

# **Audit Quality and Earnings Response Coefficients of Quoted Companies in Nigeria**

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## **Abstract**

This study examines whether Audit Quality has any impact or relationship with earnings response coefficients of companies in Nigeria. Pursuant to this objective, archival data were extracted from annual reports of 57 companies quoted on the Nigerian Stock Exchange (NSE) between 2006 and 2011. Audit Quality was estimated using Audit Firm Size, Audit Fees, Auditor Tenure and Auditor Client Importance. Earnings Response Coefficients model was applied to measure unexpected earnings (UE) as the actual earnings disclosed minus a measure of investors' prior expectation of earnings scaled by the market price. The result of the test showed that Audit Quality exerts significant impact on the ERC of quoted companies in Nigeria. In order to improve the quality of audit and minimize earnings manipulations in Nigeria, we recommend that professional accountancy bodies, the Financial Reporting Council of Nigeria and the National Assembly should issue authoritative codes for audit quality; companies should improve their earnings quality only through sales growth, cost control and cost reduction strategies; companies in Nigeria should present distinct statements of earnings quality while auditors should conduct earnings quality assessment and issue Integrated Audit Quality Assurance Report by adapting or adopting current best practices statutorily backed by earnings monitoring of companies in Nigeria.

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## **1 Introduction**

The quality of reported earnings and the ability of audit quality (AQ) to successfully constrain earnings misstatements by companies across the world and Nigeria in particular, have become considerably doubtful due to recent corporate scandals [1][2]. Differences in

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AQ result in disparity in the credibility of auditors and the reliability of earnings reports of firms. Thus, the recent corporate financial scandals pose a great challenge to the veracity, credibility, utility or value relevance of the audit function. A list of companies involved in poor audit quality and earnings manipulations – related accounting scandals in the past decade has been reported by Badawi in 2008 [1]. In Nigeria, corporate scandals include the cases of Cadbury Nigeria Plc and African Petroleum (AP) [3]; Savannah Bank and African International Bank [4]; Wema Bank, Nampak, Finbank and Spring Bank [5]; and more recently Intercontinental Bank Plc., Bank PHB; Oceanic Bank Plc. and AfriBank Plc. These are known publicly reported cases that resulted in misleading financial reports. There is therefore a concern about the quality of accounting income and its relationship with the quality of the auditing process which has been observed to increase over time following the periodical clusters of business failures, frauds, and the litigations. The issue is whether these corporate collapses are not the outcome of poor audit quality and the inability of the audit function to arrest earnings misreporting and financial misstatements.

Consequently, earnings analysts and investors may focus more on cash flows rather than the income statement of a company for loss of confidence in accounting income-based measurements. Sufficient operating cash flows are essential for these companies to remain profitable and viable in the future. Since investors use the cash flow statement to make investment decisions, greatly motivated and smart management could be involved in manipulation of the real financial operations to construct ways of influencing the real picture of a company's cash flow from operations (CFO). Certain motives may possibly account for executives' greater readiness to employ real cash – based earnings management than accruals management because accrual-based earnings management is more prone to auditors or regulatory investigation than real decisions like product pricing, production, and expenditures on research and development or on advertising.

The importance of a company's income is shown by the fact that the value of a company's shares represents the value of its future earnings. Consequently, company managers use certain strategies to deliberately manipulate company income in order to match a predetermined target by involving the planning and execution of certain activities that manipulate or smooth income, achieve high earnings level and sway the company's stock price [6][7]. This earnings management activity may occur because managers have flexibility in making accounting or operating choices, or because managers try to convey private information to financial statement users. The conveyance of private information may be done to give stakeholders information, not otherwise available, so that they can adjust their expectations appropriately. Careful release of such information may have effect on the earnings and the share price for the company. If the information conveys significant value relevance to analysts and other users of financial statements, they may also adjust earnings estimates and share prices for other companies in the industry. This may positively influence the company revealing the information to experience positive impact on its share prices because it is perceived as having a higher quality of earnings.

The earnings response coefficients (ERC) is an estimate of the change in a company's stock price due to the information provided in a company's earnings announcement [8]. Collins and Kothari [8] define ERC as the mapping of earnings' time series properties and discount rates into the changes in equity market values. Teoh and Wong [9] define high quality auditor as one who brings about more credible earnings report. Holthausen – Verecchia model [10] has shown that investors' response to an earnings surprise depends on the perceived credibility of the earnings report. Therefore, the audit of a company's

accounts signals the beginning of a process for earnings announcement. Signaling theory suggests that companies with good performance use financial information disclosures to send signals to the market [11]. A high quality audit sends a signal to the market that the financial statements are more credible than those audited by lower quality auditors [9] [12] [13].

In order to maintain high audit and earnings quality and to curb the spate of vicious corporate collapses that pervade the globe in the past decade, audit quality standards and codes of best practice have been developed in different countries. These codes constitute the bulk of the regulatory frameworks that are meant to guarantee integrity of auditors' reports in relation to corporate earnings and financial statements. Audit Quality (AQ) was first defined by DeAngelo in 1981 as the market-assessed joint probability that a given auditor discovers a breach in the client's accounting system and reports the breach [14]. The European Supreme Audit Institution (EUROSAI) extended the definition of Audit Quality in 2004 to include the degree to which a set of inherent characteristics of an audit fulfill requirements [15]. Thus, the audit process assesses the probability of material misstatements and reduces the possibility of undetected misstatement to an appropriate assurance level [16] [17]. Audit Quality is recognized to influence financial reporting and strongly impact on investors' confidence [18]. Conventionally, external auditors play critical and highly challenging roles in assuring the credibility of financial reports [19] [20].

In the context of the challenges that confront the audit function, some prior studies [9][24][51] have attempted to establish a more or less marked relationship between audit quality, earnings response coefficient and share prices and have tried to show the impact of this relationship on the quality of the earnings reported by quoted companies in many countries. The above studies show that the quality of audit is expected to minimize the extent of a firm's manipulations of reported income, influence investors response to earnings announcement and company share prices but majority of the studies has seemingly conflicting and contradictory results.

One position of this study is that audit quality as an outcome cannot be completely separated from financial reporting quality. Many accounting scandals of the past decade have involved outright manipulation of accounting data through discretionary accruals including recording fictitious inventory and hiding liabilities even in the face of audited financial reports. Knechel (2009) posits that the companies that have involved in real accounting scandals along with a number of lesser known companies greatly involved in transactions where the accounting was technically correct but which served primarily to obfuscate the financial health of the organizations and the results of their operations [17]. Wells (2005) reported that widespread manipulation of accounting information and income misstatements through discretionary accruals may be attributable to the pressure on corporate accountants, auditors and organizational managers to show profits [68]. A common trend and threat among the companies that are involved in accounting and financial scandals are gross lack of integrity, character and transactions involving related parties [2][29][47].

Given the above scenario, the major problem of this study is to determine whether audit quality can significantly influence market response to earnings of quoted companies in Nigeria. The study attempts to ascertain and establish whether there are significant relationships between Audit quality and Earnings Response Coefficients (ERC) of quoted companies in Nigeria.

## 2 Literature Review

The following sections of the study review and analyze the concept and measurement of “Audit Quality” (AQ), the concept and measurement of “earnings response coefficient” (ERC), theoretical framework and some extant analytical studies relevant to this study.

### 2.1 The Concept of Audit Quality (AQ)

According to International Auditing and Assurance Standards Board [48], there have been a number of attempts to conceptualize “audit quality” in the past. However, none has resulted in a definition that has achieved universal recognition and acceptance. AQ is, in essence, a complex and multi-faceted concept. The classic definition of AQ that is cited by most audit researchers is that of DeAngelo (1981) which states that AQ is the market-assessed joint probability that a given auditor will both (a) discover a breach in the client’s accounting system and (b) report the breach [14]. The definition highlights two important aspects of AQ: (1) the competence of the audit firm that determines how likely it is that a misstatement will be detected and (2) the independence and objectivity of the auditor that determines what the auditor is likely to do about a detected misstatement. This definition has been quite useful to AQ studies. The import of DeAngelo (1981) definition is that AQ is a probability that an auditor will discover and truthfully report material errors, misrepresentations, or omissions in the client’s financial statements [14]. Davidson, Stening and Wai (1984) simply posit that AQ is the accuracy of auditor’s information reporting [36] while Wallace (1987) shows that AQ is a measure of the auditor’s ability to reduce noise and bias and meticulously improve accounting data [20]. A study by Davidson and Neu (1993) provide further that an AQ definition is based on the auditor’s ability to detect and eliminate material misstatements and manipulations in reported net income [37].

