

IMPLICATIONS OF AUDIT QUALITY ON AGENCY CONFLICTS: EVIDENCE FROM NIGERIA

Johnson Kolawole Olowookere

Department of Accounting
Osun State University, Nigeria
johnson.olowookere@uniosun.edu.ng

Quadri Adebayo Lawal

Department of Management and Accounting
University, Ile-Ife, Nigeria

Akeem Adetunji Siyanbola

Department of Accounting
Federal University Wukari, Nigeria
adetunji@fuwukari.edu.ng

ABSTRACT

This study examined the link between audit quality and agency costs in Nigeria corporate environment. Specifically, the study examined the way audit quality represented by audit firm size affect agency conflicts represented by asset utilization rate, and whether timeliness of the audit report alters the nexus between audit quality and agency conflicts in Nigeria. The data were collected from seventy-three (73) listed non-financial firms who consistently published their annual reports between 2010 and 2019 out of the one hundred and twelve (112) non-financial firms listed on the Nigerian Stock Exchange as of 31st December 2020. Descriptive statistics tools of mean and standard deviation as well as correlation analysis were used for preliminary analysis while fixed effect panel regression was used for the multivariate analysis. Feasible generalize least square was used to estimate the model for robustness check in addition to the use Tobin's Q as alternative proxy for agency conflicts. The results were obtained by controlling for firm size, firm performance, and firm age. The results of the study revealed a significant negative impact of audit quality on agency costs implying that firms audit by big four have significantly lower agency costs compared to firms audited by other audit firms. Further analysis of the results shows that the positive effect of audit report lag overwhelms the negative influence of audit firm size on agency costs suggesting that using big 4-audit firm would not mitigate agency conflict if the audit report lag is higher. These findings are robust to alternate estimation technique and proxy for agency costs. This study therefore recommends that firms should not only patronize big 4-audit firm to mitigate agency conflict, they must ensure timely audit report.

Keywords: Agency Costs; Audit Quality; Audit Report Timeliness; Tobin's Q; Panel Regression

Introduction

More than four (4) decades after the work of Jensen and Mecklings (1976) on agency conflict in corporate firms, agency problems remain a concern in the contemporary corporate world. Agency conflicts exist when there is a divergence between the interest of the agents and the principal especially when the agent pursues selfish-interest at the expense of the shareholders (principal) wealth maximization through either hidden action (moral hazard) or hidden information (information asymmetry) (Arrow, 1985). Contemporary corporate business is characterized by a contractual arrangement involving the principal (shareholders) who delegates the function of the day-to-day management of the business activities to the agent (management). These different contractual arrangements may however create incentives for the actors to engage in opportunistic behaviour, which triggers diverse agency problems (Watts and Zimmerman, 1983). The information asymmetry and agent self-interest pursuit that characterized agency conflicts create disharmony between the two actors as the principal loses trust and confidence in the agent including the reliability of the accounting and non-accounting information reported by the agent which results to increase in agency costs (Jensen and Mecklings, 1976).

Substantial evidence suggests that agency problems are characterized by intended and unintended consequences on market-based and financial performance of a firm. Agency conflicts can weigh heavily on the financial equilibrium of large corporations. Agency costs are linked to the recent subprime mortgage crisis that engulfed the corporate world (Aras and Fortuna, 2015). Others have argued that agency costs can have diverse

effects including destruction of firm financial performance and shareholder's wealth and value as well as other excruciating effects on other entity's stakeholders (Faisal *et al.* 2020). Hence, mitigating agency conflicts through a reduction in agency costs is imperative for the long-run growth and survival of the corporate business.

Since information asymmetry is a major cause of agency conflicts (Faisal *et al.* 2020; Jensen and Mecklings, 1976), contributions from the literature suggest that agency conflicts can be reduced if the principal can limit the agent's opportunistic tendency by adopting a set of mechanisms that are capable of aligning the interest of the agent and the principal. The efficient monitoring hypothesis posits that the most adequate channel to achieve this is efficient monitoring of the agent by the principal (Beaver, 1989). Opinions in the literature point to the ability of corporate governance such as the ownership structure and board composition to shape monitoring efficiency in corporate firms (Zulvia and Serly, 2020).

However, there are those who have posited that audit quality is crucial for the principal effective and efficient monitoring of the agent (Lai and Liu, 2018; Luo *et al.* 2018). Their argument is premised on the potential of quality financial information to reduce information risk (Houge *et al.* 2017; Sitanggang *et al.* 2019), reduce the level of information asymmetry because of numbers, and minimize the residual loss which arises from manager's opportunistic financial reporting (Piot, 2001). Lai and Liu (2018) further argue that quality financial information ensure that investors have reliable information, which they can use in monitoring the agent's investment and operating decisions. In addition, Appolos and Ademola (2020) submitted that, by enhancing the reliability of financial

information, quality audit increases the ability of investors to analyze and evaluate firm performance. Furthermore, Khan *et al.* (2016) reported that audit quality serves as a key alternative monitoring mechanism in agency relationship since corporate governance mechanism is not effective in most emerging markets.

Though previous studies provide conceptual evidence on the potential negative impact of audit quality on agency costs, the link has not attracted adequate attention in the empirical literature. The very few previous studies on audit quality-agency costs nexus have produced mixed results with some reporting significant influence of audit quality on agency costs (Akway and Ramadan, 2019; Alluwi and Sarun (2018); Luo *et al.* 2018) while some others reported no significant influence of audit quality on agency costs (Habbash and Alghamdi, 2016) implying that findings in one context cannot be accurately generalized to another context. By implication, a context specific study is needed to understand the nature of relationship between audit quality and agency costs that exist in such context.

Within Nigerian context, our search revealed that efforts at investigating audit quality-agency costs nexus is very shallow as no robust study in that direction is documented. For instance while Umobong and Agburuga (2019) examined impact of agency cost on firm performance, Ibekwe (2021) conducted empirical study on the impact of ownership structure on agency cost.

In addition, previous related empirical literature such as Alluwi and Sarun (2018) have considered the audit committee attribute as the only indicator of audit quality without checking the need for timeliness of audit

report. Hence, this study fills the gap by examining the impact of audit quality on agency conflicts using data obtained from the listed non-financial firms in Nigeria, which we considered scarce. In addition, the study expanded the literature frontier by checking if audit report timeliness moderates the link between audit quality and agency costs of which finding will help to understand if audit report timeliness could explain the mixed results on audit-quality-agency costs reported in the extant literature. This study is to the best of our knowledge to test if delay in audit report can weaken the ability of audit quality represented by audit firm size to mitigate agency conflicts.

Nigeria provides a good context for studying how audit quality can influence agency conflict because it is characterized with weak institutional structure, which increases the tendency for management opportunistic behavior and prevalence agency conflicts, by extension. In addition, the country has continued to witness corporate failures attributable mainly to earnings manipulation on the part of the management (Afuwape, 2018; Musa, 2020). Prominent cases of corporate failures in the country include the cases of Cadbury, Afribank, intercontinental bank Plc, Oceanic bank Plc and Afribank Plc, Bank PHB, Spring bank and more recently Skye Banks which reportedly engage in earnings manipulation resulting in corporate failure (Okaro and Okafor, 2013). The managing director of Cadbury Plc for instance reportedly connived with the board of the firm to use trade loading, cost deferrals, stock buy backs and false stock certificates to manipulating financial report since 2002 (Okaro and Okafor, 2013).

