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CORPORATE GOVERNANCE AND AUDIT FEE DETERMINATION IN NIGERIA

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Abstract

The objective of this study is to examine the effects of corporate governance variables on audit fee in Nigeria. Specifically, the study examines if board size, board independence, board diligence, board expertise, and audit committee independence exert a significant effect on audit fees in Nigeria. The population of the study covers all quoted companies on the Nigerian Stock Exchange (NSE) from 2007-2011. The study used secondary data obtained from the published annual accounts and reports of one hundred and fifty three (153) companies from different sectors of companies quoted on the Nigerian stock exchange from 2007-2011. The cluster and simple random sampling technique was used in the selection of companies from the population. The multiple regression analysis was conducted using Pooled Ordinary Least Square (POLS) and the panel Estimated Generalized Least Squares (EGLS). The results showed that board diligence, board expertise, board size, board independence and audit committee independence all have a positive and significant impact on audit fee. It is recommended that auditors should have a better understanding of these factors and their relative importance and how the factors might be built into an audit fee model.

Keywords: Corporate Governance, Audit Fee, Panel Data Regression.

Introduction

Generally, there are two perspectives to the relationship between corporate governance and audit fees; the demand side and the supply side. From the demand side, corporate governance mechanisms may have a positive impact on audit fees by ensuring that audit hours are not reduced to a level that compromises the quality of the audit. Hence firms with effective corporate governance may tend to demand additional assurance from their auditor to preserve their reputation and avoid potential litigation (Carcello, Hermanson, Neal, & Riley, 2002) resulting in a higher audit fee. From the supply side, the corporate governance involvement in strengthening internal controls may lead the external auditor to reduce the assessed level of control risk. As a consequence, the auditor's reliance on internal controls should result in less substantive testing and hence a lower audit fee (Collier & Gregory, 1996).

Griffin, Lont and Sun (2012) typifying this relationship using an economic framework note that auditing is one of several mechanisms available to a company to achieve optimal corporate governance, and that the auditor shares in the costs and benefits of changes in governance resulting in a change in the equilibrium quantity or price of auditing relative to the use of other resources for governance. Hence the company selects an optimal governance portfolio by choosing a pair of internal control and auditing resources at prices conditional on the expected liability from bad financial statements, such that the total cost equals the total benefit of governance.

participation during meetings, and post meeting follow-up). The only one of these factors that is publicly observable is the number of board meetings. This is frequently used in several studies. Lipton & Lorsch (1992) suggest that a major impediment to board effectiveness is a lack of time to complete board duties. In addition, prior studies like Conger, Finegold, & Lawler (1998); Pound (1995) & Vafeas (1999) suggest that an increase in the number of board meetings can increase board effectiveness. One view is that a board that demonstrates greater diligence in discharging its responsibilities as measured by the number of board meetings will seek an enhanced level of oversight of the financial reporting process. As such, we would expect more diligent boards to support the purchase of a greater amount of external auditing services, resulting in higher audit fees. Alternatively, one might argue that a greater number of board meetings signal an enhanced degree of oversight by the board, and this enhanced oversight may substitute for some of the auditor's effort, thus decreasing the fee. In addition, a more diligent board may reduce the auditor's assessment of control risk, also reducing the audit fee. The finding in this respect is also inconclusive. This generates the fourth hypothesis in this study that:

> *H4: There is no significant relationship between Board diligence and Audit fees*

Audit Committee Independence

Boo & Sharma (2008) observe a negative association between audit committee independence and audit fees indicating that auditors will minimize their effort in the presence of independent audit committee. They observe that the existence of audit committee independence can reduce the tendency of control risk in financial reporting. Vafeas & Waegelein (2007) examine the association between audit committee characteristics and audit fees shows that independent audit committee is positively associated with audit fees and further suggested that audit committee serves as a complement to external auditor in monitoring mechanism and financial reporting quality. This generates the fifth hypothesis in this study that:

> *H5: There is no significant relationship between Audit Committee Independence and*
> *Audit fees*

Theoretical framework

The agency theory deals with the contractual relationship between the agent (manager) and the principal (shareholders) under which shareholders delegate responsibilities to the manager to run their business. This theory argues that when both parties are expected to maximise their utility, there is good reason to believe that the agent may engage in opportunistic behaviour at the expense of the principal's interest. Jensen & Meckling (1976) modeled this condition as an agency relationship where the inability of the principal to directly observe the agent's action could lead to moral hazard, thus increasing agency cost. In addition, agency theory points out the role of the board of directors to monitor both the majority shareholders and management; and to protect minority shareholders' interests (Fama & Jensen, 1983). How does the determination of audit pricing fall within the context of the agency theory? This question is answered when we consider clearly the contributions of Jensen & Meckling (1976). According to Jensen & Meckling (1976), a component of the agency costs is represented by the monitoring costs supported by shareholders for the monitoring of the managers actions. The audit fees are an important component of these costs, as long as auditors have to make sure that managers act according to the shareholders' interests, while also auditors have the required task to inspect the accounts of the company.

