

A red 3D dollar sign stands on a calculator. To its right, a small white house with a red roof sits on a calculator key. The background is a blurred image of a calculator keypad with various numbers and symbols.

## Applicability and Decision Usefulness of Fair Value Accounting in Measuring Non-Current Assets

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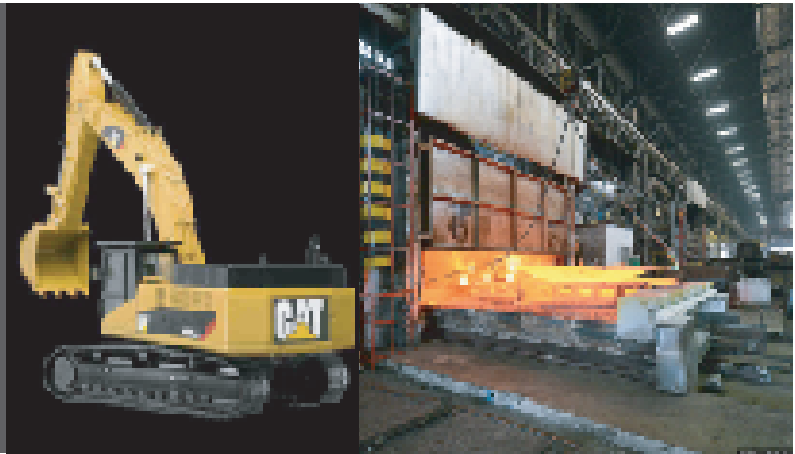
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### Abstract

This paper analytically examines the applicability of Fair Value Accounting (FVA) in measuring non-current assets. While doing so, FVA has been compared with historical cost accounting. In this paper, the decision usefulness of fair value accounting is measured in terms of understandability, relevance, reliability, comparability and consistency. For this purpose, t-test and Wilcoxon Rank Coefficient test has been performed to compare the perceptions of users (academics and professionals), while users perception regarding FVA was measured in the scale of agreed and disagreed. The result shows that, both academics and professionals consider Fair Value Accounting very relevant, comparable and consistent. There was a mixed opinion regarding understandability, and both groups show negative opinion regarding reliability of FVA.

**Keywords:** Fair value measurement, Historical cost, Non-current assets, Decision usefulness, etc.

## property plant equipment



### 1. Introduction:

Fair value accounting has been one of the most controversial accounting subjects. The recent global financial crisis highlights the disparity between the views of its supporters, who see it as panacea, and critics who consider it as Pandora's Box. The research on FVA with the mixed findings, also failed to yield a conclusive outcome (Song X, 2013). On the other hand, As the business environment is becoming more and more volatile in the recent years, the market value of financial and non financial assets frequently differ from its cost. Historical cost does not consider the effect of price increase and thus leads to regular under valuation of items of financial statements. So, subsequent to acquisition cost price becomes inaccurate and inappropriate for decision making, especially in the period of inflation. As a result, recently there has been a move towards considering financial statement items at their fair value. Financial Accounting Standards Board and International Accounting Standards Board permit either system.

Fair value is a current market-based hypothetical value. Fair value accounting is a system where assets are measured and recorded at their market value. According to IAS 32, fair value is the "amount for which an asset could be exchanged, or a liability settled, between knowledgeable willing parties in an arm's length transaction". In more technical terms, SFAS 157 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".

As we know, the central aim of financial reporting is to portray the underlying economic position of the company and faithfully reflect the genuine economic fluctuation of the business cycle. The major two groups of users of financial statements are- Investors (provider of capital) and lenders (provider of loan) and all other users always seek relevant and comparable information, which helps them to make informed decision. The fair value accounting measures financial statements' item in most recent value and reflects the true picture of the company and thus provides most relevant as well as comparable information. (Lefebvre et al. 2009).

Simply stated, fair value accounting represents the revaluation of assets and liabilities to market prices on a regular basis. It primarily applies to financial assets and liabilities however; three major groups of non-financial assets - property, plant and equipment, investment property, and intangible assets - are also subject to fair value measurement under certain circumstances. This paper is going to examine the applicability of Fair Value Accounting in measuring Property, Plant & Equipment (PPE) in respect of decision usefulness. On the other hand, the paper is a comparative analysis between FVA and historical cost accounting. The result shows that, the both groups believe FVA increases relevance, comparability and consistency of financial information for the decision makers. But it does not help to increase the reliability of information, as fair value as a market value is very volatile and reduces verifiability of financial information. While neither fair value accounting nor its main alternative - historical cost - are free from shortcoming, the arguments presented herein intend to show fair value accounting in a positive light - having the distinct advantage of being able to best reflect the reality of current financial and economic conditions.