An important issue regarding the definition of AQ is whether to distinguish audit firm quality from AQ. Several studies like Clarkson, P. M. (2000); Colbert & Murray, (1998) do not make this distinction but instead use the concepts interchangeably [32][34]. However, under certain conditions, audit firm quality and AQ might be used interchangeably. According to the underlying assumptions in the DeAngelo’s (1981) definition, when an auditor provides only one level of quality of audit service, audit firm quality and AQ may be akin to and correspond with each other. Meanwhile, Lam and Chang [58] points out that AQ should be defined on a service-by-service basis because an audit firm may not conduct its entire audit with the same level of quality.

Perceived AQ and actual AQ appear to be different concepts, due mainly to the fact that actual AQ is unobservable and can only be evaluated after audits have been conducted. For instance, Palmrose [62] measures actual AQ using auditor’s litigation activities. Deis & Giroux (1992) analyzed quality control reviews to get a measure of actual AQ in the public sector [39]. Krishnan & Schauer’s (2000) measure of actual AQ is based on how audited financial statements comply with certain specific GAAP reporting requirements [57]. Both Deis and Giroux [39] and Krishnan and Schauer’s [57] measure actual AQ in the not-for-profit sector. However, results of studies in the not-for-profit sector might not be used to generalise for for-profit setting. It therefore suffers from generalization problems.

Many studies test perceived AQ due to the difficulty in measuring actual AQ directly. DeAngelo analytically demonstrates that the larger the auditor, the less incentive the

auditor has to behave opportunistically and the higher the perceived quality of the audit [14]. Moreland (1995) investigates how SEC enforcement actions against Big 8 accounting firms affect their market perceived AQ [22]. Hogan [23] has documented that perception of higher AQ is associated with less under pricing in the IPO market. It is difficult to measure actual AQ but market perceptions of AQ are more amenable to measurement.

AQ is subject to many direct and indirect influences. In tandem with the stakeholder theory [53], perceptions of AQ vary amongst stakeholders depending on their level of direct involvement in audits and on the perspective through which they assess AQ. AQ may be perceived from any of three fundamental perspectives: inputs, outputs, and context factors. Inputs to AQ, apart from auditing standards, include the auditor's personal attributes such as auditor skill and experience, ethical values and mindset. Another important input is the audit process including the soundness of the audit methodology, the effectiveness of the audit tools used, and the availability of adequate technical support geared toward supporting a high quality audit.

Outputs of the audit are important influences on AQ that are considered by stakeholders in their assessments of AQ. Such influences include the auditor's report (viewed as positively influencing AQ if it clearly conveys the outcome of the audit), auditor communications to those charged with governance (on matters such as qualitative aspects of the entity's financial reporting practices and deficiencies in internal control that can positively influence AQ).

More broadly, context factors that influence AQ include sound corporate governance (especially if it creates a climate of transparency and ethical behaviour within the entity); Law and regulation (if it creates a framework within which the audit can be effectively conducted); regulatory oversight (if it establishes an effective regime for monitoring the quality of auditors' work and effective dialogue between auditors and regulators); the quality of the applicable financial reporting framework (use of a financial reporting framework that does not promote robust and transparent disclosures may adversely affect AQ as well as related external perceptions).

### **2.1.1 Audit Quality Measurements**

As at date, there appears to be no agreed – upon metric for the measurement of AQ construct [17][46][48]. DeAngelo [14] developed a two-dimensional definition of AQ that set the standard for addressing the issue. First, a material misstatement must be detected, and second, the material misstatement must be reported. AQ is influenced by many other factors as well. Since 1981, accounting studies have attempted to define, measure, and study multiple dimensions of AQ. DeAngelo theorizes that larger firms perform better audits because they have a greater reputation at stake. In addition, because larger firms have more resources at their disposal, they can attract more highly skilled employees [14]. Others have theorized that large auditors attract a fee premium because their greater wealth reduces clients' exposures in litigation (the deep pockets theory). Others have theorized that there is no real AQ difference, but the perception exists because large firms are well known and have gained a reputation for high quality. On the whole, the evidence is mixed, but it appears that there is some relationship between audit firm size and AQ. What is unclear is whether this difference is actual or perceived. Based

on DeAngelo's reports, many other studies use auditor size (specifically Big8, Big6 or Big5 Vs non-Big8, non-Big6 or non-Big5) to differentiate AQ levels [26][27][33][35][56][70].

Some studies have used audit fees as quality measures. Palmrose [62] finds that there is a significant association between audit fees and auditor size measured by Big 8 vs non – Big 8 dichotomy. Copley (1991) finds that using audit fees as AQ measure has greater power than Big 8 vs non – Big 8 dichotomy in explaining variation levels of local government disclosures [36]. Colbert & Murray (1998) measure AQ using the results of peer review [34]. Schauer [60] measures AQ using client bid-ask spread, which is the difference between the ask price and bid price for a client company's shares.

Audit Independence may be defined as an auditor's unbiased mental attitude in making decisions throughout the audit and financial reporting. Independence refers to the quality of being free from influence, persuasion or bias. In the absence of independence, the value of the audit service will be greatly impaired [61]. An auditor's lack of independence increases the possibility of being perceived as not being objective. This means that the auditor will not likely report a discovered breach. Prior studies contend that high fees paid by a company to its external auditor increase the economic bond between the auditor and the client and thus the fees may impair the auditor's independence [44] [58]. The impaired independence results in poor AQ and allows for greater earnings manipulation (resulting in lower earnings quality). Auditor independence was not used in this study in order to avoid circularity because Audit Fee also indirectly measures independence

Summing up, numerous earlier studies [14][62][28][39][43][54][56][57] agree on AQ as a function of audit firm size and demonstrate that larger (Big 8, Big 6, Big 5 or Big 4) audit firms possess greater capacity to measure Audit Quality. Wooten (2003) found that detecting material misstatements is influenced by how well the audit team performs the audit, which in turn is influenced by the quality control system and management resources of the audit firm [69].

## 2.2 The Concept of Earnings Response Coefficients (ERC)

The ERC is an estimate of the change in a company's stock price due to the information provided in a company's earnings announcement [8]. Both Signaling theory and Arbitrage pricing theory describe the theoretical relationship between information that is known to market participants about a particular equity (ordinary share of a particular company) and the price of that equity [31]. Under the efficient market hypothesis, equity prices are expected in the aggregate to reflect all relevant information at a given time. Market participants with superior information are expected to exploit that information until share prices have effectively impounded the information [55].

ERCs are used primarily in research in accounting and finance. In particular, ERCs have been used in research in positive accounting to theoretically describe how markets react to different information events. The audit of the financial statements of a company is a mechanism that helps monitor, control and diminish information asymmetry in order to protect the interests of the investors. Audit offers shareholders and potential shareholders realistic declaration that management's financial statements are devoid of material misstatements [16].

Research in Finance has used ERCs to study, among other things, how different investors react to information events [52]. There is debate concerning the true nature and strength of the ERC relationship. As has been demonstrated in some previous model, the ERC is



generally considered to be the slope coefficient of a linear equation between unexpected earnings and equity return. However, certain research results suggest that the relationship is nonlinear [45].

In Accounting, finance and economics, the earnings response coefficient (ERC) is the estimated relationship between equity returns and the unexpected portion of companies' earnings announcements (new information). The market response to audited accounting information can be observed through such proxy like ERC [9]. Teoh and Wong argued in their study that AQ has definite direct association with the client's quality of earnings and therefore the Earnings Response Coefficient (ERC [9]). ERC is the responsiveness of the Stock Market to information about unexpected earnings. According to Teoh & Wong [9], an auditor's reputation lends credibility to the earnings report that he audits. Using modified Holthausen – Verrecchia model [10] combined with basic intuition, Teoh & Wong argued that investor's response to an earnings surprise will depend on the perceived credibility of the earnings report [9].

