank
c) An indication of a company's liquidity
d) The cumulative earnings of the company after dividends

Ans) The cumulative earnings of the company after dividends

12. **Financial Analysis includes:**
a) External
b) Internal
c) Horizontal
d) All of the above

Ans) All of the above

13. **In Inventory Turnover calculation, what is taken in the numerator?**
a) Sales
b) Cost of Goods Sold
c) Opening Stock
d) Closing Stock

Ans) Cost of Goods Sold

14. **Who has the authority to certify that any instrument is not chargeable with duty?**
a) Magistrate
b) Collector
c) Bank Official
d) None of the above

Ans) Collector

15. **What is the maximum amount of penalty prescribed under section 62 of the Indian Stamp Act 1899 for executing instrument not duly stamped?**
a) One hundred rupees
b) Two hundred rupees
c) Five hundred rupees
d) One thousand rupees

Ans) Five hundred rupees

16. **What is the maximum amount**

MULTIPLE CHOICE QUESTIONS

of penalty prescribed under section 63 of the Indian Stamp Act, 1899, for failure to cancel adhesive stamp?
a) One hundred rupees
b) Two hundred rupees
c) Five hundred rupees
d) One thousand rupees

Ans) One hundred rupees

17. **What is the maximum amount of penalty prescribed under section 65 of the Indian Stamp Act, 1899, for refusal to give receipt, and for devices to evade duty on receipts?**
a) One hundred rupees
b) Five hundred rupees
c) One thousand rupees
d) Five thousand rupees

Ans) One hundred rupees

18. **What is the maximum amount of penalty prescribed under section 66 of the Indian Stamp Act 1899 for not making out policy within one month after receiving, or taking credit for, premium or consideration for any contract of insurance or making one not duly**
a) One hundred rupees
b) Two hundred rupees
c) Five hundred rupees
d) One thousand rupees

Ans) Two hundred rupees

19. **Who has the power to make the rules relating to sale of stamps?**
a) Central Government
b) State Government
c) Collector
d) Chief Controlling Revenue Authority

Ans) State Government

20. **Where an instrument is chargeable with ..... in respect of any money expressed in any currency other than that of India, such duty shall be calculated on the value of such money in the currency of India according to the current rate of exchange on the**
a) Fixed amount duty
b) Ad valorem duty
c) Duty of Rs 1000
d) None of the above

Ans) Ad valorem duty

21. **A owes B Rs 1000. A sells a property to B, the consideration being Rs 500 and the release of the previous debt of Rs 1000. Stamp-duty is payable on ..... :**
a) Rs 500
b) Rs 1000
c) Rs 1500
d) None of the above

Ans) Rs 1500

22. **A sells a property to B for Rs 500 which is subject to a mortgage to C for Rs 1000 and unpaid interest Rs 200. Stamp-duty is payable on ..... :**
a) Rs 500
b) Rs 1000
c) Rs 1500
d) Rs 1700

Ans) Rs 1700

23. **A mortgages a house of the value of Rs 10,000 to B for Rs 5000. B afterwards buys the house from A. Stamp-duty is payable on ..... :**
a) Rs 5000
b) Rs 10,000
c) Rs 10,000 less the amount of stamp-duty already paid for the mortgage
d) None of the above

Ans) Rs 10,000 less the amount of stamp-duty already paid for the mortgage

24. **How is stamp duty paid in transactions where more than one instrument is required?**
a) Stamp duty is paid on all the instruments equally
b) Stamp duty is paid on any one of the instruments
c) Stamp duty is paid only on one of the principal instruments and on the balance documents only minimum duty is payable
d) Stamp duty is paid on ad valorem basis

Ans) Stamp duty is paid only on one of the principal instruments and on the balance documents only minimum duty is payable

25. **Rates of Stamp Duty payable for different types of documents are as per:**
a) Schedule I
b) Schedule II
c) Schedule III
d) Schedule IV

Ans) Schedule I

26. **Income by way of rent of agricultural land is:**
a) Business Income
b) Income from other sources
c) Agricultural Income
d) Casual Income

Ans) Agricultural Income

27. **As per section 2(31), the following is not included in the definition of 'person' :**
a) An individual
b) A Hindu undivided family
c) A company
d) A minor

MULTIPLE CHOICE QUESTIONS

Ans) A minor

28. **In which of the following cases, income of previous year is assessable in the previous year itself?**
a) Assessment of persons leaving India
b) A person who is into illegal business
c) A person in employment in India
d) A person who is running a charitable institution

Ans) Assessment of persons leaving India

29.**According to section 2(24), definition of 'income' is:**
a) Inclusive
b) Exclusive
c) Exhaustive
d) Descriptive

Ans) Inclusive

30. **CBDT in controlled by:**
a) Central Government
b) State Government
c) Both (a) and (b)
d) None of the above

Ans) Central Government

31. **Who is an Ordinarily Resident?**
a) Followed both basic and additional
b) Only basic
c) Only additional
d) Not basic and additional conditions

Ans) Followed both basic and additional

32. **Fair value measurement assumes that the transaction to sell the asset or transfer the liability takes place in the principal market for the asset or liability. What is the definition of the principal market used in Ind AS 113?**
a) The one with the greatest volume and level of activity for the asset or liability that can be accessed by the entity
b) The one with the highest and best price for the asset or liability that can be accessed by the entity
c) The one with the highest value activity for the asset or liability that can be accessed by the entity
d) The most advantageous market for the asset or liability

Ans) The one with the greatest volume and level of activity for the asset or liability that can be accessed by the entity

33. **Fair value measurements are categorised into a three-level hierarchy, based on the type of inputs to the valuation techniques used. What inputs are required for a fair value measurement to be classified as level 1 inputs?**
a) Unadjusted quoted prices in active markets for items identical to the asset or liability being measured
b) Inputs based on the highest and best use of the asset as determined by a market participant
c) Inputs other than quoted prices that are directly or indirectly observable for that asset or liability
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) Unadjusted quoted prices in active markets for items identical to the asset or liability being measured

34. **Which of the following is NOT a valuation technique prescribed by Ind AS113?**
a) the fair value approach
b) the income approach
c) the cost approach
d) the market approach
Ans) the fair value approach

35. **Which of the following is NOT an example of a level 2 input?**
a) a financial forecast of cash flow or earnings
b) quoted prices for identical or similar assets or liabilities in markets that are not active
c) inputs other than quoted prices that are observable for the asset or liability, such as interest rates and yield curves, volatilities, prepayment speeds, and credit risks
d) inputs that are derived from or corroborated by observable market data by correlation or other means.

Ans) a financial forecast of cash flow or earnings

36. **Fixed assets which are subsequently measured in accordance with the revaluation model in Ind AS 16 Property, Plant and Equipment are not within the scope of Ind AS 113 in terms of both measurement and disclosure.**
a) TRUE
b) FALSE
c) Sometimes true
d) Need more information

Ans) FALSE

37. **Which of the following is considered standards of value?**
a) Liquidation of Value
b) Actual value
c) Going concern value
d) Investment value

Ans) Investment value

38. **While valuing 'synergy' which of the following is to be looked at!**
a) Operating synergy

MULTIPLE CHOICE QUESTIONS

b) Financial synergy
c) marketing synergy
d) Operating synergy orFinancial synergy

Ans) Operating synergy & Financial synergy

39. **When valuation process is under multiple scenarios, you take into consideration,**
a) Scenarios
b) Ranges of value
c) Ranges of value or Scenarios
d) none of the above

Ans) Ranges of value & Scenarios

40. **Which of the following is the "as of" date for valuation?**
a) Anytime within one year
b) Date that the report is signed
c) "As of" a single point in time or six months later
d) "As of" a single point in time

Ans) "As of" a single point in time

41. **As the amount of _____ increases the present value of _____.**
a) debt; net tax-shield benefits of debt increases
b) common equity; bankruptcy and agency costs increase
c) debt; net tax-shield benefits of debt decrease
d) common equity; net tax-shield benefits of debt decrease.

Ans) debt; net tax-shield benefits of debt increases

42. **Assume that the market imperfection of taxes exists. If thecorporate tax rate were increased under new legislation, the use of debt would _____.**
a) rise
b) fall
c) not be impacted
d) There is not sufficient information provided to determine the impact.
Ans) rise

43. **What are the specific inputs that you would consider while preparing a Valuation Report?**
a) Key Financials,Valuation methodologies considered,Valuation Workings,Fair Value Recommendation
b) Key Financials,Valuation methodologies considered,Valuation Workings,negative assurance
c) Valuation methodologies considered,Key Financials,postive assurance,disclaimer opinion
d) Key Financials,postive assurance,disclaimer opinion Industry overview

Ans) Key Financials,Valuation methodologies considered,Valuation Workings,Fair Value Recommendation

44. **If a bond sells above its par value, it is called ..... bond:**
a) Premium
b) Callable
c) Convertible
d) Discount

Ans) Premium

45. **Leverage is:**
a) The ability to easily raise needed fund
b) A notion from probability
c) The compounding of risk
d) A measure of investment performance

Ans) The compounding of risk

46. **American option is an option which:**
a) Cannot be exercised prior to its expiration date
b) Can be exercised only on the expiration date
c) Can be exercised prior to its expiration date
d) None of the above

Ans) Can be exercised prior to its expiration date

47. **..... is a notion relating to fixed income instrument:**
a) Rate of return
b) Par
c) Face value
d) Beta

Ans) Par

48. **..... is a value of security shown on certificate:**
a) Market value
b) Face value
c) Maturity value
d) All of the above

Ans) Face value

49. **Collar is:**
a) An option to purchase an asset
b) A type of derivative position
c) A notion from probability
d) A condition where spot prices exceed forward prices

Ans) A type of derivative position

50 **..... bond has its interest payment contingent on sufficient earnings of the firm:**
a) Subordinated debenture
b) Debenture
c) Junk bond
d) Income bond

Ans) Income bond

51. **The spread between Treasury securities and non-Treasury securities that are identical in all respects except for quality rating are called:**

MULTIPLE CHOICE QUESTIONS

a) Credit spread
b) Interest spread
c) Rate spread
d) None of the above

Ans) Credit spread

52. **First rating agency of India:**
a) SME Rating Agencies of India Limited (SMERA)
b) Investment Information and Credit Rating Agency of India Limited (ICRA)
c) Credit Rating Information Services of India Limited (CRISIL)
d) Credit and Research Limited (CARE)

Ans) Credit Rating Information Services of India Limited (CRISIL)

53. **Credit rating AAA denotes for:**
a) Extremely unlikely to default
b) Unlikely to default
c) Likely to default
d) Currently in default

Ans) Extremely unlikely to default

54. **A credit rating of bonds affects:**
a) Interest rate
b) Investment appetite
c) Bond pricing
d) All of the above

