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## EARNINGS QUALITY OF FIRMS IN THE NIGERIAN FINANCIAL SERVICES SECTOR

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**ABSTRACT:** *The paper uses panel data spanning from 2011 to 2015 to examine the differential earnings quality of Deposit Money Banks (DMBs) and insurance companies listed on the Nigerian Stock. We employ two proxies of earnings quality as dependent variables in running logistic regression and Generalised least square (GLS), all based on random effects, to test the hypothesis that DMBs are likely to exhibit higher earnings quality than insurance companies. We fail to document evidence to support our hypothesis. We recommend for research employing richer data set with more proxies of earnings quality.*

**KEYWORDS:** Earnings quality, Deposit money banks, Insurance companies, financial services sector.

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### INTRODUCTION

This study investigates the differential earnings quality of firms in the Nigerian financial services sector. The financial services sector of Nigeria is dominated by banks and insurance firms and the focus is the deposit money banks and insurance companies listed on the Nigerian Stock Exchange. We employ two proxies of earnings quality widely used in extant literature. In particular, consistent with Ball and Shivakumar (2005), Barth, Landsman, and Lang (2008), Givoly, Hayn, and Katz (2010), the study compares the earnings management and conservatism of deposit money banks and insurance companies.

This study is motivated by the dearth of empirical study on earnings quality in the financial services sector in Nigeria. Most of the studies on earnings quality concentrate on developed markets in the US, European Union, Australia and China and usually exclude firms in the financial services sector because of the unique reporting requirements of the sector. Studies of earnings quality in the financial services sector focus on firms in single subsector (Anandarajan, Hasan, and McCarthy, 2007; Barth, 1994; Beaty, Ke, and Petroni, 2002; Beaver, McNichols, and Nelson, 2003; Cornett, McNutt, and Tehranian, 2009; Dimitropoulos, Asteriou, and Koumanakos, 2010; Eccher, Ramesh, and Thiagarajan, 1996; Eckles, Halek, He, Sommer, and Zhang 2011). To the best of our knowledge, this paper is therefore among the first to examine the differential earnings quality between deposit money banks (DMBs) and insurance firms in Nigeria and elsewhere.

Several reforms are pursued to reposition the financial services sector. In this regard, the reforms seek inter alia: to attract external financing to the sector. Sun (2005) finds that high quality financial reporting improves capital allocation decisions. Biddle and Harry (2006) document evidence that higher quality accounting enhances investment efficiency by reducing information asymmetry between managers and outside suppliers of capital. It is therefore worthwhile examining the earnings quality of the financial services sector.

Using a sample of DMBs and insurance firms listed on the Nigerian Stock Exchange over the period 2011 to 2015 and employing panel data technique in running the regressions, we find no evidence that the earnings quality of DMBs is significantly higher than that of the insurance firms.

The rest of the paper is structure as follows: Section 2 provides the background information on the financial services sector and review of related literature and hypothesis development. Section 3 describes the methodology. Results and discussion of findings are presented in Section 4 while Section 5 contains the conclusion.

## **FINANCIAL SERVICES SECTOR AND REVIEW OF RELATED LITERATURE**

### **Financial services sector**

The financial services sector is dominated by banks and insurance firms. Banks and insurance firms act as financial intermediaries, mobilizing funds from the surplus units to the deficit units thereby facilitating the socio-economic development of the country. In particular, insurance companies promote socio-economic activities through risk transfer and indemnification for companies and individuals. Banks provide platform for payment in addition to mobilization of deposits for onward lending.

The Nigerian banking industry began with the establishment of the first bank in Nigeria, African Banking Corporation, in 1892. On the other hand, insurance activities in Nigeria formally began in the colonial days when foreign insurance companies granted trading companies insurance agency licenses (Adeyemi, 2005). The first of such insurance agency in Nigeria is Royal Exchange Assurance Agency which began in 1918 (Jegede, 2005). Ever since then there has been series of regulations. One of the most important regulations is the Insurance Act, 2003 and the establishment of the National Insurance Commission (NAICOM) as the apex regulator of the industry. The Banks and Other Financial Institutions Act (BOFIA) 1991 as amended makes the Central Bank of Nigeria (CBN) the apex regulator of the banking sector. Under the Acts, banks and insurance firms are to comply with the industry financial reporting requirements, especially approval of audited financial statements, the timeline for submission and publication of audited financial statements.

