Tax Aggressiveness, Corporate Governance and Audit fees: A Study of Listed Firms in Nigeria

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DECEMBER, 2019

DECLARATION

I, **Edwin Aruobogha ONATUYEH**, do hereby declare that:

1. this thesis is based on a study undertaken by me in the Department of Accounting, Faculty of Management Sciences, University of Benin, Benin-City, under the supervision of **Professor O. J. Ilaboya and Professor E. Eragbhe;**

2. to the best of my knowledge, this thesis has not been submitted for the award of any degree in Accounting anywhere;

3. all ideas and views are outcomes of my personal research effort and where the views of others have been expressed, they have been duly acknowledged in this work.

4. I shall be totally, wholly, and fully responsible for the liability that may flow from this study, if any.

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We, the undersigned, attest and declare that the thesis of **Edwin Aruobogha ONATUYEH,** titled *'Tax Aggressiveness, Corporate Governance and Audit fees: A Study of Listed Firms in Nigeria'* has successfully passed the anti-plagiarism test and does not violate any copyright regulations, according to the report presented by the candidate.

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We certify that this thesis was carried out by **Edwin Aruobogha ONATUYEH** in the Department of Accounting, Faculty of Management Sciences, University of Benin, Benin City, Nigeria and it is considered adequate in scope and quality in partial fulfillment of the requirements for the award of Doctor of Philosophy (Ph.D) Degree in Accounting.

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ATTESTATION OF CORRECTED DISSERTATION/THESIS

We, the undersigned, attest that **Edwin Aruobogha ONATUYEH** has successfully done all the corrections in his thesis titled, *'Tax Aggressiveness, Corporate Governance and Audit Fees: A Study of Listed Firms in Nigeria'* as recommended by the external and internal examiners.

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DEDICATION

This work is sincerely dedicated to the blessed memory of my beloved mother, Mrs. Oghenejirokowo Felicia Onatuyeh, who shaped my life, values and aspirations. She wanted me to be a Professor of Accounting but did not live long enough to see me become a Doctor. May God grant her soul eternal rest.

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ABSTRACT

The concept of audit fee has received immense empirical investigation in the literature both in the developed and developing countries. However, these vast studies have not sufficiently explored the relation of the concept with tax aggressiveness and corporate governance. This study therefore sought to provide empirical evidence as to whether tax aggressiveness and corporate governance mechanisms are significantly associated with audit fee among listed firms in Nigeria.

Leaning on the agency and stakeholder theories, the study examined the measures of tax aggressiveness of effective tax rate and cash tax rate as well as corporate governance mechanisms of board gender diversity, audit committee diligence, board independence and ownership concentration. The two measures of tax aggressiveness and audit fee were subsequently interacted with moderating corporate governance variable of ownership concentration, the essence of which was to assess ownership concentration and the relationship between tax aggressiveness and audit fee. A sample of one hundred and seven (107) firms from the entire firms quoted on the Nigerian Stock Exchange as at December, 2018 was utilised. Data were sourced solely from annual financial statements of the studied firms over a ten-year period (2009 to 2018). The panel regression technique, with preference for the random effect model based on the outcome of the Hausman test, was employed to estimate the balanced panel data.

The results of the study showed that cash tax rate, audit committee diligence and board independence all exert positive and significant effect on audit fees. Although not statistically significant, the results of this study showed that tax aggressiveness and corporate governance (ownership concentration) have a combined negative effect on the audit fees payable to external auditors by the listed firms in Nigeria. In the light of the findings, the study therefore recommended block ownership, instead of disperse share ownership, as it would give opportunity for effective monitoring of the activities of management. This would help reduce the tendency for opportunistic behaviour, such as tax aggressiveness. The study also recommended an increase in both board independence and frequency of audit committee's meetings so as to enhance their oversight functions, and promote quality financial reporting and audit.

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CHAPTER ONE

INTRODUCTION

1.1 Background to the study

Taxes are the main source of government revenue worldwide. They represent a compulsory levy which the government of a nation imposes on its citizens and firms so as to generate revenue to finance its activities, which include the provision of infrastructure, security, and the enabling conditions for the economic stability of the society (Adesola, 1986). Tax revenue is not only regarded as the lifeblood of any government, but also a reliable and sustainable means of funding public expenditure (Action Aid, 2013; Christensen & Murphy, 2004). The responsibilities of government particularly in developing countries continue to increase due to an ever rising population of citizens; and to perform these responsibilities, governments require sufficient funding. Therefore, the need to have an efficient way of collecting and managing tax revenue has always given nations a serious cause for concern because the effectiveness of any government, to a large extent, depends on the ability and willingness of taxpayers to pay their taxes voluntarily without coercion (Olaseyitan & Sankay, 2012).

Over the years, the Nigerian government has made a frantic effort to use tax as an instrument of fiscal policy to generate the required revenue to fulfill its societal obligations; but, there is no evidence suggesting that this has produced the desired results (Deloitte, 2017). Oluba (2008),

Musgrave and Musgrave (2004) all note that the declining rate at which tax revenue is generated in the developing countries makes it difficult to use tax as a means of achieving meaningful economic development compared to the developed countries of Europe and America. For instance, statistics from the Federal Inland Revenue Service of Nigeria (FIRS, 2018) revealed a dwindling total tax revenue collection of ₦5.008 billion, ₦4.806 billion, ₦4.715 billion, ₦3.742 billion, ₦3.308 billion and ₦4.028 billion for 2012, 2013, 2014, 2015, 2016 and 2017 respectively.

It is the inability of the Nigerian tax system to generate the desired revenue that has made the nation to rely heavily on revenue from crude oil to provide public utilities, goods and services, as well as to execute economic development programmes (Anyaehie & Areji, 2015). Unfortunately, the volatile nature of oil revenue, coupled with poor leadership, has not made the Nigerian economy to be stable (Uzonwanne, 2015). The dwindling revenue profile and increased cost of governance have necessitated the need for Nigerian government to explore other means of improving their revenue base, especially through taxation. Pfister (2009) notes that several countries in the globe depend principally on taxation to generate income to satisfy their financial requirements, such as the provision of health care facilities, jobs, infrastructures, education, and security.

However, in spite of these advantages and many others which are associated with tax revenue, individuals and firms would rather pay little or no tax to government. The main objective of a firm is wealth maximisation and business prosperity, and one reliable way of achieving this

objective, is to minimise business costs. Management realises that tax constitutes a major portion of the operating costs of business and thus poses a serious threat to wealth creation. Chen, Chen, Cheng, and Shevlin (2010) state that taxes represent a major cost to firms and a reduction in their distributable profits since, on the average, they pay over one-third of their pre-tax profits as taxes. Therefore, for firms to minimise tax liability, embarking on tax aggressive actions becomes imperative.

Tax aggressiveness, according to Hanlon and Heitzman (2010), refers to the most extreme aspect of tax avoidance actions directed towards downward management of taxable income so as to reduce tax liabilities and produce tax gain. Most firms determine the extent of their tax aggressive actions based on a tradeoff between the marginal benefits and costs of managing taxes (Chen et al., 2010). The fact that tax aggressive strategies can be used to minimise tax payments to government and preserves business resources has made tax aggressive activities of firms to come under close monitoring by tax authorities, and once successfully challenged, firms found culpable may be heavily penalised by the relevant tax authorities (Lisowsky, 2009). Consequently, shareholders may not support managers on certain decisions regarding fiscal issue, especially when perceived as opportunistic in nature.

Moreover, the literature has shown that due to the divorce relationship that exists between ownership and control, and information asymmetry in corporate firms, tax aggressive actions by management may involve some degree of complexity and obfuscatory activities designed to prevent its detection by tax authority; thereby creating the avenue for managerial opportunism and diversion of rents (Desai & Dharmapala, 2006; Desai & Dharmapala, 2009), in negation of

the general opinion that tax aggressiveness serves as a means of transferring wealth from government to shareholders (Desai, Dyck, & Zingales, 2007).

In most countries across the globe, listed firms are statutorily required to engage the services of external auditors to audit their accounts yearly. In Nigeria, the Companies and Allied Matters Act (2004) requires both private and public limited liability companies to audit their accounts annually. Any quoted company that fails to undertake an external audit may be penalised by relevant regulatory bodies, such as the Financial Reporting Council of Nigeria (FRCN), Corporate Affairs Commission (CAC), and Central Bank of Nigeria (CBN). The reward (remuneration) for the audit service rendered by the auditor to an audit client is called audit fee. An audit entails performing procedures to obtain sufficient appropriate evidence about the amount of disclosure in the financial statement of auditees for the purpose of assessing the adequacy of such disclosures, and evaluating the correctness of accounting estimates and policies made by management (American institute of Certified Public Accountant, 2009). In addition to carrying out a statutory audit, auditors may render other services, such as accounting, taxation, and consultancy services, among others. The reward for such services is called non-audit fee. The focus is on audit fees and not non-audit fees. The value of audit fee to be paid by an audit client is determined by the auditor (Oladipupo & Monye-Emina, 2016), and this is done based on volume of audit, quality of financial report, corporate governance, earnings management, tax aggressive nature of the client, and to a large extent, audit risk assessment (Okolie, 2013).

Shareholders can engage the services of external auditors to perform quality audit if they believe that managerial activities are becoming too opportunistic, and may be harmful to the firm. However, auditors will normally view engagement to audit clients that aggressively avoid taxes as risky and as a result, will design their audit strategy to include specialised audit procedures and documentation, as well as consultations with tax practitioners directed towards reducing any high risk of error that exposes them to potential litigation and reputational costs (Hanlon & Heitzman, 2010; Lisowsky, 2010; Menon & Williams, 2001; Simunic & Stein, 1996). The likely effect of these potential hazards is abnormally high audit fees.

Extant literature has shown that sound corporate governance practices are germane to shareholders when appraising the effectiveness of management (Desai & Dharmapala, 2009), especially on matters relating to tax and financial policies. For this reason, it is vital to investigate how corporate governance and tax aggressiveness interact with audit fees. Although, issues of corporate governance have been explored within a number of contexts, including audit fee determination, tax fraud and aggressive tax planning, these attempts have been concentrated in the developed economies of Europe and America with little studies exploring the peculiarities of the developing economies of Africa. Even in the developed economies where the issue appears to have received robust empirical consideration, studies that have investigated the link between tax aggressiveness, corporate governance and audit fee hardly exist. To date, no such study has been carried out in Africa, including Nigeria.

1.2 Statement of the Research Problem

The auditing profession has come under increased examination in recent years on the issue of audit fees regarding how auditors determine the amount of fees charged for audit services (Basioudis, Geiger, & Papanatasiou, 2006), and the rising fees they charge their auditees. This is an important issue that needs further empirical investigation for clarity given that only a handful of prior studies have focused on the influence of firm's behavior, such as tax aggressiveness as against other commonly investigated determinants of audit fees. The separation of corporate ownership from control necessitates the need for appointment of an external auditor to examine the financial statements prepared by an audit client. The fee chargeable by auditors for audit services within a given duration is very fundamental in an audit assignment as they must carefully consider the costs and benefits that are associated with the discharge of their services to make a decision on their audit fees (Hayes, Dassen, Schilder, & Wallage, 2005). This signifies that audit fees charged by the auditors are very crucial in carrying out an audit task.

While studies concerning the determinants of audit fees are numerous, just a few of them have investigated the relationship between tax aggressiveness and audit fees. These studies relate firms' tax aggressive actions with higher audit risk and higher audit fees (Desai & Dharmapala, 2009; Klassen, Lisowsky, & Mescall, 2016; Seetharaman, Gui & Lynn, 2002; Donohoe & Knechel, 2014; Hanlon, Krishnan, & Mills, 2012; Heltzer & Shelton, 2015). Desai and Dharmapala (2009) argue that complex structures designed for tax shelters (a measure of tax aggressiveness) create opportunities for managers to manipulate earnings or 'strip rent', and this increases audit risk as the auditor must assess contingent tax liabilities or uncertain tax benefits. Based on evidence from UK firms cross-listed on the US markets, Seetharaman et al. (2002) stress that external auditors will increase audit effort as client risk increases and charge a risk

premium on risky engagements to make up for increased risk of lawsuits. From a survey of US auditors, Heltzer and Shelton (2015) provide further support for the proposition that tax aggressiveness affects auditors' risk assessments and audit fees. Other studies report that public audit firms will charge higher audit fees, when there is evidence of aggressive tax planning by audit clients, as compensation for the risks of legal action they may face if tax authorities find out that clients have not complied with their tax obligations (Donohoe & Knechel, 2014; Klassen, Lisowsky, & Mescall, 2016).

Besides being performed abroad, a common theme across the aforementioned studies is that they report a positive relationship between tax aggressiveness and external audit, indicating that auditors see tax aggressiveness as a signal of potential audit engagement risk, and thus will adjust their risk assessment, increase audit effort and fees accordingly to compensate for the expected value of possible future liability losses, including litigation costs. However, this stream of studies offer partial explanations as to the extent to which the adoption of tax aggressive strategies by manager can facilitate or hinder management's fiduciary duty to shareholders as they habitually examined the shareholder-managers agency costs only from the perspective of the link between tax aggressiveness and audit fee, without considering the relevance of corporate governance to the dynamics of both concepts. Localizing the focus to Nigeria, the researcher discovers that the discourse and study of audit fees have been restricted to determinants such as audit client characteristics, audit firm characteristics (Ohidoa & Omokhudu, 2018; Semiu, & Olayinka, 2010; Uwuigbe, 2011; Urhoghide & Izedonmi, 2015; Akinpelu, Omojola, Ogunseye & Bada, 2013), and certain corporate governance variables as demonstrated in studies by Abdulmalik and Che Ahmed (2016) and Urhoghide and Emeni (2014), to mention but a few.

Currently, there is no documented Nigerian study on the link between tax aggressiveness and audit fees. This is to the best of the researcher's knowledge.

Moreover, studies that have examined the link between tax aggressiveness, corporate governance and external audit fees hardly exist in the literature. Although, few related studies include corporate governance, tax aggressiveness and earnings management (Putric, Adam & Fuadah, 2018), tax avoidance, corporate governance and firm value (Yee, Sapiei, & Abdullah, 2018) and tax planning, corporate governance and equity value (Abdul Wahab, & Holland, 2012), the only research study that has attempted a blend of tax aggressiveness, corporate governance and audit fees was performed by Martiner and Lessa (2014). In investigating the connection, these authors affirm that auditors charge higher fees when auditing highly tax-aggressive clients, but found a negative relationship between tax aggressiveness and audit fees when corporate governance was introduced as dummy variables. Martiner and Lessa (2014) argued that all variables in their study demonstrated good statistical significance, but their result is limited by the relatively short sample period covered. A period of 3 years is not long enough for any change in their variable of interest to influence the dependent variable (audit fees). Also, the authors adopted only a single proxy to capture the degree of tax aggressiveness of the Brazilian firms investigated. Hanlon and Heitzman (2010) and Dhaliwal, Huang, Moser, and Pereira (2011) caution that depending on a single measure of corporate tax aggressiveness may lead to spurious conclusions. This is because different measures of tax aggressiveness could have differential impacts on audit fees and it is difficult for a single measure to capture all tax aggressive behaviours of firms.

The present study extends Martiner and Lessa's (2014) work as follows: First, an expanded sample size was employed by using data from multiple years. With a larger number of firm-year observations, it is expected that the generalisability of the findings by Martiner and Lessa (2014) would be improved upon. Secondly, the study captured the tax aggressive behaviour of firms in Nigeria using two measures: the effective tax rate and the cash tax rate. These two measures were chosen so as to assess the impact of tax aggressiveness on audit fees from two dimensions of accounting (accrual and cash bases). Furthermore, as auditors are interested in client's corporate governance structure given that it can influence their engagement risk assessment, audit effort, and audit pricing (Cassell, Giroux, Myers and Omer, 2012), corporate governance and tax aggressiveness were investigated to assess how they interacted with audit fees in corporate firms.

Consistent with the findings of Desai and Dharmapala (2006) and Moore (2007), this study therefore proposes that managers of firms with weak corporate governance structure are more susceptible to embarking on tax-aggressive actions that will increase their personal gains at the expense of wealth creation for shareholders than managers of firms with strong corporate governance structure. Hence, it is expected that a firm that has more female board members, diligent audit committee, highly independent board, and high ownership concentration can effectively constrain tax aggressiveness through effective performance of the required oversight functions, close working with the external auditors, (Armstrong, Blouin, Jagolinzer, & Larcker, 2015; Boussaidi & Hamed, 2015; Richardson, Taylor, & Lanis, 2013; Zaman, Hudaib & Haniffa, 2011), as well as the demand for more audit, which will cause auditors to do more audit work and charge higher audit fees.

Finally, as ownership structure is one of the most cited influences on agency problems (Desender, Garcia−Cestona, Crespi & Aguilera, 2009; Ghelichli, Gerayli & Garkaz, 2017; Javeed, Shahid Yaqub, & Aslam, 2017; Lietz, 2013; Wahab, 2010), and to reduce the information asymmetry that occurs between shareholders and management as a result of tax aggressive policies, ownership concentration was introduced as a moderating variable. Allowing for this moderating effect is significant because the literature has shown that shareholders with concentrated ownership can leverage on their holdings to either directly sit on the board or indirectly have a representative as a director (La Porta, Lopez-de-Silanes, Schleifer & Vishney, 1998). Board representation of this nature normally leads to superior monitoring (Connelly, Hoskisson, Tihanyi & Certo, 2010), and can significantly influence the relationship between tax aggressiveness and audit fees.

It is against the above backdrop that this research examined the relationship between tax aggressiveness, corporate governance and audit fee with consideration to Nigeria's case, and it was guided by the following research questions:

(i) To what extent does effective tax rate influence audit fees?

(ii) To what extent does cash tax rate affect audit fees?

(iii) How does board gender diversity influence audit fees?

(iv) In what way does audit committee diligence impact on audit fees?

(v) To what extent does board independence affect audit fees?

(vi) Does ownership concentration significantly moderate the link between tax aggressiveness

and audit fees?

1.3 Objectives of the Study

The main objective of the study is to investigate the relationship between corporate tax aggressiveness, corporate governance and audit fee among listed firms in Nigeria. The specific objectives of the study are to:

(i) examine the relationship between effective tax rate and audit fees;

(ii) ascertain the link between cash tax rate and audit fees;

(iii) investigate the relationship between board gender diversity and audit fees;

(iv) determine the link between audit committee diligence and audit fees;

(v) evaluate the extent board independence influence audit fees; and

(vi) examine whether ownership concentration significantly moderate the relationship between tax aggressiveness and audit fees.

1.4 Research Hypotheses

Consistent with the abovementioned objectives of the study, the following hypotheses, presented in null form, were formulated for testing:

H_{o1}: There is no significant relationship between effective tax rate and audit fees.

H_{o2}: There is no significant relationship between cash tax rate and audit fees.

H_{o3}: There is no significant relationship between board gender diversity and audit fees.

H_{o4}: There is no significant relationship between audit committee diligence and audit fees.

H_{o5}: There is no significant relationship between board independence and audit fees.

H_{o6}: The relationship between tax aggressiveness and audit fees is not significantly moderated by ownership concentration.

1.5 Scope of the Study

This study empirically examined the relationship between corporate tax aggressiveness, corporate governance and external audit fee among listed firms in Nigeria. The study covered a period of 10 years (2009 to 2018). The ten-year period is deemed long enough for the change in the explanatory variables (tax aggressiveness and corporate governance) to influence the dependent variable (audit fee). This study was restricted only to the data contained in the annual reports and accounts of the listed firms. Listed firms on the Nigerian Stock Exchange were used because they appear to be more corporately and socially responsible than the non-listed firms. Besides, the financial statements of listed firms are considered credible, having gone through statutory external audit.

1.6 Significance of the Study

The study is significant for the following reasons: First, the findings of a study on tax aggressiveness, corporate governance and audit fee in Nigeria should be of aid to government when developing policies as regards strengthening corporate governance, and laws regulating the audit profession in the country. Specifically, this study would be useful to government and policy makers as it would aid the regulation of audit fee which can help minimise the tendencies of declining auditor independence.

Secondly, study of this nature is novel to the developing countries. As the only work that has been done in this direction was based on evidence from South America, researchers will be interested in understanding how governance mechanisms and tax aggressiveness interact with audit fee based on data from a developing country, like Nigeria. Thus, this study adds to the existing burgeoning literature on the corporate tax aggressiveness and the determinants of the pricing of audit services amongst firms listed on the Nigerian Stock Exchange.

Thirdly, shareholders may be interested in knowing if the management they have appointed is managing their businesses effectively and creating wealth for them. Given that this study is centred on the link between corporate tax aggressiveness, corporate governance, and external audit fees, it is hoped that the study will be beneficial to shareholders by directing their attention to governance mechanisms on which to concentrate more when making decisions on corporate policies regarding tax and audit matters, especially in the areas of auditor's remuneration, for the purpose of achieving better outcomes.

Finally, the research should be significant for its contribution to the agency theoretical perspective with reference to the association between corporate tax aggressiveness and audit fees. Basically, the agency viewpoint does not consider interactions or role of moderators within a corporate environment. The study has modified this framework to reflect the fact that ownership concentration, a component of corporate governance, plays the role of a moderator, which can help to constrain agency costs, defines auditor's remuneration (fee) and ensures goal congruence.

CHAPTER TWO

REVIEW OF LITERATURE

2.1 Introduction

This chapter presents a review of relevant literature on tax aggressiveness, corporate governance and audit fee. The chapter is divided into different sections. Following this introduction is the conceptual review of audit fee. A review of the determinants of audit fee was carried out in section three. The ensuing section examines the concept of tax aggressiveness. Section five focuses on corporate governance and corporate governance codes. Then, attention shifted to the review of prior literature on the link between corporate governance and audit fee, as well as the link between tax aggressiveness and audit. Section eight justifies the need for an investigation of the moderating role of corporate governance mechanisms in the interplay between corporate tax aggressiveness and audit fee. A section on the discussion of the control variables selected for the study precedes the closing section, which covers the review of theories on which the present study is anchored.

2.2 Audit fee

Audit fee refers to the cost of conducting audit so as to express an opinion thereon about the conformity of financial statements with generally accepted accounting principles (Coffee, 2005; Soltani, 2007). It is the cost that is associated with the audit services which are demanded by the audit clients (Simunic, 1984). The demand for audit services is made by users, such as shareholders, outside investors, government and the general public (Dinh, 2012). However, users

of audit services hardly have similar goals because they do not have same interest. For instance, management will be interested in reporting higher revenue in order to get higher bonuses and keep their positions. On the other hand, prospective investors will be interested in knowing whether the firm is profitable or not so that they can make informed investment decisions

Generally, audit fee should cover audit costs and provide auditors with reasonable profit (Urhoghide & Emeni 2014). Anecdotal information supplied by audit firms shows that the number of labour hours expended on an audit influence audit fee determination. For this reason, audit fee can be seen as a combination of audit cost and auditors reward for their effort. Other factors noted by audit firms include quality of audit personnel, the number of site visits required for the audit to be carried out, the volume of items to be audited, quality and independence of the internal audit function of the client. An analysis of the relevance of each of the aforementioned factors has attracted considerable discourse in the extant literature. Studies by Steward and Munro (2007), Gonthier-Besacier and Schatt (2007), Ho and Hutchinson (2010), and Hayes, Dassen, Schilder and Wallace (2005) have identified a number of factors as determinants of audit fee, including client's size, audit firm size, corporate governance structure, client's industry of operation and geographical spread.

Cohen, Krishnamoorthy and Wright (2002) opine that the determination of the audit fee is important not only because it is a method of governance that ensures sound financial reporting to the firm but that audit fee results in a fall in the profit of shareholders. In most studies, audit fee

figures are usually transformed into natural logarithm in order to control for the skewed nature of the figure (Yatim, Kent, & Clarkson, 2006) and make results uniform (Martinez & Lessa, 2014).

2.3 Determinants of Audit fees

Prior studies on audit fee beginning with the seminar work of Simunic (1980) have identified client-related and auditors-related perspectives as two important elements that influence the amount paid as an audit fee within diverse regulatory and institutional contexts. The client-related perspective includes audit client size, audit client complexity, profitability and industry of operation (Abbott, Parker, Peters, & Raghunandan, 2003; Boo & Sharma, 2008; Goodwin-Stewart & Kent, 2006; Lopez & Peters, 2011; Stewart & Munro, 2007; Zaman, Hudaib, & Haniffa, 2011). The auditor-related perspective includes audit firm size, and audit firm tenure (Bedard & Johnstone, 2010; Ezzamel, Gwilliam, & Holland, 2002; Gul, 1999; Johnson, Walker, & Westergaard, 1995; Urhoghide & Emeni 2014).

A sizeable body of literature on audit pricing has examined the impact of audit client-related factors on audit fees. Based on these studies, it is argued that audit client size is one of the important key factors that influence audit fees (Ahmed & Goyal, 2005; Gonthier-Besacier & Schatt, 2007; Joshi & Bastaki, 2000; Steward & Munro, 2007). Specifically, Gonthier-Besacier and Schatt (2007) report that larger audit clients, compared to smaller ones, pay higher audit fees because of the time and effort auditors expend to complete the audit assignment. Also, Steward and Munro (2007) report that for larger audit clients, external auditors spend more time meeting with them, understanding their internal control systems especially if complicated, and designing

audit procedures for the purpose of conducting more detailed audit test. Consequently, since fees payable to auditors largely depend on the length of time expended and amount of effort exerted toward completing an audit work, it is expected that larger audit clients will pay more audit fees (Carson, Fargher, Simon, & Taylor, 2004; Gonthier-Besacier & Schatt, 2007; Simunic, 1980). Generally, audit client size is measured by total assets (Grant, Taylor & Lanis, 2013; Walid, 2012), revenues (Pong & Whittington, 1994), and number of employees (Crabbe, 2010) of the audit client, with the size of total assets the commonly used proxy in literature to represent audit client size (Hay, Knechel, & Wong, 2006; Walid, 2012).

Another determinant of audit fees considered in the literature is audit client complexity. It is likely that the requirements of an audit engagement will be influenced by the level of complexity of such engagement. In prior studies, proxies for audit client complexity have included the number of industries in which the audit client firm operates, the number of subsidiaries, number of various international, and national locations of the firm (Waresul Karim & Moizer, 1996; Hay, Knechel, & Wong, 2006). It is therefore argued that the more diversified and larger the number of the operations and subsidiaries of an audit client firm, the more complex is the firm, thus necessitating more audit work. Consequently, this indicates audit clients with more complexity are charged higher audit fees than those with less complexity. In line with this view, Gonthier-Besacier and Schatt (2007) document a significant and positive link between audit client complexity and audit fees. Sandra and Patrick (1996) state that highly complex audit clients, especially those with presence in different countries, are normally charged higher audit fees by auditors because foreign branches will need to comply with different legislative and disclosure requirements, which will require more audit time and personnel to complete the audit assignment. The implication of this is that complex audit clients will have to pay extra charges for more

technical audit work, thus demonstrating a positive correlation between audit client complexity and audit fees: this same position was held by Simunic, (1980), and Carson, Fargher, Simon, and Taylor (2004).

The nature of industry in which the audit client operates is also a determinant of audit fees documented in the literature. Urhoghide and Izedonmi (2015) state that the uniqueness of each industry in which the audit client operates, determines the audit approach to adopt, hence making audit fees charged by auditors to vary. In a study of audit fees determinants, Gonthier-Besacier & Schatt (2007) split French listed firms into firms in information technology sector and firms in other sectors for the purpose of testing the influence of industrial sectors on audit fees, and discovered that audit fees paid by firms in the information technology sector were much higher than those paid by others. Anderson and Zeghal (1994) demonstrate that audit fees for large Canadian companies in transportation, utility or communication sector are significantly higher compared to audit fees payable by firms in other sectors, indicating that audit fees vary with industry type. Simunic (1980) notes also that audit procedures for the manufacturing sector is much more complicated than those of the financial sector, thus explaining the higher audit fee paid by manufacturing firms.

Further, literature on the drivers of audit fees report that audit client profitability could be determined by the profit figures reported in the financial statements of the firm (Firth, 1997; Sandra & Patrick, 1996; WareskulKarim & Moizer, 1996). Prior studies show that audit clients reporting huge profits will normally be subjected to detailed audit testing of their revenues and

expenses (Joshi & Al-Bastaki, 2000). According to Joshi and Al Bastaki (2000), the nature and extensiveness of an audit performed will influence the audit fees charged by auditors for that audit assignment. In line with this, Sandra and Patrick (1996) opine audit fees are significantly determined by firm's profitability. Apart from profit figures (Firth, 1997), research has equally shown that firm's profitability can be proxied using a number of different profitability ratios which include Return on Investment (ROI), Return on Capital Employed (ROCE), Return on Equity (ROE), and Return on Assets (ROA). Most of the researches in this area demonstrate that the size of audit fees is significantly influenced by these profitability ratios (Kikhia, 2015; Kimeli, 2016). Hence, profitability is an important factor that determines audit fees.

Academic works that analyse determinants of audit fees from the standpoint of audit firm activities have considered audit firm size as a key factor in providing audit services. A number of earlier studies have focused attention on finding out whether there are significant differences between the audit fees charged by the 'big' audit firms and audit fees charged by the 'non-big' audit firms. The rationale for studying the link between audit firm size and audit fees comes from the conjecture that audit firm size indicates audit quality. Within this context, Ezzamel, Gwilliam and Holland (2002) argue that established bigger audit firms tend to charge a higher audit fee for an audit work compared to the 'non-big' audit firms due to product differentiation and competition. This view was empirically supported by Choi, Kim, Kim, and Zang (2010) and Walid (2012), and replicated by Urhoghide and Emeni (2014). However, a number of other studies including those by Willekens and Achmadi (2003) and Meshari (2008) found no positive connection between audit fees and audit firm size. The results of these studies showed that audit firm size (whether big or small) does not statistically influence the amount of audit fees paid by

audit clients. Moreover, Chaney, Jeter and Shivakumar (2004) found that private firms hardly consider the Big 5 (now the Big 4) audit firms to provide better audit quality and so, do not warrant being paid higher audit fees.

Also, from the auditors-related perspective, audit firm tenure is considered a key determining factor of audit fees. It is the length of time that auditors spent in servicing their clients. Over the past few decades studies on audit firm tenure have focused on specific areas such as audit quality, audit rotation and audit fee. For example, using a sample of 254 Spanish state-owned foundations, Belen, Roberto, and Antonio (2015) investigated the link between audit firm tenure and audit quality and found that audit quality increased initially and then decreased. Jackson, Moldrich, and Roebuck (2008) discovered a positive connection between audit tenure and audit quality. As to the relation between audit quality and audit rotation, Arel, Brody, and Pany (2005), Carey and Simnett (2006), Daniels and Booker (2011) all found a negative relationship. In investigating the link between audit firm tenure and audit fees, Bedard and Johnstone (2010) looked at the connection between audit tenure, audit planning and audit fees among American firms. Their results revealed a strong association between audit fees and audit tenure, indicating that audit firm tenure means painstaking knowledge of the client, which results in a more valuable auditor-client relation, resulting in higher audit fee payments because audit clients will desire such a relationship. This same finding was established by Urhoghide and Emeni (2014).

Based on the preceding review, it is obvious that prior studies on audit fees have considered its determinants more from the audit-client and audit-firm related perspectives. However, a different

stream of studies continues to discuss other drivers of audit fees, such as earnings managements (Gul, Chen, & Tsui, 2003; Martinez, & Jesus-Moraes, 2017; Veera, 2015), tax aggressiveness (Donohoe & Knechel, 2014; Hanlon, Krishnan & Mills, 2012; Saremi, Mohammadi & Nezhad, 2016), and corporate governance mechanisms (Boo & Sharma, 2008; Boussaidi & Hamed, 2015; Urhoghide & Emeni, 2014). The main focus of this study is to determine how tax aggressiveness and corporate governance explain changes in audit fee.

2.4 Tax Aggressiveness

There is a lack of clear and universally accepted definition of tax aggressiveness because the concept may mean "a different thing to different people" (Hanlon & Heitzman, 2010:137). Tax aggressiveness can be substituted with tax planning (Khurana & Moser, 2013), tax sheltering (Yin, 2001), and tax avoidance (Lanis, Richardson, & Taylor, 2015) depending on the extent of practice. Chen, Chen, Cheng, and Shevlin (2010) and Wahab and Holland (2012) refer to tax aggressiveness as the use of tax planning activities for downward management of taxable income so as to reduce tax liabilities and produce a tax gain. Frank, Lynch and Rego (2009) see aggressive tax returns as the arrangement of activities and downward manipulation of taxable income through tax aggressive activities. Frischmann, Shevlin, and Wilson (2008) narrowly define tax aggressiveness as the process of engaging in significant tax positions without strong supporting facts. However, a more all-inclusive meaning is found in Lisowsky (2010), in which the researcher presented tax aggressiveness as activities close to the end of a continuum of tax avoidance actions that range from legitimate tax planning to investments in abusive tax shelters. For the purpose of this study, tax aggressiveness is defined as a tax strategy, which may be

considered legal in some circumstances and illegal in some other circumstances, deployed by managers to minimise tax liabilities in order to achieve an increase in after-tax earnings. Tax aggressive actions are viewed as a veritable investment for firms and shareholders as it can be used to reduce the tax liabilities, but authors including Ilaboya, Izevbekhai and Ohiokha (2016) and Chen et al. (2010) note that shareholders may not support the activities of tax planning because of the likely future costs to the firm.

Undoubtedly, tax planning (aggressiveness) remains one of the most serious threats to government revenue generation capability and indeed, the entire economy of any nation, including Nigeria (Eboziegbe, 2007). Tax aggressiveness can be carried out by firms through a number of ways, such as the deliberate act of omission or commission which might include failure to pay tax, failure to submit returns, incorrect returns by omitting or understating profits liable to tax; providing incorrect information, documenting fictitious transactions, overstating expenses, willful default or neglect; non-compliance with the provisions of relevant Tax Acts (Kiabel & Nwankwo, 2009; Sharayri & Momani, 2009). The level of tax aggressiveness in a given firm can be influenced by the nature and extent of agency conflicts, and therefore, analysis of an aggressive tax decision should be embedded in an agency framework. Studies conducted by Crocker and Slemrod (2005), and Chen and Chu (2005) analysed corporate tax aggressiveness based on the agency theory because of the principal/agent relationship that exists between shareholders and management. Besides, Chen et al. (2010) state that most firms determine the extent of their tax aggressive actions based on a tradeoff between the marginal benefits and costs of managing taxes. The marginal benefits comprise tax savings while the marginal costs include implementation costs (i.e. time and effort, transaction costs), possible reputation cost, likely

penalties that can be applied by the relevant tax authorities, as well as fall in stock prices in reaction to news of tax offenses (Scholes, Wolfson, Erickson, Maydew, & Shevlin, 2005; Slemrod, 2004).

2.5 Measures of Corporate Tax Aggressiveness

Information on taxable income and tax liabilities as well as financial statement data is required in order to measure corporate tax aggressiveness (Salihu, Obid, & Annuar, 2013). Whereas financial statement data are readily available, especially for listed firms, availability of tax information is restricted. Likely sources of information for the required inputs are the tax returns of the firm and its financial statements, which comprise the statements of financial position, changes in equity, cash flows, and profit or loss and other comprehensive income. Although, firm's tax returns usually contain correct and more reliable inputs of taxable income and tax liabilities, their accessibility is limited because tax returns are confidential information and therefore are only available to a few persons (Salihu et al., 2013). Different measures of corporate tax aggressiveness have been used in the previous literature (Lee, Dobiyanski, & Minton, 2015; Salihu, Obid, & Annuar, 2014). These measures, as categorised by Salihu, Obid, and Annuar (2014), are of three broad groups.

2.5.1 Effective Tax Rate based Measures

This first group is based on the Effective Tax Rate (ETR). Basically, the effective tax rate is the average tax rate a firm pays on its pre-tax accounting income and is calculated as the firm's tax

liability scaled by pre-tax accounting income (Minnick & Noga, 2010; Armstrong, Blouin, & Larcker, 2012). The measure reduces the tax liability of a firm without necessarily reducing its accounting income (Rego, 2003; Derashid & Zhang, 2003), and it is often employed because it helps to estimate the extent to which a firm is efficient in its tax planning activities (Mills, Erickson, & Maydew, 1998; Phillips, 2003; Lanis et al., 2015). ETR based measures are compared with the statutory tax rate (STR). Where the effective tax rate is less than the statutory tax rate, it indicates evidence of tax aggressiveness (Salihu, Obid, & Annuar, 2013). The effective tax rates comes in several variants such as the accounting ETR; current ETR; cash ETR; long-run cash ETR; ETR differential; ratio of income tax expense to operating cash flow; and ratio of cash taxes paid to operating cash flow (CTR) (Lee, Dobiyanski, & Minton, 2015; Salihu, Obid, & Annuar, 2014).

The accounting ETR, also called the GAAP ETR, is the ratio of the total accounting income payable as taxes as reflected in the financial statements. It is calculated as the total tax expenses divided by the accounting income before tax. Although accounting ETR, as a measure of tax aggressiveness, has been applied to certain areas of study, including family ownership (Chen et al., 2010) and corporate social responsibility disclosure (Huseynov & Klamm, 2012), it has some limitations. Firstly, accounting ETR has been criticised for not measuring tax deferral strategies as total tax expense is made of both current and deferred tax expense (Salihu, Obid, & Annuar, 2013). Secondly, it can only capture the non-conforming tax aggressiveness as it measures tax aggressive actions as regards accounting income. Thirdly, the accounting ETR is hardly useful for long term predictions because the annual data it uses can be highly volatile. Due to these

limitations, a number of attempts have been made to modify the accounting ETR so as to increase the power of effective tax rate measures, hence the ETR variant of current ETR.

The current ETR is somewhat different from accounting ETR because it uses the current tax expense as its numerator rather than the total tax expense. As a result, it is calculated as the ratio of current-year tax expense to the total accounting income before tax. Because the current ETR measure uses the current income tax as its numerator, it measures the tax deferral strategies of a firm, thus overcoming the GAAP ETR drawback of measuring permanent tax aggressiveness only (Salihu et al., 2013). There are prior studies that have used the current ETR measure. Lanis and Richardson (2012) employ the current ETR as a proxy for tax aggressiveness when they investigated the link between tax aggressiveness and corporate social responsibility. Also, Hope, Ma and Thomas (2012) use the current ETR surrogate for tax avoidance in their study of the relationship between corporate tax avoidance and geographical earnings' disclosure practices. Despite the advantages associated with this measure, the current ETR measure still suffers some limitations as the accounting ETR. Firstly, the current ETR captures only the nonconforming type of tax aggressiveness. Secondly, current tax expense distorts the current ETR as it may either be understated or overstated compared to the actual tax expense (Hanlon, 2003). In effect, both accounting ETR and current ETR are considered to have the problem of yearly volatility and can hardly measure long-term tax aggressive actions. An option to these two measures, as demonstrated in the tax literature, is the effective tax rate measure called the long-run cash ETR.

The long-run cash ETR measure, as developed by Dyreng, Hanlon, and Maydew (2008), is the ratio of cash taxes paid to the accounting income before tax over a given period of time (say

eight years). The use of cash amount of tax paid as against tax expense tends to reduce the possible effects of items like tax cushions and valuation allowance (Dyreng et al., 2008). Unlike the accounting ETR and current ETR, the long-run cash ETR account for the tax benefits of stock options of employee (Minnick & Noga, 2010), reduces volatility associated with the annual ETR measures (Hanlon & Heitzman, 2010; Salihu et al., 2013) and data truncation bias caused by years of losses (Henry & Sansing, 2014). Given the merits of the long-run cash ETR, studies like those of Minnick and Noga (2010) Dyreng et al. (2010) Chen et al. (2010) Armstrong et al. (2012) and Huseynov and Klamm (2012) have all used long-run cash ETR as a proxy for tax aggressiveness. Although the long-run cash ETR solves many drawbacks of annual ETR measures, it is not without some limitations. For instance, the measure is still restricted to non-conforming tax aggressiveness. Besides, the risk of a truncation bias owing to the removal of loss making firms is equally associated with this measure (Henry & Sansing, 2014). As a result, the cash effective tax rate was developed.

