

EARNINGS QUALITY AND FIRMS FINANCIAL PERFORMANCE: A MISSING LINK IN THE LISTED FIRMS IN NIGERIA

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Abstract

This paper examined the trend and impact of earnings quality on the financial performance of firms from the perspective of accounting information usefulness, aimed at resolving a missing link between current and expected firm performance, due to existing gap between managers and investors on information asymmetry and opportunistic earnings tendencies, in improving managerial and investment decisions and forecast abilities of the analysts towards increasing the level of earning quality and firm performance. The study proposed accounting-based earnings quality measures of accruals quality (AQ), earnings persistence (EPERS), earnings predictability (EPRED) and earnings smoothness (ESMOTH) as proxies to measure earnings quality and Tobin's Q to measure firm financial performance. A sample of 51 firms listed on the Nigerian Stock Exchange over the period of 2000-2016 were purposively selected. Panel data were extracted from the audited published financial statements. Descriptive and inferential statistics were used for the specified models. The findings revealed that earnings quality proxies jointly had a positive significant effect on the financial performance of the firms. Individual coefficient estimate of each of the variables revealed that AQ, EPRED and ESMOTH each had negative effect on Tobin's Q, while EPERS had a positive significant effect on Tobin's Q. The study recommended that analysts, investors, policy makers and other stakeholders should pay attention to the earnings consistency of time-series behavioral pattern of earnings as measured by predictability and persistence as a guide in managerial and investment decisions and forecasting of future earnings.

Keywords: Earnings quality, financial performance, Accruals quality, Earnings persistence, Earnings smoothness

INTRODUCTION

This study investigates the impact of earnings quality on firm performance of listed firms in Nigeria. Globally, there is high level of apprehension and reservations in the mind of interested stakeholders regarding the quality of reported earnings to guide investors in making informed investment and resource allocation decisions, analysts for forecast and projections purposes, managers for managerial decisions and growth sustenance, governments, policy makers and other market

participants, regarding the quality of earnings and financial report by which they make investment decisions and estimates (Liu, 2018). Financial reporting evaluations aim at having some characteristics required of relevance, reliability, transparency and clarity, while firms' performances and earnings persistence have been criticized and attributed to subjectivity and the view that the earnings persistence increases the perceived reliability (Richardson, Sloan & Soliman, 2005). The main aim of accounting measurement and financial reporting is to provide high quality financial reporting for decision making (FASB, 2010).

The uncertainties inherent in the capital market necessitate the investors to seek appropriate information to reduce the risk of moral hazard and adverse selection associated with resource allocation efficiency and portfolio diversification. Findings from prior literature on the impact of earnings quality on firm financial performance still remain unresolved and quite imprecise notwithstanding the various efforts by researchers to make it more accurate and to deliver a theoretical foundation (Dechow, Ge, & Schrand, 2010; Nelson & Skinner, 2013; Francis, Olsson & Schipper, 2006; Perotti & Wagenhofer, 2014; Walker, 2013).

The objective of this paper is to examine the trend and impact of earnings quality on the financial performance of firms from the perspective of accounting information usefulness, aimed at resolving a missing link between current and expected performance, due to existing gap between managers and investors on information asymmetry and opportunistic earnings tendencies, in improving managerial and investment decisions and forecast abilities of the analysts towards increasing the level of earning quality and firm performance. The rest of the paper is structured as follows: Section two discusses the conceptual, theoretical and related empirical studies. The section that follows, considers the methodology, and the next section, the data analysis, interpretation of results and discussions. The paper ends with conclusions and recommendation.

LITERATURE REVIEW

Earnings Quality: The concept and definition of earnings quality in literature are still unclear and there is no agreement on its exact definition and proxies of measure (Gaio & Raposo, 2011). However, its usefulness and properties in accounting literature cannot be ignored. Krishan and Parsons (2008) defines earnings quality as the degree to which reported earnings captures economic reality, in order to appropriately assess a company's financial performance. Francis, Olsson and Schipper (2006) postulate that one of the prime objectives of financial reporting in the capital market is to assist the participants in making judgments and informed investment decisions. In that respect, quality financial information is expected to assist the stakeholders with reliable and quality investment decisions (Ewert & Wagenhofer, 2012). Generally, poor earnings quality, opportunistic earnings and biased financial report create doubts and concern, regarding the credibility of such report for analysts, investors and market participants in making rational investment projections and decisions.

Earnings Persistence

Researchers have shown considerable interest in the measure of earnings quality and have explored the role played by earnings quality and information transparency in market effectiveness, suggesting that financial statements show an accurate and unbiased state of the company, giving a precise, timely, and transparent, persistence and comparable financial information (Dechow & Dichev, 2002). The

study of Schipper and Vincent (2003) defines earnings persistence as a measure of earnings quality revealing the sustainability of earnings. Other studies estimate earnings persistence as a regression of the future value of the variable on its current value (Dechow & Schrand, 2004; Oei, Ramsay & Mather, 2008). Earnings persistence shows the reoccurrence of earnings. The study of Prapaporn (2008) opines that earnings with low earnings persistence may not be an appropriate performance measure for chief executive officers (CEOs) because earnings may not signal their efforts.

Finally, we align our study with the argument of Dechow and Dichev (2002), that earnings quality should be a reflection of the underlying economic realities of a firm's overall performance. In this regard, earnings have the features of quality if it can be sustained in the future because investors desire repeatability or stability of performance and earnings. In relation to market share price, earnings persistence shows that the higher ability of a company to predict future earnings may indicate likely high market share price or higher earnings quality; on the other hand, the company's poor ability to predict future earnings shows poor earnings quality.