Investors, it is argued, cannot directly observe the underlying true earnings of the firm; hence they have to rely on reported accounting numbers. To safeguard the credibility of these reported figures, external auditors must certify that they conform to GAAP, which assures investors of the reliability of financial data. This reflects the attestation role of auditors [21]. It is agreed that a more skillful auditor will presumably be able to bring closer harmony of the reported earnings with GAAP. It seems reasonable therefore, that if the auditor's quality is perceived by investors as high, they will respond strongly to surprise in reported earnings.

The direction of thought is that as long as some auditors are perceived to follow policies that cause reported earnings to be more informative about value than other auditors, valuation theory predicts that ERC will be different for different auditors. Audit Quality in this case is defined in terms of the characteristic resulting in greater and more informative of reported earnings. The evidence presented in Teoh and Wong [9] and extended by Krishnan & Yang [12] measured Audit Quality in relation to auditors' brand name (Big 6 and non-Big 6, etc). The result suggests that clients of industry specialist auditors have higher ERCs than clients of non-specialist auditors [12].

In the US, Moreland (1995) examined the effect of any enforcement actions or sanctions against the auditor by SEC on the quality of audits and the perceived credibility of audit clients' earnings numbers [22]. The study compared the Earnings Response Coefficient (ERC) of the clients before and after taking such actions against the auditor by the SEC and showed a decrease in market response to client's accounting information, indicating a reduction in the perceived precision of such information. In addition, it was found that the ERC declined significantly after the client received a qualified audit report.

### **2.2.1 Measurement of Earnings Response Coefficient (ERC)**

The measurement of companies' earnings response coefficient has been developed in some previous studies. Teoh and Wong [9] developed a simple analytical formula that relates stock price to the precision of the earnings signal by adapting a single – period with a single information signal model from Holthausen and Verrecchia [10]. They abstracted and controlled for some pertinent factors that would be incorporated in a more general model namely, the firm's riskiness, the degree of earnings persistence and predictability, and other time series characteristics. The more general analysis that incorporates the time series features in deriving the theoretical values of the ERC were

earlier used by Kormendi and Lipe [55] and Lipe [60]. Consistent with previous studies, Hansen (2007) expressed ERC in the following mathematical model [49]:

$$UE_{it} = a_{0t} + \beta_{1t} (ern - u)_{it} + e_{it} \quad (2.1)$$

Where:  $UE_{it}$  = the unexpected earning;  $a_{0t}$  = benchmark rate;  $\beta_{1t}$  = earning response coefficient;  $(ern - u)_{it}$  = (actual earnings less expected earnings) = unexpected earnings. The unexpected earnings are treated as a ratio of expected earnings in this study;  $e_{it}$  = random movement. According to Teoh and Wong (1993), UEs are measured as the actual earnings disclosed minus a measure of investors' prior expectation of earnings scaled by the stock price [9]. UE is estimated as:

$$UE_{i,t} = [EPS_{i,t} - EPS_{i,t-1}] / MPS_{i,t} \quad (2.2)$$

Where: MPS is the market price per share as at the end of the year (Chritie, 1987) [55]. These prior studies indicate that price is the appropriate scaling factor from the theoretical derivation of the ERC based on the dividend and earnings capitalization formulae.

### 2.3 Theoretical Framework

Essentially, agency theory, signaling theory, and auditors' theory of inspired confidence justify the key function of auditing as a mechanism for mitigating information asymmetries among related parties. The demand for audit of companies' accounts is created by the agency problems which are related to the separation of corporate ownership from control [41][46]. The agency problem arises from the existence of asymmetric information in the principal – agent contracts (Jenson and Messier, 2000). Some studies (Trueman and Titman, 1988; Schipper, 1989; Warfield, Wild and Wild, 1995) have shown that the existence of information asymmetry between corporate management and company shareholders is a necessary condition for and easy perpetration of earnings misreporting and financial statements manipulations [4]. The audit of a company's accounts is a monitoring or control mechanism that diminishes information asymmetry and protects the interests of the principal.

The auditors' theory of inspired confidence offers a linkage between the users' requirement for credible and reliable financial reports and the capacity of the audit processes to meet those needs. It sees through the development of these needs of the public (stakeholders) and the audit processes over time. Developed by the Limperg Institute in Netherlands in 1985 [59] the theory of inspired confidence states that the auditor, as a confidential agent, derives his broad function in society from the need for expert and independent examination as well as the need for an expert and independent judgement supported by the examinations. Thus, accountants and auditors are expected to know and realize that the public continues to expect a low rate of audit failures. This requires that the auditors must plan and perform their audit in a manner that will minimize the risk of undetected material misstatements. The accountant is under a duty to conduct his work in a manner that does not betray the confidence which he commands [59].

The import of the theory of inspired confidence is that the duties and responsibilities of the auditors are a derivation from the confidence that are bestowed by the public on the success of the audit process and the assurance which the opinion of the accountant conveys. Since this confidence determines the existence of the process, a betrayal of the



confidence logically means a termination of the process or function. Carmichael, D. R. discussed the social significance of the audit and stated that when the confidence that society has in the effectiveness of the audit process and the audit report is misplaced, the value relevance of that audit is destroyed [30]. Therefore, auditors are expected to maintain reasonable quality assurance especially given that an audit failure is effectively a career-ending event. Audit provides assurance to the owners and management of companies and to investors and stakeholders, and along with financial reporting, corporate governance and regulations; it supports confidence in the capital markets.

Signaling through auditor choice stands on the agency theory, and is a manner by which managers and/or directors may impart to the market additional information about their company and their own behaviour. Signaling theory suggests that companies with good performance use financial information disclosure to send signals to the market. Craven and Marston (1999), show that firms will attempt to accept the same level of disclosure as similar firms operating in the same industry since if a firm does not keep up with the same level of disclosure as others, it may be perceived by stakeholders that it is hiding bad news or negative information. As the types of financial statements produced have become standardized, potential information differentiation that a company can use to send a signal to the market through its financial statements is reduced. Companies are thus provided an incentive to signal, other than through transparency in their notes to the accounts and other voluntary disclosures, through their choice of auditor. Moreover, even voluntary disclosures that may be used as signals achieve enhanced credibility in the presence of a quality auditor.

A high quality audit sends a signal to the market that the financial statements are more credible than those audited by lower quality auditors. The market perceives audit firm size and specialist auditors to be of a higher quality than others and rewards (punishes) companies with larger improvements (or falls) in share prices accordingly [9] [12] [13].

Signaling theory does not actually require higher AQ, it merely needs the market to believe that Top Tier firms are associated with higher AQ because of the fee premiums they are able to command [66]. It has been shown that the market's perception of the quality of the company's auditor influences that company's share price. As such, directors and management may want to signal to the stakeholders that their interest is being well monitored. Therefore, signaling should, theoretically, affect the demand for AQ over and beyond the monitoring function alone. The positive Signal of transparency and credibility it sends to the market and the assurance it provides to stakeholders about the quality of earnings performance disclosures suggests a positive association between MPS and AQ.

## **2.4 Review of Prior Empirical Studies**

The most demanding task of studying the relationship and the impact of Audit Quality on the earnings and market price of shares of corporate organizations is perhaps the measurement and testing of this relationship. A study of the relationship between Audit Quality and Earnings Response Coefficients was carried out by Teoh and Wong, in 1993 [9]. They argued that AQ is positively associated with the client's quality of earnings and therefore the Earnings Response Coefficient (ERC). ERC is the responsiveness of the Stock Market to information about unexpected earnings. Teoh and Wong (1993) present evidence that AQ measured by auditors' brand name (Big 6 and non-Big 6, etc.) is positively related with the ERC [9]. The model used by Teoh and Wong (1993) is as follows:

$$CAR_{it} = \lambda_0 + \lambda_1 D_{it} + \lambda_2 UE_{it} + \lambda_3 UE_{it} D_{it} + \lambda_4 UE_{it} MB_{it} + \lambda_5 UE_{it} MB_{it} D_{it} + \lambda_6 UE_{it} \beta_{it} + \lambda_7 UE_{it} \beta_{it} D_{it} + \lambda_8 UE_{it} LMV_{it} + \lambda_9 UE_{it} LMV_{it} D_{it} + \lambda_{10} UE_{it} \frac{1}{N_{it}} + \lambda_{11} UE_{it} \frac{1}{N_{it}} D_{it} + \epsilon_{it} \quad (2.3)$$

Where:

$CAR_{it}$  = cumulative abnormal return for firm  $i$ , continuously compounded between the forecast date and the earnings date;

$UE_{it}$  = earnings surprise for firm  $i$ ,  $D_{it}$  = dummy variable taking a value of 1 for a non-Big Eight client, 0 otherwise;

$MB_{it}$  = market value to book value as proxy for growth and persistence;  $\beta_{it}$  = market model slope coefficient as a proxy for firm risk;

$LMV_{it}$  = natural log of market value as a proxy for firm size;  $N_{it}$  = number of analysts' forecast included in the consensus forecast as a proxy for noise in the predisclosure environment; and

$\epsilon_{it}$  = error term assumed to be distributed  $N(0, \delta_i^2)$ .