The outcome of this study is expected to serve as a guide for practice and policies in Nigeria's corporate environment. In

particular, the findings would be useful to investors who are willing to limit agency conflicts and reduce agency costs in their subscribed firms. It will also be useful for the management that wishes to reinforce shareholder's trust and confidence in their activities. In addition, regulators could find the outcome of this study useful when designing policies for firm sustainable growth and development. Further studies on the nexus between agency costs and audit quality could use this study as a reference.

Literature Review

Agency Cost

Agency costs are a key component of the firm internal costs, which arise due to agency conflicts either between the principal and the agent or between the minority and majority shareholders (Cai *et al.* 2015). The term has attracted varied definitions in the literature. Jensen (1986) defines agency costs to be total costs incurred by the owners or even management in order to organize and control the management performance in a way that aligns with the firm goals. Agency costs have several consequences on an organization's existence among which are the potential to retard the corporate performance, destroy the shareholder's wealth in addition to its adverse effect on other corporate shareholders. According to Jensen and Meckling (1976), agency costs comprise of three different costs categories, which are:

- (i) The monitoring costs which are the monitoring expenditure incurred by the principal in monitoring the conduct of the management (agent) of the firm.
- (ii) The bonding cost is the bonding expenditure by the agent to ensure that the

agent does not act contrary to the interest of the principal.

- (iii) The residual loss constitutes the costs associated with differences in principal and agent interest despite the existence of monitoring and bonding activities.

In terms of its measure, there is no consensus on the appropriate measures of agency costs in corporate finance literature. The most common measure used in literature is asset utilization ratio, which is also called asset turnover ratio, and it is measured as the ratio of annual sales to the annual total assets based on the assumption that management decisions create more value for shareholders if the ratio is higher. This measure of agency costs reflects the management shirking and poor asset management (Ang, *et al.*, 2000; Chen and Yur-Austin, 2007). It is also construed as a measure of management capacity to efficiently utilize the firm's assets, which are inversely related to the agency costs (Ang *et al.*, 2000; Chen and Yur-Austin, 2007). This measure has been used widely to measure agency costs in the extant empirical literature (Aras and Furtunad, 2015; Nguye, Doan and Nguyen, 2020; Rashid, 2015). In some other instances, the agency costs is measured using Tobin's Q where the higher the Tobin's Q, the lower the agency conflict is (Henry, 2010).

Theoretical Underpinning

This study is anchored on agency theory, which link disclosure quality with agency costs. The theory is an offshoot of economic theory, which was popularised by Jensen and Meckling (1976). Agency theory postulates that agency problem arises due to the occurrence of information asymmetry between the principal (investors/shareholders) and the agent (management). The

theory derives its existence from Spence and Zeckhamser (1971) and Ross (1973). It also received contributions from other scholars (Eisenhardt, 1989; Fama, 1980). The theory is based on the assumption that each of the parties pursues selfish interests and uses the information available to him to his advantage at the detriment of the other party, which creates agency problems (Holtz and SarloNeto, 2014).

In its original form, agency theory posits that corporate firms are usually faced with two agency-related problems. The first problem concerns the conflicts created by the differences in the interests of the agent and the principal while the second problem relates to the difficulty in verifying the activities of the agents by the principal, which makes it impossible or difficult for the principal to know when the agent behaves inappropriately. This misalignment of agents and the principal interests triggers agency problems when there is insufficient or lack of necessary information for the principal to effectively evaluate the agent's performance. The theory submitted that ownership is separated from control in corporate settings under which the principal always delegates decision-making power to the agent who may want to satisfy his/her own selfish interest that often conflicts with the shareholders' interest. While the managers are concerned most times with the satisfaction of their selfish interest, investors/shareholders are mostly interested in the maximization of their wealth. The misalignment of interest between the two major actors creates agency problems when there is a lack of necessary information for the principal to effectively assess the performance of the agent. The theory posited that agency conflicts may be reduced from two angles including efficient monitoring of the management activities which can be

achieved through quality audit (Jensen and Meckling, 1976) or active and effective board of directors (Holtz and SarloNeto, 2014). The second way is to align the interest of the principal and that of agent through either higher managerial ownership or tying management bonus to firm performance (Eisenhardt, 1989).

Theoretical (Diamond and Verrecchia, 1991) and empirical studies (Alluwi and Sarun (2018; Lai and Liu, 2018) have documented evidence that quality financial information helps to mitigate information asymmetry in a corporate organization and agency costs by extension. Their argument is premised on the prospect of quality accounting information to produce better information to the principal, which can then be used as a monitoring instrument to tame the potential excesses of the managers (agents). Quality financial reporting would thus help to reduce information asymmetry and enhance the effectiveness of agent's efforts, which eventually aligns the interest of the principal and agents and reduces agency problems. In line with the theory, quality audit enhances monitoring of the management by the principal as investors can better assess the management's accountability and performance, which will enable them to in turn make better business forecasts and rational investment decisions. By implication, quality audit report reduces the agency problem and breaches the trust gap between the management and company's investors through the reduction in information asymmetry in corporations. Hence, agency theory predicts an inverse relationship between audit quality and agency costs.

Empirical Literature and Hypotheses Development

Several empirical efforts have been documented on ways to mitigate agency costs. Most of these studies have however focused on the role of corporate governance mechanisms with little attention paid to the role of financial reporting quality. Aras and Furtuna (2015) examined the efficiency of governance variables in controlling agency costs of listed firms in Borsa Istanbul. The results of their study revealed that board independence and CEO duality exert a significant positive impact on agency costs while board size and foreign director have an insignificant positive impact on agency costs proxy with asset utilization ratio.

There are however, those who have studied how audit quality influences agency conflicts in different contexts. Beshkooch *et al.* (2013) found in a study of 61 listed companies on the Tehran Stock Exchange that audit quality, measured as audit firm size and audit tenure, significantly reduces agency costs. Using regression technique to analyse the data collected from 111 listed non-financial firms in Egypt from 2013 to 2016, Akway and Ramadan (2019) found that audit quality, measured by auditor's firm size and auditor industry specialization, significantly mitigates agency costs measured with asset utilization ratio. Chen *et al.* (2011) examined the relationship between quality of audit and investment efficiency using a sample of private firms in emerging markets. The results of their study indicate that audit quality significantly increases investment efficiency of the sampled firms. Luo *et al.* (2018) examined the impact of annual report readability on corporate agency costs using a sample of Chinese listed companies between 2001 and 2015. Their results revealed that the

readability of annual reports significantly reduces agency costs. They equally submitted that the impact is more pronounced for firms with higher audit quality. Some other studies have found evidence that audit quality limits management opportunistic behaviour (Charles *et al.* 2010; Lin and Hwang, 2010). Alluwi and Sarun (2018) examined the influence of broad corporate governance mechanisms (gender diversity, board size, board composition, CEO duality, audit committee and big four) on agency cost with 150 companies listed firms Bursa Malaysia between 2010 and 2013. They used asset utilisation ratio as proxy for agency cost and analysed the data using multiple regression technique. Their findings revealed that audit quality in tandem with board attributes had significant explanatory power to influence agency cost. Specifically, the negative significant influence of audit quality on asset utilisation ratio indicate that the more the sampled firms engage big 4 for audit, the lower their propensity to minimise agency cost and foster harmonious corporate relationship. However, the findings would have been generalizable to Nigeria if the study's duration is lengthier than four years and if evidence of pre and post estimation analysis were aptly captured. In addition, the study ignored audit report timeliness in the study of audit-quality agency costs nexus.