Methodology

Panel data design which may be seen as a combination of both cross-sectional and time-series design properties is used for this study. The panel design is a method of studying sample units periodically observed over a defined time frame. The population consists of all companies quoted on the Nigeria Stock Exchange as at December 31, 2011. There were 250 companies listed on the Nigerian Stock Exchange (NSE, Factbook 2011). The sample size for this study was based on Yamani's (1967) formula in Guilford & Fruchter (1973). Following the formula, the minimum sample size for this study is 132 quoted companies at 5% levels. We therefore choose to use one hundred and fifty three (153) companies.

The cluster sampling technique was adopted in this study. This was complemented with the simple random sampling technique. The reason for the choice of the cluster sampling technique is that the population of study (the 250 companies listed on the NSE) is distributed in different clusters/sectors. Cluster sampling technique will therefore make for proportional selection of samples such that the number of subjects selected from each sector will represent its share of the entire population. For each company in a given cluster/sector to have equal chance of being selected, the simple random sampling technique was then introduced. The sectors are banking, insurance, agriculture, automobile & tyre, breweries, building materials, chemical and paints. Others are conglomerates companies,

food/beverages & tobacco, footwear, healthcare, industrial/domestic products, packaging, printing & publishing, textiles and petroleum.

The secondary source of data was adopted in this study. Data for the variables covered were obtained from the published annual accounts and reports of one hundred and fifty three (153) companies from different sectors of companies quoted on the Nigerian Stock Exchange from 2007-2011. The computer based E-view 7.0 software was used to analyse the data collected.

Variable definition and measurement

The variables (Board Independence - BDIND, Board Size - BDSIZE, Board Expertise - BDEXP, Board Diligence - BDDILI, and Audit Committee Independence - ACIND) covered in this study were operationalised as follows:

BDSIZE: This represents Board size and is measured by the number of individuals on the board. In this study we expect that large board would likely debate about higher audit fee. The use of the number of individuals on the board as a proxy for corporate governance is found in the works of Thinggaard & Kiertzner (2008). BDIND: This represents board independence and it is measured by ratio of external to internal directors on the board. In this study, we expect board independence to be negatively related to audit fee for our sampled quoted companies. BDEXP: This represents board expertise and it is measured by the number of multiple directorship held by board members. This approach of measuring board expertise is found in the work of Cassello et al (2010). BDDILI: This stands for Board diligence and is measured by the numbers of meetings held by the board. In this study, we assume that a company board that meets regularly is diligent and would be able to discuss most of the strategic problems in a company. ACIND: This represents audit committee independence and is measured by the ratio of non-executive directors to the total number on the committee. In this study we expect audit fee to be negatively associated with audit committee independence

Model specification

The model examines the effect of corporate governance on audit fee. The model is presented thus;

$$Audfee_{it} = \alpha_3 + \eta_1 Bdsize_{it} + \eta_2 Bdind_{it} + \eta_3 Bdep_{it} + \eta_4 Bdili_{it} + \eta_5 audtcom_{it} + \varepsilon_{it}$$

..............................(1)

Where: CORRECT B_1 ETC
AUDFEE = Natural log of Audit Fee
BDSIZE = Board Size
BDIND = Board Independence
BDEXP = Board expertise
BDDILI= Board Diligence
AUDITCOM = Audit committee independence
ε_t = Stochastic term
i = number of sampled cross-sectional firms (1, 2......157)
t = time period of the sampled companies (2007-2011)
The apriori signs are $B_1 > 0$, $B_2 > 0$, $B_3 > 0$, $B_4 > 0$ $B_5 > 0$,

Results and Discussions

This section contains the panel regression result and interpretation of the result and interpretation of the results. It entails the application of statistical techniques to provide the basis for the testing of the research hypotheses, which invariably formed the basis for recommendations and conclusions at the end of the research.

