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## Article

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## ACCOUNTING, CORPORATE GOVERNANCE & BUSINESS ETHICS | RESEARCH ARTICLE

# The value relevance of earnings in the return–earnings relation in the Nigerian Deposit Money Banks

Siyanbola Akeem Adetunji<sup>1\*</sup>

**Abstract:** This study was conceived to investigate the extent of relationship between accounting numbers and market values of listed Deposit Money Banks (DMBs) in Nigeria using the Easton and Harris model. Accounting information data were collected from the published financial statements of the sampled DMBs and the market value data were gathered through official daily list of the Nigerian Stock Exchange over a period of nine years (2004–2012). Multivariate regression was used to test the hypothesis of the study. The study established that accounting information of DMBs in Nigeria is value relevant. Though the result established value relevance of accounting information, however, earnings which is reputed to be the most value-relevant account information for financial services firms was found to be irrelevant as its coefficients and *p*-value were small and insignificant. The study recommends that the management of DMBs in Nigeria should improve on their earnings as doing so will prevent recurrence of stock market crisis of 2008 and 2009.

**Subjects:** Accounting; Corporate Governance; Financial Statement Analysis

**Keywords:** value relevance; accounting information; Easton and Harris

### 1. Introduction

The information content of accounting numbers in ascertaining security prices/returns has gained considerable attention in the finance and accounting literature recently. Ball and Brown (1968) are reputed to be the first to carry out a study to investigate the usefulness of general-purpose financial accounting report in determining the market value of equities. They were able to establish usefulness of accounting information through their findings that earnings are significantly related to share



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Siyanbola Akeem Adetunji holds a MSc Accounting degree from Bayero University Kano, Nigeria and BSc Accounting degree from University of Benin, Nigeria. His quest for Information Technology inspired him to attend a hands-on training on Oracle Database 10G and thereafter was awarded the Oracle Database 10G Associate and Professional Certificates. He has worked in a number of reputable organisations before enlisting in the service of Federal University Wukari, Nigeria. He has published in a number of refereed journal both within and outside Nigeria. He is happily married with children.

### PUBLIC INTEREST STATEMENT

There is a common belief that accounting information as reported by reporting entities has overbearing influence on the share price of the entities. To this end, a line of accounting research known as Capital Market-Based Accounting Research (CMBAR) evolved from the seminar work of Ball and Brown (1968). The CMBAR is essentially interested in the degree of statistical relationship measured as  $R^2$  that exists between accounting information and the market value of shares as reported on the stock exchange. This study tests the relationship using the returns model. The study established lack of statistical relationship between earnings and returns.

returns. Consequent upon that, many researchers have examined the relevance or otherwise of information content of accounting numbers in various stock markets around the world, mostly in the developed economy (Abubakar, 2011; Che, 2007; Oyerinde, 2011).

Value relevance (VR) research is located within the Capital Market-Based Accounting Research. By VR, it implies the degree of statistical relationship between information included in accounting statements and market value of equity or returns (Beisland, 2008; Barth, Beaver, & Landsman, 2001). This line of research evolves specifically to examine the extent of association between accounting information items (earnings, dividend and book value of equity) and a financial measure of value, for example, the market value of equity, share returns or future earnings. The main technique of analysis in this line of research is regressions, basically to test the existence and the degree of relationship between the stock market value of a firm and its accounting information. The higher the coefficient of determination  $R^2$ , the higher the VR of accounting information.

Banks are financial institutions that intermediate between the depositors of fund and the users of those funds i.e. the lenders. In Nigeria, the financial system is dominated by Deposit Money Banks (DMBs) (Alawiye-Adams & Babatunde, 2013). The DMBs are reputed to be the indispensable link in the economic value chain in Nigeria and throughout the world. The sector is so important to the extent that the bulk of transactions on the Nigerian Stock Exchange (NSE) is always in the banking sector. For instance, in 2012 it accounted for 53% in terms of volume and 54% in terms of value of total transactions carried out on the floor of the NSE (SEC, 2013). Despite its impressive performance on the NSE, available records, especially the stock market crisis of 2008–2009, have shown that the information content of general-purpose financial statements prepared by DMBs in Nigeria may not be related to its stock market value.