Consistent with the joint hypothesis, it was found that the ERCs of Big Eight clients are statistically significantly higher than for non-Big - Eight clients. Furthermore, the result is robust with respect to the inclusion of other explanatory factors for ERC that have been suggested by previous studies: growth and persistence, risk, firm size, and predisclosure information environment. Krisnan and Yang [12] extended this argument by examining the effect of a particular facet of AQ, auditor industry specialization, on ERC. Krishnan and Yang's result suggest that, after controlling for previously established correlates of the ERC, as well as industry affiliation, clients of industry specialist auditors have higher ERCs than clients of non-specialist auditors.

Balsam, Krishnan and Yang (2003) relying on Teoh and wong (1993) examined the association between auditor brand name and earnings quality, using auditor brand name to proxy for audit quality [24]. Recent work has hypothesized that auditor industry specialization also contributes to audit quality. Extending this literature, Balsam, Krishnan and Yang (2003) compared the absolute level of discretionary accruals (DAC) and earnings response coefficients (ERC) of firms audited by industry specialists with those of firms not audited by industry specialists [24]. They restricted their study to clients of Big 6 (and later Big 5) auditors to control for brand name. Because industry specialization is unobservable, they use multiple proxies for it. After controlling for variables established in prior work to be related to DAC and the ERC, they find clients of industry specialist auditors have lower DAC and higher ERC than clients of non-specialist auditors. This finding is consistent with clients of industry specialists having higher earnings quality than clients of non-specialists. Balsam, Krishnan and Yang (2003) adopted Teoh and Wong (1993) model to deal with the relationship between Auditor Industry Specialization and Earnings Quality [24] as stated below.

$$CAR_{it} = \lambda_0 + \lambda_1 UE_{it} + \lambda_2 UE_{it} * NEG_{it} + \lambda_3 UE_{it} * SP_{it} + \lambda_4 UE_{it} * MB_{it} + \lambda_5 UE_{it} * LTA_{it} + \lambda_6 UE_{it} * BETA_{it} + \lambda_7 UE_{it} * NO_{it} + \lambda_8 UE_{it} * YIELD_{it} + \lambda_9 RET_{it} + \sum \delta_i YR + \sum \gamma_i UE_{it} * IND_{it} + \epsilon_{it} \quad (2.4)$$

Moreland (1995) examined the effect of any enforcement actions or sanctions against the auditor by SEC on the quality of audits provided by an auditor and the perceived credibility of his clients' earnings numbers [22]. The study compared the Earnings Response Coefficient (ERC) of the clients before and after taking such actions against the auditor by the SEC and showed a decrease in market response to client's accounting information, indicating a reduction in the perceived precision of such information [22]. In addition, Choi and Jeter (1992) found that the ERC declined significantly after the client received a qualified audit report.

The summary of the review is that auditing reduces information asymmetry, and indicates the level of audit quality [65]. Auditors reduce information asymmetry between managers and stakeholders by providing reasonable assurance that the financial statements are free of material misstatements [27]. High quality audits should be more likely to successfully detect and prevent earning management. Thus, we assume that higher levels of audit quality should be associated with lower levels of EM.

### **3 Methodology**

Secondary data obtained from a sample of 57 quoted companies are studied out of the non – financial firms quoted on the NSE over a period of six years from 2006 to 2011 resulting in 342 company accounting – year observations. Archival data were extracted from annual reports and accounts of the selected companies. Drawing from the foregoing analysis, literature provides the conceptual and theoretical bases for the development and construction of the following propositions:

H<sub>0</sub>: There is no significant relationship between Audit Quality and Earnings Response Coefficients of Quoted Companies in Nigeria;

#### **3.1 Estimation of Audit Quality**

The major proposition of this study is that earnings response coefficient depends on audit quality and we maintain that this study extends the AQ proxy of Audit Firm Size (AFS) to include other perceived AQ proxies. In this study, we estimate AQ by isolating each of the most commonly applied surrogates including: Audit Firm Size in terms of Big-4 and Non-Big-4 audit firms; Audit Fees which also measures Auditor Independence; Auditor Tenure and Audit Client Importance.

We treat the individual variable effects as well as the effects of using all the audit quality attributes together in line with the earlier works of Heninger [51], Ebrahim [25], Piot and Janin [64], and Gerayli, Yanesari, & Ma'atofi [46]. Using a number of explanatory variables after controlling for the effects of exogenous variables on the dependent variable is authenticated by Thierauf and Klekamp (1975: 20) who posit that “a general model which will be representative of a system under study takes the form of  $E = f(X_1, X_2, \dots, X_n, Y_1, Y_2, \dots, Y_n)$ ”. Where: E = objective function;  $X_1, X_2 \dots X_n$  = system variables that are subject to control (controllable variables);  $Y_1, Y_2 \dots Y_n$  = system variables that are not subject to control (uncontrollable variables) [67]. The measurement and construct validity of all the independent variables and the specific review of the various proxies for estimating audit quality are contained in table 3.1 below.

### 3.2 Estimation of Earnings Response Coefficients (ERC)

We estimate ERC using the following model:

$$UE_{it} = a_{0t} + \beta_{1t} (ern - u)_{it} + e_{it} \quad (3.2)$$

Where:  $UE_{it}$  = the unexpected earning;  $a_{0t}$  = benchmark rate;  $\beta_{1t}$  = earning response coefficient;  $(ern - u)_{it}$  = (actual earnings less expected earnings) = unexpected earnings. The unexpected earnings is treated as a ratio of expected earnings in this study;  $e_{it}$  = random movement; UEs are measured as the actual earnings disclosed minus investors' prior expectation of earnings scaled by the stock price. UE is estimated as:

$$UE_{i,t} = [EPS_{i,t} - EPS_{i,t-1}] / MPS_{i,t} \quad (3.3)$$

### 3.3 Model Specifications

In this section, we specify the models used to deal with the effects and relationships between the dependent and independent variables contained in the hypotheses. Some prior studies [26] [27] that used only one Audit Quality attribute to measure Audit Quality observed that the use of only one attribute when other perceived attributes are known to have effect on Audit Quality was an obvious limitation to their findings. In order to correct for the effects of such constraints on the results, Heninger, [51], Ebrahim [25], Piot and Janin [64], Gerayli et al, [46] used all the identified perceived audit quality attributes together. Following this latter approach, and taking cognizance of the problem of multicollinearity that such treatment could create, we developed a set of models for each of the two relationships to include all identified relevant AQ measures after running some regression assumption tests including tests of normality, multicollinearity, Heteroscedaticity, autocorrelation and model specification tests.

#### 3.3.1 Model for Effect and Relationship between Audit Quality and ERC

This study adapts and modifies the model used by Teoh and Wong, (1993) to measure the relationship between AQ and ERC. Linear regression analyses were used to test the relationship between the dependent variable (ERC) and the identified independent AQ measurement variables.

$$ERC_{i,t} = a_0 + \beta_1 AFS_{i,t} + \beta_2 AF_{i,t} + \beta_3 AT_{i,t} + \beta_4 ACI_{i,t} + \beta_5 CoySize_{i,t} + \beta_6 Gwth_{i,t} + \beta_7 Lev_{i,t} + \beta_8 UE_{i,t} + \beta_9 [UE_{i,t} * UE_{i,t}] + e_{i,t} \quad (3.4)$$

Where:  $UE_{i,t}$  = Unexpected Earnings (Earnings surprise) for company i in year t. Other variables remain as described table 3.1 below. A non-linear term is introduced in the ERC regression by multiplying the absolute value of unexpected annual earnings with unexpected annual earnings [ $UE_{i,t} * UE_{i,t}$ ] in line with Freeman and Tse (1992) and Lipe et al (1998). This is similar to including the square of an independent variable in order to control for non-linearity but retains the sign of the unexpected earnings.