The ratio of income tax expense to operating cash flow (called cash effective tax rate (CETR) by Dyreng et al. (2008)) has been found to be a better measure of the tax liability of a firm (Zimmerman, 1983). According to Buijink, Janssen and Schols (2002), replacing accounting earning with operating cash flow in the denominator helps to present the actual tax liability of a firm since it is not based on accrual accounting procedures. This measure was applied by Lanis and Richardson (2012) to capture tax aggressiveness among 408 Australian firms when they examined the link between corporate social responsibility and tax aggressiveness. As noted above, while the denominator of this measure is not affected by the accrual accounting item, its numerator is still subject to the influence of accrual accounting basis due to inclusion of income

tax expense (Salihu et al., 2013). Thus, this construct measures only the non-conforming tax aggressiveness. Accordingly, Hanlon and Heitzman (2010) propose a measure which hardly measures tax aggressiveness in relation to accrual accounting procedures. This measure is discussed subsequently.

The proportion of cash taxes paid to the operating cash flow of a firm, also known as the cash tax rate (CTR), is able to measure tax aggressiveness in a manner not based on accrual accounting procedures and by implication, the conforming tax aggressiveness (Hanlon & Heitzman, 2010; Salihu et al., 2013). However, Salihu et al. (2013) note that this measure has not been empirically proven. This is a gap in the literature that this study sought to address.

2.5.2 Book-to-Tax Difference based Measures

The second group consists of those measures that consider the size of the gap between book or accounting income and taxable income. The book-tax difference (BTD) is defined as the difference between a firm's reported pretax income as per the financial statements and its taxable income as per the tax returns (Guenther, 2014; Kim, Li, & Zhang, 2011; Manzon & Plesko, 2002). The size of the gap suggests the presence of tax aggressive practices (Kim, Li, & Zhang, 2011). The reporting difference (gap) between the pretax income and taxable income originates from the fact that taxation is rule-based and financial accounting is principle based (Tang & Firth, 2011). Besides, taxable income is estimated based on current tax expense, due to the confidentiality of data contained in the tax return (Manzon & Plesko, 2002).

The observed increase in book-tax difference (BTD) together with the diverse reporting scandals in the United States have led to a strong debate amongst legislators and tax experts on the degree to which book and tax accounting should be aligned. Authors, such as Yin (2001), Desai (2003), Whitaker (2005) and Shaviro (2009), who are in support of increased book-tax agreement conjecture that it would restrict managers' incentives to aggressive reporting on financial and taxable incomes, and thus enhance tax compliance, earnings quality, and transparency. However, researchers, like Hanlon and Shevlin (2005), McClelland and Mills (2007) and Hanlon, Maydew, and Shevlin, (2008), who support book-tax difference (BTD), highlight the differing objectives of both reporting lines and emphasise that book-tax agreement would cause a decrease in accounting information available to the public and earnings quality. Basically, diverse reporting in financial and tax accounts leads to book-tax differences, and apparently, the extent of book-tax difference depends on the extent of book-tax agreement in a given country (Desai & Dharmapala, 2009). The authors note that book-tax difference may cause either under-reporting of taxable income (aggressiveness in tax avoidance) or over-reporting of financial income (earnings management).

In the empirical tax accounting literature, there are different measures of book-to tax difference constructed to capture tax aggressiveness. These measures include the total book-tax difference, temporary book-tax difference, permanent tax-to book difference, discretionary permanent difference and discretionary total book-tax difference. The first, total book-to-tax difference (BTD) is considered a broad measure because it incorporates both the temporary and permanent BTD, and it is usually determined based on information from the firm financial statements. The

taxable income is approximated by grossing up the current tax expense with the statutory tax rate (Manzon & Plesko, 2002). Although the total BTD is easily calculated, it suffers from significant measurement error because of the problems in estimating taxable income from financial statements (Hanlon, 2003). The second, temporary book-to-tax (BTD) was introduced due to the gap between book and taxable income arising from the timing of expense items and accrual income. The temporary BTD is determined by grossing up the deferred tax expense with the statutory tax rate (Moore, 2012), and it contains information of non-tax accruals such as depreciation (Hanlon & Heitzman, 2010).

The third, permanent book-to-tax (BTD) represents the difference between book and taxable income that do not reverse eventually, and it is computed as the difference between estimated total BTD and temporary BTD (Lisowsky, Robinson, & Schmidt, 2013). Permanent BTD indicates tax aggressiveness as they reduce both taxable income and ETRs without decreasing financial income reported to shareholders (Hanlon & Heitzman, 2010; Shevlin, 2002; Wilson, 2009). Furthermore, an often used measure of tax aggressiveness is the discretionary permanent difference measure developed by Frank, Lynch, and Rego (2009). These authors based their proxy on permanent BTD, as anecdotal evidence considers tax aggressiveness of firms to be associated more with permanent BTD than the total BTD. Discretionary permanent difference is estimated by regressing total permanent BTD on non-discretionary items such as changes in the valuation allowance, changes in the tax cushion, goodwill, and tax credits that are known to result in permanent differences as well as on other adjustments that are not linked to tax aggressiveness. The residual of the regression is expected to capture tax aggressive activities, after drivers that are unconnected with such activities have been eliminated. The discretionary

permanent difference measure intends to focus on items that reduce firm's ETR and increase its accounting income (Hanlon & Heitzman, 2010). Finally, discretionary total BTD measure comprises a discretionary measure of tax aggressiveness which extracts that portion of total BTD that related to tax aggressive reporting (Desai & Dharmapala, 2009). Total BTD are regressed on total accruals in order to capture earnings management. Then, the residual from this regression, that is, the component of total BTD that cannot be explained by variations in total accruals, is determined to be a measure of (aggressive) tax avoidance activity (Desai & Dharmapala, 2009).

2.5.3 Other Measures

The final group focuses on other measures of tax aggressiveness such as tax savings, unrecognised tax benefits and tax shelter estimates (Lee et al., 2015; Salihu et al., 2014). Tax savings is the difference between statutory tax rate and effective tax rate (Ilaboya, Izevbekhai, & Ohiokha, 2016). The statutory tax rate means the amount of tax liability (before any credits) regarding tax income, defined by tax law and reflects tax benefits and subsidies incorporated into the law (Devereux & Griffith, 1998). In Nigeria, statutory rate is 30% for companies. The statutory tax rate is the tax rate that is applicable to the various statutory tax bases. Tax savings used as a measure of tax aggressiveness indicates that managers are motivated to reduce financial statement tax expense because aggressiveness in tax planning is regarded as a mechanism firms use to generate permanent and/or temporary tax savings through deferrals (Ftouhi, Ayed, & Zemzem, 2010). This means that tax savings could manifest in a situation in which a tax payer pays a reduced amount of taxes either when an investment income is taxed at a low rate, only a portion is taxed or it is not taxed at all. Tax savings are gained from municipal bonds as their

interest is subjected to federal income tax and could be exempted from state and local taxes. Further, tax savings can be gained from investments in real estate since they produce large tax deductible expenses, such as depreciation, income offsetting-maintenance costs and mortgage interest.

On the other hand, tax sheltering, according to Graham and Tucker (2006), is any method taxpayers adopt to reduce their taxable incomes without valid business purposes. It is a tax-motivated misstatement of accounting income with the objective of decreasing explicit taxes (Bankman, 2004), and it is done in a manner inconsistent with any purposive application of the relevant tax regulation (Bankman, 2004; McGill & Outslay, 2004). Theresia, Ina, and Katharina (2017) see tax sheltering as any activity, legal and illegal, designed to reduce tax burden within the framework of taxation. In literature, four different class of tax sheltering measures are identified - tax audit adjustments, decrease in taxes paid, tax contingencies and indicator variable for tax shelter firms (Theresia, Ina, & Katharina, 2017).

The first class of tax sheltering measure, which the tax audit adjustments measure, is based on the difference between the taxable income reported by a firm in its tax return and the final taxable income determined by the tax authority (Chan et al., 2010). The second class of tax sheltering measure, decrease in explicit taxes paid, is defined as the discrepancy between the current taxes paid (managed tax amount) by a firm and the multiple of the statutory corporate tax rate and pre-tax earnings, called the unmanaged tax amount (Atwood, Drake, Myers, & Myers, 2012). This difference is meant to show the extent to which managers aggressively pursue tax

strategies to reduce the total tax liabilities of a firm (Tang, 2015). The third class of tax sheltering measure uses tax contingencies as a proxy for tax aggressiveness (Cazier, Rego, Tian, & Wilson, 2009; Frischmann, Shevlin, & Wilson, 2008). This is because a tax contingency of an amount equal to the additional tax liability which the firm expects to pay is set up by management should its tax position is challenged by the relevant authority following a tax audit (Theresia, Ina, & Katharina, 2017). The last class of tax sheltering measure is the proxy which is designed as either a binary variable or probability measure to indicate the likelihood of a firm engaging in tax shelter activity. Several kinds of illegal tax shelter firms are identified and then, the firms are matched with sample of control firms to identify systematic discrepancies (Theresia, Ina, & Katharina, 2017).

2.6 Corporate Governance and Corporate Governance Codes

This section discusses the concept of corporate governance and the regulatory changes in Nigeria, which came through the issuance of different codes of corporate governance.

2.6.1 Corporate Governance

Since the emergence of Joint Stock Companies which made it possible for widely dispersed people to jointly own a business, corporate business organisations have become more and more complex by the day (Agbonifoh, 2010). Factors which have led the complexity include the business sizes, number of stakeholders, market sizes, product range, dynamic business environment, sophistication in information technology and growing expectations of discerning customers. For this reason, it has become increasing difficult for shareholders and other relevant

stakeholders to monitor their investments and ensure that their interests are well protected by directors and management.

Given the divorce relationship that exists between ownership and control of public firms, shareholders and other investors rely mainly on published information produced by management to ascertain the extent to which their firms are performing. Unfortunately, most shareholders hardly attend annual general meetings or read published information on their own firms (Agbonifoh, 2010). It is, therefore, not surprising that some large corporate bodies have survived on manipulative information and aggressive financial reporting with the aim of presenting misleading information on their financial healthiness. Perhaps, the most prominent cases that swept across the globe few years ago were those of Enron and WorldCom in the United States, Parmalat in Italy, Lernout and Hauspie in Belgium, as well as Springbank, Wema bank, Finbank, and NAMPAK in Nigeria. These corporate collapses brought to the fore and public domain the need for improved measures to ensure that firms are managed and controlled in a manner that ensures the protection of the interests of corporate owners and other stakeholders. Corporate firms are managed entirely for benefits of owners and other relevant stakeholders due to the conflict of interests between shareholders and managers arising from the separation of corporate ownership and control. The separation of ownership from management (control) means that shareholders lose the effective control over managerial decisions, giving rise to agency problem. The major goal of corporate governance, therefore, is to attempt to align managerial incentives with those of shareholders and other relevant stakeholders (Wu, 2002), ensure that corporate firms are effectively managed and delegated powers are not abused to the disadvantage of owners and other stakeholders.

Due to its significance regarding the financial and economic wellbeing of firms in particular, and society in general, the concept of corporate governance has somewhat become topical and attracted a good deal of public interest (Nwokoma, 2005). Indeed, the topicality of corporate governance has manifested in various definitions of the concept depending on the interests and individuals involved. For example, Shleifer and Vishny (1997) describe corporate governance as the ways in which suppliers of finance to corporations assure themselves of receiving a return on their investment by virtue of the legal protection of ownership rights and concentration which assist in controlling management's discretion. From the stakeholder's viewpoint, Aguilera (2005) defines corporate governance as the way rights and responsibilities are distributed among different participants in the firm, such as managers, shareholders, employees, suppliers, board of directors and customers. Solomon (2007) perceives corporate governance as a system of checks and balances that ensure firms discharge their accountability to all their stakeholders and act in a socially responsible manner in all areas of their business activity. The Organization for Economic Cooperation and Development (2004) views corporate governance as a set of relations between a firm's management, its board, its shareholders and other stakeholders. One of the most famous definitions of corporate governance was provided by the Cadbury Report (1992) in the United Kingdom. According to Report, Corporate governance is the system by which firms are directed and controlled. In the preamble to the report, Sir Adrian Cadbury sums up both the concept and purpose of corporate governance in the United Kingdom as follows:

> *'*....The country's economy depends on the drive and efficiency of its companies. Thus, the efficiency with which their boards discharge their responsibilities determines Britain's competitive position. They must be free to drive their companies forward, but exercises that freedom within a framework of effective accountability. This is the essence of any system of good governance...'(Cadbury Report, 1992, p4)

From the diverse definitions of corporate governance given above, we can summarize that the term relates to the systems, practices and procedures together with both formal and informal rules that guide institutions and the manner in which these rules and regulations are applied. Omeiza-Micheal (2009) identifies accountability, fairness, transparency and independence as four pillars of corporate governance. Mulyadi, Anwar, and Ardo Dwi Krisma (2014) state that applying these four pillars of corporate governance principles will help reduce agency problems, and inspire public trust and confidence in firms. Numerous codes have been developed as a guide to effective corporate governance; nonetheless, the best guide to global corporate governance was developed by the Organization for Economic Cooperation and Development (OECD). The OECD (1999) highlighted the principles of corporate governance to include rights of shareholders, equitable treatment of shareholders, role of stakeholders in corporate governance, disclosure and transparency, as well as the responsibilities of the board

The general opinion is that firms with strong corporate governance will experience better management and performance than those with weak corporate governance (Brown & Caylor,

2004). Moreover, at the heart of the corporate governance debate is the view that the corporate boards promote strong governance in firms via ensuring compliance with the principles and provisions of the corporate governance code (Brown & Caylor, 2004; Dalton, Daily, Ellstrand, & Johnson, 1998). Corporate boards are held accountable for the policy decisions making and providing monitoring and strategic direction for firms (Owens, 2008). Corporate board of directors, according to Agara and Stainbank (2014), is a group of selected representatives of the shareholders, investors and other relevant stakeholders of a firm charged with the responsibility of providing superior supervision over the activities of employees and hired professional managers so as to ensure that actions or decisions are taken in the best interest of the stakeholders of the firm. When a corporate board fails, the chances of the firm succeeding is extremely difficult. Therefore, the importance of effective and trusted corporate boards to the success of a firm cannot be overstated.

2.6.2 Corporate Governance Codes

Although, corporate governance allows the discretion of managers to be limited and business efficiency enhanced (Forbes & Milliken, 1999), the series of occurrence of world-wide corporate scandals which occurred in the past years called into question the effectiveness of corporate governance as a control mechanism, resulting in changes in the regulatory policies concerning the accounting, auditing and legal professions worldwide, with emphasis on the accounting profession (Marshall, 2015; Ogbechie & Koufopoulos, 2010). One major outcome was the restrictions placed on the professions which affected the freedom of self-regulation in these professions. The Sarbanes Oxley Act (SOX) was signed into law in 2002 with far-reaching

impact for both accounting and auditing practices in the United States. In the United Kingdom, the Ethics Standards Board issued a consultation paper on three key issues: independence of auditor's appointment on the advice of management, the necessity for rotating auditors after a given number of years, and non-audit services provided by auditors to clients (Marshall, 2015).

Regulatory changes in Nigeria were through the issuance of different Codes of corporate governance by major regulators. However, corporate governance as an established practice did not emerged in the country until November, 2003 when the Nigerian code of corporate governance was promulgated for public liability companies. Prior to the promulgation, the Companies and Allied Matters Act of 1990 was the main legislative framework for corporate governance for companies generally. It was the code of 2003 that established corporate governance as a rule binding on all firms for the purpose of inculcating principles of corporate governance as enshrined in international standards on corporate governance (Sanda, Mukaila & Garba, 2005). Other codes of corporate governance that have been issued in Nigeria in addition to 2003 Security and Exchange Commission (SEC) code include Code of Corporate Governance for Banks Post-Consolidation, 2006 issued by Central Bank of Nigeria (CBN); Code of Corporate Governance for Licensed Pension Operators, 2008 issued by Pension Commission (PENCOM); Code of Good Corporate Governance for Insurance Industry, 2009 issued by (National Insurance Commission) NAICOM; Code of Corporate Governance for Public Companies, 2011 issued by SEC and its subsequent amendment in 2014 and the Code of Corporate Governance for Banks and Discounts Houses in Nigeria and Guidelines for Whistle Blowing in the Nigerian Banking Industry (Marshall, 2015; Oso & Semiu, 2012; Ogbechie &

Koufopoulos, 2010), as well as the National Code of Corporate Governance, issued by the Financial Reporting Council of Nigeria in 2016 but was later suspended in the same year.

The most recent event is the release, by the Financial Reporting Council of Nigeria, of the Nigerian Code of Corporate Governance (2018) for private and public companies. The aim is to promote ease of doing business by promoting trade and investment and rebuilding public trust and confidence in the Nigerian economy. The code is based on the 'Apply and Explain' principle, which assumes application of all principles, and requires entities to explain how the principles are applied. Besides, the code allows sectoral regulators to issue guidelines that set out corporate governance practices in consonance with the principles stated in the code, and to enforce compliance with such guidelines with appropriate sanctions.

The implication of the foregoing is that multiplicity of corporate governance codes exists in Nigeria. Presently, there are not less than nine corporate governance codes in the country, of which six are industry specific and three applicable to all public firms. Irrespective of the fact that it can be argued that the multiplicity of codes enable specific industries to design a corporate governance code that meets the peculiar needs and requirements of the industries concerned, the numerous corporate governance codes can cause confusion, huge financial commitment and uncertainty. Basically, corporate governance rules are principles that are applicable to organisations. Thus, any reason for having multiple corporate governance codes appears unconvincing.

2.7 Corporate Governance and Audit Fees

Traditionally, prior literature on the determinants of audit fees has focused on production-based perspective. This line of literature demonstrates that audit fees are determined by factors such as firm size, firm industry of operation, firm complexity, risk, and firm profitability, amongst others (Abbott, Parker, Peters & Raghunandan, 2003; Goodwin-Stewart & Kent, 2006; Boo & Sharma, 2008; Zaman, Hudaib & Haniffa, 2011). That is, when the client firm is large, complex or has a high risk of accounting errors, the auditor will be expected to put more hours into the audit to provide assurance that the accounts and financial statements have been properly prepared, thereby resulting in higher audit fees payment. From the production-based approach, sound corporate governance practices (like the existence of more female board members, diligent audit committee or independent board members) are expected to strengthen the control mechanisms and decrease the need for more external audit, and thus audit fees.

However, other lines of literature on the drivers of audit fees assume a different dimension. Studies by Carcello et al. (2002), Abbott et al. (2003), Hay and Knechel (2004), and Hay et al. (2006) underline the significance of the demand-driven approach, which may lead to conflicting results, such as independent directors demanding for comprehensive audit to protect their reputations and fulfill their task of due diligence. Abbott et al. (2003) and Carcello et al. (2002) demonstrate that firms with sound corporate governance structures will demand for a high quality audit and pay higher fees. Hay, Knechel, and Wong (2006) note that sound corporate governance is likely to influence audit fees as improved corporate governance practice signifies

more effective control environment. Hay et al. (2006) identified statutory audit as an important corporate governance tool often used by shareholders to monitor managers, and that enhancing corporate governance through the board or audit committee would amount to demand for more external audit work, thus increasing audit fee payable. The next subsection of the study focuses on the link between audit fee and corporate governance mechanisms such as board gender, audit committee diligence, board independence, and ownership concentration. These mechanisms are chosen because they are among the commonly investigated governance attributes in corporate governance literature.

2.7.1 Board Gender Diversity and Audit fees

Board gender diversity connotes that both female and male directors exist on the corporate board. There is a growing stream of research on the difference in the ways male and female directors bring their characteristics to bear on their choices of leadership style and decisions making process in the board (Bilimoria, 2000; Trinidad & Normore, 2005; Brooks & Zank 2005; Smith, Smith, & Verner, 2006; Renee & Daniel, 2009; Due & Thuy, 2013). Given the high risk-averse nature of female directors compared to male directors, Oyenike, Olayinka, and Emeni (2016) affirm that female directors normally support less risky policies to drive financial decisions and results. Adams and Ferreira (2009) discovered that female board members are connected with improved profitability, stronger board monitoring and good governance credentials than their male counterparts.

Other stream of literature suggests that female directors, compared to male directors, are more responsive to ethical issues in situations that require ethical decision making (Bruns & Merchant, 1990; Bernardi & Arnold, 1997; Cohen et al. 1998). The implication of this stream of literature is that the boards with female directors may insist on more audit effort in order to protect the firms' reputation (Fama & Jensen 1983; Gilson, 1990), especially in situations characterized by ethical dilemma. Also, prior literature suggests that women seek greater clarity in their decision-making (Barber & Odean, 2001; Brooks & Zank, 2005), indicating that female directors may require higher audit effort to avoid legal liability (Gilson, 1990; Sahlman, 1990). Furthermore, Gul, Srinidhi and Tsui (2008) investigated the relationship between female directors (proxy for board gender diversity) and audit fees based on a sample size of 2,784 US firms, and found that boards with a higher proportion of female directors in the boardroom demand more in terms of audits, thus resulting in high audit fees being paid.

Collectively, the streams of literature above suggest that female members are likely to enhance board monitoring by engaging higher quality auditors and demanding for comprehensive audit work. Therefore, it is expected that the presence of female directors on the board will positively and significantly influence audit fees.

2.7.2 Audit Committee Diligence and Audit fees

Audit committee's diligence is measured by the number of meetings conducted by the committee in a year (Ika & Ghazali, 2012; Menon & Williams, 1994). The intensity of audit committee's activities can lead to the effectiveness of its oversight functions especially in matters relating to

the financial reporting and auditing function (Zaman, Hudaib & Haniffa, 2011; Song & Windram, 2004; DeZoort & Salterio, 2001). That is, an audit committee that demonstrates a greater diligence in carrying out its functions is likely to enhance level of supervision of the financial reporting process that will benefit shareholders (Allegrini & Greco, 2011; Garcia, Barbadillo & Perez, 2012). Besides frequency of meetings, audit committee's diligence includes behaviour of individual committee members surrounding such meetings (Garcia, Barbadillo & Perez, 2012).

Studies on audit committee diligence have been associated with certain areas. For example, Cornett, McNutt, and Tehranian (2009) investigated the link between corporate governance mechanisms and earnings management at large U.S. bank holding companies, and reported a significantly negatively relationship between audit committee meetings and earnings management. Hassan (2013) studied financial reporting quality and monitoring characteristics among firms in the manufacturing sector of Nigeria, and found a positive relationship between audit committee meetings and financial information quality. Also, DeZoort and Salterio (2001) found that audit committee diligence leads to reduced likelihood of fraud, including tax aggressive actions.

The responsibilities of the audit committee go beyond supporting activities that discourage the opportunistic actions of management or exercising control over financial/tax reporting issues like financial fraud and tax aggressiveness. The committee can review the nature, the extent and timing of external audit assignment for the purpose of exerting a positive influence on the audit scope and quality. The more frequent audit committees meet, the more efficient they will

discharge their oversight responsibilities regarding audit. In this context, Krishnan and Visvanathan, (2009) reveal that the firms with more frequency of audit committee meetings will require additional assurances and high level quality audit from their external auditors. Also, a study carried out by Stewart and Munro (2007) on Australian corporations documented that audit committee activities highly influence the audit fee of an engagement because as the firm demands for extra audit assurances due to the diligence of the audit committee, the audit fee increases. Another study performed by Yatim, Kent, and Clarkson (2006) on Malaysian companies reported that audit fees are highly influenced by the diligence demonstrated by audit committees.

In the light of the review above, it can be argued that an active audit committee is more likely to exert a positive influence on audit scope and audit testing levels, which in turn will cause audit fee rise. Therefore, it is expected that audit committee diligence will positively and significantly influence audit fees.

2.7.3 Board Independence and Audit fees

Board independence means the number of independent non-executive directors on the board in relation to the total number of directors. Clifford and Evans (1997) define an independent non-executive (outside) director as an independent director who has no connection with an organisation except for their directorship. The assumption is that boards with a significant number of outside directors will be more independent and will make better decisions than boards dominated by insiders because of their fiduciary duty towards shareholders and their

independence from management (Barnhart, Marr, & Rosenstein, 1994; Daily, 1995; Fama & Jensen, 1983). Agency theory is in tandem with this assumption.

A number of studies support the link between the independence of the board of directors and external audit, reporting it as complementary (Hay, Knechel, & Ling, 2008). That is, to effectively perform its oversight functions, an independent board will require working closely with independent external auditors. Hence, Hay, Knechel, and Ling (2008) contend that a firm whose stakeholders are interested in improving control and governance will engage the services of competent independent directors. Also, Carcello, Hermanson, Neal, and Riley (2002) and Hay and Knechel (2004) declare that independent directors will prefer an external audit service which offers a good quality of control because administrators not only seek to avoid legal liability but protect their reputation and the interests of shareholders as well. Hay et al. (2008), O'Sullivan (2000) and Carcello et al. (2002) all support the position that the independence of the board of directors has a positive impact on external audit quality (proxied as audit fees). Similarly, Adelopo and Jallow (2008) report a positively and significantly relationship between board independence and audit fees paid to auditors.

It therefore follows that by requiring a higher audit quality and paying higher fees, firms having boards comprising more independent outside directors are more likely to reduce the misappropriation of firm's resources and management opportunism. Based on the findings of these prior studies, we can infer that the presence of independent outside or non-executive directors on corporate boards can help influence management's opportunistic actions downwards

through the demand for comprehensive audit work, resulting in high audit fees being demanded by the auditors. Hence, the link between board independence and audit fees is expected to be positive.

2.7.4 Ownership concentration and Audit fees

Ownership structure of a firm is typified by block holders, managerial ownership and government ownership (Aras & Crowther, 2008). Block holder ownership refers to the proportion of ordinary shares owned by significant number of shareholders. The shares of the block shareholders is considered to represent five percent (and above) of a firm's equity shares (Mgbame & Onoyase, 2015). Businesses that have similar stake in a firm are called institutional shareholders. For managerial ownership, a large proportion of shares are owned by management of the firm. While government ownership signifies that a larger part of the firm belongs to government (Juhmani, 2013). Ownership is therefore said to be concentrated if large block holder, managerial or government ownership exists. That is, shares of a firm are controlled by a small group of people (Juhmani, 2013) or government.

Ownership structure is vital to any corporate governance discourse (Lietz, 2013). Theoretical assertion has it that possessing concentrated ownership in firms enables shareholders to exercise power that exceeds those vested in them by their cash flow rights and one way of exercising such powers is by involvement in management (Holderness, 2003; La Porta, Lopez-de-Silanes, Schleifer, & Vishny, 1998; Shleifer & Vishny, 1997). According to Amit and Villalonga (2006), the three most common metrics used to measure ownership concentration are dichotomous

variables for stock versus mutual firm, public versus private firms, and the existence of dominant shareholders. The authors note that the presence of large shareholders could signify increased agency costs or better control, with potentially differing impacts on audit fees. This means that the amount of audit fees charged by the auditor is a function of the ownership structure in a client firm.

Prior research provides mixed empirical evidences on the effect of ownership structure on audit fees. Several studies including that of Chan et al (1993) document a positive connection between widely dispersed ownership and audit fees. According to the authors, shareholders in firms with highly dispersed ownership will rely more on auditing as one of the methods of checking managerial activities. This is because as ownership becomes more diffused, the direct monitoring of managers by shareholders becomes much more expensive, and greater reliance on auditing as a governance control mechanism becomes unavoidable. Concerning firms with highly concentrated ownership, Grant, Butler, Hung and Orr (2012) argue that block shareholders will have a strong incentive to give management close monitoring because of their large equity investment, thus reducing the need for external auditing. Sometimes, such decisions may be at expense of the non-controlling shareholders of firm.

In line with this argument, an empirical study carried out earlier by O'Sullivan (2000) revealed a negative association between the equity shares owned by executive directors and audit fees, but found no evidence that large concentrated ownership, either in the shape of blockholders or institutional, has a significant influence on audit fees among a sample of UK listed firms. Mitra,

Hossain, and Deis (2007) found evidence of a significantly negative connection between institutional block holder ownership and audit fees, and a significantly positive relation between dispersed institutional stock ownership and audit fees when they studied U.S. listed firms. The authors equally found a negative relationship between managerial stock ownership and audit fees. In light of the above, a negative relationship between ownership concentration and audit fees is anticipated.

2.8 Tax aggressiveness and Audit fees

In his seminar study, Simunic (1980) suggests that audit fees consist of the "effort" and "expected loss" components. The expected loss component, also refer to as engagement risk includes exposure to loss arising from poor publicity, bad reputation and future litigation (DeFond & Zhang, 2014). Within this context, Simunic (1980) states that auditors will exert more audit effort to decrease audit risks and charge their clients higher audit fees when faced with higher potential engagement risks associated with tax aggressive actions of firms. The positive connection between audit engagement risk and audit fees is well documented in extant literature (Hay et al., 2006). In the same vein, a number of studies have examined the link between corporate tax and external audit, and specifically, how firms' tax outcomes affect audit pricing. Hanlon, Krishnan, and Mills (2012) investigated the relationship between book-tax differences (a measure of tax aggressiveness) and audit fees and found a positive connection, noting that auditors see tax aggressiveness as a signal of potential engagement audit risk, and adjust their effort and risk assessments accordingly.

Recently, Heltzer and Shelton (2015) provide further support for the proposition that tax aggressiveness affects auditors' risk assessments and audit fees, while asserting that the auditors surveyed in the study report that they use tax aggressiveness of firms to assess audit risk and determine audit fee. This is not surprising because managing risks associated with different tax aggressive strategies has become the new focus of corporate tax departments, as against their original roles as profit or cost centres (Ernst & Young, 2014; Donohoe, McGill, and Outslay, 2014). While various measurement of tax aggressiveness abounds in literature, sizeable number of studies employ firms' annual effective tax rate (ETR) as a proxy for tax aggressiveness. The choice of this proxy is based on the evidence in Derashid & Zhang, (2003) and, Lanis and Richardson (2015) that it reduces the tax burden of a firm without essentially reducing its accounting income (Derashid & Zhang, 2003). Since ETR, according to Lanis and Richardson (2015), can conveniently summarise the cumulative effect of various tax preferences in one statistic, policymakers, government agencies, and interest groups use the measure in tax reform debates.

Studies on the association of effective tax rates with audit fee are somewhat conflicting. In investigating the link between the effective tax rate (used as a measure of tax avoidance) and audit fee, Hu (2018) considered the differences between state-owned enterprises and non-state-owned enterprises in respect of motivation for tax avoidance. The author found that non-state-owned enterprises have a greater degree of tax avoidance (aggressiveness) than state-owned enterprises in the sense that managers of the non-state-owned enterprises will use effective tax rates through accounting item such as deferred income tax expense to manage earnings, which reduces the quality of accounting information, and increases the audit risk faced by auditors, thus

resulting higher audit fees payments. Using long-run effective tax rates as compound measure, Donohoe and knechel (2014) found a positive relationship between tax aggressive actions of firms and audit fees. According to Donohoe and knechel (2014), firms with lower long-run cash or current effective tax rates were found to pay about 6 percent more for an audit work than non-aggressive firms over a nine-year period. Saremi, Mohammadi, and Nezhad (2016) examined the link between seven variables (financial leverage, Firm size, audit opinion, loss report, accruals, and effective tax rate) and audit fees of the firms listed in Tehran Stock Exchange. The results using multivariate regression analysis revealed a positive significant relationship between firm size, loss report and audit fee, but negative relationship with audit, inconsistent with results of Donohoe and Knechel (2014) and Hanlon et al. (2013).

Overall, most of the foregoing studies suggest that audit risk assessment, auditor effort, and consequently, audit fees are influenced by tax aggressive activities of the audit client, signifying that for a proper audit, auditors must themselves be familiar with the complications associated with the tax aggressive positions of their audit clients, the demands of the tax and financial reporting systems, and accordingly, will adjust both the audit effort and fees in response to clients' risky and complex tax environments (Hay et al., 2006). However, some prior literature documents that other factors, such as earnings quality, industry expertise in auditing and in taxation determine the nexus between tax aggressive actions and external auditing. Hanlon et al. (2012) find evidence suggesting that earnings quality, instead of aggressiveness in tax avoidance, explains the positive link between book-tax difference and audit fees.

Hay and Jeter (2011) identified use of an industry expert as a factor that influence audit fees for tax aggressive firms since industry expert auditors will likely charge higher audit fee when they encounter complex reporting or audit issues that require further audit effort. Donohoe and Knechel, (2014) affirm that the audit fees for a tax aggressive firm can be influenced if an audit firm that has tax-related industry expertise is used, especially if the audit firm adds value to the audit client. Just like industry expertise in auditing, audit firms also develop industry expertise in taxation. Donohoe and Knechel, (2014), and McGuire, Omer and Wang (2012) declare that audit fees for firms that are tax aggressive are likely to be affected by the use of auditors that have tax-related industry expertise. But then, the issue is whether the audit team benefits from the efficiency or value associated with tax-related industry expertise when clients chase tax aggressive policies. Both Lim and Tan (2008) and Francis, Reichelt, and Wang (2005) note that tax aggressive clients are charged higher audit fees by auditors when tax expertise leads to increase in audit efficiency or lower fees payments if value is, rather, provided.

The evidence from the studies analysed above suggests that diverse measures of tax aggressiveness have been used to study the link between tax aggressive behavior of firms and external audit pricing, and these measures have been criticized for a number of reasons. For instance, Hanlon et al. (2012) measure tax aggressiveness using book-tax difference. Hanlon (2003) argued that the total book-to-tax difference suffers from significant measurement error because of the problem in estimating the taxable income from financial statements. Besides, the estimation of the permanent BTD involves non-discretionary items that are not linked to tax aggressiveness. Again, the BTD construct reflects the non-conforming tax aggressiveness since it is based on accrual accounting procedures. Alternatively, Donohoe and Knechel, (2014) use two

variants of the effective tax rate, that is, the current ETR and cash EFR to proxy tax aggressiveness. Hanlon (2003) has criticized the use of the current effective tax rates on the ground that current tax expense may understate or overstate the current ETR compared to the actual tax expense. Salihu et al. (2013) fault the use of the cash ETR because its numerator, which includes income tax expense, is still subject to the influence of accrual accounting, and as a result reflects the non-conforming tax aggressiveness. Hanlon and Heitzman (2010) affirm that the ratio of cash taxes paid to the operating cash flow (Cash tax rate) of a firm is believed to measure tax (avoidance) aggressiveness in such a way not relative to accrual accounting and hence the conforming tax avoidance. Therefore, to assess the extent of the impact of tax aggressiveness on audit fee from two dimensions of accounting (accrual and cash bases), both the effective tax rate (ETR) and cash tax rate (CTR) were employed in this study. The effective tax rate was adopted as a second measure, notwithstanding its criticism, because it is a common measure in tax literature and auditors use it when conducting analytical review on materiality or audit risk. Both Hanlon and Heitzman (2010) and Dhaliwal, Huang, Moser, and Pereira (2011) advise that depending on a single measure of corporate tax aggressiveness may lead to phony conclusions as different measures of tax aggressiveness can have different impacts on audit fees, and it may be difficult for a single measure to capture all corporate tax aggressive behaviours.

2.9 Corporate Governance as a Moderating Variable

Previous studies that have examined the concept of tax aggressiveness have done so from many different viewpoints so as to get a clearer understanding of its practical implications. These studies have investigated the association between tax aggressiveness and earnings management,

firm value, competition, audit quality, negotiation, components of corporate governance, audit fees and more, in a bid to determine how such activities may support shareholders' interests. While each study offers an incremental understanding of the nature of the concept, they provide at best incomplete evidence on how tax aggressive actions relate to the firm at a more important level of operation, decision making as well as the agency relationship between managers and shareholders.

Specifically, most studies that investigated the link between corporate tax aggressiveness and external audit have reported a positive relationship (Donohoe & Knechel, 2014; Hanlon, Krishnan, & Mills, 2012; Heltzer & Shelton, 2015), indicating that auditors see tax aggressiveness as a signal of potential engagement audit risk, and thus will adjust their risk assessment, audit effort and fees accordingly. This stream of studies offer partial explanations as to the extent to which the adoption of tax aggressive strategies by manager can facilitate or hinder management's fiduciary duty to shareholders as they habitually examined the shareholder-managers agency costs only from the perspective of the link between tax aggressiveness and audit fee, without considering that the association between tax aggressive activities of firms and fees payable to external auditors can be influenced by corporate governance structure. Corporate governance practices are germane to shareholders when appraising the effectiveness of management (Henderson Global Investor, 2005; Desai & Dharmapala, 2009), especially on matters relating to tax and financial policies.

However, another stream of studies on the concept of tax aggressiveness have focused attention on providing evidence regarding the potential moderating influence of corporate governance on the link between tax aggressiveness and such specific aspects as firm performance, firm value and audit fees (Desai & Dharmapala, 2009; Hanlon & Slemrod, 2009; Lestari & Wardhani, 2015; Martiner & Lessa, 2014; Wahab & Holland, 2012; Zemzem & Ftouhi, 2016). For instance, results of a study carried out by Desai and Dharmapala (2009) show that corporate governance moderates the relationship between aggressiveness in tax planning and firm value for the benefit of shareholders when sound corporate governance is in place. Hanlon and Slemrod (2009), and Wilson (2009) provide evidence that supports the position that valuation of managerial tax planning activities by shareholders is based on corporate governance status. Using a sample of 300 listed Brazilian firms, Martiner and Lessa (2014) investigated the relationship between tax aggressiveness and audit fees with corporate governance as moderating (dummy) variable. The authors found a positive relationship between tax aggressiveness and audit fees, signifying that companies that are more tax aggressive tend to be charged higher audit fees than those that are less tax aggressive. Conversely, the study reported an insignificant relationship between tax aggressiveness and audit fee in companies with good corporate governance practice because the incremental effect of tax aggressiveness on audit fees is attenuated by the sound system governance in place. For this reason, it is necessary to investigate the role of corporate governance mechanisms in the interplay between corporate tax aggressiveness and audit fee.

Studies on tax aggressiveness or tax avoidance in which corporate governance mechanisms have been used as either moderating or mediating variable have rather adopted components of ownership structure (Desender, Garcia−Cestona, Crespi & Aguilera, 2009; Ghelichli, Gerayli, &

Garkaz, 2017; Javeed, Shahid, Yaqub, & Aslam, 2017; Wahab, 2010). According to Lietz (2013), ownership structure is vital to any corporate governance discourse. La Porta, et al (1998) posit that concentrated ownership enables owners to exercise power in firms in a manner that surpasses the power originally vested in them by their cash flow rights and that managerial participation is one way of exercising such powers. Shleifer and Vishny (1997) assert that concentrated ownership has a strong influence on reducing information asymmetry, improving corporate governance effectiveness, and can constitute a direct means by which cash flow rights can be aligned with control rights of outside shareholders.

Literature documents that dimensions of ownership structure such as block shareholding, managerial shareholding and institutional shareholding are regarded as key internal governance mechanisms that should provide effective monitoring function over management. Within this context, Grant, Butler, Hung and Orr (2012) submit that block holders are motivated to give management close monitoring because of their large shareholdings in the firm. Although, Berglof and Claessens (2006) note that block shareholding can make majority shareholders exercise substantial discretionary power to the disadvantage of the non-controlling (minority) shareholders, especially in countries without strong legal and regulatory environment. Nevertheless, encouraging managers to own shares in a firm can help provide an effective oversight function over management and ensure goal convergence. This is because in the contemporary corporate firm, which has large number of owners and whose control is in the hands of managers, the selfish activities of those managers need to be monitored. Agency theorists, like Jensen and Meckling (1976), Fama (1980) as well as Fama and Jensen (1983) suggest that making the manager a co-owner of the firm, and having concentrated ownership

such as block holder, government and/or institutional ownership should give owners additional incentive to appraise management more regularly. Therefore, given the foregoing arguments, we expect that ownership concentration can influence the direction of the relationship between corporate tax aggressiveness and audit fees.