Ans) All of the above

55. **A credit rating once given to an corporate or government bond is:**
a) Cannot be upgraded in future
b) Cannot be downgraded in future
c) Can be upgraded or downgraded in future
d) Stable over the maturity period of the bond

Ans) Can be upgraded or downgraded in future

56. **An embedded option is:**
a) An option that is embedded into the stock, bond, etc
b) There may be more than one embedded option in a security
c) Generally, cannot be separated from the securities to which they are attached
d) All of the above
Ans) All of the above

57. **Which of the following is true about the callable bond?**
a) Callable bonds always trade at a discount to non-callable bonds
b) Callable bonds expose issuers to the risk of reduced re-investment return
c) Callable bonds are actually variable tenor bonds
d) Callable bonds are not as liquid as non-callable bonds

Ans) Callable bonds are actually variable tenor bonds

58. **Bonds with embedded put options are called:**
a) Putable bonds
b) Bondholders puts
c) Callable bonds
d) None of the above

Ans) Putable bonds

59. **A callable bond is worth ..... to an investor than non-callable bond because the company issuing the bond has the power to redeem it and deprive the bondholder of the additional interest payments he would be entitled to if the bond was held to matur**
a) Less
b) More
c) Equal
d) None of the above

Ans) Less

60. **As per the valuation of investment circular issued by the FIMMDA, security receipts will be valued at:**
a) Carrying cost
b) Maturity cost
c) Net present value given by the issuing reconstruction company
d) None of the above

Ans) Net present value given by the issuing reconstruction company

61. **Which of the following is the correct one?**
a) Clean price = dirty price - accrued interest
b) Clean price = dirty price + accrued interest
c) Clean price = dirty price/accrued interest
d) Clean price = dirty price * accrued interest

Ans) Clean price = dirty price - accrued interest

62. **Securities issued by companies are traded in ..... :**
a) Derivatives market
b) Tertiary market
c) Primary market
d) Secondary market

Ans) Secondary market

63. **Does either the NPV or free cash flow model add the value of nonoperating net assets in its calculations_**
a) Only the NPV model does
b) Only the free cash flow model does.
c) Neither the NPV nor the free cash flow models do
d) Both the NPV and free cash flow models do

Ans) Both the NPV and free cash flow models do

64. **Does either the NPV or free cash flow model discount the firm's free cash flow at the unlevered**

MULTIPLE CHOICE QUESTIONS

cost of equity in its calculations?
a) Both the NPV and free cash flow models do
b) Only the NPV model does
c) Neither the NPV nor free cash flow models do
d) Only the free cash flow model does

Ans) Only the NPV model does

65. **Does either the NPV or free cash flow model subtract the value of debt in its calculations?**
a) Only the free cash flow model does
b) Both the NPV and free cash flow models do
c) Only the NPV model does
d) Neither the NPV nor free cash flow models do

Ans) Both the NPV and free cash flow models do

66. **The adjusted present value (NPV) and free cash flow models give equivalent results. An analyst may prefer to use the NPV model because the :**
a) NPV uses the historical cost flow statement, which the free cash flow model does not
b) NPV highlights the extent to which the value of the firm is enhanced by the use of leverage in its capital structure
c) NPV focuses on the value of core operations whereas the free cash flow model does
not
d) free cash flow model focuses of the effect of leverage,which NPV does not

Ans) NPV highlights the extent to which the value of the firm is enhanced by the use of
leverage in its capital structure

67. **In internal rate of returns, discount rate which forces net present values to become zero is classified as_**
a) positive rate of return
b) negative rate of return
c) external rate of return
d) internal rate of return
Ans) internal rate of return

68. **In calculation of internal rate of return, an assumption states that received cash flow from project must_**
a) be reinvested
b) not be reinvested
c) be earned
d) not be earned

Ans) be reinvested

69. **In which of the following basic categories can business environment be divided?**
a) Local and Regional
b) Regional and National.
c) Internal and External.
d) Financial and Nonfinancial.

Ans) Internal and External.

70. **Economic environment refers to all forces which have a _____.**
a) political.
b) natural
c) economic.
d) social.

Ans) economic.

71. **_____environment is with in the control of the business.**
a) Internal.
b) External.
c) Micro.
d) Macro.

Ans) Internal.

72. **____ environment is beyond the control of the business.**
a) Internal.
b) External.
c) Micro.
d) Macro.

Ans) External.

73. **Micro environment is also called as _____.**
a) general environment.
b) operating environment.
c) economics environment.
d) political environment.

Ans) operating environment.

74. **Internal factors affecting a business environment also are referred to ____factors.**
a) controllable.
b) uncontrollable factors.
c) relevant.
d) global.

Ans) controllable.

75. **A systematic application of scientific knowledge to practical task is known as_____.**
a) technology.
b) culture.
c) demograpic.
d) legal.

Ans) technology.

76. **Buying in a cheaper market and selling higher in another market is known as**
a) Hedging
b) Speculation
c) Arbitrage
d) Gambling

Ans) Arbitrage

77. **In arbitrage pricing theory, required returns are functioned of two factors which have_**

MULTIPLE CHOICE QUESTIONS

a) dividend policy & market risk
b) market risk & historical policy
c) historical policy & dividend policy
d) dividend policy & earning policy

Ans) dividend policy & market risk

78. **Complex statistical and mathematical theory is an approach, which is classified as_**
a) arbitrage pricing theory
b) arbitrage risk theory
c) arbitrage dividend theory
d) arbitrage market theory

Ans) arbitrage pricing theory

79. **Which of the following method of fair exchange ratio is acceptable to court in view of Supreme Court decision in Miheer H. Mafatlal vs. Mafatlal Industries Ltd (1997) 1 SCC 579:**
a) Manageable Profit Method
b) Net worth Method
c) Market Value Method
d) All of the above

Ans) All of the above

80. **In the matter of Dinesh Vrajlal Lakhani vs Parke Davis (India) Ltd, the Division Bench of the Bombay High Court also held that:**
a) 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 be contrary to law or unfair to the shareholders of the company which has been merged
b) 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 law or unfair to the shareholders of the company which has been merged.
c) The Court is neither a valuer nor an appellate forum to appreciate the merits of the valuation. 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.
d) None of the above

Ans) 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 law or unfair to the shareholders of the company which has been merged.

Use the following information to answer Questions 81-84

Lois Fischer, Valuer, believes that the retail industry will perform well over the next several quarters and is interested in selecting a retail stock on the basis of its price-to-book multiple. Fischer's research has resulted in a list of five stocks from which she will make her final selection: Wally's, Home Decor, Redrug, Lester's, and Harmon's. The following table contains the information upon which Fischer will base her decision.

P/B Comparables for Retail Firms

	2013	2014	2015	3-Year Average	Current	2-year ROE Forecast	Beta
Wally's*	9.85	8.01	6.93	8.26	6.53	20.00%	0.98
Harmon's*	6.35	4.60	4.16	5.04	3.29	19.95%	1.02
Redrug**	14.93	11.08	13.32	13.11	5.78	18.20%	0.58
Home Decor***	9.75	7.24	8.88	8.62	3.31	19.29%	1.36
Lester's***	7.65	6.25	6.66	6.85	4.32	18.90%	1.22

*Retail industry (department & discount)	5.75	19.98%
**Retail industry (drugs)	4.69	15.27%
***Retail industry (home improvement)	3.62	19.29%

Annabelle Clementi, is Fischer's supervisor and has more than 15 years of experience analyzing firms in the retail industry. Clementi typically uses the P/B ratio when comparing retail stocks with the industry and among peers. However,

MULTIPLE CHOICE QUESTIONS

Clementi has concluded that firms in the home improvement segment of the retail industry utilize their assets so efficiently that P/B valuation is not appropriate. Since these firms are typically characterized as having relatively strong cash flows, Clementi has decided to assess them using valuation measures that are based on cash flows and cash flow-related concepts. With this in mind, Clementi has obtained the following financial statements for Lester's, Inc., a major player in the home improvement segment of the retail industry. Other relevant information that will assist her with the valuation of Lester's includes the following:

- Lester's financial statements are prepared using U.S. GAAP.
- Actual interest paid for the year was $240 million. The reported cash flow from operating activities includes this effect, net of tax savings.
- The marginal tax rate is 37%.
- Lester's is currently trading at $42.10 per share.

Lester's, Inc. Income Statement

Period Ending December 31, 2015	
Total Revenue	22,111,108,000
Cost of Revenue	(15,743,267,000
Gross Profit	6,367,841,000
Operating Expenses Eepreciation	**534,102,000**
Selling General and Administrative Expenses	**3,379,253,000**
Nonrecurring	**139,870,000**
Other Operating Expenses	**516,828,000**
Total Operating Expenses	**4,570,053,000**
Operating Income	**1,797,788,000**
Total Other Income and Expenses, Net	**58,431,000**
Earnings Before Interest and Taxes	**1,856,219,000**
Interest Expense	**(231,968,000)**
Income Before Tax	**1,624,251,000**
Income Tax Expense	**600,989,000**
Equity Earnings or Loss Unconsolidated Subsidiary	**N/A**
Minority Interest	**N/A**
Net Income from Continuing Operations	**1,023,262,000**
Nonrecurring Events Discontinued Operations	**N/A**
Extraordinary Items	**N/A**
Effect of Accounting Changes	**N/A**
Other Items	**N/A**
Net Income	**1,023,262,000**
Preferred Stock and Other Adjustments	**N/A**
Net Income Applicable to Common Shares	**1,023,262,000**
Earnings per Common Share Basic	**$1.62**
Weighted Average Shares Outstanding Basic	**631,643,000**

MULTIPLE CHOICE QUESTIONS

Lester's, Inc. Statement of Cash Flows

Period Ending December 31, 2015	$
Net Income	1,023,262,000
Cash Flow Operating Activities	
Depreciation	534,102,000
Changes in Operating Activities	
Changes in Accounts Receivables	(4,593,000)
Changes in Liabilities	306,869,000
Changes in Inventories	(325,406,000)
Changes in Other Operating Activities	(36,792,000)
Cash Flow from Operating Activities	1,497,442,000
Cash Flow Investing Activities	
Capital Expenditures	**(2,199,334,000)**
Cash Flows From Investing Activities	**(2,199,334,000)**
Cash Flow Financing Activities	
Dividends Paid	**(59,884,000)**
Sale (Purchase) of Stock	**115,870,000**
Net Borrowings	**873,480,000**
Other Cash Flows From Financing Activities	**N/A**
Cash Flows From Financing Activities	**929,466,000**
Effect of Exchange Rate	**N/A**
Change in Cash and Cash Equivalents	**227,574,000**
Cash and Cash Equivalents at Beginning of Period	**455,658,000**
Cash and Cash Equivalents at End of Period	**683,232,000**

81.**Based on the information in the first figure, which of the following statements least likely supports Fischer's recommendation of Home Decor over Lester's?**
a)Home Decor's P/B ratio relative to the industry.
b)Home Decor's P/B ratio relative to Lester's P/B ratio.
c)Home Decor's historical P/B ratios.
d)None of the above

Ans) Home Decor's historical P/B ratios.

