E-Notes

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Valuation Noise, Bias and Error Challenges

For a unbiased honest professional

Concept : understanding Cost, Price and Value

Cost is basically the aggregate monetary value of the inputs used in the production of the goods or delivery of services. Conversely. The cost can be defined as the total amount spent on the inputs like land, labour, capital, machinery, material, etc. with an aim of producing the product or supplying the services. It can be anything which adds to the expense of product or service manufactured or supplied by the firm. The basic elements of cost are: **Material, Labour and Overheads**.

Price is the amount to be paid, in order to get the product or service. Price is the consideration given in return for acquiring a good or service. In a commercial transaction, price refers to the amount charged by the seller from the buyer, in exchange for any product or service

Value of a product or service is the utility or worth of the product or service for an individual. Value can be described as the benefit derived by the customer from the product or service. In clearer terms, value is what a customer perceives the product or service is worth to them. The value is decided by the marketplace on the basis of the benefits received from the combination of features, or specifications, present in a particular product. The combination of features covers material or functional characteristics, product reliability, user-friendliness, appearance, customer support and technical assistance, etc.

VALUATION IS AN OPINION

Characteristics of Value

1 *Value of the same asset changes for different purposes.*

For example *: determination of market value of a building along with the land is huge different from the value for the same asset, if computed for the purpose of determination of insurance premium.*

2. It is sometimes Immeasurable in nature, because the value of the product is different for different persons.

For example: For a person suffering from eye problem ie myopia etc. spectacles are invaluable, but for a person with good eyesight, the value of spectacles would be zero.

3. Value varies from time to time.

For example: Generally, A newspaper has the value for the particular day only The value of a book for a student before the exams is greater in comparison to the value of the same book, after clearing the exam. It is most important to understand the value of an asset on a particular date may not be same on the earlier or later date.

Value of a product or service greatly depends on the supply of the product and the demand among the buyers.

4. Differs from one place to another.

For example: The value of a same size land with same frontage may fetch much higher value in metropolitan city than in suburb. It depends on supply and demand. The value of woollen clothes will be higher in cold areas, as compared to a desert area.

So many value definition and premise of value as per IVS, RICS, IFRS, OECD, USPAP, EVS etc. and last but not the least “Fair Value and Liquidation Value” as per IBC. Within all above mentioned items ie are under standards and IBC is the rule.

To understand the difference between **Rule and Standard**

The **Rule** is meant to reduce the scope of discretion for who uses this while standard grants the scope of discretion.

The **Rule** has an very important feature that reduces the role of judgment.

Example : If rule says the speed limit of vehicles on a particular road is 80km/hr. Someone, who crosses the limit may face certain amount of penalty if caught.

Or, may be setting the lower limit of age for voting – is **Rule**

Standard is different. When standards are followed, often valuers have to work to specify the meaning of open ended terms. So, often, valuers has to use the term 'reasonable' , 'feasible' , 'prudently'.

The standards, if set without specifying details may lead to noise, which can be controlled through aggregating the different value of the same asset.

In standard, it is suggested to drive within 80km/hr, that is the standard practice.

It is important to keep in mind that standards are not laws, regulations, or ethics. Laws state how something must be done. Legislators determine and enact laws which must be abided by. Regulations generally help implement the laws. Standards are a form of measurement for doing a particular type of work. Ethics are concerned with the way we conduct ourselves which in turn can affect how work is done. Ethical behavior is the ability to perform within standards without misleading others. One might even be able to perform the work according to the standard but complete the work unethically. Ethics or a code of conduct is the underlying foundation of standards. Without ethics there would be no standards… IVSC.

Where, the setting of rule is difficult the standard is set. Even in the constitution these have been set as standard. Example “Human rights are **standards** that recognize and protect the dignity of all human beings”, “freedom of speech”. A Government may set a standard on pollution level of a city relying on some experts’ opinion but, for vehicles rules on PUC are set. A rule might stop woman to be a military officer, Rule is much biased than standard. Standard can be said as guidline also.
Otherwise, only setting **standards** can produce more noise than setting **rules.**

Understanding NOISE, BIAS in judgments and error.

Noise and Bias, these two are contributors of error. Where Accuracy or tending towards the accuracy is the main goal, these two often produce error. Generally both contribute almost same amount in error.

Often, like all professionals, valuers also have to understand the noise and bias.
Also it must be noted, in case of error reduction, both also can contribute almost same.