Since the commencement of formal banking and insurance business in Nigeria, there has been phenomenal rise and fall in the number of firms in the sector. As at December 31, 2015 there were fifty insurance firms and twenty four insured deposit money banks in Nigeria. Twenty eight insurance companies and eighteen insured DMBs are listed on the Nigerian Stock Exchange. The total asset and gross premium of the insurance industry stood at N701.4 billion and N302 billion as at the end of 2014 (Oshin, 2015). The Nigeria Deposit Insurance Corporation reported that insured DMBs recorded N32202.35 billion as total assets as at the end of 2015. The statistics show that the financial services sector is an engine of growth in Nigerian.

### **Literature review and hypothesis development**

The concept of earnings quality is fundamental in accounting and economics (Dichev, Graham, Harvey, and Rajgopal, 2013). This is not surprising as earnings are of great importance to investors, regulators, practitioners and researchers. Brown (1994) as cited in Deegan and Unerman (2011) offers explanations for this thus:

Four reasons are that, according to the Financial Accounting Standards Board, information about earnings and its components is the primary purpose of financial reporting, earnings are oriented towards the interest of shareholders who are an important group of financial statement users; earnings is the number most analysed and forecast by security analysts; and reliable data on earnings were readily available.

Sun (2005) finds that high quality financial reporting improves capital allocation decisions. Biddle and Hilary (2006) and Biddle, Hilary, and Verdi (2009) document that higher quality accounting enhances investment efficiency by reducing information asymmetry between managers and outside suppliers of capital. Bharath, Sunder, and Sunder, (2008) present empirical evidence that firms with poor accounting quality face significantly higher interest cost, lower maturity, and higher likelihood of posting collaterals.

Reported earnings depend on myriad of factors amongst which is the degree of legal enforcement and effectiveness of regulatory agencies, managerial discretions, ownership structure and dispersion, and firm performance. In addition to the reporting requirements as enshrined in the Companies and Allied Matters Act (CAMA), the listing and disclosure requirements of the Nigerian Stock Exchange and, Financial Reporting Council of Nigeria Act, the financial sector of Nigeria faces specific industry regulations with the Central Bank of Nigeria (CBN) and the National Insurance Commission (NAICOM) as apex regulators. While the CBN regulates the banking industry based on the provisions of the Banks and Other Financial Institutions Act of 1991 the NAICOM regulates the insurance industry based on the provisions of the Insurance Act, 2003. Iyoha (2009) finds that the CBN and NAICOM have differential impact on accounting practice. In 2009 the CBN conducted special examination into the books and affairs of DMBs and found massive earnings management practices and unethical practices resulting in the sack of five CEOs and takeover of five DMBs. This implication of this action is to compel banks to ensure high earnings quality. Sanusi (2010) submit that one of the very things that went wrong with the banking industry was inadequate disclosure and transparency about financial position of banks.

The demand hypothesis as advanced in Givoly et al (2010) predicts that firms with greater ownership dispersal face greater demand for high-quality financial reporting. Relative to insurance companies DMBs have greater ownership dispersal based on the number of shareholders. It therefor follows that DMB have incentives to commit to higher earnings quality.

Given the above discussion, this paper formulates the following hypothesis:

H1: Nigerian DMBs are likely to exhibit higher earnings quality than insurance companies.

## METHODOLOGY

### Data and Sample Selection

From the annual reports of DMBs and insurance firms downloaded from the firms' websites, we obtain the data for the period 2011 to 2015. The choice of this period is informed by the need to eliminate accounting standards as driver of earnings quality. The 2011 accounting data were restated in 2012 financial statements. The sample size is fourteen DMBs and twenty seven insurance firms. The sample selection criteria are shown in Table 1. We employ panel technique to gain data efficiency. The data collected were first subjected to normality test, multicollinearity test and Hausman test. The Hausman test shows that random effect model is preferred to fixed effect model.

### Empirical Model

Consistent with Ball and Shivakumar (2005), Barth, Landsman, and Lang (2008), Givoly et al (2010), the study adopts two proxies of earnings quality in formulating the empirical models.