2.10 Control Variables

It is likely that other factors may jointly influence tax aggressiveness or audit fees and cause spurious correlation. Therefore, in addition to discussing variables used as proxies for tax aggressiveness, corporate governance and audit fees, this study also includes control variables that explain the variations in audit fees (Craswell, Francis, & Taylor, 1995; Francis & Simon, 1987; Simunic & Stein, 1987). Control variables discussed here are firm size and firm leverage.

2.10.1 Firm Size and Audit Fees

Firm size means the size of an organisation. Since the pioneering work of Simunic (1980), firm size seems to be a key explanatory feature in the study of audit fee phenomenon. The amount of variation in audit fee explained by firm size is generally above 70 percent (Hay et al., 2006). There are two conflicting hypotheses in the literature which advocate that firm size may constitute a central factor to contend with in the study of the determinants of audit fee. According to the political cost hypothesis, bigger firms will avoid engaging in tax aggressive actions and pay more taxes than smaller firms because of concern for their reputation and the numerous regulations they are subjected to (Watts & Zimmerman, 1978; Zimmerman, 1983). As

auditors will assess engagements with such firms as less risky, they will adjust their audit effort accordingly, and charge relatively lower audit fees. In contrast, the political power hypothesis contends that large sized firms will pay fewer taxes than smaller firms because they have the financial power to engage in tax aggressive activities for the purpose of reducing their tax burdens, and achieving tax gains. However, since auditors see tax aggressive behaviour of firms as a signal of potential engagement audit risk, they will adjust upwards their audit effort, risk assessments, and audit fees.

Many studies on the concept of audit fee have dealt with firm size in different ways (Waresul Karim & Moizer, 1996). While researchers such as Kim, Liu and Rhee (2003), Larcker and Richardson (2004), and Grant, Taylor and Lanis (2013) measure firm size as the natural logarithm of the carrying value of total assets of the firm, other authors measure firm size using the value added and natural logarithm of market capitalization of firm's assets (Fagiolo & Luzzi, 2006; Gaertner, 2013). Moreover, some studies have suggested the number of employees, turnover and net profit before tax as a measure of firm size. Yet, other studies suggest that more than one proxy for firm size can be used in the same study. Specifically, Pong et al. (1994) argue that both turnover and total assets can be included in a model of the determination of audit fees as an audit may have two broad dimensions, which are audit of transactions (turnover) and verification of assets (total assets). Alternatively, Crabbe (2010) suggests measuring firm size as number of employees. Crabbe (2010) contends that using the number of employees of the firm as a proxy for firm size will enable the colinearity that exists between firm size and other variables scaled by total assets to be avoided. Although, there are studies that have adopted net profit

before tax as a surrogate for firm size, Low, Tan, and Koh, (1990) do not consider it as a suitable measure.

Given the different measures of firm size in literature as x-rayed above, it is not surprising that findings of different empirical work on the link between firm size and audit fees are mixed. Theoretically, it is expected that a direct relationship will exist between the size of a client firm and the audit fees chargeable. This because the volume of business and accounting activities of large firms are quite enormous, and so auditing them requires longer audit time. Since larger firms are involved in a greater number of transactions, than smaller firms, that will require longer hours of audit work (Carcello et al., 2002; Clatworthy & Peel, 2006; Hay et al., 2006), it is likely that auditors will charge higher fees. Similar studies carried out by Joshi and Bastaki (2000), Ahmed and Goyal (2005), Steward and Munro (2007) all document a significant positive association between firm size and audit fees, indicating that as fees payable to auditors depend on time expended to complete an audit assignment, larger firms will pay higher audit fees. On the other hand, studies such as Pong and Whittington (1994) and Waresul Karim and Moizer (1996) affirm that this relationship is not likely to be linear. For example, in one study, Pong and Whittington (1994) found that for reasons of economies of large scale, larger audit assignment may be less expensive than small audits. In another study, Waresul Karim and Moizer (1996) argue that internal controls and accounting systems in larger firms may be more sophisticated than those in smaller firms such that auditors' risk assessment of the engagement will be low, consequently resulting in reduced audit effort and fee charged. Therefore, the results on the association between firm size and audit fees are mixed.

2.10.2 Firm Leverage and Audit Fees

Firm leverage is commonly used to proxy for the agency costs of financial debt and it is measured as total long-term debt scaled by total assets (Arshad, Satar, Hussain, & Naseem, 2011). This is based on the fact that debt interest payments are tax deductible; and as a result leverage serves as a kind of tax shield for firms. Unless aggressively carried out, the tax shield is not an unlawful act. However, in addition to the tax shield, highly levered firms may face financial difficulties and as such we have the incentive to engage in tax aggressiveness. A highly levered firm is considered risky because the probability of it failing is high (Simunic, 1980). Literature documents that highly financial levered firms may outperform less levered firms in good times but under perform or fail in bad times (Ghosh, 2008; Margaritis & Psillaki, 2010). This risk of failing exposes the auditor to the risk of losses and potential litigation costs.

A number of studies have linked firm leverage to external audit fees. By using financial leverage as a proxy for risk, Zaman, Hudaib, and Haniffa (2011) recorded a positive connection with costs of audit, and thus concluded that levered firms need more monitoring to guard themselves against market and financial risks, and that an engaged auditor will charge higher fees as a risk premium Also, Chaney, Jeter and Shivakumar (2004) investigated the association between financial risk and audit fees, and found a positive relationship between both variables.

The import from the foregoing is that highly leveraged firms are more likely to become insolvent which can lead to a positive relationship between the firm leverage and audit fee (more audit efforts are required for the audit of highly leveraged firms). Since external auditors will perceived that their chances of facing court litigation for highly leveraged firms are high (Arshad,

Satar, Hussain & Naseem, 2011; Bedard & Jonstone, 2004; Simunic, 1980), they are more likely to charge higher audit fees. On the flip side, some studies have documented a negative association between firm leverage and audit fees. For instance, researchers such as Naser and Nuseibeh (2008) discovered a significant negative connection between firm leverage and audit fees. Also, both Sandra and Patrick (1996) and Thinggaard and Kiertzner (2008) investigated the association of leverage and liquidity with the risk of auditing clients, but their findings were insignificant. That is, leverage and liquidity were found to be statistically insignificant to determine audit fees. The findings of Thinggaard and Kiertzner (2008) were consistent with those of Waresul Karim and Moizer (1996). The empirical results on the relationship between firm leverage and audit fees are therefore also mixed.

2.11 Review of Theories

The fundamental theories of corporate governance vary with the scope and focus of the phenomenon being discussed (Wahab, 2010). Mallin (2007) notes the key theories that are relevant to the development of corporate governance include the agency theory (Jensen & Meckling, 1976), stakeholder theory (Freeman, 1984; Jenson, 2001), and resource dependency theory (Pfeffer & Salancik, 1978) because they can be used to explain different corporate governance topics and relationships, such as the link between corporate governance mechanisms and tax aggressiveness or the link between corporate governance mechanisms and audit fees. Two of these theories relevant to the present study are reviewed as follows:

2.11.1 Agency Theory

The origin of agency theory can be traced to the works of Berle and Means (1932) on the separation between ownership and control of firms, but it was Jensen and Meckling (1976) who eveloped the theory further to analyse the association between the owners of the firm and managers. This theory refers to the agency relationship where the principal faces the problem of motivating the agent to act on his behalf. That is, the theory addresses agency associations in which one party called the principal gives work to another called the agent, and the principal is confronted with the problem of motivating the agent to protect his interest (Dabor & Ibadin, 2013). Jensen and Meckling (1976) advocates the need for governance structures that separate ownership from management, clearly defined lines of authority as well as respect for the lines of authority between owners and management.

Gul and Leung (2004) identify two problems that are linked to the management process on the account of the separation between ownership and control. First, the goals of the agent and principal may be in conflict: that is, the agent will act to maximise his own utility and the principal is only concerned with financial returns. Secondly, the principal faces the difficult task of monitoring activities of his agent due to insufficient information on the business. This conflict of interests issue ultimately leads to agency costs including the cost of external audit services, costs of monitoring management, designing and implementing sound corporate governance. Consequently, principals and agents invest in a variety of information systems to constrain agency costs that arise from information asymmetry (Jensen & Meckling, 1976; Fama & Jensen, 1983).

However, the agency theory proposes that if the principal hopes to resolve any conflicts of interest between himself and the agent, then he needs to provide adequate incentives for the agent to act in a manner that protects his best interest. Besides providing the incentives, the principal needs to have in place the required mechanisms to monitor the agent so that the agent acts to create wealth for him (the owner). While incentives may be provided through the use of cash or share-options or a mixture of both; having a board of directors alongside other governance mechanisms as a part of corporate governance structure will accomplish the need for monitoring managers (Fama & Jensen, 1983; Jensen & Meckling, 1976).

In effect, besides having appropriate incentives for agents (managers), sound governance structures for monitoring of these agents are imperative. Some of the recommended governance structures include the audit committee, ownership concentration, and board of directors, which should not only be independent of management, but should comprise female board members as well. The agency theory posits that a firm can align the interests of agents and principals, and reduce agency costs, especially as it relates to tax aggressive and audit service policies using appropriate governance structure. Menon and Williams (1994) use the agency theory framework to review the argument that firms having high agency costs will seek to mitigate these costs by increasing monitoring activity via, for example, the audit committee. In other words, the presence of a diligent audit committee as a supervisory mechanism could reduce the agency costs.

Extant literature has shown that managers (agents) see tax aggressiveness as a veritable investment for firms and shareholders; and as a result may have the incentive to engage in it

(Lisowsky, Robinson, & Schmidt, 2013; Wahab & Holland, 2012). Conversely, shareholders (principal) may not support the activities due to the likely future costs to the firm, especially if those activities are challenged by the relevant tax authority (Ilaboya et al., 2016; Chen et al., 2010). The agency theory viewpoint of tax aggressiveness is that tax aggressiveness can lead to managerial opportunism (Desai & Dharmapala, 2009; Minnick & Noga, 2010), and higher levels of effective corporate governance are related to lower aggressive tax actions by management (Jiang, Lee, & Anandarajan, 2008). Given the foregoing arguments, it is therefore not out of place to anchor the present study on the agency theoretical framework. Also giving credence to the adoption of the agency perspective for this study was submission of Eisendhart (1989) that it is reasonable to adopt the agency theoretical framework when investigating problems that are connected to a principal-agent structure because of the contributory role of the framework to organizational theory, its empirical support and testability.

2.11.2 Stakeholder Theory

The stakeholder theory seems similar to the agency theory as both theories centre on a link of relationships between different stakeholders of the firm (Schwarzkopf, 2006; Solomon, 2010). However, stakeholder theory stretches the stakeholders' association beyond the principal/agent link to include other critical stakeholders whose actions can considerably affect the business activities of the firm (Donaldson & Preston, 1995; Hill & Jones, 1992). In this way, stakeholder theory represents a broader perspective of the link between tax aggressiveness, corporate governance and audit fee.

One of the earliest advocates of the stakeholder theory, Freeman (1984), identified the emergence of stakeholder groups as key elements to corporate firms. Freeman (1984) defines stakeholders as any group or individual who can affect or is affected by the achievement of the objectives of the organization. If firms want to be effective, they must concentrate on those relationships that can influence or be influenced by the accomplishment of the purpose of the firm (Freeman, 1984). Unlike, the agency theory where managers serve and work for shareholders, the stakeholder theory suggests that firm managers have a network of stakeholders, including shareholders, employees, and business associates to serve (Mallin, 2007). And that the interests of this network of stakeholders should be protected by managers of the firm to which they are connected (Freeman, 1999).

Friedman and Miles (2002) contends that the emergence of the stakeholder theory was driven by the increasing recognition by firms of the necessity to take into account the broad interests of the society, listing the firm's relationships with many constituent groups, nature of the relationships in terms of processes and outcomes as essential premises upon which the theory rests; noting that the interest of all legitimate constituent groups is considered to have intrinsic value, with none dominating the other. Sundaram and Inkpen (2004) suggest that the stakeholder theory seeks to answer the question of which group of stakeholders requires management attention. Although, Donaldson and Preston (1995) had earlier claimed that all groups participate in business for the purpose of obtaining benefits. Since the stakeholders of a firm comprise any individual or group, such as employees, customers, communities and government officials, which can influence or be influenced by the welfare of the firm, therefore, in making decisions relating to tax aggressiveness, directors and managers should not only consider the interest of shareholders but

also the interests of all other stakeholders that can be affected by such decisions (Jenson, 2001). Therefore, it is important that managers nurture, support, and sustain the interests of these groups by balancing and considering their needs and interests (Freeman, Wicks, & Parmar, 2004; Wahab, 2010). However, in order to achieve this, management must be closely monitored. It is expected that corporate governance structure that is made up of independent board, diligent audit committee and more female board members can provide the necessary supervisory functions to guarantee selfless and effective management.

Some authors have criticized the stakeholder theory on a number of grounds. Slinger (1998) states that the theory ignores the objective basis for appraising business actions. Ogbechie (2012) identifies that the theory provides no effective criterion against which business can be assessed ranked or reconciled. Wahab (2010) affirms that stakeholder theory may not provide better corporate governance because of its departure from governance focus which sees shareholders as the authority of firms since the business belongs to them. Furthermore, some studies, including Stermberg (1997) document that stakeholder theory is incomplete with corporate governance as it is at variance with the vital concept of corporate governance, which is, accountability of management and other relevant corporate agents to shareholders.

In spite of the above points, stakeholder theory still has a direct bearing on the present research topic because in making certain decisions especially as they relate to tax aggressive policies, managers should consider all stakeholders rather than shareholders only. In this context, Wahab (2010) submit that in explaining the theory of a firm, different theories should be applied,

depending on the focus of the governance issue. For example, while the agency theory is all about conflict of interests between the principal (shareholder) and his agent (manager), the stakeholder theory concerns interests of various relevant parties (relevant tax authorities), including those of shareholders and corporate agents.

CHAPTER THREE

METHODOLOGY

3.1 Introduction

This chapter presents an overview of the methods and procedures to be adopted in the research work so that results arrived at will be reliable and valid. It carefully described the research design, population of the study, sample/sampling techniques, sources of data, model specification and methods of data analysis.

3.2 Research Design

Research design is the conceptual structure within which research is conducted. It determines the data source (materials that need to be collected), data collection method (how such materials are collected) and data analysis techniques (how the materials are collated and processed) to achieve the final output (which is the research itself). Creswell (2003) advocates the adoption of either a quantitative, qualitative or mixed methods approach to designing a research framework. Consistent with this, the quantitative research framework is adopted in this study. The research framework is chosen because it deals with data which are subjected to defined numerical measurement. Creswell (2012) highlights correlational, experimental, and survey as three research designs within general quantitative framework.

Given this viewpoint, a correlational research design is therefore employed in the study. Correlational research design is apt when dealing with numerous variables and establishing or predicting the pattern of relationships among the said variables (Brom & Hedges, 2009 in Creswell, 2012). Given that the present study seeks to examine the connection between tax aggressiveness, corporate governance and audit fee, this research design is therefore deemed to be a suitable design.

3.3 Research Philosophy and Approach

The study is rooted on positivist research philosophy. The positivist philosophy is concerned with an objective description and exploitation, and the researcher is independent of the subject of the research. The behaviour of the subject of investigation is analysed based on the quantitative

facts and observations gathered by the researcher. This research philosophy supports quantitative measuring tools, including experiments and content analysis. The idea of the positivist research design is that knowledge should centre on what can be tested by observing tangible evidence; and researchers should apply the scientific method which provides control and standardisation (Henn, Weinstein, & Foard, 2006).

Research approaches are either deductive or inductive in nature. While deductive approaches are more associated with positivism, inductive approaches relate more to interpretivism. Since the positivistic philosophy makes use of the deductive approach, this study adopted the deductive research approach as it involves the formulation of hypotheses and developing a research strategy, based on quantitative data and large samples, to test the formulated hypotheses (Blaikie, 2008; Veal, 2005). The deductive research approach is relevant to the present study because quantitative data were needed as the evidence for testing the formulated research hypotheses.

3.4 Population and Sample of the Study

The population of the study consists of the entire 169 firms quoted on the Nigerian Stock Exchange (NSE) as at 31st December, 2018. Due to the difficulty associated with studying the entire firms listed on the Nigerian Stock Exchange, the Yamani's (1967) scientific approach to sample determination was used to calculate a study sample size of 119 firms. To ensure that the 119 firms are given equal opportunity of being selected, the probabilistic sampling approach was adopted with emphasis on a simple random sampling technique. However, a final sample size of 107 listed firms was selected based on the following criteria: The first criterion was that sample

firms included in the study hold a complete ten-year financial statement data. Hence, firms with missing data in the period under review (2009 to 2018) were excluded from the study. Secondly, firms that either ceased operations or were delisted at any given point during the period of study were excluded. The statistical formula is stated as follows:

$$n = \frac{N}{1 + N(e^2)}$$

Where: n = sample size

N = population size (target)

e = level of significance desired (0.05 on the basis of 95% confidence level)

3.5 Sources of Data

In line with the research framework being quantitative, the data used in this study were extracted exclusively from secondary sources. Specifically, data were gleaned from the corporate annual reports of 107 listed firms, covering a period of ten years from 2009-2018. This was augmented, where necessary, with the financial information of the firms as contained in the Nigeria Stock Exchange (NSE) fact book. The choice to use secondary data is predicated on their ease of availability and the fact that the variables of this study were proxied by metrics obtainable from secondary data.

Moreover, the annual report and accounts from which the data were extracted is perhaps the most important document of a firm, especially as regards its financial status and social imagery. It is regarded as a statutory document, and it is free from any subjective manipulation by the

researcher. The period of ten years being proposed to analyse the annual reports of the 107 firms is considered long enough to capture the variations in the dependent variables (audit fees) that will be caused by variations in the explanatory variables (cash tax rate, effective tax rate, board gender, board independence, audit committee diligence, and ownership concentration), control variables (firm size, and firm leverage).

3.6 Theoretical Framework

The analytical frameworks for the study are presented in figures 3.1, 3.2 and 3.3. The frameworks are depicted by both the schematic representations of the causal relationship proposed by the study and the theoretical analysis for such expectation, culminating into the necessary model specification, covered in the next section. The theoretical frameworks are the agency and stakeholder theories. The agency theory argues that the agent (manager) may engage in opportunistic behaviour (e.g. embarking on opaque aggressive tax policies) at the expense of the principal's (shareholder's) interest as both parties seek to maximise their utilities. Jensen and Meckling (1979) modeled this situation as an agency relationship where the inability of the principal to directly monitor the agent's actions could lead to moral hazard, thereby increasing agency costs. The authors considered agency costs as comprising monitoring costs incurred by shareholders to monitor managers' actions.

Audit fees are important component of the monitoring costs as long as auditors ensure managers act in the best interest of shareholders. Consequently, auditors will spend more time and exert extra effort inspecting managers' activities if they assess agency problems and audit risks to be

high (Simunic, 1980), resulting in increased audit fees. Alternatively, the stakeholder theory stretches the agency theory beyond the principal-agent conflicts of interest. Thus, while agency theory seeks to resolve the agency conflict between managers and shareholders, the stakeholder theory focuses on proffering solution to conflicts among several stakeholders, including the relevant tax authorities, suppliers and customers of the firm.

Most corporate governance regulatory requirements have laid emphasis on effective corporate governance structure that protect shareholders' rights and recognise the importance of transparency and disclosure (Dahya, Dimitrov, & McConnell, 2008). An effective corporate governance arrangement supports, amongst others, board gender, active audit committee, independent board and ownership concentration. Both the agency and stakeholder theories posit that these governance monitors are vital for better financial reporting and auditing function, and thus suggest that higher levels of effective corporate governance will help constrain tax aggressive actions by management (Jiang, Lee, & Anandarajan, 2008; Wahab & Holland, 2012; Minnick & Noga, 2010), ensure quality audit, reduce audit litigation and reputational costs usually associated with risky audit engagements (Donohoe & Knechel, 2014; Hanlon et al., 2012) for the benefit of not just shareholders (agency theory) but also all other relevant stakeholders (stakeholder theory).

Flowing from the extant literature and theoretical review above, a schema showing the link between tax aggressiveness, corporate governance, and external audit fee is presented as follows:

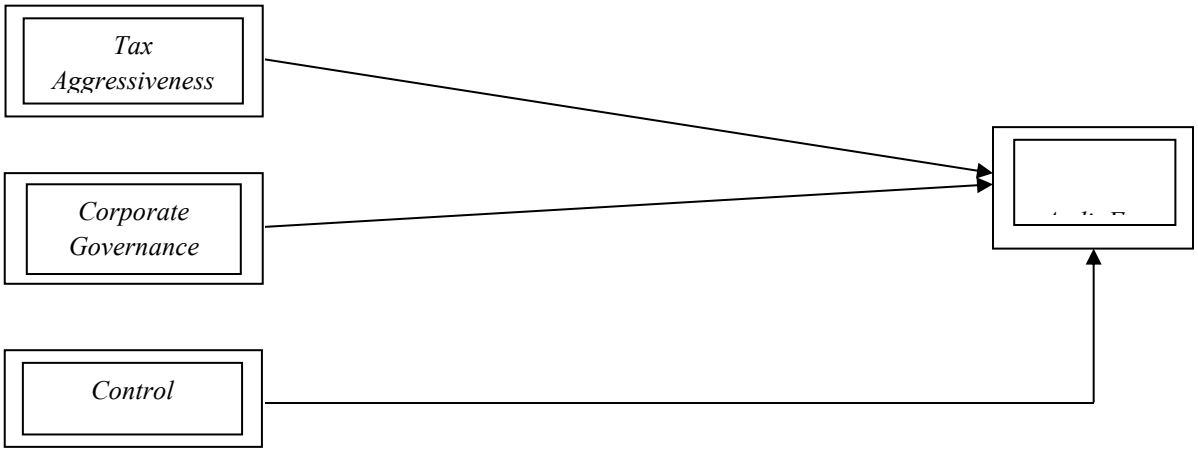
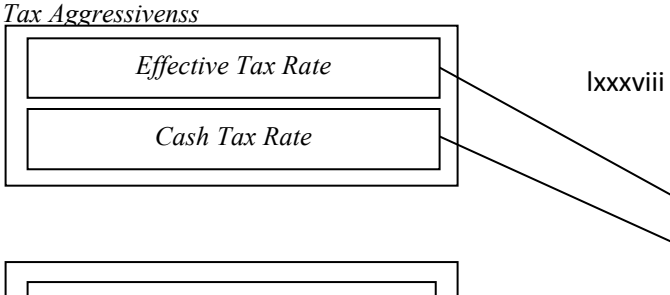


Figure 3.1: Research framework for the study

Decomposing the schema above into its relevant components will produce the following (figure 2):



Corporate Governance

Dependent Variable

Control Variables

Figure 3.2: Research framework (Decomposed)

Moderating tax aggressiveness and audit fee with corporate governance (ownership concentration) will produce the following schema:

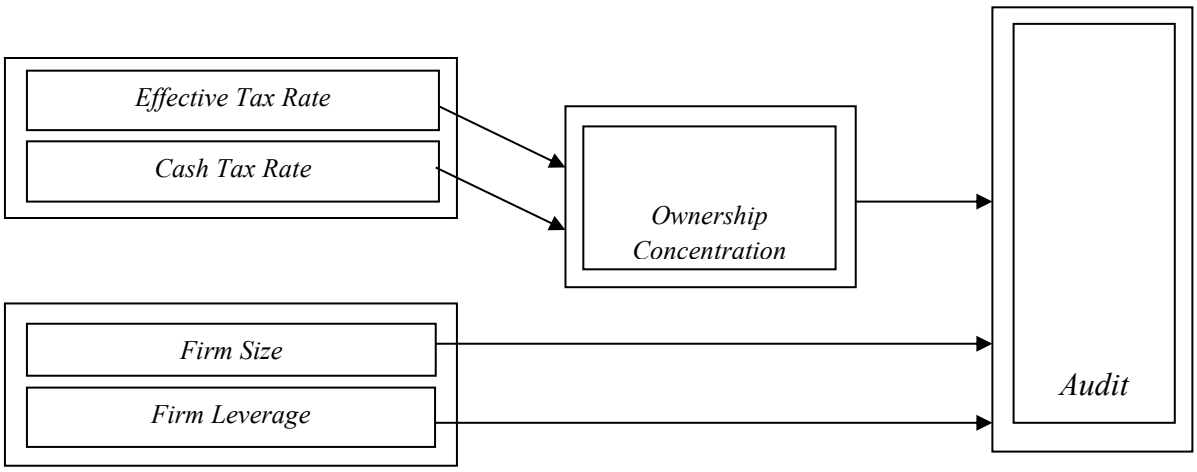


Figure 3.3: Research framework (Moderating role of corporate Governance)

3.7 Model Specification

Against the backdrop of the above theoretical and the extant literature review, a functional relationship between effective tax rate, cash tax rate, board gender, active audit committee, independent board, ownership concentration, firm size, firm leverage, and audit fees is expected. The general form of the linear relationship is represented as:

$$Y_{it} = \alpha + \beta X_{it} + \mu_I \quad \ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots \quad (1)$$

The functional form of the relationship between tax aggressiveness and audit fee is expressed as:

$$Audit\ fee = \alpha_0 + \alpha_1 Tax\ aggressiveness \ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots \quad (2)$$

Introducing the control variables, equation (2) is transformed as:

$$Audit\ fee = \alpha_0 + \alpha_1 Tax\ aggressiveness + \alpha_2 Control\ variables \ldots\ldots\ldots\ldots\ldots\ldots \quad (3)$$

The functional form of the relationship between corporate governance and audit fee is expressed as:

$$Audit\ fee = \alpha_0 + \alpha_1 Corporate\ governance \ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots \quad (4)$$

Introducing the control variables, equation (4) is transformed as:

$$Audit\ fee = \alpha_0 + \alpha_1 Corporate\ governance + \alpha_2 Control\ variables \ldots\ldots\ldots\ldots\ldots\ldots \quad (5)$$

The functional form of the relationship between tax aggressiveness, corporate governance and audit fee is expressed as:

$$Audit\ fee = \alpha_0 + \alpha_1 Tax\ aggressiveness + \alpha_2 Corporate\ governance \ldots\ldots\ldots\ldots\ldots\ldots\ldots \quad (6)$$

Introducing the usual control variables and intervening variable into equation (6), the equation becomes:

$$Audit\ fee = \alpha_0 + \alpha_1 Tax\ aggressiveness + \alpha_2 Corporate\ governance + \alpha_3 Intervening\ variable + \alpha_4 Control\ variables \ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots \quad (7)$$

Model 1: (Measures of Tax Aggressiveness)

The econometric transformation of equation (3) is expressed as:

$$AUDFEE_{it} = \beta_0 + \beta_1 ETR_{it} + \beta_2 CTR_{it} + \beta_3 FSIZE_{it} + \beta_4 FLEV_{it} + \mu_{it} \ldots\ldots\ldots\ldots\ldots\ldots\ldots \quad (8)$$

Model 2: (Components of Corporate Governance)

The econometric transformation of equation (5) is expressed as:

$AUDFEE_{it} = \beta_0 + \beta_1 BGEN_{it} + \beta_2 ACDI_{it} + \beta_3 BIND_{it} + \beta_4 OWNCON_{it} + \beta_5 FSIZ_{it} + \beta_6 FLEV_{it} + \varepsilon_{it}$ ……..……..... (9)

Model 3 (Tax Aggressiveness and Corporate Governance):

In order to assess the moderating effect of corporate governance on the relationship between tax aggressiveness and audit fee, and using ownership concentration as a measure of corporate governance, model 3 is specified as follows:

$AUDFEE_{it} = \beta_0 + \beta_1 ETR_{it} + \beta_2 CTR_{it} + \beta_3 ETR*OWNCON_{it} + \beta_4 CTR*OWNCON_{it} + \beta_5 FSIZ_{it} + \beta_6 FLEV_{it} + \varepsilon_{it}$ ……...……..…… (10)

Where:

β_0 = intercept; AUDFEE = audit fee; ETR = effective tax rate; CTR = cash effective tax rate; BGEN = board gender; ACDI = audit committee diligence; BIND = board independence; OWNCON = ownership concentration; FSIZ = firm size; FLEV = firm leverage; ε = error term; Apriori expectation for model 2, based on extant literature/agency theory:$\beta_1, \beta_2, \beta_3, \beta_5, \beta_6 > 0$; $\beta_4 < 0$; Apriori expectation for model 3, based on extant literature and both agency/stakeholder theories: $\beta_1, \beta_2, \beta_3, \beta_4, \beta_5, \beta_6 < 0$; i = number of firms (1,2,3,….107); t = time period to be covered (1,2,3,…10) and $\beta_1 \ldots \beta_6$ = regression coefficients.

Table 3.4 – Operationalisation of Variables

Variable Definition	Acronyms	Type of Variable	Measurement of Variables	Sources	Apriori sign
Audit fee	AUDFEE	Regressand	Natural log of audit fee	Ahmed and Goyal (2005); Martinez and Lessa, (2014)	
Effective tax rate	ETR	Regressor	total tax liability scaled by pre-tax accounting income	Minnick & Noga, 2010; Armstrong, Blouin, & Larcker, 2012	+ve
Cash tax rate	CTR	Regressor	Ratio of cash taxes paid to operating cash flow	Hanlon and Heitzman (2010), and Salihu et al. (2014)	+ve
Board independence	BIND	Regressor	Proportion of independent non-executive directors on the board	Uwuigbe (2011); Yermack (1996)	+ve
Board Gender	BGEN	Regressor	Measure as the ratio of female to male members on the board	Miesing and Kang (2010); Oyenike, Olayinka, and Emeni (2016)	+ve
Audit committee diligence	ACDI	Regressor	Number of audit committee meetings for the year.	Sharma (2009), Cohen (2014); Ika and Ghazali, (2012)	+ve
Ownership concentration	OWNCON	Regressor	Ratio of shares held by majority shareholders to the total shares	Ying (2015); Eng and Mak (2003)	-ve

Firm size	FSIZ	Control	The natural log of total assets of the firm	Ting (2011); Josson (2007); Lee (2009)	+ve
Firm Leverage	FLEV	Control	Measured as total long-term debt scaled by total assets	Arshad, Satar, Hussain and Naseem, (2011); Danielova and Sarka (2011)	+ve

Source: Researcher's compilation, 2018

3.8 Data Estimation Technique

The method of data analysis employed in this study is the panel regression technique with preference for the random effect model, as against the fixed effect model, due to the result of the Hausman test. The fixed effect models assume a correlation between the explanatory variables in each model and their error terms, and the individual constant as a group specific constant term (Green, 2008; Green, 2011). Conversely, the random effect models assume no correlation between the explanatory variables in each model and their error terms, and that the individual constant is a group specific disturbance akin to the error.

The Hausman test helps to determine whether to use the fixed effect model or the random effect model when performing the panel data regression model. The decision rule is that if the probability chi-square is less than the significance level of 5%, the assumption for the random effects estimation are violated and the fixed effect model is used. On the other hand, the random effect model is used if the probability chi-square is greater than the significance level of 5%.

The choice of the panel data regression model is based on the fact that it provides more informative data, more variability, reduces collinearity among independent variables, increases degrees of freedom, as well as improving the efficiency of the independent variables. This is because it combines both time series and cross sectional attributes, and this will enable us to investigate the link between tax aggressiveness, corporate governance and audit fee over time (time series) with a cross-section of sampled listed firms (cross-section). However, this type of data analysis ignores the heterogeneity effects in the sampled firms.

3.9 Regression Diagnostics

In order to test the accuracy of the research model, the classical regression assumption tests of normality, heteroskedasticity, serial correlation, and model misspecification were performed.

3.9.1 Test for Normality

The Jarque-Bera (JB) statistic was used to determine if the regression variables follow the standard normal distribution. This statistic is computed on the basis of residuals obtained from the regression, and it is used to measure the difference of the skewness and kurtosis of the series with those from the normal distribution. If the residuals are normally distributed, the histogram assumes a bell-shaped structure and the Jarque-Bera statistic becomes insignificant. In effect, a normal distribution is achieved if the Jarque-Bera statistic gives a value that is less than 0.05. However, a value higher than 0.05 shows the series is not normally distributed. The standard normal distribution of the regression variables was tested using the standard Jarque-Bera test statistic:

$$JB = n\left[\frac{s^2}{6} + \frac{(k-3)^2}{24}\right]$$

Where: n = sample size

k = kurtosis

s = skewness

3.9.2 Test for Multicollinearity

Multicollinearity arises in multiple regression models when a perfect correlation exists among the explanatory variables, thereby causing the parameter coefficients to be indeterminate. This would lead to spurious regression results as the explanatory variables in regression model will be highly correlated. Although, the presence of multicollinearity signifies large standard errors of the estimated coefficients, the BLUE properties of the OLS estimates will not be affected. In this study, the extent of multicollinearity among the explanatory variables was estimated using the variance inflation factor (VIF). Variance inflation factor (VIF) exceeding 10 means the problem of multicollinearity exists. In general terms, the VIF is expressed as follows:

$$VIF = \frac{1}{1 - R^2}$$ Where R^2 is the coefficient of determination

3.9.3 Test for Heteroskedasticity

Heteroskedasticity means the absence of homoscedasticity, which is the constant variance assumption of the ordinary least square estimator. The conditional variance or the error term for each independent variable is said to be a number that is constant. The Breush-Pagan-Godfrey test was used to test for heteroscedasticity. The decision rule is to infer the absence of heteroscedasticity if the F-statistic and observed R^2 values are both greater than the critical values at 5% level. Conversely, if the critical value at 5% is greater than both the F-statistic and

observed R^2 values, we conclude that homoscedasticity is present. The Breush-Pagan-Godfrey test is of the following form:

$$BPG = 1\ (u - \bar{u}i)^1\ Z\ (Z^1Z)^{-1}Z^1\ (u - \bar{u}i)$$

where $u = (e1^2, e2^2, \ldots eu^2)$

3.9.4 Test for Serial Correlation

Serial correlation refers to the autocorrelation of the error term, meaning that the statistical error term is correlated with itself overtime. When serial correlation is present, ordinary least square estimators are hardly the best linear unbiased estimators (BLUE). Besides, the standard errors may be underestimated, t-statistics overestimated and the R^2 overestimated. If there are lagged dependent variables on the right-hand side, ordinary least square estimators are biased and unreliable. Therefore, it is important that a test for serial correlation is performed. In this study, the Durbin Watson statistic was used to test for serial correlation so as to ascertain the correlation between a particular variable and itself over the different time intervals. The Durbin Watson statistic is a test of first-order serial correlation, and it uses the statistic d, which represents the weighted ratio of the sum of squared differences in successive residuals. In general terms, the Durbin Watson test statistic is represented as follows:

$$d = \frac{\sum_{t=2}^{T}(e_t - e_{t-1})^2}{\sum_{t=1}^{T} e_t^2},$$

The Breusch-Godfrey Test of the following form was applied:

$$U_u = XB + P_1U_{t-1} + P_2U_{t-2} + P_pU_{t-p}$$

with the chi-square test of $nR^2 = X^2$ (df = p)

The decision rule is to reject the hypothesis of no autocorrelation in the regression model if the probabilities (prob. F, Chi-square) > 0.05

3.9.5 Test for Model Specification

The Ramsey RESET test statistic is also known as the regression model specification error, and it is used to test the accuracy of a specific model. In other words, the test enables us make sure that the model is not misspecified. The decision rule is if the F-statistic with a p-value is greater than 0.05, it means that the model has not been misspecified. On the flip side, if the F-statistic with the p-value is less than 0.05, it means that the model is misspecified. In this study, to test for model specification error, the Ramsey RESET test was performed. In general term, the Ramsey RESET test statistic is represented as follows:

$$F = \frac{R^2_{new} - R^2_{old} / \text{number of new regressors}}{(1 - R^2_{new}) / (n - \text{number of parameters in the new mode})}$$

The Ramsey RESET test statistic that: $Y_i = \lambda_i + \lambda_2 x_i + u_{3i}$

$$Y_i = ß_1 + ß_2 x_i + ß_3 y_i^2 + ß_4 y_i^3 + u_i$$

CHAPTER FOUR

DATA PRESENTATION AND ANALYSES

4.1 Introduction

This chapter covers the analysis of the data extracted for the study on the link between tax aggressiveness, corporate governance and audit fees amongst firms listed on the Nigerian Stock Exchange. Specifically, the chapter presented and analysed descriptive statistics and correlations for the variables under study. Furthermore, the chapter presented and analysed the regression estimation results. In addition, robustness tests for the models studied were presented and discussed. Given the results, the hypotheses of the study were then tested. A discussion of the findings of the study was reported as the concluding part of the chapter.

4.2 Univariate Analysis

4.2.1 Descriptive Statistics

Table 4.1 presents the descriptive statistics for all the variables that were studied: dependent variable, independent variables and control variables.

Table 4.1: Results of Descriptive Statistics

	AUDFEE	ETR	CTR	BIND	BGEN	ACDI	OWNCON	FSIZE	FLEV
Mean	53642.90	-0.269505	0.242437	0.654047	0.111037	3.801869	0.684430	7.305103	0.596617
Median	14000.00	-0.202800	0.132100	0.670000	0.100000	4.000000	0.690000	7.125000	0.580000
Maximum	910000.0	18.83770	66.03210	0.940000	0.600000	9.000000	0.920000	10.77000	0.820000
Minimum	0.100000	-41.08400	-4.969500	0.180000	0.000000	1.000000	0.340000	5.090000	0.400000
Std. Dev.	114511.9	2.200309	2.292023	0.143137	0.107335	0.857475	0.142950	0.924237	0.324364

Skewness	3.910563	-9.637183	23.08281	-0.290610	0.822795	0.221942	-0.414098	0.600167	12.16326
Kurtosis	20.72218	167.5831	639.3345	2.752160	3.276457	5.867452	2.443009	3.087503	283.8473
Jarque-Bera	16729.71	1224218.	18147775	17.79953	124.1375	375.3609	44.41166	64.57708	3542902.
Probability	0.000000	0.000000	0.000000	0.000136	0.000000	0.000000	0.000000	0.000000	0.000000
Sum	57397904	-288.3704	366.4075	699.8300	118.8100	4068.000	732.3400	7816.460	638.3800
Sum Sq. Dev.	1.40E+13	5175.414	5615.851	21.90198	12.31575	785.9963	21.84456	913.1557	112.4714
Observations	1070	1070	1070	1070	1070	1070	1070	1070	1070

Source: Researcher's Computation (E-views) 2019

AUDFEE *is audit fees the dependent variable,* ***ETR*** *is effective tax rate,* ***CTR*** *cash effective tax rate,* ***BIND*** *is board independence,* ***BGEN*** *is board gender diversity,* ***ACDI*** *is audit committee diligence,* ***OWNCON*** *is ownership concentration,* ***FSIZE*** *is firm size, and* ***FLEV*** *is firm leverage.*

The mean audit fee is ₦53,642.90 million with a maximum value of ₦910,000 million and a minimum value of ₦100,000.00 million respectively. The mean effective tax rate is -0.269505% with a maximum value of 18.83770% and a minimum value of -41.08400%. The cash tax rate reported a mean value of 0.242437% (approximately 24%), a minimum value of -4.969500%, and maximum value of 66.03210% respectively. This figure is below the statutory tax rate of 30% as stipulated by the Nigerian government. The result shows that the sampled listed firms were tax aggressive in the periods reviewed. The standard deviation of 2.292023 for CTR signifies the risk associated with engaging in tax aggressive practice which includes reputation cost to the firm, likely penalties imposed by tax authorities after a tax audit, and the likely decrease in stock prices following news of tax offenses. The variable of board independence (BIND) reported a mean value of 0.654047 (approximately 65% independence), with a maximum board independence of 94% and a minimum board independence of 18%. The

closeness of both the mean (65%) and median values (67%) as well as the standard deviation of 0.143137 indicates that board independence displays significant clustering around the average of the sample. The mean board gender diversity is 0.111037 (approximately 11%), with a minimum value of 0.000000 signifying absence of female gender in the board, and a maximum value of 0.60000 representing 60% female gender in the board. Compared to most European countries, particularly Norway, that currently have legislations for gender quota, the mean value of 11% is rather low. Nonetheless, the descriptive statistics shows that some of the listed firms have reasonable proportion of women in their boards, given the maximum sample value of 60%.

