

EFFECT OF CORPORATE GOVERNANCE MECHANISMS ON TAX AVOIDANCE IN
DEPOSIT MONEY BANKS IN NIGERIA

BY

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DECLARATION

I hereby declare that the work in this thesis entitled “Effect of Corporate Governance Mechanisms on Tax Avoidance in Deposit Money Banks in Nigeria” has been carried out by me in the Department of Accounting. The information derived from the literature has been duly acknowledged in the text and a list of references provided. No part of this work was previously presented for another degree or diploma at this or any other institution.

Aisha Nuhu Mohammed

Date

CERTIFICATION

This thesis entitled EFFECT OF CORPORATE GOVERNANCE MECHANISMS ON TAX AVOIDANCE IN DEPOSIT MONEY BANKS IN NIGERIA by Aisha Nuhu MOHAMMED meets the regulations governing the award of DOCTOR OF PHILOSOPHY (PHD) IN ACCOUNTING AND FINANCE of the Ahmadu Bello University, Zaria and is approved for its contribution to knowledge and literary presentation.

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DEDICATION

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ABSTRACT

The issue of corporate tax avoidance has received vast empirical examination in Western academe. This vast examination has however not been echoed in respect of research interest on tax avoidance in corporate entities in Nigeria. This study therefore sought to provide empirical evidence on whether internal corporate governance mechanisms such as board size, board independence, board ownership, high ownership concentration as well as interactions between high ownership concentration with board size and independence are significantly associated with corporate tax avoidance in deposit money banks (DMBs) in Nigeria. A sample of fourteen out of the fifteen listed DMBs on the Nigeria stock exchange (NSE) as at December 2014 were examined. Data for the study were sourced solely from secondary sources in the form of annual financial statements of the studied DMBs for the period 2006 to 2014. In order to tackle the issue of endogeneity, arising from simultaneity in studies related to corporate governance outcomes, the Arellano-Bond Generalized Method of Moments (GMM) estimation technique was used. The study found that increase in last period's board ownership significantly increased tax avoidance in the studied DMBs in the current period. Furthermore, increased board independence in the immediate preceding period was found to significantly decrease tax avoidance in the DMBs in the current period. However, the relationship between board independence and tax avoidance in the DMBs is significantly moderated by high ownership concentration. Overall, the study concluded that internal corporate governance mechanisms combine to significantly affect tax avoidance in the DMBs. In light of the findings, the study therefore recommended that in order to facilitate goal alignment between the interests of directors and that of DMB owners, in respect of tax avoidance, owners institute more share-based remuneration for executive directors and encourage non-executive directors to take up some minimum number of shares during their tenure. This will have the combined effect of incentivizing the board to render strategic

advice on and implement more tax reduction strategies. It is also recommended that investors should look to DMBs in Nigeria that have block and or institutional owners whose holdings average at around 27%. This is because DMBs with such ownership pattern have a stronger leeway in influencing board advisory and monitoring capacity in relation to corporate strategies such as tax avoidance.

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CHAPTER ONE INTRODUCTION

1.1 Background to the Study

Taxes are a fundamental revenue source for governments the world over. They represent a recognized compulsory contribution by individuals and corporate entities towards governance, development and maintenance of physical infrastructure as well as a tool of bridging income inequities. They are also a means by which the social contract between the State and the citizenry is being nourished and facilitated (Christensen & Murphy, 2004). Taxes also happen to be the most important, sustainable and predictable source of public finance for almost all countries (Action Aid, 2013). Thus properly harnessing amounts collected via taxes is a major concern for governments.

In assessing the extent to which a country has harnessed and financed its economy through taxation, an often used measure is the tax to GDP ratio. Scholars have however noted that the tax to GDP ratio for the developing world as a whole is relatively low when compared to what obtains in the developed economies. For instance, according to Fuest and Riedel (2009) the tax to GDP ratio for developing economies was on average approximately 12-15% as at 2005. Conversely, for the developed economies, the average for the same year was quoted as approximately 35%; a figure more than twice what obtained in the developing climes. More recent reports show some improvement in the ratio but given the potential the region has for increased tax revenue, the improvement has not been found to be impressive. For instance, a report by the International Tax Compact, ITC (2010), noted that while tax revenues in Organization for Economic Cooperation and Development (OECD) countries amounted to almost 36% of gross national income in 2007, the share in selected developing regions was estimated to be around 23% for Africa (in 2007) and 17.5% for Latin America (in 2004).

Specifically focusing on Nigeria, as at January 2014, tax revenue to GDP ratio stood at 20% (Premium Times, 2014). However with the rebasing of Nigeria's GDP in 2014, which saw the country's GDP increase from N42.3 trillion to N80.3 trillion, making Nigeria Africa's largest economy, Nigeria's tax revenue to GDP ratio fell from 20 % to 12 %. Out of the said 12 %, only 4% was attributable to non-oil revenue. This led to a call by the then Minister of finance on the need for the taxing authorities to redouble their revenue generation efforts (Premium Times, 2014). This call by the minister as well as the assertion by Oxfam (2014) that widening income disparities are the second greatest worldwide risk in 2014, underscore the need to look deeper into the various sources of development finance, especially taxation. The highly volatile nature of oil revenue- which the Nigerian economy depends on to a large extent should, arguably, also serve as an added impetus towards looking for ways to better harness other revenue sources such as taxes.

In exploring how to better harness tax revenues, it has been documented world over that, two major activities; perpetrated by both individuals and corporations, have continued to represent a great threat to amounts of revenue collected through taxes. In addition, the said issues feature prominently in equity and efficiency related discourse. The duo of issues are tax evasion and tax avoidance. While both are aspects of tax non-compliance, the delineating feature between the two lies in the fact that tax evasion is deemed out rightly illegal while by definition tax avoidance is not. However notwithstanding the delineating line between the two, in advanced economies, the duo have been given serious consideration by their governments, through the relevant agencies. Furthermore, the two issues have sparked much research; ranging from investigating their determinants- both for individuals and for corporations examinations of the attendant consequences engendered by their continued flourish.

The question of what factors explain the ability of firms and corporations to avoid taxes is of particular interest to researchers. The reason for much of the focus on tax avoidance as opposed to tax evasion is because evasion as a criminal act has to be proven by court. Thus using the term avoidance is seen as less dyslogistic. In however considering corporate tax avoidance as a research issue, researchers such as Shackelford and Shevlin (2001) have earlier questioned the applicability of models of individual tax evasion and avoidance such as the Allingham and Sandmo (1972) framework in explaining and predicting corporate tax avoidance. They argued that the separation of ownership and control, a hallmark of corporate entities, means that existing individual tax non-compliance frameworks cannot adequately explain same for corporations. In furtherance of the argument, Slemrod (2004) stated that this same separation of ownership and control means that shareholders need the corporation to engage in some level of avoidance.

Thus, in investigating what factors explain tax avoidance by firms and corporations, earlier studies on corporate tax avoidance focused primarily on examining whether firm-specific characteristics such as size, leverage, growth, profitability, amongst others could explain the tax avoidance phenomenon for business entities (e.g., Gupta & Newberry, 1997). These earlier studies however failed to consider agency issues in their analyses. Pointing out why failing to do so is an anomaly, Desai and Dharmapala (2006, 2007) argued that since *decisions* about corporate tax avoidance are made by firm managers, then the analysis of such decisions is thus embedded in an agency framework.

The agency framework is one that argues that managers are risk averse and self-serving in nature and that this risk averseness as well as self-serving nature means that managers will not typically act or make decisions in the best interest of owners. To ensure goal congruence between management and shareholders or owners, the framework suggests that managers should

be both incentivized and monitored. Corporate governance mechanisms represent the means by which monitoring managers can be achieved.

Corporate governance mechanisms can however be internal or external. The internal mechanisms are those that have to do with the efficacy of the board of directors in appropriately advising on and overseeing the design and implementation of business strategies that will ensure that managers maximize shareholder wealth. In addition, such internal mechanisms include the role that shareholders themselves play in ensuring goal alignment. Prescriptions that have to do in particular with size, independence, remuneration and financial expertise of the board have therefore featured prominently in the various codes of corporate governance that have been issued both nationally and internationally as guides to what constitutes “best practice” in oversight. On the other hand, external governance mechanisms include all other stakeholder monitoring. Therefore mechanisms such as government regulation, debt covenants, takeovers, financial analysts and the like are all aspects of external governance.

Internal governance mechanisms have, in particular, been touted to be foremost amongst the monitoring mechanisms that can ensure goal alignment between owners and managers. This is thought to be so because the board of directors is responsible for the strategic direction of the company. Charting a course for effective tax management is one of such strategic direction. Therefore, like any other board room stratagem, managing taxes requires a laid down philosophy which is usually determined by the board; documented, communicated and implemented as overall corporate strategy (Erle, 2007). Thus, board related governance mechanism such as size, independence, and ownership, amongst others can arguably play a key role in determining a company’s tax planning.

Board size simply refers to the number of persons that constitute the board of directors of a corporate entity. The number of persons that constitute the board of directors is thought to influence the advisory capacity of the board as well as its monitoring effectiveness. However, what constitutes the optimal board size to achieve this effectiveness has been a subject of debate. While some argue that a large board is more desirable because the larger the number on the board the more the level of diversity, skill and expertise; others argue that larger boards stifle discussion, therefore smaller boards are more effective because communication within a smaller group is easier (Jensen, 1993). Given that managing the tax expense (tax avoidance) is thought to be beneficial for corporate owners, this study therefore finds it necessary to examine whether board size as an internal governance metric affects tax avoidance by deposit money banks (DMBs) in Nigeria.

Board independence, the proportion of members of the board who are non-executive directors, is another internal governance metric that influences board oversight. For this reason the codes of corporate governance give it categorical mention. Empirical studies to date, are however yet to consistently document either significant associations or signs when relating board independence to corporate outcomes. The intuition that board independence can influence tax avoidance by DMBs is however appealing. This is because in relation to other firm performance metrics such as profitability and firm value, it has been argued that the independent judgments that non-executive directors can bring to bear on corporate outcomes enhances oversight. Whether this is so in relation to tax avoidance by Nigerian DMBs is however an empirical question that is yet to be examined.