Table 3.1: Measurement of Variables

| S/N | Variables | Definitions   | Type        | Measurement  | Construct validity source   |
|-----|-----------|---|-------------|--|---|
| 1   | ERC       | Earnings Response Coefficient                       | Dependent   | Coefficient of UE Formula  | Christie, (1987); Kormendi & Lipe, (1987); Teoh & Wong, (1993) Hay, (1995); Teets & Wasley, (1996);                                   |
| 2   | AFS       | Audit Firm Size                                     | Independent | Dichotomous: '1' if company is audited by a Big4, '0' otherwise                                  | DeAngelo, 1981; Deis and Giroux, 1992; Becker et al, 1998; Francis and Krishnan, 1999; Krishnan and Schauer, 2000; and Krishnan, 2003 |
| 3   | AF        | A measure of Auditor Independence                   | "           | Natural Log of the Audit Fees Paid by the company.   | Palmrose, 1988, Copley (1991), Frankel et al, 2002; Li & Lin, 2005; Gerayli et al, 2011   |
| 4   | AT        | Audit Tenure  | "           | Length of auditor-client relationship: '1' if 3 yrs <sup>+</sup> & '0' if otherwise.             | Heninger ( 2001); Ebrahim (2001)  |
| 5   | ACI       | Degree of Audit Client Importance to the Audit Firm | "           | % of Turnover of each company to Total Turnover of Clients of the auditor within the sample size | Heninger ( 2001), Ebrahim (2001)  |
| 6   | CFO       | Cash Flow From Operations                           | Control     | CFO as % of Total Assets at end of Year 't'.   | Adapted from Dechow et al (1995); Yang (1999); Bauwhede et al (2000).   |
| 7   | Gwth      | Growth Prospectsof the Company                      | "           | (Market Value divided by Book Value of Equity) = MPS/BVPS  | Zhou and Elder (2001); Bowen, et al (2005)  |
| 8   | CoySize   | Company Size  | "           | Natural log of company Total Assets  | Bauwhede et al, 2000; Gerayli et al, 2011   |
| 9   | Lev.      | Leverage  | "           | $\frac{\text{Total Debts}}{\text{Equity}}$   | Becker et al (1998), Watts & Zimmerman, (1986)  |
| 10  | UE        | Unexpected Earnings                                 | "           | $\frac{(\text{EPS}_{it} - \text{EPS}_{i,t-1})}{\text{MPS}_{it}} \times 100$                      | Christie, (1987); Kormendi & Lipe, (1987); Teoh & Wong, (1993) Hay, (1995); Teets & Wasley, (1996);                                   |

## 4 Data Analysis

This section contains the presentation, analyses and interpretation of the data collected for the study. The estimation models are examined empirically and used to test the causal-relationships between ERC and audit quality. Descriptive statistics, regression assumption tests (for the variables) and multiple regression analyses were conducted on the data. For purpose of comparison, the sensitivity of the endogenous variables was examined on the baseline equation containing multiple proxies of audit quality. The regression analyses were conducted using the Pooled OLS and the Panel OLS. A series of statistical tests incorporating both the Hausman Test [50] and the Panel Unit Root tests were performed on the data. The analyses and results are presented below.

### 4.1 Descriptive Statistics

Table 4.1: Descriptive Statistics

|        | Mean      | Median   | Maximum  | Minimum  | Std.Dev  | Jarque-Bera | Probability |
|--------|-----------|----------|----------|----------|----------|-------------|-------------|
| ERC    | -1.34E-15 | 3.523765 | 163.8017 | -819.517 | 51.85725 | 522098.7    | 0.000       |
| AFS    | 0.702771  | 1        | 1        | 0        | 0.457615 | 76.42107    | 0.000       |
| AF     | 6.821742  | 6.9      | 8.22     | 5.04     | 0.577794 | 16.92742    | 0.000       |
| AT     | 0.942065  | 1        | 1        | 0        | 0.233914 | 3459.362    | 0.000       |
| ACI    | 5.536801  | 1        | 54.63    | 0.01     | 9.839493 | 1723.826    | 0.000       |
| CFO    | 11.66365  | 11.7     | 99.49    | -126.16  | 16.67328 | 3494.981    | 0.000       |
| GWTH   | 8.667909  | 2.7      | 1228.33  | -24.64   | 72.64753 | 922498.7    | 0.000       |
| COSIZE | 9.879723  | 9.97     | 11.66    | 7.87     | 0.790002 | 10.88827    | 0.004       |
| LEV    | 5.505743  | 1.39     | 685.82   | -15.7    | 43.15786 | 696687      | 0.000       |
| UE     | -3.72937  | 0.48     | 161.33   | -823.42  | 55.20262 | 362796.8    | 0.000       |
| UE*UE  | 3050.545  | 5.7121   | 678020.5 | 0        | 40630.53 | 854272.3    | 0.000       |

Source: computation derived from Eviews 7.0 by the author

### 4.2 Multiple Regression Tests

In this section we test the robustness of our main results of the estimation equations. The Robustness Tests were conducted to examine the sensitivity of the endogenous variable. Firstly, the regression assumption tests are carried out to test whether the coefficients of the variables are sensitive to the inclusion of multiple explanatory variables.

#### 4.2.1 Regression Assumption Tests

Table 4.1 has revealed that the p-values associated with Jarque-Bera statistics for the variables are all less than 0.05 indicating the normality of data and suitability for generalization. It also suggests the absence of outliers in the data. Table 4.2 presents the regression assumptions tests.



Table 4.2 Regression Assumptions Test

| <b>Variance inflation test for Multicollinearity</b> |                      |  |              |
|--|----------------------|--|--------------|
| Variable   | Coefficient Variance |  | Centered VIF |
| C  | 1179.894             |  | NA           |
| AFS  | 24.949               |  | 1.508        |
| AF   | 61.006               |  | 5.096        |
| AT   | 106.766              |  | 1.127        |
| ACI  | 0.059                |  | 1.759        |
| CFO  | 0.0146               |  | 1.096        |
| GWTH   | 0.065                |  | 1.287        |
| COSIZE   | 64.091               |  | 11.393*      |
| LEV  | 0.377                |  | 1.295        |
| UE   | 0.029                |  | 4.799        |
| UE*UE  | 3.30E-07             |  | 4.804        |

  

| <b>Breusch-Godfrey Serial Correlation LM Test:</b> |       |                     |       |
|--|-------|---------------------|-------|
| F-statistic  | 0.366 | Prob. F(1,182)      | 0.694 |
| Obs*R-squared                                      | 0.784 | Prob. Chi-Square(1) | 0.676 |

  

| <b>Heteroskedasticity Test: Breusch-Pagan-Godfrey</b> |        |                     |       |
|---|--------|---------------------|-------|
| F-statistic   | 0.0156 | Prob. F(9,184)      | 0.901 |
| Obs*R-squared   | 0.0159 | Prob. Chi-Square(9) | 0.899 |

  

| <b>Ramsey RESET Test</b> |       |             |
|--------------------------|-------|-------------|
|                          | Value | Probability |
| t-statistic              | 0.243 | 0.167       |
| F-statistic              | 0.897 | 0.621       |
| Likelihood ratio         | 0.213 | 0.312       |

Source: Computation from Eviews 7.0. \* VIF values exceed 10.

Table 4.2 above shows the regression assumptions test for models. As shown in the table, COYSIZE has VIF's value of 11.393 which exceeds 10. Hence, the variable is dropped from the multiple regression models. The Breusch-pagan-Godfrey test for heteroscedasticity was performed on the residuals and the results showed probabilities in excess of 0.05, which leads us to reject the presence of heteroscedasticity in the residuals. The Lagrange Multiplier (LM) test for higher order autocorrelation reveals that the hypotheses of zero autocorrelation in the residuals were not rejected. This was because the probabilities (Prob. F, Prob. Chi-Square) were greater than 0.05. The LM test did not therefore reveal serial correlation problems for the model. The performance of the Ramsey RESET test showed high probability values that were greater than 0.05, meaning that there was no significant evidence of misspecification.