VR studies in developed countries are characterised by higher coefficient of determination, which signifies higher VR (Paglietti, 2009). Similarly, they found that on a general note the book value is relatively more value relevant than earnings for manufacturing firms. On the contrary, in the financial services firms earnings are relatively more value relevant than the book value (Paglietti, 2009). Similarly, Nigerian studies on VR have equally produced mixed result for instance, whereas Babalola (2012) concludes that earnings are more value relevant than book values, Oyerinde (2011) concludes that dividend is more value relevant than earnings and book value of equity. In the same vein, while Abubakar (2011) found accounting information of sampled firms in Nigeria to be less value relevant, Oyerinde (2009, 2011) and Thompson and Adah (2012) show that accounting information is value relevant.

All the previous studies on VR of accounting information known to the researcher such as Oyerinde (2009) cover a period of time in the past. For instance Oyerinde (2009) covers 2001–2004, Oyerinde (2011) covers 2002–2008, Karunaratne and Rajapakse (2010) covers the period 2004–2008. This shows that they relate to a certain time horizon in the past and considering the dynamic nature of accounting and inter-industry analysis, it is pertinent to conduct a study to fill the gaps of what is known about the state of VR of accounting information in Nigeria.

## 2. Literature review

VR is a term obtained from two words, value and relevance. Value is a word with divergent meanings subject to the view being expressed. Value in economics is the price or worth that a commodity will be exchanged for in an open and competitive market, which is determined primarily by the demand for the object relative to its supply (Keen, 2001). Thus, one may argue that economists equate the value of a commodity with its price, whether the market is competitive or not. To them, everything that has no market to set a price is perceived as a commodity because it lacks economic value. In sociology, value is defined as the way of life of a person, corporation or social group in which they are passionate about (either for or against). This is usually expressed in form of mission statement by corporations purposely to inform their teeming customers of their ideals. Values impact significantly

on a person's conduct and viewpoint and in most instances serve as reference point in all situations. Some common business values in principle and practice are fairness, integrity and innovation.

In accounting, value is the monetary worth of an asset, entity, goods, services liability or obligation acquired. For instance, there is fair value, which is the value to be received to sell an asset or paid to transfer a liability in an orderly transaction between market participants at the measurement date. Relatively, the book value is the consideration of an asset or a company that reflects the figures in the entity's statement of financial position (Tracy, 2013). Conventionally, this value is arrived at by deducting depreciation, amortisation or impairment costs made against the asset from the cost of the asset. Relevance is an accounting concept that the information produced by an accounting process should influence meaningfully the decision-making ability of its users (Bonham et al., 2009; Tracy, 2013). The concept of relevance revolves round the content of the accounting information and its timeliness, both of which can impact greatly on decision-making. In particular, information that is provided to users more quickly is considered to have an increased level of relevance (Figure 1 in Appendix).

In accounting research, studies investigating the empirical relationship between market-based share price or returns and specific accounting information (mostly book value of equity, earnings and dividend) specifically to assess extent of relationship between them are broadly referred to as the VR literature (Holthausen & Watts, 2001). It is according to them meant to satisfy the present and potential investors, in view of the fact that they constitute a sizable class of users of financial reports. The next section discusses the concept of accounting information.

### **2.1. Stock return and accounting information**

Prior research points out that since earnings and book value have the ability to reflect stock values and the variance in these values, they can be considered as relevant accounting information (Babalola, 2012; Che, 2007; Paglietti, 2009). Che (2007) examines the VR of accounting information and the relationship between market value and different types of shareholding in the context of China with a view to ascertaining if market valuation theory holds in emerging markets such as China. The study uses 3,520 firm-year observations that cut across all sectors of Chinese economy during 1994–2001. The results of pooled regression models find that the accounting information as reflected in the income statement and balance sheet are highly value relevant to investors in the Chinese equity market. Consequently, he suggests that market valuation theory can be applied not only to developed stock markets, but also to the evolving ones such as China as well as Nigeria.