## 2. Literature Review:

### Understandability:

According to IASB's conceptual framework, understandability is an essential quality of the information provided in the financial statements is that it is readily understandable by users. For this purpose, users are assumed to have a reasonable knowledge of business and economic activities and accounting and a willingness to study the information with reasonable diligence.

#### **Statement: 1 Fair value accounting is more understandable to users.**

Understandability is a user-specific quality, so, as historical cost accounting has evidence of the value of the price, it is more understandable to the users. The accounting system based on historical cost is widely accepted by accountants due to its objective nature, as it is supported by transactions that have already been completed, and it's generally easily understandable to its users. (Ristea M., 2003).

But, cost, acquisition price does not reflect changes in price with the changes in market condition. So, in many cases users find it difficult to determine the reason where market value of an asset significantly deviates from the cost.

So, fair value accounting increases understandability of accounting information, accordingly we assign point 1 in this statement.

### Relevance:

According to IASB, "to be useful information must be relevant to the decision making needs of the users. Information has the quality of relevance, if it influences the economic decisions of users by helping them evaluate past, present or future events or confirming or correcting their past evaluations. The relevant information must have three primary characteristics- predictive value, feedback value and timeliness."

#### **Statement: 2 Fair value accounting increases predictive value of information than cost.**

According to SFAC no. 2, predictive value is defined as "the quality of information that helps users to increase the likelihood of correctly forecasting the outcome of past and present events".

Several papers, Easton, Eddy and Haris (1993), Birth and Clinch (1998), Aboody, Birth and Kasznik (1999) found that the revaluation of property, plant and equipment improves forecasts of future earnings. Fair value provides more predictive value than historical cost in the situation, when the entity is no longer a going concern.

Hermann, Shahrokh and Thomas (2002), found that fair values are preferable to historical costs in estimating an acquisition price or in liquidating the assets of the firm.

So, 1 point is assigned to this statement.

#### **Statement: 3 Fair value provides more feedback value than cost.**

According to FASB's conceptual framework feedback value is defined as the "quality of information that enables users to confirm or correct prior expectations".

Feed back value supports fair value accounting because fair value changes over time, thus it always reflects current market price of non-current assets. So, fair value has the ability to provide feedback value to users.

On the other hand, under historical cost accounting, value of assets does not change over time, so, it provides limited feedback value subsequent to acquisition. Under historical cost accounting, book value of assets decreases while market value of assets may increase.

So, it is appropriate to assign point 1 on this statement.

**Statement: 4 Fair value accounting provides timely information than historical cost.**

"Timeliness means having information available to decision makers before it loses its capacity to influence decisions" (IASB, 2008). "Timeliness refers to the time it takes to reveal the information and it is related to decision makers in general".

Fair value accounting provides timely information about property, plant and equipment to creditors, investors and other users of financial statements. Investors need current value of assets and liabilities. Creditors, when using PPE as security for a loan, generally require current appraisal to determine the fair value of assets to be used as collateral. (Herrmann, Shahrokh and Thomas, 2002).

On the other hand, subsequent to acquisition, historical cost accounting does not provide current market value of non-current assets. Besides this, in case of impairment, historical cost accounting system is a combination of cost and market value of assets.

So, Point 1 is assigned to this statement.

## Reliability:

To be useful information must be reliable. Information has the quality of reliability, when it is free of error and bias and can be depended upon by users to represent faithfully that which it either purports to represent or could reasonably be expected to represent (IASB).

**Statement: 5 Fair value provides verifiability.**

Historical cost is verifiable. Historical cost is a cost that is paid at the time of acquisition. So, the value is clearly verifiable against the proof. But, fair value as a market value does not have much verifiability, Sometimes, fair value is subject to interpretation and it is not possible to verify the market value against objective data.

But, according to Herrmann, Shahrokh and Thomas (2002), verifiability of cost price is in

subject to be challenged for some specific cases in reporting property, plant and equipment. For example- measuring self-constructed asset, reporting non- current asset at the time of business combination, reporting property, plant and equipment in subject to discontinued operations, for donated property.