Financial Performance

Tobin's Q as a proxy for financial performance is a theory first postulated by James Tobin in 1969 used in traditional economic theory (Tahir & Razali, 2011). It specifies the percentage of the firm's financial performance as a ratio of the market value to the replacement cost of the firm's value. Tobin's Q (TQ) was earlier used to measure the performance of the company since it contains a combination of accounting book value and market value information, and seems to be free from managerial manipulation (Hoyt & Liebenberg, 2011). The approximate of Tobin's Q is derived from the product of the firm's share price and the number of common stock shares outstanding plus the firm preference stock plus total net debt divided by the book value of the total assets of the firm. Under Tobin's Q theory, a company is said to create market value if the company's return on investment is greater than the cost of investment.

Therefore, Tobin's Q (TQ) is the reflection of the market anticipations about future profitability against returns on assets or gross margin basis, which are connected to current profitability. Other previous studies used Tobin's Q as a proxy to measure market (Hoyt & Liebenberg, 2011). A low value of Tobin's Q between 0 and 1 could suggest that the cost to replace the company's assets is greater than value of its stock. Statistically, it could mean that the share is undervalued. On the other hand, a higher Tobin's Q (greater than 1) implies that a company's share is more expensive than the replacement cost of its assets, which also could suggest that the share is overvalued.

Empirical Review

Earnings Quality and Financial Performance

Findings from prior studies in earnings quality and firm financial performance are mixed, while some found positive, other found negative, yet found none. For example, Klapper and Love (2002) examined the relationship between corporate governance and financial performance employing Tobin's Q as a proxy for financial performance. The study uses data obtained from the Credit Lyonnais' Security Asia (CLSA) in the form of implementation of corporate governance ranking for 495 companies in 25 countries, the companies' performance in the study was measured using Tobin's Q as a measure of market value and return on assets as a measure of operational performance of the company. The study found a positive relationship between corporate governance and corporate financial performance.

Also, Al-Khouri, Magableh and Aldamen (2004) examined the relationship of managerial holdings with Tobin's Q and Research and development (R&D) expenditure of Japanese firms over the period 2000-2003. The study revealed a negative relationship between Tobin's Q and R&D, and that Japanese managers engaged in pursuing non-value-maximizing objectives. Tahir and Razali (2011) examined the relation between enterprise risk management and firm value in Malaysian public listed companies with Tobin's Q as the measure of firm value. The study was based on 2007 year for 528 companies. The study found that enterprise risk management is positively related to firm value but it is not significant. Building on Tahir et al. (2011) work, Georgeta and Stefan (2014) examined the relationship between financial intermediaries' ownership and firm value in Romania for a period of 2007-2011, using companies listed on the Bucharest Stock Exchange (BSE) using Tobin's Q as a proxy measure of firm financial performance of the companies listed in Romania. The study found that there exists a positive influence of Romanian financial investment on firm value but up to an ownership threshold of 2.7%, after which point the influence becomes negative. The study also found a positive influence of shareholding of all categories of financial intermediaries on firm value when considering the ownership of the investment funds and financial investment services companies but up to an ownership threshold of 50.3%.

Similarly, Wiyadi, Noer, Rina and Ichwani (2015) investigated the impact of information asymmetry, firm size, leverage, and profitability and employee stock ownership on earnings management. The study employed 191 companies listed in the Jakarta Islamic Index and 226 companies listed in LQ45 for the period of 2004-2013. The study findings indicated that information asymmetry had a positive effect on the earnings management in both indexes. That the employee stock ownership had a positive influence on the earnings management. The study seems to support agency theory that management could manipulate earnings if there is more information gap between principal and agent in the management of companies.

From the Indonesian market, Sabrin, Sarita, Takdir and Sujono (2016) examined the effect of firm performance (profitability) on firm value. The study employed secondary data obtained from manufacturing companies listed on the Indonesia Stock Exchange for a period of 6 years 2009-2014. The study found that profitability as a measure of firm performance using Tobin's Q has a positive effect on firm value. The study further found that dividend payment as a sign of profitability increases the firm share price. Tayebe, Jamal and Hamid (2016) examined the effect of firm size and financial leverage

on the relationship between cost management and the relevance of accounting information on the companies listed on the Tehran Stock Exchange. The study used 101 companies for period, 2004-2013 with Ohlson's pattern in which the relevance of earnings per share and book value per share were examined using market value per share. The study found that cost management significantly and positively affected share value. Also that cost management negatively influenced share value.

Furthermore, Sucuahi and Cambarihan (2016) examined the impact of profitability on firm value of diversified companies in the Philippines. The main objective of the study was to determine if there is significant influence between the company's profile such as industry, company age and its profitability and the firm value using Tobin's Q model. The study employed 86 diversified companies listed on the Philippines Stock Exchange. The result from the study, revealed that three factors influence value of the firm using the Tobin's Q model. That only profitability showed significant positive impact on the firm's value. The study concluded that Tobin's Q is considered as one of the best predictor of market correction and it can also explain the majority of the investment variability. However, Akben-Selcuk (2016) examined the likely future performance of a firm based on the current performance, the study investigated factors affecting firm competitiveness in the emerging market in Turkey. Tobin's Q was used in measuring company's financial performance of firms listed on Borsa Istanbul for a period of 9 years (2005-2014). Tobin's Q ratio revealed that firm's performance based on good return on assets utilization was positively related to firm size, sales, liquidity and growth. Furthermore, the study revealed that gross profit margin is positively related to size and intentional sales and also negatively related to leverage and research and development expenditure.

More so, Hossein, Kasravi and Fazil (2017) examined the impact of the management performance evaluation methods on the quality in accounting, considered firm performance. The study adopts Tobin's Q to measure the firm performance using 112 companies in Tehran Stock Exchange during the period of 4 years (2000-2013). The study found that earnings quality has a positive relation to management abilities using Tobin's Q.

