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FAIR VALUATION HIERARCHY AND EARNINGS QUALITY OF LISTED NIGERIAN DEPOSIT MONEY BANK

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Abstract

The study investigated the effect of fair value hierarchical measurements on the quality of earnings reported in Nigerian Deposit Money Banks (DMBs), given the magnitude of managerial discretion allowed in Fair value accounting standards that can be opportunistically used to manipulate earnings via the disclosure of financial instrument's fair value measurement. The study used a sample of thirteen listed DMBs on the NSE website with audited annual reports between 2016 and 2021. A multiple regression analysis via SPSS is used to explore the possible effects of fair value hierarchical measurements on the earnings quality of DMBs. The results revealed that fair value level one measurement which is based on observable market information has a positive and significant effect on the earnings quality of DMBs. On the other hand, the fair value levels two and three measurements which are respectively based on adjusted observable market inputs and unobservable bank inputs are negatively associated with the quality of earnings reported in Nigerian DMBs. By implication, the findings corroborate the arguments in some literature that fair value level 2 & 3 enables opportunistic use of discretion allowed to manage earnings. Therefore, the study recommends the need for regulatory authorities to facilitate an active market for financial instruments and organise effective training via workshops to reduce the complexity around the estimation of fair value level 3 & 2 financial instruments. The study advises further examination of CG mechanisms variables' roles in the relation between FVA and earnings quality in DMBs.

Keywords: Fair Value Hierarchical Levels, And Earnings Quality

1. Introduction

The need to increase the financial reporting quality in Nigeria has led to many efforts, including the adoption of International Financial Reporting Standards (IFRS). The IFRS comes with some changes in the way and manner the company's financial information is reported. For example, the application of fair value accounting (FVA) model, regarded as key implication of IFRS, generated some critical application concern across the globe. Thus, since the mandatory adoption of the IFRS in 2012, the FVA provisions (IAS 39, 40, & IFRS 7, 9 & 13) is applicable in the determination of value for most financial assets/liabilities of all listed firms in Nigeria. However, some prior studies observed that, although IFRS is considered to be a high-quality standard, which can facilitate high-quality annual reports, but at the same time, IFRS is a principle-based standard, which implies, considerable professional judgment and the use of management discretions are allowed. Thus, the application of FVA via IFRS adoption spark-off critical debate across the globe, in which the supporters expressed that fair value provides up-to-date information about assets as it reflects their real value, hence more relevance than HCA for economic decision-making, (Bello et al, 2016; Adeyemi et al, 2021). While, some studies (eg Sudan, 2015, Takacs et al, 2019, etc) express that because of the level of professional judgment allowed, the quality of a fair value-based annual report is still a

matter of subjective determination, especially in the context of an inactive or illiquid market of certain financial assets or liabilities in emerging economies such as Nigeria.

In addition, some critics submitted that, in the interest of increasing the relevance of financial reporting, the IFRS standards have increasingly required accelerated accounting recognition for incomplete transactions, which in turn requires that reported numbers be based on management estimates. Recent examples include the recognition of changes in the fair value of certain marketable securities, certain derivatives, recognition of impairment losses on fixed assets, and purchased goodwill before those value changes are realized in an exchange transaction. Hence, they studies argued that the required accelerated recognition of economic events introduces measurement error in the financial reports, due to inadvertent judgment or forecasting error by preparers who may be wrong in their assumptions about the future (Menicccuci, 2020). Thus, given that most of the financial instruments are measured at fair value and the fact that these instruments represent a significant portion of bank's financial statements, the impact of FVA especially in financial sectors such as deposit money banks has been a subject of concern and has generated heated debate among academic researchers, investment analysts, and policymakers.