82.**Which of the following statements is least likely a justification of Fischer's selection of Harmon's over Wally's on the basis of the information in the first figure?**
a)Harmon's level of systematic risk relative to Wally's.
b)Harmon's P/B ratio relative to the industry.
c)Wally's P/B ratio relative to the industry.
d)None of the above

Ans) Harmon's level of systematic risk relative to Wally's.

83.**Clementi requests that Fischer calculate several ratios using the previous information. The P/CF for Lester's using earnings-plus-noncash-charges for cash flow is closest to:**
a)15.89.
b)17.08.
c)25.99.
d)None of the above

Ans) 17.08.

84.**Clementi requests that Fischer calculate the P/CFO for Lester's, using adjusted cash flow from operations for cash flow for comparison with other companies. The adjusted P/CFO for Lester's is closest to:**
a)15.
b)17.
c)19.
d)None of the above

Ans) 17.

MULTIPLE CHOICE QUESTIONS

Use the following information to answer Questions 85-87

A bond named Galaxy has 4 years remaining till its maturity and is currently trading at US $102. Interest on the bond is paid on a semiannual basis based on a coupon rate of 5%. The bond is first callable in 2 years and on coupon dates after that date in accordance to the given table below:

End of Year	Call Price
2	101.5
3	101
4	100

85.**Which of the following is most likely to be the bond's annual yield to maturity?**
a)2.22%.
b)4.44%.
c)6.66%.
d)None of the above

Ans) 4.44%.

86.**Which of the following is most likely to be the bond's annual yield to first call?**
a)4.42%.
b)4.66%.
c)4.78%.
d)None of the above

Ans) 4.66%.

87.**Which of the following is most likely to be the bond's annual yield to second call?**
a)4.26%.
b)4.38%.
c)4.59%.
d)None of the above

Ans) 4.59%.

Use the following information to answer Questions 88-90

A 6% corporate bond is priced for settlement on 15 September 2015. The bond matures on 30 June 2018 and makes semiannual coupon payments on 30th June and 31st December. The bond is currently trading at 7.0% yield to maturity.

88.**Based on the above information, the full price of the bond on the settlement date is closest to:**
a)973.36.
b)987.47.
c)975.52.
d)None of the above

Ans) 987.47.

89.**Based on above information, the accrued interest on the settlement date is closest to:**
a)12.55.
b)22.55.
c)15.55.
d)None of the above

Ans) 12.55.

90.**Based on the above information, the flat price of the bond on settlement date is closest to:**
a)973.36.
b)974.92.
c)972.52.
d)None of the above

Ans) 974.92

KEY CHANGES IN THE REVISED IVS

- Compiled by CMA, RV & IP Padma Ganesh

Key changes at a glance:

Effective date: The latest IVS becomes effective from 31 January 2022. However, the IVSC encourages early adoption from the date of publication. Valuers will need to make clear which edition of the IVS they are using when preparing a valuation report.

New chapter: The updated IVS includes a new chapter, '*IVS 230 Inventory*' as part of the intangible asset standards.

Technical revisions: Updates also include the technical revisions consulted on throughout 2020 and 2021.

Introduction: The introduction has been revised to incorporate new '*core principles of valuation standard setting*' and the '*core principles of valuation*'

Glossary: The IVS glossary has been updated to include new terms and to provide additional clarifications.

IVS *Framework*: The sections on '*compliance with standards*', '*assets and liabilities*', '*valuer'* and '*competence*' have been revised to provide additional clarifications.

IVS 104 *Bases of Value*: A new section on '*allocation of value'* has been included within this chapter.

IVS 105 *Valuation Approaches and Methods*: The introduction has been revised to provide additional clarification that one or more valuation approaches may be used to arrive at the value reported within a basis of value.

Additions to 'Introduction' :

The IVSC Standards Boards have taken into account the following core principles when drafting the International Valuation Standards.

Core Principles of Valuation Standard Setting

1. Purpose (Objective)

The purpose of valuation standards is to promote and maintain a high level of public trust in valuation practice by establishing appropriate requirements for valuers.

2. Valuation Standards

Valuation Standards should be principle based and adequately address the development of a credible opinion of value and the communication of that opinion to the intended user(s).

3. Development and Revisions of Standards

Standards are to be created and revised, when necessary, by way of a transparent process after appropriate exposure.

4. Jurisdiction

Departures from the standards to comply with legislative and regulatory requirements that are in conflict with the standards are allowed.

Core Principles of Valuation

1. Ethics

Valuers must follow the ethical principles of integrity, objectivity, impartiality, confidentiality, competence and professionalism to promote and preserve the public trust.

2. Competency

At the time the valuation is submitted, valuers must have the technical skills and knowledge required to appropriately complete the valuation assignment.

3. Compliance

Valuers must disclose or report the published valuation standards used for the assignment and comply with those standards.

4. Basis (ie, Type or Standard) of Value

Valuers must select the basis (or bases) of value appropriate for the assignment and follow all applicable requirements. The *basis of value* (or bases) must be either defined or cited.

5. Date of Value (ie, Effective Date/Date of Valuation)

Valuers must disclose or report the date of value that is the basis of their analyses, opinions or conclusions. Valuers must also state the date they disclose or report their valuation.

6. Assumptions and Conditions

Valuers must disclose significant assumptions and conditions specific to the assignment that may affect the assignment result.

7. Intended Use

Valuers must disclose or report a clear and accurate description of the intended use of the valuation.

8. Intended User(s)

Valuers must disclose or report a clear and accurate description of the intended user(s) of the valuation.

9. Scope of Work

Valuers must determine, perform, and disclose or report a scope of work that is appropriate for the assignment that will result in a credible valuation.

10. Identification of Subject of Valuation

Valuers must clearly identify what is being valued.

11. Data

Valuers must use appropriate information and data inputs in a clear and transparent manner so as to provide a credible

valuation.

12. Valuation Methodology

Valuers must properly use the appropriate valuation methodology(ies) to develop a credible valuation.

13. Communication of Valuation

Valuers must clearly communicate the analyses, opinions and conclusions of the valuation to the intended user(s).

14. Record Keeping

Valuers must keep a copy of the valuation and a record of the valuation work performed for an appropriate period after completion of the assignment.

Changes, New terms and clarifications introduced in the 'Glossary' :

20.2. Basis (bases) of Value

The fundamental premises on which the reported values are or will be based (see IVS 105 *Valuation Approaches and Methods*, para 10.1) (in some jurisdictions also known as standard of value).

20.4. Cost(s) (noun)

The consideration or expenditure required to acquire or create an asset.

20.5. Discount Rate(s)

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

20.6. Equitable Value

This is the estimated price for the transfer of an asset or liability between identified knowledgeable and willing parties that reflects the respective interests of those parties.

20.7. Fair Market Value

The Organisation for Economic Co-operation and Development (OECD) defines "fair market value" as the price a willing buyer would pay a willing seller in a transaction on the open market.

2. For United States tax purposes, Regulation §20.2031-1 states: "The fair market value is the price at which the property would change hands between a willing buyer and a willing seller, neither being under any compulsion to buy or to sell and both having reasonable knowledge of relevant facts" .

20.8. Fair Value (International Financial Reporting Standards)

IFRS 13 defines "fair value" as the price that would be received to sell an asset or paid to transfer a liability in an orderly transaction between market participants at the measurement date.

20.11. Investment Value

The value of an asset to the owner or a prospective owner given individual investment or operational objectives (may also be known as worth).

20.13. Liquidation Value

The amount that would be realised when an asset or group of assets are sold on a piecemeal basis. Liquidation value should take into account the costs of getting the assets into saleable condition as well as those of the disposal activity. Liquidation value can be determined under two different premises of value (see IVS 104 *Bases of Value*, section 80):

(a) an orderly transaction with a typical marketing period; or

(b) a forced transaction with a shortened marketing period.

20.14. Market Value

The estimated amount for which an asset or liability should exchange on the valuation date between a willing buyer and a willing seller in an arm's length transaction, after proper marketing and where the parties had each acted knowledgeably, prudently and without compulsion.

20.18. Price (noun)

The monetary or other consideration asked, offered or paid for an asset, which may be different from the value.

20.23. Synergistic Value

The result of a combination of two or more assets or interests where the combined value is more than the sum of the separate values. If the synergies are only available to one specific buyer, then synergistic value will differ from market value, as the synergistic value will reflect particular attributes of an asset that are only of value to a specific purchaser. The added value above the aggregate of the respective interests is often referred to as marriage value.

20.24. Valuation

The act or process of determining an opinion or conclusion of value of an asset on a stated basis of value at a specified date in compliance with IVS. ~~A "valuation" refers to the act or process of determining an estimate of value of an asset or liability by applying IVS.~~

20.25. Valuation Approach

In general, a way of estimating value that employs one or more specific valuation methods (see IVS 105 *Valuation Approaches and Methods*).

20.26. Valuation Method

Within valuation approaches, a specific way to estimate a value.

20.29. Value (noun)

The opinion resulting from a valuation process that is compliant with IVS. It is an estimate of either the most probable monetary consideration for an interest in an asset or the economic benefits of holding an interest in an asset on a stated basis of value. ~~The word "value" refers to the judgement of the valuer of the estimated amount consistent~~

~~with one of the bases of value set out in IVS 104 *Bases of Value*.~~

20.30. Valuer

A "valuer" is an individual, group of individuals ~~or a firm~~ or individual within an entity, regardless of whether employed (internal) or engaged (contracted/external), ~~who possesses~~ possessing the necessary qualifications, ability and experience to execute a valuation in an objective, unbiased, ethical and competent manner. In some jurisdictions, licensing is required before one can act as a valuer.

20.33. Worth

See investment value.

Revisions in the IVS Framework

Para 10. Compliance with Standards

10.2. In order for a *valuation* to be compliant with IVS the *valuer must* comply with all the requirements contained within IVS.

10.3. A *valuer* can only depart from International Valuation Standards (IVS) as described in section 60 of this *Framework*.

Para 20. Assets and Liabilities

20.1. The standards can be applied to the *valuation* of both *assets* and liabilities and present and future claims on *assets* and liabilities.

Para 30. Valuer

30.1. *Valuer* has been defined as "an individual, group of individuals, or ~~a firm~~ individual within an entity, regardless of whether employed (internal) or engaged (contracted/external), possessing the necessary qualifications, ability and experience to undertake a *valuation* in an objective, unbiased, ethical and competent manner. In some *jurisdictions*, licensing is required before one can act as a *valuer*. Because a *valuation reviewer must* also be a *valuer*, to assist with the legibility of these standards, the term *valuer* includes *valuation reviewers* except where it is expressly stated otherwise, or is clear from the context that *valuation reviewers* are excluded.

