

The Impact of Fair Value Measurement on Financial Instrument of Firms in Nigeria

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ABSTRACT

This study assessed the impact of fair value measurement on financial instrument of firms in Nigeria. The objective of this study is to determine the extent to which fair value measurement can be applied with precision in the assessment of a firm's financial position and to determine the possibility of measurement errors in financial instrument measured on Fair Value. The method of data collection used in this study was field survey method involving the use of questionnaire administered to 188 samples. The method of data analysis was the Kruskal-Wallis rank sum test statistic. From the result of the analysis it was observed that the implementation of Fair Value measurements gives sufficient precision in assessing firm's financial position and earning potential since majority of the respondents agreed with a mean rank (mean rank=35.38) and a corresponding Chi-Square test statistic value of 33.27 and a p-value of 0.00 which falls on the rejection region of the hypothesis. Also observed was that the possibility of measurement errors in financial instrument measured on Fair Value basis was high since majority of the respondents agreed with a mean rank (mean rank= 24.50) and a corresponding Chi-Square test statistic value of 20.13 and a p-value of 0.00 which falls on the rejection region of the hypothesis. Hence, we conclude that Fair value is the best reflection of the expected future cash flow as it predicts the ability of the entity to take advantage of opportunities or to react to adverse situations. We recommend that for fair value accounting to be beneficial in Nigeria there should be vigorous policing and enforcement of punitive actions against insider abuse and other forms of market manipulation.

Keywords: Mean rank, errors, rejection, enforcement, implementation, survey

1 INTRODUCTION

Fair value accounting is a financial reporting approach in which companies are required or permitted to measure and report on an ongoing bases, certain assets/liabilities (generally financial instruments) at estimates of the prices they would receive if they were to sell the assets or would pay if they were to be relieved of the liabilities [1]. Fair value can be defined as the price that would be received to sell an asset or paid to transfer a liability in an orderly transaction between market participants at the measurement date.

[2], in his study raised the following issues to be challenges of implementation of fair value accounting in Nigeria: are corporate bonds and government bonds traded in active markets; are there expertise in development of valuation models; complex valuations required for measuring fair value of Foreign Exchange Contracts (FECs), Cross Currency Interest Rate swaps and other derivatives may be hard to find; will regulators allow fair value measurements for financial instruments of entities performing fiduciary duties. He concluded by suggesting that accounting standards and regulators should provide additional guidance targeting on how to determine when markets becomes inactive and determining whether a transaction or group of transactions is forced or distressed. [1], noted that under fair value accounting companies report losses when the fair value of their assets decreases or liabilities increase. Those losses are found to reduce companies reported equity and may also reduce companies reported net income. He added that fair value is an estimate of the price an entity would realize if it were to sell an asset, or price it would pay to re-

lieve a liability. Many financial instruments such as shares traded on an exchange, debt securities (U.S. Treasury bond), and derivatives are measure and reported at fair value. [3], in his review on the relevance and reliability of reporting fair value for loans and other financial instrument concluded that the evidence on fair value reporting supports its relevance. [4], in their study sought to identify the source of volatility in financial statement amount that is attributable to using fair values as the measurement basis. Their work revealed that volatility from period to period in financial statement amounts derives from several sources, the most obvious being the entity's activities during the period and changing economic condition that are reflected in the financial statements. They added that using fair value as a measurement basis in accounting is intended to reflect better economic volatility than any historical based amounts. [5], said that it has been argued that different conceptions of what is for an accounting estimate to be reliable underlie the fair value debate as it has taken shape in the last decade. The language of subjectivity and objectivity is unhelpful in characterizing what is at stake; it is more useful to focus on the question of how certain valuation technologies do or don't become institutionally accepted as producing facts. However, the shift in accounting principles will not come without some additional effort by all capital market participants, including preparers, auditors, regulators, and users of this information. It is realized that accounting and reporting based on fair value principles, in comparison with historical cost-based principles, require more extensive and detailed