The results of all these empirical studies revealed inconsistencies and the debate of the impact of earnings quality on firm financial performance is still unresolved. Consequently, there exists a paucity of literature and a researchable gap relating earnings quality and firm financial performance which is the crux of this study.

Theoretical Framework

This study is underpinned on stakeholder theory and decision usefulness theories. Stakeholder theory in literature, is accredited to Edward Freeman who states that any identifiable group or individual who can affect the achievement of an organization's objectives, or is affected by the achievement of an organization's objectives is a stakeholder (Freeman & Reed, 1987). Stakeholder implies that it is not only the investors or the shareholders who are affected by the company's objectives. It then means that the achievement and misfortune of the organizations affect all the stakeholders. The stakeholders include (shareholders, employees, creditors, political groups, government, trade unions, communities, and customers). The number of stakeholders tends to have increased since the corporate governance became prominent following the collapse of some prominent and high profile companies and the belief that firms with good and powerful corporate governance tend to perform better than firms with weak corporate governance.

It then means that the success or failure of firms does not depend on stakeholders with explicit contracts and financial interest but it rather depends on all the stakeholders with explicit and implicit contracts. Stakeholder theory is attributed to Freeman et al. (1987) who introduced it in 1984. Freeman contended that the firm exists primarily with the aim of serving and synchronizing the collective interests of those who benefit directly or indirectly from the activities of the firm (Schilling, 2000). The going concern and corporate objective of profit maximization and long term sustainability of the firm require managers with more sensitive approach to ensure the interests and benefits of all the entire stakeholders (Schilling,2000).

Stakeholder theory is relevant to this study as it relates to the complexities that arise between investors and managers who have more information about the company than the investors leading to information asymmetry, and the managers exploit this information gap to their personal advantage. Bridging the information gap, necessitated the Policeman theory and the theory of inspired confidence, to ensure some level of credibility and confidence in financial statements

Decision usefulness theory could also be traced back to 1955 (Eliwa, 2015). The theory assigns information usefulness to various users on the basis of their individual decision-making needs (Deegan & Unerman, 2011). Deegan and Unerman (2011) also argue that financial reporting should help other groups of users, like lenders and analysts to make useful decisions, as their needs differ from those of the investors. The existing accepted justification of financial reporting is to provide useful accounting information that make available the decision making needs of all stakeholder groups (Deegan & Unerman, 2011; Eliwa, 2015).

Accordingly, the IASB adopted the decision usefulness theory as the main criterion of its Conceptual Framework (2010) identifies six qualitative features of financial information usefulness, these are: relevance and faithful representation, others that enhance the decision usefulness that is already relevant and faithful represented includes: comparability, verifiability, timeliness and understandability (IFRS Foundation, 2010). This theory is relevant to this study basically on the firm value perspective in regard to investors' decision usefulness. The reasons, being that accounting information is fundamental for firm value determinations, and hence guide to investment decisions.

METHODOLOGY

The study employed secondary data sourced from the audited annual reports of the sampled firms. The study purposively selected 51 companies out of 173 listed companies for a period of 2000-2016 whose stocks had been actively traded for the period. Panel data were estimated using Unobserved Effects Model (UEM). The UEM can either be fixed effect or random effect depending on the assumption about the distribution of the unobserved components and the error term, and the stochastic process of the time series across i as well as the asymptotic properties of t and i with p -value > 0 . Series of test were carried out such as normality, multicollinearity, heteroskedasticity, variance inflation factor (VIF), Breusch–Pagan/Cook–Wesberg tests and Hausman test.

Model Specification

Dependent Variable

Financial Performance: In this study, financial performance is measured using Tobin's Q. Tobin's Q is a measure of market valuation premiums, defined as the ratio of market value to replacement value of the firm's assets (Gaio & Raposo, 2011). A value greater than one indicates that the firm is using its resources effectively and thereby is creating economic value. In this study, because of the difficulty in estimating the market value of debt and replacement costs, the study adopted Gaio and Raposo (2011) model and follow common practice to compute Tobin's Q as:

$$TQ_{it} = \frac{(BVA_{it} + MVE_{it} - BVE_{it})}{BVA_{it}} \quad \text{Equation (1)}$$

(Please check if this model is correctly reproduced here!)

Where

TQ_{it} = the Tobin's Q value of firm i in year t;

BVA_{it} = the book value of total assets of firm i in year t;

MVE_{it} = the market value of common equity of firm i (computed as stock price X the number of common shares outstanding in year t

BVE_{it} = the book value of equity (total shareholders' fund) of firm i in year t.

Although Tobin's Q is widely used, it has its limitations and it is not a perfect measure of firm value (Gaio et al., 2011). Gompers, Ishii and Matrick (2003) pointed out several problems with using Tobin's Q in ordinary least square pooled cross-sectional and time series regressions. The study addresses this by our use of panel data and multi regressions.

Independent Variables

The study adopted accounting-based earnings attributes (Accruals Quality, Earnings Persistence, Earnings Predictability and Earnings Smoothness) instead of market-based accounting attributes because the former is associated with how a company's cash flows from operations have transformed into reported earnings in line with this study. These proxies demonstrate different angles of earnings quality (Dechow et al., 2010; Francis et al., 2004; Walker, 2013). In particular, accruals quality proxy reflects to what extent working capital accruals map into last period, current, and next-period cash flow from firms operations (Dechow & Dichev, 2002; Eliwa, 2015).