Ownership structure dimensions such as having an individual with sizeable number of shares in a company (block shareholding), the level of managerial shareholding as well as the

ownership of shares by other corporate bodies (institutional shareholding) are also regarded as key internal governance mechanisms that ought to provide effective oversight over management. This position arises from the fact that in the modern day corporation, which has a multitude of owners and whereby the manager is not an owner, the self-serving behavior of the manager needs to be checked. Therefore, agency theorists such as Jensen and Meckling (1976), Fama (1980) as well as Fama and Jensen (1983) have all posited that making the manager a co-owner and having concentrated ownership in the form of either a block holder or an institutional shareholder, or both, should give all such owners additional motivation to more regularly appraise management; thereby ensuring goal convergence. Tax avoidance is, in most instances, likely to benefit the shareholders. Therefore, the preceding arguments are compelling enough for the researcher to also conjecture that ownership plays a role in determining some amount of tax avoidance at the corporate level.

This study is motivated by the fact that even though several studies abound on the corporate tax avoidance phenomenon, only a handful are on developing countries. In addition, only few present evidence from Nigeria. Furthermore, of the studies which examine the issue for Nigeria, to the best of the researchers' knowledge only Ekoja and Jim-Suleiman (2014) examined the issue for banks. Their study however only provided evidence as to how an external governance mechanism; competition, plays a role in determining Nigerian banks' tax avoidance. Major failures in internal corporate governance mechanisms are thought to be one of the principal factors that have continually undermined bank performance (Sanusi, 2012).

The Nigerian banking sector tends to be a key driver of activities in the corporate sector. This it achieves primarily through its principal role in financial intermediation. An OECD (2009) report also suggests that banks are particularly creative in structuring tax avoidance schemes

both for themselves and their clients. These features of banks as well as differing arguments in the literature (e.g. Adams & Mehran, 2003; Becher & Frye, 2008) as to whether internal corporate governance mechanisms are actually effective in regulated entities such as banks, serve as motivation for this study to examine to what extent corporate governance mechanisms- specifically internal ones- determine tax avoidance for DMBs in Nigeria.

1.2 Statement of the Problem

Tax avoidance has, especially in the last decade or so, come under increased scrutiny and criticism by governments, the media, aid groups as well as the general public. The reason for this is because even though tax avoidance in itself is not an illegality, as the law has not made it so, the amounts of revenue thought to have been lost through various ingenious avoidance activities world-wide have become an issue of concern. For instance, the Task Force for Financial Integrity and Economic Development, a global coalition of non-profit groups that campaign for transparency in the financial system, put the global foreign aid budget at \$1 billion per year while it estimated that the developing world loses \$1 trillion every year through evasion and/ avoidance, corruption as well as money laundering (Reuters, 2013). The Global Financial Integrity (GFI), another advocacy group, in its 2012 report, estimated that \$5.86 trillion moved from developing countries to tax havens over the period from 2001 to 2010 with outflows from Nigeria alone amounting to a princely \$129 billion. This princely sum earned the nation seventh spot on the GFI's top ten list of developing countries with the highest illicit outflows. A further breakdown of the components of the illicit outflows shows that the greatest part (i.e. 60% - 65%) was as a result of tax avoidance(Philippines Star, 2013).

Arising, in part, from concerns over the aforementioned lost amounts of revenue; researchers have also upped the ante on the analysis of tax avoidance. While however still acknowledging the legality of tax avoidance, several researchers such as Potas (1993), Christensen and Murphy (2004), Fuest and Riedl (2009), Sikka (2010), Prebble and Prebble (2013) and Fischer (2014), amongst others, bring to the fore the argument that the legality of a phenomenon does not necessarily translate to that phenomenon being fair or ethically and morally acceptable. This argument is particularly evident regarding the phenomenon of tax avoidance. This is because tax avoidance contributes to a situation whereby tax payers of the same income bracket will not pay taxes on the same marginal tax rate. This has the effect of making the tax system appear unfair to those who are unable to avoid taxes.

Research on corporate tax avoidance in comparison with that of tax avoidance by individuals could however be said to be of relatively recent focus. The said recent focus of research on the phenomenon has also tended to be conducted principally in developed climes. The earlier empirical studies on corporate tax avoidance such as Gupta and Newberry (1997) had focused more on the interplay between firm-specific characteristics such as size, leverage, profitability, capital intensity, amongst others in determining corporate tax avoidance. Given that the results on the association between the studied firm-specific characteristics and tax avoidance turned out to be far from consistent (e.g., Richardson&Lanis, 2007 and Hsieh, 2012); researchers further broadened the scope of investigation, on the determinants of corporate tax avoidance, to include other factors such as corporate transparency (Wang, 2010), CEO/manager effects (Dyreg, Hanlon &Maydew, 2010; Chyz, 2010), ownership structure (Badertscher, Katz &Rego, 2009; Chen, Chen, Cheng &Shevlin, 2010), external auditor effects (Mcguire, Omer & Wang,

2010; Huseynov&Klamm, 2012), incentives (Philips, 2003; Armstrong, Blouin&Larcker, 2012) and a host of other characteristics.

The basis for broadening of the scope of investigation has however been questioned by Hanlon &Heitzman (2010). They contend that the choice, by researchers,of what variables to study as determinants of corporate tax avoidance has seldom been backed by theory. Thus, in order to provide a theoretical base for the study of corporate tax avoidance, a relatively young but burgeoning literature which seeks to situate the determinants of corporate tax avoidance within an agency theoretical framework has emerged. According to Hanlon and Heitzman (2010), theoretical arguments for the study of corporate tax evasion and avoidance as agency issues have been pioneered by Crocker and Slemrod (2004), Slemrod (2004), as well as Chen and Chu (2005). The pioneers however failed to back their arguments with empirical data. Thus other researchers have sought empirical evidence in support of the framework. Specifically Desai and Dharmapala (2007), Minnick and Noga (2010), Khaoula and Ali (2012), Zemzem and Ftouhi (2013), Khaoula (2013) and Armstrong, Blouin, Jagolinzer and Larcker (2015) are amongst a spate of relatively recent researches that have directly examined the interplay between corporate governance mechanisms and tax avoidance.

A common theme across the aforementioned studies that directly relate governance mechanisms with corporate tax avoidance is that while they refer to governance broadly, they habitually study only board related mechanisms to the detriment of other governance mechanisms. Governance is a myriad of mechanisms which are both external to the corporation as well as internal to it. For instance, shareholder and stakeholder monitoring, competition, the markets for both managerial and corporate control as well as debt covenants are all governance mechanisms. Therefore narrowing such a multi-faceted concept down to only board mechanisms

does not appropriately proxy the phenomenon. The said empirical studies have also not been consistent in documenting either significant associations or similar signs of association in their studies.

One possible reason for the inconsistencies may be because none of the past studies has considered whether interactions with other variables are the actual force behind the effects of the studied mechanisms on tax avoidance. As Hermalin and Weisbach (2003) and Adams, Hermalin and Weisbach (2010) point out, the effect of board mechanisms on firm performance may not be direct. Therefore failure to take this into consideration is likely to distort interpretations. In this study, it is therefore proposed that concentrated ownership moderates the relationship between board structure proxies such as size and independence on corporate tax avoidance. Considering this moderating effect is important because shareholders with concentrated ownership (blocks and institutions) usually leverage upon their concentrated holdings to either directly sit on the board of directors or indirectly have a representative as director (La Porta, Lopez-de-Silanes, Schleifer & Vishny, 1998). This representation on the board is likely to affect both board advisory capacity (size) as well as monitoring capacity (independence). Furthermore, Connelly, Hoskisson, Tihanyi and Certo (2010) have argued that concentrated ownership leads to concentrated decision rights and this leads to superior monitoring.

Localizing the focus to Nigeria, the researcher observes that the discourse as well as study of corporate tax avoidance is yet to gather full momentum. Most existing studies such as AbdulRazaq (1985), Alabede, Ariffin and Idris (2011) and Ibadin and Eiya (2013), to name a few, focused on examining individual tax compliance issues. This is despite assertions by researchers such as Adegbe and Fakile (2011a, 2011b), that in Nigeria, the contribution to overall tax revenue by companies has continually fallen far short of expectations. This lack of

research momentum may however be, in part, because evidence on whether Nigerian corporations actively engage in tax avoidance schemes, is largely anecdotal; evasion headlines seem to feature more prominently (see for example news on Proshare website accessed by the researcher on 15/03/2013, about tax evasion by petroleum companies as well as a This Day online news report accessed on the same date on the issue of evasion in the automobile industry in Nigerian).

The anecdotal nature of narrations on the extent of corporate tax avoidance in Nigeria is however not surprising. This is because the very nature of tax avoidance demands some degree of obfuscation (Desai & Dharmapala, 2006; 2007; 2009a). Thus as a research issue corporate tax avoidance is only very recently receiving academic interest in Nigeria with studies such as James and Igbeng (2014) and Ekoja and Jim-Suleiman (2014). The James and Igbeng (2014) study however merely gave a theoretical exposition of the matter which is to a large extent a re-echo of Desai and Dharmapala (2007). Ekoja and Jim-Suleiman (2014) on the other hand studied the effect of competition on tax avoidance by Nigerian deposit money banks (DMBs) and reported the surprising result that competition alone explains 100% of the variation in Nigerian DMBs tax avoidance; a situation that is hardly plausible for social science phenomena. Their results are therefore suggestive of either measurement issues that have to do with the proxies used by the study or data inaccuracies.

The focus of this research was therefore on furthering study on the agency theory perspective of tax avoidance. In order to achieve this the association between corporate governance mechanisms and tax avoidance in Nigerian DMBs was examined. The research focused on banks because differing regulation meant their exclusion from analysis by several past international studies on corporate tax avoidance (e.g., Zimmerman, 1983; Taylor &

Richardson, 2011; Abdul Wahab, 2011) while in Nigeria, to the best of the researchers' knowledge only Ekoja and Jim-Suleiman (2014) have previously studied tax avoidance by banks. It seems therefore that the financial sector has not been adequately covered by researchers in relation to tax avoidance. Studying the sector is important because Minnick and Noga (2010), have earlier posited that different companies with different governance structures are likely to choose different tax management strategies. Given this assertion, it may therefore be misleading to assume that the empirical results of studies of some corporate sectors will hold for other sectors. Providing sector-specific contexts to show the interplay between governance and tax avoidance is therefore necessary.