Paglietti (2009) considers the strength of the relationship between earnings and stock returns as a proxy for VR. The study uses the Easton and Harris model and carried out empirical analysis on a sample of 960 firm-year observations concerning Italian-listed companies observed from 2002 to 2007. In summary, the study confirms VR of accounting information as well as overall increase in the VR under IFRS. In a study that dichotomises Korean listed firms into loss firms and profit firms, Kwon (2009) investigates whether their accounting earnings and book value have a nonlinear relationship to equity value. He performs analyses using Easton and Harris (1991) model for all samples and across subsamples divided into loss firms and profit firms, observing changes in relationships over a 20-year period. The result shows that profit firms have a linear relationship between equity value and accounting earnings, but loss firms do not. This is an indication of the fact that the VR of accounting information differs between loss firms and profit firms. It also reveals that accounting earnings is the most significant variable affecting the equity values of profit firms while book value affects the equity values of loss firms.

In a study similar to Kwon (2009), Kadri, Abdul Aziz, and Ibrahim (2009) investigate the VR of book value and earnings and the relationship between earnings and operating cash flow of two different financial reporting regimes in Malaysia using market and nonmarket valuation approaches. The result of the returns regression analysis shows that market valuation approach of pooled sample shows that book values and earnings are individually and collectively value relevant. The study also

shows that the change in financial reporting regime from Malaysian GAAP to IFRS affects significantly the VR of book value, but lacks significant impact on earnings.

Oyerinde (2009) is reputed to be the pioneer among studies relating to VR of accounting information in Nigeria. She investigates the VR of accounting data in the Nigerian stock market. She uses linear regression on a sample size that comprises 30 firms with highest earnings yield for a period of 4 years from 2001 to 2004. In its conclusion, the study shows that the Nigerian-listed firms' accounting information is value relevant. Adopting quite a different statistical technique, a larger sample size and period different from this study, Oyerinde (2011) investigates the VR of accounting data in the Nigerian stock market, purposely to determine whether accounting information has the ability to capture data that affect share prices of firms listed on the NSE. Secondary and primary data were used to investigate the VR of accounting numbers. The techniques of analysis employed were a combination of Ordinary Least Squared (OLS), Random-Effects Model, Fixed-Effects Model and Independent Samples *t*-Test.

The study reveals that accounting information of Nigerian companies is value relevant. Item-by-item analysis reveals that dividends are the most widely used accounting information for investment decisions followed by earnings and net book value of equity by Nigerian investors. The study finds that the contribution of accounting information of traditional companies (manufacturing companies) to changes in share prices is more than that of non-traditional companies (service providing companies). The study equally attests to the existence of significant but negative relationship between negative earnings and share prices of companies listed on the NSE.

Abubakar (2011) investigates the VR of accounting information reported by Telecommunication, Media and Technology (TMT) firms in Nigeria and how such information influences the share value of the firms. The study uses the Ohlson Model to establish the degree to which the accounting information of TMT firms influence share price valuation over a four-year period (2005–2008). The findings from the study revealed that accounting information of listed TMT firms in Nigeria has no significant VR to its users. The study thus, suggests that low VR of TMT firms accounting information may be attributable to the exclusion of value of intangibles in the financial statement.

Babalola (2012) investigates the VR of accounting information of listed companies across different sectors. It employs the logarithmic regression model to examine the interaction between the accounting numbers and market value of equity of listed firms in the NSE for period 1999 and 2009. Taking 40 companies from various sectors of the Nigerian economy as samples, he finds that earnings are more value relevant in driving its firms' value than book values.

This suggests that the information contained in the income statements, as ably represented by the earnings, dictates more of the corporate values of firms in Nigeria than the information contained in the balance sheet, as ably proxied by the book value. Though the study makes vital recommendations for improvement, it is silent on approaches adopted to arrive at its sample. Moreover, the share price used is the closing share price on the last day of the year. Considering the fact that share price is a high-frequency data, a study that uses an average value may produce a better result.