Accruals Quality

This study calculated accrual quality based on DD model, modified by Francis et al. (2005) as the measure of accruals. This considers how well the firm's accruals in the present year t match its cash in the previous period (year $t-1$), present period (year t), and next period (year $t+1$):

$$TCA_{it} = \hat{\alpha}_0 + \hat{\alpha}_1 CFO_{it-1} + \hat{\alpha}_2 CFO_{it} + \hat{\alpha}_3 CFO_{it+1} + \hat{\alpha}_4 \Delta REV_{it} + PPE_{it} + \hat{\alpha}_{it} \quad \text{Equit. (2)}$$

Where

$$CFO_{it} = NIBE_{it} - (\Delta A_{it} - \Delta Cash_{it}) - (\Delta CL_{it} - \Delta STDBET_{it})$$

TCA_{it} = Total Current Accrual: the firms' accruals in year t , which equals the current assets change in year t minus current liability changes, minus the changes of cash and cash equivalent changes in year t plus change of short-term liability with interest in year t , QA The change in current assets; $\Delta Cash$ the change is cash/cash equivalent; ΔCL the change in current liabilities; $\Delta STDBET$ = the change in short term debt; CFO_{it} = the firms operating cash flow; REV the change in revenue; while; PPE_{it} = the property, plant and equipment while $NIBE$ = net income before extra-ordinary items.

The regression residual means unrealized cash flow, which is absolute to the companies' expected accruals. As expected, the standard deviation of residuals of all observation residuals is to measure the companies' accruals quality.

Earnings Persistence

Following prior literature, the persistence of firms' earnings are measured as the non-constant (slope) coefficient obtained after regressing current earnings before interest and tax (EBIT) on its past value (Francis et al., 2004). Consistent with Francis et al. (2010), earnings persistence is measured as follows:

$$NIBE_{it} = \gamma_{oi} + \gamma_{1i} NIBE_{it-1} + U_{it} \quad \text{Equation (3)}$$

Where;

$NIBE_{it}$ = net income before extraordinary of firm

$NIBE_{it-1}$ net income before extraordinary items of firm i in year $t - 1$

γ_{oi} constant (intercept) coefficient; γ_{1i} the non-constant (slope) coefficient; U_{it} = the residual (error term). Using maximum likelihood regression estimation techniques and 5 year rolling windows, the equation above is estimated for each panel. The regression coefficient γ_{1i} indicates the level of earnings persistence; with a larger γ_{1i} indicate higher earnings persistence. Persistence earnings are seen as higher-quality earnings if they are sustainable (Gaio & Raposo, 2011).

Earnings Predictability

Lipe (1990) provided an earning predictability measure based on the variance of earnings shocks, where higher variance implies lower predictability. This study adopts Gaio and Raposo (2011); Hashem, Hamidreza, Fraydoon, Ghodratollah, and Peyman (2011), and therefore, derive earning predictability measure from equation (3) as the square root of the estimated error variance. Earnings

Predictability describes the ability of the firm's current earnings to predict its future earnings. Therefore, earnings predictability is measured using the same model as that of earnings persistence. Consistent with Raposo (2011), the earnings predictability model is specified:

$$EPRED_{it} = \sqrt{\sigma^2(\hat{U}_{it})} \quad \text{Equation (4)}$$

The standard deviation of the \hat{U} -residual obtained from the regression can be used to measure the prediction error in the companies' earnings, with larger \hat{U} -residual indicating poorer earnings predictability or accounting numbers quality. A higher value of EPRED indicates a lower degree of earnings predictability. While EPERS is related to both the level of earnings and the variability of innovation series, EPRED is related only to the variability of innovation series (Gaio et al., 2011).

Earnings Smoothness

The study measures earnings smoothness as the percentage of the firm-level standard deviation of earnings and the standard deviation of the operating cash flow as used in the Gaio & Raposo (2011) study. The study measured earnings smoothness using the following:

$$ESMOTH_{i,t} = \frac{\sigma\left(\frac{NIBE_{it}}{TA_{i,t-1}}\right)}{\sigma\left(\frac{CFO_{it}}{TA_{i,t-1}}\right)} \quad \text{Equation (5)}$$

Where: $NIBE_{it}$ = the firm's net income before extraordinary items in year

CFO_{it} = cash flow from operation of firm i in year t . $TA_{i,t-1}$ = cash total asset of firm i in year $t - 1$

Value < 1 implies greater variability in operating cash flows than in earnings, meaning the use of accruals to smooth earnings. Therefore, a higher value of smooth indicates less earnings smoothness. Since smoothness as desirable attribute of earnings, and therefore lower earnings smoothness implies poorer earnings quality (Leuz et al., 2003; Gaio et al., 2011).

The panel model for the study is specified thus:

$$Y = \hat{\alpha}_0 + \hat{\alpha}_1 X_{it} + \hat{\alpha}_{it} \quad \text{Equation (6)}$$

Where:

Y = Dependent Variable

X = Dependent Variable

$\hat{\alpha}_0$ = the regression intercept which is constant $\hat{\alpha}_1, \hat{\alpha}_2$ = the coefficient of the explanatory variable

$\hat{\alpha}$ = the error term of the model, i = cross-sectional variable from 1, 2, 3, ..., 51. t = time series variable from 2005, 2006, ..., 2015

Hypothesis

Resulting from the literature review and arguments as presented in studies (Gaio & Raposo, 2011; Eliwa, 2015) gave a great motivation in this study in bridging the gap of operating environment peculiarities: microeconomics factors, political instability, and corruption perception index profile of

the emerging economies like Nigeria differ from those of the advanced economies where some of the said studies were carried out. This study, therefore, investigates possible missing link among managers and the expected performance reconciled by the quality of earnings. Arising from the identified variables of dependent and independent variables, the hypothesis formulation:

Hypothesis- H01: Earnings quality does not have significant impact on firm financial performance of the listed Companies in Nigeria.

Pooled Regression Models

The starting model is the pooled regression model where it is assumed that any heterogeneity across firms has been averaged out.