Excluding these exceptions, historical cost accounting has more verifiability than fair value accounting.

So, it would be appropriate to assign point 0.

**Statement: 6 Fair value accounting increases neutrality of information.**

According to IASB (2009), to be reliable, the information contained in the financial statements must be neutral, that is, free from bias. Financial statements are not neutral if by the selection or presentation of information, they influence the making of a decision or judgment in order to achieve a predetermined result or outcome.

As fair value accounting includes market inputs, it is neutral. On the other hand, historical cost accounting for PPE introduces a distinct conservative bias. (Dietrich, Haris and Muller, 2000).

Point 1 is assigned in this statement.

**Statement: 7 Fair value ensures more faithful representation than cost.**

To be reliable, information must represent faithfully the transactions and other events it purports to represent or could reasonably be expected to represent. (IASB, 2009).

Historical costs do not provide faithful representation of asset value, when the market rate of depreciation (or appreciation) differs materially over time from the book rate of depreciation. On the other hand, Historical cost earnings can be manipulated also. (Herrmann, Shahrokh and Thomas, 2002).

Based on the above discussion, 1 point is assigned.

## Comparability and Consistency:

### Statement: 8 FVA increases comparability of accounting information than cost.

"Comparability is defined as the quality of information that enables users to identify similarities and differences between two sets of economic phenomena." (IASB, 2008:39).

Under historical cost accounting, assets purchased at different times are measured and recorded at different value. On the other hand, historical cost does not consider asset appreciation that also hampers comparability of accounting information. On the other hand, FVA allows revaluation of assets that helps to compare two identical assets purchased at different times.

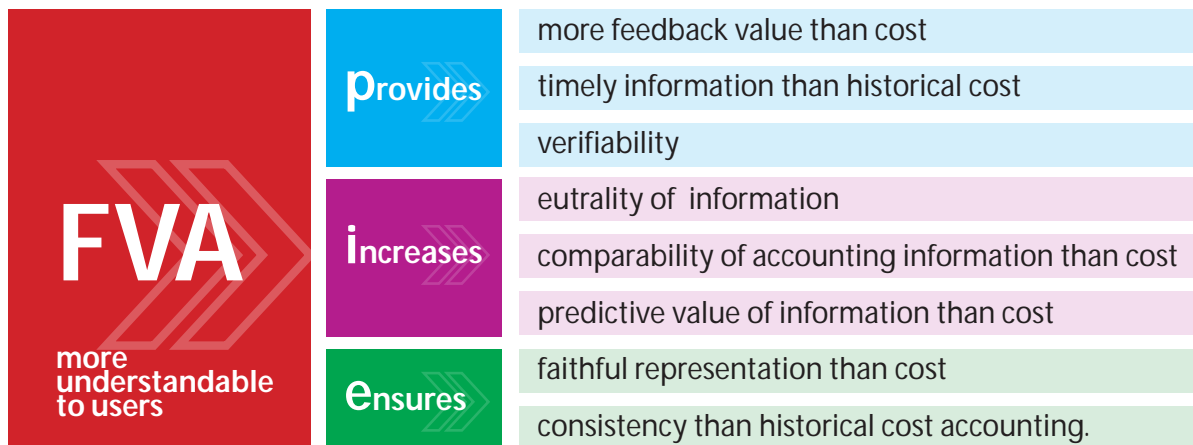
So, it is appropriate to assign 1 point.

### Statement: 9 FVA ensures consistency than historical cost accounting.

"Consistency refers to the use of the same accounting policies and procedures, either from period to period within an entity or in a single period across entities" (IASB, 2008:39).

FVA applies same valuation method all the time, including the time of impairment. On the other hand, under historical cost accounting, book value less depreciation and impairment is a combination of different valuation methods.

So, it is appropriate to assign 1 point.



## 3. Objectives:

The main objective of this paper is to analytically examine the applicability and decision usefulness of FVA in measuring Property, Plant & Equipment using Qualitative Characteristics of Accounting Information. On the other hand, the article is also going to determine the difference in perceptions between two major groups (academics and professionals) of users of financial information regarding FVA.

## 4. Research Method of the study:

To fulfill the objective of this study, total 50 participants were selected purposively. Among these, 25 participants were from renowned academicians and 25 participants were from accounting professionals. This study has been based on both primary and secondary data. Primary data were obtained through structured questionnaire. Total 9 questions under the head of 5 qualitative characteristics of accounting information (Understandability, Relevance, Reliability, Comparability & Consistency) were incorporated in survey questionnaire, where, participants has to answer in two ranking scale 1 for agreed, 0 for disagreed. Thus, perception index for 2 groups (academics and professionals) has been constructed.