In summary, VR studies have been carried out by researchers in and outside Nigeria to examine the extent of relationship between the content of financial report of listed companies in Nigeria and the market value of their equities. It is observed that while some of the studies utilised only the price model, others combined the price and the return model and the common metric of interest is the  $R^2$ . In summary, most of the studies with the exception of few ones report value irrelevance of accounting information.

Considering the previous studies' findings summarised above, in order to provide direction for this research work, the study hypothesises that accounting information of Nigerian-listed DMBs is not value relevant.

### 3. Methodology

This study uses data from the annual report of listed DMBs in Nigeria for the period of 2004–2012, the official daily list of the NSE and the NSE Factbook. Those DMBs with missing observations for any variable in the model during the research period were dropped, and this resulted in a balanced panel data of 8 listed DMBs. The population of the study includes all the 15 listed DMBs, operating in the Nigerian banking industry as at 31 December 2012. For a bank to be included in the sample it must be listed on the NSE for a period not later than 2004 and must not have been involved in takeover, purchase and assumption agreement. Using the two-point filter as stated in this section, the study arrives at the sample size of 8 listed DMBs.

#### 3.1. The dependent variable

The dependent variable which is returns on share price of equity is the dividend-adjusted stock market return of firm at the fiscal year-end  $t$ . It is derived by deducting the preceding-year market value of equity from the current-year market value of equity and adding the current-year dividend to the subtraction. The whole is then divided by the preceding-year market value of equity. This is consistent with the position of Che (2007).

#### 3.2. The independent variables

The independent variables of this study are the deflated earnings per share and change in earnings per share. Deflated earnings per share are obtained by dividing the current earnings per share by the preceding-year market value of equity (Subramanyam & Venkatachalam, 2007). Change in earnings per share is given as the change in current earnings deflated by the preceding-year market value of equity (Alfaraih, 2009).

The variables in the model are the deflated versions of the basic variables as used in previous studies (Alfaraih, 2009; Babalola, 2012; Che, 2007). The advantage of deflated variables over the basic variables is to cater for the scale problem associated with the basic variables and control for heteroscedasticity as discussed in chapter two. Therefore, to mitigate the scale effect on the variables, researchers have resorted to the use of scale which is the preceding-year value of equity (Babalola, 2012; Ye, 2009).

#### 3.3. Model specification

This study uses the model formulated by Easton and Harris in 1991. The model was used to investigate the extent of relationship existing between security returns on one hand and earnings and change in earnings on the other hand.

Studies such as Babalola (2012) and Alfaraih (2009) that have examined the returns–earnings interrelationship posit that they are based on a statistical relationship that expresses market value of equity as a multiple of earnings. In fact, prior studies that have investigated relationship between stock market returns and accounting information argue that including earnings levels in the returns model is important for capturing all the components of earnings (Andriantomo & Yudianti, 2013; Barth et al., 2001).

This study has taken guidance from some prior studies highlighted above. Hence, Easton and Harris (1991) model was modified to include the earnings level and earnings changes scaled by opening share price. This is necessary so as to control for heteroscedasticity. Consistent with prior studies, the basic returns model for this study is:



$$RET_{jt} = \beta_0 + \beta_1 EMV_{jt} + \beta_2 CEMV_{jt} + \varepsilon_{jt} \quad (1)$$

where  $RET_{jt}$ , the total share returns, is the returns on share price measured as the current market value of equity minus the opening market value of equity plus the current dividend all deflated by the opening market value of equity;  $EMV_{jt}$  is the current earning deflated by the opening market value of equity,  $CEMV_{jt}$  is the change in earning from period  $t-1$  to period  $t$ ;  $\beta_n$  is the coefficient of the variables signifying the rate at which a unit change in the independent variables will influence change in dependent variable using the assumption that all other independent variables are held constant and  $\varepsilon_{jt}$  is the error term.

