Fair Value Accounting and the Relevance of Information Supplied in Corporate Reports of Nigerian Firms: A Probit Regression-Based Approach

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ABSTRACT

The influence of fair value accounting in reporting is of concern to users of accounting information. The impact of fair value accounting on the relevance of information supplied in corporate reports of Nigerian firms was investigated in this study. The results of a questionnaire survey of 50 internal auditors in Nigeria were used to generate primary data and the binary probit estimation technique was employed to analyze the data. Fair value accounting significantly impacts company reporting, according to the study. Finally, based on the data, it is stated that the implementation of fair value accounting is more likely to improve corporate reporting quality in Nigerian firms. According to the findings of this study, fair value accounting will aid investors in accurately determining a company's value through improved corporate reporting. Thus, the study recommends that concerns such as fair value measurement and accounting estimates be emphasized in academic and professional accounting programs on corporate reporting to promote its adoption.

Keywords: *Fair Value Accounting, Corporate Reporting, Binary Probit Model, Nigerian Firms*

1. Introduction

Standard setters (International Accounting Standard Board and Financial Accounting Standard Board) have extensively re-modified financial statements reporting methods, using fair value accounting, as a way to remedy the issues of financial statements reporting in the current global corporate environment (PricewaterhouseCoopers, 2015). As a result of this development, the historical accounting approach has been gradually replaced by the fair value accounting approach. In Nigeria, the fair value accounting measurement technique is being used to evaluate the value and profitability of publicly traded companies. The Financial Accounting Standards Board (FASB) and the International Accounting Standards Board (IASB) have embraced the fair value accounting system over historical cost accounting. The historical cost accounting reviews assets and liabilities at their initial cost, whereas fair value accounting represents the asset or liability's current market value. Nigerian companies used historical cost accounting to prepare their financial statements until 2012. The majority of Nigerian firms complied with the directive from the Financial Reporting Council of Nigeria (FRCN) that mandated all quoted corporations on the floor of the Nigerian Stock Exchange (NSE) incorporate the International Financial Reporting Standards (IFRS) in their financial reporting beginning January 1, 2012.

The historical cost accounting in reality results in fixed asset values, insufficient provision for depreciation, unrealistic profit, failure to show a fair value of the financial position, among other problems, as the overall price level in the economy of Nigeria continues to expand. In comparison to the historical cost accounting methodology, fair value accounting appears to compromise comparability and consistency. The financial crisis of 2007-2009 aroused researchers' interest in the implications of fair value accounting, and the debate over the role of fair value accounting during the crisis has remained a contentious issue among academics ever since. While fair value accounting improves the relevance of the information supplied, some scholars believe that it sacrifices other qualitative qualities of financial reporting such as comparability, verifiability, and accurate presentation (Bessong and Charles, 2012). The inputs and methods of fair value accounting are still extremely subjective in most markets, particularly in developing nations where market illiquidity has been comparatively high and active markets for financial assets and liabilities are few, therefore valuations may be less trustworthy (Chambers, 2008).

The challenges of relevance and credibility are at the centre of fair value accounting. The idea of reliability is described as the quality of information that ensures that financial statement information is reasonably free of errors and biases and that it truly represents what it intends to reflect (Ilaboya, 2008). As a result, the level of market liquidity, inactive markets, and financial transparency in a country determine the reliability of fair value measures of assets and liabilities. The fair value accounting information would be useful in taking managerial and investment decisions if these required conditions are met (Alves et al., 2015). Corporate reporting aims to give investors and other stakeholders a better understanding of the company by providing them with a comprehensive economic assessment of all value-creating activities. It enables stakeholders to gain greater insight into a company's genuine potential including its capacity to make long-term success (Lev and Daum, 2004). Compulsory versus voluntary reports are dependent on the management of financial and non-financial information according to guidelines, legislations, and principles across countries. Corporate reporting in firms includes accounting, reporting, disclosure, managerial control, auditing, and so on. The purpose of this study is to assess empirically the impact of the introduction of the fair value measurement (FVM) (IFRS 13) on the informativeness and relevance of corporate reporting in Nigerian firms.