The mean audit committee diligence is 3.801869, representing an average of four (4) meetings per year. The maximum number of meetings per year is 9 with a minimum value of one (1) audit committee meeting per year. The mean ownership concentration is 0.684430 implying that about 68% of the total shares of the listed firms under consideration are concentrated in the hands of majority shareholders. Mean concentration of 68% is well above the 5% necessary to have some degree of influence over decisions. Ownership concentration for the period ranged from a minimum concentration of 34% to a maximum concentration of 94%, indicative of wide variations between the studied firms in concentrated ownership. Again, the closeness of the mean concentration value (65%) and median concentration value (67%), together with the standard deviation of 0.142950, means that ownership concentration demonstrates significant clustering around the average of the sample of study.

The control variables of the study were firm size (FSIZ) and firm leverage (FLEV). The average firm size measured by the natural logarithm of total assets has a mean of 7.305103 representing about ₦7.3 billion, with a standard deviation of 0.924237 while the median value was also very close to the mean at 7.125000 (approximately ₦7.12 billion). The minimum value is 5.090000 (approximately ₦5.09 billion), and the maximum value is 10.77000 (approximately ₦10.77 billion). Skewness value of 0.600167 and kurtosis of 3.087503 signify slight departure from symmetry within the firm size data set but the figures are not so alarming as to suggest the presence of outliers The mean firm leverage is 0.596617 (approximately 60%), with a maximum value of 0.820000 (approximately 82%), and a minimum leverage of 0.400000 (approximately 40%), signifying high variation amongst the sample firms and high debt capacity that can be exploited for tax aggressive practices.

Generally, the standard deviations are relatively small with the exception of the dependent variable of audit fee with a standard deviation of 114511.9. The standard deviation of the variable of effective tax rate is 2.200309; cash tax rate is 2.292023; board independence is 0.143137; board gender diversity is 0.107335; ownership concentration is 0.142950; firm size is 0.924237 and firm leverage is 0.324364. As mentioned earlier, the values are suggestive of small dispersion from the mean of the data which is a loose indicator of the quality of the data. The Jarque-Bera statistics are relatively large and the probability values are significant at the 5% level. The Jarque-Bera value of the dependent variable of audit fee is 16729.71; effective tax rate has a Jarque-Bera value of 1224218, cash tax rate is 17.79953, board independence is 124.1375, board gender diversity is 375.3609, ownership concentration is 44.41166, firm size is 64.57708,

and firm leverage is 3542902. The large Jarque-Bera values and significant probability values are indicative of the normality of the regression data.

The result of the normality of the regression data is further strengthened by the outcome of the histogram normality test. The result of the histogram normality test is presented in Figure 4.1

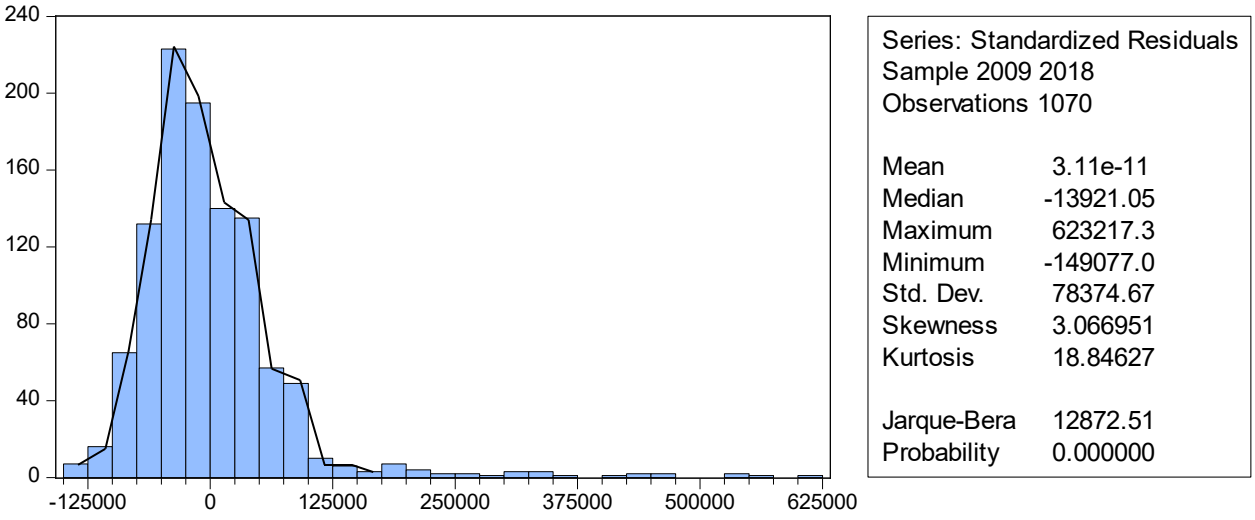


Figure 4.1: Result of the Histogram Normality Test

The mean Jarque-Bera value is 12872.51 with a probability value of 0.000000. The bell-shaped histogram shows that the regression data follow the Gaussian normal distribution. The mean kurtosis is 18.84627, which is in excess of the 3.00 benchmark and indicative of leptokurtic distribution. The mean skewness is positive 3.066951, which shows a rightward skew distribution that is visible on the bell-shaped histogram in Figure 4.1.

4.2.2 Correlation Coefficients

Table 4.2 presents the Pearson correlation coefficients (r), in a matrix format, among variables of the study. The correlation coefficients provide a preliminary assessment of both the direction and strength of relationship between the dependent variable, explanatory variables and control variables.

Table 4.2: Results of Correlation Analysis

Covariance Analysis: Ordinary

Date: 07/20/19 Time: 09:54

Sample: 2009 2018

Included observations: 1070

Balanced sample (listwise missing value deletion)

Correlation									
t-Statistic									
Prob.	**AUDFEE**	**ETR**	**CTR**	**BIND**	**BGEN**	**ACDI**	**OWNCON**	**FSIZE**	**FLEV**
AUDFEE	1.000000								

ETR	0.011691	1.000000							
	0.382087	-----							
	0.7025	-----							
CTR	-0.017730	-0.473369	1.000000						
	-0.579496	-17.56212	-----						

	0.5624	0.0000	-----						
BIND	-0.093121	-0.039921	-0.005986	1.000000					
	-3.056510	-1.305682	-0.195636	-----					
	0.0023	0.1919	0.8449	-----					
BGEN	0.148032	0.034521	0.012631	-0.052186	1.000000				
	4.891631	1.128843	0.412807	-1.707785	-----				
	0.0000	0.2592	0.6798	0.0880	-----				
ACDI	0.167491	0.001613	0.071416	-0.090485	0.118408	1.000000			
	5.552077	0.052723	2.339853	-2.969246	3.897034	-----			
	0.0000	0.9580	0.0195	0.0031	0.0001	-----			
OWNCON	0.108158	-0.003735	0.019404	-0.058603	-0.104030	-0.032288	1.000000		
	3.555499	-0.122052	0.634237	-1.918464	-3.418268	-1.055745	-----		
	0.0004	0.9029	0.5261	0.0553	0.0007	0.2913	-----		
FSIZE	0.719892	0.013776	-0.009398	-0.140707	0.223895	0.265963	0.011157	1.000000	
	33.89531	0.450254	-0.307154	-4.644565	7.507541	9.016472	0.364647	-----	
	0.0000	0.6526	0.7588	0.0000	0.0000	0.0000	0.7154	-----	
FLEV	0.226471	-0.026344	-0.025710	-0.035488	-0.009951	0.052982	0.001199	0.246237	1.000000
	7.598575	-0.861233	-0.840494	-1.160493	-0.325208	1.733890	0.039174	8.302737	-----
	0.0000	0.3893	0.4008	0.2461	0.7451	0.0832	0.9688	0.0000	-----

Source: Researcher's Computation (E-views) 2019

AUDFEE *is audit fees the dependent variable,* ***ETR*** *is effective tax rate,* ***CTR*** *cash effective tax rate,* ***BIND*** *is board independence,* ***BGEN*** *is board gender diversity,* ***ACDI*** *is audit committee diligence,* ***OWNCON*** *is ownership concentration,* ***FSIZE*** *is firm size, and* ***FLEV*** *is firm leverage.*

As shown in Table 4.1, the correlation coefficients are relatively small and indicative of the absence of the problem of multicollinearity. The correlation coefficient are mixed with some showing positive correlation and others showing negative correlation. The coefficient of correlation between the independent variable of effective tax rate (ETR) and the explanatory variable of audit fees (AUDFEE) is positive with a value of 0.011691. The positive sign of the coefficient indicates that both effective tax rate and audit fee are moving in the same direction, that is to say as effective tax rate increases, audit fee also increases. Conversely, the independent variable of cash tax rate is negatively correlated with the dependent variable of audit fee (R = -0.17730). The sign of the coefficient suggests cash tax rate (CTR) and audit fees (AUDFEE) are moving in the opposite directions.

Furthermore, board gender diversity (R = 0.148032), audit committee diligence (R = 0.167491), and ownership concentration (R = 0.108158) all exhibited a positive relation with audit fee, a sign that implies that all the three explanatory variables (BGEND, ACDI, OWNCON) are moving in the same direction with audit fee. However, the same cannot be said of board independence (R = -0.093121) as it moves in the opposite direction with audit fees. The negative correlation between board independence (BIND) and audit fees (AUDFEE) indicates that as board independence increases, audit fee reduces in the listed firms.

The correlation matrix regarding the control variables selected for the study reveals that both firm size (R = 0.719892) and firm leverage (R = 0.226471) are positively correlated with audit fee amongst the studied firms. The positive sign between firm size (FSIZ) and audit fees (AUDFEE) implies that as firm size increases, audit fee increases as well. In the same vein, the positive sign between firm leverage (FLEV) and audit fees (AUDFEE) signifies that as firm size increases, audit fee increases also. Lastly, neither the independent variables nor control variables seem highly correlated with each other. The highest correlation coefficient (R = 0.719892) is between firm size and audit fees. Since none of the correlations exceeds or is equal to 0.8, the potential for harmful multicollinearity is therefore low (Kennedy, 2008). The result of the correlation analysis is further strengthened with the result of the test of variance inflation factor in Table 4.3.

4.2.3 Variance Inflation Factor

Tables 4.5, 4.6, 4.7, and 4.8 show the results of the regression model used to test all hypotheses formulated in this study. The use of multivariate hypothesis test is based on the assumption that no significant multicollinearity exists among the explanatory variables. The applicability of this test is that if multicollinearity exists, it may lead to a phony regression result. Therefore, to investigate the existence of multicollinearity, the variance inflation factors (VIFs) for each of the explanatory variables were computed as presented in Table 4.3. Variance inflation factor is a measure of the degree of inflation of the variance. The results show that the centered VIF in column three (3), are not substantially different from one (1). The centered VIF of effective tax

rate is 1.298534, cash effective tax rate is 1.303251, board independence is 1.029689, board gender diversity is 1.076786, audit committee diligence is 1.092452, ownership concentration is 1.017779, firm size is 1.213245, and firm leverage is 1.072503.

Table 4.3: Results of Test of Variance Inflation Factor

Variance Inflation Factors

Date: 07/20/19 Time: 10:12

Sample: 1 1090

Included observations: 1070

Variable	Coefficient Variance	Uncentered VIF	Centered VIF
C	7.56E+08	130.6603	NA
ETR	1552823.	1.318033	1.298534
CTR	1436237.	1.332368	1.303251
BIND	2.91E+08	22.54879	1.029689
BGEN	5.41E+08	2.230215	1.076786
ACDI	8601928.	22.58857	1.092452
OWNCON	2.88E+08	24.37128	1.017779
FSIZE	8222760.	77.07804	1.213245
FLEV	59016091	4.704382	1.072503

Source: Researcher's Computation (E-views) 2019

AUDFEE *is audit fees the dependent variable,* ***ETR*** *is effective tax rate,* ***CTR*** *cash effective tax rate,* ***BIND*** *is board independence,* ***BGEN*** *is board gender diversity,* ***ACDI*** *is audit committee diligence,* ***OWNCON*** *is ownership concentration,* ***FSIZE*** *is firm size, and* ***FLEV*** *is firm leverage.*

The results show all the individual co-variates VIF and VIF mean values (1.138030) are lower than the benchmark of 10, a number that is used as a rule of thumb to indicate multicollinearity problems (Field, 2000). These results demonstrate no case of multicollinearity in the research model. There can only be problem of multicollinearity if the values of the centered VIF are in excess of 10. The outcome of the variance inflation factor test further reinforced the results of the correlation analysis in Table 4.3. Therefore, the results of the regression analysis can be interpreted with a greater degree of confidence.

4.2.4 Regression Diagnostics

The regression analysis is preceded by the classical regression assumption test of heteroskedasticity (using the Breusch-Pagan-Godfrey Test), test of serial correlation (using the Breusch-Godfrey Test), and the test of model specification (using the Ramsey RESET Test). The result of the classical regression diagnostics is presented in table 4.4 below:

Table 4.4: Results of classical Regression Assumption Test

Diagnostic Test	F-statistic	Probability
Serial Correlation	1.482000	0.3000
Heteroskedasticity	5.868594	0.0000
Ramsey RESET	1.206812	0.2722

Source: Researcher's Computation (E-views) 2019

The result of the Breusch-Godfrey serial correlation test could not sustain the null hypothesis of serially correlated variables with F-statistic of 1.482000 and probability value of 0.3000. The null hypothesis of the heteroskedastic residuals could not be rejected with F-statistic of 5.868594 and probability value of 0.0000. The null hypothesis of misspecified model could not be sustained with F-statistic of 1.206815 and insignificant probability value of 0.2722 at the 5% level. Thus, the results show that the regression model is not mis-specified, the regression variables not serially correlated and there is presence of homoscedastic residuals, indicating the absence of the problem of heteroscedasticity.

4.3 Multivariate Analysis

4.3.1 Analysis of Regression Results: Model 1

Table 4.5 presents the result of the regression analysis on the relationship between effective tax rate and audit fee. The panel regression shows preference for the random effect model since the Hausman test reported a probability value of 0.6779 even though the results of the fixed effect model is not substantially different from that of the random effect model. For purposes of the analysis, emphasis is on the result of the random effect model presented in column one (1). The coefficient of multiple determination of the random effect model is 0.313546 while the adjusted value is 0.311631. The import of the result is that 31% of the systematic cross-sectional variation in the dependent variable of audit fee is explained by the explanatory variable of effective tax rate. The balance is accounted for by the error term. The F-statistic of 163.6732 and the probability value of 0.000000 is highly significant and shows that a linear relationship exists between the dependent variable of audit fee and the explanatory variable of effective tax rate. It can therefore be concluded that the model fits the data.

Table 4.5: Result of the Regression Analysis on the Relationship betwn ETR and Audit Fee

	Random Effect	Fixed Effect
Constant	-19.85606	-16.45650
	(0.0000)	(0.0000)
ETR	-0.283357	-0.332428
	(0.7770)	(0.7396)
FSIZ	21.73862	17.74432
	(0.0000)	(0.0000)
FLEV	1.381324	1.183440
	(0.1673)	(0.2369)
R-squared	0.313546	0.813420
Adjusted R-squared	0.311631	0.792002
F- statistic	163.6732	37.97973
Prob. (F-statistic)	0.000000	0.000000
Durbin Watson Statistic	1.066753	1.304726
Hausman Test	0.6779	

Observation	1079	1079

Source: Researcher's Computation (E-views) 2019

Note: *ETR is effective tax rate, FSIZE is firm size, FLEV is firm leverage. The variables are significant at $P \leq 0.05$. The t-values are presented in the Table and the probability values are in parenthesis.*

To test the hypotheses in this section, the level of significance (α) is set at 5%. The criterion for the rejection of null hypothesis is that any coefficient with a p-value of 0.05 or less should be rejected.

Test of Hypothesis One:

Ho_1: There is no significant relationship between effective tax rate and audit fees

The result of the relationship between effective tax rate and audit fees, as shown in Table 4.5, reported a t-value of -0.283357 and a probability value of 0.7770 > P = 0.05 at the 5% level of significance. The result indicates that aggressive tax behaviour in the firms under consideration tends to reduce audit fees. While the result maybe counter intuitive in nature, it shows that the relationship between effective tax rate and audit fee is statistically insignificant in the firms listed on the Nigerian Stock Exchange. Against the background of the insignificant relationship between effective tax rate and audit fees, the null hypothesis of no significant relationship could

not be rejected. Therefore, the null hypothesis was accepted and the alternate of a significant relationship between effective tax rate and audit fees rejected.

The result of the Hausman test, as reflected in Table 4.6, shows preference for the random effect model. The probability value of the Hausman test is 0.7758 which exceeds the 0.05. Where the probability value is less than or equal to 0.05, the fixed effect model is preferred. Therefore, the analysis of the relationship between cash tax rate and audit fees is based on the random effect model.

The coefficient of multiple determinations reported a value of 0.313458 and the adjusted value is 0.311542. The implication is that about 30% of the systematic cross-sectional variation within the dependent variable of audit fee is accounted for by the explanatory variable of cash tax rate.

Table 4.6: Result of the Regression Analysis on the Relationship betwn CTR and Audit Fee

	Random Effect	Fixed Effect
Constant	-19.82409 (0.0000)	-16.43285 (0.0000)
CTR	2.757120 (0.0003)	2.664444 (0.004)
FSIZ	21.71437 (0.0000)	17.72706 (0.0000)
FLEV	1.388318 (0.1653)	1.193080 (0.2331)
R-squared	0.313458	0.813443
Adjusted R-squared	0.311542	0.792030
F- statistic	163.6062	37.98601
Prob. (F-statistic)	0.000000	0.000000
Durbin Watson Statistic	1.068655	1.306632
Hausman Test	0.7758	

Observation	1079	1079

Source: Researcher's Computation (E-views) 2019

Note: *ETR is effective tax rate, FSIZE is firm size, FLEV is firm leverage. The variables are significant at P ≤ 0.05. The t-values are presented in the Table and the probability values are in parenthesis.*

The F-statistic of 163.6062 and the probability value of 0.000000 is an indication of a significant linear relationship between cash tax rate and audit fees. The result shows that the regression model adequately fits the data. To test the hypothesis, the level of significance (α) is set at 5%. The criterion for the rejection of null hypothesis is that any coefficient with a p-value of 0.05 or less should be rejected.

Test of Hypothesis Two:

Ho_2: There is no significant relationship between cash tax rate and audit fees

The regression result of the relationship between cash tax rate and audit fees is presented in Table 4.6. The cash tax rate was used as a measure of tax aggressiveness because the current measure of effective tax rate has been highly criticised. According to Hanlon (2003), current tax expense, a major component of effective tax rate may understate or overstate the current effective tax rate compared to the actual tax expense. In addition, the effective tax rate conforms to accrual accounting. From the result in Table 4.6, there is a positive relationship between cash tax rate and audit fees. The result reported a robust t-value of 2.757120 and a probability value of 0.0003 < P= 0.05 at the 5% level of significance. The result shows that tax aggressiveness, measured by cash tax rate increases audit fees. The differences in result of the two measures of

tax aggressiveness may not be unconnected with the criticisms of the effective tax rate measure

	Random Effect	Fixed Effect
Constant	-19.33458	-16.58886

of tax aggressiveness. The result of the positive and statistically significant relationship between cash tax rate and audit fees could not sustain the null hypothesis of no significant relationship between cash tax rate and audit fees. Hence, the null hypothesis was rejected and the alternate accepted.

4.3.2 Analysis of regression Results: Model 2

The result of the regression analysis of Model two (2) is presented in Table 4.7. The Hausman test result with a probability value of 0.8876 > 0.05 shows preference for the random effect model. Therefore our analysis is based on the result of the random effect model in column one (1). Besides, to test the hypothesis, the level of significance (α) is set at 5%. The criterion for the rejection of null hypothesis is that any coefficient with a p-value of 0.05 or less should be rejected. The coefficient of multiple determination reported a value of 0.327070 and the adjusted coefficient of multiple determination is 0.323271. This implies that about 32% systematic cross-sectional variation in audit fees is accounted for by the explanatory variables of board independence, board gender diversity, audit committee diligence, and ownership concentration.

Table 4.7: Result of the Regression Analysis on the Relationship Corporate Governance and Audit Fees

	(0.0000)	(0.0000)
BIND	2.585069	2.745319
	(0.0099)	(0.0062)
BGEND	0.636166	0.680535
	(0.5248)	(0.4963)
ACDI	2.064423	2.248206
	(0.0454)	(0.0337)
OWNCON	4.005929	3.621100
	(0.0001)	(0.0003)
FSIZ	21.21616	17.32165
	(0.0000)	(0.0000)
FLEV	1.572812	1.3941
	(0.1161)	(0.1636)
R-squared	0.327070	0.816419
Adjusted R-squared	0.323271	0.794505
F- statistic	86.10974	37.25500
Prob. (F-statistic)	0.000000	0.000000

Durbin Watson Statistic	1.070806	1.311962
Hausman Test	0.8876	
Observation	1079	1079

Source: Researcher's Computation (E-views) 2019

BIND *is board independence,* ***BGEN*** *is board gender diversity,* ***ACDI*** *is audit committee diligence,* ***OWNCON*** *is ownership concentration,* ***FSIZE*** *is firm size, and* ***FLEV*** *is firm leverage. The variables are significant at P ≤ 0.05. The t-values are presented in the Table and the probability values are in parenthesis.*

The F-statistic of 86.10974 and the probability value of 0.000000 < P= 0.05 is an indication of a significant linear relationship between the dependent and the independent variables of interest.

Test of Hypothesis Three:

Ho_3: There is no significant relationship between board independence and audit fees

Expectedly, the result of the relationship between board independence and audit fees is positive and significant at the 5% level. Intuitively, it is expected that a board dominated by outside directors will be more independent of management and will drive quality reporting and by

extension, quality audit. The reported t-value is 2.585069 with a probability value of 0.0099 < 0.05. The result is in consonance with the extant literature that independent auditors need independent external directors to effectively carry out their oversight function. The mean independence of the board of the companies under investigation is 65% as reported in the descriptive analysis in Table 4.1. The result of the descriptive statistics signifies that the boards of the studied firms are independent enough to exert positive influence on quality audit. Within this context, quality audit means accuracy and diligence in carrying out the audit work and this will no doubt attract higher audit fees. The result of the significant relationship between board independence and audit fees, could not sustain the null hypothesis of insignificant relationship. Hence, the null hypothesis was rejected and the alternate hypothesis of a significant relationship accepted.

Test of Hypothesis Four:

Ho_4: There is no significant relationship between board gender diversity and audit fees

The result of the relationship between board gender diversity and audit fees is positive and statistically insignificant at the 5% level. The result reported a t-value of 0.636166 with a probability value of 0.5248 > 0.05. It shows that the presence of female gender in the board has tendency of increasing the value of audit fees. Board with more female directors are said to demand more in terms of audit. This increase demand for thorough audit exercise will intuitively lead to increase in the fees charged by external auditors. The insignificant nature of the result is undoubtedly as a result of the low presence of female directors on the board of the firms under consideration. The average female gender as reported in the descriptive analysis in Table 4.1 is

11%. This is a far cry from the Norwegian Model of 40% (Hoel, 2008). The result of the insignificant relationship between board gender diversity and audit fees do not provide sufficient evidence for the rejection of the null hypothesis.

Test of Hypothesis Five:

Ho_5: There is no significant relationship between audit committee diligence and audit fees

The average audit committee diligence expressed in the number of meetings is four (4) meetings per year (see the descriptive analysis in Table 4.1). The effectiveness of the audit committee oversight functions, as it relates to the financial reporting and audit function is a function of the intensity of the activities of the committee. Therefore, the positive relationship between the audit committee diligence and audit fees is expected. The result reported a t-value of 2.0644423 and a probability value of 0.0454 < 0.05 at the 5% level of significance. It shows that as the diligence of the audit committee increases, the fee charged by external auditors also increases. This is because the more frequent the audit committee meetings, the more efficient they will discharge their oversight function. Increase demand for quality audit will no doubt drive up the fees payable to external auditors.

The control variables of firm size and leverage are positive. While the variable of firm size is positive and significant, the variable of firm leverage is not statistically significant at the 5% level (t-value = 1.572812, p-value = 0.1161 > 0.05). The significant positive relationship between firm size and audit fees is expected. The variable reported a robust t-value of 21.21616 and a probability value of 0.000000 < 0.05. The implication is that an increase in firm size

increases the fees payable to external auditors. With increase in size, the activities of the firm become disperse and complex which will mean greater audit effort and by extension, increased audit fees. The variable of leverage is positive meaning that highly levered firms attract higher audit fee. This reason may be the increase risk associated with highly geared firms. The increase risk is likely to increase the audit effort which will translate into higher fees charged by external auditors.

4.3.3 Analysis of regression Results: Model 3

The result of the moderating effect of ownership concentration on the relationship between tax aggressiveness and audit fee is presented in Table 4.8. The Hausman test shows preference for the random effect model with a probability value of 0.9315 > 0.05.

Variables	Random Effect	Fixed Effect
Constant	-19.81171	-16.51689
	(0.0000)	(0.0000)
ETR*OWNCON	-1.566519	-1.594055
	(0.1175)	(0.1113)
CTR*OWNCON	-0.454743	-0.519582
	(0.6494)	(0.6035)

R-squared	0.314288	0.814047
Adjusted R-squared	0.310450	0.792056
F- statistic	81.88983	37.01841
Prob. (F-statistic)	0.000000	0.000000
Durbin Watson Statistic	1.079922	1.314935
Hausman Test	0.9315	
Observation	1079	1079

Table 4.8: Result of the Regression Analysis on the Moderating Role of Ownership Concentration on the Link between Tax aggressiveness and Audit Fees

Source: Researcher's Computation (E-views) 2019

*ETR*OWNCON is the interaction between effective tax rate and ownership concentration, CTR*OWNCON is the interaction between cash tax rate and ownership concentration. The variables are significant at P ≤ 0.05. The t-values are presented in the Table and the probability values are in parenthesis.*

The adjusted coefficient of multiple determination is 0.310450 which indicates that about 31% of the systematic cross-sectional variation in audit fee is accounted for by the interaction between ownership concentration and effective tax rate and the interaction between cash tax rate and ownership concentration. The F-statistic of 81.88983 and the probability value 0.000000 is significant and indicative of a linear relationship between the dependent variable of audit fees and the interaction between the different measures of tax aggressiveness.

Test of Hypothesis Six:

Ho_6: Ownership concentration does not significantly moderate the relationship between tax aggressiveness and audit fees

Ownership structure has been regarded as a key governance mechanism that can help to monitor the activities of management (Javeed, Shahid, Yaqub, & Aslam, 2017; La Porta et al., 1998; Wahab, 2010). It is against this backdrop that this study sought to know how ownership concentration, a measure of ownership structure can help moderate the relationship between tax aggressiveness and audit fees. The regression result in Table 4.8 shows that the two measures of tax aggressiveness reported a negative relationship after they were moderated with ownership concentration. ETR*OWNCON reported a negative t-value of -1.566519 and a probability value of 0.1175 > 0.05. and CTR*OWNCON reported a t-value of -0.454743 and a probability value of 0.6494 > 0.05. Both results were reported at 5% level of significance. The result shows that moderating the relationship between tax aggressiveness and audit fee will reduce the level of fee charged by external auditors. This is because block ownership gives the opportunity to scrutinise the activities of management which will help to reduce the extent of tax aggressiveness and by extension, reducing the audit fees.

4.4 Discussion of Findings

The relationship between effective tax rate (ETR) and audit fees is statistically insignificant and negative. That is, an increase in firm's tax aggressive activity by 1 unit, *ceteris paribus, is* estimated to decrease audit fees by 0.28%. This implies that higher effective tax rate reduces the level of audit fees. The result is unexpected even though it may be attributable to the limitations of effective tax rate as a measure of tax aggressiveness. The result is in tandem with the negative relationship reported by Nezhad (2016), but at variance with the positive relationship reported by Donohoe and Knechel (2014). The cash tax rate measure of tax aggressiveness reported a positive relationship with audit fees which shows that more aggressive tax behaviour will attract higher audit fees. The significant positive relationship is in tandem with the extant literature (Hanlon & Heitzman, 2010; Salihu et al., 2013) even though studies that measure tax aggressiveness, using cash tax rate, are relatively scarce.

The relationship between board independence and audit fees is positive and statistically significant. It shows that where there is preponderance of external directors to internal directors, there is demand for high quality audit which by implication will increase the fees payable to external auditors. The result is consistent with the position of Carcello, Hermanson, Neal, and Riley (2002) and Hay and Knechel (2004) who posit that independent directors will have preference for external audit service which offer good quality control so as to protect the reputation of the organization as well as avoiding legal liability. The position of Adelopo and Jallow (2008) also supports the positive relationship reported in the study. The relationship between board gender diversity and audit fees is positive but statistically insignificant. The positive relationship corroborates the positions of Fama and Jensen (1983) and Gilson (1990) who assert that boards with female directors are likely to demand for more audit effort to protect

the reputation of the organization. The position is not different from those of Gilson (1990) and Sahlman (1990) who conclude that the need to avoid legal liability may make female directors to demand more audit effort which will in turn attract higher fees.

Audit committee diligence was found to have a positive and significant association with audit fees. Holding all other factors constant, a 2.06% increase in audit fee is anticipated by increasing audit committee diligence by 1 unit. The positive and significant relationship between audit committee diligence and audit fees is in tandem with the positions of Krishnan and Visvanathan (2009) and Stewart and Munro (2007) who posit that the demand for more audit assurance arising from increase diligence of the audit committee members has tendency to increase the fees payable to external auditors. In the same vein, Yatim, Kent, and Clarkson (2006) are of the opinion that audit fees are highly influenced by the diligence of the audit committee members expressed in the frequency of audit committee meetings.

The moderating effect of ownership concentration on the relationship between tax aggressiveness and audit fee is negative for both effective tax rate and cash tax rate measures of tax aggressiveness. The result shows that with highly concentrated ownership, there will be effective monitoring of the activities of management which tends to cut down on the level of tax aggressiveness and by implication reducing the fees payable to external auditors. This is about the first study to moderate the relationship between tax aggressiveness and audit fees using ownership concentration.

CHAPTER FIVE

SUMMARY OF FINDINGS, CONCLUSION AND RECOMMENDATIONS

5.1 Introduction

This chapter presents the summary of findings, conclusion, recommendations, areas for further study and contributions to knowledge.

5.2 Summary of Findings

The broad objective of the study was to examine the connection between tax aggressiveness, corporate governance, and audit fees by testing the relation of effective tax, cash tax rate, board gender, audit committee diligence, board independence, ownership concentration, firm size and firm leverage with audit fees using data gleaned from the published financial statements of firms listed on the Nigerian Stock Exchange over a ten-year period from 2009 – 2018. Based on the empirical analysis of the study, the results were summarised as follows:

1. The relationship between effective tax rate and audit fees, as revealed by the random effect panel regression, is negative and statistically insignificant. The import of this result is that effective tax rate may not lead to an increase in audit fees.

2. The relationship between cash tax rate and audit fee is positive and statistically significant. The implication of the result is that cash tax rate as against the effective tax rate, has the tendency to increase audit fees paid by the studied listed firms.

3. The relationship between the corporate governance variable of board gender diversity and audit fees is positive but not statistically significant at 5 per cent level. This means that the presence of female board directors is unlikely to reduce audit fees amongst the listed firms investigated.
4. The relationship between audit committee diligence and audit fees is positive and statistically significant, thus indicating that the activities of a highly diligent audit committee that desires high level of audit quality will cause audit fees to go upwards as the committee pushes that the firm demands for extra audit assurances.

5. The relationship between the corporate governance variable of board independence and audit fees is positive and statistically significant. This implies that board independence of the selected sample firms has the tendency of increasing audit fees via demanding for quality reporting and audit.

6. The result of the moderating variable of ownership concentration with audit fees for both effective tax rate and cash tax rate was negative and insignificant. Therefore, the relationship

between tax aggressiveness and audit fees was not significantly moderated by ownership concentration.

5.3 Conclusion

Most studies on the concept of audit fee have often intended to focus on determinants like audit client characteristics, audit firm characteristics and certain corporate governance variables as against firm's behaviour, such as tax aggressiveness, despite its significance to audit fee determination. To this end, research on the interplay between tax aggressiveness and audit fees or how tax aggressiveness and corporate governance relate with audit fees are sparse. This study therefore investigated the connection between tax aggressiveness, corporate governance and audit fees for the purpose of providing insight into how tax aggressiveness and corporate governance interact with audit fee within corporate environment.

Leaning on both the agency and stakeholder theories and to achieve the above objective, the study examined the measures of tax aggressiveness of effective tax rate and cash tax rate as well as corporate governance mechanisms of board gender, audit committee diligence, board independence and ownership concentration. The two measures of tax aggressiveness and audit fees were subsequently interacted with corporate governance moderating variable of ownership concentration, the essence of which was to find out how ownership concentration influence the relationship between tax aggressiveness and audit fees. Control variables, such as firm size and firm leverage projected to influence audit fees, and cause spurious correlation, were incorporated into the regression model.

Furthermore, a sample size of 107 firms listed on the Nigerian Stock Exchange was selected for the period 2009 to 2018. One thousand and seventy (1,070) firm-year observations were estimated using random effect panel regression technique based on the outcome of the Hausman Test. The results of the study provide that not only does the cash tax rate lead to a significant increase in audit fees, both audit committee diligence and board independence also influence audit fee upwards. Although not statistically significant, the results of this study provide that tax aggressiveness and corporate governance (ownership concentration) have a combined negative effect on the audit fees payable to external auditors by the listed firms in Nigeria.

5.4 Recommendations

Based on the findings of this study, the following recommendations were therefore suggested:

1. The relationship between tax aggressiveness and audit fee is positive and statistically significant, with emphasis on the cash tax rate. This means the external auditor will build in the risk factor associated with tax aggressiveness into audit fee. Therefore, it is important for management to cut down on tax aggressive behaviour so as to reduce audit fees.
2. Even though there is a trade-off between independent board and audit fees, it will be counter-productive to sacrifice higher audit demand for fees reduction. Therefore, improvement on the independence of the board to enhance quality financial reporting and audit is recommended.

3. In the same vein, even though more intensive audit committee activities will lead to demand

for more audit work, it is recommended that increase in the frequency of audit committee's meetings to enhance the oversight function of the members.

4. It was observed that the relationship between board gender diversity and audit fees was statistically insignificant. It is recommended that more female gender should be allowed to sit on the board of listed firms in Nigeria in line with the Norwegian model of 40% female gender representation and the Federal Government 35% Affirmative Action.

5. Even though the moderating effect of ownership concentration on the relationship between tax aggressiveness and audit fees is insignificant, block ownership is however recommended, instead of disperse share ownership because the former gives room for proper monitoring of the activities of management, which reduce the tendency for opportunistic behaviour, such as tax aggressiveness.

5.5 Contribution to Knowledge

The study has contributed to knowledge in the following ways:

1. This study contributes to the empirical literature on the relationship between tax aggressiveness, corporate governance and audit fees using Nigerian data. To the best of the researcher's knowledge, this study is the first to address the relationship between tax aggressiveness, corporate governance and audit fees within the Nigerian context. The only documented study, so far, that has addressed the issue was carried out in Brazil.

2. This study has helped to bridge the knowledge gap created by paucity of empirical literature reconciling the mixed results observed in extant theoretical and empirical accounting literature.

3. Besides its modest contribution to knowledge, the coverage of 107 firms with 1,070 firm year observations, given the number of firms listed on the Nigerian Stock Exchange as at December, 2018, is considered extensive enough and therefore constitutes one of the major strengths of the study as it will allow effective generalisation having given an insight into the interaction between tax aggressiveness, corporate governance and audit fee.

4. The study made a methodological advancement by employing cash tax rate as a measure of tax aggressiveness. To the best of the researcher's knowledge, there is hardly any study that has used this approach.

5.6 Suggestions for further Studies

This is a country specific study. A cross country study will be appropriate to enhance extensive generalisation of the outcome of the relationship between tax aggressiveness, corporate governance and audit fees.

Also, since only four corporate governance mechanisms and two measures of tax aggressiveness were examined by the study, future research may wish to examine the impact of other governance mechanisms, such as financial expertise and managerial compensation incentives on audit fee. In the same vein, future study may incorporate other measures of tax aggressiveness,

such as book to tax difference and tax savings in addition to the ones considered in this study.

Finally, the data gathered for the purpose of this study was entirely secondary in nature, thus comprising surrogates taken from annual financial statements. While the use of secondary data is not bad, some degree of caution should be exercised in drawing conclusions regarding financial statements prepared by management (Whittington, 2010). Consequently, future research may wish to design appropriate instruments for the collection of primary data so as to report evidence from the field.

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APPENDIX I: REGRESSION RESULTS

Dependent Variable: AUDFEE

Method: Panel EGLS (Cross-section random effects)

Date: 07/20/19 Time: 10:39

Sample: 2009 2018

Periods included: 10

Cross-sections included: 109

Total panel (unbalanced) observations: 1079

Swamy and Arora estimator of component variances

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	-599062.1	30170.23	-19.85606	0.0000
ETR	-215.4513	760.3530	-0.283357	0.7770

FSIZE	88653.61	4078.162	21.73862	0.0000
FLEV	8224.783	5954.275	1.381324	0.1675

Effects Specification

	S.D.	Rho
Cross-section random	60454.99	0.5720
Idiosyncratic random	52290.85	0.4280

Weighted Statistics

R-squared	0.313546	Mean dependent var	14221.84
Adjusted R-squared	0.311631	S.D. dependent var	62953.24
S.E. of regression	52237.14	Sum squared resid	2.93E+12
F-statistic	163.6732	Durbin-Watson stat	1.066753
Prob(F-statistic)	0.000000		

Unweighted Statistics

R-squared	0.520834	Mean dependent var	53781.55
Sum squared resid	6.79E+12	Durbin-Watson stat	0.415662

Dependent Variable: AUDFEE

Method: Panel Least Squares

Date: 07/20/19 Time: 10:40

Sample: 2009 2018

Periods included: 10

Cross-sections included: 109

Total panel (unbalanced) observations: 1079

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	-598717.0	36381.80	-16.45650	0.0000
ETR	-253.7714	763.3875	-0.332428	0.7396
FSIZE	88712.30	4999.476	17.74432	0.0000
FLEV	7147.976	6039.999	1.183440	0.2369

Effects Specification

Cross-section fixed (dummy variables)

R-squared	0.813420	Mean dependent var	53781.55
Adjusted R-squared	0.792002	S.D. dependent var	114655.9
S.E. of regression	52290.85	Akaike info criterion	24.66504
Sum squared resid	2.64E+12	Schwarz criterion	25.18236
Log likelihood	-13194.79	Hannan-Quinn criter.	24.86093
F-statistic	37.97973	Durbin-Watson stat	1.304726
Prob(F-statistic)	0.000000		

Correlated Random Effects - Hausman Test

Equation: Untitled

Test cross-section random effects

Test Summary	Chi-Sq. Statistic	Chi-Sq. d.f.	Prob.

Cross-section random	1.519113	3	0.6779

Cross-section random effects test comparisons:

Variable	Fixed	Random	Var(Diff.)	Prob.
ETR	-253.771437	-215.451289	4623.731506	0.5731
FSIZE	88712.301519	88653.614771	8363359.125872	0.9838
FLEV	7147.975894	8224.782719	1028186.148900	0.2883

Cross-section random effects test equation:

Dependent Variable: AUDFEE

Method: Panel Least Squares

Date: 07/20/19 Time: 10:41

Sample: 2009 2018

Periods included: 10

Cross-sections included: 109

Total panel (unbalanced) observations: 1079

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	-598717.0	36381.80	-16.45650	0.0000
ETR	-253.7714	763.3875	-0.332428	0.7396

FSIZE	88712.30	4999.476	17.74432	0.0000
FLEV	7147.976	6039.999	1.183440	0.2369

Effects Specification

Cross-section fixed (dummy variables)

R-squared	0.813420	Mean dependent var	53781.55
Adjusted R-squared	0.792002	S.D. dependent var	114655.9
S.E. of regression	52290.85	Akaike info criterion	24.66504
Sum squared resid	2.64E+12	Schwarz criterion	25.18236
Log likelihood	-13194.79	Hannan-Quinn criter.	24.86093
F-statistic	37.97973	Durbin-Watson stat	1.304726
Prob(F-statistic)	0.000000		

Dependent Variable: AUDFEE

Method: Panel EGLS (Cross-section random effects)

Date: 07/20/19 Time: 10:42

Sample: 2009 2018

Periods included: 10

Cross-sections included: 109

Total panel (unbalanced) observations: 1079

Swamy and Arora estimator of component variances

Variable	Coefficient	Std. Error	t-Statistic	Prob.