To investigate the explanatory power of each of the variables separately, Equation (1) is further broken down into the following equations:

$$RET_{jt} = \beta_0 + \beta_1 EMV_{jt} + \varepsilon_{jt} \quad (2)$$

$$RET_{jt} = \beta_0 + \beta_2 CEMV_{jt} + \varepsilon_{jt} \quad (3)$$

where the variables remain as they have been defined in this section.

#### 4. Discussion of findings

Table 1 is the tabular presentation of the descriptive statistics of the variables used in this study. Returns on share price of DMBs equity stood at the average of 0.13. This tells us that on the average investors in the DMBs in Nigeria realise a gain of 13% annually from their investment in the DMBs. The maximum value 22 and a negative minimum value (−0.72) show that there is a wide dispersion between the two values. This is an indication of the fact that while some of the banks performed well in terms of return to shareholders, others did not perform satisfactorily in the period under review. The standard deviation of 0.74 provides evidence of wide dispersion among the DMBs in terms of their earnings and dividend payment. However, a comparative analysis with other studies such as Beisland (2008) and Alfaraiah (2009) who obtained 0.22 in Sweden and 0.19 in Kuwait respectively, shows that the value of DMB in Nigeria as measured through the return on shares is relatively low.

The earnings to market value is relatively higher than the earnings to book value. This confirms our market-to-book value variable, which shows that on the average, the market value to book value is less than 1. With a maximum value of 0.79 and minimum value of −2.43, it has an average value and standard deviation of 0.02 and 0.36, respectively. The negative value tells us that some of the banks incur loss in the period 2005–2012. The obtained mean value of 0.02 is the same mean value obtained by Che (2007). The change in earnings variable shows that the earnings in the period experience decline. The mean value of −0.001 shows that the banks in the period under review realise earnings but their current earnings are relatively lower than their immediate past reporting period earning. This may not be unconnected with regulatory intervention of the CBN which began with the elimination of toxic assets in 2009–2010 to reduction in commission on turnover in 2011. These policies have affected the banks' revenue and reduced burden of excessive charges on the depositors.

**Table 1. Descriptive statistics of dependent and independent variables**

Variable	RET	EMV	CEMV
Observation	64	64	64
Mean	0.13	0.02	−0.001
Standard deviation	0.74	0.36	0.01
Min	−0.76	−2.43	−0.03
Max	22	0.79	0.03

Source: Compiled from the NSE Factbook and financial reports of sampled DMBs (2004–2012).

**Table 2. Correlation matrix share price returns, earnings, change in earnings, age and size**

	RET	EMV	CEMV
RET	1.0000		
EMV	0.1400	1.0000	
	0.2697		
CEMV	0.3642*	0.3040*	1.0000
	0.0031	0.0146	
AG	-0.1681	-0.1452	-0.1562
	0.1843	0.2524	0.2177
LNSZ	0.0551	0.1408	0.3241*
	0.6655	0.2672	0.0090

Source: Generated by the researcher through Stata 12.0 statistical software.

\*Signifies 5% level of significance.

Table 2 presents the result of Pearson correlation on earnings, changes in earnings, age of the bank, size of the bank and the share price return for all the sampled banks. It shows the  $p$ -value as well as the correlation coefficient. From Table 2, it is evident that the return on DMBs equity and the earnings component of the model have no significant relationship due to a correlation coefficient of 0.1400, which is closer to 0 than 1. This is supported by the  $p$ -value of 0.4138 which is greater than 0.050.

On the contrary, return on share price of DMBs and the change in earnings have a relatively high correlation coefficient of 0.3642 ( $p$ -value, 0.0031) which means value of DMBs in Nigeria is influenced significantly by the change in earnings. Relatively, the age of the bank and size of the bank show evidence of non-correlation with the share return. A critical look at the correlation coefficients and  $p$ -values among the independent variables shows absence of multicollinearity.