Consequently, the study sought to fill the gap on the determinants of corporate tax avoidance in DMBs in Nigeria. In particular, this was done by examining the extent to which internal corporate governance mechanisms play a role in determining corporate tax avoidance in DMBs in Nigeria. To realize this board size, ownership and independence as well as high block ownership concentration were studied. The interactions between concentrated ownership and board size as well as board independence were also examined. In addition the study sought to fill the gap on available research from the developing world; more so, with specific reference to the literature gap on corporate tax avoidance in Nigeria. The study also covered the banking sector, a part of the financial services sector that has been relatively understudied in relation to the tax avoidance phenomenon.

1.3 Research Questions

To facilitate inquiry the following research questions were raised:

- i. Does board size have a significant effect on corporate tax avoidance among DMBs in Nigeria?
- ii. Does board independence have a significant effect on corporate tax avoidance among DMBs in Nigeria?
- iii. Does high ownership concentration have a significant effect on corporate tax avoidance among DMBs in Nigeria?
- iv. Does board ownership have a significant effect on corporate tax avoidance among DMBs in Nigeria?
- v. Does high ownership concentration significantly moderate the relationship between board size and tax avoidance among DMBs in Nigeria?
- vi. Does high ownership concentration significantly moderate the relationship between board independence and tax avoidance among DMBs in Nigeria?

1.4 Objectives of the Study

The overall objective of this study is to determine to what extent internal corporate governance mechanisms determine tax avoidance in Nigerian deposit money banks. The specific objectives of the study are to:

- i. assess whether board size has a significant effect on corporate tax avoidance among DMBs in Nigeria.
- ii. ascertain whether board independence has a significant effect on corporate tax avoidance among DMBs in Nigeria.
- iii. estimate whether high ownership concentration has a significant effect on corporate tax avoidance among DMBs in Nigeria.

- iv. evaluate whether board ownership has a significant effect on corporate tax avoidance among DMBs in Nigeria.
- v. examine whether high ownership concentration moderates the relationship between board size and tax avoidance among DMBs in Nigeria.
- vi. examine whether high ownership concentration moderates the relationship between board independence and tax avoidance among DMBs in Nigeria.

1.5 Statement of Hypotheses

In line with the aforementioned objectives of the study, the following hypotheses; stated in null form,were formulated for testing:

Ho₁: board size has no significant effect on corporate tax avoidance among DMBs in Nigeria.

Ho₂: board independence has no significant effect on corporate tax avoidance among DMBs in Nigeria.

Ho₃: high ownership concentration has no significant effect on corporate tax avoidance among DMBs in Nigeria.

Ho₄: board ownership has no significant effect on corporate tax avoidance among DMBs in Nigeria.

Ho₅: the relationship between board size and tax avoidance among DMBs in Nigeria is not significantly moderated by high ownership concentration.

Ho₆: the relationship between board independence and tax avoidance among DMBs in Nigeria is not significantly moderated by high ownership concentration.

1.6 Scope of the Study

This study empirically examined the effect of internal corporate governance mechanisms on corporate tax avoidance in Nigeria. The study covered only listed Deposit Money Banks (DMBs) in Nigeria. The focus on banks was in part, hinged on the role of banks as financial intermediaries in the economy. This role therefore means that banks tend to drive activities in the corporate sector. There are also assertions that banks structure transactions both for customers and themselves that are likely to facilitate tax avoidance (OECD, 2009). The study covered the period 2006 to 2014. The year 2006 was chosen as a base year so as not to allow the effects of the 2005 banking sector consolidation exercise to distort results while 2014 represents the latest year before the CBN classification of some DMBs as strategically important (CBN 2014a). The new classification, effective March 1, 2015 imposes stringent requirements on the said banks in respect of liquidity and capital adequacy requirements. The requirements are likely to affect some financial statement items and therefore introduce some distortion in analysis. The period overlaps with the 2001-2010 previously noted by the GFI (2012) report as the period in which Nigeria lost substantial revenue through avoidance activities.

1.7 Significance of the Study

The study is significant for the following reasons:

Firstly, taxes are a key source of revenue for governments and often feature prominently in government's income redistribution function. Government, through its relevant tax agencies,

is therefore interested in identifying which characteristics matter most in determining cross-sectional differences in tax avoidance for corporate bodies such as the banks that were studied. The findings of the study that revealed significant associations between internal corporate governance mechanisms and corporate tax avoidance in DMBs in Nigeria will therefore aid government in designing proper policy both in respect of corporate governance and in respect of tax avoidance.

Secondly, researchers are interested in understanding determinants of corporate tax avoidance. The study serves to add to the overall existing literature on the determinants of corporate tax avoidance by filling the gaps on corporate tax avoidance research in the developing world as well as in relation to documenting results from one class of highly regulated entities- banks.

Thirdly, in terms of theory, the research is significant for its contribution to the agency theoretical perspective in relation to corporate tax avoidance. In its barest form, the agency perspective does not consider interactions. The study has modified the framework to reflect the fact that highly concentrated ownership interacts together with specific board mechanisms to be effective in ensuring goal congruence.

Fourthly, shareholders wish to know whether the management appointed by them is properly controlling the organizations expenses; in this case taxes, in the direction of increasing shareholder wealth. Since the study focused on the effect of corporate governance mechanisms on tax avoidance, the study will benefit shareholders by showing them which internal governance mechanisms they should pay more attention to in their desire to achieve more effective tax outcomes such as avoidance.

CHAPTER TWO LITERATURE REVIEW

2.1 Introduction

The purpose of this chapter was to review relevant and related literature on the variables under study; corporate governance and tax avoidance, with a view to putting this research in its proper context. Specifically, the section reviewed literature on the concept of tax avoidance by looking at its definitions, related terminologies, its forms and motivations as well as its measurement. The concept of governance was also examined from the prism of its definition, and its mechanisms. The chapter, furthermore, examined the various theoretically and empirically established links between the variables of the study. The theoretical framework on which the study is anchored was also put forward.

2.2 Concept of Tax Avoidance

Most studies of tax avoidance and evasion write about the two concepts as if what the terms mean is clear, and assume that the problem is one of analyzing the various incentives to engage in the two activities (Weisbach, 2003). The reality, however, is that there are differing views as well as perceptions particularly with regards to the avoidance phenomenon. One possible reason for the varied perceptions could lie in the fact that the tax avoidance phenomenon lies at the intersection of several disciplines; Law, Economics, Accounting, Finance, Sociology and even Psychology all have perspectives relating to the avoidance

phenomenon. The perspectives, however, cannot be said to be independent of one another but are rather intertwined.

Given the said multifaceted perceptions as well as subject-oriented nature of the tax avoidance phenomenon, Lietz (2013) suggested that a conceptual framework for tax avoidance must of necessity be capable of not only aggregating existing views but should also be able to leave room for possible future views and/ dimensions to the phenomenon. However, whether or not such aggregation is possible depends on our ability to actually understand the divergence points of the existing views. A look at them individually is therefore necessary.

It seems that the very term tax avoidance is a legal creation. This is because the term was coined to distinguish between two categories of tax dodging. The first category-evasion is defined as outright illegal and therefore punishable while the second category, avoidance is deemed legal but not desirable; therefore ordinarily not punishable. Thus, the focus of the law would be to establish that an act has been committed that contravenes the law. Given the said legal distinction, on the face of it, the difference between the two forms of tax dodging appears clear cut.

In practice however as several researchers (e.g., Potas, 1993; Slemrod&Yitzhaki, 2002; McLaren, 2008; and Murphy, 2008) point out, the dividing line between tax evasion and avoidance is not so clear. Tax avoidance is therefore severally referred to as a “grey area” between outright tax evasion and being tax compliant (Slemrod&Yitzhaki, 2002; Murphy, 2008). It is a process of getting round taxation law without actually breaking it (Murphy, 2008: 3). McLaren (2008) further lamented that in Australia, the distinction between tax evasion and tax avoidance has continually become blurred due to laws that refuse to demarcate what constitute

either the former or the latter; but rather define activities as “tax exploitation”. McLaren cites for instance Division 290 of the *Taxation Administration Act 1953* (Cth) which ignores the distinction between tax avoidance and tax evasion and deals instead with ‘tax exploitation schemes’ as well as the *Anti-Money Laundering and Counter Terrorism Financing Act 2006* (Cth) (AML/CTF Act) as examples of laws that blur any clear cut demarcation of the two activities. Potas (1993) had earlier pointed out the increased blurring of the difference between the two terms; which he contends had led to the use of ‘non-compliance’ and ‘compliance’ respectively in lieu of the said terms. Tax Analysts (2010) however quoted Franklin D. Roosevelt, one time president of the US, as commenting on the subject of tax evasion and avoidance thus:

Methods of escape or intended escape from tax liability are many. Some are instances of avoidance which appear to have the color of legality; others are on the borderline of legality; others are plainly contrary even to the letter of the law. All are alike in that they are definitely contrary to the spirit of the law. All are alike in that they represent a determined effort on the part of those who use them to dodge the payment of taxes which Congress based on ability to pay. All are alike in that failure to pay results in shifting the tax load to the shoulders of others less able to pay, and in mulcting the Treasury of the Government’s just due.

For Roosevelt, therefore, tax evasion and tax avoidance are both opposite sides of the same coin. They amount to the same thing; a reduction in tax revenue accruable to the government purse and a truncating of the fairness which tax regimes are meant to achieve. This argument falls neatly in place with the position of various aid and advocacy groups such as Action Aid, 2013; Oxfam (2014) and Tax Justice Focus (2009) as well as corporate social responsibility (CSR) proponents such as Christensen and Murphy (2004), Sikka (2010; 2012), and Fischer (2014), amongst others.