analysis of the methods and assumptions used to determine values recognized in the financial statements. This in turn, will require market participants to redesign the current financial reporting model and to educate themselves in the application of these new principles. [6], in their contribution reported that much of the controversy about Fair Value Assets (FVA) results from confusion about what are new and different views about the purpose of FVA. In their view they argued that the debate on FVA dates back to several old accounting issues, like the trade-off between relevance and reliability, which has been debated for decades. They noted that it is important to recognize that accounting rules interact with other elements of institutional framework, which could give rise to unintended consequences. They stressed that manager's concerns on litigation could make a deviation from market prices less likely even when it would be appropriate. It is important to recognize that giving management more flexibility to deal with potential problems of FVA (e.g. in times of crisis) also opens the door for manipulation. Managers' could use deviation from allegedly depressed market values to avoid losses impairments. Judging from evidence in other areas in accounting (e.g. a loan and goodwill) as well as U.S. savings and loans (S & L) crisis, this concern they stressed should not be underestimated. Hence, standard setters and enforcement agencies face a delicate trade-off (e.g. between contagion effects and timely impairment). According to [7], he noted that the fundamental case in favour of fair value accounting seems obvious to most economist, this is because fair value incorporates more information into financial statements. Speaking against fair value, [8], argued that fair value accounting has been the principal cause of an unprecedented decline in asset values; an unprecedented rise in instability among financial institutions; and the worst economic crisis in the United States since the Great Depression. Moreover, [9], believes that fair value accounting is highly pro-cycling and should be abandoned or at least significantly modified in order to ensure that financial statements report information on stability of the entity rather than on its earnings power. [10], reported that many see fundamental inconsistency between measuring financial instruments at fair value and nonfinancial items largely on historic cost basis. Standard-setters recognize that whenever a boundary is drawn between financial statement items with different measurement attributes some inconsistencies and complexities often results. It is argued that there is economic logic in drawing a line between financial instruments and nonfinancial items, and more so than drawing a line including some financial instruments but not others. Conceptually, the periodic returns on financial instruments can be separated into three components with distinct sustainability or certainty. The first two components; amortized cost interest and the difference between fair value interest and amortized cost interest-sum to fair value interest. It is useful to distinguish these two components of fair value interest because amortized cost interest is both sustainable and certain, whereas the difference between fair value interest and amortized cost interest is sustainable but uncertain. The difference between fair value interest and amortized cost interest is sustainable because unexpected changes in interest rates and the resulting unexpected changes in fair values affect fair value interest calculations throughout the remaining lives of

financial instruments. For example, an unexpected gain on a financial asset due to a decrease in interest rates in the current period reduces expected fair value interest revenue on the asset throughout its remaining life. This third component of the periodic returns to financial instruments is the unexpected change in their fair values during the period. Unexpected changes in the fair values of financial instruments are both unsustainable and uncertain [11]. According to [12] fair values reflect the most current and complete expectation and estimation of the value of assets or obligations, including the amounts, timing, and riskiness of the future cash flows attributable to assets or obligations. As such expectations lie at the heart of all transactions, which add to the belief that market efficiency would be enhanced if the information upon which such decisions are made is reported in the financial statements at fair value. Measurement of accounting elements is one of the crucial factors in the process of preparing financial statements, which fairly present economic activity of an accounting entity. Elements of financial statements can be measured by various attributes, corresponding to the nature of an element and the purpose for which the element has been incurred by entity. The reliability and relevance of the attribute measured are the key points of measuring assets, liabilities, equity and other elements. According to [13], they noted that the problems that exist in today's financial markets can be traced to many different factors. One key factor that is recognized as having exacerbated these problems is fair value accounting. They explained further that fair value accounting is appropriate for assets that are held for trading purposes or if an entity's business model is based and managed on fair value. However, for traditional commercial banks and for loans, leases, and securities that are held to maturity, the argument goes, fair-value accounting can be inappropriate and misleading, especially in a time of crisis and when markets are illiquid. In consideration of reliability and relevance of fair value, [14] found fair values relevant in the explanation of share prices. They gave substantial evidence that recognized and disclosed fair value measures to be relevant to investors and reliable enough to be reflected in share prices. Fair value measures which have consistency in definition, incorporate all elements of financial instrument measurement, invoke some degree of market discipline and more relevant to investment decision-making, are found to be better measurements for recognition of financial instruments within the basic financial statements. [15], outlined some of the major concerns associated with the application of fair value accounting in developing countries as inactive market, cost, skills shortage, government controlled markets, related parties, weak regulatory environment, and lack of valuation standard and guidance. [16], examined the perceptions of fair value accounting by auditors in Nigeria. They found that statements prepared under fair value accounting basis is more useful than those prepared under historical cost basis. Auditors, awareness of fair value issues in Nigeria is low, fair value accounting poses greater challenges for auditors than the historical cost basis, and they claim that fair value accounting is not appropriate within the Nigeria context. [17], explained that countries with weaker investor's protection mechanisms are more likely to adopt International Financial Accounting Standards (IFRS) and therefore conclud-