C	-598173.2	30174.05	-19.82409	0.0000
CTR	364.9821	132.3780	2.757120	0.0003
FSIZE	88553.81	4078.120	21.71437	0.0000
FLEV	8264.038	5952.555	1.388318	0.1653

Effects Specification

	S.D.	Rho
Cross-section random	60574.35	0.5730
Idiosyncratic random	52287.34	0.4270

Weighted Statistics

R-squared	0.313458	Mean dependent var	14194.89
Adjusted R-squared	0.311542	S.D. dependent var	62932.54
S.E. of regression	52223.30	Sum squared resid	2.93E+12
F-statistic	163.6062	Durbin-Watson stat	1.068655
Prob(F-statistic)	0.000000		

Unweighted Statistics

R-squared	0.520956	Mean dependent var	53781.55
Sum squared resid	6.79E+12	Durbin-Watson stat	0.415844

Dependent Variable: AUDFEE

Method: Panel Least Squares

Date: 07/20/19 Time: 10:45

Sample: 2009 2018

Periods included: 10

Cross-sections included: 109

Total panel (unbalanced) observations: 1079

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	-597368.7	36352.10	-16.43285	0.0000
CTR	360.5621	135.3236	2.664444	0.0004
FSIZE	88549.47	4995.159	17.72706	0.0000
FLEV	7203.911	6038.079	1.193080	0.2331

Effects Specification

Cross-section fixed (dummy variables)

R-squared	0.813445	Mean dependent var	53781.55
Adjusted R-squared	0.792030	S.D. dependent var	114655.9
S.E. of regression	52287.34	Akaike info criterion	24.66490
Sum squared resid	2.64E+12	Schwarz criterion	25.18222
Log likelihood	-13194.72	Hannan-Quinn criter.	24.86079
F-statistic	37.98601	Durbin-Watson stat	1.306632
Prob(F-statistic)	0.000000		

Correlated Random Effects - Hausman Test

Equation: Untitled

Test cross-section random effects

Test Summary	Chi-Sq. Statistic	Chi-Sq. d.f.	Prob.
Cross-section random	1.105417	3	0.7758

Cross-section random effects test comparisons:

Variable	Fixed	Random	Var(Diff.)	Prob.
CTR	360.562127	364.982127	4323.375099	0.9464
FSIZE	88549.474787	88553.806453	8320548.398778	0.9988
FLEV	7203.911156	8264.038173	1025483.630140	0.2952

Cross-section random effects test equation:

Dependent Variable: AUDFEE

Method: Panel Least Squares

Date: 07/20/19 Time: 10:46

Sample: 2009 2018

Periods included: 10

Cross-sections included: 109

Total panel (unbalanced) observations: 1079

Variable	Coefficient	Std. Error	t-Statistic	Prob.

C	-597368.7	36352.10	-16.43285	0.0000
CTR	360.5621	135.3236	2.664443	0.0004
FSIZE	88549.47	4995.159	17.72706	0.0000
FLEV	7203.911	6038.079	1.193080	0.2331

Effects Specification

Cross-section fixed (dummy variables)

R-squared	0.813445	Mean dependent var	53781.55
Adjusted R-squared	0.792030	S.D. dependent var	114655.9
S.E. of regression	52287.34	Akaike info criterion	24.66490
Sum squared resid	2.64E+12	Schwarz criterion	25.18222
Log likelihood	-13194.72	Hannan-Quinn criter.	24.86079
F-statistic	37.98601	Durbin-Watson stat	1.306632
Prob(F-statistic)	0.000000		

RANDOM

Dependent Variable: AUDFEE

Method: Panel EGLS (Cross-section random effects)

Date: 07/20/19 Time: 10:27

Sample: 2009 2018

Periods included: 10

Cross-sections included: 109

Total panel (unbalanced) observations: 1079

Swamy and Arora estimator of component variances

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	-598778.0	30221.47	-19.81300	0.0000
ETR	-507.2257	862.4889	-0.588095	0.5566
CTR	595.3817	230.8001	2.579642	0.0008
FSIZE	88636.55	4084.329	21.70162	0.0000
FLEV	8169.159	5956.702	1.371423	0.1705

Effects Specification

	S.D.	Rho
Cross-section random	60715.37	0.5740
Idiosyncratic random	52303.35	0.4260

Weighted Statistics

R-squared	0.313487	Mean dependent var	14168.24
Adjusted R-squared	0.310930	S.D. dependent var	62912.11
S.E. of regression	52229.54	Sum squared resid	2.93E+12
F-statistic	122.6067	Durbin-Watson stat	1.070391
Prob(F-statistic)	0.000000		

Unweighted Statistics

R-squared	0.520872	Mean dependent var	53781.55
Sum squared resid	6.79E+12	Durbin-Watson stat	0.416410

FIXED

Dependent Variable: AUDFEE

Method: Panel Least Squares

Date: 07/20/19 Time: 10:28

Sample: 2009 2018

Periods included: 10

Cross-sections included: 109

Total panel (unbalanced) observations: 1079

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	-598329.5	36394.33	-16.44019	0.0000
ETR	-553.0326	865.7597	-0.638783	0.5231
CTR	611.6491	233.9884	2.614014	0.0005
FSIZE	88680.00	5000.865	17.73293	0.0000
FLEV	7112.003	6041.641	1.177164	0.2394

Effects Specification

Cross-section fixed (dummy variables)

R-squared	0.813523	Mean dependent var	53781.55
Adjusted R-squared	0.791903	S.D. dependent var	114655.9

S.E. of regression	52303.35	Akaike info criterion	24.66634
Sum squared resid	2.64E+12	Schwarz criterion	25.18827
Log likelihood	-13194.49	Hannan-Quinn criter.	24.86397
F-statistic	37.62744	Durbin-Watson stat	1.307933
Prob(F-statistic)	0.000000		

HAUSMAN

Correlated Random Effects - Hausman Test

Equation: Untitled

Test cross-section random effects

Test Summary	Chi-Sq. Statistic	Chi-Sq. d.f.	Prob.
Cross-section random	1.690302	4	0.7925

Cross-section random effects test comparisons:

Variable	Fixed	Random	Var(Diff.)	Prob.
ETR	-553.032634	-507.225669	5652.825910	0.5424
CTR	611.649088	595.381740	5307.806140	0.8233
FSIZE	88680.0049	88636.54757	8326908.4104	0.9880

	51	4	33	
	7112.00274		1019127.6219	
FLEV	4	8169.159073	69	0.2950

Cross-section random effects test equation:

Dependent Variable: AUDFEE

Method: Panel Least Squares

Date: 07/20/19 Time: 10:29

Sample: 2009 2018

Periods included: 10

Cross-sections included: 109

Total panel (unbalanced) observations: 1079

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	-598329.5	36394.33	-16.44019	0.0000
ETR	-553.0326	865.7597	-0.638783	0.5231
CTR	611.6491	233.9884	2.614014	0.0005
FSIZE	88680.00	5000.865	17.73293	0.0000
FLEV	7112.003	6041.641	1.177164	0.2394

Effects Specification

Cross-section fixed (dummy variables)

R-squared	0.813523	Mean dependent var	53781.55
Adjusted R-squared	0.791903	S.D. dependent var	114655.9

S.E. of regression	52303.35	Akaike info criterion	24.66634
Sum squared resid	2.64E+12	Schwarz criterion	25.18827
Log likelihood	-13194.49	Hannan-Quinn criter.	24.86397
F-statistic	37.62744	Durbin-Watson stat	1.307933
Prob(F-statistic)	0.000000		

Dependent Variable: AUDFEE

Method: Panel EGLS (Cross-section random effects)

Date: 07/20/19 Time: 10:36

Sample: 2009 2018

Periods included: 10

Cross-sections included: 109

Total panel (unbalanced) observations: 1079

Swamy and Arora estimator of component variances

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	-602062.4	30389.22	-19.81171	0.0000
ETR	4892.991	3577.533	1.367700	0.1717
CTR	518.3282	4232.632	0.122460	0.9026
ETR*OWNCON	-9491.834	6059.190	-1.566519	0.1175
CTR*OWNCON	-2493.622	5483.586	-0.454743	0.6494
FSIZE	89085.11	4105.194	21.70058	0.0000
FLEV	8039.691	5957.066	1.349606	0.1774

Effects Specification		
	S.D.	Rho
Cross-section random	61283.29	0.5787
Idiosyncratic random	52284.05	0.4213

Weighted Statistics			
R-squared	0.314288	Mean dependent var	14041.11
Adjusted R-squared	0.310450	S.D. dependent var	62815.07
S.E. of regression	52167.04	Sum squared resid	2.92E+12
F-statistic	81.88983	Durbin-Watson stat	1.079922
Prob(F-statistic)	0.000000		

Unweighted Statistics			
R-squared	0.521304	Mean dependent var	53781.55
Sum squared resid	6.78E+12	Durbin-Watson stat	0.419485

Correlated Random Effects - Hausman Test

Equation: Untitled

Test cross-section random effects

Test Summary	Chi-Sq. Statistic	Chi-Sq. d.f.	Prob.
Cross-section random	1.866710	6	0.9315

Cross-section random effects test comparisons:

Variable	Fixed	Random	Var(Diff.)	Prob.
ETR	4975.574803	4892.991238	126264.883302	0.8162
CTR	781.235293	518.328173	171437.791344	0.5255
ETR*OWNCON	-9709.768300	-9491.834380	389413.038960	0.7269
CTR*OWNCON	-2863.039434	-2493.622231	293383.443869	0.4952
FSIZE	89358.093012	89085.108423	8326340.657291	0.9246
FLEV	6992.838076	8039.690845	997959.055656	0.2947

Cross-section random effects test equation:

Dependent Variable: AUDFEE

Method: Panel Least Squares

Date: 07/21/19 Time: 07:28

Sample: 2009 2018

Periods included: 10

Cross-sections included: 109

Total panel (unbalanced) observations: 1079

Variable	Coefficient	Std. Error	t-Statistic	Prob.

C	-603304.7	36526.54	-16.51689	0.0000
ETR	4975.575	3595.137	1.383974	0.1667
CTR	781.2353	4252.835	0.183698	0.8543
ETR*OWNCON	-9709.768	6091.240	-1.594055	0.1113
CTR*OWNCON	-2863.039	5510.272	-0.519582	0.6035
FSIZE	89358.09	5017.864	17.80799	0.0000
FLEV	6992.838	6040.248	1.157707	0.2473

Effects Specification

Cross-section fixed (dummy variables)

R-squared	0.814047	Mean dependent var	53781.55
Adjusted R-squared	0.792056	S.D. dependent var	114655.9
S.E. of regression	52284.05	Akaike info criterion	24.66723
Sum squared resid	2.64E+12	Schwarz criterion	25.19841
Log likelihood	-13192.97	Hannan-Quinn criter.	24.86837
F-statistic	37.01841	Durbin-Watson stat	1.314935
Prob(F-statistic)	0.000000		

Correlated Random Effects - Hausman Test

Equation: Untitled

Test cross-section random effects

Test Summary	Chi-Sq. Statistic	Chi-Sq. d.f.	Prob.
Cross-section random	1.866710	6	0.9315

Cross-section random effects test comparisons:

Variable	Fixed	Random	Var(Diff.)	Prob.
ETR	4975.574803	4892.991238	126264.883302	0.8162
CTR	781.235293	518.328173	171437.791344	0.5255
ETR*OWNCON	-9709.768300	-9491.834380	389413.038960	0.7269
CTR*OWNCON	-2863.039434	-2493.622231	293383.443869	0.4952
FSIZE	89358.093012	89085.108423	8326340.657291	0.9246
FLEV	6992.838076	8039.690845	997959.055656	0.2947

Cross-section random effects test equation:

Dependent Variable: AUDFEE

Method: Panel Least Squares

Date: 07/21/19 Time: 07:39

Sample: 2009 2018

Periods included: 10

Cross-sections included: 109

Total panel (unbalanced) observations: 1079

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	-603304.7	36526.54	-16.51689	0.0000
ETR	4975.575	3595.137	1.383974	0.1667
CTR	781.2353	4252.835	0.183698	0.8543
ETR*OWNCON	-9709.768	6091.240	-1.594055	0.1113
CTR*OWNCON	-2863.039	5510.272	-0.519582	0.6035
FSIZE	89358.09	5017.864	17.80799	0.0000
FLEV	6992.838	6040.248	1.157707	0.2473

Effects Specification

Cross-section fixed (dummy variables)

R-squared	0.814047	Mean dependent var	53781.55
Adjusted R-squared	0.792056	S.D. dependent var	114655.9
S.E. of regression	52284.05	Akaike info criterion	24.66723
Sum squared resid	2.64E+12	Schwarz criterion	25.19841
Log likelihood	-13192.97	Hannan-Quinn criter.	24.86837
F-statistic	37.01841	Durbin-Watson stat	1.314935
Prob(F-statistic)	0.000000		

Dependent Variable: AUDFEE

Method: Panel EGLS (Cross-section random effects)

Date: 07/20/19 Time: 11:10

Sample: 2009 2018

Periods included: 10

Cross-sections included: 109

Total panel (unbalanced) observations: 1070

Swamy and Arora estimator of component variances

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	-673506.2	34834.28	-19.33458	0.0000
BIND	36096.01	13963.27	2.585069	0.0099
BGEN	12925.04	20317.09	0.636166	0.5248
ACDI	2087.097	1010.983	2.064423	0.0454
OWNCON	83536.76	20853.28	4.005929	0.0001
FSIZE	88597.63	4175.951	21.21616	0.0000
FLEV	9310.882	5919.897	1.572812	0.1161

Effects Specification

	S.D.	Rho
Cross-section random	60431.78	0.5754
Idiosyncratic random	51910.02	0.4246

Weighted Statistics

R-squared	0.327070	Mean dependent var	14139.55
Adjusted R-squared	0.323271	S.D. dependent var	62951.33
S.E. of regression	51793.25	Sum squared resid	2.85E+12

F-statistic	86.10974	Durbin-Watson stat	1.070806
Prob(F-statistic)	0.000000		

Unweighted Statistics			
R-squared	0.529680	Mean dependent var	53642.90
Sum squared resid	6.59E+12	Durbin-Watson stat	0.417625

Correlated Random Effects - Hausman Test

Equation: Untitled

Test cross-section random effects

Test Summary	Chi-Sq. Statistic	Chi-Sq. d.f.	Prob.
Cross-section random	2.324389	6	0.8876

Cross-section random effects test comparisons:

Variable	Fixed	Random	Var(Diff.)	Prob.
BIND	39194.898233	36096.008966	8859650.825340	0.2978
BGEN	14247.535423	12925.039646	25522640.817248	0.7935

ACDI	2035.302390	2087.097352	127795.244082	0.8848
OWNCON	83825.166010	83536.756422	101021264.097904	0.9771
FSIZE	88234.027865	88597.629960	8508840.911183	0.9008
FLEV	8371.383454	9310.882432	1012376.478944	0.3504

Cross-section random effects test equation:

Dependent Variable: **AUDFEE**

Method: Panel Least Squares

Date: 07/20/19 Time: 11:11

Sample: 2009 2018

Periods included: 10

Cross-sections included: 109

Total panel (unbalanced) observations: 1070

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	-672762.1	40555.06	-16.58886	0.0000
BIND	39194.90	14276.99	2.745319	0.0062
BGEN	14247.54	20935.78	0.680535	0.4963
ACDI	5035.302	2239.697	2.248206	0.0337
OWNCON	83825.17	23149.09	3.621100	0.0003

FSIZE	88234.03	5093.860	17.32165	0.0000
FLEV	8371.383	6004.794	1.394117	0.1636

Effects Specification

Cross-section fixed (dummy variables)

R-squared	0.816419	Mean dependent var	53642.90
Adjusted R-squared	0.794505	S.D. dependent var	114511.9
S.E. of regression	51910.02	Akaike info criterion	24.65366
Sum squared resid	2.57E+12	Schwarz criterion	25.18840
Log likelihood	-13074.71	Hannan-Quinn criter.	24.85623
F-statistic	37.25500	Durbin-Watson stat	1.311962
Prob(F-statistic)	0.000000		

Dependent Variable: AUDFEE

Method: Panel Least Squares

Date: 07/20/19 Time: 11:12

Sample: 2009 2018

Periods included: 10

Cross-sections included: 109

Total panel (unbalanced) observations: 1070

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	-672762.1	40555.06	-16.58886	0.0000
BIND	39194.90	14276.99	2.745319	0.0062
BGEN	14247.54	20935.78	0.680535	0.4963
ACDI	5035.302	2239.697	2.248206	0.0337
OWNCON	83825.17	23149.09	3.621100	0.0003
FSIZE	88234.03	5093.860	17.32165	0.0000
FLEV	8371.383	6004.794	1.394117	0.1636

Effects Specification

Cross-section fixed (dummy variables)

R-squared	0.816419	Mean dependent var	53642.90
Adjusted R-squared	0.794505	S.D. dependent var	114511.9
S.E. of regression	51910.02	Akaike info criterion	24.65366
Sum squared resid	2.57E+12	Schwarz criterion	25.18840
Log likelihood	-13074.71	Hannan-Quinn criter.	24.85623
F-statistic	37.25500	Durbin-Watson stat	1.311962
Prob(F-statistic)	0.000000		

Ramsey RESET Test

Equation: UNTITLED

Specification: AUDFEE C ETR CTR BIND BGEN OWNCON

Omitted Variables: Squares of fitted values

	Value	df	Probability
t-statistic	1.098550	1071	0.2722
F-statistic	1.206812	(1, 1071)	0.2722
Likelihood ratio	1.214016	1	0.2705

F-test summary:

	Sum of Sq.	df	Mean Squares
Test SSR	1.53E+10	1	1.53E+10
Restricted SSR	1.36E+13	1072	1.27E+10
Unrestricted SSR	1.35E+13	1071	1.26E+10
Unrestricted SSR	1.35E+13	1071	1.26E+10

LR test summary:

	Value	df
Restricted LogL	-14064.26	1072
Unrestricted LogL	-14063.65	1071

Unrestricted Test Equation:

Dependent Variable: AUDFEE

Method: Least Squares

Date: 07/21/19 Time: 17:20

Sample: 1 1089

Included observations: 1078

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	-334.2690	25285.78	-0.013220	0.9895
ETR	-361.7774	1784.707	-0.202710	0.8394
CTR	-1529.118	1759.222	-0.869202	0.3849
BIND	-95677.35	40499.75	-2.362419	0.0183
BGEN	269602.9	101449.8	2.657500	0.0080
OWNCON	155075.3	55512.36	2.793527	0.0053
FITTED^2	-5.42E-06	4.93E-06	-1.098550	0.2722

R-squared	0.044012	Mean dependent var	53822.16
Adjusted R-squared	0.038657	S.D. dependent var	114701.4
S.E. of regression	112462.5	Akaike info criterion	26.10510
Sum squared resid	1.35E+13	Schwarz criterion	26.13746
Log likelihood	-14063.65	Hannan-Quinn criter.	26.11735
F-statistic	8.217886	Durbin-Watson stat	0.320732
Prob(F-statistic)	0.000000		

Breusch-Godfrey Serial Correlation LM Test:

F-statistic	1.482	Prob. F(2,1070)	0.3000
Obs*R-squared	2.9300	Prob. Chi-Square(2)	0.3000

Test Equation:

Dependent Variable: RESID

Method: Least Squares

Date: 07/21/19 Time: 17:27

Sample: 1 1089

Included observations: 1078

Presample and interior missing value lagged residuals set to zero.

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	-17781.87	13279.46	-1.339051	0.1808
ETR	277.7913	961.5755	0.288892	0.7727
CTR	463.0620	924.7231	0.500758	0.6166
BIND	24162.19	13036.64	1.853406	0.0641
BGEN	-5773.370	17459.10	-0.330680	0.7410
OWNCON	3384.702	13053.76	0.259289	0.7955
RESID(-1)	0.824767	0.030514	27.02932	0.0000
RESID(-2)	0.021751	0.030593	0.710987	0.4772

R-squared	0.707727	Mean dependent var	3.47E-11
Adjusted R-squared	0.705815	S.D. dependent var	112212.0
S.E. of regression	60862.45	Akaike info criterion	24.87801
Sum squared resid	3.96E+12	Schwarz criterion	24.91499
Log likelihood	-13401.25	Hannan-Quinn criter.	24.89202
F-statistic	370.1377	Durbin-Watson stat	1.992349

Prob(F-statistic)	0.000000

Heteroskedasticity Test: Breusch-Pagan-Godfrey

F-statistic	5.868594	Prob. F(5,1072)	0.0000
Obs*R-squared	28.72104	Prob. Chi-Square(5)	0.0000
Scaled explained SS	270.0224	Prob. Chi-Square(5)	0.0000

Test Equation:

Dependent Variable: RESID^2

Method: Least Squares

Date: 07/21/19 Time: 17:29

Sample: 1 1089

Included observations: 1078

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	-2.38E+10	1.18E+10	-2.017250	0.0439
ETR	25482125	8.57E+08	0.029727	0.9763
CTR	-3.70E+08	8.22E+08	-0.449754	0.6530
BIND	-7.19E+09	1.16E+10	-0.619503	0.5357
BGEN	5.20E+10	1.56E+10	3.340819	0.0009
OWNCON	5.19E+10	1.16E+10	4.460750	0.0000

R-squared	0.026643	Mean dependent var	1.26E+10
Adjusted R-squared	0.022103	S.D. dependent var	5.49E+10
S.E. of regression	5.43E+10	Akaike info criterion	52.27791
Sum squared resid	3.16E+24	Schwarz criterion	52.30565
Log likelihood	-28171.80	Hannan-Quinn criter.	52.28842
F-statistic	5.868594	Durbin-Watson stat	0.548079
Prob(F-statistic)	0.000023		

APPENDIX 2 REGRESSION DATA

Year	Companies	Exchange Sector	Profit Before Tax	Income Tax Expenses	Profit After Tax	Cash Flow From Operations	Income Tax Paid	Audit Fee	Audit Comm Meetings	Board Independence	Board Gender Divrsity	Total Debt to Asset
2009	Ftn Cocoa Processors	Agriculture	259710	51	259659	-112172	0	1200	3	0.86	0.14	0.31
2010	Ftn Cocoa Processors	Agriculture	63647	0	63647	321458	0	1500	3	0.86	0.14	0.48
2011	Ftn Cocoa Processors	Agriculture	-243808	0	-243808	-24334	0	1700	3	0.86	0.14	0.48
2012	Ftn Cocoa Processors	Agriculture	-405980	0	-405980	212846	0	1700	1	0.57	0	0.55
2013	Ftn Cocoa Processors	Agriculture	-286076	0	-286076	-90321	0	1700	2	0.57	0	0.63
2014	Ftn Cocoa Processors	Agriculture	-577204	0	-577204	-221506	0	1900	5	0.43	0	0.73
2015	Ftn Cocoa Processors	Agriculture	-201195	0	-201195	-541644	0	1900	4	0.43	0	0.78
2016	Ftn Cocoa Processors	Agriculture	-847235	0	-847235	-281811	0	1900	2	0.5	0	0.77
2017	Ftn Cocoa Processors	Agriculture	-762421	0	-762421	-472558	0	1900	2	0.67	0	0.92
2018	Ftn Cocoa Processors	Agriculture	521710	-311780	209930	1411952	7669	12660	3	0.67	0.33	0.56
2009	Livestock Feeds	Agriculture	38751	-8803	29948	121322	10812	3000	2	0.83	0.17	0.55
2010	Livestock Feeds	Agriculture	52844	-24540	28304	-52809	8803	3400	2	0.83	0.17	0.61
2011	Livestock Feeds	Agriculture	152225	-54361	97864	21263	15614	4000	3	0.5	0.17	0.68
2012	Livestock Feeds	Agriculture	221221	-77119	144102	-43419	15302	4800	3	0.5	0.2	0.69
2013	Livestock Feeds	Agriculture	282798	-72052	210746	-175817	0	6000	4	0.5	0.2	0.53
2014	Livestock Feeds	Agriculture	402151	-147981	254170	-829720	0	6900	4	0.63	0.25	0.66
2015	Livestock Feeds	Agriculture	300115	-112198	187917	2060454	68727	6900	4	0.63	0.25	0.57
2016	Livestock Feeds	Agriculture	223990	-71709	152281	-978605	77467	7500	4	0.63	0.25	0.72
2017	Livestock Feeds	Agriculture	-725803	0	-725803	544153	44009	7500	4	0.71	0.14	0.6
2018	Livestock Feeds	Agriculture	-761227	140916	-620311	921566	0	8500	4	0.71	0.14	0.63
2009	Okomu Oil Palm	Agriculture	661741	-112217	549524	1085426	2E+06	20000	4	0.9	0	0.45
2010	Okomu Oil Palm	Agriculture	1971262	-341806	1629456	2429512		20000	4	0.9	0	0.32
2011	Okomu Oil Palm	Agriculture	4658441	-734681	3923760	4551241	49782	21000	4	0.9	0	0.19
2012	Okomu Oil Palm	Agriculture	4346666	-547865	3590763	5169103	57385	24000	4	0.73	0	0.18
2013	Okomu Oil Palm	Agriculture	2693555	-601381	2092174	2671516	33536	24000	4	0.73	0	0.25
2014	Okomu Oil Palm	Agriculture	2127996	-574541	1553455	3221620	644497	20001	4	0.73	0	0.25

2015	Okomu Oil Palm	Agriculture	2898645	-267500	2631145	3999205	698552	23000	4	0.73	0	0.4
2016	Okomu Oil Palm	Agriculture	5906453	-996180	4910273	5947746	140150	23000	4	0.7	0	0.31
2017	Okomu Oil Palm	Agriculture	11140142	-1992292	9147850	9632304	-1E+06	23000	4	0.82	0	0.22
2018	Okomu Oil Palm	Agriculture	10337171	-1835322	8501849	9314911	3E+06	23000	4	0.82	0	0.26
2009	Presco	Agriculture	338148	-98721	239427	814652	157081	8000	3	0.5	0.08	0.65
2010	Presco	Agriculture	1333000	-238593	1095000	1144138	13687	8000	3	0.55	0.09	0.52
2011	Presco	Agriculture	2721457	-924680	1796777	3686053	73257	8000	4	0.55	0.09	0.81
2012	Presco	Agriculture	3875622	-387553	3488069	5052082	559408	12000	4	0.8	0.1	0.39
2013	Presco	Agriculture	2333970	-996768	1337202	1986391	387553	12000	4	0.64	0.09	0.47
2014	Presco	Agriculture	3420306	-814996	2605312	6776941	92986	12000	4	0.6	0.1	0.43
2015	Presco	Agriculture	4214741	-1893947	2320794	1458043	387217	24000	4	0.67	0.11	0.45
2016	Presco	Agriculture	31226452	-9490987	21735465	22368195	914034	31000	4	0.67	0.11	0.37
2017	Presco	Agriculture	10951581	14452033	25403614	6951591	2E+06	31400	4	0.78	0.11	0.92
2018	Presco	Agriculture	6321010	-2036822	4284188	10307707	1E+06	29000	3	0.67	0.11	0.59
2009	A.G.Leventis Nig	Conglomerate	1763235	-528237	1234998	-47424	534504	18640	3	0.44	0	0.37
2010	A.G.Leventis Nig	Conglomerate	787562	-139319	648234	335830	430425	20600	4	0.9	0	0.52
2011	A.G.Leventis Nig	Conglomerate	823532	-494889	328643	769514	371496	22880	3	0.9	0	0.51
2012	A.G.Leventis Nig	Conglomerate	652846	-368677	284169	641126	208503	21398	4	0.63	0	0.55
2013	A.G.Leventis Nig	Conglomerate	1227392	-542750	684642	1319603	445507	23865	5	0.63	0	0.52
2014	A.G.Leventis Nig	Conglomerate	536234	-380457	155777	475770	240037	26900	3	0.63	0	0.57
2015	A.G.Leventis Nig	Conglomerate	329382	-506368	-176986	2439852	129636	29500	3	0.63	0	0.6
2016	A.G.Leventis Nig	Conglomerate	-2912112	345832	-2566280	2933288	63257	32141	4	0.63	0	0.69
2017	A.G.Leventis Nig	Conglomerate	-3835915	359056	-3476859	842772	10320	43226	5	0.86	0	0.85
2018	A.G.Leventis Nig	Conglomerate	521710	-311780	209930	1411952	7669	12660	3	0.67	0.33	0.65
2009	Chellarams	Conglomerate	544207	167309	-376898	-928191	34290	2500	4	0.75	0	0.75
2010	Chellarams	Conglomerate	415633	30492	446125	1744525	47972	2500	4	0.71	0	0.7
2011	Chellarams	Conglomerate	333821	-113503	220318	391898	13601	5200	4	0.71	0	0.9
2012	Chellarams	Conglomerate	378894	-127732	251162	-2650343	0	7000	4	0.71	0	0.79
2013	Chellarams	Conglomerate	241322	-150915	90407	4163044	0	7150	4	0.43	0	0.71
2014	Chellarams	Conglomerate	-68625	-5967	-74592	-380290	130677	7350	4	0.5	0	0.74

2015	Chellarams	Conglomerate	-2622640	-538452	-3161092	-4967520	340772	9075	4	0.5	0	0.94
2016	Chellarams	Conglomerate	235051	-78032	157019	3871590	247748	9600	4	0.5	0	0.9
2017	Chellarams	Conglomerate	567737	-233683	344055	2480413	104517	9200	4	0.6	0	0.87
2018	Chellarams	Conglomerate	269904	-69193	200711	-3829	52997	11000	3	0.6	0	0.74
2009	John Holt	Conglomerate	-25000	669000	-2144000	548000	27000	11000	3	0.71	0.14	0.8
2010	John Holt	Conglomerate	5000	15000	-10000	1701000	3000	10500	2	0.67	0	0.73
2011	John Holt	Conglomerate	-1944000	379000	-1565000	1527000	8000	10500	3	0.6	0	0.71
2012	John Holt	Conglomerate	635000	-211000	424000	537000	4000	11000	4	0.71	0	0.83
2013	John Holt	Conglomerate	297000	-42000	126000	2837000	13000	11000	4	0.71	0	0.74
2014	John Holt	Conglomerate	427000	127000	591000	-145000	2000	8500	4	0.71	0	0.68
2015	John Holt	Conglomerate	-171000	83000	-254000	378000	5000	9000	4	0.71	0	0.72
2016	John Holt	Conglomerate	204000	-99000	97000	138000	34000	9000	4	0.71	0	0.73
2017	John Holt	Conglomerate	-223000	-1308000	-728000	186000	16000	9000	4	0.67	0	0.74
2018	John Holt	Conglomerate	145671	-34933	110738	721022	46017	88580	4	0.7	0.1	0.75
2009	Scoa Nig	Conglomerate	811105	-96875	714230	-144679	1428	7000	3	0.7	0.1	0.51
2010	Scoa Nig	Conglomerate	220541	-7888	212653	291580	13580	9000	3	0.7	0.1	0.51
2011	Scoa Nig	Conglomerate	148283	-47017	101266	-160082	144342	188248	3	0.7	0.1	0.57
2012	Scoa Nig	Conglomerate	164306	-90900	73406	-44763	138123	188248	4	0.7	0.1	0.54
2013	Scoa Nig	Conglomerate	145671	-34933	110738	721022	46017	88580	4	0.7	0.1	0.63
2014	Scoa Nig	Conglomerate	88444	-91033	179477	690557	5980	12500	4	0.43	0	0.69
2015	Scoa Nig	Conglomerate	-1256500	-9708	-1266458	-1716451	24210	14000	4	0.8	0	0.82
2016	Scoa Nig	Conglomerate	-2258195	626421	-1631774	87171	6955	8220	4	0.8	0	0.68
2017	Scoa Nig	Conglomerate	-1897170	-12131	-1909301	364003	46285	7250	4	0.8	0	0.79
2018	Scoa Nig	Conglomerate	-507604	461725	-45880	3701900	10983	4000	3	0.8	0	0.87
2009	Transcorp Nig	Conglomerate	3233160	-2006583	1226577	6870703	75000	40750	3	0.82	0.09	0.34
2010	Transcorp Nig	Conglomerate	6908216	-1518430	5389786	4132670	0	55700	3	0.85	0.08	0.38
2011	Transcorp Nig	Conglomerate	4605927	-1255697	5861624	1941194	1E+06	62500	7	0.8	0.1	0.33
2012	Transcorp Nig	Conglomerate	3948216	-1420468	2527748	4012332	2E+06	75000	2	0.75	0	0.45
2013	Transcorp Nig	Conglomerate	9032151	-2074249	6957902	-2535529	2E+06	95000	2	0.75	0	0.31
2014	Transcorp Nig	Conglomerate	7731598	-4427338	3304260	7731243	2E+06	110119	3	0.71	0	0.47

2015	Transcorp Nig	Conglomerate	3319529	-1287972	2031557	21665041	2E+06	120556	4	0.71	0	0.57
2016	Transcorp Nig	Conglomerate	-5928348	4801350	-1126998	11619057	3E+06	117350	4	0.71	0	0.63
2017	Transcorp Nig	Conglomerate	12305547	-1698271	10607276	39381543	4E+06	115600	4	0.86	0	0.66
2018	Transcorp Nig	Conglomerate	22402087	-1775420	20626667	22298849	960711	115000	4	0.92	0.25	0.65
2009	Uac Of Nig	Conglomerate	8076451	-1899343	6177108	12751220	2E+06	38969	5	0.55	0.09	0.52
2010	Uac Of Nig	Conglomerate	7093521	-1642719	5450802	7360999	1E+06	42004	4	0.73	0.09	0.55
2011	Uac Of Nig	Conglomerate	6994489	-3586804	3407685	-5438823	3E+06	173238	4	0.78	0.11	0.53
2012	Uac Of Nig	Conglomerate	10745391	-3642440	7102951	9429353	3E+06	195018	5	0.5	0.13	0.51
2013	Uac Of Nig	Conglomerate	14010517	-4061530	9902858	7408670	3E+06	200063	5	0.63	0.13	0.42
2014	Uac Of Nig	Conglomerate	14096932	-3370163	10726769	2339700	2E+06	220968	5	0.63	0.13	0.43
2015	Uac Of Nig	Conglomerate	7943844	-2796891	5146953	8432639	3E+06	184635	5	0.5	0.1	0.42
2016	Uac Of Nig	Conglomerate	7774880	-2108343	5666538	-4089639	2E+06	179537	4	0.5	0.1	0.45
2017	Uac Of Nig	Conglomerate	3246120	-1921733	1324387	7318698	2E+06	167541	4	0.82	0.27	0.44
2018	Uac Of Nig	Conglomerate	-5512401	-3959969	-9472370	1293931	2E+06	164894	4	0.85	0.27	0.43
2009	Julius Berger	Construction & Real Estate	9444412	-6144281	3300131	13605696	559746	32000	4	0.89	0.11	0.95
2010	Julius Berger	Construction & Real Estate	8014197	-5210092	2804105	14687310	831685	39500	4	0.9	0.1	0.95
2011	Julius Berger	Construction & Real Estate	9933147	-5521149	4411998	19881569	969694	49500	3	0.89	0.11	0.94
2012	Julius Berger	Construction & Real Estate	12341492	-4328798	8012694	31548838	461102	96000	4	0.5	0	0.92
2013	Julius Berger	Construction & Real Estate	16220536	-8367196	7853340	15922650	626845	99000	4	0.58	0	0.91
2014	Julius Berger	Construction & Real Estate	13134896	-4894917	8239979	12527897	509473	88025	4	0.5	0	0.9
2015	Julius Berger	Construction & Real Estate	6499973	-4059833	2440140	8993838	391554	88025	4	0.45	0	0.9
2016	Julius Berger	Construction & Real Estate	-1498029	-2318763	-3816792	-6284447	544849	96920	4	0.44	0	0.9
2017	Julius Berger	Construction & Real Estate	3739140	-1167100	2572040	30645804	866749	99741	4	0.67	0.17	0.89
2018	Julius Berger	Construction & Real Estate	10197667	-4095852	6101815	4047411	314206	98420	4	0.69	0.15	0.88
2009	Updc Property	Construction	2828321	-441982	2386339	7974215	0	13500	4	0.63	0.25	0.52

		& Real Estate										
2010	Updc Property	Construction & Real Estate	2538771	-260745	2278026	1465149	0	15500	4	0.63	0.25	0.57
2011	Updc Property	Construction & Real Estate	2398713	728608	1670105	-2125698	333744	15500	4	0.71	0.29	0.57
2012	Updc Property	Construction & Real Estate	2454951	274640	2180310	-672494	682107	22500	4	0.7	0.2	0.56
2013	Updc Property	Construction & Real Estate	3707533	-552114	3155419	3037776	927181	28500	4	0.71	0.29	0.49
2014	Updc Property	Construction & Real Estate	3540523	48552	3589075	234915	300431	28948	4	0.57	0.29	0.47
2015	Updc Property	Construction & Real Estate	55851	324926	380778	3878095	158031	24506	5	0.57	0.29	0.51
2016	Updc Property	Construction & Real Estate	-1783124	233069	-1550055	-1471756	51039	24950	4	0.57	0.29	0.52
2017	Updc Property	Construction & Real Estate	-3057309	403306	-2654003	-418465	189569	19950	5	0.86	0.14	0.48
2018	Updc Property	Construction & Real Estate	-9214965	-1723130	-1.1E+07	-385220	116291	19950	4	0.75	0.5	0.61
2009	7Up Nigeria	Consumer	2223436	-693762	1529674	4712186	292863	8000	3	0.6	0	0.75
2010	7Up Nigeria	Consumer	2635163	-876706	1892146	7300578	334165	25000	3	0.6	0	0.73
2011	7Up Nigeria	Consumer	2525082	-247538	2277544	6995524	502248	28000	2	0.6	0	0.79
2012	7Up Nigeria	Consumer	2928512	859978	2068534	8042118	454533	28000	3	0.6	0	0.77
2013	7Up Nigeria	Consumer	3262719	406215	2856504	13839625	710527	33000	3	0.6	0	0.76
2014	7Up Nigeria	Consumer	7616444	-1181843	6434601	19225600	650942	35000	5	0.6	0	0.69
2015	7Up Nigeria	Consumer	8749100	-1623310	7125790	17133520	1E+06	38000	4	0.82	0	0.65
2016	7Up Nigeria	Consumer	3757390	-409927	3347463	16984343	974853	39000	3	0.82	0	0.63
2017	7Up Nigeria	Consumer	-11228438	451726	-1.1E+07	-1.2E+07	953617	41000	4	0.91	0.09	0.85
2009	Cadbury Nig	Consumer	-2379440	1143523	-1235917	4357898	50070	22300	4	0.63	0.13	0.5
2010	Cadbury Nig	Consumer	1952559	-784392	1168000	4484109	49028	21500	4	0.63	0.13	0.54
2011	Cadbury Nig	Consumer	5053022	-1382467	3670555	5619557	60163	24200	4	0.75	0.13	0.51
2012	Cadbury Nig	Consumer	5511518	-2056527	3454991	7202477	266969	28553	4	0.57	0.29	0.5
2013	Cadbury Nig	Consumer	7421477	-1398258	6023219	6513983	336914	26000	4	0.57	0.29	0.44
2014	Cadbury Nig	Consumer	1467314	45373	1512687	1419524	715728	37421	4	0.57	0.29	0.6
2015	Cadbury Nig	Consumer	1557412	-424117	1153295	3781283	365212	35831	4	0.57	0.29	0.57