Furthermore, the pro-cyclical nature of the FV model in provisioning for losses, which cause provisions to increase during economic recessions. By implication, in bad times, an increase in provision for losses could affect the bank's profit, weaken the bank's capital base, reduce its lending activities to solvent borrowers, and eventually trigger a credit crunch, that could worsen the economic crisis, or create a bank run that may lead to distress as the case of Fin-bank, Intercontinental bank, etc between 2009-2014(Ahmed, 2014). Thus, Chukwu et al, (2020) express that several firms/banks suffered huge losses on their derivative positions, causing concern among stakeholders, they alleged that banks use security gains/losses to manipulate reported earnings in the form of gains timing. For example, the high-profile case of Diamond Bank's distress that led to merger with Access Bank Nigeria toward the end of 2018. Also, in early 2019 again, fresh news about seven Nigerian deposit money banks (DMBs) in secret merger and acquisition talks due to distress problems made many depositors, regulators, and analysts apprehensive and worried (Onuoha et al, 2021). Thus, we argue from an agency theory point of view, that managers may use their discretion concerning FV estimates and classification to manipulate earnings, weakening both the persistence and predictive ability of reported earnings. The big question is; how does this alternative hierarchical accounting choice in estimating FV of financial assets/liabilities affect the quality of reported earnings in Nigerian DMBs. The objective of this paper is to examine the effect of these discretionary FVA hierarchical measurements (proxy by gains/losses on individual hierarchical levels) on the EQ of Nigerian DMBs. Hence, based on the above objective the following hypotheses are tested:

Ho_1 ; Fair value measurement hierarchy level one financial asset/liability has no significant effect on EQ of listed Nigerian DMBs.

Ho_2 : Fair value measurement hierarchy level two financial assets/liabilities have no significant effect on the EQ of listed Nigerian DMBs.

Ho_3 : Fair value measurement hierarchy level three financial assets/liabilities have no significant effect on the EQ of listed Nigerian DMBs.

This study has the following contribution to the literature: First, we contribute to the ongoing debate about the merits of a fair-value-based accounting information system. Second, prior studies examine the value relevance (e.g Song et al, 2010), of fair values based on a 'three-level' measurement hierarchy, however, there is limited research (e.g., Adeyemi et al, 2021; Uyanna et al, 2019) examining the differences in effect between alternative FV measurement inputs choices in terms of a comprehensive informative ability of reported earnings. Therefore, we extend the FV literature by examining how alternative FV measurements affect banks' EQ from an information perspective. Thirdly, to the best of our knowledge, there has been no study yet that examined the multi-dimensional measures (i.e multiple properties of earnings simultaneously) of EQ in Nigerian DMBs. In general, the study provides useful information to

investors and financial analysts on the implication of FV disclosure requirements. More specifically, regulators such as the Financial Reporting Council of Nigeria (FRCN), Security and Exchange Commission (SEC), and Central Bank of Nigeria (CBN), as well as investors and analysts would find this study of particular interest as it will provide empirical evidence on the usefulness of FVA based estimates.

The remainder of the paper is organized as follows. Section 2 provides the literature review and theoretical frame of the study. Section 3 explains the research design, including the models, measurement of variables, and sample selection procedures. Section 4 presents and discusses the analysis of the results, while Section 5 provides a conclusion and recommendation.

2. Literature Review

2.1 Conceptual Issue

Generally most scholars agree that high-quality earnings give a reliable indication of the real economic performance of the firm, which implies the income presented is informative and useful for making decisions (An, 2017; Dechow et al., 2010). Unfortunately, there is no generally accepted approach to measure EQ, thus, empirical researchers used different empirical proxies that are regarded as desirable properties of accounting information. Hence, Markou-Tsitsoni (2013) expresses that despite the existence of many acceptable methods for EQ measurement, none of these measures has revealed superiority. Thus EQ in most recent studies is considered a multidimensional concept that allows different users to interpret it differently. But, despite the lack of consensus in the literature, some researchers have formulated definitions and proposed measurement approaches depending on the research design, the research question posed, e.t.c (Barth & Taloy,2010). For instance, Dechow et al, (2010; p61) provide a comprehensive definition, they defined EQ as; “higher quality earnings provide more information about the features of a firm's financial performance that are relevant to a specific decision made by a specific decision-maker”. Also, An (2017) study, defines the quality of earnings as high if the presented numbers are useful to stakeholders in decision-making purposes. In summary, this study aligns itself with the preceding definitions, and describes high-quality earnings as a mix of four decision-useful accounting attributes of earnings. That is, earnings are of high quality if it is highly Persistence (sustainable), highly predictable, have low volatility, and with low Smooth (effective smoothing activities). A brief description of these four earnings attributes is given in the next section.