However, the ambiguity of the term tax avoidance does not end with the legalese of differentiating it from tax evasion. The term tax avoidance has often also been used interchangeably with other terms such as tax planning, tax mitigation, tax aggressiveness, tax sheltering, and tax minimization by researchers in their study of the tax avoidance phenomenon (Potas, 1993; Desai & Dharmapala, 2009b; Chen, Chen, Cheng & Shevlin, 2010; Badertscher, Katz & Rego, 2011; Armstrong, Blouin & Larcker, 2012; Huseynov & Klamm, 2012). Strictly speaking, each of these terms that have been adopted as synonyms of tax avoidance, connotes a different aspect of behavior. Arguably, the terms, perhaps, closer in meaning to tax avoidance are tax mitigation, tax minimization and tax planning. Even with these terms, as Kwagheke and Samuel (2011) observe, in some jurisdictions such as The United Kingdom (UK) and New Zealand, a distinction is made.

The Scholes, Wolfson, Erickson and Maydew (2009) framework on effective tax planning has often been referred to in defining tax planning in contrast to tax avoidance. According to the framework, effective tax planning is that strategy that identifies all parties to a transaction; all tax costs and benefits as well as all non-tax costs and benefits. Within this framework therefore the efficient tax planner would of necessity avoid any conduct that would tend to increase his tax and non-tax costs. He would however take advantage of allowances and reliefs permitted by law to their full extent as doing so is perfectly legal. The difficulty in delineating the two terms however arises with practices such as use of tax havens, which theoretically do not appear to be tax evasion but in all sincerity cannot be categorized as tax planning. This is because such activities lack any economic substance. Therefore, for want of another term, such activities are categorized as tax avoidance.

In its own effort to differentiate the use of related terminology, The UK Tax Law Review Committee (1997: IX) has this to say on the definition of tax avoidance:

We think it impossible to define the expression ‘tax avoidance’ in any truly satisfactory manner. People rationally alter their behaviour to reduce or defer their taxation liabilities. In doing so, commentators regard some actions as legitimate tax planning and categorise others as tax avoidance. So far as we have needed some broad framework within which to conduct our discussion of tax avoidance (in contra- distinction to legitimate tax mitigation or planning) as action taken to reduce or defer tax liabilities in a way that Parliament plainly did not intend or could not possibly have intended had the matter been put to it.

The above statement draws a distinction between what it refers to as tax mitigation or planning and tax avoidance in trying to clarify the concepts. What one can deduce from the assertion is that tax planning or mitigation is a conduct or action that is within the letter of the law (as promulgated by parliament) whilst tax avoidance is a conduct that while, not exactly outside the law, but is nonetheless contrary to the “intent” of the law. What, however, specifically was the intent of parliament leaves a lot of room for subjective interpretation and therefore leaves the issue in need of further clarification- most probably through further judicial processes. Given that the courts have not been found to be consistent in deciding when to accept and when to disregard a particular scheme as being legally avoided or not, this still leaves vague the clarity of the tax avoidance phenomenon. The UK Tax Law Review position is, however, also echoed by Murphy (2008) who states that tax planning, in contradistinction to tax avoidance is the use of the opportunities parliament has provided to citizens and corporations to reduce their tax rate. To add to the lack of clarity and consensus on the defining characteristic of tax avoidance, Prebble and Prebble (2010: 696) also state that tax planning does not necessarily amount to tax avoidance, but contend on the other hand that it is hard to conceive of an activity

that one might describe as “tax avoidance” that is not preceded by or accompanied by at least some degree of tax planning.

Definitions closer to home do not fare better in the clarification bid. For instance, Osuegbu (2007:1), a tax planning consultant, sees tax avoidance as “the legal application of the tax laws to one’s own advantage, in order to reduce the amount of tax that is payable by means that are within the law.” Osuegbu further posits that in order to take the said advantages, one would need to have a well thought out or planned strategy. Hence, in this context, the two terms avoidance and planning could be construed as the same thing. Further complexity is added to the quest for clarity of the phenomenon by the use of other terminology interchangeably. Tax aggressiveness and tax sheltering are also terms used interchangeably with tax avoidance. In differentiating tax aggressiveness from tax avoidance Hanlon and Heitzman (2010) suggest the use of a continuum. On such a continuum, activities on the farthest side- such as manipulation of intra-group prices, wholly artificial transactions and the use of tax havens can be labeled as tax aggressiveness while activities on the lower rung such as tax-favored investments and taking advantage of statutory incentives could be classified as perfectly harmless tax avoidance. They themselves however concede that gauging the extent of aggressiveness, given the proposed continuum, would still end up being a highly subjective affair.

Despite all the various nuances of the associated terminologies, Lietz (2013) proposed that all the prior mentioned terms used either interchangeably or in contra-distinction with tax avoidance should all be subsumed under the umbrella term-tax planning. At the same time, he contended that sometimes it may be preferable to study each term individually and distinctively “in order to reach flawless conclusions and consistent implications” (Lietz, 2013: 2). It appears therefore that the tax avoidance phenomenon can be viewed either from a wide lens to

incorporate the several associated terminology or from a narrow lens by which specific behavior can be measured. Thus, just like with many other social science phenomena there is no consensus of definition in the matter of conceptualizing tax avoidance. It all depends on the context in which the phenomenon is being studied. This lack of an agreed consensus on what exactly the term tax avoidance portends, while not in itself exactly an impediment to research, nonetheless presents a great drawback in terms of the consistency of measuring, evaluating and comparing studies. This is because while on the face of it the titles of the research refer to the same term, avoidance; in reality the researchers may not be studying the same aspect of the phenomenon.

The Hanlon and Heitzman (2010:137) definition of tax avoidance, “broadly as the reduction of explicit taxes” has been adopted by various other researchers. They contend that this broad definition, which had earlier been suggested by Dyreng, Hanlon and Maydew (2008), is in order to reflect the fact that tax avoidance or planning is a continuum. On one end, the continuum reflects transactions whose legality is not in question (e.g. real activities that are tax favored) while on the other end, transactions such as engaging tax shelters as well as actions that tend toward deception and fraud are described as “aggressive” tax planning and are therefore nearer to outright tax evasion. Their definition, therefore, embraces a wide spectrum of activities. This study therefore also adopted the Hanlon and Heitzman (2010) definition. This is because as a definition of the tax avoidance phenomenon, the definition avoids a moralistic tune to wit that avoidance is either good or bad. The definition also allows the use of a broad measure of tax avoidance for the study.

2.2.1 Methods of tax avoidance

Several methods are available both to individuals and corporations to both take advantage of legally allowed tax savings as well as to exploit loopholes in the tax laws in order to reduce amounts payable by them in the form of taxes. Such opportunities range from ordinarily taking advantage of statutorily deductible allowances, applications for statutorily approved reliefs, use of tax favored investments to various other ingenious schemes. Stiglitz (1985) in putting forth his general theory of tax avoidance itemizes three basic principles that apply in relation to avoidance of income taxes- the ability to postpone taxes, tax arbitrage across individuals facing different tax brackets or an individual facing different marginal tax rate at different times and tax arbitrage across income streams facing different tax treatments.

Researchers have however specifically documented several methods, also referred to as schemes, by which corporations in particular can specifically take advantage of tax minimization and therefore plan their strategies accordingly. For instance, Sikka (2010) documented the use of transfer pricing, royalty programs, off shore tax havens and structured transactions as methods of tax avoidance by corporations. Gravelle (2013) on the other hand documented, in addition to transfer pricing, other methods such as allocation of debt and earnings stripping, contract manufacturing, check-the-box, hybrid entities and/ instruments as well as cross crediting and sourcing rules for foreign tax credits. An individual examination of the mechanisms is therefore necessary.

2.2.1.1 Income shifting

Income shifting is a general term which refers to the ability of an individual or corporation to move income between different tax bases or bands. This follows the tax arbitrage principle of tax avoidance as outlined by Stiglitz (1985). Taking advantage of tax arbitrage as a

tax avoidance strategy allows incomes to be passed either across different individuals who are on incomes facing different tax treatments, the same individual facing a different marginal tax rate at different times or across income streams facing different tax treatments. For instance, income shifting by hiring family members to work in the business has often been employed by small businesses. Family owned limited partnerships have been known to use income splitting mechanisms to shift income. Trusts, annuities, gifts and interest free or below market loans have been known to be proven methods by which individuals as well as families shift income and therefore avoid taxes.

Specifically, in the case of corporations, Gordon and Slemrod (2000) pointed out that income can be shifted through increasing the use of debt financing in order to increase interest deductions for firms in higher tax jurisdictions and to also increase interest income for those in lower tax jurisdictions. Other contrived means of corporate tax avoidance through income shifting include changing the form of employees or executive compensation from stock-based to cash-based as well as shifting business activity income between corporate and non-corporate bases. Kwaghkehe and Samuel (2011) have in particular identified private companies as perpetrators of income shifting in a manner that allows for shareholders to be executives and hence receive jumbo amounts, which are tax deductible, in the form of executive compensation. Kwaghkehe and Samuel also pointed at the capitalization of profits by means of bonus issue as an additional income shifting mechanism by corporations. Gordon and Slemrod (2000) however drew attention to the fact that the various income shifting, if not adequately tackled and monitored play havoc with the usual interpretation of many kinds of data, because it blurs the return to capital and the return to labour. Financing constraints are however thought to moderate the extent of corporations' income shifting. For instance, Dyreng and Markle (2013) documented

that firms facing financial constraints shift less income out of the U.S. into foreign jurisdictions than their non-constrained counterparts.