3.1.1 Earnings quality and financial performance of quoted companies in Nigeria

$$TQ_{it} = \gamma_0 + \gamma_1 AQ_{it} + \gamma_2 EPERS_{it} + \gamma_3 EPRED_{it} + \gamma_4 ESMOTH_{it} + \hat{a}_{it}$$

Where

TQ = Tobins's Q; *AQ* = Accruals Quality; *EPERS* = Earnings Persistence; *EPRED* = Earnings Predictability; *ESMOTH* = Earnings Smoothness.

γ_0 = Constant; $\gamma_1, \gamma_2, \gamma_3, \gamma_4$ = models coefficients; \hat{a} = Error term

The subscript i represents the entity of each quoted firm (51 firm), while subscript t represents the year, t = 2005... 2015. The models for Fixed and Random effects are presented below.

Random Effect Model

The random effect model assumes that the individual heterogeneity is uncorrelated with (or, strongly, statistically independent of) all the observed variables. Going by this assumption the following models are specified:

$$TQ_{it} = \gamma_0 + \gamma_1 AQ_{it} + \gamma_2 EPERS_{it} + \gamma_3 EPRED_{it} + \gamma_4 ESMOTH_{it} + V_{it}$$

Where $V_{it} = a_i + \hat{a}_{it}$ is often called the composite error.

Fixed Panel Regression Model

The fixed effect model assumes that individual heterogeneity is captured by the intercept term. This means every individual is assigned its intercept while the slope coefficients are the same, and the heterogeneity is associated with the regressions on the right hand side. In the model also we introduced dummy.

$$Tq_{it} = \gamma_0 + \gamma_1 AQ_{it} + \gamma_2 EPERS_{it} + \gamma_3 EPRED_{it} + \gamma_4 ESMOTH_{it} + \sum_{i=1}^{n-1} D_i + \hat{a}_{it}$$

RESULTS AND DISCUSSION

Correlation Matrix

This section presents the results of preliminary correlation analyses among the variables. The results serve two important purposes. The first purpose is to determine whether there are bivariate relationship between each pair of the dependent and independent variables considered in this study. The second is to ensure that the correlations among the explanatory variables are not so high to the extent of posing multicollinearity problems.

Table 1: Correlation Matrix

	MSP	BV	TQ	AQ	EPERS	EPRED	ESMOTH
MSP	1	0.603*	0.524*	-0.068	0.069	0.001	-0.021
BV		1	0.031	-0.053	0.061	-0.128*	-0.059
TQ			1	-0.038	0.079	0.244*	0.086*
AQ				1	-0.061	0.118*	-0.069
EPERS					1	0.017	0.097*
EPRED						1	0.241*
ESMOTH							1

Source: Authors' Computation, underlying data from annual reports of firms listed on NSE. MSP = Market Share Price. BV = Book Value. TQ = Tobin's Q. AQ = Accrual Quality. EPERS = Earning Persistence. EPRED = Earnings Predictability. ESMOTH = Earnings Smoothness. The earnings quality indicators are computed using a 5-year rolling window. * P-value < 0.05

The result in Table 1 shows that there is no evidence of multi-collinearity among the variables given the fact that the correlations among the independent variables are generally weak. Specifically, the result shows that positive and significant association exists between BV and MSP ($r = 0.603$). TQ is positively and significantly correlated with MSP ($r = 0.524$) whereas it is positively but insignificantly correlated with BV ($r = 0.031$). AQ is negatively and insignificantly associated with MSP, BV and TQ with the correlation coefficients of -0.068, -0.053 and -0.038, respectively. EPERS is positively and insignificantly correlated with MSP, BV and TQ ($r = 0.069, 0.061, 0.079$). Conversely, negative and insignificant correlation (-0.061) exists between EPERS and AQ. Also, EPRED is positively but insignificantly correlated with MSP ($r = 0.001$). Nevertheless, it is positively and significantly correlated with TQ ($r = 0.244$) while it is negatively and significantly correlated with BV ($r = -0.128$) at 5% levels of significance.

Variance Inflation Factor

For robustness, the variables considered in this study are subjected to multicollinearity test using variance inflation factor (VIF) and the result is presented in Table 2. VIF that is not above 10 and a tolerance value that is approaching 1 indicate no harmful effect of multicollinearity (Field, 2005).

Table 2: Variance Inflation Factor

Variable	Model	
	VIF	1/VIF
EPRED	1.08	0.924
ESMOTH	1.08	0.925
AQ	1.03	0.973
EPERS	1.01	0.988
Mean VIF	1.05	