There are other studies, which have reported contrary findings on the link between audit quality and agency costs. In a study of listed Saudi Arabia firms, Habbash and Alghamdi (2016) found positive but non-significant impact of audit quality proxy with big four-audit firm on management opportunistic behaviour. Chi, *et al.* (2011) found evidence that big four audited firms promote agency conflicts by encouraging earnings management. Kanagaretnam (2010) reported no

significant difference in the management opportunistic behaviour of firms audit by big 4 firm and those audited by non-big 4 firms.

In a concurrent study in a different jurisdiction, Ayunitha *et al.* (2020) examined the effect of corporate governance including audit quality on agency in Indonesia with specific emphasis on consumer goods firms between 2015 and 2019. They used ratio of operating expenses to turnover as proxy for agency cost and audit committee members as proxy for audit quality. They used seventeen (17) firms and carried out all the necessary pre and post estimation tests. The results obtained showed that audit quality failed to impact significantly on agency cost. As against our study, they used internal audit attributes, which is at variant with external audit quality attribute used in this study. In addition, the study did not consider audit report timeliness as an alternative dimension of audit quality, which can influence agency costs. Hence, there is no unanimous direction in literature on the link between audit quality and agency costs leading to the below first hypothesis of the study.

Hypothesis 1: Ceteris paribus, audit quality has no significant influence on agency conflicts in Nigerian corporate environment.

Another argument has been put forward in literature, which suggests that audit timeliness, or report lag may be matter for the agency conflicts in corporate entities. This argument rests on the submission that delay in audit report compounds information asymmetry in corporate environment, which prevents principal from effectively monitoring the potential opportunistic behaviour of the management. Several empirical findings on the issue have been documented. Hussain *et al.* (2020) examined the effect of audit quality on agency cost with listed firms

in Pakistan. The study used auditor independence, expertise, meeting frequency, big 4 audit firms and audit report lag as proxies for audit quality. Relatively, they used asset utilisation ratio to represent agency cost. The study used a sample that comprised of 374 firms listed on the Pakistani Stock Exchange between the period 2010 and 2015. The data was estimated using the static and dynamic panel data techniques. The findings reveal a consistency in the findings between the GLS and fixed effect estimators with respect to relationship between agency costs on the one hand, and audit report lag, auditor expertise, meeting frequency and big 4 audit firms, on the other. On the contrary, while auditor independence was significant in the GLS, the relationship in the fixed effects model was insignificant. However, the study's findings may not be generalizable because of inconsistency in the direction of relationship between the audit quality and agency cost. Though the study incorporated audit report lag, it does not check if audit report lag weakens or strengthens the link between big 4 and agency costs. Bae and Woo (2015) reported that increase in audit report lag deepens opportunistic behaviour of management in a study of Korean corporate firms. On the contrary, Habbash and Alghamdi (2016) found no evidence to suggest that audit timeliness is instrumental for mitigating opportunistic behaviour of management among Saudi Arabia corporate firms. Similar studies by Al-Mousawi and Al-Thuneibat (2011) reveal no evidence to suggest that audit quality significantly influences management opportunistic behaviour in Jordan corporate setting. The hypothesis below is specified to capture these conflicting submissions:

Hypothesis 2: Ceteris paribus, audit timeliness does not significantly influence the

nexus between audit quality and agency conflicts in Nigerian corporate environment.

Extant empirical studies have also revealed that agency costs of entities are affected by some firm-level characteristics including firm size, financial advantage, and firm performance. Akway and Ramadan (2019) reported a significant positive impact of firm size on agency costs of listed non-financial firms in Egypt. Aras and Furtunal (2015) also reported a significant positive impact of firm size on agency costs measured by asset utilization ratio. Zhang *et al.* (2020) reported a significant negative impact of firm size on agency costs measured by operating expenses to sales ratio. It was also reported that age of the firm can influence the agency conflicts (Hussain *et al.*, 2020). Loderer and Waelchli (2010) argued that the inherent organizational rigidity and higher tendency for rent-seeking behaviour makes older firms to be less efficient. In a study of non-corporate firms in New Zealand, Wellalage and Locke (2011) found evidence, which suggests that older firms are associated with higher agency conflicts. Zhang *et al.* (2020) found a significant negative impact of firm performance on agency costs of listed Chinese firms between 2005 and 2015. Aras and Furtuna (2015) found in a study of listed firms in Borsa Istanbul that firm performance measured as the ROA exerts a significant negative impact on agency costs such that better-performing firms produce a higher asset turnover ratio.

From the foregoing, empirical literature has shown that agency costs are associated with the monitoring efficiency achieved through corporate governance and audit quality. Emphasis was however mainly rest on the ownership structure and board composition with very few studies on the link between audit quality and agency costs especially

within Africa and Nigerian context. While majority of the studies used big 4 as indicator of audit quality, few other studies incorporated audit reported timeliness and another indicator, which reflects quality of audit. From all the existing literature, none has examined if reporting timeliness matters for the nexus between audit quality and agency costs. This is the main novelty of this study. We found that while engaging big 4 as an indicator of audit quality reduces agency costs, this results will not hold is the audit report is not timely. By implication, our results suggest that audit quality that mitigate agency costs is that which involves big 4 and at the same time characterized with lower reporting lag.

Methodology

Data and Technique of Analysis

The data used in this study were manually extracted from the annual reports of seventy-three (73) listed non-financial firms on the Nigerian Stock Exchange between 2010 and 2019. The population of the study as displayed in Table 1 consists of the one-hundred and six (106) listed non-financial firms in Nigeria out of which the seventy-three (73) that consistently published their annual reports for the period are selected as a sample. The year 2010 is chosen as base year because it corresponds to the recovery period from the 2008 world economic crisis.

The study was analysed using both descriptive and inferential statistical tools of panel regression. While descriptive statistics tools of mean and standard deviation as well as correlation analysis were used for preliminary analysis, the panel regression was used to investigate the extent to which audit quality influences the agency costs while holding other variables constant. The three variants of the basic panel model

(pooled ordinary least square (OLS), fixed effects, and random effects) were estimated and the most appropriate one was selected using two different specification tests namely; F-test and Hausman test. In order to check for the robustness of the results, the feasible generalized least squares (FGLS), which corrects for serial correlation and heteroscedasticity, was equally applied to estimate the data.