Panel regression result for corporate governance and audit fees

0	Pred. sign	Fixed effects	Random effects	Pooled OLS	VIF
C		-1.395* (0.000)	-1.476* (0.000)	-0.874 (0.229)	
BDDILI	+	0.091* (0.000)	0.116* (0.000)	0.075** (0.084)	1.26
BDEXP	+	0.659* (0.000)	0.630* (0.000)	0.485* (0.000)	1.34

BDIND	+	0.260* (0.000)	0.216* (0.010)	0.090 (0.397)	2.08
BDSIZE	+	1.061* (0.000)	0.154* (0.000)	0.144* (0.000)	1.96
ACIND	+	-0.099* (0.010)	0.022 (0.879)	0.085 (0.887)	1.067
AR(1)				0.6811* (0.000)	2.926
R^2		0.795	0.174	0.540	
ADJ R^2		0.760	0.170	0.537	
F-Stat		22.513	44.491	176.964	
P(f-stat)		0.000*	0.000*	0.000*	
D.W		1.5	1.1	2.3	
Hausman test	0.037				
Ramsey (Prob)	0.396				
ARCH(Prob)	0.411				
LM Test(Prob)	0.208				

*Source: Authors Compilation (2014). * significant at 5%   **significant at 10%*
N.B: ( ) indicates the p-values.

The table shows the result for the Model which examines the effect of corporate governance on audit fee. Specifically, the result clearly provides empirical evidence of the effect of Corporate Governance Variables {Board diligence (BDDILI), Board expertise (BDEXP), Board independence (BDIND) Board size (BDSIZE) and Audit committee independence (ACIND)} on Audit fee. The R^2 for the three estimations show that the fixed effects is able to explain about 79.5% of systematic variations in AUDFEE with an adjusted value of 0.760 while the Pooled estimation explains about 54.0% with an adjusted value of 0.537. The random effect has the lowest R^2 value of 17.4%. However, the F-stat for all three estimations are all significant as their p-values are all less than 0.05 and this indicates that the hypothesis of a significant linear relationship between the dependent and independent variables cannot be rejected at 5% level while the D. W statistics for fixed effects (1.5) and pooled OLS (2.3) indicates the presence of serial correlation in the residuals is unlikely but this is not the case for the random effects estimation. Commenting on the performance of the Corporate governance variables, it is interesting to note that the results of the three different estimations i.e. the fixed effects model, random effect model and pooled OLS give similar results that are all significant at 5% level. BDDILI has a positive impact on AUDFEE with slope coefficients of 0.091, 0.116 and 0.075 for fixed effects, random effects and Pooled OLS estimations respectively with significant p-values below 0.05.

BDEXP is observed to have a positive effect on AUDFEE with slope coefficients of 0.659, 0.630 and 0.485 for fixed effects, random effects and Pooled OLS estimations respectively with significant p-values below 0.05. BDSIZE also appears to have a positive effect on AUDFEE with slope coefficients of 1.061, 0.154 and 0.144 for fixed effects, random effects and Pooled OLS estimations respectively with significant p-values below 0.05. BDIND is also observed to have a positive effect on AUDFEE with slope coefficients of 0.260, 0.216 and 0.090 for fixed effects, random effects and Pooled OLS estimations respectively with significant p-values below 0.05. Furthermore, the regression result reveals that ACIND also has positive effect on AUDFEE with slope coefficients of 0.022 , and 0.085 for the random effects and Pooled OLS estimations only while it appeared negative (-0.099) for fixed effects estimation. However, if we go by the identification test, that is the Hausman's Chi-square statistics, (0.037), the fixed effects result is more reliable and actually performs better than the random effects and pooled estimations and the results explain a significantly higher proportion of systematic variations in AUDFEE. Also, the variance inflation factor (VIF) of the independent variables does not provide any evidence of multicollinearity in the model.

The ARCH test for heteroscedasticity was performed on the residuals as a precaution. 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 mis-specification.

Discussion of Results

In line with the Hausman test, the structural parameters of the fixed effects estimation are preferred and are used for the discussion. The fixed effects regression results show clearly that Corporate Governance Variables {Board diligence (BDDILI), Board expertise (BDEXP), Board independence (BDIND) Board size (BDSIZE) and Audit committee independence (ACIND)} exert a significant effect on Audit fee and hence we reject H1-H5 and conclude that Corporate governance variables exert significant effects on audit fee in Nigeria.