ed that IFRS represent a vehicle through which countries can import investor protection and make their capital markets more accessible to foreign investors. [18], reported that many see fundamental inconsistency between measuring financial instruments at fair value and nonfinancial items largely on historic cost basis. Standard-setters recognize that whenever a boundary is drawn between financial statement items with different measurement attributes some inconsistencies and complexities often results. It is argued that there is economic logic in drawing a line between financial instruments and non-financial items, and more so than drawing a line including some financial instruments but not others. [19], explained that with the current controversy surrounding fair value accounting, it is important to understand actually what it is. According to him, under Generally Accepted Accounting Principles (GAAP), fair value is defined as the amount at which an asset can be bought or sold in a current transaction between willing parties, or transferred to an equivalent party, other than in a liquidation sale. On the opposite side of the balance sheet, the fair value of a liability is the amount at which the liability can be incurred or settled in a current transaction between willing parties, other than in liquidation. He added that fair value is sometimes referred to as "exit values". When fair value is not available due to lack of an actual transaction, it is logical to use information from an active market. An active market is a market in which securities as a whole are trading at a high volume. He stated further that, sometimes, quoted prices might not represent the best estimate of fair values. [15], simply state in their study that fair value accounting represents the revaluation of unsold assets and liabilities to market prices on regular basis. According to them, it is primarily applied to financial assets and liabilities but however, three major groups of non-financial assets which include property, plant, investment property and intangible assets are also subject to fair value measurement. They noted further that active markets may not always exist in order to identify a market price for the specific asset or liability and that instead there should be established hierarchy that prioritizes the relative reliability of the inputs that may be used in establishing fair value. The fair value hierarchy consists of three levels and gives the highest priority to the most reliable inputs-quoted prices in active markets for identical assets or liabilities (Level 1), whereas the lowest majority is assigned to unobservable inputs (level 3), which are received as the least transparent and objective. The objective of this study is to determine the extent to which fair value measurement can be applied with precision in the assessment of a firm's financial position and equally, to determine the possibility of measurement errors in financial instrument measured on Fair Value.

2 MATERIAL AND METHODOLOGY

2.1 Data Collection

The method of data collection used in this study was field survey method involving the use of questionnaire. A sample of 188 persons drawn from a population consisting of members
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of Nigerian Accounting Standard Board, members of Institute of Chartered Accountants of Nigeria/Association of National Accountant of Nigeria, Accounting lecturers and postgraduate accounting students, financial institutions, Government agencies and Nigeria Capital market.

2.2 The Kruskal–Wallis Analysis Rank Sum Test

Biological data from experience never follow a Gaussian (normal) distribution precisely, because a Gaussian distribution extends infinitely in both directions, so it includes both infinitely low negative numbers and infinitely high positive numbers. Many kinds of biological data, however, do follow a bell-shaped distribution that is approximately Gaussian. Because ANOVA works well even if the distribution is only approximately Gaussian (especially with large samples), these tests are used routinely in many fields of science [20].