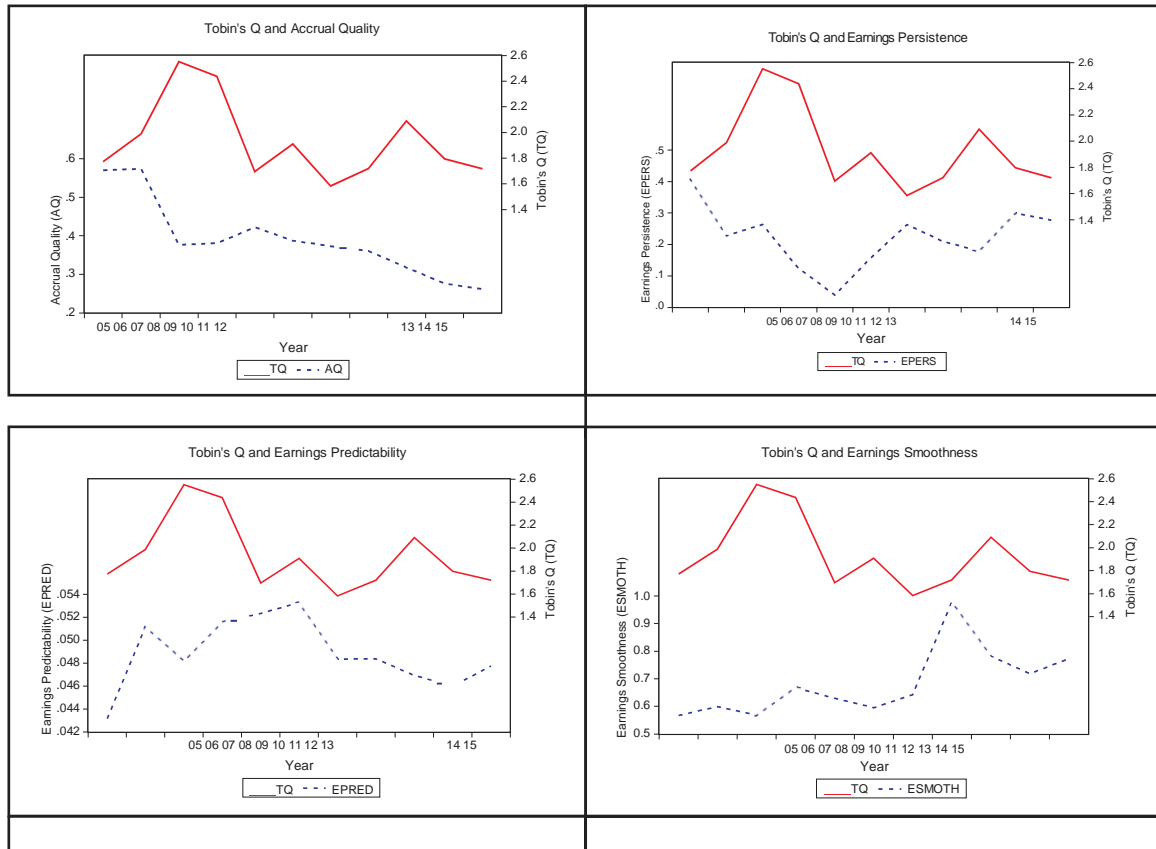
Source: Authors' Computation, 2018, underlying data from annual reports of firms listed on NSE. MSP = Market Share Price. BV = Book Value. TQ = Tobin's Q. AQ = Accrual Quality. EPERS = Earning Persistence. EPRED = Earnings Predictability. ESMOTH = Earnings Smoothness. The earnings quality indicators are computed using a 5-year rolling window

EPRED, ESMOTH, AQ and EPERS have VIF values of 1.08, 1.08, 1.03 and 1.01 in the panel. Also, the corresponding reciprocal of tolerance was close to 1. These indicate that the variables under consideration are not perfect linear combination of each other. The results display none of the VIFs are above three, this further suggests that multicollinearity does not pose a problem to the regression analysis.

Trend of Financial Performance (Tobin's Q) and Earnings Quality Indicators

As evident in Figure 1, Tobin's Q (TQ) grows by 2.97% between 2005 and 2016. It peaks at 2.55 in 2007. The accrual quality (AQ) and earnings persistence (EPERS) fall by 54.07% and 32.12% respectively between the period while earnings predictability (EPRED) and earnings smoothness (ESMOTH) rise by 10.66% and 36.27%, respectively, between the period with some fluctuations. These indicate that AQ and EPERS move in the direction of TQ suggesting that the TQ of the companies reduces as the two earnings quality proxies worsen over time. In the growth trend of EPRED and ESMOTH, there could be situations of departure between the trend EPERS, ESMOTH and MSP in recent years. The likely reason for the growth in Financial Performance (Tobin's Q) during the period could be a reflection of the political and economic stability, and gradual effect of various economic policies put in place by the democratic government after a protracted military rule in Nigeria, while the decrease during the period particularly, the Accruals quality and earnings persistence could be due to cash flow variabilities from operations and overheads cost of companies during the period. The impact of some microeconomic variables like interest rates and inflationary fluctuations could also be responsible.

Figure 1: Trend of Tobin's Q and Earnings Quality Indicators



Source: Authors' computations (2018)

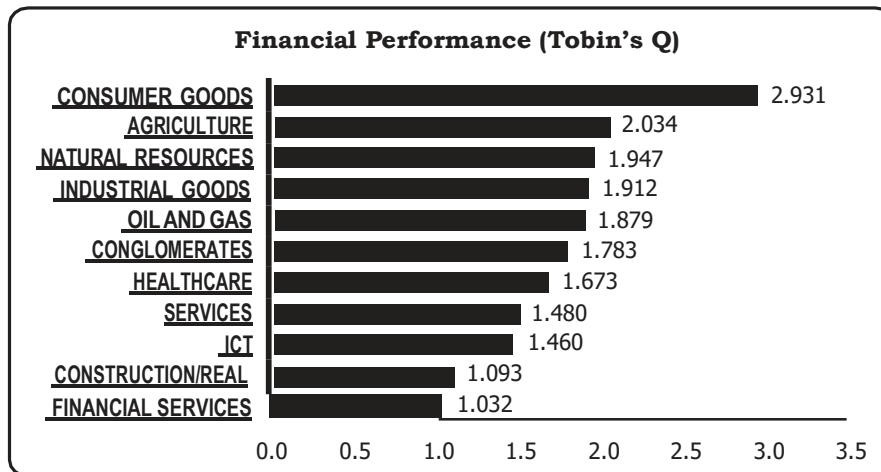


Figure 2: Average Value per sectors of the economy.

Source: Authors' computation (2018)

The study revealed that the consumer goods sectors performed better among the other sectors with 2.931 while the financial services contributed the least with 1.032.

Financial Performance and Earnings Quality Indicators

The post estimation tests' results - Jarque-Bera test for normality 4096.00 (p = 0.000) and Breusch–Pagan/Cook–Wesberg test for heteroskedasticity 84.140 (p = 0.000) for the lead model (in Column 3 of Table 3) showed evidence of no normality and heteroskedasticity. Nevertheless, the panel robust standard error that was employed in this study addresses the heteroscedasticity problem and no normality is ignored.