The formula is:

$$\text{Perception Index} = \frac{\sum_{i=1}^{n_j} X_{ij}}{n_j}$$

Where,

Perception Index for  $i^{\text{th}}$  person

$n_i$  = Number of items expected for  $i^{\text{th}}$  person, where  $n \geq 5$

$X_{ij}$  = 1, if person agreed  $j^{\text{th}}$  item, otherwise 0

Now you can compare the perception index of both academic and non-academic (professional) people.

To do this comparison, t-test and Wilcoxon Rank Coefficient test has been performed. Besides that, various local and international journals, International Accounting Standards (IASs) were reviewed to complete this study.

## 5. Data Analysis & Findings

In the following table shows the perceptions of academics, 25 academics were denoted by alphabet A to Y.

**Table: I Perception Index for Academics**

Person	Understandability	Relevance	Reliability	Comparability	Consistency	Perception index
A	1	1	0	1	0	0.60
B	1	1	0.33	1	0	0.67
C	1	1	0.67	1	1	0.93
D	1	1	0	1	1	0.80
E	0	1	0.33	1	1	0.67
F	0	1	0.67	1	1	0.73
G	0	1	0.33	1	1	0.67
H	0	1	0	1	1	0.60
I	1	1	1	1	1	1.00
J	1	1	0.33	1	1	0.87
K	1	1	0	1	1	0.80
L	0	1	0.67	1	1	0.73
M	1	1	0.67	1	1	0.93
N	0	1	0	1	1	0.60
O	1	1	0.33	1	1	0.87
P	1	1	0.33	1	1	0.87
Q	0	1	0.67	0	1	0.53
R	1	1	0	0	1	0.60
S	1	1	0.33	1	1	0.87
T	0	1	0.33	1	1	0.67
U	0	1	0	1	1	0.60
V	1	1	0	0	1	0.60
W	0	1	0.33	1	1	0.67
X	1	1	0.67	1	1	0.93
Y	1	1	0.33	1	1	0.87

The mean value of the perception index for the academicians is 0.7472. The minimum value of the index for this group is 0.53 while the maximum is 1. The mode is 0.6 (with a frequency of 6). 52% of the academics has a perception index greater than 0.67. The one-sample t-test reveals that the sample mean is statistically significantly higher than 0.67 at 5% level of significance. According to the Wilcoxon signed-rank test, the median of the perception index for the academicians is not statistically significantly different from 0.7472, the mean value of the index for this group.

Following table shows the perceptions of professionals, 25 professionals were denoted by alphabet A to Y.

**Table: II Perception Index for Accounting professionals**

Person	Understandability	Relevance	Reliability	Comparability	Consistency	Perception index
A	0	1	0	1	0	0.40
B	1	1	1	1	1	1.00
C	1	1	0.67	1	1	0.93
D	0	1	0	0	0	0.20
E	1	1	0.33	1	1	0.87
F	1	1	1	1	1	1
G	1	1	0	1	0	0.60
H	0	1	0	1	1	0.60
I	1	1	0	1	1	0.80
J	1	1	0.33	1	1	0.87
K	0	1	0	1	1	0.60
L	0	1	0	0	0	0.20
M	1	1	0.67	1	1	0.93
N	1	1	0	1	1	0.80
O	0	1	0	1	1	0.60
P	0	1	0.33	1	1	0.67
Q	1	1	0	1	1	0.80
R	0	1	0	1	0	0.40
S	1	1	0.33	1	1	0.87
T	1	1	0	1	1	0.80
U	1	0	1	1	1	0.80
V	1	1	0	0	1	0.60
W	0	1	0	1	1	0.60
X	1	1	0	1	1	0.80
Y	0	1	0.33	1	1	0.67

The mean value of the perception index for the professionals is 0.6964. The minimum value of the perception index for this group is 0.2 and the maximum value is 1. The distribution is bimodal with modes at 0.6 and 0.8 (each with a frequency of 6). For this group too, 52% has a perception index greater than 0.67. Following the one-sample t-test, the sample mean is not statistically significantly different from 0.67 at the conventional levels of significance. Also, the Wilcoxon signed-rank test suggests that the median of the perception index for the professionals is not statistically significantly different from the mean value of the index for this group.