Para 50. Competence

50.1. *Valuations must* be prepared by an individual, group of individuals or individual within an entity, regardless of whether employed (internal) or engaged (contracted/external), possessing the necessary qualifications, ability and experience to execute a *valuation* in an objective, unbiased, ethical and competent manner and having the appropriate technical skills, experience and knowledge of the subject of the *valuation*, the market(s) in which it trades and the *purpose of the valuation*.

[IVS 2020 version : 50.1. *Valuations must* be prepared by an individual or firm having the appropriate technical skills, experience and knowledge of the subject of the *valuation*, the market(s) in which it trades and the *purpose of the valuation*.]

IVS 101- Scope of work

Para 10 – Introduction :

10.1. A scope of work (sometimes referred to as terms of engagement) describes the fundamental terms of a valuation ~~engagement,~~ such as the *asset(s)* being valued, the *purpose of the valuation* and the responsibilities of parties involved in the *valuation*.

10.2. This standard is intended to apply to a wide spectrum of valuation assignments, including:

(a) *valuations* performed by *valuers* for their own employers (~~"in-house valuations"~~ employed)

(b) *valuations* performed by *valuers* for *clients* other than their employers (~~"third-party *valuations*"~~ engaged), and

(c) valuation reviews where the reviewer *may* not be required to provide their own opinion of *value*.

IVS 104-Bases of value

Para 220. Allocation of Value

220.1. Allocation of value is the separate apportionment of *value* of an *asset(s)* on an individual or component basis.

220.2. When apportioning *value*, the allocation method must be consistent with the overall valuation premise/basis and the *valuer must*:

(a) follow any applicable legal or regulatory requirements,

(b) set out a clear and accurate description of the *purpose* and *intended use* of the allocation,

(c) consider the facts and circumstances, such as the relevant characteristic(s) of the items(s) being apportioned,

(d) adopt appropriate methodology(ies) in the circumstances.

IVS 105-Valuation approaches and methods

Para 10. Introduction

10.1. Consideration *must* be given to the relevant and appropriate valuation approaches. One or more valuation *approaches may* be used in order to arrive at the *value* in accordance with the *basis of value*. The three approaches described and defined below are the main approaches used in *valuation*. They are all based on the economic principles of price equilibrium, anticipation of benefits or substitution.

Para 50.13

As required by para 50.12, regardless of the source of

the PFI (eg, management forecast), a *valuer must* perform analysis to evaluate the PFI, the assumptions underlying the PFI and their appropriateness for the valuation *purpose*. The suitability of the PFI and the underlying assumptions will depend upon the *purpose* ~~of the *valuation*~~ and the required *bases of value*. For example, cash flow used to determine *market value should* reflect PFI that would be anticipated by *participants*; in contrast, *investment value* can be measured using cash flow that is based on the reasonable forecasts from the perspective of a particular investor.

IVS 200-Businesses and Business Interests

Para 20. Introduction

20.1. The definition of what constitutes a business *may* differ depending on the *purpose* of a *valuation*. ~~However,~~ but generally ~~a business conducts a~~ involves an organisation or integrated collection of *assets* engaged in commercial, industrial, service or investment activity. Generally, a business would include more than one *asset* (or a single *asset* in which the *value* is dependent on employing additional *assets*) working together to generate economic activity that differs from the outputs that would be generated by the individual *assets* on their own. ~~Businesses can take many forms, such as corporations, partnerships, joint ventures and sole proprietorships. The *value* of a business *may* differ from the sum of the values of the individual assets or liabilities that make up that business. When a business value is greater than the sum of the recorded and unrecorded net tangible and identifiable intangible *assets* of the business, the excess value is often referred to as going concern value or goodwill.~~

20.2. Individual intangible assets, or a group of intangible assets might not constitute a business but would nonetheless be within the scope of this standard if such *assets* generate economic activity that differs from the outputs that would be generated by the individual assets on their own. If the *assets* do not meet these criteria, a *valuer* should defer to IVS 210 *Intangible Assets* and IVS 220 *Non-Financial Liabilities*. ~~When *valuing* individual *assets* or liabilities owned by a business, *valuers should* follow the applicable standard for that type of *asset* or liability (IVS 210 *Intangible Assets*, IVS 400 *Real Property Interests*, etc).~~

20.3. The commercial, industrial, service or investment activity of the business may result in greater economic activity (ie, *value*), than those *assets* would generate separately. The excess value is often referred to as going concern value or goodwill. This excess value may constitute a separate *asset* under certain *bases of value* in certain situations. The absence of excess value does not automatically mean that the *asset* or group of *assets* does not constitute a business. In addition, economically, substantially all of the *value* of *assets* within a business may reside in a single *asset*.

20.4. Businesses can take many legal forms, such as corporations, partnerships, joint ventures and sole proprietorships. However, businesses could take other forms such as a division, branch, line of business, segment, cash generating unit, and asset group that can consist of parts of one or more legal entities.

20.5. Interests in a business (eg, securities) can also take many forms. To determine the value of a business interest, a *valuer* should first determine the *value* of the underlying business by applying these standards. In such instances, business interests should be within the scope of this standard but depending on the nature of the interest certain other standards may be applicable.

[IVS 200-Para 20.3 & 20.4 of IVS 2020 version now stand renumbered at Para 20.6 & 20.7 respectively]

IVS 230 Inventory

Contents	Paragraphs
Overview	10
Introduction	20
Bases of Value	30
Valuation Approaches and Methods	40
Market Approach	50
Income Approach	60
Cost Approach	70
Special Considerations for Inventory	80
Identification of Value-Added Processes and Returns on Intangible Assets	90
Relationship to Other Acquired Assets	100
Obsolete Inventory Reserves	110
Unit of Account	120

10. Overview

10.1. The principles contained in the General Standards apply to *valuations* of inventory and *valuations* with an inventory component. This standard contains additional requirements for *valuations* of inventory.

20. Introduction

20.1. Inventory broadly includes goods which will be used in future production processes (ie, raw materials, parts, supplies), goods used in the production process (ie, work-in-process), and goods awaiting sale (ie, finished goods).

20.2. This standard focuses on *valuation* of inventory of physical goods that are not real property, as the numerous and varied aspects of real property inventory were not considered or contemplated in the preparation of this standard. The *valuation* of real property is covered in IVS 400 *Real Property Interests*.

20.3. While the book value of inventory only includes historical costs, the profits earned in the production process, which reflect returns on the *assets* utilised in manufacturing (including working capital, property, plant, and equipment, and intangible assets), are not capitalised into book value. As a result, the *market value* of inventory typically differs from, and is usually higher than, the book value of inventory.

20.4. As inventory is seldom transacted at an interim stage (eg, work-in-process) or *may* not be frequently sold to a third party to conduct the selling effort (eg, finished goods sold via distributor networks), the valuation techniques and considerations for inventory frequently vary from those of other *assets*.

20.5. Inventory valuations are performed for a variety of *purposes*. It is the *valuer's* responsibility to understand the *purpose* of a *valuation* and whether the inventory *should* be valued, whether separately or grouped with other *assets*. A non-exhaustive list of examples of circumstances that commonly include an inventory valuation component is provided below:

(a) For financial reporting *purposes*, *valuations* of inventory are often required in connection with accounting for business combinations, asset acquisitions and sales, and impairment analysis.

(b) For tax reporting *purposes*, inventory valuations are frequently needed for transfer pricing analyses, estate and gift tax planning and reporting, and ad valorem taxation analyses.

(c) Inventory valuation *may* be the subject of litigation, requiring valuation analysis in certain circumstances.

(d) *Valuers* are sometimes asked to value inventory as part of general consulting, collateral lending, transactional support engagements and insolvency.

30. Bases of Value

30.1. In accordance with IVS 104 *Bases of Value*, a *valuer must* select the appropriate *basis(es) of value* when valuing inventory.

30.2. Often, inventory valuations are performed using *bases of value* defined by entities/organisations other than the IVSC (some examples of which are mentioned in IVS 104 *Bases of Value*) and the *valuer must* understand and follow the regulation, case law, and other interpretive guidance related to those *bases of value* as of the valuation date.

40. Valuation Approaches and Methods

40.1. The three valuation approaches described in IVS 105 *Valuation Approaches* can all be applied to the *valuation* of inventory. The methods described below simultaneously exhibit elements of the cost approach, market approach, and income approach. If necessary for the *valuer* to classify a method under one of the three approaches, the *valuer should* use judgement in making the determination and not necessarily rely on the classification below.

40.2. When selecting an approach and method, in addition to the requirements of this standard, a *valuer must* follow the requirements of IVS 105 *Valuation Approaches*, including para 10.3.

50. Market Approach

50.1. The market approach, ie, reference to market activity involving identical or similar goods, has only narrow direct application for the *valuation* of inventory. Such applications typically include 1) inventory of commoditised products, or 2) inventory in which a market exists for the inventory at an interim stage in the production process. For non-commodity traded products or products that a market exists at an interim production stage, such selling prices *must* be adjusted downward to account for the disposal effort and related profit.

50.2. While the market approach is not directly applicable in most instances, *valuers should* consider market-based indications to determine the selling price as an input for other methods.

50.3. Other observable markets *may* provide insights on the returns attributable to the manufacturing and disposition of *assets* that can also be leveraged for inputs into other methods. Such returns are typically considered to exclude returns attributable to intellectual property. For example:

(a) Distributor profit margins represent a meaningful market proxy for returns on the disposition process, if an appropriate base of comparable companies is identified.

(b) Contract manufacturers, to the extent available, *may* provide a proxy for margins earned through the manufacturing process.

50.4. *Valuers must* comply with paras 20.2 and 20.3 of IVS 105 *Valuation Approaches and Methods* when determining whether to apply the market approach to the *valuation* of inventory. In addition, *valuers should* only apply the market approach to value inventory if both of the following criteria are met:

(a) information is available on arm's length transactions involving identical or similar inventory on or near the valuation date, and

(b) sufficient information is available to allow the *valuer* to adjust for all *significant* differences between the *subject* inventory and those involved in the transactions.

50.5. Where evidence of market prices is available, *valuers should* make adjustments to these to reflect differences between the *subject* inventory and those involved in the transactions. These adjustments are necessary to reflect the differentiating characteristics of the *subject* inventory and those involved in the transactions. Such adjustments may only be determinable at a qualitative, rather than quantitative, level. However, the need for *significant* qualitative adjustments *may* indicate that another approach would be more appropriate for the *valuation* (see IVS 105 *Valuation Approaches and Methods*, paras 10.1-10.10).

60. Income Approach

60.1. The *valuation* of inventory using the income approach requires the allocation of profit (value) contributed

pre-valuation date versus the profit (value) contributed post-valuation date.