Concept of Fair value accounting:

IASB released IFRS 13 effective 2013, which only applies when other IFRSs (e.g IAS39, IFRS9, etc.) require or permit fair value measurements. IFRS 13 defines fair value as *“the price that would be received to sell an asset or paid to transfer a liability in an orderly transaction between market participants at the measurement date” (an exit price) (IASB 2010; IFRS 13, 2012).* This implies fair value is the price that would be received to sell an asset or paid to transfer a liability in an orderly transaction in the principal (or most advantageous) market at the measurement date under current market conditions, regardless of whether that price is directly observable or estimated using another valuation technique (Yao et al, 2017). However, to address the above concern on the model’s reliability expressed in section one, IASB came up with IFRS 13 which sets out a single framework for measuring fair value and specifies the required disclosure about fair value (FV) measurement. The standard requires reporting entities to disclose fair values based on a ‘Three-Level’ measurement hierarchy to provide financial statement users with useful information about valuations, methods, and clear the uncertainty associated with fair value measurements. The Level 1 assets and liabilities are measured based on directly observable inputs such as quoted prices of identical assets. Thus, Level 1 measurements are perceived to be highly reliable. However, Level 2 measurements include indirect inputs such as yield curves, exchange rates, and empirical correlations that introduce managerial discretion into the valuation processes. Further, Level 3 measurements include unobservable inputs computed by using price models or discounted cash flow methodologies, or other information reflecting the reporting entity’s assumptions and judgments, which can be highly subjective.

FVA and EQ in Banking Sector

With the FVA model, the balance sheet provides complete information about the value of the bank's assets and liabilities. As such, the income statement reports the changes in Fair Value as per the balance sheet. Thus, earnings are influenced by the FVA system, because subsequent measurements of assets and impairment testing lead to gains or losses that go straight to the net income (NI) statement or other comprehensive income (OCI). If a large portion of the bank's assets/liabilities is measured subsequently at Fair Value, earnings might fluctuate and may be unreliable, depending on existing market conditions (Gaio, 2010). Hence, banks' earnings are mostly affected by FVA because financial instruments constitute a significant proportion of their balance sheets that is prone to value fluctuations based on market conditions. Thus, some prior studies blame the FVA model for the increased volatility of earnings in the banking sector (Xu, 2019; Yao et al, 2017). Therefore, this study argues that greater flexibility in FV measurements could be opportunistically exploited, and may degrade the quality of reported earnings in Nigerian DMBs.

Generally, some researchers provide empirical evidence that fair value estimations improve the transparency in the financial statements to enhance EQ. For instance, Yao et al,(2017), using a sample of 210 international banks during the period 2009 to 2013, investigated whether fair value exposure is associated with earnings persistence. The results suggest that the use of fair values for balance-sheet financial instruments enhances earnings persistence. They also reported that the non-discretionary fair value Level 1 asset is positively associated with earnings persistence, whereas the Level 2 and 3 assets are not associated with earnings persistence. Contrarily, Alaryan et al. (2014) examined the relationship between FVA and the presence of earnings manipulation using an annual report of ten year period (1997-2006) split into Pre and Post adoption of the IFRS standards. The results indicate that the number of firms that manipulated their financial statement information increased after the application of FVA.

Back home, Adeyemi et al, (2021), investigated the effect of fair value financial instruments measurements on cosmetic accounting(earnings management) practices in the Nigerian DMBs, using an audited annual financial report of fourteen banks in the Nigerian listed market for 2012-2018. The study uses multiple regression analysis to examine the possible effects of FV hierarchical measurements on cosmetic accounting. They reported that, level 1 & 2 fair value measurements which are respectively based on unadjusted and adjusted observable market inputs were found to be negatively and significantly influencing the level of earnings management practices in Nigerian DMBs. On the other hand, the result reveals that level three fair value measurements is positively and significantly influencing earnings management practices. However, the study did not dwell very much on the informative perspective of earnings and their study ends in 2018.. Thus, this study will fill the observed gap and update the domestic literature with more recent findings.

2.2 Theoretical Framework

Agency Theory

This study's theoretical frame is based on the conceptual ideal of decision-usefulness which underpins the FVA projected by IASB. Specifically, agency theory is the central underpinning theory of this study. The theory posits that the separation of ownership and control of entities creates an inherent conflict of interest between the shareholders (Principal) and the management (Agent) (Jensen and Meckling, 1976 cited in Bello, 2011). Prior studies alleged that although managers are said to be rational, but cannot be trusted to remain faithful by always acting in the best interest of the principal, they are presumed to be self-serving. Therefore, studies submitted that information asymmetry may result between the contracting parties due to FV measurement high reliance on managerial assumptions and discretion that enables managers to have superior information about the present and expected realized and unrealized gains/losses of the entity than the owners, creating an information asymmetry between the two parties. Hence, FVA may give rise to moral hazard, especially given the above assumptions of conflicts of interest between the parties in a utility-maximizing struggle (Thesing & Velte, 2021). Thus, managers may exploit fair value measurements discretions opportunistically, which may decrease the reliability of the information leading to lowers EQ

(Sony et al, 2010; Bello et al, 2016; Thesing & Velte, 2021).