Table 3: Financial Performance and Earnings Quality Indicators

Main model $TQ_{it} = \gamma_0 + \gamma_1 AQ_{it} + \gamma_2 EPERS_{it} + \gamma_3 EPRED_{it} + \gamma_4 ESMOTH_{it} + \hat{a}_{it}$ (1)

Random Effect model: $TQ_{it} = \gamma_0 + \gamma_1 AQ_{it} + \gamma_2 EPERS_{it} + \gamma_3 EPRED_{it} + \gamma_4 ESMOTH_{it} + V_{it}$ (2)

Fixed Effect model: $Tq = \gamma_0 + \gamma_1 AQ + \gamma_2 EPERS + \gamma_3 EPRED + \gamma_4 ESMOTH + \sum_{i=1}^{n-1} D_i + \hat{a}_{it}$ (3)

Variables	(1)			(1)			(1)		
	OLS			OLS			OLS		
	Coeff.	t-stat	P-value	Coeff.	t-stat	P-value	Coeff.	t-stat	p-value
AQ	-0.102***	-3.05	0.002	-0.039	-1.34	0.180	-0.029	-0.94	0.352
EPERS	0.136*	1.92	0.055	0.068	1.24	0.215	0.054	1.01	0.316
EPRED	7.958***	4.07	0.000	-1.775	-0.82	0.410	-3.499	-1.41	0.164
ESMOTH	-0.029	.38	0.708	-0.013***	-3.48	0.001	-0.014***	-3.74	0.000
Constant	1.535***	17.72	0.000	2.032***	9.37	0.000	2.116***	17.89	0.000
Observations		561			561			561	
R-squared		0.070			0.018			0.020	
Adj.R-squared		0.063			0.010			0.013	
Year Effect		NO			NO			NO	
F-test		7.26			20.71			NO	
Prob > F		0.000			0.000			5.472	
Hausman [Prob.]							31.26 [0.000]	0.001	
LM Test [Prob.]		714.890 [0.000]							
Post Estimation Test									
Jarque-Bera Normality Test [Prob.]								4096.00 [0.000]	
Breusch-Pagan test Heteroskedasticity[Prob.]								84.140 [0.000]	

Source: Authors' Computation, 2018. Underlying data from annual reports of firms listed on NSE. MSP = Market Share Price. BV = Book Value. TQ = Tobin's Q. AQ = Accrual Quality. EPERS = Earning Persistence. EPRED = Earnings Predictability. ESMOTH = Earnings Smoothness. The earnings quality indicators are computed using a 5-year rolling window. The dependent variable is the Tobin's Q (TQ). *** P-value<0.01, ** P-value<0.05, * P-value <0.1

$$\text{Tobin's Q} = 2.116 - 0.029\text{AQ} + 0.054\text{EPERS} - 3.499\text{EPRED} - 0.014\text{ESMOTH}$$

The coefficient estimated for Accruals quality (AQ) Earnings predictability (EPRED) and Earnings smoothness (ESMOTH) as measures of earnings quality each has negative effect on financial performance (TQ), Earnings persistence (EPERS) has a positive effect on financial performance of Nigerian quoted companies. These are indicated by the sign of their respective coefficients ($\hat{\alpha}_1 = -0.029$; $\hat{\alpha}_3 = -0.3.499$; $\hat{\alpha}_4 = -0.014$) < 0 ; while $\hat{\alpha}_2 = 0.054 > 0$. Thus, AQ, EPRED and ESMOTH are not in tandem with expectation, while EPERS is consistent with a priori expectation.

Based on the coefficient of the variables, the result of this study further reveals that an increase in earnings persistence will lead to an increase of 0.054 on financial performance (Tobin's Q) while increase in accruals quality, earnings predictability and earnings smoothness will lead to a decrease of 0.029, 3.499 and 0.014 respectively in financial performance of the companies.

On the basis of Breusch and Pagan Lagrangian multiplier test for random effects result which is 714.89 ($p = 0.000$), the study fails to accept the null hypothesis of "no paneleffect", thus accepts the alternative hypothesis and concludes that random effect is better. However, based on the Hausman – statistics, the initial hypothesis that the individual-level effects are adequately modeled by a random-effects model is resoundingly rejected. Hence, fixed effect (FE) model becomes the lead model. Consequently, the value of F-statistics (5.472; $p = 0.000$) associated with the lead model indicates the significance of the model at 1% level of significance.

In other word, it implies that all the independent variables are jointly and statistically significant in affecting TQ. The coefficient of determination (0.020) indicates that about 2.0% of changes in TQ are explained by the independent variables. As evident from the result, negative and insignificant relationships exist between accrual quality (AQ), earnings predictability (EPRED) and Tobin's Q (TQ). However, positive but insignificant relationship exists between earnings persistence and TQ. Apparently, the coefficient estimate of earnings smoothness (ESMOTH) is negative and significant at the confidence level of 99%. The negative and significant relationship is consistent with the result obtained in Table 4. This also indicates that the firms with high Tobin's Q have low earnings smoothness (ESMOTH).

Post Estimation Test

The post estimation tests - Jarque-Bera test for normality 4260.00 ($p = 0.000$) and Breusch-Pagan/Cook-Wesberg test for heteroskedasticity 0.030 ($p = 0.860$) - suggest that the lead model (in Column 2 of Table 3) passed heteroskedasticity test but fails normality test. Nevertheless, this did not represent much of a problem since we are dealing with a sufficiently large sample of data (Oscar, 2007). This implies that there is no evidence of heteroskedasticity.