Table 4.3 Regression Test Result

| Variable                         | POOLED OLS  |       | PANEL OLS<br>(FIXED EFFECTS) |        | PANEL OLS<br>(RANDOM EFFECTS) |        |
|----------------------------------|-------------|-------|------------------------------|--------|-------------------------------|--------|
|                                  | Coefficient | Prob. | Coefficient                  | Prob.  | Coefficient                   | Prob   |
| C                                | -5.811      | 0.745 | 92.629                       | 0.061  | -1.176                        | 0.000* |
| <b>EXPLANATORY<br/>VARIABLES</b> |             |       |                              |        |                               |        |
| ACI                              | 0.230       | 0.274 | 0.121                        | 0.880  | 1.823                         | 0.619  |
| AF                               | 0.816       | 0.770 | -4.038                       | 0.142  | 0.107                         | 0.845  |
| AFS                              | -1.682      | 0.718 | -102.075                     | 0.039* | -0.228                        | 0.676  |
| AT                               | 3.68        | 0.354 | 6.663                        | 0.832  | 0.592                         | 0.599  |
| <b>CONTROL<br/>VARIABLES</b>     |             |       |                              |        |                               |        |
| CFO                              | -0.084      | 0.447 | 0.042                        | 0.825  | -0.007                        | 0.759  |
| GWTH                             | -0.378      | 0.457 | -0.288                       | 0.173  | 0.073                         | 0.291  |
| LEV                              | -0.039      | 0.886 | 0.131                        | 0.933  | -0.056                        | 0.307  |
| R <sup>2</sup>                   | 0.023       |       | 0.396                        |        | 0.024                         |        |
| ADJ R <sup>2</sup>               | -0.023      |       | 0.162                        |        | -0.015                        |        |
| F-Stat                           | 0.488       |       | 1.689                        |        | 0.619                         |        |
| P(f-stat)                        | 0.88        |       | 0.004                        |        | 0.000                         |        |
| D.W                              | 1.56        |       | 2.24                         |        | 2.38                          |        |
| <b>Hausman test</b>              | <b>0.00</b> |       |                              |        |                               |        |

Source: Computation derived from Eview 7.0 by the author. \* Significant at 5%  
\*\*significant at 10%

## 5 Discussion of Results

In estimating the models, we employed the pooled OLS and Panel effects estimations. Our preference for the variable estimates used in discussing the results is based on the descriptive statistic and Hausman Test [50].

Descriptive statistics showed the mean value of Audit firm Size (0.702) and suggests that majority of the companies in the sample were audited by the Big-4 Audit Firms. This may be related to the level of perceived audit firm quality being associated with Audit Firm Size (in terms of the Big-4 audit brand names) by quoted companies in Nigeria. This result agrees with the findings of previous studies [14][26][27][33][35][56][70]. Other prior studies agree on audit quality as a function of audit firm size and demonstrate that larger (Big 8, Big 6, Big 5 or Big 4) audit firms possess greater capacity to constrain and minimise earnings management through accruals manipulations [39][43][54][57][62]. Our result shows a considerable cluster of audit firm choice around the Big-4 audit brand names.

The descriptive statistics revealed that on the average, companies (about 94%) engage their audit firms for over three (3) years. The study reveals a considerable experience of a substantial number of audit firms in this distribution. Audit Tenure is defined in this study as the length of the auditor-client relationship. In Nigeria, it is professionally required that audit tenure should not exceed three years but this does not appear to be enforced.

The fixed effects estimation results show that the effect of Audit fees on ERC appeared negative (-25.218) and significant (p=0.032) at 5% level. The effect of Audit firm size on ERC is negative (-96.812) and significant (p=0.000) at 5% level, and the effect of Audit

Tenure on ERC also appear negative (-1.848) and significant ( $p=0.00$ ) at 5% level. With the inclusion of all explanatory variables (Audit quality measures) together in the model, the fixed effects estimation shows that AF (Audit fees) appeared negative (-4.038) but statistically insignificant at 5% ( $p=0.142$ ); AFS (Audit Firm Size) is observed to exert a negative effect on earning response coefficient (-102.075) and significant at 5% ( $p=0.039$ ). AT (Audit Tenure) appeared positive (6.663) but insignificant at 5% ( $p=0.832$ ). The performance of AFS provides evidence to accept the alternative hypothesis which indicates the existence of a significant relationship between Audit Quality and Earnings Response Coefficient (ERC) of quoted companies in Nigeria. This result was expected because the signaling theory has shown that high quality audit sends a signal to the market that financial reports audited by higher quality auditors are more credible than those audited by lower quality auditors. The market perceives audit firm size (Big-4 audit) to be of higher quality than others and rewards (punishes) companies with larger improvements or falls in share prices accordingly [9] [12] [13].

Empirical evidence provides that Audit Quality measured in terms of Auditors' Brand name (Big-4 and non-Big-4) is positively associated with the client's quality of earnings and therefore the Earnings Response Coefficient (ERC) [9] [12]. This present study proves that Audit Quality, by reducing information asymmetry, has significant impact on earnings response coefficients and hence Share Prices of quoted companies in Nigeria. Our finding shows however that the relationship between Audit Quality and Earnings Response Coefficient of quoted companies in Nigeria is negative. Examining post event stock returns, there are short-term capital market reactions around the announcements of fraudulent reporting. Evidences from studies by Foster [42], Dechow, Sloan, and Sweeney [38], Beneish [28] and Palmrose, Richardson, and Scholz [63] indicate that the market reaction to disclosure of manipulation is on average negative. This implies that investors were surprised and interpret these as negative information.

## **5.1 Summary of Findings**

The summary of the above findings is based on results of both the descriptive statistics and the various tests conducted on the multiple regression models. The summary of findings is as follows:

1. The results of the tests conducted on both Single Audit Quality variables taken individually as well as the multiple Audit Quality measures taken together provide sufficient evidence of the existence of a significant relationship between Audit Quality and Earnings Response Coefficient (ERC) of quoted companies in Nigeria.
2. The results of the tests on both Single Audit Quality explanatory variables taken individually as well as multiple Audit Quality measures taken together show that Audit Quality measures exert significant influence on the Market Value per Share of quoted companies in Nigeria.
3. The result of descriptive statistics imply that majority of the companies in the sample were audited by the Big-4 Audit Firms. This may be related to the level of perceived audit firm quality being associated with Audit Firm Size (in terms of the Big-4 audit brand names) by quoted companies in Nigeria.
4. The descriptive statistic test result also revealed that on the average, companies (about 94%) engage their audit firms for over three (3) years, with a considerable experience of a substantial number of audit firms in this distribution.

## 5.2 Policy Implications of Findings

The policy implications of our findings are as follows:

1. The reported results and findings of this study present obvious implication for regulators such as the Securities and Exchange Commission in its supervisory position to distinguish between legitimacy, outright fraudulent reporting and earnings statements that reflect the desires of management rather than the underlying performance of the company and to impose appropriate disciplinary penalties on offenders.
2. The result of this study has shown that if company's earnings are not properly monitored, companies will continue to deviate from reporting correct earnings figures by presenting earnings figures that appear beautiful but are not true; hence investors and other stake holders are deceived.
3. The Auditors standing expertise notwithstanding, an overly long association between the auditor and his client may constitute a threat to independence and hence audit quality as personal ties and familiarity may develop between the parties. This will lead to less vigilance and an obliging attitude of the auditor towards the top managers of the company. Apart from the threat to independence and audit quality, the audit engagement may become routine over time resulting in devotion of less effort to identifying the weaknesses of internal control and risk sources.