3. Methodology

This study uses a quantitative research approach and adopts a correlation research design which is used to explain the statistical relationship between FVA variables and EQ and determine the level of such association. The population of the study comprises of all 14 listed deposit money banks in the Nigerian Stock Exchange (NSE) as of 31st December 2021. The sample selection method is the census technique, in which all the population subject is included in the study group, but one bank is dropped for incomplete data in the period of study. Therefore, 13 banks formed the adjusted population and sample of banks studied for the period 2016 to 2021. This period was chosen because, FVA as a key component of IFRS was adopted in Nigeria by 2012, but, IFRS 13 which provides additional guidance on FVA took effect in January 2013. Thus, 2013-2015 was a transitional stage, and by 2016 some stability is assumed to have been achieved in the industry, hence the choice of 2016 as the beginning period of observation. The data for this study is extracted from secondary sources (from the NSE website), and basically from the audited financial statement of listed Nigerian DMBs. Thus, the study used longitudinal panel data and multiple regression via SPSS to examine the model of the study. Longitudinal panel data is used to account for individual heterogeneity of the sampled banks in determining the EQ of the listed DMB in Nigeria following prior empirical studies model (Sodan, 2015; Paoloni *et al.* 2017; Takacs et al, 2020).

3.1 Variables Measurement

Following prior researchers, this study considers EQ as a multidimensional concept and adopted four most commonly used attributes of earnings: (persistence, predictability, variability, and smoothness) in a combined form, by constructing aggregate earnings quality(AEQ) measure as reflected in table 1 below. Thus, following prior researchers like; Paoloni et al, (2017), and Takacs et al, (2020) among others, the four selected accounting time series properties of earnings that form AEQ are derived from the auto-regression of eq 1 below:

$$X_{i,t} = \beta_0 + \beta_1 X_{i,t-1} + \varepsilon_{i,t}$$

e q 1

Where $X_{i,t}$ and $X_{i,t-1}$ are firm i's earnings(Net income) in year t and t−1, respectively, and scaled by outstanding shares(i.e EPS), and coefficient β_1 captures firm i's persistence of earnings, β_0 is the constant, while $\varepsilon_{i,t}$ is the error adjustment.

i**)** ***Persistence (PERS):*** Persistence is an indicator of the future sustainability of earnings; it is regarded as a desired earnings attribute, and measured as the slope coefficient of the above autoregressive models of earning. Values of slope coefficient β_1 close to 1 imply highly persistent earnings and high EQ, while values of coefficient β_1 close to 0 imply highly transitory earnings and low EQ. Accordingly, PERS = β_1 from eq 1 above

ii) ***Predictability (PRED):*** Earnings predictability measures the ability of earnings to be expected. Prior researchers apply the square root of the variance error adjustment from equation eq 1 where higher variance indicates lower predictability and low EQ. Thus PRED = $(\sigma^2)^{½}(\varepsilon_{i,t}) = \sigma(\varepsilon_{i,t})$ from eq1.

iii) ***Variability (VAR):*** The variability (VAR) of earnings expresses the volatility of the firm's net income, calculated as the standard deviation of earnings in the examined period, where lower variability indicates higher EQ. Thus VAL is measured as VAL = $\sigma(X_{j,t})$ from eq 1 above

iv) ***Smoothing (SMOTH):*** Following Gaio, (2010), Pompili and Tutino (2019), and Takacs et al, 2020), this study adopted the high value of SMOTH implies less artificial smoothing and represents high EQ in measuring AEQ. Thus, smooth value is measured as the ratio of standard deviations (σ) of earnings ($X_{j,t}$) to standard deviations of operating cash flows (CFO) and measured as follows;

$$\text{SMOOTH} = \frac{\sigma(X_{j,t})}{\sigma(CFO_{it})}$$

from eq 1 above

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v**) Construct of AEQ measure as EQ:** The EQ is measured as AEQ, which is derived after calculating the raw values of these components for each bank as

indicated above, then scoring of all 13 banks in the sample is created for each attribute, by awarding the highest score (that is, 13) to the bank showing the best value from the viewpoint of EQ (as defined above), and giving the lowest score (that is, 1) to the worst value. Then, a summation of the four individual scores is done and the resulting figure is then divided by fifty-two (52= 4*13) (total scores for the 4 attributes). Thus, the AEQ (EQ) indicator for each bank was obtained and ranges from 0 to 1. (Paoloni et al., 2017; Takacs et al, 2020, see Table 1 below).