Table 1: Sample selection

Sectoral Classification	Listed Firms	Firms with Missing Data	Sampled Firms
Agriculture	5	1	4
ICT	9	5	4
Nat Resources	4	0	4
Conglomerate	5	0	5
Construction and Real Estate	8	6	2
Consumer Goods	21	4	17
Healthcare	7	1	6
Industrial Goods	13	3	10
Oil	10	2	8
Services	24	11	13
Total Firm	106	33	73

Source: Author's Compilation, 2021

Model Specification

The model specification for this study relies mainly on the inference from the theoretical review of the study and the reviewed empirical literature. According to the agency theory, by serving as a monitoring instrument, audit quality enhances the capacity of the principal (shareholders) to monitor the excesses of the agents (management) reporting. Similarly, it assists shareholders in monitoring the activities of the management leading to a reduction in agency conflict. Accordingly, the model for this study is expressed as below:

$$ACT = f(AQ, FS, FAG, FG) \quad (1)$$

Where:

ACT = agency cost

AQ = audit quality reporting quality

FS = the firm size

FAG = firm age

FG = firm growth

(1) Is represented in linear econometric form as

$$ACT_{it} = \tau + \vartheta AQ_{it} + \sum_{i=1}^{10} Year_i + \mu_{it} \quad (2)$$

Controlling for firm and year effect yields

$$ACT_{it} = \tau + \vartheta AQ_{it} + \varphi FS_{it} + \omega FAG_{it} + \sigma FG_{it} + \sum_{i=1}^{10} Year_i + \lambda_i + \varepsilon_{it} \quad (3)$$

To ascertain whether report timeliness impact on the relationship between audit quality and agency costs, the model in (3) is modified as follows

$$ACT_{it} = \tau + \vartheta AQ_{it} + \beta AQ * RL_{it} + \varphi FS_{it} + \omega FAG_{it} + \sigma FG_{it} + \sum_{i=1}^{10} Year_i + \lambda_i + \varepsilon_{it} \quad (4)$$

Measurement of variables

Dependent Variable

The dependent variable of this study is agency costs. Agency costs type 1 that is between the managers and the shareholder is considered in this study. In this type of agency costs, the self-interest managers are assumed to maximize its utility via either perk consumption or inefficient investment. Therefore, this study follows the approach of Akway and Ramadan (2019) by measuring agency costs with asset utilization rate. The asset utilization rate is measured as the ratio of sales (revenue or turnover) to the firm total

assets. This is expected to reveal how the managers efficiently utilize the firm resources for achieving firm goals. This measure is negatively related to agency costs as the higher the ratio the more efficiency in the resource utilization and the lower the agency costs. For the purpose of this study, however, especially to ease results interpretation and discussion, the measure is normalized to directly reflect agency costs by multiplying the value of asset utilization ratio by -1 so that higher value will denote higher agency costs and a lower value will denote lower agency costs. This measure of agency costs is denoted as ACT1. For robustness, the study follows other literature (Jurkus *et al.* 2011; Amelinda and Setyawan, 2020) that have measured agency conflicts using the inverse of Tobin’s Q. This measure is named as ACT2 in this study.

Independent Variable

The independent variables of this study are audit quality and audit report timeliness. Following previous empirical literature, audit quality is measured in terms of the audit firm size where audit report is assumed to be of high quality if it is prepared by a big 4 audit firm compared to the reports from non-big4 firms (Alzoubi, 2016; Charles *et al.*, 2010; Chen *et al.*, 2011; Habbash and Alghamdi, 2016; Lin and Hwang, 2010). Thus, the variable would be a dichotomous variable with proxy 1 if big 4-audit firm is used and 0 otherwise. For the audit report timeliness, the study follows extant literature (Alzoubi, 2016; Bae and Woo, 2015) and measure audit report timeliness as the difference between the end of fiscal years date and the audit report release date.

Control Variables

Consistent with previous empirical studies on

agency costs (Aras and Fortuna, 2015; Hussain *et al.*, 2020; Luo *et al.*, 2018; Zhang *et al.* (2020), the study control for other variables that may systematically affect agency costs. In particular, the study controls for the effect of firm size (FS measured as the natural logarithm of total assets), firm age (FAG measures as the number of years from when the firm is listed to the year under consideration), and firm performance (FG measured as firm growth which is change in revenue). The summarized definitions of all the variables used in this study are contained in Table 2.

Table 2: Variables’ definition and Sources

Variables	Description	Source
Agency costs (ACT1)	Measured as the ratio of turnover to total assets	Khan <i>et al.</i> , 2016; Akwayand Ramadan, 2019
ACT2	Measured as the inverse of Tobin’s Q which is the ratio of the sum of market capitalization and total liabilities less cash flow to the total assets	Amelinda and Setyawan, 2020
Audit Quality (AQ)	This is measured as a dichotomous variable which is assigned 1 when the firm is audited by one of the big 4 and 0 otherwise	Habbash and Alghamdi, 2016;
Audit Report Lag (RL)	The number of days between the end of a fiscal year and the time audit report is released	Alzoubi, 2016; Bae and Woo, 2015
Firm performance (FG)	measured as the ratio of the difference between current year sales and previous year sales to the previous year sales	Luo <i>et al.</i> (2018)
Firm size (FS)	Measured as log of total assets	Gajevszky (2015); Luo <i>et al.</i> (2018)
Firm age (FAG)	This is measured as the difference between the period	Tuan <i>et al.</i> (2019);

when the firm is listed
and the year being
considered

Source: Author's Compilation, 2021

Results Presentation and Discussion

In order to overcome the challenge of heterogeneity, this study used three (3) control variables viz: firm performance, firm size and firm age. Furthermore, the results obtained from the *ovtest* and *linktest* as displayed in the Appendix revealed that the $\text{prob} > F = 0.2447$, which indicates absence of omitted variable. Similarly, the outcome of *linktest* with significant $\hat{\rho}$ and insignificant $\hat{\rho}^2$ further demonstrated that omitted variable which is one of the sources of heterogeneity did not merit remedial action (Barros *et al.*, 2020).

Descriptive Analysis

The results in Table 3 constitute the summary statistics of the panel variables used in the study. The results reveal that the average agency costs measured with asset utilization ratio in absolute term is 0.936 with a standard deviation of 0.769 indicating no wide variation in the agency problems among listed non-financial firms in Nigeria. It was similarly found that the average Tobin's Q, which also measures the agency cost, is 1.547. In terms of audit quality, the results of the descriptive analysis indicate that the average percentage of the firm year observation audited by the big 4-audit companies is 57.9 percent implying that majority of the listed non-financial firms' financial statements are audited by the big 4 audit firms. Furthermore, the average audit report timeliness is 113 days, which is equivalent to almost 4 months after the financial reporting date. This is sequel to failure of one of the sampled firms' inability to present its financial reports and its

subsequent suspension from trading on the floor of NSE in 2018 and cautionary notice to investors by the market to trade cautiously in the firm's share (Afuwape, 2018; Musa, 2020). The standard deviation of 79 days shows lack of significant variation it was revealed further by the results that the average firm growth for the study is 10.256 with a standard deviation of 63.645 implying wide variation in the revenue growth recorded by the sampled firms for the study. The average age of the firms is found to be 13.479 with a minimum of 1 year and a maximum of 55 years. In addition, the mean firm size recorded by the firms in terms of the log of return on assets is found to be 7.094 with a standard deviation of 0.830.