2. Literature Review

2.1 Conceptual Review

Fair Value Accounting

Fair value can be defined by the international financial reporting standard (IFRS) 13 as the amount that would be realized if an asset were sold or paid if liability were transferred in an organized transaction at the measurement date; fair value is emphasized as a market-based measure. This concept assumes the presence of an exit price, which is the price paid to transfer responsibility to a third party in an organized trade between market players at the measurement date. When calculating fair value, the entity assumes that the market asset or liability is under present market conditions, including risk assumptions. As a result, whether an asset is retained or liability is dismissed has

no bearing on the calculation of fair value (IASB, 2012). Fair value is specified as a market-based measurement rather than an institution measurement, according to the definition (IASB, 2011). When calculating fair value, an entity takes into account the assumptions that market players would make when valuing an asset or liability in present market conditions, considering risk assumptions. As a result, while determining fair value, an entity's desire to acquire an asset or settle a liability is irrelevant (IASB, 2012). Unlike historical cost accounting, fair value accounting, in its ideal condition, serves the shareholder reporting aim by reporting assets and liabilities in the financial reports at fair value (Gautam and Arjun, 2015)

The traditional accounting method, historical cost accounting, does not satisfy the information needs of investors (i.e. shareholders and debt-holders) who seek relevant information that can help predict firms' futuristic performance in the dynamic business environment. Because historical cost accounting could no longer account for the intricacies inherent in the valuation of financial instruments such as shares traded on an exchange, debt securities, and derivatives, fair value measurement was first introduced to address issues surrounding the complexities in such items to ensure their faithful representation (Bessong & Charles, 2012)

2.2 Theoretical Literature

The agency theory is a contract between the shareholders (principal) and the management (agent) to manage the firm's activities efficiently and effectively (Jensen and Meckling, 1976). The problem of information failure between managers and investors can arise as a result of this agency relationship. managers may have superior information about the firm's current and predicted future performance as compared to the information available to shareholders.

Agency theory is a concept that is utilized to analyse and resolve problems in the interaction between corporate owners and their agents. The relationship between shareholders, who function as principals, and corporate executives, who serve as agents, is the most prominent example. Because a shareholder invests money in a corporation operated by an executive, and the executive is in charge of making decisions that affect the shareholder's investment, the shareholder acts as the principal.

2.3 Empirical Review

Does a fair value-based income statement provide more value-relevant information than a fair value-based balance sheet? According to Barth and Landsman (1995), fair value is not adequately defined in a realistic market scenario, resulting in three value constructs: entry and exit values, and values-in-use. Barlev and Haddad (2003) investigated the relationship between fair value accounting and firm management. They discovered that financial statements prepared according to the fair value accounting paradigm provide up-to-date fair or market values of assets, liabilities, and owners equity to interested parties, putting the shareholders' equity in the spotlight. Bessong and Effiong (2012) employed the ordinary least square technique of estimation technique to compare and contrast the effects of fair value accounting and historical cost accounting on reported earnings using a data set of manufacturing enterprises in Nigeria. Their findings reveal that both fair-value and historical cost accounting have a considerable impact on reported profit. They further found that compiling a financial report that uses both historical cost and fair-value methodologies at the same time can reveal a company's genuine financial status. Toluwa and Power (2019) examined the problematic concerns surrounding the fair value accounting approach. Their findings demonstrate that market liquidity, the availability of an active market, and an uninterrupted market environment are all linked to the reliability and usefulness of fair value accounting; and ultimately, fair value accounting influences firms' earnings, which invariably affect earnings quality.