(vi) FV variable measurement: Exposure to FVA for hierarchical levels are proxy by gains/losses on individual Fair Value levels (1-3) assets and measured as the periodic change of the fair value of different levels of assets recognized as gains/losses into net income or OCI. It is calculated as the absolute value of the annual change in the fair value of Financial assets (trading assets and non-cash hedge derivative instruments, etc., and scaled by NI for each different level of FV assets(see table.1 below. Finally, to control for noise, based on prior EQ studies, bank size, and financial leverage are to be included in model 2 as control variables (Gaio, 2010; Pompili & Tutino, 2019; Takacs and Suzcs, 2019 Takacs et al, 2020)(see Table 1 below for measurement)

Table 1: Variable measurement summary

EQ = AEQ	Descriptions	Measurements	Sources
AEQ	EQ proxy	AEQ = Score(PERS)+Score(PRED)+Score(VAR)+Score(SMOOTH) / 52	Gaio, (2010); Paoloni et al , (2017); Takacs and Suzcs, (2019) and Takacs et al, (2020).
IVs (FVA) & CVs			
FVL1 (gains/losses)	Exposure of NI to FVL1 gains/losses	Absolute variation between year [t-1] and year [t] of FVL1 assets divide by Absolute value of NI ie abs(FVL1-A [t]) - abs(FVL1-A [t-1])/abs NI	Laghi et al, (2012), Bratten et al. (2016) Pompili and Tutino,(2019);
FVL2 (gains/losses)	Exposure of NI to FVL2 gains/losses	Absolute variation between year [t-1] and year [t] of FVL2 assets divide by Absolute value of NI ie abs(FVL2-A [t]) - abs(FVL2-A [t-1])/abs NI	Laghi et al, (2012), Bratten et al. (2016) Pompili and TUtino,(2019);
FVL3 (gains/losses)	Exposure of NI to FVL3 gains/losses	Absolute variation between year [t-1] and year [t] of FVL3 assets divide by Absolute value of NI ie abs(FVL3-A [t]) - abs(FVL3-A [t-1])/abs NI	Laghi et al, (2012), Bratten et al. (2016) Pompili and Tutino,(2019);
SIZE	Bank size	The logarithm of total assets	Most Prior studies
LEV	Financial Leverage	Total liabilities divided by total assets	Most Prior studies

3.2 Model Specification

As in many prior studies, this study adopts both descriptive analysis and regression to examine the effects of FV hierarchical levels on aggregate EQ (AEQ) for sampled banks using the model below to validate or reject the hypothesis 1, 2, & 3 stated above.

$$AEQ = \beta_0 + \beta_1 FVGL1_{,it} + \beta_2 FVGL2_{it} + \beta_3 FVGL3_{it} + B_4 SZE_{it} + \beta_5 LEV_{it} + \varepsilon_{it} \quad \text{eq 2}$$

4. Result and Discussion

4.1 Descriptive Statistics

Table 1 below shows the mean of AEQ is 0.537, indicating that the average reported EQ proxy by AEQ is 53.7 % among Nigerian listed DMBs. The standard deviation is 0.1523, which is lower than the mean, showing that the dispersion of AEQ among the listed DMBs in Nigeria is low. Table 1 also shows the

descriptive value for Gains/Losses on fair value financial assets hierarchical levels(financial instrument), where on average the percentage of Fair Value Gains/ Losses(FVGL1) on FVA Level 1 in reported NI is 14.4% (0.1437), with low dispersed S/Diviation of 0.076, because the inputs are observable market prices which can be easily accessed by all banks. Also, Table 1 indicates that fair value gain/losses(FVGL2) on level two assets have a mean of 0.2847 for the study periods, which implies that, fair value assets on level two measurement inputs contribute gains /losses on average of 28..5% to reported NI (earnings) of listed DMBs in the study period. The standard deviation indicates a highly dispersed usage of fair value level two inputs among listed DMBs because it uses indirectly observable input which could be biased. Table 1 also reveals that the mean of fair valued assets gains/losses on FVA level 3(FVGL3), which uses unobservable inputs is 7.4%(0.0736) with a standard deviation of 1.4379 which indicates high dispersion of fair value level three inputs usage among listed DMBs.