#### 4.1. VR of accounting information of DMBs in Nigeria

VR research is meant to test the degree of relationship between market value of equity as reflected in the price on the stock exchange and returns on those shares on the right-hand side and the earnings, dividend, book value, change in earnings and other accounting information on the left-hand side. This study tested the VR of accounting numbers as reported in the published financial statements of listed DMBs against the accounting information in form of deflated earnings, book value, change in book value, change in earnings and dividend for the period 2004–2012. In conformity with the research methodology, an association study VR research requires the use of regression analysis purposely to arrive at the  $R^2$ , the  $t$ -statistic and the  $p$ -value of each of the models to test the hypothesis of the study.

#### 4.2. VR of earnings and changes in earnings

Table 3 reports the result of pooled and yearly cross-sectional regressions of return of Nigerian DMBs on the deflated earnings level and earnings changes using the returns model approach on Models 1, 2 and 3.

Table 3 presents the slope coefficients,  $t$ -statistics,  $R^2$  and adjusted  $R^2$  for Models 1, 2 and 3 using yearly data. The first four columns report the regression results for the full returns model (1). The yearly ordinary least squares (OLS) regressions show that the model is statistically significant with a  $p$ -value of 0.0126 and a  $R^2$  of 13% and adjusted  $R^2$  of 11%. Consequently, the regression equation for model 1 is as written in Equation (4):



**Table 3. Pooled and yearly cross-sectional regressions of annual share price returns on earnings level and earnings changes**

$RET_{jt} = \beta_0 + \beta_1 EMV_{jt} + \beta_2 CEMV_{jt} + \varepsilon_{jt}$ (1)								
$RET_{jt} = \beta_0 + \beta_1 EMV_{jt} + \varepsilon_{jt}$ (2)								
$RET_{jt} = \beta_0 + \beta_2 CEMV_{jt} + \varepsilon_{jt}$ (3)								
Year	$\beta_0 + \beta_1 EMV_{jt} + \beta_2 CEMV_{jt} + \varepsilon_{jt}$				$\beta_0 + \beta_1 EMV_{jt} + \varepsilon_{jt}$		$\beta_0 + \beta_2 CEMV_{jt} + \varepsilon_{jt}$	
	$\beta_1$	$B_2$	$R^2$ adj. $R^2$ (%)	F-stat.	$\beta_1$	$R^2$ adj. $R^2$ (%)	$B_2$	$R^2$ adj. $R^2$ (%)
2005	0.907267	87.83257	68	5.40	1.444206	51	129.6045	54
	(1.50)	(1.68)	56		(2.47)*	42	(2.65)*	46
2006	5.385992	-50.04939	78	8.87	2.332022	59	228966	29
	(3.35)*	(-2.07)*	70		(2.95)*	52	(1.55)	17
2007	18.71951	-11.34287	87	17.49	17.01789	87	75.48166	55
	(3.58)*	(-0.39)	82		(2.337)*	85	(2.73)*	48
2008	-0.1230958	-23.56548	92	29.78	-1.002254	92	-26.85	92
	(-0.06)	(-0.46)	89		(-8.27)*	91	(2.73)*	91
2009	1.859596	-399.67	69	5.53	0.2337271	27	43.4537	16
	(2.91)*	(-2.59)*	56		(1.50)	15	(1.07)	2
2010	-0.09606	477.4705	45	2.08	-0.3530024	6	489.8426	45
	(-0.19)	(1.91)	24		(-0.60)	-10	(2.22)*	36
2011	0.104131	-15.61065	4	0.11	0.0681944	2	-7.193326	1
	(0.44)	(-0.35)	-34		(0.35)	-14	(-0.19)	-16
2012	1.69392	18.57962	29	1.03	1.536051	28	-8.765596	0.3
	(1.43)	(0.30)	1		(1.53)	16	(-0.14)	-16
Pooled	0.066777	43.93903	13%	4.70	0.2891665	2%	45.15801	13%
	(0.26)	(2.83)*	11%		(1.11)	0.4%	(3.08)*	12%

Source: Generated by the researcher through Stata 12 statistical software.

\*Statistically significant at 5%.

$$RET = 0.159 + 0.067 EMV + 43.94 CEMV \quad (4)$$

In the first column, earning is positive and significantly associated with the return in 2006, 2007 and 2009. The relationship between both variables is negative and insignificant for 2008 and 2010 and positive but insignificant for 2005, 2011 and 2012. This is further corroborated by the findings of univariate regression as displayed in columns 5 and 6. The variable standing alone can only influence 0.4% of variations in the return of share of DMBs in the period 2005–2012.