Table 3: Summary Statistics of Panel Variables

Variable		Mean	Std. Dev.	Min	Max	Observations	
ACT1	Overall	-0.936	0.769	-8.035	-0.001	N	730
	between		0.630	-3.645	-0.047	N	73
	within		0.446	-6.270	1.636	T	10
ACT2	Overall	-1.547	1.367	-11.299	-0.124	N	730
	between		1.124	-6.843	-0.589	N	73
	within		1.124	-6.843	-0.589	T	10
AQ	Overall	0.579	0.494	0	1	N	730
	between		0.429	0	1	N	73
	within		0.250	-0.321	1.479	T	10
RL	Overall	113	79	20	934	N	730
	between		50	43	342	N	73
	within		61	130	705	T	10
FG	Overall	10.256	63.645	-100	1354.255	N	730
	between		23.252	-24.317	145.567	N	73
	within		59.302	-171.426	1218.944	T	10
FAG	Overall	26.262	13.479	1	55	N	730
	between		13.254	5.5	50.500	N	73
	within		2.860	21.762	30.762	T	10
FS	Overall	7.094	0.830	5.093	9.241	N	730
	between		0.819	5.414	8.999	N	73
	within		0.164	6.358	8.079	T	10

Source: Authors Computation, 2021

Table 4 depicts the results of the correlation analysis, which reveal the nature, and extent of the relationship among all the variables. The estimated correlation coefficient of -0.241 shows that audit quality has a weak negative relationship with agency costs proxy with inverse of asset utilization ratio, while an estimated correlation coefficient of -0.177 indicates that audit quality is inversely related with agency costs proxy with the inverse of Tobin's Q. This implies that agency costs reduce with better quality of audit albeit the relationships are weak. Equally noticeable in Table 3 is the positive correlation between reporting timeliness on one hand and each of the agency cost proxies on the other. However, the 14 percent correlation between asset utilization rate and 2 percent correlation between Tobin's Q show that the relationship between a pair of timeliness and agency costs are weak. Firm growth records a weak

negative relationship with agency costs given its estimated correlation coefficient of -0.318 implying that firms with higher revenue growth are associated with lower agency costs. Equally, the estimated correlation coefficient of -0.179 indicates that older firms are associated with lower agency costs while the estimated correlation coefficient of -0.025 shows that agency costs is inversely related with firm size as bigger firms are associated with lower agency problems. The estimated correlation coefficients among the regressors reveal that the variables are not highly correlated as the highest estimated coefficient of 0.377 between audit quality and firm size is below the threshold of 0.9 suggested by Hair *et al.* (2006) and 0.7 suggested by Kennedy (2008) for multicollinearity to exist among the regressors implying that the problem of multicollinearity among the regressors is not envisaged.

Table 4: Estimated Correlation Coefficients among Variables

Variables	(1)	(2)	(3)	(4)	(5)	(6)
(1) ACT	1.000					
(2) ACT2	0.111***	1.000				
(3) AQ	-0.241***	-0.177***	1.000			
(4) FP	-0.318***	-0.017	0.079**	1.000		
(5) FA	-0.179***	-0.065*	0.173***	-0.020	1.000	
(6) FS	-0.025	-0.036	0.377***	0.059*	0.103***	1.000

*** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$

Source: Authors' Computation, 2021

Panel Regression Results

In arriving at the results of the panel regression presented in Table 5, two panel regression specification tests were conducted including the F-test for the presence of firm effect and the Hausman test for the consistent estimator. The results are presented at the lower part of Table 5. In addition, several possibilities were considered in estimating the regression model including a model with only audit quality without control variable, the model with audit quality and control variables and full model with audit quality, control variables and moderating effect of audit report timeliness. F-test results with 17.16, 18.76 and 18.67 generally suggest the presence of firm effect, which rule out the use of pooled OLS. The Hausman test results (2.93, 16.44 and 15.58) in addition suggest that fixed effect is the consistent estimator implying that the models are better explained using the panel fixed effects. In order to obtain the results of the fixed effect, year effects were controlled for as shown in the results presented in Table 5.

The results of the fixed effect panel regression in column 2 of Table 5 show that audit quality has significant negative impact on the agency costs given its estimated

coefficient of -0.162 and p-value of 0.032. These results imply that a qualitative audit report would bring about a reduction in agency conflicts. Therefore, audit quality can play an active role in mitigating agency conflicts among listed non-financial firms. Hence, the first null hypothesis of this study (H1) which states that audit quality has no significant impact on agency conflicts is rejected at 5 percent level of significance. These results may be linked to the efficacy of audit quality to serve as monitoring mechanism to discourage the management from engaging in opportunistic behaviour and in turn align the interest of the agents and the principals. In particular, qualitative audit report enhances the capacity of the principal to effectively monitor the activities of the agent. This result aligns with the proposition of the agency theory and efficient monitoring hypothesis. The finding is equally consistent with the submission of previous extant literature that reported a significant negative impact of audit quality on agency costs (Luo *et al.*, 2018) and others that reported the ability of audit quality to significantly mitigate opportunistic behaviour of the management against the principal (Chen *et al.*, 2011; Sitanggang *et al.*, 2019).

Table 5: Estimated Fixed Effect Panel Regression Results (Dependent= ACT1)

VARIABLES	1	2	3
AQ	-0.137* (0.0871)	-0.162** (0.0302)	-0.246** (0.0209)
AQ*RL			0.000595* (0.0777)
FG		-0.00303*** (0.00391)	-0.00303*** (0.00353)
FAG		0.00409 (0.784)	0.000951 (0.949)
FS		0.494** (0.0135)	0.497** (0.0121)
Year			
2011	0.0510 (0.263)	0.0539 (0.241)	0.0639 (0.166)
2012	0.0785* (0.070)	0.0192 (0.679)	0.0263 (0.570)
2013	0.0930 (0.194)	-0.000797 (0.989)	0.00896 (0.879)
2014	0.198*** (0.00021 9)	0.0663 (0.361)	0.0784 (0.280)
2015	0.219*** (0.00148)	0.0848 (0.298)	0.102 (0.204)
2016	0.287*** (0.00060 3)	0.126 (0.134)	0.147* (0.0729)
2017	0.236*** (0.00532)	0.0752 (0.417)	0.0983 (0.279)
2018	0.203** (0.0285)	0.0338 (0.737)	0.0621 (0.528)
2019	0.0484 (0.747)	-0.103 (0.464)	-0.0755 (0.584)
Constant	- 0.998*** (0)	-4.456*** (0.00443)	-4.403*** (0.00458)
Observations	730	730	730
R-squared	0.052	0.226	0.228
Hausman Test	2.93*	16.44***	15.80***
F-test for Fim Effect	17.16***	18.76***	18.67***
Number of PID	73	73	73

P value in parentheses

*** p<0.01, ** p<0.05, * p<0.1

Source: Authors' Computation 2021

The study proceeds to examine if audit report timeliness does alter the link between audit

quality and agency costs. The results regarding this issue, which is based on the full model of the study, are presented in the last column of Table 6. From the results, audit quality maintains a significant negative relationship with agency costs with its estimated coefficient and p value of -0.246 and 0.0209 respectively, which suggest that audit quality mitigates agency conflicts in corporate entity.