Table 2: Descriptive Statistics of variables

Variables	Mean	Medin	S/Devi	Min	Max	Skewness	S/Error	Kurtosis	S/Error	N
AEQ	0.537	0.4808	0.1523	0.2885	0.8077	0.334	0.616	-0.625	1.191	78
FVGL1	0.1437	0.1309	0.076	0	1.7801	1.669	0.272	3.837	0.538	78
FVGL2	0.2847	0.3282	0.681	0	1.9321	0.862	0.272	0.744	0.538	78
LNFVGL3	0.0736	0.1001	1.4379	0	5.772	2.386	0.272	4.971	0.538	78
BSZ	5.9231	6.0035	0.56	5.0146	6.6839	-0.215	0.616	-1.264	1.191	78
F/Lev	0.7247	0.86	0.4191	0.123	1.237	-0.912	0.616	-0.277	1.191	78

Source: SPSS 16 output

From the same table above, the listed bank's size measured by LOG of total assets is on average 5.9(5.9247), which implies that on average the DMBs in Nigeria have strong assets based, considering the log form of the mean value given above 1 trillion Naira(i.e. 10^5.9247). Also, the DMBs in Nigeria are highly leveraged as the mean value is about 0.7247, which implies the liabilities are up to 72.5 % of total asset. This is however normal for the banking sector since they collect the deposit money that forms a significant part of their liabilities. Furthermore, Table 3 below displays Kolmogorov-Smirnov & Shapiro-Wilk Normality Test for all the variables used in model 2. The decision rule for normality with these two tests is that its p-value should not be less than 0.05 (5%) level of significance (Petra-Petrovics, 2012; Sabine et al, 2004). Thus, as can be observed, all variables are normally distributed except FVGL3, which is transformed into LOG form (as LNFVGL3) to achieve normality.

Table 3: Kolmogorov-Smirnov & Shapiro-Wilk Normality Test

	Kolmogorov-Smirnov[a] Test			Shapiro-Wilk Test		
	Statistic	df	Sig.	Statistic	df	Sig.
AEQ	.182	78	.200*	.963	78	.794
FVGL1	.169	78	.200*	.895	78	.114
FVGL2	.292	78	200*	.780	78	.104
FVGL3	.397	78	.000	.550	78	.000
LNFVGL3	.159	78	.200*	.945	78	.524
B/SIZE	.134	78	.200*	.940	78	.451
F/LEV	.277	78	.071	.812	78	.109

4.2 Correlation matrix

Table 4 below shows the relationship between IV variables and DV variables and also the relationship among the individual IV variables. The results from the Pearson correlation indicate a positive correlation between FVGL1 and AEQ, but a negative correlation between FVGL2 and AEQ of DMBs in Nigeria. The result also indicates a negative correlation between FVGL3 and AEQ. Amongst the independent variables, the relationship is very weak, as expected which may not pose any multicollinearity problem, since they are all less than 0.8, as opined by Gujarati (2004 cited in Adeyemi et al., 2021). Also, the tolerance values and the variance inflation factor (VIF) in Table 5 indicate that VIF was consistently smaller than 10, and the tolerance values were consistently smaller than 1.00, thereby indicating a complete absence of multicollinearity between IV variables (Gujarati, 2004 cited in Adeyemi et al., 2021). .

Table 4: Correlation Matrix

		AEQ	FVGL1	FVGL2	LNFVGL3	B/SIZE	F/LEV
Pearson Correlation	AEQ	1.000					
	FVGL1	.401	1.000				
	FVGL2	-.380	-.229	1.000			
	LNFVGL3	-.322	.401	.613	1.000		
	B/SIZE	.412	-.538	.351	-.107	1.000	
	F/LEV	.361	-.181	.092	.022	.532	1.000

Source: Spss output 2021

Also, table 5 below report the regression result summary, and indicate the D/Watson test result is 2.01, which indicates the absence of autocorrelation in the data set for the model and therefore fit for regression analysis. From Table 5, the R-squared which is the multiple coefficient of determination is 0.791, which implies about 79.1% of the total variation in AEQ of listed DMBs is jointly explained by all the explanatory variables included in the model of the study, while the remaining 20.9 % is due to factors not captured in this model. The F-statistic is 3.794 which is significant at ten percent, showing that the model of the study is fit and all the explanatory variables were properly selected and used.