## 5.3 Recommendations

This study recommends that:

1. The management of quoted companies in Nigeria should, as a legal mandate, provide a "statement of the quality of its earnings" arrived at using acceptable and uniform criteria and make assertions that the earnings of the company have not been manipulated (managed) during the period. Management can be held liable for any misstatement intended to distort or mislead the public with respect to the "quality of earnings". Management should be responsible for making an assertion about the company's quality of earnings, similar to the financial statement assertions currently required. Given management's inherent bias, however, an evaluation of its own quality of earnings would not be viewed by the public as completely reliable.
2. The auditors of quoted companies in Nigeria should conduct Earnings Quality Assessment (EQA) following Earnings Manipulation detection metrics and the techniques enumerated in this paper and issue "Integrated Audit Reports" which will include EQA reports and Internal Control Reports in addition to normal annual audit reports. EQA reports will provide higher – quality information to financial statement users and meet the Stock Exchange, Regulatory Agencies and the public demand for greater assurance about the reliability of earnings figures. The conduct and completion of the EQA should be a legislative mandate while the auditors should be held responsible for EQA report they issue. Auditors' insight and expertise in this area is much like the expertise required to evaluate and report on management's assessment of internal controls under section 404 of the Sarbanes Oxley Act (2002).
3. The three years professional requirement for Auditors in Nigeria should be backed up by law and enforced. Considering the negative effects audit tenure may have on audit quality of independence (measured by audit fee in this study) and in line with global trends, professional accounting bodies, Financial Reporting Council of Nigeria, and

- the National Assembly should issue a codified and authoritative framework, guideline or standard for auditors' tenure and independence in Nigeria.
4. Attention should also be focused on companies' attempts to smooth or increase earnings to beautify its attractions in the stock market through unnecessary manipulation of real economic operations and cash flows. We recommend that companies earn high quality income only through sales growth and cost cutting activities since repeatable and fairly predictable earnings that come from sales and cost reductions presents the company's earnings as high quality earnings in the eyes of investors.
  5. Audit quality measures applied to effectively detect and report earnings misstatements will facilitate the achievement of the public expected low rate of audit failures. This implies that Auditors must plan and perform their audit procedures in a manner that will minimize the risk of an undetected material misstatement. Enhanced annual internal inspections and triennial peer reviews should further compel an enhancement of audit quality in this respect.
  6. In order to enhance high Audit Quality and minimize Earnings Management, Companies in Nigeria should adapt to or engage in an outright adoption of currently available best practices like the provisions of US Public Companies Accounting Oversight (Sarbanes Oxley's) Act, 2002 and Public Companies Accounting Oversight Board standards, the UK Financial Reporting Council's Audit Quality Guidelines and Frameworks, followed by a statutorily backed earnings monitoring of companies in Nigeria.
  7. Further studies in the same or similar area to the present study should focus on quoted companies in the financial services sector as well as unquoted companies and other businesses located within the informal sector in Nigeria. Despite the reasons adduced, the non-inclusion of institutions in these sectors constitutes a major constraint to the generalization. The financial data for such firms also need to be evaluated in order to be able to make general policies that will favourably affect such institutions and consequently the entire economy.

#### **5.4 Conclusion**

Many past empirical studies investigate the implications of audit quality since the seminar work of DeAngelo (1981). The majority of these investigations are based on developed economies, while very little is empirically known about the implications, relationships and impact of audit quality on earnings response coefficients and market prices in transition economies like Nigeria. The study extended the relationship between audit quality and earnings management to the examination of the relationship and effects which audit quality exerts on the earnings response coefficients and market prices of shares of quoted companies in Nigeria. Based on a sample of 342 company – year observations from the NSE for the fiscal years, 2006 to 2011, and using the commonly applied audit quality measures (AFS, AF, AT and ACI) separately before treating them together with other perceived audit quality measures, for purpose of comparison, a massive and all-inclusive multivariate analyses was conducted. The result showed that audit quality significantly exerts influence and relationships with earnings response coefficients and market prices of quoted companies in Nigeria.

Although the results of this study are similar to findings of some similar studies conducted in some more advanced economies, in arriving at the above conclusions,

quoted financial institutions, unquoted companies and other firms located within the informal sector of the Nigerian economy were excluded; the sample covered six years of data drawn from annual accounts of sampled companies. The effect of these limitations is that external validity problem may be amplified to constrain the generalization of the results to cover different periods of time and different locations. The effects of inflation on figures related to financial statements and on the estimation of earnings response coefficients of quoted companies in Nigeria were ignored.

In Nigeria in particular and to the best of our knowledge, as at the time of this present study, there exists no known study that relate audit quality to earnings response coefficients or that have examine the effects of audit quality on the market prices of shares of quoted non-financial institutions in Nigeria. This study contributes to knowledge by showing that the best accounting policy is that which evokes the greatest market response and the market seems to respond to earnings information more strongly than other information contained in financial statements. Audit Quality can act as a signal to potential earnings announcement and elicit the reactions or response of investors to the market price of the company's shares. Furthermore, this study contributes to knowledge by integrating the two streams of research in market reactions to earnings and audit quality which has been desperate and incongruent in several economies.

## References

- [1] I. M. Badawi, Motives and consequences of fraudulent financial reporting. paper presented at the 17<sup>th</sup> annual convention of the global awareness society international, May, (2008), San Francisco, USA.
- [2] A. Enofe, Reaping the fruits of evils: how scandals help reshape the accounting profession, *International Journal of Business, Accounting and Finance*, 4 (2) (2010), 53 – 69.
- [3] A. O. Okolie, and D. J. Agboma, The impact of environmental dynamics on the accounting profession in Nigeria. *Journal of Business Administration and Management.*, 3 (1) (2008), 70 – 75.
- [4] J. Odia, Creative accounting and its implications for financial reporting in Nigeria. *Nigeria urnal of Business Administration*, 8 (1 & 2) (Jan/July) (2007)
- [5] S. B. Adeyemi, and T. O. Fagbemi, Audit quality, corporate governance and firm characteristics in Nigeria, *International Journal of Business and Management*, 5 (5) (2010), 169 – 179.
- [6] K. Schipper, Commentary on earnings management, *Accounting Horizons* (December), (1989), 91 – 102.
- [7] P. M. Healy and J. M. Wahlen, A review of the earnings management literature and its implications for standard setting, *Accounting Horizons*, 13 (1999), 365 – 383
- [8] D. W. Collins and S. P. Kothari, An analysis of inter – temporal and cross – sectional determinants of earnings response coefficients, *Journal of Accounting & Economics* 11, No.2/3 (July), (1989), 143 – 81.
- [9] S. H. Teoh, and T. J. Wong, Perceived auditor quality and earnings response coefficient. *The Accounting Review*, 68 (2) (1993), 346 – 366.



- [10] R. Holthausen, and R. Verrecchia, The effects of sequential information releases on the variance of price changes in inter – temporal multi – asset market, 26 (spring), (1988), 82 – 106
- [11] B. M. Craven, and C. L. Marston, Financial reporting on the internet by leading UK companies, *European Accounting Review*, 8 (2), (1999), 321 – 333.
- [12] J. Krishnan and J. S. Yang, Auditor industry specialization and earnings response co-efficient, working paper, Temple University, (April) (1999)
- [13] K. Menon and D. D. Williams, The insurance hypothesis and market prices, *The Accounting Review*, 69, (1994), 327 – 342.
- [14] L. E. DeAngelo, Auditor size and audit quality, *Journal of Accounting and Economics*, 3 (3) (1981), 183 – 199.
- [15] EUROSAI, Guidelines on audit quality, revised version for the consideration of Contact Committee of the Heads of the Supreme Audit Institutions (SAIs) of the European Union held in Luxembourg, (6 – 7<sup>th</sup> December, 2004).
- [16] R. Watts and J. L. Zimmermann, *Positive accounting theory*, Prentice Hall, Inc. Englewood Cliff, (1986)
- [17] W. R. Knechel, Audit lessons from the economic crisis: rethinking audit quality, inaugural lecture delivered at Maastricht University on Friday, September 11, (2009).
- [18] A. Levitt, The numbers game: speech delivered at the New York University center for law and business, New York, (1998) <http://www.rutgers.edu/accounting>; <http://www.sec.gov/news>
- [19] R. K. Mautz and H. A. Sharaf, *The philosophy of auditing*; Florida, American Accounting Association, Monograph Series (6), (1961)
- [20] W.A. Wallace, The economic role of the auditor in free and regulated markets: a review, *Research in Accounting Regulation*, 1, (1987), 7 – 34.
- [21] A. R. Abdel-khalik and I. Solomom, *Research opportunities in auditing: the second decade* (edited), (1988), Sarasota, FL: AAA auditing section.
- [22] K. A. Moreland, Criticisms of auditors and the association between earnings and returns of client firms, *Auditing*, 14 (1), (1995), 94 – 104.
- [23] C. E. Hogan, Costs and benefits of audit quality in the ipo market: a self – selection analysis, *The Accounting Review*, 72 (1), (1997), 67 – 86.
- [24] S. Balsam, J. Krishnan, and J. S. Yang, Auditor Industry Specialization and the Earnings Response Co – efficient, working paper, (2003)
- [25] A. Ebrahim, *Auditing quality, auditor tenure, client importance, and earnings management: an additional evidence* (2001), Unpublished, Rutgers University.
- [26] H. V. Bauwhede, M. Willekens, and A. Gaeremynck, *Audit quality, public ownership and firms' discretionary accruals management*, (2000), Working paper.
- [27] C. L. Becker, M. L. Defond, J. Jiambalvo, and K. R. Subramanyam, The effect of audit quality on earnings management, *Contemporary Accounting Research*, 15 (1), (1998), 1 – 24.
- [28] M. D. Beneish, Detecting GAAP violations: implications for assessing earnings management among firms with extreme financial performance, *Journal of Accounting and Public policy*, 16, (1997), 271 – 309.
- [29] W. P. Carey, *Fallout from corporate scandals: Enron Q & A*. (2006), <http://knowledge.wpcare.asu> Retrieved: February 27<sup>th</sup>, 2010.
- [30] D. R. Carmichael, The PCAOB and the social responsibility of auditors, *Accounting Horizon*, 18 (2), (2004), 127 – 133.