2016	Cadbury Nig	Consumer	-562870	266468	-296402	-1848864	459196	27000	4	0.56	0.22	0.61
2017	Cadbury Nig	Consumer	350317	-50319	299998	-1471631	46317	23000	4	0.67	0.22	0.59
2018	Cadbury Nig	Consumer	1222831	-399746	823085	6695082	23460	23000	4	0.71	0.29	0.54
2009	Dangote Flour Mills	Consumer	5374056	187024	5530732	17005607	213223	50190	2	0.7	0	0.55
2010	Dangote Flour Mills	Consumer	4911885	-2183310	2722575	12828530	76715	61768	1	0.7	0	0.61
2011	Dangote Flour Mills	Consumer	758742	109668	649074	5478579	279850	57788	1	0.7	0.1	0.65
2012	Dangote Flour Mills	Consumer	-4000351	1737015	-2263336	-4029419	1E+06	75293	4	0.7	0.1	0.67
2013	Dangote Flour Mills	Consumer	-8342294	1577990	-6764304	1161040		67500	4	0.7	0.1	0.73
2014	Dangote Flour Mills	Consumer	-9285013	3006708	-6278304	-3963781	74572	83066	4	0.67	0.08	0.82
2015	Dangote Flour Mills	Consumer	-12466210	-213100	-1.3E+07	-3557500	9319	72050	4	0.78	0.11	1.06
2016	Dangote Flour Mills	Consumer	11818966	-1249679	10569287	5803946	11536	83000	4	0.67	0.25	0.69
2017	Dangote Flour Mills	Consumer	22439871	-7310665	15129206	3300297	554750	83000	4	0.63	0.25	0.71
2018	Dangote Flour Mills	Consumer	-1191071	33184	-1157887	432460	1E+06	83000	4	0.67	0.33	0.57
2009	Dangote Sugar	Consumer	19587423	-6401333	13185599	8101200	50128	24150	4	0.56	0.11	0.46
2010	Dangote Sugar	Consumer	16146930	-4864690	11282240	-5468002	1E+07	26000	2	0.56	0.11	0.34
2011	Dangote Sugar	Consumer	10921229	3517632	7403597	14179928	5E+06	26500	6	0.56	0.11	0.46
2012	Dangote Sugar	Consumer	16331679	5535263	10796416	25057605	3E+06	32000	4	0.7	0.2	0.44
2013	Dangote Sugar	Consumer	16265159	-5419227	10845932	-1.2E+07	6E+06	40700	4	0.73	0.18	0.44
2014	Dangote Sugar	Consumer	15273152	-3637373	11635779	15495897	5E+06	44100	4	0.78	0.11	0.45
2015	Dangote Sugar	Consumer	16548299	-5013237	11535062	15631934	5E+06	44100	4	0.78	0.22	0.43
2016	Dangote Sugar	Consumer	19614434	-5218496	14395938	36368932	5E+06	52920	3	0.78	0.22	0.63
2017	Dangote Sugar	Consumer	53598868	-1.4E+07	39783605	25927222	6E+06	52920	2	0.89	0.22	0.52
2018	Dangote Sugar	Consumer	34601057	-1.3E+07	21976468	3770658	2E+06	54000	2	0.89	0.22	0.43
2009	Flour Mills Of Nigeria	Consumer	5470455	1578701	4324760	7107512	2E+06	67000	4	0.85	0	0.73
2010	Flour Mills Of Nigeria	Consumer	11383317	7491563	3891754	29752720	2E+06	85200	4	0.87	0	0.63
2011	Flour Mills Of Nigeria	Consumer	16445415	6995211	9450204	18664095	4E+06	96000	4	0.87	0	0.69
2012	Flour Mills Of Nigeria	Consumer	12048781	3672125	8376656	3770449	6E+06	126865	4	0.77	0	0.65
2013	Flour Mills Of Nigeria	Consumer	11165431	3438760	7726671	18661551	4E+06	135947	4	0.77	0	0.7

2014	Flour Mills Of Nigeria	Consumer	8227983	2860108	5367875	25268637	3E+06	179958	4	0.71	0	0.72
2015	Flour Mills Of Nigeria	Consumer	7724770	738290	8463060	24753130	2E+06	206354	4	0.73	0	0.75
2016	Flour Mills Of Nigeria	Consumer	11489278	2931006	14420284	47973537	629927	624508	5	0.71	0	0.72
2017	Flour Mills Of Nigeria	Consumer	10472847	-1636395	8836452	-1.4E+07	621269	296900	4	0.93	0.07	0.79
2018	Flour Mills Of Nigeria	Consumer	16541767	-2925993	13615774	82753011	1E+06	366672	4	0.93	0.07	0.63
2009	Guinness Nig	Consumer	18991762	-5450573	13541189	11281730	4E+06	21965	5	0.92	0	0.57
2010	Guinness Nig	Consumer	19988735	-6252376	13736359	28665159	5E+06	24162	5	0.93	0.07	0.56
2011	Guinness Nig	Consumer	26176966	-8249032	17927934	19530773	6E+06	26578	5	0.93	0	0.56
2012	Guinness Nig	Consumer	20383158	-6168538	14214620	23542190	6E+06	29236	5	0.67	0.25	0.64
2013	Guinness Nig	Consumer	17008875	-5145149	11863726	24298137	5E+06	31575	5	0.67	0.25	0.62
2014	Guinness Nig	Consumer	11681560	-2108080	9573480	19157202	4E+06	33470	5	0.79	0.14	0.66
2015	Guinness Nig	Consumer	10795100	-3000200	7794900	32538990	2E+06	35144	5	0.8	0.13	0.6
2016	Guinness Nig	Consumer	-2347241	331355	-2015886	-1320097	2E+06	30000	4	0.64	0.21	0.7
2017	Guinness Nig	Consumer	2662081	-738361	1923720	18045541	592686	32500	4	0.64	0.14	0.71
2018	Guinness Nig	Consumer	9943164	-3225559	6717605	10589788	370320	35000	4	0.8	0.13	0.04
2009	Honeywell Flour Mill	Consumer	687152	-4700370	217115	-1154119	98870	6500	4	0.7	0.1	0.77
2010	Honeywell Flour Mill	Consumer	2330273	-1154351	1175922	2167043	167415	7750	4	0.67	0.11	0.55
2011	Honeywell Flour Mill	Consumer	3515785	-1023388	2492397	2654482	794628	8200	4	0.67	0.11	0.48
2012	Honeywell Flour Mill	Consumer	3663134	-960703	2702431	2654482	199435	12466	4	0.45	0.09	0.63
2013	Honeywell Flour Mill	Consumer	3814599	-971079	2843520	-1794859	220814	13613	4	0.5	0	0.67
2014	Honeywell Flour Mill	Consumer	4237432	-885868	3351564	6431524	789647	15000	4	0.5	0	0.68
2015	Honeywell Flour Mill	Consumer	1434830	-314560	1120270	5602150	409529	15000	4	0.67	0.07	0.7
2016	Honeywell Flour Mill	Consumer	-2869342	-154510	-3023852	10131641	98025	15000	4	0.6	0.13	0.78
2017	Honeywell Flour Mill	Consumer	5469833	-1164878	4304955	-2533081	500356	14000	4	0.73	0.13	0.54
2018	Honeywell Flour Mill	Consumer	4872291	-445313	4426978	14725910	396144	18000	4	0.67	0.13	0.55
2009	International Breweries	Consumer	-285546	0	-285546	2149513	0	6000	3	0.6	0.1	1.06
2010	International Breweries	Consumer	199133	0	199133	3873729	0	7399	3	0.6	0.1	1.01

2011	International Breweries	Consumer	190340	-42993	147347	2101802	0	10964	3	0.6	0.1	0.91
2012	International Breweries	Consumer	190340	-42993	147347	2101802	0	10964	3	0.6	0.1	0.91
2013	International Breweries	Consumer	3734694	87934	2506490	-4043424	42993	12490	5	0.6	0.1	0.59
2014	International Breweries	Consumer	3925500	-451307	2105500	6258083	0	18796	4	0.71	0.21	0.54
2015	International Breweries	Consumer	2815550	-448688	1946490	3151230	451307	21618	4	0.71	0.21	0.6
2016	International Breweries	Consumer	3656826	-676952	2652748	7901718	420375	21618	4	0.79	0.21	0.58
2017	International Breweries	Consumer	2891749	-1857392	1034357	7549199	877446	23780	4	0.85	0.23	0.69
2018	International Breweries	Consumer	2891749	-1857392	1034357	7549199	877446	23780	4	0.85	0.23	0.45
2009	Nascon Allied	Consumer	2712000	-870102	1842000	1489230	422369	8400	3	0.78	0	0.43
2010	Nascon Allied	Consumer	2058000	-410019	1648000	1208791	703625	8400	3	0.78	0	0.34
2011	Nascon Allied	Consumer	3138599	934904	2203695	3645645	672131	9000	2	0.78	0	0.44
2012	Nascon Allied	Consumer	4036336	1270030	2766308	3240019	829433	9900	4	0.78	0	0.38
2013	Nascon Allied	Consumer	4038405	-1338863	2699542	1881899	1E+06	14500	4	0.78	0	0.4
2014	Nascon Allied	Consumer	2856399	-989361	1867038	4209545	1E+06	15500	4	0.78	0	0.5
2015	Nascon Allied	Consumer	3017564	-911918	2105646	4007770	756507	14500	4	0.8	0.4	0.57
2016	Nascon Allied	Consumer	3516331	-1101148	2415183	2238496	530212	17400	3	0.7	0.4	0.67
2017	Nascon Allied	Consumer	7909488	-2565896	5343592	13835753	884626	17400	5	0.8	0.3	0.62
2018	Nascon Allied	Consumer	6449385	-2029168	4420217	986399	2E+06	17400	5	0.8	0.3	0.61
2009	Nestle Nig	Consumer	13783244	3999666	9783578	11920089	2E+06	23000	3	0.9	0	0.76
2010	Nestle Nig	Consumer	18244454	-5642345	12602109	15348315	5E+06	24612	3	0.89	0	0.75
2011	Nestle Nig	Consumer	18539000	1702796	16496453	19999112	4E+06	28219	3	0.9	0	0.7
2012	Nestle Nig	Consumer	25050172	3912897	21137275	30243832	2E+06	32682	4	0.25	0.25	0.62
2013	Nestle Nig	Consumer	26047590	-3789311	22258279	36209580	4E+06	35676	4	0.25	0.25	0.62
2014	Nestle Nig	Consumer	24445978	-2210338	22235640	23495038	2E+06	30783	4	0.44	0.22	0.66
2015	Nestle Nig	Consumer	29322477	-5585700	23736777	39877436	3E+06	30000	4	0.5	0.25	0.68
2016	Nestle Nig	Consumer	21548408	-1.4E+07	7924968	61484847	5E+06	32400	4	0.56	0.11	0.82

2017	Nestle Nig	Consumer	46828682	-1.3E+07	33723730	19235881	8E+06	35000	4	0.63	0.13	0.69
2018	Nestle Nig	Consumer	59750846	-1.7E+07	43008026	74618791	7E+07	35000	4	0.75	0.13	0.69
2009	Nigeria Breweries	Consumer	41399796	13489705	27910091	36976535	9E+06	30306	4	0.5	0	0.56
2010	Nigeria Breweries	Consumer	44880248	14548130	30332118	39149661	1E+07	33943	4	0.43	0	0.56
2011	Nigeria Breweries	Consumer	56397878	18347122	38050756	54328647	1E+07	55964	4	0.43	0	0.67
2012	Nigeria Breweries	Consumer	55624366	17581652	38042714	55888588	2E+07	45801	4	0.38	0.08	0.63
2013	Nigeria Breweries	Consumer	62240317	19159968	43080349	95167850	1E+07	40043	4	0.46	0.08	0.56
2014	Nigeria Breweries	Consumer	61461821	-1.9E+07	42520253	60860045	2E+07	43692	4	0.53	0.12	0.51
2015	Nigeria Breweries	Consumer	54514973	-1.6E+07	38056123	72627198	2E+07	46239	4	0.53	0.12	0.52
2016	Nigeria Breweries	Consumer	39674518	-1.1E+07	28416965	70154017	2E+07	49591	4	0.53	0.13	0.55
2017	Nigeria Breweries	Consumer	46630058	-1.4E+07	33048559	72050522	2E+07	56524	4	0.64	0.14	0.53
2018	Nigeria Breweries	Consumer	29421952	-9984008	19437944	30170434	2E+07	56534	4	0.76	0.18	0.57
2009	Nigerian Enamelware	Consumer	93407	-29926	63481	636496	37782	6500	2	0.43	0	1.09
2010	Nigerian Enamelware	Consumer	129743	-35383	74905	-332748	27967	9000	2	0.86	0	0.84
2011	Nigerian Enamelware	Consumer	123707	-35579	88128	472641	24037	11000	2	0.86	0	0.71
2012	Nigerian Enamelware	Consumer	138048	-50107	87941	164284	30258	13000	2	0.71	0	0.83
2013	Nigerian Enamelware	Consumer	117678	-43708	73970	-32250	51850	15000	4	0.71	0	0.46
2014	Nigerian Enamelware	Consumer	111658	-25503	86155	-719515	42298	16000	4	0.71	0	0.6
2015	Nigerian Enamelware	Consumer	122140	47780	74360	-1652580	22520	7500	4	0.71	0	0.74
2016	Nigerian Enamelware	Consumer	176961	-43485	133475	1255425	30089	8500	4	0.67	0	0.69
2017	Nigerian Enamelware	Consumer	67849	-22791	45058	-1054611	23606	8500	4	0.67	0	0.76
2018	Nigerian Enamelware	Consumer	-8482	5149	-3333	2697822	21136	5000	4	0.83	0	0.69
2009	Nigerian Northen Flour Mill	Consumer	70542	-12956	57586	465486	9022	5000	2	0.91	0	0.72
2010	Nigerian Northen Flour Mill	Consumer	632220	-222015	149233	-453179	71235	10000	2	0.83	0	0.53
2011	Nigerian Northen Flour Mill	Consumer	649463	-193865	455598	1307711	241794	10000	2	0.83	0	0.62
2012	Nigerian Northen Flour Mill	Consumer	47331	-42288	5043	-903610	136492	12500	2	0.73	0	0.59
2013	Nigerian Northen Flour Mill	Consumer	330377	-105232	225145	1125731	112764	14500	2	0.73	0	0.56
2014	Nigerian Northen	Consumer	341800	-108255	233545	-55295	13255	14500	2	0.67	0	0.46

	Flour Mill											
2015	Nigerian Northen Flour Mill	Consumer	-215430	15872	-199558	555099	70515	14500	2	0.67	0	0.78
2016	Nigerian Northen Flour Mill	Consumer	-233071	35831	-197240	-527392	14661	14500	2	0.5	0	0.12
2017	Nigerian Northen Flour Mill	Consumer	405	-16639	-16234	-871530	2826	14500	4	0.83	0	0.71
2018	Nigerian Northen Flour Mill	Consumer	-113187	52199	-60988	-268417	10494	18000	4	0.83	0	0.8
2009	Pz Cussons	Consumer	7671087	2340187	5330900	8512525	1E+06	13180	4	0.79	0.21	0.35
2010	Pz Cussons	Consumer	7951448	-2366806	5584642	14103776	2E+06	15420	4	0.75	0.17	0.34
2011	Pz Cussons	Consumer	8025266	-2328200	5697066	-420663	2E+06	23155	4	0.92	0.08	0.4
2012	Pz Cussons	Consumer	4306860	1768020	2538850	3459722	2E+06	22213	4	0.75	0.25	0.33
2013	Pz Cussons	Consumer	7650270	2329080	5321190	9738717	1E+06	27297	3	0.75	0.25	0.36
2014	Pz Cussons	Consumer	6949980	1867240	5082750	7451110	2E+06	32694	4	0.33	0.25	0.36
2015	Pz Cussons	Consumer	6556810	1986030	4570790	4298160	3E+06	36599	4	0.8	0.3	0.39
2016	Pz Cussons	Consumer	3148196	-1018507	2129689	16775678	2E+06	40112	4	0.45	0.27	0.42
2017	Pz Cussons	Consumer	4811169	-1124572	3686597	2290655	1E+06	48864	5	0.45	0.27	0.5
2018	Pz Cussons	Consumer	2313509	-386389	1927120	11155343	2E+06	45457	4	0.45	0.18	0.49
2009	Unilever Nig	Consumer	7061000	-1567000	4093000	5169815	945673	24018	3	0.6	0.1	0.65
2010	Unilever Nig	Consumer	6400900	-1971000	4180000	8800214	2E+06	26356	3	0.67	0.11	0.68
2011	Unilever Nig	Consumer	8018115	-2502902	5515213	10622492	2E+06	17852	3	0.67	0.11	0.7
2012	Unilever Nig	Consumer	8185988	-2588374	5597613	7164096	2E+06	27539	4	0.67	0.11	0.72
2013	Unilever Nig	Consumer	6911441	-2104534	4806907	11652482	3E+06	17539	4	0.5	0	0.78
2014	Unilever Nig	Consumer	2873235	-460892	2412343	-1824795	1E+06	15800	4	0.43	0	0.84
2015	Unilever Nig	Consumer	1771063	-578697	1192366	15773000	239989	15752	4	0.5	0.2	0.84
2016	Unilever Nig	Consumer	4106422	-1034537	3071885	5990506	159300	22500	4	0.67	0.22	0.84
2017	Unilever Nig	Consumer	11207213	-3757128	7450085	5935307	598165	25310	4	0.7	0.2	0.37
2018	Unilever Nig	Consumer	12621908	-3489756	9132152	6893344	3E+06	26047	4	0.7	0.2	0.37
2009	Vitafoam Nig	Consumer	780915	-270139	512532	722200	0	8500	4	0.18	0.18	0.6
2010	Vitafoam Nig	Consumer	823252	-310469	514170	626605	297141	11000	4	0.38	0.13	0.59
2011	Vitafoam Nig	Consumer	823566	304716	518850	1172372	269050	15831	3	0.44	0.11	0.7

2012	Vitafoam Nig	Consumer	813250	311135	502115	1132093	248464	16050	3	0.55	0.18	0.7
2013	Vitafoam Nig	Consumer	629785	-219472	410313	1536886	288560	27950	4	0.55	0.18	0.69
2014	Vitafoam Nig	Consumer	709722	-274127	435595	2072432	237710	18500	5	0.44	0.22	0.75
2015	Vitafoam Nig	Consumer	534130	-285080	249050	2619900	117000	19400	4	0.4	0.2	0.68
2016	Vitafoam Nig	Consumer	61198	-93230	-32032	-1957320	206195	31300	4	0.5	0.25	0.74
2017	Vitafoam Nig	Consumer	18133	-145823	-127690	2360551	138262	29762	3	0.7	0.3	0.75
2018	Vitafoam Nig	Consumer	793852	-191929	601923	-26531	220579	31457		0.88	0.25	0.76
2009	Abbey Building Society	Finance	354227	118899	235328	-742764	32400	9000	5	0.57	0.14	0.5
2010	Abbey Building Society	Finance	372429	90509	281920	-1757885	111566	11000	5	0.57	0.14	0.52
2011	Abbey Building Society	Finance	572834	310538	262296	-357476	88486	10000	5	0.56	0.11	0.5
2012	Abbey Building Society	Finance	305326	86351	218975	746487	38222	12000	5	0.56	0.11	0.5
2013	Abbey Building Society	Finance	472577	36023	-508600	-109517	25073	12000	5	0.64	0.09	0.51
2014	Abbey Building Society	Finance	-182892	19686	-163206	801016	6815	12000	4	0.56	0.11	0.51
2015	Abbey Building Society	Finance	-227272	282766	55494	-607362	37163	12000	5	0.56	0.11	0.48
2016	Abbey Building Society	Finance	-134443	-33554	-167997	-118456	49659	12000	4	0.67	0.11	0.48
2017	Abbey Building Society	Finance	-177907	-34468	-212375	-496497	43777	12000	6	0.75	0.13	0.49
2018	Abbey Building Society	Finance	-636480	-29039	-665519	-113174	29729	12000	4	0.75	0.13	0.54
2009	Access Bank	Finance	-3481565	920601	4402166	22528379	2E+06	182772	5	0.21	0.14	0.76
2010	Access Bank	Finance	16168870	5100749	11068121	67771217	7E+06	278664	5	0.5	0.14	0.78
2011	Access Bank	Finance	24107026	7029108	15378322	1.21E+08	5E+06	408461	6	0.47	0.13	0.88
2012	Access Bank	Finance	46534979	1695343	44893636	-1.3E+08	8E+06	339528	6	0.47	0.13	0.86
2013	Access Bank	Finance	44996410	-7498759	37497651	-1.2E+08	1E+07	308208	6	0.53	0.29	0.87
2014	Access Bank	Finance	52022000	-8959000	43063000	-2.8E+08	7E+06	433734	6	0.5	0.31	0.87
2015	Access Bank	Finance	75038117	-9169344	65868773	-1.8E+08	6E+06	378789	2	0.56	0.25	0.86
2016	Access Bank	Finance	90339456	-1.9E+07	71439347	12826157	8E+06	460182	7	0.53	0.33	0.87

2017	Access Bank	Finance	80072482	-1.8E+07	61990852	2.53E+08	9E+06	529588	6	0.53	0.12	0.87
2018	Access Bank	Finance	1.03E+08	-8206617	94981086	5.52E+08	1E+07	612978	6	0.53	0.2	0.9
2009	Aiico	Finance	879463	165202	1002729	1479796	0	16000	3	0.55	0	0.48
2010	Aiico	Finance	1230252	-112655	1117597	1221037	0	14000	3	0.7	0.1	0.52
2011	Aiico	Finance	433090	-461470	-28381	1139896	706997	17550	3	0.7	0.1	0.66
2012	Aiico	Finance	2084087	-763424	1320663	3651501	587920	17550	3	0.67	0.11	0.68
2013	Aiico	Finance	-1279555	540329	-739226	1037551	637521	20750	3	0.7	0.1	0.75
2014	Aiico	Finance	3276560	-1043689	2232871	15676905	1E+06	35000	4	0.7	0.1	0.8
2015	Aiico	Finance	1799294	-603688	1195606	16444082	450413	54000	4	0.57	0	0.88
2016	Aiico	Finance	11835236	-1596825	10238411	1895214	885057	54500	5	0.63	0	0.89
2017	Aiico	Finance	3040489	-1712168	1283276	-1989621	730931	59000	5	0.67	0	0.89
2018	Aiico	Finance	3495871	-344281	315189	6680802	593129	79000	5	0.7	0.1	0.86
2009	AxaMansard	Finance	1312601	-796013	516588	1697937	364230	14500	4	0.8	0.2	0.26
2010	AxaMansard	Finance	1017902	-374256	643646	3210918	335623	16000	2	0.8	0.2	0.34
2011	AxaMansard	Finance	1256039	-290442	965597	2733601	335623	18000	4	0.87	0.2	0.45
2012	AxaMansard	Finance	2179807	-576500	1603307	2947662	477195	19000	4	0.64	0.27	0.56
2013	AxaMansard	Finance	1991266	102925	2094191	4019718	246612	21000	3	0.64	0.27	0.61
2014	AxaMansard	Finance	2015409	-397276	1618133	1524937	468506	29000	4	0.76	0.29	0.64
2015	AxaMansard	Finance	2023653	-361472	1662181	2749920	136541	32228	4	0.67	0.25	0.62
2016	AxaMansard	Finance	3125627	-490631	2634996	1190271	150734	35943	4	0.69	0.23	0.63
2017	AxaMansard	Finance	323099	-556991	2675108	1763198	276827	30000	4	0.67	0.17	0.7
2018	AxaMansard	Finance	3380073	-897791	2482282	-944741	383027	49930	5	0.73	0.09	0.65
2009	Consolidated Hallmark	Finance	563396	-163962	242673	292556	59013	3500	3	0.7	0	0.2
2010	Consolidated Hallmark	Finance	238294	-55566	196617	380697	29219	3500	3	0.6	0.1	0.24
2011	Consolidated Hallmark	Finance	148231	5158	153389	558017	42182	5500	4	0.67	0.11	0.36
2012	Consolidated Hallmark	Finance	560466	-156642	395207	253710	131060	6500	5	0.67	0.11	0.37
2013	Consolidated Hallmark	Finance	-178195	-19453	-197648	452906	42772	8000	4	0.67	0.11	0.41
2014	Consolidated	Finance	205621	-12544	193076	-51025	104747	11500	2	0.63	0.13	0.37

	Hallmark											
2015	Consolidated Hallmark	Finance	704911	-159100	545811	716645	65883	11300	2	0.63	0.13	0.39
2016	Consolidated Hallmark	Finance	368133	-173145	194987	155046	64030	7500	2	0.55	0.36	0.41
2017	Consolidated Hallmark	Finance	641052	-234846	406205	-196705	67537	7500	5	0.82	0.27	0.51
2018	Consolidated Hallmark	Finance	534437	-127726	406710	-484768	116915	8500	5	0.73	0.27	0.43
2009	Contiental Reinsurance	Finance	979815	-74597	905218	1556162	96453	7500	2	0.56	0.22	0.29
2010	Contiental Reinsurance	Finance	1585000	-354766	1230234	2311668	237718	10000	2	0.36	0.09	0.38
2011	Contiental Reinsurance	Finance	1829729	-387150	1442579	1630591	331578	10000	2	0.45	0.09	0.43
2012	Contiental Reinsurance	Finance	1980400	-353832	1626568	-232858	371649	14000	2	0.45	0.09	0.45
2013	Contiental Reinsurance	Finance	2233394	-479994	1753400	466393	447032	19004	4	0.67	0.11	0.45
2014	Contiental Reinsurance	Finance	1587969	-732325	855644	-252962	623790	23936	4	0.56	0.11	0.48
2015	Contiental Reinsurance	Finance	2915593	-772788	2142788	1487794	454769	28537	4	0.73	0.18	0.48
2016	Contiental Reinsurance	Finance	4651687	-1533052	3118635	4062600	825002	35600	4	0.7	0.1	0.51
2017	Contiental Reinsurance	Finance	3570285	-1099994	2470291	5236691	708629	40863	4	0.78	0.11	0.52
2018	Contiental Reinsurance	Finance	4359355	-1037242	3322113	1178687	776019	57928		0.8	0.1	0.5
2009	Cornerstone Insurance	Finance	482681	45978	-442965	7240	54692	14900	4	0.8	0	0.4
2010	Cornerstone Insurance	Finance	109519	-83614	399067	117452	86393	18000	4	0.73	0	0.43
2011	Cornerstone Insurance	Finance	-340130	56721	-283409	306747	46616	24738	4	0.73	0	0.5
2012	Cornerstone Insurance	Finance	543925	-33523	510402	304936	33523	22000	3	0.73	0.09	0.51
2013	Cornerstone Insurance	Finance	870207	-9844	860363	965150	44257	22000	4	0.73	0.09	0.51

2014	Cornerstone Insurance	Finance	1037690	-91208	946482	-781842	137377	24200	4	0.58	0.08	0.47
2015	Cornerstone Insurance	Finance	1843054	-212300	1630754	-396142	56600	24200	4	0.58	0.08	0.42
2016	Cornerstone Insurance	Finance	-1264660	-470563	-1735223	-932816	164499	33200	4	0.73	0.13	0.52
2017	Cornerstone Insurance	Finance	-3426517	64437	-3362080	368688	154039	35900	4	0.67	0.11	0.69
2018	Cornerstone Insurance	Finance	3284554	-266982	3017572	102301	125833	51393	5	0.67	0.11	0.64
2009	Custodian & Allied Insurance	Finance	2011452	-132154	1879231	642008	117884	1500	4	0.75	0.25	0.21
2010	Custodian & Allied Insurance	Finance	2330332	-350103	1980229	540663	143351	9400	4	0.75	0.25	0.25
2011	Custodian & Allied Insurance	Finance	1169864	-112287	1057577	1220133	204715	9400	4	0.75	0.25	0.52
2012	Custodian & Allied Insurance	Finance	2095128	-663936	1431192	1714826	418684	21080	4	0.75	0	0.54
2013	Custodian & Allied Insurance	Finance	4336650	-733156	3603494	6929445	325850	37995	2	0.67	0.17	0.57
2014	Custodian & Allied Insurance	Finance	5148746	-1060043	4088703	2349192	884078	40275	2	0.67	0	0.53
2015	Custodian & Allied Insurance	Finance	5731738	-1531284	4200454	8477423	1E+06	40600	2	0.67	0	0.55
2016	Custodian & Allied Insurance	Finance	7389822	-2058846	5330976	6344093	1E+06	39200	2	0.67	0	0.56
2017	Custodian & Allied Insurance	Finance	8932671	-1616006	7316665	4104245	2E+06	42782	4	0.86	0.14	0.6
2018	Custodian & Allied Insurance	Finance	9500710	-2387519	7113191	56622883	1E+07	47713	4	0.86	0.14	0.58
2009	Diamond Bank	Finance	-12374154	-4199741	-8174413	-1.3E+07	979612	132277	4	0.57	0	0.84
2010	Diamond Bank	Finance	4772863	-3444208	1328655	-2.4E+07	3E+06	148500	4	0.56	0.13	0.82
2011	Diamond Bank	Finance	-17964929	-4023944	-1.4E+07	75792146	1E+06	129250	4	0.59	0.18	0.88
2012	Diamond Bank	Finance	27481541	-5373457	22108084	29526618	649933	160123	4	0.53	0.2	0.91
2013	Diamond Bank	Finance	32079982	-3535409	28544492	2.13E+08	1E+06	188583	4	0.61	0.17	0.91
2014	Diamond Bank	Finance	28101232	-2616013	25485219	1.32E+08	871063	155700	4	0.5	0.19	0.89
2015	Diamond Bank	Finance	7092731	-1436108	5656623	-1.8E+08	2E+06	183832	4	0.63	0.19	0.88
2016	Diamond Bank	Finance	5034137	-1535172	3498965	-7.8E+07	1E+06	230771	2	0.44	0.19	0.89

2017	Diamond Bank	Finance	-11546952	-1349575	-1.3E+07	-8E+07	2E+06	220000	4	0.69	0.38	0.87
2018	Diamond Bank	Finance	2891749	-1857392	1034357	7549199	877446	23780	4	0.85	0.23	0.56
2009	Fidelity Bank	Finance	3768405	3434104	1430757	-8673356	2E+06	66000	4	0.4	0.13	0.74
2010	Fidelity Bank	Finance	8651000	2543000	6108000	24650000	948000	73000	4	0.88	0.12	0.72
2011	Fidelity Bank	Finance	161000	-2423000	2584000	16053000	2E+06	84000	5	0.79	0.16	0.8
2012	Fidelity Bank	Finance	21349000	-3425000	18200000	42638000	2E+06	113000	3	0.88	0.19	0.82
2013	Fidelity Bank	Finance	9028000	-1307000	7721000	15048000	2E+06	125000	2	0.88	0.19	0.85
2014	Fidelity Bank	Finance	15515000	-1719000	13796000	43789000	2E+06	150000	3	0.58	0.21	0.85
2015	Fidelity Bank	Finance	14024000	-120000	13904000	1.07E+08	917000	150000	4	0.57	0.21	0.85
2016	Fidelity Bank	Finance	11061000	-1327000	9734000	-5.7E+07	2E+06	150000	4	0.56	0.11	0.86
2017	Fidelity Bank	Finance	20302000	-1445000	18857000	-3.8E+07	996000	200000	6	0.58	0.42	0.85
2018	Fidelity Bank	Finance	25089000	-2163000	22926000	1.77E+08	1E+06	200000	7	0.73	0.2	0.89
2009	First Bank Holding	Finance	13297000	-8396000	4901000	-4.5E+08	3E+06	142000	4	0.47	0.2	0.86
2010	First Bank Holding	Finance	41299000	-9777000	33411000	-8415000	2E+07	193000	2	0.56	0.19	0.85
2011	First Bank Holding	Finance	35863000	-1.7E+07	18636000	1.04E+08	7E+06	193000	4	0.63	0.38	0.87
2012	First Bank Holding	Finance	92701000	-1.7E+07	75670000	22211000	2E+07	348000	3	0.67	0	0.86
2013	First Bank Holding	Finance	91337000	-2.1E+07	70631000	1.4E+08	8E+06	488000	3	0.63	0	0.88
2014	First Bank Holding	Finance	92884000	-1E+07	82839000	-4.9E+08	3E+07	530000	2	0.73	0.09	0.88
2015	First Bank Holding	Finance	21512000	-6364000	15148000	4.83E+08	1E+07	731000	4	0.75	0.08	0.86
2016	First Bank Holding	Finance	22948000	-5807000	17141000	2.31E+08	8E+06	803000	4	0.82	0.18	0.88
2017	First Bank Holding	Finance	56825000	-9040000	47785000	4.3E+08	7E+06	856000	4	0.9	0.2	0.87
2018	First Bank Holding	Finance	65288000	-5544000	59744000	5.38E+08	6E+06	910000	4	0.9	0.2	0.9
2009	First City Monumental Bank	Finance	856600	292262	564338	-4.7E+07	1E+06	100000	5	0.54	0	0.72
2010	First City Monumental Bank	Finance	9025742	1090771	7934971	-9646804	2E+06	127011	5	0.6	0	0.75
2011	First City Monumental Bank	Finance	-10682803	-1439253	-9243550	77614369	2E+06	129794	6	0.6	0	0.8
2012	First City Monumental Bank	Finance	16248019	-1126315	15121704	2.12E+08	1E+06	176525	5	0.6	0	0.85
2013	First City Monumental Bank	Finance	18184399	-2183244	16001155	-2.8E+07	2E+06	240412	3	0.75	0	0.86
2014	First City	Finance	23942893	-1809636	22133257	-1.2E+08	4E+06	253970	5	0.82	0	0.86

	Monumental Bank											
2015	First City Monumental Bank	Finance	7768664	-3007998	4760666	5799496	4E+06	287061	4	0.8	0	0.86
2016	First City Monumental Bank	Finance	16251397	-1912515	14338882	-8.3E+07	2E+06	324634	4	0.8	0	0.85
2017	First City Monumental Bank	Finance	11462392	-2052188	9410204	98114491	410944	372835	4	0.83	0.08	0.84
2018	First City Monumental Bank	Finance	18442297	-3470769	14971528	2.27E+08	1E+06	398578	4	0.83	0.08	0.87
2009	Guaranty Trust Bank	Finance	35012534	-6409456	28603078	-9197553	1E+07	175689	4	0.5	0.21	0.82
2010	Guaranty Trust Bank	Finance	48455000	-1E+07	38346000	1.96E+08	4E+06	312455	4	0.5	0.21	0.82
2011	Guaranty Trust Bank	Finance	65596000	-1.6E+07	49887000	1.27E+08	1E+07	285424	5	0.5	0.21	0.85
2012	Guaranty Trust Bank	Finance	1.03E+08	-1.6E+07	86686880	92390760	2E+07	320931	4	0.5	0.21	0.84
2013	Guaranty Trust Bank	Finance	1.07E+08	-1.7E+07	90023977	3.25E+08	2E+07	335337	4	0.5	0.29	0.84
2014	Guaranty Trust Bank	Finance	1.16E+08	-1.8E+07	98694919	-4.7E+07	2E+07	399957	4	0.53	0.27	0.84
2015	Guaranty Trust Bank	Finance	1.21E+08	-2.1E+07	99437000	28473155	2E+07	502552	4	0.53	0.27	0.84
2016	Guaranty Trust Bank	Finance	1.65E+08	-3.3E+07	1.32E+08	5.11E+08	3E+07	596234	4	0.44	0.19	0.84
2017	Guaranty Trust Bank	Finance	2E+08	-3E+07	1.7E+08	3.57E+08	3E+07	712254	4	0.53	0.33	0.82
2018	Guaranty Trust Bank	Finance	2.16E+08	-3.1E+07	1.85E+08	2.61E+08	3E+07	791353	4	0.57	0.29	0.82
2009	Guinea Insurance	Finance	19663	-33057	-13394	46926	34123	7000	4	0.5	0	0.22
2010	Guinea Insurance	Finance	-94420	-11582	-106002	329357	0	8500	4	0.5	0	0.23
2011	Guinea Insurance	Finance	-192321	-246271	-438592	89059	279085	8500	4	0.5	0	0.33
2012	Guinea Insurance	Finance	175933	-125843	50090	477875	33190	8000	4	0.5	0	0.35
2013	Guinea Insurance	Finance	300282	-260447	39835	1065640	0	9000	4	0.5	0	0.29
2014	Guinea Insurance	Finance	-14372	-67526	-81898	-630675	71422	9000	3	0.71	0	0.37
2015	Guinea Insurance	Finance	46906	-54133	-7227	-338714	235767	9000	4	0.75	0.13	0.3
2016	Guinea Insurance	Finance	138205	-135685	2520	-177723	68773	9000		0.75	0.13	0.27
2017	Guinea Insurance	Finance	237849	13184	251033	-258456	48762	11500	4	0.69	0.08	0.23
2018	Guinea Insurance	Finance	2891749	-1857392	1034357	7549199	877446	23780	4	0.85	0.23	0.56
2009	Lasasco Assurance	Finance	649292	160685	539304	500957	194709	4000	3	0.63	0.25	0.26
2010	Lasasco Assurance	Finance	322560	-72902	249658	717422	121242	5000	3	0.63	0.25	0.29
2011	Lasasco Assurance	Finance	500310	-270598	229711	218890	399140	7000	3	0.63	0.25	0.43

2012	Lasasco Assurance	Finance	-180090	-74934	-255024	-840613	0	8000	2	0.63	0.38	0.53
2013	Lasasco Assurance	Finance	412807	-137467	275340	460635	69816	14000	3	0.57	0.43	0.56
2014	Lasasco Assurance	Finance	525856	-80111	445745	460635	69816	10000	3	0.56	0.33	0.56
2015	Lasasco Assurance	Finance	404113	-120793	283320	2231910	114073	12000	4	0.58	0.33	0.59
2016	Lasasco Assurance	Finance	1142880	-198419	944461	-441007	191182	12000	4	0.38	0.38	0.59
2017	Lasasco Assurance	Finance	854273	-192395	661878	-1628277	161750	12000	3	0.71	0.29	0.56
2018	Lasasco Assurance	Finance	459938	-25494	485432	253155	33295	13500	3	0.67	0.44	0.56
2009	Lawunion & Rock	Finance	351619	-57070	294549	-24695	25274	9000	4	0.67	0	0.3
2010	Lawunion & Rock	Finance	384273	-23351	360922	520565	38664	9000	4	0.7	0.1	0.35
2011	Lawunion & Rock	Finance	289212	-39592	249620	21047	54830	9000	3	0.7	0.1	0.37
2012	Lawunion & Rock	Finance	-1190800	-146380	-1337180	-19774	35295	11500	3	0.67	0.44	0.47
2013	Lawunion & Rock	Finance	459938	-25494	485432	253155	33295	13500	3	0.67	0.44	0.4
2014	Lawunion & Rock	Finance	259830	-134395	125435	715007	137053	13500	3	0.67	0.33	0.43
2015	Lawunion & Rock	Finance	328498	-47579	280919	303370	47377	15000	4	0.67	0.33	0.46
2016	Lawunion & Rock	Finance	658643	-96792	561851	102601	88579	11500	4	0.7	0.4	0.41
2017	Lawunion & Rock	Finance	1099198	-188491	910707	36443	108654	11500	4	0.82	0.27	0.36
2018	Lawunion & Rock	Finance	490088	-226495	263593	-130421	112054	11500	4	0.8	0.3	0.43
2009	Linkage Assurance	Finance	-233747	-25542	-259289	4311	19053	17500	2	0.67	0.17	0.38
2010	Linkage Assurance	Finance	-125691	-25239	-150930	-430677	0	17500	2	0.67	0.08	0.37
2011	Linkage Assurance	Finance	288400	-67709	220691	-206670	42192	15000	3	0.67	0.08	0.22
2012	Linkage Assurance	Finance	-212203	391973	176770	-528960	25204	22000	2	0.67	0.08	0.12
2013	Linkage Assurance	Finance	563062	-148780	414282	-667470	19963	20000	2	0.67	0.08	0.13
2014	Linkage Assurance	Finance	580846	-255849	324997	548315	0	22000	3	0.67	0.08	0.13
2015	Linkage Assurance	Finance	929109	-416862	512247	-113301	96732	22000	3	0.67	0	0.16
2016	Linkage Assurance	Finance	942682	-398118	544561	51726	101646	22500	3	0.73	0	0.19
2017	Linkage Assurance	Finance	2925541	-34273	2891268	-1330019	256914	22500	4	0.91	0.27	0.14
2018	Linkage Assurance	Finance	134703	-424821	-290118	-562623	440344	25000	4	0.9	0.3	0.23
2009	Mutual Benefit Assurance	Finance	402612	-125590	277022	525407	41383	3000	4	0.5	0.07	0.62
2010	Mutual Benefit Assurance	Finance	957106	-143215	813891	3042918	37250	8400	4	0.54	0.08	0.69