Table 5: Regression result summary

Model	Unstandardized Coefficients		Standardized Coefficients			Collinearity Statistics	
	B	Std Error	Beta	t	Sig.	Tolerance	VIF
Constant	-.136	.427		-.318	.761		
FVGL 1	.031	.014	.651	2.287	.062	.429	2.329
FVGL 2	-.143	016	.920	-2.699	.036	.299	3.343

FVGL 3	-.127	.025	-.375	-1.085	.058	.292	3.426
B/SIZE	.074	.076	.271	.973	.368	.448	2.234
F/LEV	.151	.085	.417	1.783	.125	.637	1.570
R^2	0.791						
D/watson	2.012						
F-Stat.	3.794						
F-Sig.	0.065						

a. Dependent Variable: AEQ

FVA Level One and EQ of DMBs: From the regression results in table 5 above, FVGL1 which proxy FV level 1 assets/liabilities, is found to have a positive and significant influence on the EQ of DMBs with a coefficient of 0.031 and t-value of 2.287 which is significant at 10%. This suggests that an approximately 1% increase in fair value assets/liabilities level one results in an approximately 3.1% increase in reported EQ, in terms of its in formativeness regarding persistence, predictability, etc as applied in this study. This is because; this class of assets most often has available market, with observable market inputs. Furthermore, the positive association these variables(FVGL1 & EQ) implies that as more financial assets of banks are measured at fair value using the observable market input the less the possibility of earnings manipulation, thereby enhancing the EQ and financial reporting quality of DMBs generally.

Hypothesis 1; *FVA-L1 measurement has no significance effect on the EQ of listed Nigerian DMBs.*

The above finding provides reasonable evidence to reject hypothesis 1 and to support the alternative that FVA level one has a significant positive impact on the EQ of listed Nigerian DMBs. The finding is consistent with prior literature on fair value measurement such as Adeyemi et al, (2021), Uyanna et al, (2019), Song et al (2010) among others, who provide empirical evidence that fair value estimations level 1 improves transparency in the financial statements, reduced the level of earnings management and enhances earnings quality.

FVA Level Two and EQ of DMBs: Also, the results from Table 5 revealed a negative and significant association between level two fair value assets measurements and AEQ of Nigerian DMBs, with a coefficient of -0.143 and a t-value of -2.699 which is significant at the 5% level, implying that 1% increases in fair value assets/liabilities on level two that is indirectly estimated, decrease the reported EQ by approximately 14% in terms of in formativeness to investors.

Hypothesis 2; FVA-L 2 measurement has no significance effect on the EQ of listed Nigerian DMBs.

The above findings provide valid evidence to reject hypothesis 2 and to support the alternative that, the FVAL2 has a significance negative impact on the reported EQ of Nigerian DMBs. The finding is also consistent with prior studies like; Uyanna et al, (2019), Xu, (2019), Yao et al, (2017), and Laux and Leuz (2010); they provided empirical evidence of a negative effect of FVAL2 on earnings with the USA and some Europe countries samples. Thus, this study argues along with prior researchers, like Xu, (2019), Yao et al, (2017), among others, that the level 2 fair value measurements are also subject to managerial discretions and could be manipulated(Xu, 2019). However, the result contradicts the findings of Adeyemi et al, (2021), and Song et al (2010) among others, their studies provide empirical evidence that fair value estimations level 1 & 2 improves transparency in financial statements.

FVA Level Three and EQ of DMBs: Furthermore, the result in table 5 reveals a negative and significant relationship between level three fair value measurements (FVAL3) and EQ, with a coefficient of - 0.127 and a t-value of -1.085, which is also significant at the 10% level. Implying a 1% increase in financial assets/liabilities level three that are estimated with unobservable inputs, decreases the reported earnings quality by approximately 12.7% in terms of its in formativeness to investors. This implies level three fair value assets measurements (FVAL3) have a negative and significantly affect the EQ of Nigerian DMBs. This finding is in line with the expectation that more level three fair value assets measurements create opportunity for earnings management practices because it is based on unobservable bank-generated inputs which provide managers greater flexibility in managing the valuation of level three financial instruments..