2.2.1.2 Transfer pricing

Transfer pricing is a situation whereby intra-group prices for certain commodities that are traded within the same group of companies are manipulated in such a way as to ensure maximum tax savings. It has been identified by many as a key means by which companies, especially Multinational Corporations (MNCs) and group company structures, shift income in order to avoid being taxed at a higher statutory tax rate (Rego, 2003). According to Kwaghkehe and Samuel (2011: 164), abuse of transfer pricing happens to be “the biggest single problem to the tax systems of developing and developed countries”. Using transfer pricing technique companies, within a multinational or group structure, can manipulate the price at which they transfer products for sale intra-group in such a way as to ensure that the group’s companies situated in higher tax jurisdictions receive goods at an artificially higher cost from companies within the group that are located in lower tax jurisdictions. This higher cost will tend to reduce the tax payable by the company to whom the goods are transferred thereby reducing the overall tax burden of the company. Use of transfer pricing in tax avoidance is therefore also a classic example of Stiglitz’s (1985) arbitrage principle of tax avoidance. It must however be pointed out that the ordinary use of transfer pricing is not in itself avoidance, but rather its potential abusive exploitation is the problem. Various studies such as Rego (1999), Clausing (2009), Sikka (2010), Gravelle (2009), and Henn (2013) have all reported the use of abusive transfer pricing as a key method of corporate tax avoidance.

In order to prevent such intra-group price manipulation, an internationally accepted “arm’s length principle” has been advocated for by the OECD. The said principle is to be applied in assessing the acceptability of such intra-group transactions that may occur within the same entity. A Nigerian equivalent to the OECD rules is provided for under Section 5(1) of The Income Tax (Transfer Pricing) Regulations Number 1 of 2007 as amended in 2012. The Act provides that in determining whether the result of a transaction or series of transactions are consistent with the arm’s length principle, one of the following transfer pricing methods shall be applied- (i) the Comparable Uncontrolled Price (CUP) method; (ii) the Resale Price method; (iii) the Cost Plus method; (iv) the Transactional Net Margin method; or (v) the Transactional Profit Split method; and (vi) any other method which may be prescribed by regulations made by the Service from time to time. Given the said arms’ length rule, the problem therefore lies in how government agencies can correctly gauge and/ decipher that the transfer of goods within business entities actually adheres to the rule. Realistically, this may not be easily done.

2.2.1.3 *Tax havens*

Use of tax havens is another means by which corporations may avoid and/ evade taxes. According to Henn (2013) tax havens have no universal definitions but they can be identified by three major characteristics. Firstly, they are usually states, countries or jurisdictions with zero or very low tax rates. Secondly, they have low level of regulation regarding legal entities such as companies, foundations, or trusts. Thirdly, they have very strict secrecy laws especially in relation to banking and exchange of tax information with other jurisdictions. The secrecy laws in particular provide the most lure and cover for users of havens. Quoting Black’s Law Dictionary,

Fisher (2014:343) described tax havens as ‘financial conduits that, in exchange for a fee, use their one principal asset- their sovereignty- to serve a nonresident constituency of accountants and lawyers, bankers and financiers, who bring a demand for the privileges that tax havens can supply’. Tax havens satisfy both deferral and arbitrage principles of tax avoidance put forth by Stiglitz (1985).

With regards to tax haven use as a corporate tax avoidance mechanism, MNCs in particular have been fingered as the main customers. The multinational companies utilize the tax havens by locating either the head office or a major subsidiary of the group in the said jurisdiction and ensuring that the bulk of the profits of the group are declared there. In a study reported by Christian Aid (2013), it was found that MNCs with tax haven connections report 1.5 per cent less profits, pay 17.4 per cent less in taxes per unit of asset, pay 30.3 per cent less in taxes per unit of profit and have 11.4 per cent higher debt ratios than MNCs with no connection to tax havens. Tax havens have therefore come under severe criticism by various stakeholders because it has been argued that most tax havens’ practices do not involve a transfer of real economic activity to those jurisdictions, but merely a shift on paper that allows for tax avoidance (Henn, 2013).

2.2.1.4 Royalty programs

Using royalty programs is yet another tax avoidance activity that uses income shifting mechanism. In order for the royalty programs/ schemes to concretize in respect of tax avoidance purposes, they need to be channeled through tax havens. The tax haven(s) then facilitate the requisite tax savings by providing cover from taxes for such royalty income. Depending on the

amount of the purported royalty payment, the business can benefit from significant tax savings. An example is given by Henn (2013) of the use of royalty programs to facilitate tax avoidance by IKEA, the worlds' biggest furniture maker. Under the said royalty program, IKEA is touted to have channeled its royalties to a holding company under the name Inter IKEA Systems; which is based in the Netherlands and where the royalties can be amassed tax-free. Not much has however been documented in Nigeria on the use of royalty programs to facilitate corporate tax avoidance.

2.2.1.5 Structured transactions, hybrid entities and instruments

Structured transactions are an umbrella term used to describe a multitude of transactions that have been designed to be complex. Hybrid entities and instruments are one of such complex transactions used as tax avoidance mechanism by corporations. According to Needham (2013: 4), hybrid entities revolve around obtaining a deduction of the same cost, such as loan interest, from two different countries based on the company's affiliates' structures. Thus such entities are subject to different tax rates in one national jurisdiction and a different tax rate in the other. This could facilitate overall tax savings for such entities. Financial instruments such as derivatives provide a similar opportunity to avoid taxes. This can be made possible through the exploitation of different tax treatments afforded the derivatives in different jurisdictions; just like that described above for hybrid entities. As such derivatives can be used to facilitate a hedging pattern that allows a MNC to shift profits between subsidiaries and parent companies to reduce the overall tax burden for the company. Other structured transactions such as conduits and shell companies, collateralized debt obligations, as well as mortgage-backed securities have also been found to be variously used for corporate tax avoidance purposes (Needham, 2013). DMBs in Nigeria are particularly prone to using structured transactions. This is evident by the mention, without necessary explanation, of such transactions in several of the DMBs' annual reports.

2.2.1.6 *Allocation of debt and earnings stripping*

Allocation of debt and earnings stripping mechanisms are also used to actualize tax avoidance. According to Gravelle (2013), companies within a group structure domiciled in lower tax jurisdictions can borrow more from related companies situated in higher tax jurisdictions or alternatively unrelated foreign borrowers not subject to tax on interest income in the country in which the company is domiciled may borrow sizeable amounts. Gravelle further pointed out that such a practice, referred alternatively to as earnings stripping has been touted to lure corporations into engaging in corporate inversion practices.

There is also evidence that firms alter debt/equity ratios across countries in order to incur more interest expense in high tax countries and more interest income in low tax countries (Clausing, 2009). Where the debt/equity ratio is in favour of debt, the practice is referred to as thin capitalization. According to Taylor and Richardson (2013a) MNCs in particular have an incentive to fund their foreign direct investments in their related and subsidiary companies situated in jurisdictions with higher tax rates by debt. The logic behind having such a high debt/equity ratio lies in the fact that the interest payments become deductible in the jurisdiction with higher tax rate while they become receivable in the jurisdiction with lower tax rates. Thus, while the interest payment will still be taxed at the headquarters, it however effectively reduces the amount chargeable to tax for the MNC as a single entity- hence tax avoidance is facilitated.

There are therefore multitudes of ways by which companies in particular can perpetrate tax avoidance. As can be surmised from the preceding discussion, a key hallmark of most of the various activities and schemes is that they are not easily discernable. Hence tax avoidance continues to flourish.

2.2.2 Motives for tax avoidance

What motivates a firm or corporation to engage in tax avoidance is still an area being explored by researchers, especially given the “under-sheltering puzzle” earlier observed by Weisbach (2003; 2004). According to Alstadsaeter and Jacob (2013), three conditions are necessary before a tax payer can participate in tax avoidance; incentive, access and awareness. Incentive implies that, for one to partaker in tax avoidance, the tax benefit from tax avoidance must outweigh its costs. Access presupposes that the taxpayer needs to have actual access to tax-minimizing strategies. For example, employees generally have less opportunity to shift income across tax bases than owner-managers of closely held corporations. Finally, the taxpayer must have such awareness of the tax code that allows him to have knowledge of the opportunities available to him to avoid taxes. A further perusal of the literature, however, leads us to surmise the motives as falling under any one of the following: opportunity, camouflage, and financing constraints.

The opportunistic motive is premised on the argument that rather than tax avoidance being a deliberately calculated act, it is something to be done because the law has given room for it. That is to say, tax avoidance is a recognized legal activity, given backing by several provisions within the tax laws which give room for individuals or firms to minimize their tax payments. For instance, in Nigeria under section 23 of the Companies Income Tax Act (CITA), 1990, various profits and incomes such as those from registered cooperatives; ecclesiastical, charitable or educational activities; dividends from small companies in the manufacturing sector enjoying pioneer status; amongst others, have been given tax exempt status. In the same vein, sections 25 and 26 of the same act allow for some deductible donations and deductions for research and development respectively which can be used for tax avoidance. Companies taking

advantage of all these provisions of the legislation would therefore only amount to opportunity having presented itself. The opportunistic motive has been given weight by the famous UK Case Law precedent established in the case of Gregory v Helvering (1934) cited in Chirlstein (1968) in which Judge Learned Hand is quoted as saying "there is nothing sinister in so arranging one's affairs as to keep taxes as low as possible". Hanlon (2003) also cited opportunistic reporting as one of two major causes of book-tax differences for US companies.

The camouflage motive is surmised from the propositions of Desai and Dharmapala (2006) and Desai, Dyck and Zingales (2007) who contended that in the presence of agency problems, the very nature of tax avoidance which demands for complex and obfuscatory activities may very well present a shield for managerial opportunism and diversion of rents. The argument draws on the problem of information asymmetry, which has earlier been documented, between owners and managers. Based on this argument, corporate tax avoidance is motivated by a deliberate act of management to conceal fraud. Erickson, Hanlon and Maydew (2004) have earlier documented empirical evidence in favor of the camouflage motive. Erickson *et al* had examined a sample of 27 US firms which were found to have overstated earnings during the period 1996-2002 and found that the firms paid \$320million dollars in taxes on overstated earnings to the tune of \$3.36 billion.