- [31] D. J. Chambers, R. N. Freeman and A. S. Koch, The effect of risk on price responses to unexpected earnings, *Journal of Accounting, Auditing and Finance*, 20 (4), (2005), 461 – 482.
- [32] P. M. Clarkson, Auditor quality and the accuracy of managing earnings forecasts, *Contemporary Accounting Research*, 17 (4), (2000), 595 – 622.
- [33] P. M. Clarkson and D. A. Simunic, The association between audit quality, retained ownership and firm specific risk in U.S. vs. Canadian IPO markets, *Journal of Accounting and Economics*, 17, (1994), 207 – 228.
- [34] G. Colbert, and D. Murray, The association between audit quality and auditor size: an analysis of small CPA firms. *Journal of Accounting, Auditing and Finance*, 13 (2), (1998), 135 – 150
- [35] P. A. Copley, The association between municipal disclosure practices and audit quality. *Journal of Accounting and Public Policy*, 10 (4), (1991), 135 – 150.
- [36] A. G. Davidson, B.W. Stenning, and W. T. Wai,. Auditor concentration and the impact of interlocking directors, *Journal of Accounting Research*, 22 (1), (1984), 313 – 317
- [37] R. A. Davidson, and D. Neu, A note on association between audit firm size and audit quality, *Contemporary Accounting Research*, 9 (2), (1993), 479 – 488.
- [38] P. Dechow, R. Sloan and A. Sweeney, Causes and consequences of earnings manipulations: an analysis of firm's subject to enforcement actions by SEC, *Contemporary Accounting Research*, 13, (1995), 1 – 36.
- [39] D. R. Deis, and G. A. Giroux, Determinants of audit quality in the public sector, the *Accounting Review* 67 (3), (1992), 462 – 479.
- [40] R. Dye, Earnings management in an overlapping generations model, *Journal of Accounting Research*, 26, (1988), 195- 235.
- [41] A. Eilifsen, and W. F. Messier, The incidence and detection of misstatements: a review and integration of archival research, *Journal of Accounting Literature*, 19, (2000), 1 – 43.
- [42] G. Foster, Briloff and the Capital Market, *Journal of Accounting Research*, 17, (1979), 262 – 274.
- [43] J. R. Francis, and J. Krishnan, Accounting accruals and auditor reporting conservatism, *Contemporary Accounting Research*, 16 (1), (1999), 135 – 65
- [44] R. Frankel, M. Johnson, and K. Nelson, the relation between auditors' fees for non-audit services and earnings quality, *The Accounting Review* 77 (Supplement), (2002), 71-105.
- [45] R. Freeman, and S. Tse, A nonlinear model of security price response to unexpected earnings, *Journal of Accounting Research*, 30 (2) (Autumn), (1992), 185 – 209.
- [46] M. S. Gerayli, A. M. Yanesari, and A. R. Ma'atoofi, Impact of audit quality on earnings management: evidence from Iran, *International Research Journal of Finance and Economics*, 66, <http://www.eurojournals.com/finance> Retrieved February 27, (2011), 2010
- [47] L. Geriash, Organizational culture and fraudulent financial reporting. *The CPA Journal*, (2006); Retrieved February 27, 2010 from <http://nysscpa.org/cpajournal>
- [48] IAASB, Audit quality: an IAASB perspective, International Auditing and Assurance Standards Board, New York, (2011)
- [49] J. Hansen, The Effect of alternative goals on earnings management studies: an earnings benchmark examination, working paper, (2007), University of Illinois, at Chicago.

- [50] J. A. Hausman, Specification tests in econometrics, *Econometrica*, 46 (6), (1978), 1251-71
- [51] W. G. Heninger, The association between auditor litigation and abnormal accruals, *The Accounting Review*, 76 (1), (2001), 111 – 126.
- [52] E. S. Hotchkiss, and D. Strickland, Does shareholder composition matter? Evidence from the market reaction to corporate earnings announcements, *Journal of Finance* 58 (4), (2003), 1469 – 1498.
- [53] T. Khan, Financial reporting disclosures: an international perspective (Unpublished), (2006), Victoria University, Australia.
- [54] J. Kim, R. Chung, and M. Firth, Auditor conservatism, asymmetric monitoring and earnings management, *Contemporary Accounting Research*, 20 (2), (2003), 323 – 359.
- [55] R. Kormendi, and R. Lipe, Earnings innovations, earnings persistence and stock returns, *Journal of Business*, University of Chicago Press, 60 (3), (1987), 323 – 345.
- [56] G. V. Krishnan, Does Big 6 auditor industry expertise constrain earnings management? *Accounting Horizons*, 17 (Supplement), (2003), 1 – 15
- [57] J. Krishnan, and P. C. Schauer, The differentiation of quality among auditors: evidence from the not-for-profit sector, *Auditing: A Journal of Practice and Theory*. 19 (2), (2000), 9 – 26.
- [58] S. Lam, and S. Chang, Auditor service quality and auditor size: evidence from initial public offerings in Singapore, *Journal of International Accounting, Auditing and Taxation*. 3 (1), (1994), 103.
- [59] Limperg Institute, The social responsibility of auditors: a basic theory on auditors function. The Limperg Institute, Netherlands, (1985).
- [60] R. Lipe, The relation between stock returns and accounting earnings given alternative information, *The Accounting Review* 65 (January), (1990), 49-71
- [61] P. Moizer, Auditor reputation: the international empirical evidence, *International Journal of Auditing*, 1 (1), (1997), 61 – 74.
- [62] Z. V. Palmrose, An analysis of auditor litigation and audit service quality, *The Accounting Review*, 64 (1), (1988), 55 – 73.
- [63] Z. Palmrose, V. Richardson, and S. Scholz, Determinants of market reactions to restatement announcements, *Journal of Accounting and Economics*, 37, (2004), 59-89.
- [64] C. Piot, and R. Janin, Audit quality and earnings management in France, working paper, (2005), IUT GEA – Piere Mendes France University, France.
- [65] P. C. Schauer, Differences in audit quality among audit firms: an examination using bid – ask spreads. \Working paper, (2000)
- [66] A.P. Sweeney, Debt – Covenant violations and managers' accounting responses, *Journal of Accounting and Economics*, 17, (1994), 281 – 308
- [67] R. J. Thierauf, and R. C. Klekamp, Decision making through operations research (second edition). New York, John Wiley and Sons, (1975), 20 – 21.
- [68] J. Wells, Principles of fraud examination (1<sup>st</sup> ed), Hboken, NJ: John Wiley and Sons, Inc., (2005), New York
- [69] T. C. Wooten, Research about audit quality, *The CPA Journal* (January, 2003), <http://www.nysscpa.org>. Retrieved: April 21, 2012.
- [70] J. Zhou, and R. Elder, Audit firm size, industry specialization and earnings management by initial public offering firms, (2001), working paper

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