Hypothesis 3; *FVA-L3 measurements have no significant effect on the EQ of listed DMBs in Nigeria.*

The finding provides a reasonable ground to reject hypothesis 3 and to support the alternative that FVAL3 has a significant negative impact on the EQ of Nigerian DMBs. The findings are in line with most prior study submissions. Thus, the last two results, reinforce the empirical evidence by Bello et al, (2016) study on the Nigerian non-financial sector though, that adoption of uniform accounting standards alone, without considering the institutional features(legal frameworks, stage of capital market developments, & good CG mechanism e.t.c), is not enough to significantly improve accounting quality or enhance the usefulness of accounting information.

For control variables, table 5 shows the bank size is positively (0.074) and significantly associated with the EQ report in DMBs. This means that size of the bank influences the accounting policy of banks. This is because large banks as in the case of some Nigerian banks have the resources to put the necessary infrastructure in place, both in terms of personality and or technology to enhance EQ. Also, the F/Leverage variable is positive (0.151) and significantly associated with the EQ report in DMBs. This is in line with prior study submission that good quality earnings of an organization, provide an opportunity to attract more capital from investors (Alaryan et al, 2014).

5. Conclusion and Recommendations

Thus, using a sample comprising 78 bank-year observations from 13 listed Nigerian banks' financial statements downloaded from the Nigerian Stock Exchange (NSE) website for the period 2016-2021, the results of the investigation support the following conclusions: a) That FVA level 1 proxy by level one fair value gains/losses (FVGL1) is found to have a positive and significant influence on the EQ of DMB. The positive association between the EQ of the banks and FV level one asset proxy (FVGLs) implies that as more financial assets of banks are measured at fair value using the observable market input the less the possibility of earnings manipulation, thereby enhancing the EQ and financial reporting quality of Nigerian DMBs generally.

b) that FV level 2 & 3 assets and liabilities estimated respectively with indirectly observable and unobservable inputs are negative and significantly associated with the EQ of Nigerian DMBs. Implying that the more the proportion of these assets and liabilities, the greater the opportunity for managers to manage earnings, which may affect EQ, and its informativeness to statement Users. Thus, this study has validated the arguments by prior researchers, like Badia et al. (2017), Yao et al. (2017), and Xu (2019), among others, that although it is generally considered that level 3 fair value inputs are the least transparent and the most subjective among the three levels, but level 2 fair value assets and liabilities measurements are also subject to managerial discretion and are used to manage earnings, which explain the negative relationship of the variable with the EQ of DMBs.

On the whole, it is concluded that even if FVA hierarchical principles allow a better understanding about trends in value and composition of banks financial instrument portfolios, they suffer from two main weaknesses: (i) subjectivity problems in value estimation; (ii) short term volatility in earnings due to changes in macroeconomic variables. Thus, based on the findings and conclusion of this study, the following recommendations are made:

a) The study recommends that the SEC and CBN should create an enabling environment for active corporate financial instruments market to improve the reliability of fair value measurements and promote the use of more observable inputs in the measurement of financial assets generally.

b) The regulatory agencies, such as FRCN, CBN, SEC, etc., should provide training and retraining on FV measurements via workshops and seminars for staff and management of DMBs to reduce complexity and unintentional measurement error. Also, training can improve any negative perception on FVA model by managers of these DMBs.

c) Lastly, the IASB is advised in the next amendment to IFRS 13 to consider input from emerging markets like Nigeria and bring FV level two assets into the disclosure component of the financial statement as done with FV assets level 3, to reduce room for manipulation with level 2 financial assets.

Limitations

Although effort is made to mitigate the potential effects of measurement errors and omitted variables by using AEQ measure to proxy EQ, but, only the accounting-based attributes were purposively selected for this study, the market-based attributes were left out, because, management does not have much control over the market-based attributes (Takacs & Suzucs, 2019). However, based on prior studies (Paoloni et al, 2017; Takacs et al, 2020), these omitted attributes limitation would not significantly affect the overall interpretation of the result concerning earnings information quality for investors' decision-making process.

Area for Further Study

Further studies are advised as follows; a) adopt the multidimensional construct of the EQ approach to the Non-financial sector and compare the result with the findings of this study. b) Attempt a similar topic in financial sector to examine the influence of CG mechanism on the above relation between FVA and EQ of DMBs in Nigeria.

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