Financing constraints as a motive for tax avoidance is however surmised from studies such as Foley, Hertzell, Titman and Twite (2007) who explored why US multinationals hold so much cash abroad (they approximated that up to 47 % of cash is held abroad). Their findings revealed that US multinationals hold a lot of cash in their foreign subsidiaries and affiliate companies as a tax avoidance tactic. This, they argued, is because the companies are trying to avoid the high costs associated with repatriating foreign income. Furthermore, they found that

even within affiliates, affiliates where the repatriation costs are higher tend to hold more cash than other affiliates where repatriation costs are lower. Further support for the financing constraints motive is found in Troncoso and Vergara (2010) who proposed a theoretical model of firms facing financial constraints. They based their model on the accelerator framework. In their model, financially constrained firms evaluate expected costs and weigh them against expected benefits of the avoidance/ evasion. Thus as financing constraints become tighter after a worsening in internal/ external financing conditions, firms will tend to avoid/evade more taxes. They however, concluded that even though tax compliance depends on both internal and external financing conditions, firms that are more dependent on external financing are more likely to engage in tax avoidance and/ evasion because of the effect of interest rate increases. Empirical support is documented by Chen and Lai (2012) found that financially constrained firms are highly tax aggressive.

2.2.3 Measuring tax avoidance

Ordinarily, deciphering tax avoidance for companies would not constitute a difficult affair. One would merely compare data between a company's financial statements and its tax returns with any differences between the two associated with tax avoidance. Tax returns are however proprietary in nature and are not readily accessible to the public. Thus researchers have considered several measures, often based solely on financial statement data, as proxies in studies of corporate tax avoidance. Relying on the financial statement data to compute tax avoidance measures has however come under criticism. For instance, Hanlon and Heitzman (2010: 139) pointed out that "a lack of disclosure in financial statements about taxable income and/ or the actual cash taxes paid or to be paid on the current year's earnings" represents a great drawback in the use of proxies based on financial statement data as appropriate measures for corporate tax

avoidance. However, despite this criticism, in the absence of alternative and more reliable information, financial statement based proxies of corporate tax avoidance continue to be used.

Hanlon and Heitzman (2010) have earlier identified and reviewed twelve (12) measures from the literature as having been used to proxy for corporate tax avoidance. The identified measures were summarized as falling into one of four categories; effective tax rate measures, discretionary or ‘abnormal’ measures, unrecognized tax benefits and tax shelter firms. The effective tax rate measures are broad measures usually capturing both permanent and temporary differences while the other three measures all capture specific forms of tax avoidance. The review by Hanlon and Heitzman (2010) concluded that all currently existing measures of corporate tax avoidance capture only non-conforming tax avoidance. They therefore caution that the choice of what measure to use as proxy should depend on the nature of the research questions of a study.

Given the broad definition of taxes adopted by the study, of the aforementioned four categories of measures of tax avoidance, the effective tax rate (ETR) measures seem more apt. The effective tax rate measures include the GAAP ETR, cash ETR and long-run ETR. Typically, all the ETR measures capture the average tax rate per monetary (₦) value of pre-tax book income. Data needed to measure ETRs are therefore readily gleaned from financial statements. The GAAP ETR, usually measured as current tax expense divided by pre-tax book income, is one of the most popular measures of tax avoidance. This may be, in part, because it is easy to compute, the necessary data used in its computation are directly discernable from the annual published financial statements and the fact that GAAP matching rules ensure that once a firm generates income for a period, a corresponding tax expense must also be reported irrespective of when taxes are actually paid (Hanlon & Heitzman, 2010). Furthermore, AbdulWahab (2010) citing Hanlon (2003) posits that the GAAP ETR proxy avoids measurement errors in relation to

the effect of tax expense on foreign income and tax credits. However, despite these touted advantages, GAAP ETR has been criticized for not appropriately recognizing particular tax deferral strategies such as more accelerated depreciation charges and for absorbing some tax planning strategies and treating them as avoidance (Lee, Dobiyski & Minton, 2015; Hanlon & Heitzman, 2010).

The cash ETR and its long-run variant differ from the GAAP ETR in respect of their numerators. While GAAP ETR uses total taxes as represented by the tax expense in the income statement, cash ETR and long-run cash ETR focus only on the actual cash taxes that were paid as given by the statement of cash flows. While on the face of it, this may seem more reflective of the company's tax burden, the use of cash taxes paid as numerator against earnings as denominator means that where the cash taxes paid include taxes from a different period, there will be a mismatch between the numerator and denominator. Where there is a mismatch, this will present as one form of measurement error. Furthermore Rego and Wilson (2009) posit that cash ETR measures do not control for non-discretionary sources of book-tax differences such as intangible assets.

According to Dyreng *et al* (2010), which of the ETR variants better captures tax avoidance by the corporation is likely to depend on whether the focus of managers is in reducing the tax expense or in reducing cash taxes. They argue that where managers are concerned with reducing the tax expense for financial accounting purposes, GAAP ETR suffices as a measure of tax avoidance. If however the focus of the managers was to reduce actual taxes paid, the cash ETR serves as a better proxy of tax avoidance. Notwithstanding the drawbacks earlier highlighted, this study used GAAP ETR as a proxy for the corporate tax avoidance phenomenon

because it remains one of the surest ways of ensuring comparability with various other researches.

2.3 Concept of Corporate Governance

Corporate governance or simply governance derives its essence from a need to have mechanisms that alleviate the agency costs associated with the separation of ownership and control rights within the legal entity known as a company or corporation. Muhammad (2009) points out that the growth of the firm and its subsequent maximization of shareholder wealth are likely to be a mirage without the necessary oversight that corporate governance brings to bear. Like many other concepts, several attempts have been made to define it. One of the most cited definitions is that of the Cadbury Committee Report (1992: Paragraph 2.5) which states that “corporate governance is the system by which corporations are directed and controlled.” Without recourse however to the section by section elaboration by the report, the definition leaves a first time reader perplexed over how or by what mechanisms direction and control can be attained. Another oft cited definition is that of Shleifer and Vishny (1997:737) which states that “corporate governance deals with the ways in which suppliers of finance to corporations assure themselves of getting a return on their investment.” This definition fails to convey to the reader what is meant by suppliers of finance and by what mechanisms such assurance is to be ensured. A description by Oman (2003) in Elliot and Elliot (2011: 802) is however more explicit. Oman described corporate governance as:

private and public institutions, including laws, regulations and accepted business practices, which together govern the relationship, in a market economy, between corporate managers and entrepreneurs (‘corporate insiders’) on the one hand, and those who invest resources in corporations on the other. Investors can include suppliers of equity finance (shareholders), suppliers of debt finance (creditors), suppliers of relatively firm-specific human capital (employees) and suppliers of

other tangible and intangible assets that corporations may use to operate and grow.

Thus it can be inferred from the above description that corporate governance is a set of broad corporation control structures that seek to provide proper direction for management in a bid to safeguard the interests of owners of capital.

2.3.1 Corporate governance mechanisms

Corporate governance does not operate in a vacuum. Specific mechanisms, sometimes referred to as controls, exist which are used to achieve the objectives of corporate governance. Brown, Beekes and Verhoeven (2010) classified governance controls or mechanisms as either internal or external. Such a classification has the benefit of easing analysis of the efficacy of the said governance practices. Brown *et al* (2010) further explained that the defining feature of internal governance mechanisms is that they are the result of decisions and actions of the shareholders of a company and that of its board of directors. Given this defining feature of internal governance, it could be said that when Jensen (1993: 871) stated that “governance refers to the top-level control structure, consisting of the decision rights possessed by the board of directors and the CEO, the procedures for changing them, the size and membership of the board and the compensation and equity holdings of managers and the board” he was referring to internal governance. Conversely, external governance mechanisms include all other monitoring exerted by outside parties on the corporation. This typically includes: government regulations, competition, the markets for managerial labor and corporate control, external audit, activists, analysts as well as a host of other outsider influences that monitor the activities of the

corporations. The study focused only on internal governance mechanisms, therefore a review of the known mechanisms is given as follows:

2.3.1.1 *Board Mechanisms*

The board of directors could be said to be the primary internal governance structure. This is because “the board sets the rules of the game for the CEO” (Jensen, 1993:862). As a prime mover of affairs therefore there is high interest in the effectiveness of board mechanisms in fulfilling its general oversight and advising role. In particular, issues that have to do with optimal board structure in terms of size, independence, CEO/ Chair duality and stock ownership by directors of a firm have been noted by Booth, Cornett and Tehranian (2008) as having enjoyed much debate in the literature. Other board mechanisms and characteristics such as diversity, board committees and board remuneration/ incentives have also been considered extensively (Bøhren&Strøm, 2005).

Board size: simply refers to the number of people who make up the board. The focus on board size as an internal governance mechanism centers on concerns about cohesion, co-ordination and timely intervention of the board in respect of advice over relevant organizational matters. Section 4.1 of the Securities and Exchange Commission (SEC) code of corporate governance for all public listed entities in Nigeria (2009) states that “the board should be of a sufficient size relative to the scale and complexity of the company’s operations...” Section 4.2 of the same code further suggests that minimum board membership should be five (5) but makes no such stipulations as to the maximum number. For banks in Nigeria, the Central Bank of Nigeria (CBN) code (2014) also stipulates a minimum board number of five (5). Unlike the SEC code, the CBN code sets the maximum number of board members for banks at twenty (20). The ideal board size has thus been

debated by researchers. No real consensus has however been achieved as to what constitutes optimal board size.

Theoretically some researchers such as Jensen (1993) advocate for smaller board numbers. Their arguments are based on assertions that smaller board sizes are more effective in advising and monitoring because expressing opinions as well as communication within a smaller group is generally easier and less time consuming. On the other hand, it has been argued that larger boards suggest a larger pool of talent and a wealth of varied experiences. The larger pool of talent and varied experience is thought to make it easier for the board to tackle issues and makes it better poised to be able to advice management. All the above arguments are not however based on any empirical evidence. Yermack (1996) therefore empirically explored whether board size has an effect on the market valuation of companies. The findings of the study revealed that companies with large board sizes have lower market valuations and are on average less able to efficiently utilize assets. Consequently, companies with larger board sizes earn lower profits. In a similar study Beiner, Drobetz, Schmid and Zimmerman (2003) while confirming their initial proposition that board size is an independent corporate governance mechanism, found that board size is negatively related to firm performance as measured by Tobin's Q. The results are however not significant. Conversely, Sanda, Mikailu and Garba (2010) found a statistically positive association between board size and firms' financial performance. However, despite the documented positive association, Sanda *et al* still recommended that board size should be kept at a moderate ten (10).