The positive and statistical significance of **Board independence** is in tandem with the findings Adelopo & Jallow (2008) that board independence is positively and significantly associated with audit and non-audit fees paid to auditor. They suggest that independent board play crucial oversight function on the management hence independent board is likely to purchase more services from the external auditor to signal board's competence and quality of audit. Also consistent with our finding is that of Bliss (2010) which found that higher proportion of board independence is positively associated with higher audit fees pricing and claimed large number of board independence significant demand and pay for the higher quality of audit performed. Also, Carcello et al. (2002) document a positive relation between audit fees and board characteristics and conclude that stronger boards purchase more auditing services which increase fees.

Our findings are also consistent with Goodwin-Stewart & Kent (2006) who found using Australian firms that the independence of the board of directors had a positive and significant impact on audit fees. Using Malaysian firms, Muniandy (2007), found that the existence of CEO duality on the board, a proxy for board independence, is associated with higher audit fees and that this positive relationship is weakened in the presence of a strong independent audit committee. Another study on Malaysian companies (Yatim et al., 2006), found that audit fees are positively and significantly associated with board independence. The study finding is also supported by that of Abbott, Parker, Peters and Raghunandan (2003) that found a positive and significant correlation between the independence and the cost of the audit.

The positive and statistical significance of **Board size** is supported by Beasley (1996) that found that the large boards are less effective in monitoring the financial reporting process which results in the external auditor assessing the control environment in the company as weak, hence a higher external audit fees will be charged. In contrast Yatim et al. (2006) found that external audit fees are not related with the board size. Consistent with Dillian (2007) who also found that board size is not significantly associated with external audit fees.

The positive and statistical significance of **Board expertise** is in line with theoretical expectation. Although, the perspectives on the link between the variables and audit fee is quite imprecise; for example, one view is to expect directors who hold multiple directorships, and who presumably possess greater expertise, to be more supportive of the purchase of a greater amount of external auditing services, resulting in higher audit fees. Alternatively, one might argue that a greater number of other directorships signals enhanced quality of oversight by the board (i.e. greater expertise results in higher quality oversight), and this enhanced oversight may substitute for some of the auditor's effort, thus decreasing the fee.

The positive and statistical significance of **Board diligence** measured by number of Board meetings provide empirical justification for the theory that more diligent boards will seek an enhanced level of oversight of the financial reporting process. As such, we would expect more diligent boards to support the purchase of a greater amount of external auditing services, resulting in higher audit fees. Although, there is also the argument that a greater number of board meetings signal an enhanced degree of oversight by the board, and this enhanced oversight may substitute for some of the auditor's effort, thus decreasing the fee. In addition, a more diligent board may reduce the auditor's assessment of control risk, also reducing the audit fee. However, the study finding is consistent with prior studies (Conger, et al, 1998; Pound 1995; Vafeas 1999) suggest that an increase in the number of board meetings can increase the Audit fee.

The positive and statistical significance of **Audit committee independence** suggest that a more independent board will be more concerned about discharging its monitoring role and will be more supportive of the external audit function and therefore are more interested in an extensive audit testing in order to minimize the risk of manage

misbehavior. This is in tandem with Carcello et al., (2002). This further suggests that companies with greater board independence will favour a more comprehensive audit.

Conclusion and Recommendation

The aim of this paper is to provide greater insight into how corporate governance mechanisms may influence audit fees. An important novelty of this study is the introduction of the resource provision argument to explain audit fees. Following the agency perspective, we argue that from the demand side, corporate governance mechanisms may have a positive impact on audit fees by ensuring that audit hours are not reduced to a level that compromises the quality of the audit. Hence firms with effective corporate governance may tend to demand additional assurance from their auditor to preserve their reputation and avoid potential litigation. From the supply side, the corporate governance involvement in strengthening internal controls may lead the external auditor to reduce the assessed level of control risk.

As a consequence, the auditor's reliance on internal controls should result in less substantive testing and hence a lower audit fee. This implies that auditing and corporate governance are co-determined by two countervailing relations, namely, a fee-increasing relation and a fee-decreasing relation. Therefore, a company's cost minimization problem will be to derive the optimal combination of both corporate governance and auditing services. To assess our arguments, we examine if corporate governance is a significant determinant of audit fees. We find clearly that Corporate Governance Variables {Board diligence (BDDILI), Board expertise (BDEXP), Board independence (BDIND) Board size (BDSIZE) and Audit committee independence (ACIND)} exert a significant effect on Audit fee and hence we conclude that Corporate governance variables exert significant effects on audit fee in Nigeria. It is recommended that auditors should have a better understanding of these factors and their relative importance and how the factors might be built into an audit fee model.

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