60.2. *Valuers must* comply with paras 40.2 and 40.3 of IVS 105 *Valuation Approaches and Methods* when determining whether to apply the income approach to the *valuation* of inventory.

Top-Down Method

60.3. The top-down method is a residual method that begins with the estimated selling price and deducts remaining *costs* and estimated profit.

60.4. The top-down method attempts to bifurcate the efforts, and related value, that were completed before the measurement date versus those efforts that are to be completed after the measurement date.

60.5. The key steps in applying the top-down method are to:

(a) Estimate the selling price. The *valuer should* rely on direct observations of selling prices when the information is available. However, such data is often not available and the selling price is often estimated by applying an appropriate gross profit margin to the net book value of finished goods at the product level or aggregate level. Typically, the projected gross profit margin in the period the inventory will be sold is used.

(b) Estimate the *costs* to complete (for work-in-process only). Completion costs *should* include all of the expenditures directly or indirectly remaining to be incurred post-valuation date in bringing the work in progress inventory to its finished condition. *Costs* to complete *should* be adjusted to remove expenses benefitting future periods.

(c) Subtract the *costs* of disposal. *Costs* of disposal represent *costs* that would be incurred post-valuation date in order to deliver the finished goods to the end customer. *Costs* of disposal *should* be adjusted to remove expenses benefitting future periods. Disposal costs generally include selling and marketing expenses while procurement and manufacturing expenses have typically already been incurred for finished goods inventory. In order to properly determine *costs* of disposal, each expense in the inventory cycle (including indirect overhead) *should* be categorised as having been incurred and, therefore, contributed to the *value* of the finished goods inventory or remaining to be incurred during the disposal process.

(d) Subtract the profit allowance on the completion effort (for work-in-process only) and the disposal process. An initial starting point *may* be to utilise the operating profit of the company. However, this methodology assumes the profit margin would be proportional to the *costs* incurred. In most circumstances there is rationale to assume profit margins which are not proportional to *costs* (see section 90).

(e) Consider any necessary holding costs. Holding costs *may* need to be estimated in order to account for the opportunity cost associated with the time required to sell the inventory. Additionally, the *valuer should* consider the risk born during the holding period when determining the required rate of return. Risks *may* be a function of the length of inventory life cycle and the contractual arrangements with end customers (eg, manufacturer bears the risk of fluctuation in *costs* of completion and disposal). Holding costs *may* be immaterial if the inventory turnover is high and/or the borrowing rate is low.

60.6. When determining the *cost* to complete, *costs* of disposal and profit allowance, the *valuer should* identify and exclude any expenses that are intended to provide future economic benefit and are not necessary to generate the current period revenue. Examples of future-benefit expenses *may* include research and development (R&D) related to new product development; marketing for a new product; recruiting to increase the size of the workforce; expansion into a new territory; depreciation of an R&D facility dedicated to future research; or restructuring costs.

60.7. Internally developed intangible assets *should* either be modelled as 1) a *cost* as if they were hypothetically licensed, and therefore included in either the *cost* of production or disposal, or 2) considered as part of a functional apportionment when determining the appropriate profit allowance.

60.8. When utilising the top-down method, *valuers should* consider whether sufficient data are available to appropriately apply the key steps. If sufficient data is not available, it *may* be appropriate to apply other methods or techniques.

60.9. The *valuer may* use the bottom-up method (see para 60.10) to corroborate the *value* derived from the top-down method (see paras 60.3 to 60.9).

Bottom-Up Method

60.10. The key steps in applying the bottom-up method are to:

(a) Determine the book value of the *subject* inventory. The book value *may* need to be adjusted for multiple considerations (see para 70.4 and section 110).

(b) Add any *cost* of buying and holding already incurred.

(c) Add any *cost* toward completion already incurred. Such *costs* typically include procurement and manufacturing expenses

(d) Add profit on total *costs* already incurred. An initial starting point *may* be to utilise the operating profit of the company. However, this methodology assumes the profit margin would be proportional to the *costs* incurred. In most circumstances there is rationale to assume profit margins which are not proportional to *costs* (see section 90).

60.11. When determining the *costs* already incurred, *valuers should* consider internally developed intangible assets that have contributed toward the completion effort.

70. Cost Approach

70.1. The primary method to value inventory is the replacement cost method. Raw materials inventory is typically valued using the current replacement cost method.

70.2. *Valuers must* comply with paras 60.2 and 60.3 of IVS 105 *Valuation Approaches and Methods* when determining whether to apply the cost approach to the *valuation* of inventory.

Current Replacement Cost Method

70.3. The current replacement cost method (CRCM) *may* provide a good indication of *market value* if inventory is readily replaceable in a wholesale or retail business (eg, raw materials inventory).

70.4. The *market value* of raw materials and other inventory *may* be similar to the net book value as of the valuation date but certain adjustments *should* be considered.

(a) The book value *may* need to be adjusted to FIFO basis.

(b) If raw material prices fluctuate and/or the inventory turnover is slow the book value *may* need to be adjusted for changes in market prices.

(c) The book value of raw materials *may* also be decreased to account for obsolete and defective goods.

(d) The book value *may* also need to be decreased for shrinkage, which is the difference between inventory listed in the accounting records and the actual inventory due to theft, damage, miscounting, incorrect units of measure, evaporation, etc.

(e) The book value *may* need to be increased for any *costs* incurred in connection with raw material preparation (eg, purchasing, storage and handling).

80. Special Considerations for Inventory

80.1. The following sections address a non-exhaustive list of topics relevant to the *valuation* of inventory.

(a) Identification of value-added processes and returns on intangible assets (section 90).

(b) Relationship to other acquired assets (section 100).

(c) Obsolete inventory – reserves (section 110).

(d) Unit of account (section 120)

90. Identification of Value-Added Processes and Returns on Intangible Assets

90.1. The *valuation* of inventory involves an allocation of profit between the profit earned pre-measurement date and the profit earned post-measurement date. In practice, profit earned *may* not be proportional to expenses. In most cases the risks assumed, value added, or intangibles contributed to the inventory pre-measurement date are not the same as those contributed post-measurement date.

90.2. *Valuers* typically *should* not simply allocate profit in proportion to disposition and manufacturing costs. This assumption can misallocate profit, as it presupposes that a company's production process earns profit on a pro-rata basis based on *costs* incurred. For manufacturers, this method is inappropriate if the *costs* of materials represent an initial outflow without significant efforts. Such an assumption also fails to recognise the contribution of internally-generated intangible assets with minimal associated costs.

90.3. *Valuers should* distinguish between value-added costs and those that are not value-added. The materials portion of COGS may not be a value-added cost because it does not contribute any of the profit to the inventory.

90.4. For a company that owns internally developed intangible assets that contribute to an increase in the level of profitability, the return on and of those intangible assets would be included in the total profit margin of the business. However, whether intangible assets are owned or licensed, the *market value* of the inventory *should* be the same.

90.5. The *valuer should* determine the extent to which the technology, trademarks, and customer relationships support the manufacturing and distribution processes and whether the returns are applicable to the entire base of revenue. If the intangible asset has been utilised to create the inventory (eg, a manufacturing process intangible), then the *value* of the inventory would be increased. Conversely, if the intangible asset is expected to be utilised in the future, at the time of disposal, the *value* of the inventory would be decreased.

90.6. For marketing intangibles, the determination of whether the intangible is an attribute of the inventory *may* be difficult. To assist with the determination, the *valuer may* consider how the inventory would be marketed by a market *participant* to its customers – pull vs push model. A push model requires significant disposal efforts for inventory and is less reliant on marketing intangibles, while a pull model depends on strong brand development and recognition to pull customers to the product.

90.7. A non-exhaustive list of other considerations for evaluating when intangible assets are contributed *may* include the amount of marketing spend, whether products are sold through a distributor, level of attrition for customer relationships, and any legal rights associated with the intangible assets.

90.8. In some cases, the intangible asset may consist of several elements that contribute to various aspects of the value creation, such as a pharmaceutical product intangible asset that is comprised of technology and trade name. This requires an assessment of how the overall profit related to each element of the intangible asset *should* be apportioned to manufacturing the inventory versus in the disposal effort.

90.9. Similarly, although a single intangible asset may only contribute to either the manufacturing or disposal effort, it is possible for a portion of the intangible to be

contributed pre-measurement date and a portion contributed post-measurement date. For example, when assessing the contribution of symbolic IP for finished goods, although the product bears the respective branding associated with the symbolic IP, the related right to sell the branded product *may* not be conveyed with the transfer of inventory. As such, it *may* be appropriate to consider such rights in the *costs* of disposal.

100. Relationship to Other Acquired Assets

100.1. The *valuer should* maintain consistency, as appropriate, between assumptions used in the inventory valuation relative to *valuation* of other *assets* or liabilities.

110. Obsolete Inventory Reserves

110.1. The *valuer should* account for obsolete inventory reserve balances. The inventory reserve balances *should* be applied to the inventory in which the reserve applies, rather than netted against the entire inventory balance.

110.2. Typically, the obsolete inventory adjusted for the inventory reserve would not be valued as it has been adjusted to net realisable value. However, the *valuer may* need to consider further write-downs if *market value* is lower than net realisable value.

120. Unit of Account

120.1. For *purposes* of inventory valuation, it is often appropriate to assume inventory is one homogenous set of *assets*. However, it is possible for the profit margins, risk, and intangible asset contributions to vary by product or product group.

120.2. If the profit margins, risk, and intangible asset contributions vary by product or product group, and the relative mix of inventory being valued does not match the assumed sales mix used to develop the assumptions for the *valuation*, the *valuer should* assess the different groups of inventory separately.

IVS 400-Real Property Interests

Para 20. Introduction

20.1. Property interests are normally defined by state or the law of individual *jurisdictions* and are often regulated by national or local legislation. In some instances, legitimate individual, communal/community and/or collective rights over land and buildings are held in an informal, traditional, undocumented and unregistered manner ~~outside of a modern land administration and governance system.~~ Before undertaking a *valuation* of a real property interest, a *valuer must* understand the relevant legal framework that affects the interest being valued.

20.2. A real property interest is a right of ownership, control, use or occupation of land and buildings. A real property interest includes informal tenure rights for communal/community and or collective or tribal land and urban/rural informal settlements or transition economies, which can take the form of possession, occupation and rights to use.