Board independence: is also thought to play a key role in internal governance. Independence reflects the willingness of the boards to monitor management (Adams *et al* 2010). This feature of the board is largely unobservable but has been most commonly proxied by looking at the

appropriate mix of executive and non-executive directors sitting on any one board (Dalton, Daily, Johnson & Ellstrand, 1999). The emphasis on having a board with more non-executive directors (NEDs) stems from theoretical argument which has it that, a board dominated by executive directors (insiders) is likely to facilitate actions by management that are most favorable for management as opposed to shareholders. Therefore, theoretically, it is argued that a greater percentage of non-executives or outside directors on a board ensures better monitoring of the agent. Given this perspective, board independence requirements linked to the number of NEDs on a board feature prominently in the various codes of corporate governance. For instance, Section 4.3 of the Securities and Exchange Commission (SEC) code of corporate governance (2009) for all public listed entities in Nigeria states that “the Board should comprise a mix of executive and non-executive directors... .. the majority of members should be non-executive directors, at least one of whom should be independent director”. Furthermore, Section 5.4 (a) states that NEDs should bring independent judgement as well as necessary scrutiny to the proposals and actions of management and executives especially on issues of strategy, performance evaluation and key appointments. Empirical studies such as Yermack (1996) and Beineret *al* (2003) while not categorically studying board independence, nonetheless examined the effect of board independence on firm valuation and performance. The results of these earlier studies suggest that the percentage of outside/ independent directors on the board has a significant effect on market valuation and performance of companies.

Board remuneration: is also a focal internal governance mechanism. Interest in board remuneration stems from the fact that remuneration packages ought to be structured in such a manner as to provide both maintenance and incentive effects to board members. According to agency theory, incentives play a key role in facilitating the requisite goal alignment between

management and owners (Jensen & Meckling, 1976). Given that the board is supposed to appropriately monitor management, the level and form of board pay therefore has strategic importance in ensuring the actualization of internal governance and should therefore also be possessed of incentive effect. Thus issues that have to do with board compensation are discussed in virtually all corporate governance codes. For instance, paragraph 4.40 of the Cadbury code stipulates that “openness” should be the overriding principle in respect of board remuneration. This is in order to ensure full disclosure that allows for the proper evaluation of compensation structures. In addition, in order to encourage adherence to best practices in relation to board pay, section 14.1 of the SEC code (2009) states that “levels of remuneration should be sufficient to attract, motivate and retain skilled and qualified persons needed to run the company successfully.” Section 14.3 of the same code further stipulates that executive directors’ compensation should be set by only NEDs. The compensation of NEDs themselves should however be fixed by the board in general with approval sought from shareholders at a general meeting.

The focus of empirical research on board compensation has however been more on the compensation of executive directors; relating their pay to the performance of the companies being managed. In particular, focus has been on the compensation of individuals such as the chief executive officer (CEO) and chief financial officer (CFO) as opposed to the compensation of the board as one group (e.g., Healy, 1985; Jensen & Murphy, 1990; Baker, Jensen & Murphy, 1998; Crocker & Slemrod, 2006; Gabaix & Landier, 2008; Jiang, Petroni & Wang, 2010; Scholtz & Smit, 2012). This focus is, in part, because NEDs’ compensations are usually fees and allowances that are not tied to company performance while the remunerations of executive directors such as the CEO and CFO whom are thought to actually partake in the daily running of

company processes are meant to be, to some extent, contingent on performance. Other reasons for the focus on executive pay arise from the argument that an overbearing CEO will have his way in spite of other board members' observations (Bebchuck& Fried, 2003). The results from studies of executive compensation and corporate performance have however failed to consistently establish pay-performance associations.

This research does not study board compensation because Nigerian financial statements do not fully disclose either the existence or amounts of performance-related pay to directors.

CEO duality: is said to exist whenever the positions of Board Chairman and Chief Executive Officer (CEO) are vested in one person. Best practice in corporate governance requires the separation of the positions so as to ensure proper internal corporate governance. There are fears that concentrating such dual power in one individual is a sure recipe for the failure of governance which would then facilitate all sorts of expropriation by management. Paragraph 4.9 of the Cadbury code therefore suggests that CEO duality should be avoided. Such a requirement is also echoed by the Nigerian SEC and CBN codes. Ogbechie (2011) conducted a study of the corporate governance practices of Nigerian banks over the period 2007-2008 and reported that CEO duality was not practiced by Nigerian banks- a situation that still holds till today. Therefore this research does not study CEO duality in relation to tax avoidance by Nigerian DMBs.

Board committees' characteristics: are also argued to play a strategic role in internal governance. This is because even though the board as a singular unit is responsible for providing direction to management, it is at the various committee levels that actual governance practices are undertaken. Consequently, even though boards are free to have several committees, emphasis by most corporate governance codes is on the importance of committees on nomination,

remuneration and audit (Brown *et al*, 2011). In respect of Nigerian banks, the CBN code (2006) specifies that Nigerian banks should have a minimum of the following committees: risk management, audit, as well as credit. The revised CBN code (2014) however stipulates the minimum board committees as risk management, audit and board governance & nominations committees.

Several committee characteristics such as size, independence, expertise, remuneration and activity (meetings) are argued to influence the effectiveness of committees. While however there exist empirical studies that examined the influence of the characteristics of the various committees on company performance, arguably the committee that has received the most attention by researchers is the audit committee (e.g., Hayes, Mehran & Schaefer, 2004; Laux&Laux, 2006; Fauzi& Locke, 2012).

According to Aldamen, Duncan, McNamara and Nagel (2012) the audit committee is a key monitoring mechanism, both in respect of shareholders' and for other stakeholders' interests. Xie, Davidson and DaDalt (2001) point out that with regards to issues such as the management of earnings, the role of the executive committee is an indirect one; it is the audit committee that has a more direct role. This is because the principal role of the audit committee is to monitor a firms' financial reporting and performance. The strength of its monitoring capacity is however contingent on its possession of certain characteristics; amongst which are its size, independence, activity (meetings) and financial expertise. Thus the UK Financial Reporting Council (FRC, 2012) stipulates that minimum audit committee membership should be three; two of which shall be independent. Audit committee meetings are recommended to be frequent (i.e. no fewer than three times during the year), and audit committee members should be given further remuneration to compensate them for their additional tasks. The Audit Committee News (2013) however posits

that the appropriate audit committee size will depend on “the needs and culture of the organization and the extent of responsibilities delegated to the committee by the board”.

In respect of financial expertise, this has been emphasized upon by virtually all the various corporate governance codes as well as reports such as The Audit Committee News (2013) and the FRC (2012). What is mostly emphasized upon is that at least one member of the audit committee should have “recent” and “relevant” experience in finance, accounting or auditing. This is because having experts on the committee is thought to be critical to both the monitoring and advisory roles that the board of directors render (Robinson, Xue & Zhang, 2012). However, in a survey that intended to document what directors themselves consider most important among several corporate governance attributes, Adrian, Wright and Kilgore (2013) found that audit committee composition ranks as the second most important governance mechanism that matters to directors. Adrian *et al.* (2013) also documented that audit partner tenure and audit committee size were less emphasized on by directors as they were ranked bottom of the pack, coming in eighth and ninth respectively. Committee characteristics are not studied by this research because Anderson, Deli and Gillian (2003) have previously documented that elements of audit committee characteristics such as independence and expertise are explained by overall board characteristics.

This study does not consider committee characteristics largely because sufficient disclosure of committee-related mechanisms that have to do with knowledge and financial expertise are lacking in so many DMBs’ annual reports.

2.3.1.2 Ownership structure

Ownership structure is also central to any corporate governance discourse (Lietz, 2013). Theoretical assertion has it that concentrated ownership is one of the most direct ways to align cash flow and control rights of outside investors (Shleifer & Vishny, 1997). According to Brown *et al* (2011: 114), “where ownership is concentrated and there is a difference between the cash-flow rights and voting rights of shares, owning a relatively small portion can be enough to control the firm.” La Porta *et al* (1998) also posited that having concentrated ownership allows shareholders to exercise power in firms that in most instances significantly exceeds the power vested in them by their cashflow rights and that one such way of exercising power is through participation in management. How well concentrated ownership may influence outcomes may however be contingent on ownership identity. This is because ownership identity has implication in terms of risk aversion of owners, monitoring incentive as well as the ability to defend shareholder rights (Shleifer & Vishny, 1997; Holderness, 2003).

Concentrated ownership can be by individuals, management or other institutions. Thus separate terminologies have usually been employed to distinguish the identities of such concentrated ownership. Block shareholders is the term usually identified with individuals whose share of a company’s equity amounts to five percent and above. Corporations or other businesses that have such a similar stake in a company are otherwise referred to as institutional shareholders. According to Holderness (2003) two motivations, which are not mutually exclusive, drive the existence of such block holders- shared benefits of control and private control benefits such as increased voting power and board participation. These two benefits are at the heart of arguments that block holders can and do appropriately monitor management. Increased pressure from institutional shareholders has also been noted as one of the facilitators of more diligent and independent boards (Adams *et al*, 2010).

Holderness (2003) also surveyed the then existing empirical evidence on the effect of block holders- both corporate and individual on corporate control in the US. The survey chronicled that the prevalence of such block holders in the US as at 1999 was about twenty percent. However, the review failed to document enough evidence to establish whether the impact of block holders on firm value is positive or negative. Either way the magnitude of the impact was found to be small. Holderness further concluded that the behavior of block holders depends on whether they are outside individuals, insiders (executives) or corporations. This position is in tandem with Shleifer and Vishny (1997) who also concluded that the effectiveness of large shareholders depends to a large extent on their ability to defend their rights; an ability which itself is contingent on shareholder identity. Institutional shareholders are therefore more likely to be active to the extent that they can influence and dictate corporate policy (Dalton *et al*, 1999; Connelly, Hoskisson, Tihanyi&Certo, 2010).