Where data is grey mainly sourced from Noise and Bias
Understand NOISE and BIAS

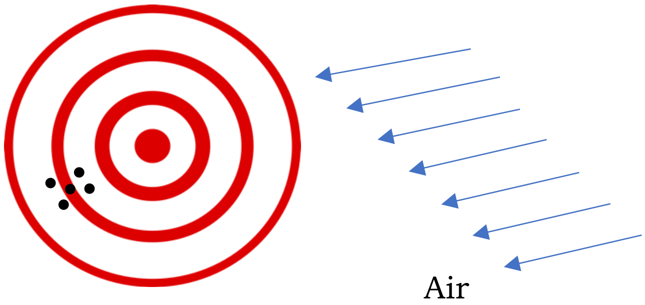

Figure 1 BIAS for air from right side

Figure 1 shows all the arrows thrown when air was from right side

Bias is a preference or inclination that precludes a valuer's impartiality, independence, or objectivity in an assignment**.**

Bias is **an irrational assumption or belief that affects the ability to make a decision based on facts and evidence**. Investors are as vulnerable as anyone to making decisions clouded by prejudices or biases. Smart investors avoid two big types of bias—emotional bias and cognitive bias.

Three types of bias can be distinguished: **information bias, selection bias, and confounding**. These three types of bias and their potential solutions are discussed using various examples.

Information bias is a type of error that occurs when key study variables are incorrectly measured or classified. Information bias can affect the findings of observational or experimental studies due to systematic differences in how data is obtained from various study groups.

Figure 2 NOISE

Figure 2 shows all the arrows were thrown in random.

Noise in Market : **all of the price/value data that distorts the actual picture and the real underlying trend**. Mostly small corrections may be made to combat the volatility

Any news about a company can also artificially inflate or reduce the market value. Trading can be made at this deviated value if noise traders decide to buy/sell the stocks at an abnormal rate.

Overreaction on good and bad news or predicted/forecast is what causes market noise also.

A noise measurement is **a method for identifying noise in valuer's decisions.** It may take to wait many days before to know the full outcomes of certain decisions.

Bias and Noise has significant contribution to the error.
"*Gauss proposed a rule for measuring the contribution of individual error to overall errors, which can be call as mean square error "*. Here we do not go deep in to this.

AVOID ERRORs
Challenges lie in the CHOICE avoiding Noise & Bias

1. **Choice of appropriate basis of valuation**

Market Value defined in IVS as

"Market Value is 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."

Here we can see that, above **Market Value** definition comes from a standard, but, below, the **Fair Value** comes from a code.

Fair Value defined in IBC

*"**Fair Value**" means the estimated realizable value of the assets of the corporate debtors, if they were to be exchanged on the insolvency commencement date between a willing buyer and a willing seller in an arm's length transaction after proper marketing wherein the parties had each acted knowledgeably, prudently and without compulsion.*

Orderly liquidation *as per IVS104 (premise of value)*

An orderly liquidation describes the value of a group of assets that could be realised in a liquidation sale, given a reasonable period of time to find a purchaser (or purchasers), with the seller being compelled to sell on an as-is, where-is basis.

Here we can see that, above ***Orderly liquidation*** definition comes from a standard, but, below, the ***Liquidation Value*** comes from a code.

Liquidation Value as IBC says

"Liquidation Value" *means the estimated realizable value of the assets of the corporate debtor, if the corporate debtor were to be liquidated on the insolvency commencement date.*

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For "Fair Value" and "Liquidation Value"

The date said here is a historical date and to that extent, it is expected from the valuer to collect input and information with reference to that date. Though a very difficult task, it may be possible for the valuer to identify willing buyer on historical date and ascertain the Fair Value. Now, the problem lies particularly in determining the Liquidation Value on a historic date unless the valuer gets a particular comparison.

To determine liquidation value, a valuer generally has to give corresponding **standard percent deduction** on the fair value as comparisons for liquidation value are not generally available. Though, "Fair Value" and "Liquidation Value" definitions come from code, and it should create less noise, as per our hypothesis, but, in practical these sometimes create the noisy areas, for the "historical dates" as mentioned above, which are questionable.

Rules can be placed to reduce the noise. It is seen that where the Rules are set noise has to be reduced severely. But, rule should be failproof.

2. Choice of appropriate approach and method of valuation

Valuers has to adopt the valuation approach and the valuation methods justifying its usefulness to fulfil valuation assignments.

Considerations

- The nature of the asset.
- Understanding the actual requirement.
- The purpose, intended use and context of the particular assignment .
- Any statutory or other mandatory requirements applicable in the jurisdiction concerned

Valuers are expected to follow the recognised best practice within the valuation discipline in which they practise.