For the moderating effect of audit report timeliness, the estimated coefficient and corresponding p value of 0.000595 and 0.0777 respectively indicate that firms audit by big 4 with longer report lag are associated with higher agency conflict. The results imply that engaging big 4 would lead to lower agency cost but late reporting of audited financial statement by this big 4 firms significantly deepen the agency conflicts. This finding is quite intuitive since delay to release the audited financial statement may signal attempt to cover the opportunistic behaviour of the management (agent). Hence, for audit quality to mitigate agency problem, it should not only be from the big 4 but also timely reported. This finding aligns with the findings in previous empirical literature that reported the crucial role of audit report timeliness in limiting the management opportunistic behaviour in corporate entities such as (Alzoubi, 2016; Bae and Woo, 2015)

Regarding the control variables, the results in Table 6 reveal that firm growth has a significant negative impact on agency costs given its estimated coefficient of -0.00303 and p value of 0.00353. This implies that firms that record higher growth would be characterized with lower agency conflict probably because there is enough pie to share between the management (agent) and the shareholders (principal). Luo *et al.* (2018) who found that firms that record improved

financial performance have lower agency conflicts reported similar findings. However, the respective estimated coefficient and corresponding p value of 0.497 and 0.0121 in the results presented in Table 6 show that firm size has significant positive relationship with agency cost implying that the bigger the firm, the greater is the agency conflict. This is because the operation of bigger firms is complex and so many interests exist, which deepen the agency conflicts in such organization. This finding aligns with the submission in previous extant literature in which it was reported that bigger firms were associated with higher agency conflict in (Aras and Fortuna, 2015; Luo *et al.*, 2018). The study could not find evidence of significant impact of firm age on agency costs.

We proceeded to conduct robustness check for the results obtained in two different ways. First, we used alternative panel regression method in feasible generalized least square (FGLS) to estimate the model with inverse of asset utilization ratio as a proxy for agency costs. The FGLS is heteroscedasticity and autocorrelation consistent as it controls for the presence of both auto correlation and serial correlation in the model. Secondly, the study used inverse of Tobin's Q as an alternative measure of agency cost (ACT2) and the model is estimated using FGLS. Consistent with the results obtained from the baseline model using panel fixed effect and asset utilization ratio, the results obtained with FGLS with asset utilization ratio as a proxy and that obtained with Tobin's Q as a proxy for agency costs reveal that audit quality has negative impact on the agency costs. This is based on the estimated coefficient and p value of -0.475 and 0.000 respectively for the first robustness check and respective coefficient and p value of -0.738

and 0.000 for the second robustness check. Equally, the estimated coefficient of 0.00709 with p value of 0.0648 and estimate coefficient of 0.0020 with p value of 0.0820 for the moderating effect of audit report timeliness in first and second robust model respectively show that using big 4 audit firm but late audit report increases agency conflict in agreement with the results of the baseline model of the study. These implies that the results of the impact of audit quality and moderating effect of audit report timeliness are robust to various estimation technique and proxies of agency costs.

Table 6: Estimated Panel Feasible Generalized Least Square Regression Results

VARIABLES	Dependent (ACT1)		Dependent (ACT2)	
	(1)	(2)	(1)	(2)
AQ	-0.351*** (0.000)	-0.475*** (0.000)	- (0.000)	- (0.000)
AQ*RL		0.00109* (0.0648)		0.738*** (0.00200*)
FG	- (0.000)	- (0.000)	- (0.885)	- (0.886)
FA	0.00374*** (0.000)	0.00374*** (0.000)	0.000114 (0.311)	0.000113 (0.454)
FS	- (0.009)	- (0.005)	-0.00380 (0.334)	-0.00283 (0.232)
Constant	-1.081*** (0.000)	-1.151*** (0.000)	- (0.000)	- (0.000)
Observations	730	730	730	730
Number of PID	73	73	73	73

P value in parentheses

*** p<0.01, ** p<0.05, * p<0.1

Source: Author's Computation 2021

In summary, the results of the study provide evidence that audit quality is crucial for mitigating agency conflicts in Nigerian corporate business environment consistent with the submission of the agency theory (Hussain *et al.*, 2020). In particular, the firms that not only engage big 4- audit firm but also characterized with timely audit report or less

audit delay are bound to have minimal agency problem. Thus, while big 4- auditing of financial statement is associated with lower agency costs, delay in the report of the audit findings may dampen the ability of the big 4-audit firm to mitigate agency conflicts. Hence, timely report of audit statement is even more important than the engagement of big 4 in mitigating agency conflicts in Nigeria corporate environment.

Conclusion and Recommendations

Agency problem constitutes one of the major subjects of discussion in the corporate finance literature especially in recent times. In a bid to contribute to the empirical literature on agency costs, this study investigates the impact of audit quality on agency costs using sample data from seventy-three (73) listed non-financial firms in Nigeria between 2010 and 2019. Agency cost is primarily measure with asset utilization ratio and Tobin's Q (for robustness check). Audit quality on the other hand was measured using both audit firm size and audit report timeliness (audit delay). The finding of the study reveals that firms with higher audit quality in terms engaging big 4-audit firms incur lower agency costs compared to the firms with lower audit quality in terms of engaging non-big 4 audit firms. Further analysis in the study however revealed that the positive impact of audit delay significantly overwhelmed the negative impact of big 4 audit firms on agency conflict suggesting that firms audited by big 4 have higher agency costs when audit report lingers beyond reasonable period.

Accordingly, the study could not reject the agency theory proposition that effective audit quality could mitigate agency conflicts by serving as effective monitoring tool. Hence,

the findings in this study further lend credence to the agency theory and efficient monitoring hypothesis quality could mitigate agency conflicts by serving as effective monitoring tool. Hence, the findings in this study further lend credence to the agency theory and efficient monitoring hypothesis.

The findings of this study have practical implications for the shareholders to ensure they focus on appointment of big 4 firms for audit and render all necessary support to ensure that the report is concluded expeditiously. This could serve as a key monitoring mechanism to mitigate agency conflicts between the shareholders (principals) and managers (agent) in corporate firms. It is therefore, recommended that regulators should encourage firms to improve the quality of their financial statement by not only engaging big 4 firms but also ensure that audit report delay is strictly minimized in order to limit agency conflicts. The management of the corporate firms in the country should also ensure timely release of audit report by the audit firms to reinforce investors' confidence in their operations.