An alternative approach does not assume that data of interest follow a Gaussian distribution. In this approach, values are ranked from low to high and the analyses are based on the distribution of ranks. These tests, called nonparametric tests, are appealing because they make fewer assumptions about the distribution of the data. But there is a drawback. Nonparametric tests are less powerful than the parametric tests that assume Gaussian distributions. If the samples are large the difference in power is minor. With small samples, nonparametric tests have little power to detect differences.

The Kruskal – Wallis test which is an extension of the Wilcoxon test for location with two independent samples from continuous populations ([20], [21], [22]).

Procedure for calculating the Kruskal–Wallis test

1. Rank all the scores in the experiment, irrespective of condition.
2. Add up the ranks for each condition to produce a rank total for each condition: R_1, \dots, R_k where k is the number of conditions.
3. Calculate H using the formula:

$$H = \frac{12}{N(N+1)} \sum_{i=1}^k \frac{R_i^2}{n_i} - 3(N+1)$$

which allows for different numbers of subjects in each condition. N is the total number of subjects and n_1, \dots, n_k are the number of subjects in the k conditions.

4. The calculated value of H must equal or exceed the table value of χ^2 with $k - 1$ degrees of freedom at the chosen level of significance to reject the null hypothesis.

Decision Rule: The decision rule is reject the null hypothesis when the P-value is less or equal to the $\alpha=0.05$, otherwise, accept the null hypothesis. Alternatively, when the Ch-square calculated is greater than the Chi-square tabulated the null hypothesis is rejected.

2.3 Data presentation

Table 1: Responses on Whether Fair Value Measurement gives Sufficient Precision

Question	SA	A	U	D	SD	Total
1	91	80	4	9	4	188
2	47	88	25	23	5	188
3	69	87	15	16	1	188
4	38	87	30	25	8	188
5	62	72	22	18	14	188
6	51	83	23	27	4	188
7	46	66	32	32	12	188
8	61	81	28	13	5	188

Table 2: Responses on Possibility of Measurement errors in fair value for financial Instruments

Question	SA	A	U	D	SD	Total
9	80	81	18	8	1	188
10	73	74	26	11	4	188
11	72	83	20	9	4	188
12	30	43	55	55	5	188
13	29	70	50	36	3	188
14	25	57	82	20	4	188

3.1 Kruskal-Wallis Test on whether Fair Value measurement gives sufficient precision to help assess adequately the Firm's Financial Position and Earning Potential

H00: Implementation of Fair Value measurements does not give sufficient precision in assessing firm's financial position and earning potential

H11: Implementation of Fair Value measurements gives sufficient precision in assessing firm's financial position and earning potential

Table 3: Ranks

	Option	N	Mean Rank
Responses	1.00	8	29.63
	2.00	8	35.38
	3.00	8	16.44
	4.00	8	15.44
	5.00	8	5.63
	Total		40

Key: 1= strongly agree, 2= Agree, 3= Undecided, 4= Disagree, and 5= strongly disagree

Table 4: Test Statistics^{a,b}

	Responses
Chi-Square	33.273
df	4
Asymp. Sig.	.000

a. Kruskal Wallis Test

b. Grouping Variable: Option

3.2 Kruskal-Wallis Test on Possibility of Measurement errors in fair value for financial Instruments

H02: The possibility of measurement errors in financial instrument measured on Fair Value basis is not high

H12: The possibility of measurement errors in financial in-

3.0 DATA ANALYSIS AND RESULT

strument measured on Fair Value basis is high

Table 5: Ranks

	Options	N	Mean Rank
Response	1.00	6	20.00
	2.00	6	24.50
	3.00	6	17.33
	4.00	6	12.17
	5.00	6	3.50
	Total		30

Key: 1= strongly agree, 2= Agree, 3= Undecided, 4= Disagree, and 5= strongly disagree