In some jurisdictions and/or for certain purposes more than one approach may be expected or required in order to arrive at a balanced judgment. In this regard, the valuer must always be prepared to justify the approach(es) and method(s) adopted.

- *Although no formal, universally recognised definition of valuation approach exists, the term is generally used to mean the overall manner in which the* *valuation task is undertaken in order to determine the value of the particular asset or liability. The term valuation method is generally used to refer to the particular procedure, or technique, used to assess or calculate the result.*

- *Valuations are required of different interests in different types of assets for a range of different purposes. Given this diversity, the approach to the estimation of value in one case may well be inappropriate in another, let alone the actual method(s) or technique(s) used. …RICS*

  We can see here the scope of creating noise as alone , actual method may attract biasness.

3. where the data is grey and consists of Noise and Bias

- When the grey data
- which have lack of clarity, rationale
- border lines are smudged and Hazy
- in some sense it is mixed with true and false.
- It is a situation or an area of activity where definition is not readily conforming to a category or set of rules.
- Or it may not come from any standard source.
- An area of a subject or situation that is not clear or does not fit into a particular group and is therefore difficult to define or deal with. Ambiguous Area or the area in a valuation report, which cannot be interpreted properly may also called grey area.
- Steps to be taken to avoid non reliable data.
- Very cautious step to take for screening data

  There are models and techniques of practical application of grey data analysis.

  IT IS MOST PERTINENT TO MENTION HERE

Not to confuse between choice of data from grey area and established wrong data. An established wrong data cannot be considered as the data collected from grey area.

4. **The choice of impartial or unbiased opinion.**

   Valuers to be aware of, understand, and appropriately employ those recognized methods and techniques that are necessary to produce a credible opinion in valuation.

   - A Valuer must not commit a substantial error of omission or commission that significantly affects a valuation
   - and not render valuation services in a careless or negligent manner, such as by making a series of errors that, although individually might not significantly affect the results of an appraisal, in the aggregate affects the credibility of those results.

   A valuer must use sufficient care and due diligence to avoid errors that would significantly affect his or her opinions and conclusions. Diligence is required to identify and analyze the factors, conditions, data, and other information that would have a significant effect on the credibility of the assignment results.

   A valuer's mind should be the measuring instrument, a valuation opinion can be said as measurement where instrument is the human mind. Though accurate or perfect opinion should be the goal, perfection never be achieved through even in scientific measurement. There would be an always error as Noise and Bias contribute significantly in producing error.

   Other Challenges

   Often we see the errors in valuation opinion are significantly contributed by threats.

- **Influence threat** – the threat that a financial or other interest will inappropriately influence the professional valuer's judgement or behavior;

- **Previous involvement threat** – the threat that a professional valuer will not appropriately evaluate the results of a previous judgement made or service performed, or by another individual within the same firm or employing organisation, on which the valuer may rely when forming a judgement as part of providing a current service;
- **Conflict of clients threat** – the threat that two or more clients may have opposing or conflicting interests in the outcome of a valuation;
- **Advocacy threat** – the threat that a professional valuer will promote a client's or employer's position to the point that their objectivity is compromised.
- **Intimacy threat** – the threat that due to a long or close relationship with a client or employer, a professional valuer may be too sympathetic to their interests or too accepting of their work; and
- **Pressure Threat** – the threat that a professional valuer will be deterred from acting objectively because of actual or perceived pressures, including attempts to exercise undue influence over the valuation opinion

Measurement of error is well accepted in science and statistics and everywhere.

- Non understanding the issue to be addressed ie Bases of value and Purpose of Value
- Wrong assumption or
- Special assumption but without appropriateness

"Valuers must disclose significant assumptions and conditions specific to the assignment that may affect the assignment result S**ignificant and/or Material** Assessing significance and materiality require professional judgement. However, that judgement should be made in the following context: Aspects of a valuation (including inputs, assumptions, special assumptions, and methods and approaches applied) are considered to be significant/material if their application and/or impact on the valuation could reasonably be expected to influence the economic or other decisions of users of the valuation; and judgments about materiality are made in light of the overall valuation engagement and are affected by the size or nature of the subject asset. .”… IVS

- Using non appropriate Valuation approach
- Using non appropriate Valuation methods
- Using wrong Projections can lead to a wrong valuation.
- Always relying on Rules of Thumb.
- Comparable are being used just blindly.
- Mismatching the Adjustments with the Interests Being Valued.
- Failing to Investigate Mathematical Errors.
- Incompetency
- Intentional biased report generated
- Negligence
- Inadvertent wrong done
- Uncertainty risk in valuation process