Our first empirical model is based on earnings management. Prior studies suggest that certain patterns in earnings are indicative of the presence of earnings management. The higher the level of earnings management the lower the earnings quality. Burgstahler and Dichev, (1997) claim that the concentration of earnings number at or just above certain earnings threshold suggests the presence of earnings management. Following Lang, Raedy, and Yetman (2003) we divide the distribution of the earnings measure into bins with bin width of 0.01. We then we follow the convention in Barth, Landsman, and Lang (2008) to estimate the following logistic regression:

$$\text{Prob}(SPOS_{i,T}=1) = \Phi_0 + \Phi_1 \text{FIRM}_{i,t} + \Phi_2 \text{SIZE}_{i,t} + \Phi_3 \text{LEV}_{i,t} + \Phi_4 \text{CFO}_{i,t} + \Phi_5 \text{TURN}_{i,t} + \Phi_6 \text{GROWTH}_{i,t} + \varepsilon_{i,t} \dots (1)$$

Where:

$SPOS_{i,T}$  = a dummy variable coded 1 if firm i's earnings before tax and extraordinary item divided by total assets in year t is between 0 and 0.01, and 0 otherwise.

$\text{FIRM}_{i,t}$  = a dummy variable taking the value 1 if firm i is a bank in period t, and 0 otherwise.

$\text{SIZE}_{i,t}$  = firm i's natural logarithm of total assets in year t.

$\text{LEV}_{i,t}$  = firm i's total liabilities divided by total assets in year t.

$\text{CFO}_{i,t}$  = firm i's operating cash flow in year t divided by total assets in year t-1.

$\text{TURN}_{i,t}$  = firm i's gross premium or gross earnings in year t divided by total assets in year t-1.

$\text{GROWTH}_{i,t}$  = firm i's turnover growth in year t.

Based on the argument that DMBs face more effective regulatory and media scrutiny and therefore are likely to be committed to high earnings quality, we expect the coefficient on FIRM ( $\Phi_1$ ) to be negative and significant.

Our second empirical model is based on measure of earnings quality that shows the relationship between current net income and one-year-ahead operating cash flows. If current net income is informative about the performance of future cash flows, earnings quality is deemed high. Following Hope, Thomas and Vyas (2011) we present the following empirical model using Panel Least Square Method:

$$\text{CFO}_{i,t+1} = \psi_0 + \psi_1 \text{FIRM}_{i,t} + \psi_2 \text{NI}_{i,t} + \psi_3 \text{NI}_{i,t} * \text{FIRM}_{i,t} + \psi_4 \text{SIZE}_{i,t} + \psi_5 \text{LEV}_{i,t} + \psi_6 \text{GROWTH}_{i,t} + \varepsilon_{i,t} \dots\dots (2)$$

Where

$\text{NI}_{i,t}$  = firm  $i$ 's earnings before tax and extraordinary items in year  $t$  divided by total assets in year  $t-1$

$\text{NI}_{i,t} * \text{FIRM}_{i,t}$  = interactive term for  $\text{NI}$  and  $\text{FIRM}$

All other variables are as defined earlier. In equation (2), a greater coefficient on  $\psi_2 \text{NI}_{i,t}$  implies that net income ( $\text{NI}$ ) better relates to one-year-ahead operating cash flows. The differential earnings quality is captured by  $\psi_3$ . We expect  $\psi_3$  to be positive and significant as this implies that the DMBs' current accrual-basis net income provides a better prediction of one-year-ahead operating cash flows than the net income of insurance firms. A significantly positive coefficient -  $\psi_3$  - is deemed higher earnings quality.

## EMPIRICAL RESULTS

### Descriptive Statistics.

Table 2 provides the descriptive statistics used in the regressions. Panel A of Table 2 shows 0.362 and 0.041 as the mean of  $\text{SPOS}$  and  $\text{CFO}_{i,t+1}$ . Table 2 shows that DMBs have higher mean than the insurance firms and this is statistically significant at 10% level. However, the insurance companies exhibit higher mean of  $\text{CFO}_{i,t+1}$  than the DMBs. The comparison test shows that the difference is overwhelmingly significant. On the average DMBs are larger in size than insurance firms. In contrast insurance firms exhibit a higher mean of turnover than DMBs and this is overwhelmingly significant.