To investigate the influence of fair value accounting on corporate reporting in Nigeria, Adegboyegun, et al. (2020) administered a well-structured questionnaire to 120 respondents in Lagos State, Nigeria, who were made up of accountants, auditors, bankers, financial specialists, and practitioners. the logistic regression approach was employed to analyse the primary data was collected. The findings revealed that using the fair value in corporate reporting assisted in estimating earnings and assessing the amounts, timing, and unpredictability of future cash flows. Another empirical study on Nigeria by Ajibolade, Adeyemi, and Oyewo (2018) assessed the influence of fair value accounting (FVA) on the quality of accounting information disclosed in financial statements from the

perspective of auditors in Nigeria from 2013 to 2018. data was collected by administering a standardized questionnaire to 277 auditors from chosen audit companies in Nigeria.

Ibidunni and Okere (2019) used survey research and quantitative approaches to investigate the relationship between fair value accounting and accounting information reliability. They divided accounting information users into one hundred corporate investment analysts and sixty-one corporate portfolio executives for a total population of 161. They discovered a relationship between fair value accounting and the accuracy of accounting information in Nigerian firms. Focusing on deposit money banks listed on the Nigerian Stock Exchange, Abiahu, Udeh, and Okegbe (2020) investigated the impact of fair value reporting on financial profitability and business value considering a sample of 13 banks that are listed on the Nigerian Stock Exchange. They discovered that fair value reporting does not affect reported profitability. They went on to reveal that fair value does, in fact, influence firm valuation.

However, because there are few comprehensive studies on the subject, the extant fair value accounting literature in Nigeria ignores corporate reporting and fair value accounting. The Binary probit regression method has not been used in this research to study the relationship between fair value accounting and corporate reporting. We contribute to the literature on fair value accounting by demonstrating how fair value accounting affects effective corporate reporting of listed companies in Nigeria using Binary probit regression. By forecasting a binary dependent outcome, the Binary probit regression technique provides for the evaluation of the probability that fair value accounting improved or did not improve the relevance of information supplied in corporate reports of Nigerian firms. The data sample was gathered using a well-structured questionnaire, which was then analysed using descriptive-analytic techniques.

2.4 Hypothesis Development

There is a core contradiction between fair value as a metric for evaluating financial instruments and historical cost as a metric for evaluating non-financial instruments (Okafor and Ogiedu, 2012). When a boundary is formed between financial statement items with different measuring methodologies, standard-setters noticed disagreement and complications. As a result of the discrepancies and differing perspectives arising from the use of the fair value method, this paper will test the following hypothesis:

H_0: Application of Fair Value Accounting has no significant impact on the relevance of information supplied in corporate reports of Nigerian firms.

3. Methodology

Internal auditors of various companies listed on the Nigerian stock exchange made up the study's population. For the study, a total of fifty (50) internal auditors were sampled. The sampled population was surveyed and a structured questionnaire was used to acquire primary data. For the greatest marginal gains, fair value accounting is expected to have an impact on corporate reporting. Let Pr represent the state of impact, with Pr = 0 representing no impact and Pr = 1 representing impact. If the error term is considered to have a normal distribution, a probit distribution model can be used to estimate the error term. In particular, the model has the following implicit form:

Pr=(Y=1|X)=ϕ(X′β)... (1)

Where Pr denotes probability and ϕ is the probability distribution function of the standard normal distribution. Typically, the parameters are computed using the maximum likelihood technique. Motivating the probit model as a latent variable model, Equation (1) becomes:

$Y = \beta_0 + \beta_1 \sum_i^n X_i + e_i$………………………………………………… (2)
Where: e ~ N (0, 1).
Therefore, Yi becomes

$$Y = \begin{cases} 1 \ if \ Y^* > 0 \ (-e < X'\beta) \\ 0 \ if \ otherwise \end{cases}$$…………………………………..……(3)

To test the hypotheses, The model is based on Adegboyegun et al (2020) model which has been modified to determine the relationship between fair value accounting on corporate reporting in Nigeria. The following is the probit model:

$CPR = \beta_o + \beta_1 RPF + \beta_2 ROI + + \beta_2 REL + \text{£}_i$ ……………………(4)

Where:

CPR = corporate reporting (= 1 indicating that fair value effectively impacted the relevance of information supplied in corporate reports of Nigerian firms and = 0 if otherwise)

RPF = Reported Profit at Fair Value

ROI= Return on investment (ROI) using Fair Value

REL = relevance of accounting information

4. Result and Discussion

The table below shows the simple descriptive statistic of the variables in the model.