Practical Challenges for CERTAINTY in valuation

Declaration of certainty in valuation

1. While Valuation uncertainty is the possibility that the estimated value may differ from the price that could be obtained in a transfer of the same asset or liability taking place at the same time under the same terms and within the same market environment. Particularly for tangibles, the same environment and terms are possible only in hypothetical scenario. If the gap between Date of Valuation (insolvency declaration date as per IBC) and Date of inspection is large, same market environment and terms becomes almost impossible. Minimization of the gap between date of inspection and date of Valuation will mitigate the valuation uncertainty for tangible assets.

- A *valuation opinion* is not a fact. Like all opinions, the certainty, involvement will definitely vary from case to case, **as in the degree of 'certainty'** – for example, for all the probability that the valuer's opinion on the *Market Value as per IVS or Fair Value asper IBC* should exactly coincide with the price achieved on an actual sale at the *valuation date or inspection date* , even if all the circumstances envisaged or covered by the definition of *market value as per IVS or Fair Value asper IBC* and the valuation *assumptions* were identical to the circumstances. On an actual sale, most *valuations* are subject to a degree of variations (that is, a difference in professional opinion). This is principle probably well-recognised by the various jurisdictions.
- Even all the conditions are same, date of inspections are same all the input data and information are same, two valuers have different opinions on the value of same asset. As per Rule, two valuers are being appointed for each asset class.
- It may also be prudent for the Valuer to draw the client's attention to the fact that values change over time, and
- that a valuation given on a particular date may not be valid on an earlier or later date.

2. If information not available properly or data is not reliable

   The valuer must make it clear if the valuation has been carried out without the information normally available when carrying out a valuation.

   The valuer must indicate in the Report if (where practicable) verification is needed on any information or Assumptions on which the valuation is based, or if information considered material has not been provided.

   If any such information or Assumption is material to the amount of the valuation, the valuer must make clear that this valuation should not be relied on, pending verification.

3. The Report must record that date and extent of the inspection, including reference to any part of the property to which access was not

possible. Inspection of the asset is a must for L&B and P&M. The valuer must make it clear if the valuation has been made without an opportunity to carry out an adequate inspection, explanation must be given in support of that. The valuer feels he/she may also make clear that this valuation should not be relied on, pending verification.

4. Abnormal Situation. (like Covid 19 Pandemic)

In case the valuer can not get entry in to the premises due to (not a question of adequacy of inspection) Covid 19 Pandemic. This situation can not be compared with normal situation where valuer is unable to see a part of the property, as this is a Pandemic Situation and the area falls under a containment zone, it is already more than a year mankind is facing such unprecedent problem. Government has invoked *Epidemic* Diseases *Act. The challenges lying there apart from the worries of catching this dreadful disease, the most of the states has declared curfew and lockdown and practically inaccessible.*

A client may have a legitimate need to know about current fair value and prospective opinion of value. A valuer may guess the value of an asset in short future, but that should be legally acceptable, economically viable and technically sound. The special assumption declared by the valuer must have such disclosure.

As a special case, departure from IVS can be considered, if IVS suggests a particular method but valuer feels that method/approach (IVS Suggested) will not lead to the actual value.

Result orientation for a successful Valuer

1. **Valuer should see how closely their opinion on value matches with the verifiable outcome.** That means, a true professional should take care to see how the value opinion made by the valuer is close to the sell even the job is over or, resolution process has succeeded.
2. **Unacceptable Conditions**

In case of the valuer receives an Unacceptable request

Specifically, an assignment condition is unacceptable when it:

Unacceptable Conditions Certain types of conditions are unacceptable in any assignment because performing an assignment under such conditions violates the standards.

- Specifically, an assignment condition is unacceptable when it precludes a valuer's impartiality, because such a condition destroys the objectivity and independence required for the development and communication of credible results.

- Destroys an valuer's impartiality, because such a condition breaks the objectivity and independence required for the development and resulting in to a wrong value;
- Limits the scope of work. It may lead to a wrong if the scope of work is limited to such a degree that the assignment results are not credible.;
- Limits the content of a final report in such a manner that results in the report be misleading."

A valuer must decline if a request comes in some ways any of the above three.

a)How to Deal With Unacceptable Requests

- Better understand the potential client's real needs
- Educate the client about valuation practice and explain other aspects of valuation.

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