One major limitation of this study is that it focuses on the Type 1 agency problem in terms of the principal-agent relationship. In addition, it measures agency conflicts from the perspective of audit firm size and audit report timeliness, which may not extensively reveal the quality of audit report. Further study can improve on this study by considering the impact of audit quality on Type II agency costs. In addition, this study may be extended by considering different proxies for audit quality and agency conflicts and check if the results found are consistent with the findings of this study.

References

- Afuwape, G. (2018). *NSE suspends six from trading*. Retrieved 26 July 2021 from <https://insidebusiness.ng/nse-suspends-six-from-trading/>
- Akway, I.D, and Ramadan, M. M. (2019). The role of audit quality in reducing agency costs and cost of equity capital: An empirical study on companies listed in the Egyptian Stock Exchange. *Alexandria Journal of Accounting Research*, 3(2), 1-45.
- Al-Mousawi, R.J., and Al-Thuneibat, A. (2011). The effect of audit quality on the earnings management activities. *Dirasat: Administrative Sciences*, 38(2), 614-628.
- Alluwia, F. and Sarun, A. (2018). Female directors, mechanisms for corporate governance and agency cost. *International Business Education Journal* 11(1), 1-15.
- Alzoubi, E. S. S. (2016). Audit quality and earnings management: evidence from Jordan. *Journal of Applied Accounting Research*, 17(2), 170-189.
- Amelinda, R. and Setyawan, I. R. (2020). Agency conflict control on corporate values in companies with the best GCG period 2008-2014. *Advances in Social Science, Education and Humanities Research*, 478, 121-127.
- Ang, J. S., Cole, R. A., and Lin, J. W. (2000). Agency costs and ownership structure. *The Journal of Finance*, 55(1), 81–106.
- Appolos, N. N., and Ademola, A. (2020). Financial reporting quality and shareholders' wealth maximization: Evidence from listed companies in Nigeria. *European Journal of Accounting, Auditing and Finance Research*, 8(6), 1-14.
- Aras, G., and Furtuna, O.K. (2015). Does governance efficiency affect equity agency costs? Evidence from Borsa Istanbul. *Emerging Markets Finance and Trade*, 51(2), 84–100.
- Arrow, K. (1985). The economics of agency. In Pratt, J. and Zeckhauser, R. J. (Eds), *Principals and agents: the structure of business* (pp. 37-51). Boston: Harvard Business School Press.
- Ayunitha, A., Sulastri, H. W., Fauzi, M. I., Prabowo, M. A., and Nugraha, N. M. S. (2020). Does the good corporate governance approach affect agency cost? *Solid State Technology*, 63(4), 3760–3770.
- Bae, C., and Woo, Y. (2015). The effect of audit report lag and management discretionary report lag on analyst forecasts: Evidence from Korea. *Investment Management and Financial Innovations*, 12(1), 318-329.
- Barros, L. A. B. C., Bergmann, D. R., Castro, F. H. and Di Miceli da Silveira, A. (2020). Endogeneity in panel data regressions: methodological guidance for corporate finance researchers. *Rev. Bras. Gest. Neg. São Paulo*, 22, 437-461.
- Beaver, W. (1989). *Financial reporting: An accounting revolution*. New Jersey: Prentice-Hall International, Inc.

- Beshkooch, M., Soumehsarei, B., Mahmoudi, V., and Kazebabrizi, F. (2013). The Relationship between Audit Quality and Agency Cost. *Journal of Basic and Applied Scientific Research*, 3(2), 516-525.
- Cai, C., Hiller, D., Tian, D., and Wu, Q. (2015). Do audit committees reduce the agency costs of ownership structure? *Pacific-Basin Finance Journal*, 35(A), 225–240. doi:10.1016/j.pacfin.2015.01.002
- Charles, J., Stanley, C., and Charlotte, H. (2010). The imp act of audit quality on earnings management to achieve user reference points in EPS. *Journal of Applied Business Research*, 26(1), 19–30.
- Chen, X.C., and Yur-Austin, J.Y. (2007). Re-measuring agency costs: The effectiveness of block holders. *Quarterly Review of Economics and Finance*, 47, 588–601.
- Chen, H., Chen, J., Lobo, G., and Wang, Y. (2011). Effects of audit quality on earnings management and cost of equity capital: Evidence from China. *Contemporary Accounting Research*, 28(3), 892–920.
- Chi, C., Lisic, L., and Pevzner, M. (2011). Is enhanced audit quality associated with greater real earnings management? *Accounting Horizons*, 25(2), 315–335.
- Diamond, D.W., and Verrecchia, R. E. (1991). Disclosure, liquidity, and the cost of capital. *Journal of Finance*, 46, 1325–1359.
- Eisenhardt, K. M. (1989). Agency theory: An assessment and review. *Academy of Management Review*, 14(1), 57-74.
- Faisal, F., Abd Majid, M.S., and Sakir, A. (2020). Agency conflicts, firm value, and monitoring mechanisms: An empirical evidence from Indonesia. *Cogent Economics and Finance*, 8(1), 1-24. <https://doi.org/10.1080/23322039.2020.1822018>
- Fama, F. (1980). Agency problems and the theory of the firm. *Journal of Political Economy*, 88(2), 288–307.
- Gajevszky, A. (2015). Assessing financial reporting quality: Evidence from Romania. *Audit financiar*, XIII (1), 69-80
- Habbash, M., and Alghamdi, S. (2016). Audit quality and earnings management in less developed economies: The case of Saudi Arabia. *Journal of Management and Governance*, 1-23. doi:10.1007/s10997-016-9347-3
- Hair, J. F., Black, W. C., Babin, B. J., Anderson, R. E., and Tatham, R. L. (2006). *Multivariate data analysis*. Upper Saddle River, NJ: Pearson Prentice Hall.
- Henry, D. (2010). Agency costs, ownership structure and corporate governance compliance: A private contracting perspective. *Pacific-Basin Finance Journal*, 18(1), 24-46. <https://doi.org/10.1016/j.pacfin.2009.05.004>
- Houge, M. N., Ahmed, K., and Zijl, T. (2017). Audit quality, earnings management, and cost of equity capital: Evidence from India. *International Journal of Auditing*, 21 (2), 177 189. <https://english.mubasher.info/markets/EGX>