Normality Test

Table 4: Normality Test

Regression	Models	Jarque-Bera normality test
MSP and EQI	I	4260.000 [0.000]
	II	0.988 [0.610]
BV and EQI	I	1314.000 [0.000]
	II	14.640 [0.000]
TQ and EQI	I	4096.000 [0.000]
	II	8884.000 [0.000]

Source: Authors' Computation 2018, underlying data from annual reports of firms listed on NSE. MSP = Market Share Price. BV = Book Value. TQ = Tobin's Q. EQI = Earnings Quality Indicator. The figures in brackets are probability values and Chi2 are outside the bracket. The figures in brackets are probability values.

One of the assumptions of the regression model that guarantee the validity of p-values, t-tests or F-tests is that the regression error term behave 'normal'. In other words, normality assumption assures the validity of all tests. This study uses Jarque-Bera test to assess the normality in the error terms (residuals) of the models. The null hypothesis is 'normality' and if this is rejected, it indicates 'non-normality'. The results as presented in Table 4 show no indication of normality except for the model II of MSP and EQI. Nevertheless, this does not represent much of a problem since we are dealing with a sufficiently large sample of data (Oscar, 2007).

Heteroskedasticity Test

Table 5: Heteroskedasticity Tests

Regression	Models	Jarque-Bera normality test
MSP and EQI	I	0.030 [0.860]
	II	10.040 [0.002]
BV and EQI	I	9.88 [0.002]
	II	135.60 [0.000]
TQ and EQI	I	84.140 [0.000]
	II	50.790 [0.000]

Source: Authors' Computation 2018, underlying data from annual reports of firms listed on NSE. MSP = Market Share Price. BV = Book Value. TQ = Tobin's Q. EQI = Earnings Quality Indicator. The figures in brackets are probability values and Chi2 are outside the bracket. The figures in brackets are probability values.

This study used Breusch–Pagan/Cook–Wesberg test to assess the variance in the error terms (residuals) of the models, and the results as presented in Table 5 indicate that all the models except for model I of MSP and EQI regression suffer from heteroskedasticity. As a result of this, panel robust standard error was employed to control the heteroscedasticity.

Basically, the outcome of the empirical analysis in this category is that earnings quality significantly impact on the financial performance of quoted companies in Nigeria. Specifically, negative and insignificant relationships exist between accrual quality (AQ), earnings predictability (EPRED) and Tobin's Q (TQ). Apparently, the coefficient estimate of earnings smoothness (ESMOTH) is negative and significant at the confidence level of 99%. The negative and significant relationship is consistent with the result obtained in Table 3. This also indicates that the firms with high Tobin's Q have low earnings smoothness (ESMOTH).

Consistent with our findings, Hossein, Kasravi and Fazil (2017) found that earnings quality has a positive relationship with Tobin's Q. Also Nikoumaram et al. (2014) find that accounting information quality has positive relationship with Tobin's Q. Also, empirical studies of Collins and Kothari, (1989); Lipe (1986); Penman and Zhang (2002); Chan et al. (2006); Huang et al., (2009) suggest that earnings are associated to firm performance. Specifically, Lipe (1990) examines the relationship between earnings quality components and firm performance. The study finds that firm performance is positively associated with earnings persistence, while Sloan (1996) finds that firms with comparatively high earnings quality experience high performance. Similarly, Huang et al. (2009) find that firm performance decreases with lower earnings quality.

Furthermore, consistent with Meyers et al. (2007) find that companies with positive persistence with TQ, and also persistently meet previous earnings target or market analysts expectation are rewarded with higher market share price, however in contrast, Petroni et al. (2000) in a study of discretionary and nondiscretionary revision of loss reserves by property –causality insurers, differential implications for future profitability, risk and market values, found out that company managers who engage in earnings management in order to achieve desired results end up not being rewarded as they experience lower market share price.

Given that the study found that earnings quality significantly impacts market value, and since earnings is one of the benchmarks to evaluate the performance of companies, and managers, it implies that investors, market analysts, and other stakeholders would give Nigerian companies higher market share price more value and thus attract more investments. On earnings smoothing, this study found a negative but significant relationship between market share price and financial performance except book value that revealed a positive significant. This is in consistent with Hejazi et al. (2014) who found that firms' performance is not influenced by income smoothing, that there is no significant difference in performance of the smoothers and no smoother companies. This could mean that earnings smoothing activities if they do exist, do not affect the market share price of quoted companies in Nigerian. From the study, it equally implies that the performance of companies would as well increase earnings quality of companies in quoted companies in Nigeria

CONCLUSION AND RECOMMENDATIONS

The results obtained indicated that all the earnings quality proxies are jointly significant in influencing market value. The findings of the study revealed that the quality of the time –series behaviours of earnings as measured by earnings predictability and earnings persistence have more predictive weight than that of cash flow as measured by accruals quality and smoothness. The result of the study further showed that earnings predictability is negatively signed in all market value properties.

Based on the findings and conclusion of this study, the following recommendations are made which may be useful to the management, investors, market analysts, policy makers, financial standard regulators: The study recommends that analysts should pay greater attention to earnings quality measuring properties of earnings persistence, earnings predictability and earnings smoothness, because the magnitude signs largely help in decision making. Investors and their advisers should understand the dynamics of earnings quality proxies as a guide in making informed investment decisions and portfolio diversifications strategies particularly in time of investment uncertainties. This paper also contributes to the body of literature on the behavioral and attitudinal aspect of paradigm shift of performance theory, curbing manager's opportunistic behaviour, putting a workable governance structure that could enable an effective monitoring and assessment of the actual behavioural tendencies of managers. This study equally contributes by recommending that there is need to bridge the gap of extensive discrepancies by managers' opportunistic earnings tendencies, affecting earning quality and ultimately the firm performance, hence transparency and nondiscretionary earnings, closing the gap between previous and current performance of managers, meeting the expectations of investors and analysts.. For further studies, Generalized Method of Moments (GMM), panel Autoregressive Distributed Lag (ARDL) and Fully Modified OLS (FMOL) models could be estimated to establish the relationship between earnings quality and firm performance.

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