Table 6: Test Statistics^{a,b}

	Response
Chi-Square	20.134
df	4
Asymp. Sig.	.000

a. Kruskal Wallis Test

b. Grouping Variable: Options

4 DISSCUSSION

The result of the analysis obtained in section 3.1 showed in Table 3 that majority of the respondents agreed that implementation of Fair Value measurements gives sufficient precision in assessing firm's financial position and earning potential since the highest mean rank (mean rank=35.38) was obtained for option 2 (Agree). Also, from Table 4 it was observed that implementation of Fair Value measurements gives sufficient precision in assessing firm's financial position and earning potential since the Chi-Square obtained was 33.27 and a p-value of 0.00 which falls on the rejection region of the hypothesis. Hence, the null hypothesis was rejected since the p-value= $0.00 < \alpha = 0.05$, assuming a 95% confidence interval. This result implies that implementation of Fair Value measurements gives sufficient precision in assessing firm's financial position and earning potential.

The result of the analysis obtained in section 3.2 showed in Table 5 that majority of the respondents agreed that the possibility of measurement errors in financial instrument measured on Fair Value basis is high since the highest mean rank (mean rank= 24.50) was obtained for option 2 (Agree). Also, from

Table 6 it was observed that the possibility of measurement errors in financial instrument measured on Fair Value basis is high since the Chi-Square obtained was 20.13 and a p-value of 0.00 which falls on the rejection region of the hypothesis. Hence, the null hypothesis was rejected since the p-value= $0.00 < \alpha = 0.05$, assuming a 95% confidence interval. This result implies that the possibility of measurement errors in financial instrument measured on Fair Value basis was high.

5 CONCLUSIONS

This study assessed the impact of fair value measurement on financial instrument of firms in Nigeria. From the finding of the study it was observed that the implementation of Fair Value measurements gives sufficient precision in assessing firm's financial position and earning potential. Also observed was that the possibility of measurement errors in financial instrument measured on Fair Value basis was high. Hence, it is obvious that fair values are not necessarily the currently realizable values of positions rather they are hypothetical value that reflect transaction prices even if current conditions do not support such transaction. Fair value reflects current information about future cash flows and current risk adjusted discount rates. It does not allow firms to manage their income through gains trading, because gains and losses are recognized when they occur, not when they are realized. Hence, we conclude that Fair value is the best reflection of the expected future cash flow as it predicts the ability of the entity to take advantage of opportunities or to react to adverse situations. We recommend that for fair value accounting to be beneficial in Nigeria there should be vigorous policing and enforcement of punitive actions against insider abuse and other forms of market manipulation. Also, there should be clearly enforceable standards as well as an effective enforcement framework fines and disciplinary records should be announced and made publicly available to serve as a deterrent to operators.

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Appendix

Sample of Questionnaire
Section A

S/No.	Question	S A	A	U	D	S D
1	Fair value measurement would reflect market views of the attributes of the assets or liability being measured					
2	Managers will include views of the reporting entity that differ from market expectations					
3	Fair value measurement gives sufficient precision to help assess adequately the firm's financial position and earning potential					
4	The 'principal market' view, more accurately reflects the fair value than the most advantageous market view currently in IFRS					
5	Fair value helps users to evaluate past performance					
6	Fair value help users to analyze future performance					
7	Fair vale best reflects future cash flow					
8	Financial statement being presented in full fair value will help users entity's present correct stand					

Section B

S/N o.	Question	S A	A	U	D	S D
9	Fair value measurement would consider the utility of the asset or liability being measure					
10	Fair value measurement would reliably determine the price that would be received for an asset between market participants at the measurements date					
11	Fair value measurement would reliably determine price that would be paid to transfer a liability in a transac-					

	tion between market participants at the measurement dates						
12	The possibility of measurement error is high						
13	The use of valuation models for financial instruments for which no active market readily exist is not reliable						
14	Fair values could be less accurate and more discretionary when they are either adjusted mark-to-market value or mark-to-model value						

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