- Holtz, L., and SarloNeto, A. (2014). Effects of board of directors' characteristics on the quality of accounting information in Brazil. *Revista Contabilidade and Financas*, 25(66), 255- 266.
- Hussain, A., Aslam, H. M. S. I., Noor, U., Zafar, S., Saleem, A., and Hani, U. (2020). Impact of corporate political connections and audit quality on agency cost: Evidence from Pakistan. *International Journal of Management*, 11(8), 1533–1549. <https://doi.org/10.34218/IJM.11.8.2020.138>
- Ibekwe, I. (2021). Blockholding and agency cost: evidence from Nigeria. *International Journal of Emerging Markets*, (preprint). <https://doi.org/10.1108/IJOEM-08-2018-0445>
- Jensen, M., and Meckling, W. (1976). The theory of the firm: Managerial behaviour, agency costs and ownership structure. *Journal of Financial Economics*, 3, 305–360.
- Jensen, M. C. (1986). Agency costs of free cash flow, corporate finance, and takeovers. *The American Economic Review*, 76(2), 323-329.
- Jurkus, A. F., Park, J. C. and Woodward, L. S. (2011). Women in top management and agency costs. *Journal of Business Research*, 64(24). <https://doi.org/10.1016/j.busres.2009.12.010>
- Kanagaretnam, A. (2010). Auditor reputation and earnings management: International evidence from banking industry. *Journal of Banking and Finance*, 34(10), 2318–2337.
- Kennedy, P. (2008). *A guide to econometrics* (6th ed.). Malden: Blackwell Publishing.
- Khan, A., Khan, A., Mihret, D. G., Mihret, D. G., Muttakin, M. B., and Muttakin, M. B. (2016). Corporate political connections, agency costs and audit quality. *International Journal of Accounting and Information Management*, 24(4), 357-374.
- Lai, S. M., and Liu, C. L. (2018). The effect of auditor characteristics on the value of diversification. *AUDITING: A Journal of Practice & Theory* (2018) 37 (1): 115–137.
- Loderer, C., and Waelchli, U. (2010). Firm age and performance. MPRA Paper 26450, University Library of Munich, Germany.
- Lin, J., and Hwang, M. (2010). Audit quality, corporate governance, and earnings management: A metanalysis. *International Journal of Auditing*, 10, 1099–1123.
- Luo, J., Li, X., and Chen, H. (2018). Annual report readability and corporate agency costs. *China Journal of Accounting Research*, 11, 187-212
- Musa, I. (2020). *NSE cautions investors on Thomas Wyatt over deficient filling*. Retrieved 26 July 2021 from <https://insidebusiness.ng/9896/nse-cautions-investors-on-thomas-wyatt-over-deficient-trading/>
- Nguye, A., Doan, D., and Nguyen, L. (2020). Corporate Governance and Agency Cost: Empirical Evidence from Vietnam. *Risk and Financial management*, 13, 1-15
- Okaro, S. C., and Okafor, G. O. (2013). Drivers of audit failure in Nigeria: Evidence from Cadbury Nigeria PLC. *Research Journal of Finance and Accounting*, 4(6), 14-17.

- Piot, C. (2001). Agency costs and audit quality: Evidence from France. *European Accounting Review*, 10(3), 461-499. <http://dx.doi.org/10.1080/713764630>
- Rashid, A. (2015). Revisiting agency theory: Evidence of board independence and agency cost from Bangladesh. *Journal of Business Ethics*, 130(1), 181–198.
- Ross, S. (1973). The economic theory of agency: The principal's problem. *The American Economic Review*, 63(2), 134-139. <https://www.jstor.org/stable/1817064>
- Sitanggang, R. P., Karbhari, Y., Matemilola, B. T., and Ariff, M. (2019). Audit quality and real earnings management: Evidence from the UK manufacturing sector. *International Journal of Managerial Finance*, 16(2), 165-181.
- Spence, M. and Zeckhauser, R. (1971). Insurance, information and individual action. *American Economic Review*, 61, 380-387.
- Tuan, T. M., Nha, P. V., Long, T. P., and Phuong, T. T. (2019). Impact of agency costs on firm performance: Evidence from Vietnam. *Organizations and Markets in Emerging Economics*, 10(2), 294-309. doi:DOI: <https://doi.org/10.15388/omee.2019.10.15>
- Umobong, A., and Agburuga, U. T. (2019). Agency cost of equity and growth rate in relation to returns on capital employed and high and low leveraged firms in Nigeria. *International Journal of Economics, Business and Management Studies*, 6(2), 318–337. <https://doi.org/10.20448/802.62.318.337>
- Watts, R.L., and Zimmerman, J. L. (1983). *Positive Accounting Theory*. New Jersey: Prentice Hall.
- Wellalage, N.H., and Locke, S. (2011). Agency costs, ownership structure and corporate governance mechanisms: A case study in New Zealand unlisted small companies. *International Research Journal of Finance and Economics*, 78, 178–192.
- Zhang, L., Zhang, Z., Jia, M., and Ren, Y. (2020). A tiger with wings: CEO–board surname ties and agency costs. *Journal of Business Research*, 118(2020), 271-285.
- Zulvia, Y., and Serly, V. (2020). Capital structure, ownership structure, and firm size: It's Implication on agency cost (A Study in Indonesia Manufacturing Company). *Advances in Economics, Business and Management Research*, 124, 873–882.

Appendix

```
. ovtest
Ramsey RESET test using powers of the fitted values of ACT1 > ycostdat
Ho: model has no omitted variables
      F(3, 722) =      1.39
      Prob > F =      0.2447

. linktest
      Source |      SS      df      MS      Number of obs =      730
-----+-----+-----+-----+-----+-----+-----+-----
      Model | 76.9164742      2 38.4582371  Prob > F      =      0.0000
      Residual | 354.237816     727  .48725972  R-squared     =      0.1784
-----+-----+-----+-----+-----+-----+-----
      Total | 431.15429     729  .591432497  Adj R-squared =      0.1761
                                         Root MSE     =      .69804

-----+-----+-----+-----+-----+-----+-----
atar_asset~t |      Coef.   Std. Err.      t    P>|t|      [95% Conf. Interval]
-----+-----+-----+-----+-----+-----+-----
      _hat | 1.005793   .145789      6.90   0.000   .7195752   1.29201
      _hatsq | -.0014996  .0316191    -0.05   0.962  -.0635752   .0605761
      _cons | -.0039497  .1146771    -0.03   0.973  -.2290875   .2211881
-----+-----+-----+-----+-----+-----+-----
```

Johnson Kolawole Olowookere is a Senior Lecturer at the Department of Accounting, Osun State University, Osogbo, Nigeria. He holds a Doctor of Philosophy degree in Accounting from Obafemi Awolowo University in 2017. He obtained his B.Sc. (Hons) and M.Sc. degrees both in Accounting from Olabisi Onabanjo University and University of Lagos respectively. He is a fellow of the Institute of Chartered Accountants of Nigeria and a member of African Accounting and Finance Association. He has over 50 publications to his credit both in local and international academic journals in the areas of audit market, audit quality and financial reporting.

Lawal Quadri Adebayo is a Senior Lecturer in the Department of Management and Accounting, Obafemi Awolowo University, Ile-Ife, Nigeria. He joined the University as a graduate assistant in 2013 and rose through the rank. He has B.Sc., M.Sc., and Ph.D. in Accounting from the same University. He has published both locally and internationally in different areas of specialization in accounting. He is a Chartered Accountant and a Reviewer for the Institute of Chartered Accountants in Nigeria.

Akeem Adetunji Siyanbola lectures in accounting department at Federal University Wukari, Nigeria. He crowned his academic credentials with a Ph.D. in Accounting (2022) from Bayero University, Kano Nigeria. He has taught core accounting courses with specialty in accounting laboratory and software applications amongst others. In 2018, Akeem commenced review for Cogent Business & Management and Emerald's International Journal of Law and Management. He is also an editorial team member for Core Journals. His exceptional skills in data analysis, presentation and discussion fetched him the best paper presenter at the 4th iStems International Conference in 2015.