20.6. To comply with the requirements to state the extent of the investigation and the nature and source of the information to be relied upon in IVS 101 Scope of Work, para 20.3.(j) and IVS 102 Investigations and Compliance, the following matters ~~must~~ should be considered:

(a) the evidence, if available, required to verify the real property interest and any relevant related interests,

(b) the extent of any inspection,

(c) responsibility for information on the site area, site characteristics and ~~any~~ building floor areas,

(d) responsibility for confirming the specification and condition of any building,

(e) the extent of investigation into the nature, specification and adequacy of services,

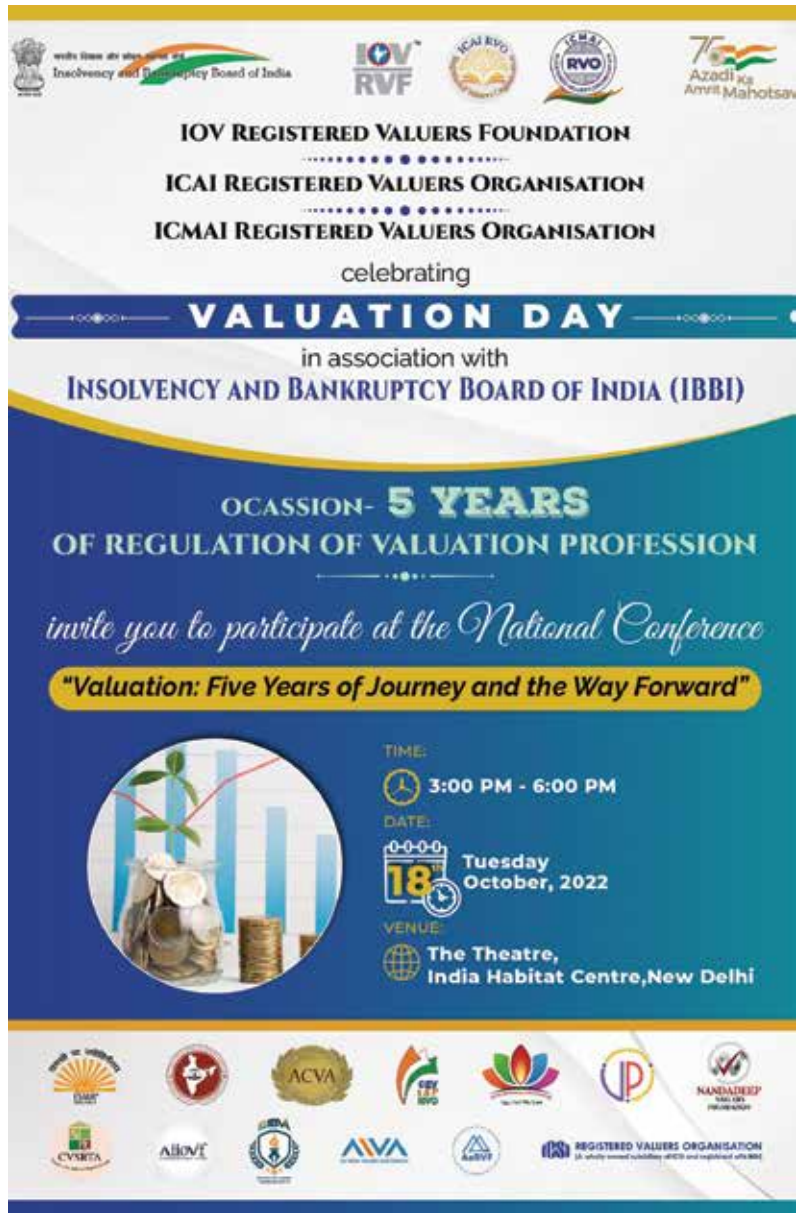
(f) the existence of any information on ground conditions and ~~foundation~~ soil conditions,

(g) responsibility for the identification of actual or potential environmental factors ~~risks~~,

(h) legal permissions or restrictions on the use of the property and any buildings, as well as any expected

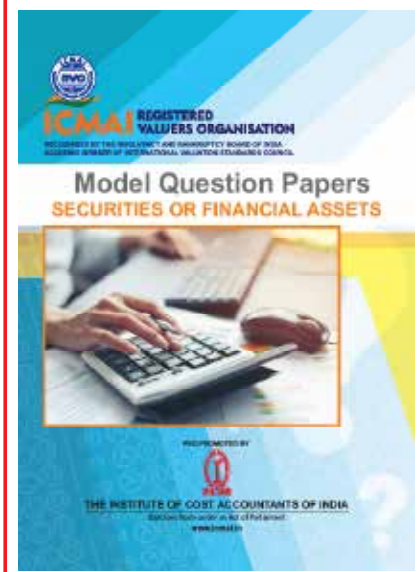
or potential changes to legal permissions and restrictions.

VALUATION DAY ON 18th OCTOBER 2022

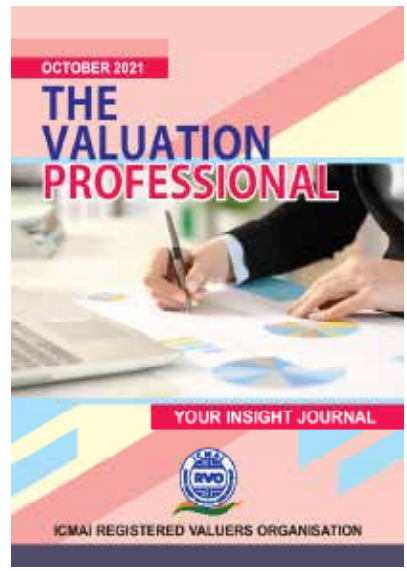



India Habitat Centre, New
GUEST OF HONOUR
SPECIAL ADDRESS
Dr. S. K. Gupta

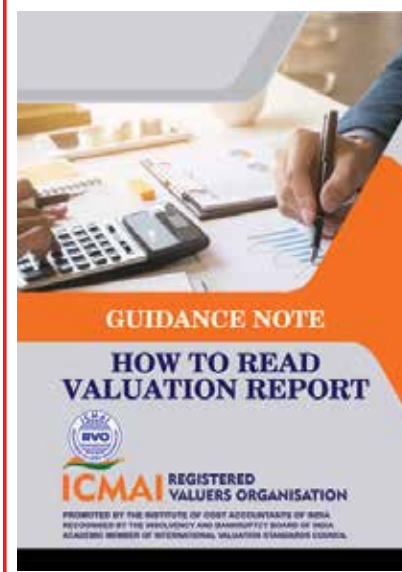
PUBLICATIONS



Model Question Papers
Securities or Financial Assets

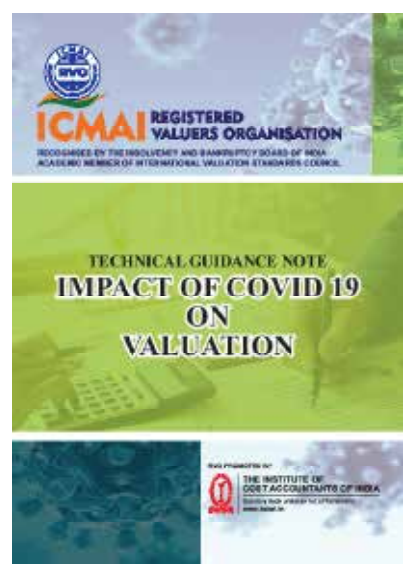


The Valuation Professional

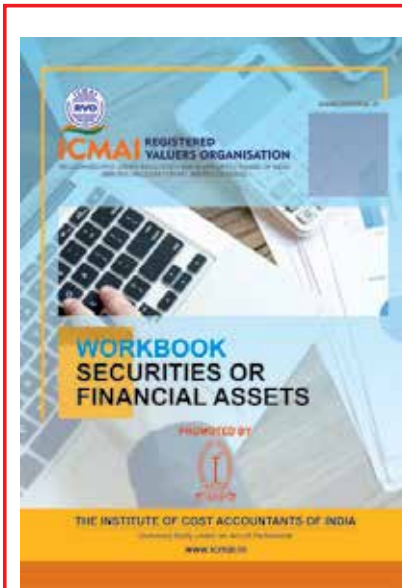


Guidance Note
How to Read Valuation Report

Technical Guidance Note
Creation Maintenance and Retention of Valuation Working Papers



Technical Guidence Note
Impact of Covid 19
on Valuation

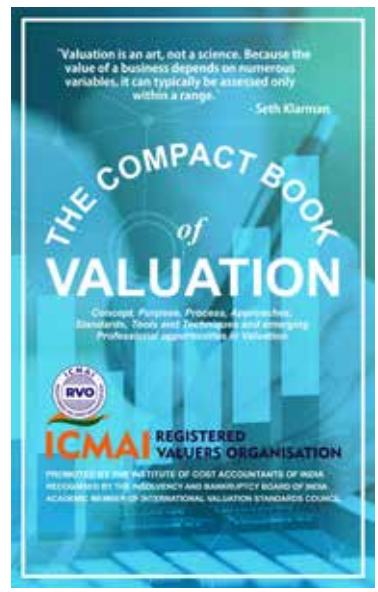


Work Book
Securities or Financial Assets

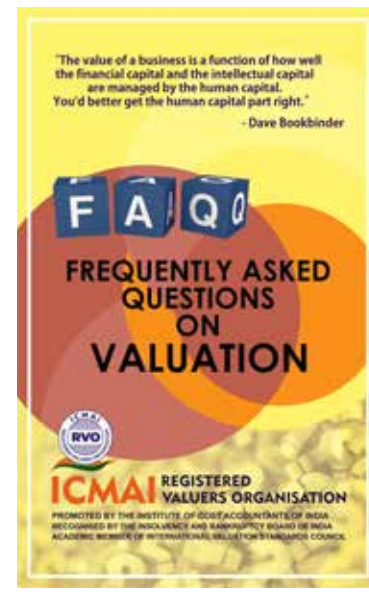
Link:- https://www.rvoicmai.in/publication/