Table 4: Descriptive Statistics of the Variables

	CPR	RPF	ROI	REL
Mean	0.580000	0.043774	6.370619	3.120000
Maximum	1.000000	0.178619	7.576555	5.000000
Minimum	0.000000	0.020332	2.213034	1.000000
Std. Dev.	0.498569	0.040132	1.294778	1.465801
Skewness	-0.324176	1.359586	-2.121212	-0.052283
Kurtosis	1.105090	4.660753	6.404514	1.537040
Observations	50	50	50	50

Source: Author's computation from EViews 10

The mean, standard deviation, skewness, and kurtosis of the variables are presented in Table 4. The variables' descriptive statistics show a total of 50 observations. The low values of the standard deviations show that the variables did not deviate significantly from their means, as shown in the table. Except for Reported Profit at Fair Value, all of the variables are negatively skewed, meaning that their values are not extremely large. Furthermore, the kurtosis of the Reported Profit at Fair Value and Return on Investment (ROI) using Fair Value is greater than three (3), meaning that their probability distributions are all relatively steeply peaked.

4.1 Pre-estimation Tests

A pre-estimation test is carried out to determine if the data complies with the criteria for economic analysis. The tests required here are the stationarity/unit root test and the co-integration test.

Stationarity Test

The level of significance adopted here is 5%. The table shows the result for the Augmented Dickey-Fuller (ADF) unit root test employed to check for non-stationarity or otherwise of the variables.

Table 4.1.1: Result for Stationarity Test

VARIABLES	ADF STAT LEVELS	5% CRITICAL VALUE	ADF STAT FIRST DIFFERENCE	5% CRITICAL VALUE	ORDER OF INTEGRATION
CPR	-7.566026	-2.922449	-	-	I(0)
RPF	-5.500369	-3.020686	--	-	I(0)
ROI	0.324331	-2.931404	1.516447	-2.931404	I(1)
REL	-7.324982	-2.922449	-	-	I(0)

Source: Author's computation from E-Views 10

The stationarity of the variables used in this study is depicted in Table 4.1.1 above. This is executed with the Augmented Dickey-Fuller method, which takes into account trends and has no intercept. If the probability value of the ADF 5% crucial value is greater than 0.05, a variable is not stationary at any given level. All variables, except Return on investment (ROI) using Fair Value, are stationary at levels, according to the table; Return on investment (ROI) using Fair Value is stationary at first difference.

Co-integration Test Results

Table 4.1.2: Johansen Co-Integration Test

No. of Cointegrating equations	Statistic	Critical Value	Prob.**
None *	69.07638	47.85613	0.0002
At most 1 *	42.45424	29.79707	0.0011
At most 2 *	15.95804	15.49471	0.0426
At most 3	1.643181	3.841466	0.1999

Source: Author's Computation

Since not all of the variables are stationary at the level, the Johansen procedure is used to perform a co-integration test with a trend and no intercept. Three key co-integrating equations can be found in the final result. This shows that the variables have a long-term relationship. As a result, while not all of the variables are stationary at their current levels, they have a long-term relationship. As a result, it is possible to calculate a long-run model.