2011	Mutual Benefit Assurance	Finance	996404	-240682	755722	1713328	84162	13300	4	0.47	0.07	0.72
2012	Mutual Benefit Assurance	Finance	-2243812	-318654	-2562466	2408015	91630	18390	4	0.47	0.07	0.93
2013	Mutual Benefit Assurance	Finance	911077	-355325	555752	4719112	190010	18970	4	0.67	0.07	0.93
2014	Mutual Benefit Assurance	Finance	4526538	-427408	4099130	5840841	126754	20250	4	0.75	0.06	0.85
2015	Mutual Benefit Assurance	Finance	1195272	-303500	891772	1801022	211598	32161	4	0.67	0.07	0.83
2016	Mutual Benefit Assurance	Finance	-1068666	-277620	-1346286	3059252	283812	34002	5	0.64	0.07	0.86
2017	Mutual Benefit Assurance	Finance	1335093	-312585	1002508	2221126	235386	33547	5	0.77	0.08	0.86
2018	Mutual Benefit Assurance	Finance	1380983	-231975	1149008	-1895016	138408	39596	3	0.83	0.08	0.85
2009	Nem Insurance	Finance	855809	-11673	844136	1282119	54644	6617	3	0.57	0.29	0.16
2010	Nem Insurance	Finance	1034592	-200738	833854	912993	141208	6418	3	0.57	0.29	0.2
2011	Nem Insurance	Finance	387104	-133810	253294	1576804	339496	8530	4	0.5	0.33	0.34
2012	Nem Insurance	Finance	680594	-225282	455312	861273	129090	7442	4	0.5	0.33	0.45
2013	Nem Insurance	Finance	544410	-149350	395060	956532	192364	9957	4	0.5	0.33	0.53
2014	Nem Insurance	Finance	1766772	-241451	1525321	859500	30932	9437	4	0.57	0.29	0.48
2015	Nem Insurance	Finance	598838	114864	713702	786526	40469	9345	4	0.43	0.29	0.5
2016	Nem Insurance	Finance	2146772	-327974	1817797	1115714	106470	9500	4	0.43	0.29	0.49
2017	Nem Insurance	Finance	3094769	-319499	2775270	1407959	211435	9000	4	0.57	0.29	0.45
2018	Nem Insurance	Finance	2685661	-648957	2036704	1171177	155542	9000	4	0.63	0.38	0.04
2009	Niger Insurance	Finance	2149719	-128507	2285110	1601699	143549	13600	4	0.71	0	0.78
2010	Niger Insurance	Finance	81792	-185766	-123661	1742728	50000	13858	4	0.45	0	0.8
2011	Niger Insurance	Finance	1409659	-156543	1228618	1580403	234503	13643	4	0.45	0	0.79
2012	Niger Insurance	Finance	703499	82208	776293	1948009	159129	14115	4	0.56	0	0.67
2013	Niger Insurance	Finance	716108	-81940	627425	2590612	94501	17650	4	0.56	0	0.67
2014	Niger Insurance	Finance	644781	-6383	690969	-1231692	125894	17150	4	0.56	0	0.63
2015	Niger Insurance	Finance	736030	-129243	600911	-1833928	174623	18198	4	0.55	0.09	0.59
2016	Niger Insurance	Finance	99045	-51371	42134	-715789	98000	18048	4	0.56	0.11	0.62

2017	Niger Insurance	Finance	-920126	-51494	-978927	-344580	109999	18048	4	0.67	0.11	0.66
2018	Niger Insurance	Finance	459938	-25494	485432	253155	33295	13500	3	0.67	0.44	0.45
2009	Prestige Assurance	Finance	873417	-264395	593072	505865	300833	3500	4	0.8	0	0.37
2010	Prestige Assurance	Finance	830870	-306799	487699	103495	287710	4000	4	0.8	0	0.37
2011	Prestige Assurance	Finance	156858	-189978	-34689	-638620	234891	4000	4	0.8	0	0.55
2012	Prestige Assurance	Finance	869620	-257905	603019	-229861	191587	6500	2	0.8	0	0.6
2013	Prestige Assurance	Finance	156854	-217045	-90836	-42396	110496	6500	3	0.8	0	0.56
2014	Prestige Assurance	Finance	174987	-160800	14187	-519996	391047	6000	4	0.8	0	0.62
2015	Prestige Assurance	Finance	20544	-165634	-145295	-1789877	170028	6000	5	0.86	0	0.42
2016	Prestige Assurance	Finance	340394	-10602	-118402	228651	145651	8500	5	0.67	0	0.36
2017	Prestige Assurance	Finance	697989	-166148	531841	-27	123976	10000	4	0.75	0	0.36
2018	Prestige Assurance	Finance	645430	-221635	423795	-588163	158850	13000	4	0.78	0.11	0.38
2009	Regency Aliance Ins	Finance	-42577	-68752	-68752	-201837	4868	2000	4	0.6	0.1	0.09
2010	Regency Aliance Ins	Finance	335699	-99264	233016	137845	791	2000	4	0.5	0.1	0.15
2011	Regency Aliance Ins	Finance	39026	-46794	-7768	174392	30273	2100	4	0.5	0.1	0.32
2012	Regency Aliance Ins	Finance	735243	-295263	439980	186087	65108	5603	4	0.5	0.1	0.35
2013	Regency Aliance Ins	Finance	810621	-336929	473691	356687	261845	5165	4	0.44	0.11	0.36
2014	Regency Aliance Ins	Finance	505595	-66222	439074	636449	157651	5036	4	0.78	0.11	0.37
2015	Regency Aliance Ins	Finance	569249	-196137	373112	276312	146881	6025	5	0.38	0.13	0.36
2016	Regency Aliance Ins	Finance	761701	-150502	611199	-249497	119671	11023	5	0.5	0.1	0.3
2017	Regency Aliance Ins	Finance	412571	-137210	275361	-727553	186022	11925	5	0.5	0	0.44
2018	Regency Aliance Ins	Finance	373085	-99733	273352	-228855	128371	12777	5	0.57	0	0.41
2009	Royal Exchange	Finance	337122	274715	160070	-1559006	418348	18950	4	0.78	0.11	0.45
2010	Royal Exchange	Finance	143692	129714	273406	114359	101267	18950	4	0.7	0.1	0.36
2011	Royal Exchange	Finance	210428	259895	-49467	33942	178030	16665	4	0.7	0.1	0.49
2012	Royal Exchange	Finance	743208	119273	623935	-2440	234949	16321	4	0.7	0.1	0.5
2013	Royal Exchange	Finance	165020	-52806	112214	564270	112482	23275	5	0.7	0.1	0.55
2014	Royal Exchange	Finance	315627	-94151	150437	484911	84939	23820	5	0.7	0.1	0.66
2015	Royal Exchange	Finance	-896961	-338467	-1298960	271557	104887	29920	5	0.7	0.1	0.72
2016	Royal Exchange	Finance	-743838	-173023	-980252	2473831	77863	38068	4	0.75	0	0.8

2017	Royal Exchange	Finance	-831760	-137883	-969643	765246	94050	46689	5	0.88	0	0.83
2018	Royal Exchange	Finance	459938	-25494	485432	253155	33295	13500	3	0.67	0.44	0.45
2009	Sovereign Trust	Finance	13195	8998	4197	696698	25463	3000	3	0.73	0.18	0.35
2010	Sovereign Trust	Finance	415867	107103	308764	-82855	37885	5000	3	0.73	0.18	0.34
2011	Sovereign Trust	Finance	-513847	25097	538943	377298	49740	5000	2	0.67	0.11	0.68
2012	Sovereign Trust	Finance	1585113	-108759	1476355	320257	87480	5000	3	0.67	0.11	0.56
2013	Sovereign Trust	Finance	274859	72071	346930	925703	124359	7500	4	0.8	0.1	0.6
2014	Sovereign Trust	Finance	326021	-31078	294943	198687	32391	7500	3	0.6	0.1	0.51
2015	Sovereign Trust	Finance	454846	127363	582209	273501	20686	7500	4	0.75	0.17	0.46
2016	Sovereign Trust	Finance	44975	-21383	23592	257023	13350	8500	3	0.69	0.31	0.45
2017	Sovereign Trust	Finance	202694	-44825	151869	431010	19244	10000	4	0.63	0.38	0.49
2018	Sovereign Trust	Finance	540554	-196318	344236	1319766	26086	10000	3	0.6	0.3	0.49
2009	Stanbic Ibtc Holding	Finance	10342000	-2204000	8138000	-2.8E+07	4E+06	138000	4	0.83	0.17	0.69
2010	Stanbic Ibtc Holding	Finance	13528000	-4073000	9455000	-1194000	5E+06	135000	4	0.6	0.6	0.78
2011	Stanbic Ibtc Holding	Finance	10106000	3463000	6643000	65750000	4E+06	135000	4	0.67	0.25	0.85
2012	Stanbic Ibtc Holding	Finance	11726000	1569000	10157000	28923000	4E+06	147000	1	0.83	0.25	0.87
2013	Stanbic Ibtc Holding	Finance	24840000	4067000	20773000	91682000	4E+06	200000	4	0.64	0.27	0.85
2014	Stanbic Ibtc Holding	Finance	40070000	8005000	32065000	28383000	7E+06	220000	4	0.71	0.43	0.88
2015	Stanbic Ibtc Holding	Finance	23651000	-4760000	18891000	15082000	9E+06	310000	5	0.7	0.2	0.86
2016	Stanbic Ibtc Holding	Finance	37209000	-8689000	28520000	2.01E+08	8E+06	341000	5	0.7	0.2	0.87
2017	Stanbic Ibtc Holding	Finance	61166000	-1.3E+07	48381000	1.32E+08	1E+07	340000	4	0.7	0.3	0.87
2018	Stanbic Ibtc Holding	Finance	88152000	-1.4E+07	74440000	32902000	1E+07	387000	4	0.6	0	0.86
2009	Sterling Bank	Finance	-11632428	2612826	-9019602	-3.4E+07	1E+06	100615	4	0.62	0	0.88
2010	Sterling Bank	Finance	4954843	-89700	5044543	24893940	872070	80000	5	0.58	0	0.89
2011	Sterling Bank	Finance	5640310	-1268290	6908600	-1.1E+07	194469	80000	5	0.62	0.08	0.91
2012	Sterling Bank	Finance	7499650	546110	6953540	-1.5E+07	345619	120000	5	0.55	0.09	0.91
2013	Sterling Bank	Finance	9310200	1035330	8274860	-4.4E+07	633370	180000	4	0.55	0.09	0.9
2014	Sterling Bank	Finance	10747990	1743010	9004970	-755006	942230	198500	4	0.56	0.25	0.9
2015	Sterling Bank	Finance	11016301	-723724	10292577	54691995	2E+06	198500	4	0.59	0.29	0.88
2016	Sterling Bank	Finance	5999880	-837515	5162365	-1.2E+08	615570	198500	4	0.5	0.19	0.9

2017	Sterling Bank	Finance	8606000	-85000	8521000	-4.6E+07	710000	215000	4	0.6	0.2	0.9
2018	Sterling Bank	Finance	9489000	-271000	9218000	35703000	0	220000	4	0.65	0.29	0.91
2009	Sunu Assurance	Finance	-843517	-52318	-894835	531929	73204	4000	4	0.64	0.09	0.35
2010	Sunu Assurance	Finance	62026	-33230	28796	-357003	37866	5000	4	0.63	0.25	0.37
2011	Sunu Assurance	Finance	-654260	-61889	-716149	-307196	32799	5500	3	0.63	0.25	0.5
2012	Sunu Assurance	Finance	245855	-96225	149630	306613	55613	10606	4	0.63	0.25	0.52
2013	Sunu Assurance	Finance	-364940	-72892	-437832	597502	44483	9315	4	0.75	0.25	0.6
2014	Sunu Assurance	Finance	310757	-127423	183334	479901	99842	12906	5	0.75	0.25	0.58
2015	Sunu Assurance	Finance	-487033	-93161	-580194	377003	94117	15899	5	0.44	0.11	0.49
2016	Sunu Assurance	Finance	-242462	-165	-407	-964569	131680	16978	4	0.83	0	0.48
2017	Sunu Assurance	Finance	42387	-36714	5673	383997	60249	13196	4	0.73	0.09	0.62
2018	Sunu Assurance	Finance	1653	-43095	-41442	-488898	109151	12416	5	0.6	0.1	0.65
2009	Union Bank Of Nig	Finance	-2.8E+08	-1587000	-2.8E+08	47037000	2E+06	138000	4	0.57	0.14	1.16
2010	Union Bank Of Nig	Finance	36454000	70018000	1.06E+08	45751000	3E+06	157000	4	0.57	0.14	1.1
2011	Union Bank Of Nig	Finance	-1.08E+08	25133000	-8.3E+07	-2.4E+08	2E+06	175000	4	0.57	0.29	0.81
2012	Union Bank Of Nig	Finance	9060000	-1685000	7375000	23894000	102000	152000	4	0.5	0.11	0.81
2013	Union Bank Of Nig	Finance	5141000	933000	6074000	-7.1E+07	102000	118000	4	0.59	0.12	0.8
2014	Union Bank Of Nig	Finance	26971000	-409000	26562000	-1.2E+08	64000	124000	4	0.61	0.11	0.78
2015	Union Bank Of Nig	Finance	14442000	-552000	13890000	-2.2E+07	12987	161000	4	0.53	0.11	0.77
2016	Union Bank Of Nig	Finance	15738000	-347000	15391000	4965000	269000	180000	5	0.56	0.11	0.78
2017	Union Bank Of Nig	Finance	15519000	-911000	14608000	45504000	659000	249000	6	0.65	0.1	0.76
2018	Union Bank Of Nig	Finance	18453000	-360000	18093000	36986000	318000	299000	3	0.6	0.2	0.85
2009	United Bank For Africa	Finance	6637000	4262000	2375000	-2.7E+08	7E+06	196000	4	0.53	0.16	0.86
2010	United Bank For Africa	Finance	3219000	2621000	598000	47676000	7E+06	222000	4	0.42	0.16	0.88
2011	United Bank For Africa	Finance	-26600000	17935000	-8665000	-2.4E+07	2E+06	308000	4	0.5	0.22	0.91
2012	United Bank For Africa	Finance	52010000	-533000	51477000	2.35E+08	4E+06	309000	5	0.5	0.25	0.91
2013	United Bank For Africa	Finance	56058000	-9457000	46601000	-6.4E+07	8E+06	296000	6	0.37	0.26	0.91
2014	United Bank For	Finance	56200000	-8293000	47907000	-1.1E+08	9E+06	358000	4	0.47	0.24	0.9

	Africa											
2015	United Bank For Africa	Finance	68454000	-8800000	59654000	1.11E+08	7E+06	450000	4	0.53	0.16	0.88
2016	United Bank For Africa	Finance	90642000	-1.8E+07	72264000	30111000	2E+07	490000	4	0.53	0.16	0.87
2017	United Bank For Africa	Finance	1.05E+08	-2.7E+07	78590000	1.41E+08	2E+07	607000	4	0.53	0.16	0.87
2018	United Bank For Africa	Finance	1.07E+08	-2.8E+07	78607000	6.06E+08	2E+07	592000	3	0.48	0.14	0.9
2009	Veritas Kapital Assurance (Unitykapital Assurance)	Finance	334629	-115480	112061	-830341	12658	5000	4	0.56	0	0.09
2010	Veritas Kapital Assurance (Unitykapital Assurance)	Finance	6551	-76208	-190234	19150	136139	5000	4	0.64	0	0.1
2011	Veritas Kapital Assurance (Unitykapital Assurance)	Finance	228263	-99884	128379	-195389	88349	7500	5	0.64	0	0.1
2012	Veritas Kapital Assurance (Unitykapital Assurance)	Finance	583848	-220240	363608	-749690	138798	10620	4	0.6	0	0.13
2013	Veritas Kapital Assurance (Unitykapital Assurance)	Finance	222470	41550	264020	446742	119182	15250	5	0.5	0.13	0.14
2014	Veritas Kapital Assurance (Unitykapital Assurance)	Finance	175023	-33547	141476	123558	60552	17557	4	0.58	0.17	0.12
2015	Veritas Kapital Assurance (Unitykapital Assurance)	Finance	441617	-119636	321981	168618	59728	20606	4	0.67	0.17	0.15
2016	Veritas Kapital Assurance (Unitykapital Assurance)	Finance	265435	-73285	192150	-908447	99758	20606	5	0.63	0.13	0.12
2017	Veritas Kapital Assurance (Unitykapital Assurance)	Finance	-558605	-142037	-700642	-1251985	88972	15980		0.73	0.2	0.23

2018	Veritas Kapital Assurance (Unitykapital Assurance)	Finance	-262881	-432371	-695252	-999421	69068	31750	8	0.8	0.1	0.31
2009	Wapic Insurance	Finance	-576055	188513	-387542	-1266381	221224	29700	4	0.67	0	0.35
2010	Wapic Insurance	Finance	269290	-856947	-587657	723767	260557	28291	5	0.67	0	0.35
2011	Wapic Insurance	Finance	581644	-235893	345751	859746	185431	34087	4	0.6	0.2	0.39
2012	Wapic Insurance	Finance	552385	-169353	383032	746007	166188	38180	4	0.71	0.14	0.4
2013	Wapic Insurance	Finance	-629129	511740	-208127	-250711	292391	41582	6	0.64	0.18	0.36
2014	Wapic Insurance	Finance	58573	290331	236834	-2096457	193464	53190	7	0.64	0.29	0.36
2015	Wapic Insurance	Finance	1667663	-370277	1297386	957660	216284	49506	4	0.45	0.27	0.37
2016	Wapic Insurance	Finance	1193446	-607421	586025	-193165	188705	57031	4	0.5	0.3	0.36
2017	Wapic Insurance	Finance	1622691	-91881	1530810	-1388881	319961	61674	4	0.64	0.27	0.37
2018	Wapic Insurance	Finance	187234	163959	351193	-724214	150817	76473	4	0.64	0.27	0.44
2009	Wema Bank	Finance	-8868199	1337901	-7530298	2733849	63872	96800	4	0.43	0	1.23
2010	Wema Bank	Finance	13141764	4313891	17455655	29111952	292251	100000	5	0.56	0	0.92
2011	Wema Bank	Finance	-3770021	458905	-4228926	-2.2E+07	347132	75000	4	0.56	0	0.97
2012	Wema Bank	Finance	-4942211	98418	-5040629	14124619	134431	90000	4	0.58	0.08	0.99
2013	Wema Bank	Finance	1947308	-350777	1596531	14012504	97695	90000	4	0.62	0.15	0.86
2014	Wema Bank	Finance	3093940	-721495	2372445	-4.3E+07	365005	110000	4	0.62	0.15	0.89
2015	Wema Bank	Finance	3045528	-718253	2327275	14676273	274095	110000	4	0.5	0.29	0.88
2016	Wema Bank	Finance	3245144	-684565	2560579	15903858	318014	120000	4	0.5	0.25	0.89
2017	Wema Bank	Finance	3000203	-753715	2255488	-2.7E+07	343082	130000	4	0.58	0.33	0.87
2018	Wema Bank	Finance	4797710	-1471290	3326420	51242990	338604	142742	4	0.58	0.33	0.9
2009	Zenith Bank	Finance	35085000	-1.4E+07	20603000	-3E+08	1E+07	200000	4	0.4	0	0.8
2010	Zenith Bank	Finance	50026000	-1.3E+07	37414000	1.45E+08	1E+07	243000	4	0.46	0.08	0.76
2011	Zenith Bank	Finance	67440000	-1.9E+07	48704000	-4.8E+07	2E+07	289000	4	0.42	0	0.8
2012	Zenith Bank	Finance	1.02E+08	-3519000	1.01E+08	1.04E+08	1E+07	320000	4	0.43	0.14	0.79
2013	Zenith Bank	Finance	1.11E+08	-1.5E+07	95318000	2.66E+08	2E+07	420000	4	0.5	0.17	0.81
2014	Zenith Bank	Finance	1.2E+08	-2E+07	99455000	-2E+07	2E+07	460000	4	0.58	0.17	0.85
2015	Zenith Bank	Finance	1.26E+08	-2E+07	1.06E+08	-4.5E+08	3E+07	546000	4	0.58	0.17	0.85
2016	Zenith Bank	Finance	1.57E+08	-2.7E+07	1.3E+08	-1660000	2E+07	626000	5	0.54	0.08	0.85

2017	Zenith Bank	Finance	2.03E+08	-2.6E+07	1.78E+08	-443000	3E+07	693000	4	0.5	0.07	0.85
2018	Zenith Bank	Finance	2.32E+08	-3.8E+07	1.93E+08	94352000	4E+07	822000	4	0.54	0.08	0.09
2009	Fidson Healthcare	Healthcare	623036	193963	429073	1194995	76720	5750	4	0.38	0.13	0.29
2010	Fidson Healthcare	Healthcare	642183	176290	465893	1165800	111976	6500	2	0.38	0.13	0.34
2011	Fidson Healthcare	Healthcare	214264	158674	55590	-200144	269758	7500	4	0.44	0.22	0.45
2012	Fidson Healthcare	Healthcare	540000	333191	206889	881080	263057	7500	4	0.44	0.22	0.52
2013	Fidson Healthcare	Healthcare	249591	-94611	154980	1769510	154620	10500	4	0.44	0.22	0.57
2014	Fidson Healthcare	Healthcare	870812	-238987	631825	3002259	70000	10500	4	0.44	0.22	0.63
2015	Fidson Healthcare	Healthcare	838039	-93661	744378	2220829	0	11500	3	0.5	0.38	0.62
2016	Fidson Healthcare	Healthcare	443787	-127025	316762	2059110	202569	12000	4	0.5	0.25	0.6
2017	Fidson Healthcare	Healthcare	1578547	-517758	1060789	1710648	288633	13000	4	0.67	0.22	0.56
2018	Fidson Healthcare	Healthcare	160867	-258314	-97447	155939	144875	11500	5	0.63	0.38	0.65
2009	Glaxosmithkline Nig	Healthcare	2469596	767767	2326485	2802492	541397	14100	4	0.9	0.1	0.45
2010	Glaxosmithkline Nig	Healthcare	2935285	-957891	1977394	2295037	679726	16695	4	0.88	0.13	0.47
2011	Glaxosmithkline Nig	Healthcare	3492620	1197632	2302000	3725370	474271	18000	4	0.86	0.14	0.5
2012	Glaxosmithkline Nig	Healthcare	4171665	1348139	2823526	5079202	775369	21300	4	0.86	0.14	0.51
2013	Glaxosmithkline Nig	Healthcare	4314829	-1395659	2919170	4841759	1E+06	25019	4	0.85	0.08	0.53
2014	Glaxosmithkline Nig	Healthcare	2752216	-903374	1848842	1352052	822239	27721	4	0.86	0.14	0.54
2015	Glaxosmithkline Nig	Healthcare	1157514	-192467	965047	5133975	960190	24000	4	0.67	0.08	0.58
2016	Glaxosmithkline Nig	Healthcare	185891	2192254	2378145	1010812	402048	28000	4	0.63	0.13	0.4
2017	Glaxosmithkline Nig	Healthcare	1124269	-637836	486433	-2150414	2E+06	17000	4	0.67	0.17	0.35
2018	Glaxosmithkline Nig	Healthcare	1160154	-542530	617624	-622411	305647	19210		0.75	0.13	0.44
2009	May & Baker Nig	Healthcare	344162	-112081	232081	802735	111669	5280	4	0.67	0	0.56
2010	May & Baker Nig	Healthcare	307790	-114813	192977	579802	82964	5280	4	0.63	0	0.58
2011	May & Baker Nig	Healthcare	339474	84002	255472	1006733	123561	7800	4	0.57	0	0.55
2012	May & Baker Nig	Healthcare	44522	31421	75943	-293682	133485	12600	4	0.57	0.29	0.61
2013	May & Baker Nig	Healthcare	-11370	-91719	-103089	1301394	42069	8000	4	0.57	0.14	0.63
2014	May & Baker Nig	Healthcare	101174	-37833	63341	766997	30676	10000	4	0.57	0.14	0.62
2015	May & Baker Nig	Healthcare	142397	-74364	68033	1589652	38866	10000	4	0.64	0.27	0.62
2016	May & Baker Nig	Healthcare	345939	-387033	-41094	1501186	70254	10000	4	0.78	0.11	0.65

2017	May & Baker Nig	Healthcare	605622	-234756	370866	872513	146704	10000	4	0.56	0.11	0.57
2018	May & Baker Nig	Healthcare	817912	-475226	342686	1352984	55115	10700	4	0.6	0.1	0.55
2009	Morison Industries	Healthcare	-20857	-405	-20452	25643	4447	3500	3	0.83	0.17	0.25
2010	Morison Industries	Healthcare	-33127	555	-33682	5312	0	3500	3	0.83	0.17	0.27
2011	Morison Industries	Healthcare	-26137	2264	-28401	4122	0	2000	3	0.83	0.17	0.25
2012	Morison Industries	Healthcare	2014	4331	2014	11530	0	3000	4	0.63	0	0.26
2013	Morison Industries	Healthcare	-14100	7965	-22065	-36834	621	3000	3	0.63	0	0.22
2014	Morison Industries	Healthcare	-88309	5978	-82331	44	7330	3000	3	0.63	0	0.26
2015	Morison Industries	Healthcare	-46106	-62394	-108500	-1886	0	2000	3	0.78	0	0.47
2016	Morison Industries	Healthcare	-78585	0	-78585	5599	0	2000	3	0.78	0	0.65
2017	Morison Industries	Healthcare	-181178	0	-181178	-112170	0	2000	4	0.88	0	1.07
2018	Morison Industries	Healthcare	-188634	-1448	-190082	-175309	0	2000	3	0.83	0	0.53
2009	Neimeth Int Pharm	Healthcare	-406380	-48856	-455206	164127	91142	6700	3	0.45	0	0.63
2010	Neimeth Int Pharm	Healthcare	-117795	-8338	-126133	399746	15957	8000	3	0.45	0	0.77
2011	Neimeth Int Pharm	Healthcare	123436	-10359	113077	166395	23118	6000	3	0.5	0	0.67
2012	Neimeth Int Pharm	Healthcare	87508	18204	-69304	159023	4770	7000	3	0.5	0	0.45
2013	Neimeth Int Pharm	Healthcare	182135	-18382	130578	86520	9370	7000	4	0.5	0	0.38
2014	Neimeth Int Pharm	Healthcare	198173	30362	228535	89520	977	7000	4	0.73	0	0.41
2015	Neimeth Int Pharm	Healthcare	-315770	-19910	-335680	243950	24436	7700	5	0.67	0.08	0.47
2016	Neimeth Int Pharm	Healthcare	95361	-30268	65093	550043	10631	7700	4	0.67	0.08	0.55
2017	Neimeth Int Pharm	Healthcare	-404920	-6584	-411484	-81905	12757	7700	6	0.8	0.1	0.65
2018	Neimeth Int Pharm	Healthcare	202479	-18444	184035	362387	0	8085	4	0.8	0.1	0.57
2009	Pharma-Deko	Healthcare	-460455	-1042	-461497	-175358	6757	5000	3	0.9	0.2	1.52
2010	Pharma-Deko	Healthcare	-462919	-1175	-464094	17055	2942	3000	3	0.9	0.2	1.68
2011	Pharma-Deko	Healthcare	97602	21119	16114	142810	0	3000	4	0.9	0.2	1.42
2012	Pharma-Deko	Healthcare	686776	54169	740945	658184	0	3000	6	0.67	0	0.66
2013	Pharma-Deko	Healthcare	-127993	6811	-121182	134554	0	3500	4	0.67	0	0.67
2014	Pharma-Deko	Healthcare	150171	-49164	101007	442808	35971	3500	4	0.7	0	0.67
2015	Pharma-Deko	Healthcare	701674	-42410	659264	-866092	11230	3500	4	0.7	0	0.31
2016	Pharma-Deko	Healthcare	-208521	-10182	-218703	-345992	26618	4725	4	0.78	0	0.25

2017	Pharma-Deko	Healthcare	39317	-26709	12607	87995	9923	4725	4	0.88	0	0.23
2018	Pharma-Deko	Healthcare	-255983	-9277	-265260	-49978	1606	4725	4	0.89	0	0.32
2009	Chams	ICT	-2474699	-140540	-2873094	-2596189	0	5000	2	0.75	0	0.25
2010	Chams	ICT	-1801323	424710	-1382229	-602222	17269	5000	2	0.71	0	0.39
2011	Chams	ICT	-1198400	-38582	-1236982	146239	0	5000	3	0.71	0	0.48
2012	Chams	ICT	169627	-82088	87539	-243973	0	5000	2	0.71	0	0.48
2013	Chams	ICT	169627	81541	188464	418404	0	5000	3	0.71	0	0.56
2014	Chams	ICT	261805	18622	280427	819521	16116	5000	3	0.78	0.11	0.51
2015	Chams	ICT	-3393020	-12296	-3405316	179948	12000	5000	3	0.83	0	0.61
2016	Chams	ICT	-1471917	-46696	-1518613	447711	12637	5000	3	0.71	0.14	0.7
2017	Chams	ICT	-1230432	-30297	-1260729	183079	247541	0	4	0.89	0.22	0.88
2018	Chams	ICT	301614	78534	380148	-163467	70078	0	4	0.9	0.3	0.99
2009	Courtville Investment	ICT	215935	-34491	181444	44244	22959	2500	4	0.29	0	0.11
2010	Courtville Investment	ICT	231108	-51681	179428	339217	40367	2500	4	0.45	0.09	0.1
2011	Courtville Investment	ICT	303635	-58283	245352	410331	20000	2500	2	0.45	0.09	0.14
2012	Courtville Investment	ICT	374202	-75880	298322	338477	83028	2500	3	0.45	0.18	0.33
2013	Courtville Investment	ICT	403030	-95225	307805	399545	15000	2500	3	0.45	0.18	0.32
2014	Courtville Investment	ICT	457031	-139374	317657	713068	27040	3000	4	0.4	0.2	0.32
2015	Courtville Investment	ICT	184386	-118769	65617	189529	19000	3000	4	0.4	0.2	0.29
2016	Courtville Investment	ICT	38887	-2077	36810	238387	110221	3000	4	0.45	0.09	0.22
2017	Courtville Investment	ICT	52037	-15060	36976	285705	185407	3500	9	0.63	0.13	0.22
2018	Courtville Investment	ICT	179797	-101356	78440	1172581	44719	3675	4	0.73	0.09	0.22
2009	Etranzact Interntional	ICT	-167394	-7294	-174688	510143	7000	2500	3	0.78	0	0.05
2010	Etranzact Interntional	ICT	-200230	61926	-138304	17722	7651	6000	3	0.78	0	0.05
2011	Etranzact Interntional	ICT	126035	44749	81286	-40234	2495	6000	3	0.78	0	0.06
2012	Etranzact Interntional	ICT	178694	-50936	127758	327584	27050	8000	3	0.78	0	0.14
2013	Etranzact Interntional	ICT	246401	-53717	192684	342583	22738	8000	5	0.8	0	0.28
2014	Etranzact Interntional	ICT	604278	-196716	407562	1018252	0	10000	3	0.56	0	0.36
2015	Etranzact Interntional	ICT	1063945	-359241	704704	1353817	68427	10000	5	0.56	0	0.4
2016	Etranzact Interntional	ICT	865131	-415645	449486	1614202	192823	15000	5	0.56	0	0.49

2017	Etranzact Interntional	ICT	292201	-83796	208405	-815004	300259	15000	4	0.7	0	0.47
2018	Etranzact Interntional	ICT	-3277655	141242	-3136413	-355581	233422	15000	4	0.7	0	0.97
2009	Ncr Nigeria	ICT	1141882	-197019	944863	-56248	555	5250	3	0.8	0	0.83
2010	Ncr Nigeria	ICT	1061499	-339913	721586	609269	23013	5250	3	0.67	0	0.49
2011	Ncr Nigeria	ICT	355089	-125649	229440	789630	22258	6500	5	0.6	0	0.6
2012	Ncr Nigeria	ICT	-1148910	83734	-1065176	1174323	10063	9750	3	0.71	0	0.97
2013	Ncr Nigeria	ICT	104872	-124245	-19373	-794948	0	8500	3	0.71	0	0.98
2014	Ncr Nigeria	ICT	215027	-57639	157388	414212	3479	8500	3	0.6	0	0.96
2015	Ncr Nigeria	ICT	226107	-207497	18610	508947	4961	8500	3	0.6	0	0.97
2016	Ncr Nigeria	ICT	326938	-260448	66490	487776	9537	8500	4	0.57	0.14	0.97
2017	Ncr Nigeria	ICT	620042	-469374	150668	-289073	40117	8500	4	0.63	0.25	0.83
2018	Ncr Nigeria	ICT	69907	-44000	25907	2071760	40707	8500	4	0.71	0.43	0.95
2009	Tripple Gee & Company	ICT	175427	-32155	143272	134810	9292	750	4	0.86	0.14	0.49
2010	Tripple Gee & Company	ICT	-46120	-4730	-50850	58695	4337	750	4	0.67	0.17	0.42
2011	Tripple Gee & Company	ICT	-45342	-3880	-49222	109513	109513	750	4	0.67	0.17	0.56
2012	Tripple Gee & Company	ICT	8905	-2672	-6234	82661	109513	900	4	0.67	0.17	0.63
2013	Tripple Gee & Company	ICT	26901	-8070	18831	139535	1000	900	4	0.67	0.17	0.56
2014	Tripple Gee & Company	ICT	22135	-8841	15484	151933	0	900	4	0.67	0.17	0.6
2015	Tripple Gee & Company	ICT	53915	-13156	40759	29273	0	1100	4	0.67	0.17	0.64
2016	Tripple Gee & Company	ICT	36884	-9221	27663	128694	0	1100	3	0.67	0.17	0.65
2017	Tripple Gee & Company	ICT	15589	-5350	10239	44695	54979	1100	3	0.83	0.17	0.4
2018	Tripple Gee & Company	ICT	37804	-14354	23450	79375	19200	1100	3	0.83	0.17	0.45
2009	Berger Paints Nig	Industrial	322867	129591	193276	362806	111891	10500	3	0.56	0	0.41
2010	Berger Paints Nig	Industrial	442463	77434	442463	196532	119611	13000	3	0.56	0	0.36
2011	Berger Paints Nig	Industrial	369325	141509	227816	296518	164446	14300	3	0.6	0	0.35

2012	Berger Paints Nig	Industrial	284465	92456	192009	250780	116064	15000	3	0.8	0	0.39
2013	Berger Paints Nig	Industrial	356096	-104750	251346	311797	110088	15500	3	0.8	0	0.31
2014	Berger Paints Nig	Industrial	249258	-100450	148808	-462336	57674	16500	3	0.73	0	0.32
2015	Berger Paints Nig	Industrial	565212	-234896	330316	514780	35151	15500	4	0.67	0	0.34
2016	Berger Paints Nig	Industrial	271770	-47763	224007	758941	21567	16275	4	0.9	0	0.37
2017	Berger Paints Nig	Industrial	339456	-93180	246276	326215	166284	17500	4	0.9	0	0.39
2018	Berger Paints Nig	Industrial	454328	-133819	320509	380053	50300	17500	4	0.82	0.09	0.38
2009	Beta Glass Company	Industrial	1813400	-428624	1384776	2949571	103459	8400	4	0.55	0	0.36
2010	Beta Glass Company	Industrial	1832403	-359959	1472444	2910197	122373	14400	4	0.55	0	0.39
2011	Beta Glass Company	Industrial	2300357	525697	1774660	2735475	228057	14400	4	0.5	0	0.37
2012	Beta Glass Company	Industrial	1857089	528509	1328580	1283118	549295	19184	4	0.78	0	0.45
2013	Beta Glass Company	Industrial	2043293	-575949	1467344	2922972	450548	19184	4	0.78	0	0.49
2014	Beta Glass Company	Industrial	3340660	-950437	2390223	4341370	557102	20527	4	0.78	0	0.41
2015	Beta Glass Company	Industrial	3114795	-1123668	1991127	4842441	1E+06	22272	4	0.78	0	0.35
2016	Beta Glass Company	Industrial	5215253	-1415860	3799393	4912545	228489	22272	4	0.75	0	0.35
2017	Beta Glass Company	Industrial	5854740	-1739598	4115142	1076544	1E+06	22272	4	0.7	0.4	0.34
2018	Beta Glass Company	Industrial	7188181	-2135376	5052805	8614946	3E+06	26426		0.7	0.11	0.36
2009	Cement Comy Of Northern Nig	Industrial	2317300	-505000	1812300	3411553	266900	3000	4	0.56	0.11	0.57
2010	Cement Comy Of Northern Nig	Industrial	1752034	-483000	1269034	830710	666110	3000	4	0.56	0.11	0.55
2011	Cement Comy Of Northern Nig	Industrial	3294097	-989581	2304000	1873508	378262	3000	4	0.56	0.11	0.44
2012	Cement Comy Of Northern Nig	Industrial	1652866	-457000	1196000	1089589	0	7500	4	0.46	0.08	0.46
2013	Cement Comy Of Northern Nig	Industrial	1970439	-547000	1423000	2071903	0	7500	4	0.46	0.08	0.4
2014	Cement Comy Of Northern Nig	Industrial	2476771	-558409	1918361	1863994	507135	13022	4	0.73	0	0.4
2015	Cement Comy Of Northern Nig	Industrial	1549596	-348488	1201108	2583252	521364	13009	4	0.73	0.09	0.41
2016	Cement Comy Of Northern Nig	Industrial	1740522	-486716	1253805	2799490	236164	12120	4	0.78	0	0.43
2017	Cement Comy Of Northern Nig	Industrial	4203153	-979299	3223852	3625887	304866	11181	4	0.88	0.13	0.42

2018	Cement Comy Of Northern Nig	Industrial	7591667	-1860347	5731321	4814862	333586	18858	4	0.83	0.08	0.04
2009	Chemical & Allied Product	Industrial	619296	-278316	340980	299421	243739	10000	4	0.33	0.17	0.65
2010	Chemical & Allied Product	Industrial	1139014	-256158	882856	804643	274618	10000	4	0.43	0.14	0.57
2011	Chemical & Allied Product	Industrial	1300325	-295043	1048391	933155	345191	14000	4	0.43	0.14	0.52
2012	Chemical & Allied Product	Industrial	1661181	545627	1115554	913532	428311	17000	4	0.67	0.33	0.61
2013	Chemical & Allied Product	Industrial	2086993	-670198	1416795	1448653	426330	19500	4	0.5	0.33	0.58
2014	Chemical & Allied Product	Industrial	2442140	-779715	1662425	1341425	663039	21060	4	0.5	0.33	0.62
2015	Chemical & Allied Product	Industrial	2570021	-830462	1739559	261700	1E+06	20575	4	0.5	0.33	0.55
2016	Chemical & Allied Product	Industrial	2296821	-693464	1603357	134054	531155	19530	4	0.8	0.2	0.54
2017	Chemical & Allied Product	Industrial	2181711	682981	1498730	1804682	682923	19530	4	0.71	0.29	0.55
2018	Chemical & Allied Product	Industrial	2597832	-568489	2029343	2686030	319081	20983	4	0.71	0.29	0.55
2009	Cutix	Industrial	134134	55822	78312	154727	42001	1000	4	0.58	0.08	0.49
2010	Cutix	Industrial	212114	-74053	138061	36254	34622	1000	4	0.54	0.08	0.55
2011	Cutix	Industrial	125354	-41028	84326	229377	50440	1800	4	0.58	0.08	0.47
2012	Cutix	Industrial	118635	-39621	79014	38761	68899	1800	4	0.78	0.22	0.46
2013	Cutix	Industrial	229287	-75845	151423	193538	69473	1800	4	0.71	0.29	0.44
2014	Cutix	Industrial	264837	-57721	207116	126655	59876	2000	4	0.71	0.29	0.6
2015	Cutix	Industrial	202107	-52898	149209	222355	27078	2000	4	0.67	0.17	0.62
2016	Cutix	Industrial	278114	-87563	190551	644996	222355	2000	4	0.71	0.14	0.54
2017	Cutix	Industrial	370143	-112645	257498	190068	91190	2500	4	0.89	0.11	0.56
2018	Cutix	Industrial	661563	-221268	440295	609575	83311	3000	4	0.86	0.29	0.54
2009	Dn Meyer	Industrial	-473237	-153832	-627069	50360	0	4200	4	0.71	0	0.69
2010	Dn Meyer	Industrial	-231935	-4439	-236374	788700	17669	4500	4	0.67	0.11	0.78
2011	Dn Meyer	Industrial	-93738	-4236	-54091	318753	0	5000	4	0.75	0.13	0.75
2012	Dn Meyer	Industrial	-28834	1887	-26947	-34758	4236	9500	4	0.75	0.13	0.75