PUBLICATIONS

International Valuation Standards

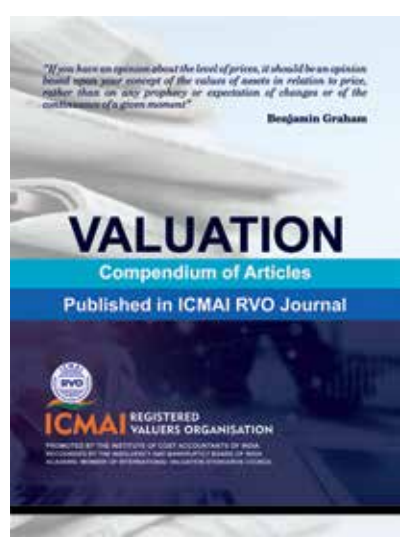


The Compact Book of Valuation

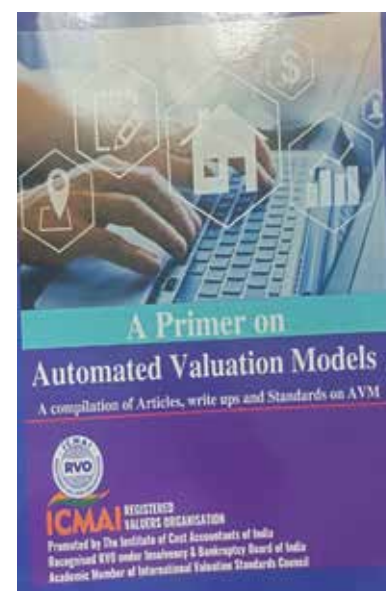


FAQ
Frequently Asked Questions on Valuation

Compendium of Perspective Papers



Compendium of Articles



Automated Valuation Models

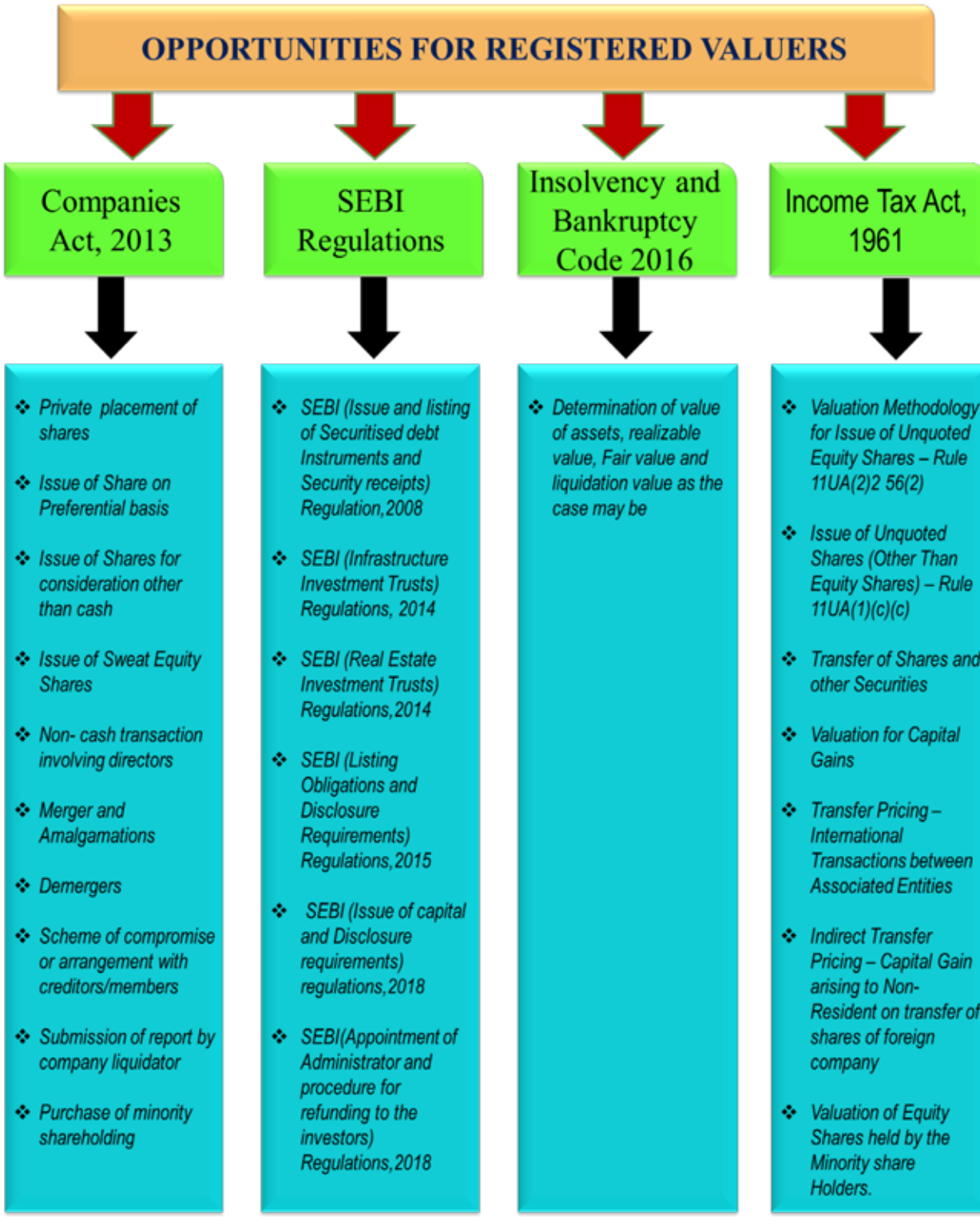
Link:- https://www.rvoicmai.in/publication/

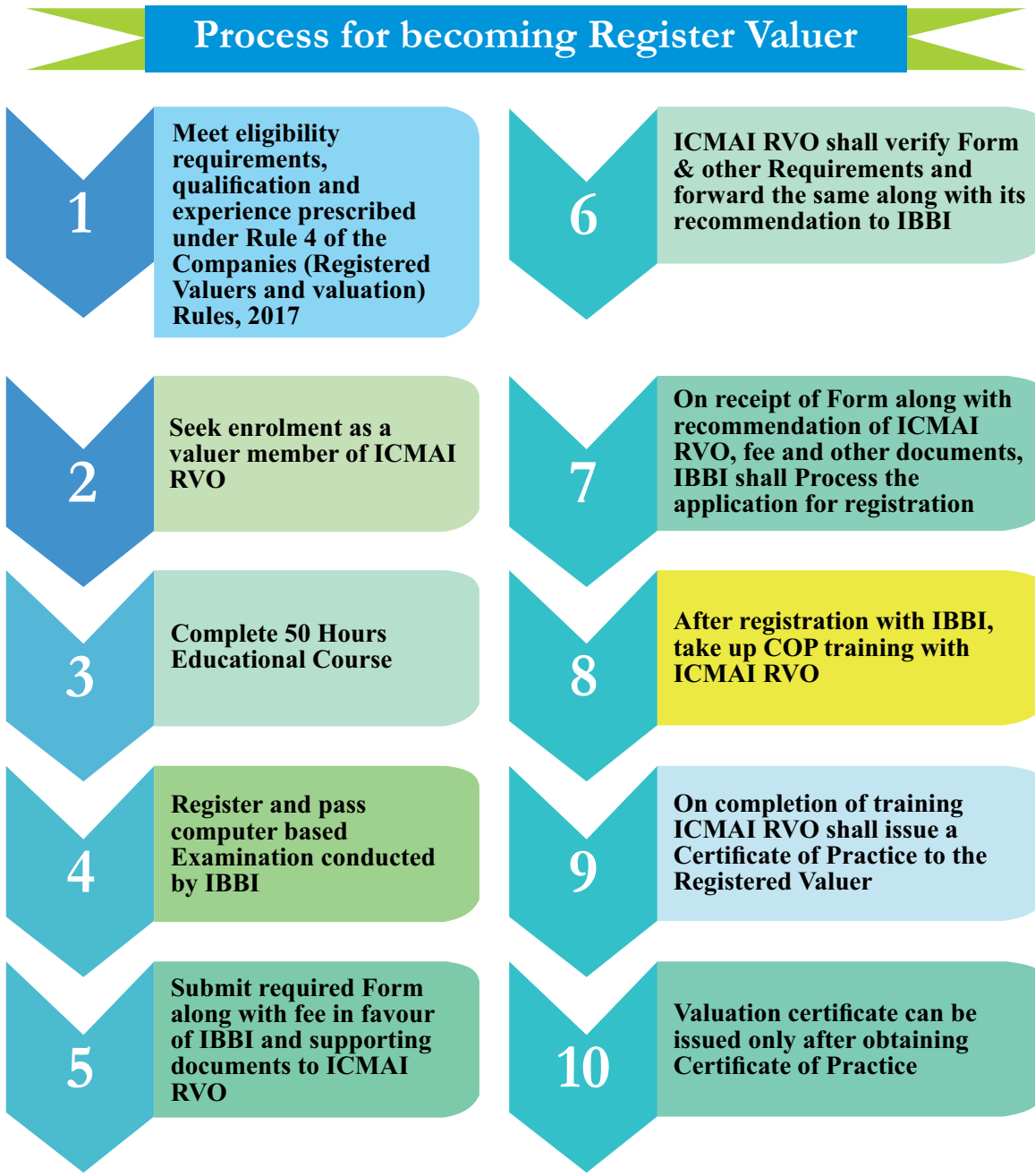
Ambassadors - ICMAI RVO

Sl. No.	Name of RV	E-mail	Place	Asset Class	CA/CMA/ CS/ MBA/ Engineer
1	AJEESH R S NAIR	ajeeshrsnair@gmail.com	THIRUVANANTHAPURAM , KERELA	Securities or Financial Assets	CMA
2	ALEKHA CHARAN ROUT	acrout.carv@gmail.com	PUNE , MAHARASHTRA	Securities or Financial Assets	MBA
3	AMISH SHASHIKANT MEHTA	mehta_amish@hotmail.com	MUMBAI , MAHARASHTRA	Securities or Financial Assets	CMA,CA
4	AMIT BHATIA	caamit02@hotmail.com	YAMUNANAGAR , HARYANA	Securities or Financial Assets	CA
5	AMIT BINDLISH	amitbindlish@gmail.com	GURUGRAM , HARYANA	Securities or Financial Assets	CMA
6	ANIL XAVIER	anilxavier.v@gmail.com	ERNAKULAM , KERALA	Securities or Financial Assets	CMA,CS
7	ANKIT GUPTA	gupta.ankit2002@gmail.com	MUKERIAN , PUNJAB	Securities or Financial Assets	CMA
8	ASUTOSH DEBATA	ashutosh_debata@rediffmail.com	BHUBANESWAR , ORISSA	Securities or Financial Assets	CMA
9	BABU LAL GURJAR	cmablgurjar@gmail.com	JAIPUR , RAJASTHAN	Securities or Financial Assets	CMA
10	DEBAYAN PATRA	patra.debayan@gmail.com	KOLKATA , WEST BENGAL	Securities or Financial Assets	CA
11	DEEPANKAR SHARMA	charteredengineerbaddi@gmail.com	SOLAN , HIMACHAL PRADESH	Plant and Machinery	Engineer
12	HARIKRISHNA R	harikrishnacvl@gmail.com	BANGALORE , KARNATAKA	Land and Building	Engineer
13	JATIN MEHRA	jatinmehraassociates@gmail.com	AMRITSAR , PUNJAB	Securities or Financial Assets	CA
14	KRIESHAN GROVERR	ca.krieshan@gmail.com	RAJPURA , PUNJAB	Securities or Financial Assets	CMA,CA,CS
15	MAHESH BANSAL	emmbee.consulting@gmail.com	LUDHIANA , PUNJAB	Securities or Financial Assets	CA
16	MANEESH SRIVASTAVA	MANEESHCS1@gmail.com	NOIDA , UTTAR PRADESH	Securities or Financial Assets	CS
17	MANISHA SANJAY AGRAWAL	m_taiyal@yahoo.com	NAGPUR , MAHARASHTRA	Securities or Financial Assets	CMA
18	MOHAMED ABUBECKER SIDHICK M	masidhick.co@gmail.com	PALANI , TAMILNADU	Securities or Financial Assets	CMA,CA
19	KAPIL MAHESHWARI	maheshwarikapil@gmail.com	GHAZIABAD , UTTAR PRADESH	Securities or Financial Assets	MBA
20	KRISHNA KUMAR MITTAL	mittalkrishna53@gmail.com	AGRA , UTTAR PRADESH	Securities or Financial Assets	CA
21	NATARAJA NANJUNDAIAH	nnataraja491@gmail.com	BANGALORE , KARNATAKA	Securities or Financial Assets	CMA
22	NAVIN KHANDELWAL	navink25@yahoo.com	INDORE , MADHYA PRADESH	Securities or Financial Assets	CA
23	NITIN GOYAL	canitin94@gmail.com	RAIPUR , CHHATTISGARH	Securities or Financial Assets	CMA,CA,CS
24	PADMAKUMAR ACHUTHAN NAMBOOTHIRI	cma.padmakumar@gmail.com	KOTTAYAM , KERALA	Securities or Financial Assets	CMA
25	PRANAB KUMAR CHAKRABARTY	pranabchakrabartypkc@yahoo.com	HOWRAH , WEST BENGAL	Securities or Financial Assets	CMA