Table 3 reports correlation matrix for the dependent and independent variables in equation 1.  $\text{SPOS}$  is positively but insignificantly correlated with firm implying a rejection of our hypothesis. However,  $\text{TURN}$  and  $\text{GROWTH}$  are negatively and significantly correlated with  $\text{SPOS}$  suggesting the control variables have influence on earnings quality. Similarly, we present the correlation matrix of the variables employed in Equation 2 in Table 4. We observe only  $\text{FIRM}$  and  $\text{SIZE}$  are negatively correlated with the dependent variable at 5% level of significance. This provides preliminary evidence that net income of DMBs is not better than net income of insurance firms in predicting ahead one-year cash flow. The evidence is explored further in the regression analyses that follow.

The regression results are provided in Table 5 and 6 respectively. Table 5 reports the logistic regression result which is based on earnings management. From Table 5, we observe the coefficient on  $\text{FIRM}$  ( $\Phi$ ) is positive and significant ( $p > 0.009$ ). This suggests the DMBs are more likely than insurance companies to engage in earnings management to avoid reporting loss. This may be explained by the intense market pressure (Barth, Elliot, and Finn, 1999; Athanasakou, Strong, and Walker, 2011.) and greater analyst following especially the media (Fang and Peress, 2009) on the DMBs relative to the insurance companies. This result therefore does not support our hypothesis that DMBs are likely to exhibit higher earnings quality than insurance firms.

We report the regression result that uses measure of earnings quality that captures the relation between current net income and one year ahead operating cash flow in Table 5. Table 5 reveals the coefficient of the interactive term,  $\psi_3$ , is positive. This indicates that the net income of the DMBs is more predictive of future cash flow than the net income of the insurance companies. However, this result is not statistically significant ( $p > 0.385$ ). Thus we reject our hypothesis that states that DMBs are likely to exhibit higher earnings quality than the insurance firms.

All control variables in equation 2 are highly significant except growth. This is consistent with prior evidence in the literature, such as the political cost hypothesis (Cahan, 1992), earnings momentum (Myers, Myers, and Skinner, 2007), reporting incentives (Burgstahler, Hail, and Leuz, 2006).

## CONCLUSION

Earnings quality is found to be very to various stakeholders. This is more so of the financial services sector because of the significant role the sector plays in the economic development of the country especially the financial intermediation and risk management role. The paper predicts that DMBs are likely to exhibit higher earnings quality than the insurance companies. The results of regression analysis fail to support the hypothesis. The findings are inconsistent with the general perception of the quality of earnings posted by the insurance firms.

The result should be interpreted with caution because of the smallness of the sample size and deployment of only two proxies. Further research should seek to overcome these limitations.

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Table 1 : Sample selection Criteria

	DMBS		INSURANCE FIRMS		POOLED SAMPLE	
	# of firms	# of firm-years	# of firms	# of firm-years	# of firms	# of firm-years
Listed firms as at 31 <sup>st</sup> Dec 2015	18	90	28	140	46	230
Less bridged DMBS	3	15	-	-	3	15
	15	75	28	140	43	215
Less firm with incomplete data	1	5	2	10	41	200
	14	70	26	130	41	200
Less observation years with incomplete data	0	16	0	35	0	51
Data for Equation 1	14	54	26	95	41	149
Less further data loss due to data requirement of Equation 2	0	14	0	26	0	40
Data for Equation 2	14	40	26	69	41	109

Note: Sample span 2011 to 2015



**Table 2: Descriptive Statistics**

Variable	Panel B: Banks sample					Panel C: Insurance sample					Comparison Test	
	obs	mean	std dev	Min	Max	obs	mean	std dev	Min	Max	mean	t stat
<i>sp<sub>0</sub></i>	54	0.463	0.503	0	1	95	0.305	0.463	0	1	0.1577	1.89*
<i>cfo<sub>i,t+1</sub></i>	40	-0.005	0.088	-0.152	0.187	69.000	0.068	0.117	-0.150	0.372	-0.073	-3.72***
<i>ni<sub>i</sub></i>	40	0.021	0.023	-0.085	0.064	69.000	0.038	0.085	-0.226	0.217	-0.017	-1.55**
<i>size<sub>i</sub></i>	54	20.822	1.193	14.024	22.192	95.000	16.418	0.723	14.580	18.199	4.404	24.68***
<i>lev<sub>i</sub></i>	54	16.626	115.688	0.767	851.009	95.000	0.583	0.384	0.116	2.816	16.043	1.02
<i>cfo<sub>i</sub></i>	54	0.011	0.092	-0.152	0.352	95.000	0.060	0.106	-0.150	0.372	-0.049	-2.94***
<i>turn</i>	54	0.133	0.027	0.040	0.194	95.000	0.510	0.299	0.031	1.492	-0.377	-12.20***
<i>growth</i>	54	0.198	0.298	-0.646	1.501	95.000	0.376	1.877	-0.964	13.298	-0.178	-0.90