2013	Dn Meyer	Industrial	51189	-4121	47068	245862	809	8500	4	0.75	0.13	0.74
2014	Dn Meyer	Industrial	-37362	787	-36575	140348	5814	10500	4	0.78	0.22	0.74
2015	Dn Meyer	Industrial	60459	-7599	52860	11864	5327	4773	4	0.78	0.22	0.71
2016	Dn Meyer	Industrial	-215832	-3364	-219196	-36213	7314	4100	4	0.75	0.13	0.79
2017	Dn Meyer	Industrial	-264809	-3035	-267844	-20821	3364	4100	6	0.89	0.11	0.82
2018	Dn Meyer	Industrial	182302	136885	319885	28336	3040	4100	6	0.56	0.13	0.64
2009	First Alumminium Nig	Industrial	59621	11305	48316	1439556	0	13000	3	0.5	0	0.38
2010	First Alumminium Nig	Industrial	-298070	-36516	-334586	566605	8435	12000	3	0.43	0	0.4
2011	First Alumminium Nig	Industrial	-204318	-70471	-274789	784557	11262	10000	3	0.43	0	0.4
2012	First Alumminium Nig	Industrial	-1053239	48847	-1004393	256661	89186	11000	5	0.33	0	0.49
2013	First Alumminium Nig	Industrial	27714	69409	97123	872151	0	11000	2	0.33	0	0.46
2014	First Alumminium Nig	Industrial	104450	-74643	29807	770123	4968	12000	3	0.33	0	0.45
2015	First Alumminium Nig	Industrial	41265	69382	110647	713196	7569	12000	4	0.33	0.17	0.42
2016	First Alumminium Nig	Industrial	269713	-106200	163513	928994	3302	11000	4	0.67	0.33	0.47
2017	First Alumminium Nig	Industrial	521710	-311780	209930	1411952	7669	12660	3	0.67	0.33	0.48
2018	First Alumminium Nig	Industrial	521710	-311780	209930	1411952	7669	12660	3	0.67	0.33	0.56
2009	Greif Nig	Industrial	813	-18017	-17258	40541	4157	2750	4	0.6	0	0.59
2010	Greif Nig	Industrial	73094	-29461	43633	56832	5052	3087	3	0.6	0	0.49
2011	Greif Nig	Industrial	73150	-33198	38382	92812	5017	3087	4	0.6	0	0.41
2012	Greif Nig	Industrial	56068	-19682	36386	65792	20889	3087	3	0.6	0	0.45
2013	Greif Nig	Industrial	52469	-21843	30626	51316	11467	3087	3	0.6	0	0.53
2014	Greif Nig	Industrial	58029	-14586	43443	45639	16714	5250	3	0.6	0	0.49
2015	Greif Nig	Industrial	40149	-15525	24624	107399	18093	5250	3	0.67	0	0.53
2016	Greif Nig	Industrial	27597	-10491	27106	-135337	31898	5750	3	0.5	0	0.53
2017	Greif Nig	Industrial	49424	0	49424	127019	27482	6000	3	0.8	0	0.54

2018	Greif Nig	Industrial	-245229	-17360	-262589	-61706	49237	6000	3	0.8	0	0.79
2009	Lafarge Cement Wapco Nig	Industrial	9237328	4181930	5055398	9459432	620402	28266	4	0.92	0.08	0.45
2010	Lafarge Cement Wapco Nig	Industrial	8464365	3583002	4881363	12593125	445584	28266	4	0.92	0.08	0.63
2011	Lafarge Cement Wapco Nig	Industrial	10349273	1709886	8639387	31341223	234120	28266	3	0.92	0.08	0.63
2012	Lafarge Cement Wapco Nig	Industrial	21264420	6552744	14711676	24968838	964943	30800	3	0.69	0.15	0.55
2013	Lafarge Cement Wapco Nig	Industrial	27714997	552187	28267183	36939298	238658	142545	4	0.69	0.15	0.42
2014	Lafarge Cement Wapco Nig	Industrial	41198427	-6537761	34660666	48751080	3E+06	156005	4	0.74	0.26	0.44
2015	Lafarge Cement Wapco Nig	Industrial	29274869	-2276596	26998273	57867963	2E+06	187180	4	0.71	0.29	0.61
2016	Lafarge Cement Wapco Nig	Industrial	-22818718	39717499	16898781	10663215	872808	191024	4	0.82	0.29	0.5
2017	Lafarge Cement Wapco Nig	Industrial	-34319949	-281460	-3.5E+07	-7122801	772057	221264	4	0.94	0.28	0.73
2018	Lafarge Cement Wapco Nig	Industrial	-19508228	10706502	-8801726	27964997	2E+06	206640	4	0.94	0.29	0.75
2009	Portland Paint Nig	Industrial	272558	66569	183100	79791	35943	3500	4	0.6	0	0.45
2010	Portland Paint Nig	Industrial	246842	115218	131624	193971	145653	4000	4	0.43	0	0.6
2011	Portland Paint Nig	Industrial	274948	-118063	156885	314312	91829	5000	3	0.43	0	0.56
2012	Portland Paint Nig	Industrial	-199162	29199	-228361	295582	31141	6500	5	0.67	0	0.67
2013	Portland Paint Nig	Industrial	123591	-16117	107473	34158	42553	8660	4	0.67	0	0.59
2014	Portland Paint Nig	Industrial	194297	-45654	148643	175897	29484	10000	4	0.67	0	0.59
2015	Portland Paint Nig	Industrial	-258369	25384	-232985	249371	78655	10735	4	0.67	0	0.64
2016	Portland Paint Nig	Industrial	7502	1094	8597	96074	1861	10800	4	0.67	0.17	0.6
2017	Portland Paint Nig	Industrial	123868	-65698	58170	-257587	1061	11880	4	0.86	0.14	0.32
2018	Portland Paint Nig	Industrial	307533	-100840	206693	425156	44692	11880	4	0.83	0.17	0.32
2009	Premier Paints	Industrial	-16851	1112	-17963	-17798		500	3	0.71	0	0.61
2010	Premier Paints	Industrial	-57116	29966	-87082	5540	0	3250	3	0.78	0.11	0.8
2011	Premier Paints	Industrial	-64792	3455	-61337	-49742	1637	3250	3	0.78	0.11	0.56
2012	Premier Paints	Industrial	-43035	12813	-30222	-22311	796	4500	3	0.67	0.11	0.96

2013	Premier Paints	Industrial	12580	-5128	-21130	10586		4500	3	0.67	0.11	0.88
2014	Premier Paints	Industrial	11676	-3585	8091	12904	690	4500	3	0.67	0	0.56
2015	Premier Paints	Industrial	-50840	21343	-29497	25656	1801	4500	3	0.67	0	0.92
2016	Premier Paints	Industrial	-40245	1721	-38523	29833	660	4500	4	0.67	0	0.8
2017	Premier Paints	Industrial	-76395	22492	-53903	-4670	466	1260	3	0.78	0	0.78
2018	Premier Paints	Industrial	-72216	3080	-69136	2986	0	1200	3	0.86	0	0.15
2009	11 Plc	Oil & Gas	4066153	1224190	2841963	5541279	770000	11678	3	0.43	0.14	0.81
2010	11 Plc	Oil & Gas	5721728	-1836118	3885610	6391776	594022	12365	3	0.4	0.2	0.56
2011	11 Plc	Oil & Gas	5999413	1917354	4082059	6910024	1E+06	12940	2	0.4	0.2	0.83
2012	11 Plc	Oil & Gas	4076549	1198250	2878299	4968841	2E+06	23823	4	0.33	0.17	0.8
2013	11 Plc	Oil & Gas	5123002	-1642217	3480785	11536145	2E+06	28177	3	0.33	0.17	0.77
2014	11 Plc	Oil & Gas	8445137	-2053347	6392790	5595423	2E+06	26517	4	0.33	0.17	0.72
2015	11 Plc	Oil & Gas	6906322	-2033393	4872929	11158304	3E+06	23427	4	0.5	0.17	0.72
2016	11 Plc	Oil & Gas	12019892	-3865599	8154293	11036077	692527	15569	4	0.5	0.17	0.65
2017	11 Plc	Oil & Gas	13366905	-3619153	7518733	-548489	3E+06	24164	4	0.63	0	0.63
2018	11 Plc	Oil & Gas	13695459	-4366524	9328935	2026528	3E+06	21000	4	0.71	0	0.52
2009	Eternaoil	Oil & Gas	-1962168	466975	-1495203	-502498	1551	8000	3	0.8	0	0.62
2010	Eternaoil	Oil & Gas	1159730	-436979	722737	2563396	9763	8000	3	0.8	0	0.5
2011	Eternaoil	Oil & Gas	1789885	-578726	1211156	-2227353	33292	10000	2	0.8	0	0.6
2012	Eternaoil	Oil & Gas	1413128	466772	946356	-253955	132036	11013	4	0.8	0	0.81
2013	Eternaoil	Oil & Gas	1069428	-366232	703196	4742614	135645	14636	4	0.8	0	0.61
2014	Eternaoil	Oil & Gas	974366	0	974366	4169541	184040	15636	4	0.6	0.2	0.78
2015	Eternaoil	Oil & Gas	1306585	-28512	1278073	-2188577	180585	19500	4	0.75	0.25	0.66
2016	Eternaoil	Oil & Gas	2400172	-922613	1477559	7732649	114309	25500	4	0.63	0.25	0.66
2017	Eternaoil	Oil & Gas	2812941	-811039	2001902	345160	421440	25000	4	0.75	0.25	0.74
2018	Eternaoil	Oil & Gas	1989899	-980903	1008996	-1759669	623528	40000		0.75	0.25	0.76
2009	Forte Oil (Ap)	Oil & Gas	-8921636	437937	-9158927	9344654	2E+06	53956	4	0.9	0.1	0.62
2010	Forte Oil (Ap)	Oil & Gas	-2843846	801104	-2747405	12805968	503640	33828	4	0.9	0.1	0.63
2011	Forte Oil (Ap)	Oil & Gas	-19949954	-377600	-2E+07	-2899083	784353	41273	4	0.63	0.13	0.87
2012	Forte Oil (Ap)	Oil & Gas	1149805	142298	1007507	1931034	142298	48841	4	0.56	0.22	0.82

2013	Forte Oil (Ap)	Oil & Gas	6524550	-1520153	5004397	67669	1E+06	65345	4	0.67	0.11	0.6
2014	Forte Oil (Ap)	Oil & Gas	6006298	-1549681	4456617	2165298	0	66349	4	0.56	0.11	0.68
2015	Forte Oil (Ap)	Oil & Gas	7012440	1218390	5794060	12739850	1E+06	67162	6	0.4	0.1	0.89
2016	Forte Oil (Ap)	Oil & Gas	5340244	2449814	2890430	14332180	2E+06	73486	4	0.4	0.1	0.69
2017	Forte Oil (Ap)	Oil & Gas	10627156	1599266	12226422	4142630	1E+06	73695	4	0.75	0.13	0.62
2018	Forte Oil (Ap)	Oil & Gas	758544	-397073	361471	9642415	556303	34125	4	0.75	0.25	0.55
2009	Japaul Oil & Maritime Serv	Oil & Gas	1025705	294802	730903	-21627	61290	3500	4	0.63	0	0.76
2010	Japaul Oil & Maritime Serv	Oil & Gas	1071684	178928	792753	1439577	68191	4000	4	0.78	0	0.86
2011	Japaul Oil & Maritime Serv	Oil & Gas	144646	-227208	980438	2771391	322899	4500	4	0.8	0	0.83
2012	Japaul Oil & Maritime Serv	Oil & Gas	-6584090	-191275	-6775365	5761143	77792	5500	4	0.5	0	0.54
2013	Japaul Oil & Maritime Serv	Oil & Gas	460274	-220529	239746	1113881	0	12906	4	0.5	0	0.61
2014	Japaul Oil & Maritime Serv	Oil & Gas	-2258361	-380133	-2638494	1261969	60695	10000	4	0.5	0	0.68
2015	Japaul Oil & Maritime Serv	Oil & Gas	-7899056	-137867	-8036923	527105	33721	12500	4	0.5	0.17	0.9
2016	Japaul Oil & Maritime Serv	Oil & Gas	-21344797	-96778	-2.1E+07	2617549	149	12500	4	0.5	0.17	0.61
2017	Japaul Oil & Maritime Serv	Oil & Gas	-13081595	-127152	-1.3E+07	-4718695	20110	10000	4	0.6	0.2	0.2
2018	Japaul Oil & Maritime Serv	Oil & Gas	-6583280	-10352	-6593632	1392751	2363	10000		0.4		0.39
2009	Mrs(Texaco Chevron)	Oil & Gas	1050910	670373	1721283	1392593	174704	13500	4	0.7	0.1	0.99
2010	Mrs(Texaco Chevron)	Oil & Gas	1847327	-1040356	2887683	1694444	210683	13500	4	0.57	0	0.55
2011	Mrs(Texaco Chevron)	Oil & Gas	615624	-797618	1413242	3660015	1E+06	17114	4	0.57	0	0.74
2012	Mrs(Texaco Chevron)	Oil & Gas	205121	-173634	378755	10277414	1E+06	24914	5	0.63	0.13	0.66
2013	Mrs(Texaco Chevron)	Oil & Gas	1407143	-772725	634418	9644924	976442	24914	5	0.63	0.13	0.7
2014	Mrs(Texaco Chevron)	Oil & Gas	1282053	-535649	746404	3053150	896656	27231	5	0.57	0.14	0.65

2015	Mrs(Texaco Chevron)	Oil & Gas	1460843	-525218	935625	2464533	939113	30000	5	0.75	0.13	0.69
2016	Mrs(Texaco Chevron)	Oil & Gas	2287347	-821442	1465905	410273	701883	30000	5	0.75	0.13	0.73
2017	Mrs(Texaco Chevron)	Oil & Gas	-996609	2381665	1385056	5260431	1E+06	35000	5	0.89	0.11	0.63
2018	Mrs(Texaco Chevron)	Oil & Gas	-1427448	162507	-1264941	-1401249	450580	35000	5	0.9	0.3	0.62
2009	Oando	Oil & Gas	13512155	-3415176	10096979	58163210	6E+06	135000	4	0.29	0.07	0.83
2010	Oando	Oil & Gas	24318845	-9943879	14374966	10618336	8E+06	130100	4	0.25	0.06	0.71
2011	Oando	Oil & Gas	13885097	-1.1E+07	346643	-2071700	1E+07	166028	4	0.31	0.13	0.77
2012	Oando	Oil & Gas	17554067	-6767750	10786317	29310426	1E+07	156178	4	0.31	0.13	0.8
2013	Oando	Oil & Gas	713207	-5389472	-4676265	32888267	5E+06	204750	4	0.31	0.13	0.73
2014	Oando	Oil & Gas	-1.71E+08	-7958945	-1.8E+08	-4.5E+07	1E+07	529987	4	0.58	0.08	0.95
2015	Oando	Oil & Gas	-32735583	1537880	-3.1E+07	8262264	9E+06	537946	4	0.58	0.08	0.95
2016	Oando	Oil & Gas	-25806484	37569028	-2.6E+07	71780774	8E+06	418118	4	0.62	0	0.81
2017	Oando	Oil & Gas	20764585	-7295366	13469219	48890081	2E+07	414394	4	0.7	0	0.75
2018	Oando	Oil & Gas	11188120	17609623	28797623	58678003	3E+07	434097		0.83	0	0.74
2009	Total Nigeria	Oil & Gas	6163359	2195300	3968059	6985584	2E+06	20900	4	0.67	0.11	0.86
2010	Total Nigeria	Oil & Gas	5783464	1811547	3971917	6112619	2E+06	22990	4	0.73	0.09	0.84
2011	Total Nigeria	Oil & Gas	5858613	-2045411	3813202	12612121	1E+06	22990	4	0.67	0.11	0.83
2012	Total Nigeria	Oil & Gas	7098172	-2427255	4670917	-8428599	2E+06	25289	4	0.8	0.1	0.85
2013	Total Nigeria	Oil & Gas	8120018	-2785927	5334091	13658707	2E+06	29977	4	0.7	0.1	0.83
2014	Total Nigeria	Oil & Gas	5558326	-1134593	4423733	15604793	3E+06	21446	4	0.64	0.18	0.85
2015	Total Nigeria	Oil & Gas	6495390	-2448339	4047051	10649288	2E+06	24228	4	0.64	0.18	0.81
2016	Total Nigeria	Oil & Gas	20353076	-5555981	14797095	16956719	4E+06	27359	4	0.56	0.11	0.83
2017	Total Nigeria	Oil & Gas	11795283	-3775985	8019298	7653788	7E+06	39047	5	0.78	0.22	0.74
2018	Total Nigeria	Oil & Gas	12098463	-4.1E+07	7960893	-3457458	981723	36023	4	0.78	0.11	0.77
2009	Aluminium Extrusion Indus	Resources	125838	48140	77699	93619	4929	1200	4	0.89	0	0.66
2010	Aluminium Extrusion Indus	Resources	91994	31676	60318	96602	6108	1600	4	0.89	0	0.65
2011	Aluminium Extrusion Indus	Resources	80710	-30171	50539	15244	5529	2500	4	0.89	0	0.5

2012	Aluminium Extrusion Indus	Resources	77561	-32449	45112	81746	5818	2500	4	0.71	0	0.41
2013	Aluminium Extrusion Indus	Resources	131548	-3912	135460	92964	9409	2500	4	0.71	0	0.43
2014	Aluminium Extrusion Indus	Resources	118922	-51157	170079	164066	10800	2850	4	0.67	0	0.37
2015	Aluminium Extrusion Indus	Resources	120439	-37485	82954	91585	14569	1500	4	0.63	0	0.38
2016	Aluminium Extrusion Indus	Resources	127563	-39511	88052	57475	29668	1500	4	0.71	0	0.19
2017	Aluminium Extrusion Indus	Resources	124014	-40616	83398	270309	46715	1500	4	0.86	0	0.29
2018	Aluminium Extrusion Indus	Resources	128043	-41142	86901	148845	51501	2250	4	0.86	0	0.28
2009	B.O.C Gases Nig	Resources	429788	180304	249484	372244	45555	9000	3	0.5	0	0.55
2010	B.O.C Gases Nig	Resources	518039	171359	346680	422653	81133	10500	3	0.5	0	0.47
2011	B.O.C Gases Nig	Resources	487492	-154919	332573	431072	160367	10500	3	0.5	0	0.4
2012	B.O.C Gases Nig	Resources	499049	194417	304632	511524	137934	12789	3	0.5	0	0.38
2013	B.O.C Gases Nig	Resources	380322	-117565	262757	536523	177963	12936	3	0.5	0	0.37
2014	B.O.C Gases Nig	Resources	310207	-82322	225601	581141	71397	14036	3	0.5	0	0.41
2015	B.O.C Gases Nig	Resources	131042	-9852	121190	284083	16057	16164	3	0.5	0	0.34
2016	B.O.C Gases Nig	Resources	121457	-45168	76289	385437	12482	17500	3	0.63	0	0.4
2017	B.O.C Gases Nig	Resources	383886	-149940	233946	560606	16094	15000	2	0.75	0	0.44
2018	B.O.C Gases Nig	Resources	558569	-200965	357604	568428	13719	16500	4	0.71	0	0.41
2009	Multiverse	Resources	82660	4769	93809	53921	0	1000	3	0.63	0	0.13
2010	Multiverse	Resources	45783	2678	43104	116770	4769	2000	3	0.57	0	0.17
2011	Multiverse	Resources	138120	-3695	25569	348677	0	2000	3	0.63	0	0.26
2012	Multiverse	Resources	34686	-4038	30648	422371	0	3000	4	0.63	0	0.31
2013	Multiverse	Resources	-372220	78275	-293945	27367	0	3000	3	0.5	0	0.52
2014	Multiverse	Resources	-580014	27607	-552408	10257	0	3000	4	0.25	0	0.66
2015	Multiverse	Resources	-405855	19134	-386721	960	0	3000	4	0.25	0	0.73
2016	Multiverse	Resources	-584118	0	-584118	-73784	0	3000	4	0.25	0	0.87
2017	Multiverse	Resources	-427315	-5871	433186	-59364	0	3000	4	0.45	0	0.74
2018	Multiverse	Resources	-306734	-5335	-312069	-54028	0	3000	3	0.45	0	0.81

2009	Thomas Wyatt	Resources	5205	-4228	977	-69408	0	750	3	0.89	0.11	0.67
2010	Thomas Wyatt	Resources	-2303	-3224	-5527	-24575	0	750	3	0.88	0.13	0.71
2011	Thomas Wyatt	Resources	-24566	5574	-31140	9036	0	1000	3	0.88	0	0.76
2012	Thomas Wyatt	Resources	-26544	-1230	-27774	1483	903	1000	3	0.78	0	0.81
2013	Thomas Wyatt	Resources	13595	-20485	-6890	53537	0	1000	3	0.78	0	0.56
2014	Thomas Wyatt	Resources	9598	-12887	-22485	-15311	0	1500	3	0.71	0	0.4
2015	Thomas Wyatt	Resources	-16989	-407	-17396	29791	0	1500	3	0.67	0.17	0.85
2016	Thomas Wyatt	Resources	-64359	-2106	-66466	11646	0	1500	3	0.8	0	8.2
2017	Thomas Wyatt	Resources	-40067	-1904	-41972	25089	166	1500	3	0.8	0	0.28
2018	Thomas Wyatt	Resources	-139633	41103	-98529	-27974	0	1500	3	0.67	0	0.5
2009	Academy	Services	133694	-20237	93733	223510	13681	5350	4	0.78	0.11	0.69
2010	Academy	Services	182851	-32390	135030	276995	19036	5050	4	0.7	0.1	0.76
2011	Academy	Services	165321	-76867	88454	309934	58764	5350	4	0.7	0.1	0.73
2012	Academy	Services	156124	-63844	92280	345379	20159	6350	4	0.56	0.11	0.76
2013	Academy	Services	83381	-28329	55052	616588	22001	6350	4	0.56	0.11	0.79
2014	Academy	Services	82624	-7649	90273	687915	22145	6350	4	0.5	0.1	0.79
2015	Academy	Services	-9680	-15840	-25520	689860	19230	6350	4	0.56	0.11	0.81
2016	Academy	Services	-183950	32081	-151869	678503	41182	6350	4	0.5	0.1	0.83
2017	Academy	Services	-387459	-125266	-512725	-110957	16614	7000	3	0.82	0.09	0.92
2018	Academy	Services	-10273	73911	63638	449082	1352	7320	3	0.78	0.11	0.89
2009	Associated Bus Company	Services	160890	-75223	85667	791278	147867	7800	4	0.5	0.17	0.57
2010	Associated Bus Company	Services	195280	-137775	57505	1458683	69085	9000	2	0.5	0.17	0.53
2011	Associated Bus Company	Services	107639	-36616	71023	1485793	90708	10000	4	0.5	0.17	0.63
2012	Associated Bus Company	Services	531772	-206257	325515	1883603	122148	12000	4	0.5	0.17	0.56
2013	Associated Bus Company	Services	521336	-216258	305078	793530	101793	13291	4	0.5	0.17	0.6
2014	Associated Bus Company	Services	-259971	-113253	-373224	1473069	79750	10679	4	0.5	0.17	0.71
2015	Associated Bus Company	Services	295137	-163879	131258	1487535	72967	11034	4	0.5	0.17	0.68

2016	Associated Bus Company	Services	-490577	-109219	-599796	1976974	86445	11722	4	0.5	0.17	0.67
2017	Associated Bus Company	Services	766844	-253586	513258	1469519	24487	11723	4	0.6	0	0.57
2018	Associated Bus Company	Services	67126	-180549	-113423	1134243	218463	11347	4	0.6	0	0.7
2009	Capital Hotel	Services	1225607	-557159	668448	1324481	221173	4500	3	0.83	0.08	0.49
2010	Capital Hotel	Services	1068506	-470016	5050561	207784	467834	4500	1	0.78	0.11	0.47
2011	Capital Hotel	Services	549757	293094	427726	1016654	334001	5500	3	0.78	0.11	0.59
2012	Capital Hotel	Services	477605	175991	357512	73160	225740	6000	3	0.78	0.11	0.58
2013	Capital Hotel	Services	327195	-159871	167324	760508	177184	6000	3	0.78	0.11	0.5
2014	Capital Hotel	Services	667846	-422803	245043	809685	236268	6500	3	0.78	0.11	0.51
2015	Capital Hotel	Services	670119	-177859	492260	785337	119380	7500	3	0.88	0.13	0.48
2016	Capital Hotel	Services	1762780	-488425	1274450	1877317	161235	7500	4	0.88	0.13	0.42
2017	Capital Hotel	Services	780510	155396	935906	1327385	54248	7500	3	0.9	0.2	0.37
2018	Capital Hotel	Services	507781	-127835	379946	568436	235550	7500		0.9	0.2	0.57
2009	Ci Leasing	Services	408588	-74359	334229	409404	5166	18542	4	0.6	0.1	0.78
2010	Ci Leasing	Services	111167	-118127	107185	2674762	18873	31023	4	0.6	0.1	0.84
2011	Ci Leasing	Services	-109482	-47440	-156922	297695	247029	26941	4	0.6	0.1	0.87
2012	Ci Leasing	Services	189825	-51642	138183	5671040	33944	31023	2	0.6	0.1	0.9
2013	Ci Leasing	Services	304523	-142926	161597	4922685	11976	26214	4	0.6	0.1	0.77
2014	Ci Leasing	Services	411806	-233739	178067	5182270	21514	20176	4	0.8	0.1	0.75
2015	Ci Leasing	Services	465639	-316871	148768	4465996	40957	26101	5	0.22	0.11	0.81
2016	Ci Leasing	Services	1036224	-115357	920867	4595533	394892	24841	4	0.22	0.11	0.79
2017	Ci Leasing	Services	1262072	-162783	1099289	9954313	128325	23998	6	0.78	0	0.8
2018	Ci Leasing	Services	1540234	-342470	1197764	6726296	284734	24060	6	0.78	0	0.78
2009	Ikeja Hotel	Services	1683063	510998	1172065	2317558	357925	3750	2	0.88	0.13	0.62
2010	Ikeja Hotel	Services	2123658	680614	2220722	3823817	541011	4500	2	0.89	0.11	0.56
2011	Ikeja Hotel	Services	2115919	-365800	1448309	1731034	640484	11950	2	0.89	0.11	0.65
2012	Ikeja Hotel	Services	2184870	-650863	1728481	2321133	432376	14450	2	0.89	0.11	0.59
2013	Ikeja Hotel	Services	1627040	-581051	994806	2569062	417724	15600	2	0.89	0.11	0.67
2014	Ikeja Hotel	Services	562632	-559698	2934	351606	536898	16450	3	0.86	0.14	0.71

2015	Ikeja Hotel	Services	824257	-263527	560730	2314434	577208	17600	3	0.71	0.14	0.7
2016	Ikeja Hotel	Services	1607431	-500979	1106452	4445553	285141	17600	3	0.71	0.14	0.69
2017	Ikeja Hotel	Services	747528	-130205	617323	3430634	253584	16600	4	0.8	0.1	0.49
2018	Ikeja Hotel	Services	1229079	-123720	1105359	3305105	262948	17685	4	0.5	0.13	0.6
2009	Interlinked Technologies	Services	15598	-14473	1125	-124725	2291	1000	2	0.73	0.18	0.6
2010	Interlinked Technologies	Services	-13319	-5514	-18833	-38073	115	1000	2	0.82	0.18	0.17
2011	Interlinked Technologies	Services	2564	636	3199	261461	0	1000	2	0.78	0	0.42
2012	Interlinked Technologies	Services	-13411	1612	-15022	-106340	767	1000	3	0.67	0	0.39
2013	Interlinked Technologies	Services	6955	3259	3696	-5228	2409	1000	3	0.67	0	0.4
2014	Interlinked Technologies	Services	7302	-1392	5910	36803	0	1000	3	0.67	0	0.43
2015	Interlinked Technologies	Services	9123	-2953	6170	-21383	9064	1000	3	0.67	0	0.35
2016	Interlinked Technologies	Services	2596	-1544	1052	-3358	2024	1000	3	0.67	0	0.41
2017	Interlinked Technologies	Services	-7989	-1224	-9213	4721	345	1000	3	0.67	0	0.47
2018	Interlinked Technologies	Services	3053	-1290	1763	7782	0	1000	3	0.83	0	0.44
2009	Learn Africa (Longman)	Services	1111924	-402438	709486	86821	401645	6500	5	0.78	0.11	0.34
2010	Learn Africa (Longman)	Services	328780	-105210	223570	-176232	355391	6500	5	0.55	0.09	0.35
2011	Learn Africa (Longman)	Services	382661	-161507	221154	115667	126497	8000	5	0.7	0.1	0.28
2012	Learn Africa (Longman)	Services	212974	-38005	174969	173042	91215	8000	6	0.7	0.1	0.22
2013	Learn Africa (Longman)	Services	125711	-25579	100132	-75382	20735	8000	5	0.7	0.2	0.24
2014	Learn Africa (Longman)	Services	2958	55722	58680	-211412	18609	8000	5	0.67	0.25	0.14
2015	Learn Africa (Longman)	Services	-618007	-25385	-643392	91633	9059	9000	5	0.44	0.33	0.23
2016	Learn Africa	Services	134314	102845	237159	450535	14963	9000	4	0.44	0.22	0.36

	(Longman)											
2017	Learn Africa (Longman)	Services	296689	-29803	266886	-489138	16858	9000	4	0.63	0.38	0.28
2018	Learn Africa (Longman)	Services	295347	640224	344234	234567	234231	8000	3	0.65	0.09	0.69
2009	National Aviation Handling	Services	1897560	650226	1247334	2448094	242014	7000	3	0.55	0.09	0.31
2010	National Aviation Handling	Services	1711157	533653	1177504	1109194	476871	7000	3	0.6	0	0.32
2011	National Aviation Handling	Services	1232039	434051	757720	460981	286958	7000	3	0.6	0	0.48
2012	National Aviation Handling	Services	736403	143166	593237	4104311	349406	9000	4	0.62	0.08	0.5
2013	National Aviation Handling	Services	930457	-170849	759608	1816523	196948	9000	4	0.62	0.08	0.57
2014	National Aviation Handling	Services	769453	-200900	568553	1702778	202951	14500	4	0.73	0.09	0.59
2015	National Aviation Handling	Services	796796	-259000	537796	1361341	214354	18000	4	0.73	0.09	0.59
2016	National Aviation Handling	Services	909625	-328906	580719	1310619	201492	10000	6	0.77	0.15	0.5
2017	National Aviation Handling	Services	600011	175756	775767	813199	257965	10000	4	0.82	0.09	0.45
2018	National Aviation Handling	Services	503237	-306443	196794	1104146	87983	14000	6	0.72	0.11	0.49
2009	Newrest Air& Logistic Services	Services	396270	0	181155	1338769	0	4200	3	0.6	0	0.44
2010	Newrest Air& Logistic Services	Services	241017	-315	240702	986373	0	5750	3	0.67	0.17	0.3
2011	Newrest Air& Logistic Services	Services	244915	-994	244915	227825	1214	6400	4	0.67	0.17	0.3
2012	Newrest Air& Logistic Services	Services	492800	-390	492410	750772	788	7893	4	0.67	0.17	0.27
2013	Newrest Air& Logistic Services	Services	90796	-407	90389	418953	368	8893	4	0.67	0.17	0.38
2014	Newrest Air& Logistic Services	Services	171128	-826	171954	520866	390	10285	4	0.71	0.14	0.46
2015	Newrest Air& Logistic Services	Services	-56823	-437	-57260	979935	291	12760	4	0.71	0	0.55

2016	Newrest Air& Logistic Services	Services	1152140	-1604	1150536	1455940	250	16910	4	0.75	0	0.5
2017	Newrest Air& Logistic Services	Services	392015	-5339	386676	1415881	529	13600	4	0.86	0	0.29
2018	Newrest Air& Logistic Services	Services	1509101	-21427	1487674	1484298	7987	14125	4	0.83	0	0.25
2009	Redstar Express	Services	459769	-211484	248285	309254	118296	8450	3	0.63	0	0.46
2010	Redstar Express	Services	473614	-293098	180516	400530	139478	10299	3	0.57	0	0.49
2011	Redstar Express	Services	411301	-77707	333594	304456	104224	9650	4	0.57	0	0.44
2012	Redstar Express	Services	617934	313142	304792	526367	145070	12955	4	0.57	0	0.43
2013	Redstar Express	Services	544961	-240436	304525	333273	143640	11700	4	0.57	0	0.43
2014	Redstar Express	Services	603891	-200257	403634	706038	61320	11700	3	0.57	0	0.45
2015	Redstar Express	Services	611060	-227430	383640	470120	31250	13100	5	0.67	0	0.46
2016	Redstar Express	Services	572107	-237680	334427	296551	53886	13492	2	0.57	0	0.41
2017	Redstar Express	Services	653200	226444	426756	528666	75792	14300	4	0.67	0	0.45
2018	Redstar Express	Services	610589	-263031	347558	801791	61808	14300	6	0.67	0	0.49
2009	Studio Press Nig	Services	33970	345664	379634	-386972	0	6500	4	0.67	0	0.76
2010	Studio Press Nig	Services	81767	-56585	25182	1247356	44998	6500	4	0.67	0	0.75
2011	Studio Press Nig	Services	78287	-74073	4214	1085248	30940	6000	4	0.67	0	0.86
2012	Studio Press Nig	Services	28092	25594	2498	-474821	30991	7000	4	0.5	0	0.71
2013	Studio Press Nig	Services	-15586	31899	-47485	1139298	16967	8000	3	0.5	0	0.77
2014	Studio Press Nig	Services	-269755	-83624	-353379	1345245	29459	8000	4	0.5	0	0.82
2015	Studio Press Nig	Services	-165584	71800	-93784	1752509	75717	8500	4	0.5	0	0.84
2016	Studio Press Nig	Services	470447	-213827	256620	1504042	24079	8500	5	0.43	0	0.81
2017	Studio Press Nig	Services	566485	-257908	308577	2899529	58193	9500	4	0.5	0	0.76
2018	Studio Press Nig	Services	632993	-363545	269448	2175094	48252	7000	4	0.4	0	0.73
2009	Tantalizer	Services	177530	120907	56623	858510	43160	3500	3	0.36	0.09	0.37
2010	Tantalizer	Services	153389	92040	61349	654269	37873	3500	3	0.36	0.09	0.33
2011	Tantalizer	Services	83587	18283	101870	-180338	37728	3500	3	0.36	0.09	0.43
2012	Tantalizer	Services	-263180	-40288	-303468	336246	71755	3500	4	0.4	0.1	0.44
2013	Tantalizer	Services	-598449	33628	-564822	478715	13284	3500	4	0.4	0.1	0.53
2014	Tantalizer	Services	-771645	-12651	-784297	318535	15754	3500	4	0.44	0.11	0.64

2015	Tantalizer	Services	-695943	-11136	-707079	-172618	0	3675	4	0.44	0.11	0.66
2016	Tantalizer	Services	-1008368	-8153	-1016521	-28322	0	2500	4	0.44	0.11	0.85
2017	Tantalizer	Services	450624	-7254	443370	344380	269481	2500	4	0.67	0.11	0.84
2018	Tantalizer	Services	96024	-9768	86256	142244	10760	2500	4	0.67	0.11	0.81
2009	Tourist Company Of Nigeria	Services	-642388	-38288	-680676	-1434380	42917	1200	4	0.88	0.13	0.45
2010	Tourist Company Of Nigeria	Services	-642388	-38288	-680676	-1434380	42917	1200	4	0.88	0.13	0.56
2011	Tourist Company Of Nigeria	Services	-1115451	-254728	-1370179	1158953	0	1500	4	0.88	0.13	0.8
2012	Tourist Company Of Nigeria	Services	-670711	148461	-522250	98173	0	1500	4	0.88	0.13	0.84
2013	Tourist Company Of Nigeria	Services	-263844	388894	125050	490137	388894	12000	4	0.88	0.13	0.84
2014	Tourist Company Of Nigeria	Services	-602547	0	-602547	270255	0	16700	4	0.83	0	0.89
2015	Tourist Company Of Nigeria	Services	-2642326	0	-2642326	363161	0	19215	4	0.83	0	1.14
2016	Tourist Company Of Nigeria	Services	-5547091	0	-5547091	957307	0	22247	3	0.83	0	1.66
2017	Tourist Company Of Nigeria	Services	-3218232	0	-3218232	10342	90428	25200	6	0.67	0	2.03
2018	Tourist Company Of Nigeria	Services	-1379384	0	-1379384	-333147	77858	19425	4	0.8	0	0.63
2009	Trans-Nationwide Express	Services	66044	-10301	55744	9498	9775	1200	3	0.88	0.13	0.31
2010	Trans-Nationwide Express	Services	53974	-4300	49675	39536	11108	1200	3	0.88	0.13	0.25
2011	Trans-Nationwide Express	Services	58518	-9865	48653	29064	1806	1500	3	0.88	0.13	0.21
2012	Trans-Nationwide Express	Services	56168	-90559	-34391	26649	24211	1500	3	0.75	0.25	0.48
2013	Trans-Nationwide Express	Services	72665	4767	77432	62897	23794	1575	3	0.78	0.33	0.43
2014	Trans-Nationwide Express	Services	49476	17295	66771	29332	21757	2100	3	0.8	0.4	0.37
2015	Trans-Nationwide Express	Services	75678	-24706	50972	47485	13362	2100	3	0.8	0.4	0.35
2016	Trans-Nationwide	Services	30292	-10106	20186	41054	87045	2100	3	0.8	0.4	0.24

	Express											
2017	Trans-Nationwide Express	Services	5553	-3726	3611	7464	10789	2000	4	0.89	0.44	0.21
2018	Trans-Nationwide Express	Services	38938	12505	-26433	-3444	4780	2000	4	0.82	0.45	0.21
2009	University Press	Services	336400	-95039	241361	47853	63771	1700	3	0.78	0	0.37
2010	University Press	Services	410367	-133544	276823	249573	63234	2000	3	0.77	0	0.38
2011	University Press	Services	326631	-115256	211375	348001	112810	2000	3	0.75	0	0.26
2012	University Press	Services	343512	-116085	227427	328857	148430	3200	4	0.6	0.1	0.31
2013	University Press	Services	393300	-132598	260702	167758	158947	3200	4	0.6	0.1	0.22
2014	University Press	Services	348117	-114192	233925	95177	124588	4200	4	0.6	0.1	0.25
2015	University Press	Services	199200	-62806	136394	113219	109686	4200	4	0.6	0.1	0.2
2016	University Press	Services	70207	3069	73276	399603	77251	4200	4	0.6	0.1	0.25
2017	University Press	Services	164941	-46523	118418	319013	23219	4200	4	0.64	0.18	0.3
2018	University Press	Services	354625	-147214	207411	-53397	86006	4200	4	0.7	0.1	0.25