4.2 Probit Regression Result
The hypothesis developed in Section 3 is tested in this section. Table 4.2 show the Probit regression results

Table 4.2: Regression Results

Variable	Coefficient	Std. Error	z-Statistic	Prob.
RPF	2.145672	0.878002	2.443813	0.0145

ROI	2.841979	1.051640	2.702427	0.0069
REL	0.217100	0.977520	0.222093	0.8242
C	-4.609861	1.490891	-3.092018	0.0020
Pseudo R^2	0.650912			
H-L Statistic	10.35 (0.2412)			

Source: Authors' Computation, 2021. Probability values are in parenthesis.
*Notes: Values reported are t-statistics values. **denotes significance at 5 percent.*

Findings

This model is tested using Hosmer and Lemeshow's (2000) goodness of fit (GOF) test, which yields a p-value of 0.2412, which is larger than 0.05. Because the sample size is high enough, the resulting p-value indicates that we have enough evidence to infer that the model is correctly defined at a 5% level of significance. The pseudo R^2 of 0.650912 in *Table 4.2* indicates that the Pseudo R-squared is statistically significant at the 5% level of significance. It means that the model's explanatory variables all work together to explain whether fair value accounting improved corporate reporting or not.

The Reported Profit at Fair Value variable has a positive coefficient of 2.145672, indicating that an increase in the Reported Profit at Fair Value increases the likelihood that fair value accounting will have a favourable impact on the relevance of information supplied in corporate reports of Nigerian firms.

The p-value of the z-statistics is 0.0145, which indicates significance at a threshold of 5% significance. The Reported Profit at Fair Value variable's regression coefficient was determined to be significantly different from zero. The coefficient of the Return on Investment (ROI) using fair value variable is 2.841979, implying that a higher Return on Investment (ROI) using Fair Value enhances the anticipated probability of fair value accounting in enhancing corporate reporting. The z-statistics p-value is 0.0069, showing significance at a level of 5% significance. The probability value for the relevance of the accounting information variable is 0.8242. We conclude that the regression coefficient (0.217100) for the relevance of accounting information is not statistically different from zero at the 5% level of significance. This proved that the usefulness of accounting data has no significant effect on the relevance of information supplied in corporate reports of Nigerian firms.

The findings in *Table 4.2* indicate that Nigerian companies may have benefited from the use of fair value accounting in terms of improved corporate reporting. The implementation of fair value accounting (Reported Profit at Fair Value and Return on Investment (ROI) using Fair Value) significantly boosted the likelihood of improving the relevance of information supplied in corporate reports of Nigerian firms, with the most pronounced impact on the relevance of accounting information in the corporate report of Nigerian firms. This is in line with findings in extant literature (Adegboyegun, et al., 2020; Ajibolade, Adeyemi, and Oyewo, 2018). The findings back up the FASB and IASB's arguments that fair value accounting serves the goals of corporate financial reporting by providing decision-relevant data. The finding that corporate reporting quality in Nigerian firms is more likely to improve as a result of the application of fair value accounting in *Table 4.2* is consistent with the prevailing ideology in the literature that the shift from historical cost accounting to fair value accounting is prompted by the need to provide information relevant to users' decisions. The conclusion also backs up the idea put forward in the diffusion of innovation theory that fair value accounting will thrive due to its relative advantage in terms of improving the qualitative aspects of financial statements.

Conclusion

The purpose of this study was to examine if the application of fair value accounting in corporate reporting affects the relevance of information supplied in corporate reports of Nigerian firms. In this study, the data was estimated

with the binary probit model using data gathered from a well-structured questionnaire sent to internal auditors of several companies listed on the Nigerian stock exchange. In the entire sample, the data suggest that using fair value accounting has a significant impact on corporate reporting meaning that fair value accounting is more likely to contribute significantly to the relevance of information supplied in corporate reports of Nigerian firms. The outcomes of this study suggest that using fair value accounting will help investors accurately determine a company's value through improved corporate reporting by providing them with a comprehensive economic assessment of all value-creating activities. This also aids in the decrease of company failure and investor distress, both of which can have an impact on corporate growth and achievement.

As a result, the study suggests that concerns such as fair value measurement and accounting estimates be emphasized in academic and professional accounting programs on corporate reporting to promote its adoption. A study program for professional accounting bodies and practitioners' forums is required to identify, develop, and define a conceptually superior accounting framework that eliminates the ambiguities associated with Fair value accounting.

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