Level of significance denoted \* = 10%, \*\* = 5%, \*\*\* = 1%, all 2-tailed test

**Table 3; Correlation matrix relating to SPOS**

	spos	firm	szelevcfo	turn	growth		
spos	1.0000						
firm	0.1577	1.0000					
size	0.0231	0.9181*	1.0000				
lev	0.1099	0.1111	-0.1405	1.0000			
cfo	-0.2895*	-0.2274*	-0.1718*	0.0383	1.0000		
turn	-0.2331*	-0.6057*	-0.6154*	-0.0915	0.2296*	1.0000	
growth	-0.0142	-0.0568	-0.0150	-0.0519	0.0805	0.1076	1.0000

**Table 4. Correlation Matrix relating to net income predict one year-ahead operating cash flow**

	cfo <sub>i,t+1</sub>	firm	ni	firm*ni	szelev	growth	
cfo <sub>i,t+1</sub>	1.0000						
firm	-0.3160*	1.0000					
ni	0.0720	-0.1177	1.0000				
firm*ni	-0.1129	0.5935*	0.0930	1.0000			
size	-0.2668*	0.9522*	-0.0372	0.6439*	1.0000		
lev	-0.1180	0.4807*	-0.2796*	0.2519*	0.4256*	1.0000	
growth	-0.0337	-0.0642	-0.1130	-0.0303	-0.0318	0.1447	1.0000

**Table 5: Logistic regression of earnings threshold**

logpseudolikelihood = -97.564556			
Logistic regression	Number of obs	=	149
	Wald chi2(6)	=	26.88
Prob> chi2	=	0.0002	
Log pseudolikelihood = -71.681867	Pseudo R2	=	0.2653

	Coef.	Std. Err.	Robust z	P> z	[95% Conf. Interval]	
firm	4.659255	1.793153	2.60	0.009	1.14474	8.173769
size	-1.431848	.4012878	-3.57	0.000	-2.218357	-.6453382
lev	2.212099	.9860701	2.24	0.025	.2794366	4.14476
cfo	-7.710294	2.821001	-2.73	0.006	-13.23936	-2.181233
turn	-4.905037	1.185336	-4.14	0.000	-7.228254	-2.581821
growth	.0793936	.0923691	0.86	0.390	-.1016464	.2604337
_cons	23.86054	6.725728	3.55	0.000	10.67836	37.04273

Note: 0 failures and 1 success completely determined.

**Table 6: Regression based on the relation between net income and one year-ahead operating cash flow**

Random-effects GLS regression	Number of obs	=	109
Group variable: firmid	Number of groups	=	41
R-sq: within = 0.0981	Obs per group: min =		1
between = 0.0899	avg =		2.7
overall = 0.1114	max =		3
	Wald chi2(6)	=	10.78
corr(u_i, X) = 0 (assumed)	Prob> chi2	=	0.0954

  

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cfo <sub>i,t+1</sub>	Coef.	Std. Err.	z	P> z	[95% Conf. Interval]	
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firm	-.1422082	.0923448	-1.54	0.124	-.3232006	.0387842
ni	-.1305956	.1604375	-0.81	0.416	-.4450472	.1838561
firm*ni	.6870887	.7914167	0.87	0.385	-.8640595	2.238237
size	.0106337	.0191442	0.56	0.579	-.0268884	.0481557
lev	.017657	.0477499	0.37	0.712	-.075931	.1112451
growth	-.0093284	.00572	-1.63	0.103	-.0205394	.0018826
_cons	-.1090215	.3169384	-0.34	0.731	-.7302094	.5121663
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sigma_u	.05298811					
sigma_e	.08584163					
rho	.27590358	(fraction of variance due to u_i)				
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