it is very imperative to find out the gap between two groups' opinions, preferences and objections regarding FVA, as well as minimize the gap to establish a uniform measure of Accounting

## 6. Implications of the Study:

The study compares the perceptions of two groups regarding FVA. The participants were asked to rank Fair Value Measure in respect of Qualitative Characteristics. As these groups are the major users of Accounting data, their preference of Fair value measure over its best alternative Historical Cost and differences in their preference can create misrepresentation of financial statement. This misinterpretation leads to unintentional distort like Earnings Management. In consequence, the shareholders will suffer in the long run. So it is very imperative to find out the gap between two groups' opinions, preferences and objections regarding FVA, as well as minimize the gap to establish a uniform measure of Accounting. Thus the study is exclusively significant for the disperse shareholders to protect their rights.

The results of the two independent samples t-test (which assumes a normally distributed interval dependent variable for the two independent groups) indicate that there is no statistically significant difference between the mean perception indexes for the academicians and the professionals ( $t = 0.9756$ ,  $p = 0.3341$ ). We also conducted the Wilcoxon-Mann-Whitney test which does not rely on the assumption that the dependent variable is a normally distributed interval variable but assumes that the variable is at least ordinal. The results suggest that there is no statistically significant difference between the underlying distributions of the perception indexes of the academicians and the professionals ( $z = 0.590$ ,  $p = 0.5554$ ). Also, Spearman correlation vindicates this finding. With a  $\rho = -0.0842$  and  $p = 0.5608$ , we cannot reject the null hypothesis. Hence the perception

## 7. Conclusion:

In the recent years there has been a move towards fair value accounting, as it is supported by users for its decision usefulness. But it possesses some strong flaws in the context of contemporary business environment. Because, under fair value accounting recording amounts of PPE are significantly differ from the acquisition price, thus it loses reliability, verifiability and introduces management bias. On the other hand, as fair value as a market value is volatile, sometimes it reduces both relevance and reliability. But, in spite of all these short comings, investors and all others users of financial statements rely strongly on FVA. It indicates the never-ending debate between relevance and reliability, where users of financial statements always prefer relevance. The results of the study are also not an exception at all. Except for verifiability, most academicians and professionals support fair value accounting. But, the survey was conducted exclusively for Bangladesh so; this study doesn't represent the view outside Bangladesh. 



## References:

- Aboody, D., M.E. Barth, R. Kasznik, 1999. Revaluation of fixed assets and future firm performance: Evidence from UK. *Journal of Accounting and Economics*. 26 (1-3).
- Barth, M.E., G., Clinch, 1998. Revalued Financial, Tangible and Intangible assets: Associations with share prices and non-market based value estimates. *Journal of Accounting Research* 36 (supplement): 199-233.
- Beest, F.V., Braam G., and Boelens, S., 2009. "Quality of Financial reporting: measuring qualitative characteristics." Nijmegen Center for Economics (NiCE), *Center for management research*, Radboud University Nijmegen.
- Dietrich, J. R., M.S., Harris and K.A., Muller, 2000. The reliability of investment property fair value estimates. *Journal of Accounting and Economics* 30(2): 125-158.
- Financial Accounting Standards Board, 1980. Qualitative characteristics of accounting information. Statement of Financial Accounting Concepts, No-2 Norwalk, Conn: FASB.
- Financial Accounting Standards Board (FASB). 2008. Fair value measurement. Statements of Financial Accounting Standards, No-157. FASB.
- Foster, J.M., and Upton, W.S. 2001. Measuring Fair Value. *Understanding the issue* 3 (series 1)
- Hermann, D., Saudagaran, S. M., and Thomas W. B. 2006. *Accounting Forum*, Vol:30, Pp:43-59.
- International Accounting Standards Board (IASB), 2006. Fair value measurements. *Discussion paper*. Available at <http://www.iasb.org>
- Lefebvre, R., Simonova, E., and Scarlet, M., 2009. "Fair value accounting: Road to be most travelled", *Issue in focus*, Certified General Accountants of Canada.
- Song, X., 2013. "Fair Value accounting and market conditions", *Global review of Accounting and finance*, Vol:4, No. 2, Pp:1-17.
- Penman, S.H.2007. Financial Reporting Quality: Is fair value plus or minus? *Accounting business research*, Special issue: International accounting policy forum. Pp: 33-44.