Ambassadors-ICMAI RVO

Sl. No.	Name of RV	E-mail	Place	Asset Class	CA/ CMA/ CS/ MBA/ Engineer
26	PRIYANKA SATYNARAYAN MUNDRA	manihar8priyanka@gmail.com	SURAT , GUJARAT	Securities or Financial Assets	CMA,CA
27	RAMAKRISHNA KURRA	kurraramakrishna@gmail.com	GUNTUR , ANDHRA PRADESH	Securities or Financial Assets	CMA
28	SAURABH DASOT	skd.manu@gmail.com	KOTA , RAJASTHAN	Land and Building	Engineer
29	SHAILENDRA KUMAR PALIWAL	cmashailendra@hotmail.com	LUCKNOW , UTTAR PRADESH	Securities or Financial Assets	CMA
30	SHRIKANT RAJMOGALI IPPALPALLI	shrikant.cma@gmail.com	SOLAPUR , MAHARASHTRA	Securities or Financial Assets	CMA
31	SIDDHARTHA MUKHOPADHYAY	saptarshi2307@gmail.com	BILASPUR , CHHATTISGARH	Securities or Financial Assets	CMA
32	SONY AHUJA	cssonyahuja@gmail.com	COIMBATORE , TAMILNADU	Securities or Financial Assets	CS
33	SURESH KUMAR JAIN	sureshkumarjain.rv@gmail.com	VIJAYAWADA , ANDHRA PRADESH	Securities or Financial Assets	CA
34	SURESH KUMAR JOHAR	johar_128@yahoo.com	AHMEDABAD , GUJARAT	Securities or Financial Assets	CMA,CA,CS
35	VENKATA NAGA LAVANYA KANDALA	31069lavanya@icmaim.in	HYDERABAD , TELANGANA	Securities or Financial Assets	CMA
36	VISHESH UNNI RAGHUNATHAN	visheshunni@gmail.com	CHENNAI , TAMILNADU	Securities or Financial Assets	CMA,CA
37	VISHNU UPADHYAY	vishnu.upadhyay@gmail.com	FARIDABAD , HARYANA	Securities or Financial Assets	CMA
38	YOGESH PRABHUDAS PATHAK	yogpath99@gmail.com	AHMEDABAD , GUJARAT	Land and Building	Engineer


OPPORTUNITIES FOR REGISTERED VALUERS
Companies Act, 2013
SEBI Regulations
Insolvency and Bankruptcy Code 2016
Income Tax Act, 1961
Private placement of shares
Issue of Share on Preferential basis
Issue of Shares for consideration other than cash
Issue of Sweat Equity Shares
Non- cash transaction involving directors
Merger and Amalgamations
Demergers
Scheme of compromise or arrangement with creditors/members
Submission of report by company liquidator
Purchase of minority shareholding
SEBI (Issue and listing of Securitised debt Instruments and Security receipts) Regulation,2008
SEBI (Infrastructure Investment Trusts) Regulations, 2014
SEBI (Real Estate Investment Trusts) Regulations,2014
SEBI (Listing Obligations and Disclosure Requirements) Regulations,2015
SEBI (Issue of capital and Disclosure requirements) regulations,2018
SEBI(Appointment of Administrator and procedure for refunding to the investors) Regulations,2018
Determination of value of assets, realizable value, Fair value and liquidation value as the case may be
Valuation Methodology for Issue of Unquoted Equity Shares – Rule 11UA(2)2 56(2)
Issue of Unquoted Shares (Other Than Equity Shares) – Rule 11UA(1)(c)(c)
Transfer of Shares and other Securities
Valuation for Capital Gains
Transfer Pricing – International Transactions between Associated Entities
Indirect Transfer Pricing – Capital Gain arising to Non-Resident on transfer of shares of foreign company
Valuation of Equity Shares held by the Minority share Holders.


Process for becoming Register Valuer
1
Meet eligibility requirements, qualification and experience prescribed under Rule 4 of the Companies (Registered Valuers and valuation) Rules, 2017
2
Seek enrolment as a valuer member of ICMAI RVO
3
Complete 50 Hours Educational Course
4
Register and pass computer based Examination conducted by IBBI
5
Submit required Form along with fee in favour of IBBI and supporting documents to ICMAI RVO
6
ICMAI RVO shall verify Form & other Requirements and forward the same along with its recommendation to IBBI
7
On receipt of Form along with recommendation of ICMAI RVO, fee and other documents, IBBI shall Process the application for registration
8
After registration with IBBI, take up COP training with ICMAI RVO
9
On completion of training ICMAI RVO shall issue a Certificate of Practice to the Registered Valuer
10
Valuation certificate can be issued only after obtaining Certificate of Practice

EDUCATIONAL QUALIFICATION & EXPERIENCE

FOR 50 HOURS EDUCATIONAL COURSE

Asset Class	Eligibility/ Qualification	Experience in specified discipline.
Plant and Machinery	(I} Graduate in Mechanical, Electrical, Electronic and Communication, Electronic and Instrumentation, Production, Chemical, Textiles, Leather, Metallurgy, or Aeronautical Engineering, or Graduate in Valuation of Plant and Machinery or equivalent; (ii) Post Graduate on above courses.	(i) Five years (ii) Three years
Land and Building	(i) Graduate in Civil Engineering, Architecture, or Town Planning or equivalent; (ii) Post Graduate on above courses and also in valuation of land and building or Real Estate Valuation (a two-year full time post-graduation course).	(i) Five years (ii) Three years
Securities or Financial Assets	(i) Member of Institute of Chartered Accountants of India, Member of Institute of Company Secretaries of India, Member of the Institute of Cost Accountants of India, Master of Business Administration or Post Graduate Diploma in Business Management (specialisation in finance). (ii) Post Graduate in Finance	Three years
Any other asset class along with corresponding qualifications and experience in accordance with rule 4 as may be specified by the Central Government. *Note: The eligibility qualification means qualification obtained from a recognized Indian University or equivalent Institute whether in I ndia or abroad.".*		

PROCESS FOR IBBI EXAMINITION

a. The candidate may enroll for the examination on payment of the fee as prescribed by IBBI
b. Online examination with objective multiple-choice questions
c. The duration of the examination is 2 hours
d. Wrong answer attracts a negative mark of 25% of the assigned for the question
e. A candidate needs to secure 60% of marks for passing.

FORMAT AND FREQUENCY OF EXAMINATION

a. The examination is conducted online (computer-based in a proctored environment) with objective multiple-choice questions;
b. The examination centers are available at various locations across the country;
c. The examination is available on every working day;
d. A candidate may choose the time, the date and the Examination Centre of his choice for taking the Examination. For this purpose, he needs to enroll and register at https://certifications.nism.ac.in/nismaol/
e. A fee of Rs.1500 (One thousand five hundred rupees) is applicable on every enrolment;
f. The duration of the examination is 2 hours;
g. A candidate is required to answer all questions;
h. A wrong answer attracts a negative mark of 25% of the marks assigned for the question;
i. A candidate needs to secure 60 % of marks for passing;
j. A successful candidate is awarded a certificate by the Authority;
k. A candidate is issued a temporary mark sheet on submission of answer paper;
l. No workbook or study material is allowed or provided;
m. No electronic devices including mobile phones and smart watches are allowed; and
n. Use of only a non-memory-based calculator is permitted. Scientific Calculators (memory based or otherwise) are not allowed.

INSOLVENCY AND BANKRUPTCY BOARD OF INDIA

New Delhi, the 30th September, 2022

THE INSOLVENCY AND BANKRUPTCY BOARD OF INDIA (ONLINE DELIVERY OF EDUCATIONAL COURSE AND CONTINUING PROFESSIONAL EDUCATION BY INSOLVENCY PROFESSIONAL AGENCIES AND REGISTERED VALUERS ORGANISATIONS) (AMENDMENT) GUIDELINES, 2022

In exercise of powers conferred by section 196(1)(aa) of the Insolvency and Bankruptcy Code read with regulation 5(b) and clause (ba) of sub-regulation (2) of regulation 7 of the IBBI (Insolvency Professionals) Regulations, 2016 and clauses (a) and (e) of sub-rule (2) of rule 12 of the Companies (Registered Valuers and Valuation) Rules, 2017, the Insolvency and Bankruptcy Board of India hereby makes the following amendments to the Insolvency and Bankruptcy Board of India (Online Delivery of Educational Course and Continuing Professional Education by Insolvency Professional Agencies and Registered Valuers Organisations) Guidelines, 2020, namely:-

1. (1) These amendments may be called the Insolvency and Bankruptcy Board of India (Online Delivery of Educational Course and Continuing Professional Education by Insolvency Professional Agencies and Registered Valuers Organisations) (Amendment) Guidelines, 2022.

(2) It shall come into force with immediate effect.

2. In the Insolvency and Bankruptcy Board of India (Online Delivery of Educational Course and Continuing Professional Education by Insolvency Professional Agencies and Registered Valuers Organisations) Guidelines, 2020 (hereinafter referred to as the principal guidelines), in Clause 9, in sub-clause (d), for the digit '100', the digit '200' shall be substituted.

3. In the principal guidelines, for Clause 11, the following shall be substituted, namely:-

"11. **Validity**
The Guidelines shall remain in force till further orders."

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

PROMOTED BY: THE INSTITUTE OF COST ACCOUNTANTS OF INDIA

Registered Office

The Institute of Cost Accountants of India
4th Floor, CMA Bhawan 3, Institutional Area, Lodhi Road, New Delhi – 110003
www.rvoicmai.in

Contact us

Telephone No. 120 2975515,120 2975516
Mobile No: 94114-69499 (Manager); 94579-54906 (Program Coordinator)
Email: manager@rvoicmai.in, coordinator.delhi@rvoicmai.in