On the contrary, the other variable change in earning is statistically significant with a pooled t-statistical value of 2.83 and a corresponding univariate analysis value of 3.08. Year-by-year analysis of the models shows that the variable is statistically significant in 2005, 2006, 2007, 2008, 2009 and 2010 with mixed signs. While the value is negative in 2006, 2008 and 2009, it is positive in 2005, 2007 and 2010. The variable standing alone has an adjusted  $R^2$  of 12%, which implies that it is able to predict or explain 12% of changes in the dependent variable.

Overall, the full model (1) is statistically significant with a  $p$ -value of 0.0126,  $F$ -value of 4.70 and adjusted  $R^2$  of 11%. This means that only 11% of the variations in the returns of DMBs in Nigeria are explained by earnings and changes in earnings. The results from regression of Models 1, 2 and 3 tell us that the accounting information (earnings and change in earnings) of DMBs in Nigeria through the return model can predict 11% of variation in the return on share. In view of the fact that prior VR

studies measure of VR is that the adjusted  $R^2$  must be greater than zero, we can say that both of them (earnings and change in earnings) can predict movement in return on shares of DMBs in Nigeria. Therefore, they are value relevant.

Relatively, findings from the model ( $R^2 = 11\%$ ,  $p = 0.0126$ ) show that it is relative to what was obtained elsewhere. For instance, Paglietti (2009) uses returns model on 960 firm-year observations for Italian-listed companies during 2002–2007 and reports that earnings level and earnings changes jointly account for 3% of cross-sectional variation in share price returns. The coefficients of earnings and changes in earnings in Paglietti's study which stood at 0.02 and 0.18 respectively are significantly lower than the corresponding value obtained in this study, 0.06 and 0.44 respectively. However, the explanatory power of this study which is 11% is relatively higher than the equivalent value obtained by Babalola (2012) of 6%. This suggests that the Nigerian DMBs have accounting information of earnings, and changes in earnings are relatively more value relevant than total information content of all listed firms on the NSE.

## 5. Conclusion

This study was conceived to measure VR of earnings in Nigerian DMBs. To achieve the stated objective we collect accounting information data (earnings and changes in earnings) from published financial reports of sampled DMBs. To guide against heteroscedasticity, we deflated the variables with the opening book value of equity. The results show that accounting information (earnings and change in earnings) is value relevant. The implication of this is that the general-purpose financial statements of Nigerian DMBs are able to capture information that affects returns of listed firms in the Nigerian Stock Market. Though the combined effect of both variables appear significant, earnings which is the most value relevant accounting information in financial services firm is found to be irrelevant in this study.

The findings of this study are interesting because it is the first to establish value irrelevance of earnings in financial services firm, but as in every research activity it faced some challenges. The sample is relatively small when compared with similar studies conducted in developed economies where established capital markets are fully developed. In spite of the observed weakness, the study's usefulness is not in doubt. Future researchers are enjoined to include other variables omitted to enhance the effectiveness of the result.

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## Appendix: Output of regression analysis

**Figure 1. Regression result for Model 1.**

```
. regress RET EMV CEMV
```

Source	SS	df	MS			
Model	4.63464195	2	2.31732097	Number of obs =	64	
Residual	30.067225	61	.492905328	F( 2, 61) =	4.70	
				Prob > F =	0.0126	
				R-squared =	0.1336	
				Adj R-squared =	0.1051	
Total	34.7018669	63	.550823285	Root MSE =	.70207	

  

RET	Coef.	Std. Err.	t	P> t	[95% Conf. Interval]	
EMV	.0667777	.2583186	0.26	0.797	-.4497624	.5833177
CEMV	43.93903	15.51343	2.83	0.006	12.918	74.96005
_cons	.1588645	.0885052	1.79	0.078	-.0181126	.3358415



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