The issue of CEO ownership of shares, in a company being run by the said CEO, and in what proportion, is also central to any discourse on ownership structure. Stock ownership by management is of particular interest to shareholders and researchers. This is because agency theorists consistently emphasize such ownership as a tool of mitigating agency costs (Jensen &Meckling, 1976; Jensen & Murphy, 1990; Jensen, 1993). Empirical evidence on whether CEO ownership has a significant direct effect on corporate outcomes is however as yet still inconclusive. Morck, Shleifer and Vishny (1988) reported that managerial ownership has an initial positive effect on firm value but the effect diminishes with time as entrenchment sets in. Yermack (1996) and Sandaet *al*(2010) found a positive association between managerial ownership concentration and firm value and performance respectively. The issue of the effect of CEO ownership on firm outcomes is therefore still mixed and open to further investigation.

2.4 Review of Empirical Studies

The earlier studies on tax avoidance and evasion tended to focus more on the avoidance and evasion tactics of individual tax payers. Foremost amongst those earlier studies was Alingham and Sandmo (1972) who theorized that evasion by individuals is a function of the probability of detection and the extent of penalties if one is caught. A call by Shackelford and Shevlin (2001), in their review of empirical tax research in accounting, somewhat aided in shifting the focus of researchers on to corporations. This they did by pointing out, that due to the separation of ownership and control for corporations, the determinants of avoidance for individuals could not be generalized and taken to explain the determinants for corporations. They therefore called for more research in order to better document and understand the determinants of tax avoidance for corporations. Slemrod (2004) also pointed out that outside the chance of getting caught and the extent of penalties for non-compliance, it seemed that why and how corporations differed among themselves with respect to “tax selfishness” was still vague. Since the observations of Shackelford and Shevlin (2001) as well as Slemrod (2004), an avalanche of research has therefore been conducted in order to ascertain the determinants of cross-sectional variations in firms’ tax avoidance activity; making the subject of determinants the foremost studied area of the corporate tax avoidance issue. The determinants have been considered from many angles that include the effects of corporate governance mechanisms, firm-specific determinants, financing constraints- related determinants as well as the effect of executive traits and incentives. However, in the ensuing review only the variables examined by this study will be discussed.

2.4.1 Corporate governance mechanisms and corporate tax avoidance

Governance is primarily in existence to ensure satisfactory goal alignment between shareholders (principal) and management (agent). It is therefore a key mechanism within agency theory. The analysis of corporate tax avoidance within an agency framework is however a relatively recent phenomenon. Hanlon and Heitzman (2010) posited that the theoretical foundations for studying corporate tax avoidance as an agency issue were laid by Slemrod (2004), Chen and Chu (2005) as well as Crocker and Slemrod (2005). The literature preceding these papers had failed to see that due to the separation of ownership and control rights within companies, it could not to be assumed that both the principal and agent had the same motivation to avoid taxes. Of necessity therefore, if owners are desirous of some amount of tax savings, they have to find a way of communicating this to the agent. Thus the board of directors as the spokespersons of the shareholders assumes strategic importance in achieving this goal alignment in terms of tax savings. Within the tax-related agency framework, Slemrod (2004) and Crocker and Slemrod (2005) thus argued that the key to achieving requisite goal alignment lies in incentivizing the agent to do so through his compensation contract.

Another perspective has been added to the agency view of corporate tax avoidance by Desai and Dharmapala (2006, 2007) who argued that even though theoretically better governance should result in greater tax avoidance, the fact that tax avoidance demands some degree of “complexity” and “obfuscation” means that managers can hide behind tax avoidance to perpetuate opportunistic behavior. This argument is given empirical backing by Erickson, Hanlon and Maydew (2004) who found that their sample of US firms had overpaid taxes in order to conceal fraud. Armstrong, Blouin, Jagolinzer and Larcker (2014) also see corporate tax avoidance as an agency issue. However their view differs from that of Desai and Dharmapala, in the sense that they consider tax avoidance as an investment decision. Armstrong *et al*(2014)

therefore contended that as with any other investment decision, managers have personal incentives to engage in some degree of tax avoidance that may not be in the interest of shareholders, thereby giving rise to agency problems.

Given the rising profile of tax avoidance as an agency issue, researchers have therefore begun to seek empirical evidence in order to test the said theoretical arguments. In particular, internal governance variables such as board characteristics as well as ownership structure proxies have therefore begun to be looked at.

2.4.1.1 Ownership structure and corporate tax avoidance

Ownership structure has been of particular interest to researchers studying firm-level tax avoidance. In a treatise on corporate tax selfishness, Slemrod (2007) conjectured that privately held firms may sacrifice reporting higher financial accounting earnings in an attempt to reduce taxes. The conjecture was predicated on the argument that since such firms have fewer outside capital pressures, such a sacrifice would not be difficult to consider. Empirical evidence such as that provided by Badertscher, Katz and Rego (2009) however, showed that private companies which are majority owned by private equity firms engage in significantly less non-conforming tax planning when they are privately held than when they are publicly traded. Similarly, Chen, Chen, Cheng and Shevlin (2010) examined whether private family-owned firms; defined in the study as firms in which founding families retain controlling interest by having over 10% of the issued shares of the said firms, are less or more tax aggressive than their non family-owned counterparts. The study reported that family-owned firms are less tax aggressive than their non family-owned counterparts. The result is consistent with the notion that oversight of activities is

greater in such family firms and that such firm owners are usually risk averse. Their results are corroborated by Rego and Wilson (2009).

McGuire, Wang and Wilson (2012) examined tax avoidance in firms with dual class ownership; a situation whereby some firms have two classes of stock- one class with voting rights and the other with no voting rights. Such firms are characterized by a marked separation of voting rights from cash flow rights. The study found that dual class owned firms tend to avoid more tax. Their research findings, taken together suggest that the costs of risky tax avoidance increase as the separation of voting rights and cash flow rights grows.

In another study, Cheng, Huang, Li and Stanfield (2012) examined businesses that have been targeted by hedge fund activists. Their findings taken together suggest that hedge fund activism lessens tax avoidance for the targeted firms. However, tax avoidance increases when the activists have a successful track record of tax knowledge and/ interest. Cheng *et al*(2012) contended that their findings are consistent with hedge fund activists having concentrated investment portfolios whereby the performance of an individual firm may significantly affect their portfolio return. Therefore, with hedge fund acquisition comes increased monitoring. Their study appears to be a first as no previous literature exists regarding the effect of this form of ownership on avoidance.

With regards the issue of CEO ownership, Desai and Dharmapala (2006) found that the incentive to engage in tax avoidance activities is greater when a CEO has a large ownership stake in the firm. This is in addition to the incentive he has to minimize the burden of his personal taxes. This is consistent with the notion that having an ownership stake in the firm, helps align the goal of the executive with that of the owners, thereby mitigating agency costs and if the CEO

thus perceives avoidance as a wealth maximizing technique, he draws near it. Desai and Dharmapala (2006) however argued that the greater avoidance instituted by the managers may be a sign of managers extracting rents from the firms they manage. Chen *et al*(2010) conversely report results which show that high CEO ownership leads to less tax avoidance in family-owned firms. The differing results between the Desai and Dharmapala as well as Chen *et al* (2010) studies may be because agency costs are less evident in family-owned firms.

2.4.1.2 *Board mechanisms and corporate tax avoidance*

The issue of exploring the effect of board mechanisms on corporate tax avoidance is of relatively recent interest to researchers. Minnick and Noga (2010) are one of the earlier empirical studies to categorically focus on whether corporate governance mechanisms affect tax management by companies. Based on the argument that it is the governance of a company that determines which tax management strategy is pursued by a company, they studied a sample of US S&P500 companies over the period 1996-2005. Using both long-run GAAP ETR and cash ETR as proxies for tax management, Minnick and Noga (2010) aggregated and disaggregated (i.e. foreign and domestic components) tax management for their sample firms. The study found that companies with larger boards that are however less entrenched tend to focus more on domestic tax avoidance than foreign tax management. However, in their aggregated model with the exception of CEO age, all the other governance characteristics (board size, independence, duality, age, GIndex, EIndex and staggered board dummy) examined by the study were found not to be significant determinants of tax management. In their disaggregated models, board independence and age were both found to be inversely related to foreign tax management while board size and independence are respectively inversely and positively associated with domestic

tax management. Staggered boards on the other hand were found to be inversely related to domestic tax management.

In the ensuing period after the publication of Minnick and Noga (2010), few other studies have looked specifically at the issue of governance and tax management. There appears however to be renewed interest. Khaoula and Ali (2012) claim to be the first study to empirically examine corporate tax avoidance issues in relation to the African continent. They examined, for a sample of 32 Tunisian companies, the effect of board-related corporate governance mechanisms on corporate tax avoidance over the period 2000-2007. Specifically, Khaoula and Ali (2012) studied the effect of board characteristics such as size, independence, diversity and duality. Their findings revealed that duality has a statistically significant inverse association with GAAP ETR while diversity has a positive association. The effects of board size and independence were however found not to be statistically significant. Khaoula (2013) further examined whether corporate governance affects tax planning for a sample of 300 large US S&P 500 firms over the period 1996-2009. Using GAAP ETR as a proxy for avoidance, the study found a statistically significant inverse association between board independence and GAAP ETR while a not significant inverse association was found between board size and GAAP ETR.

Some few other studies, such as Lanis and Richardson (2011), while not categorically studying the effect of governance mechanisms on tax avoidance have nonetheless included some governance variables in their estimation. In examining the effect of board independence on aggressive tax avoidance (proxied by GAAP ETR) for a small sample of Australian firms, Lanis and Richardson (2011) found that boards composed of a higher proportion of outside members tend to reduce the probability of aggressive tax avoidance by the said firms.

From the preceding review, it appears therefore that board size and independence have so far been the most frequently studied board-related corporate governance variables in relation to tax avoidance. However the documented empirical associations between the said variables and tax avoidance are far from consistent.

2.4.2 Firm-specific characteristics and corporate tax avoidance

Firm-specific characteristics such as size, profitability, leverage, growth and capital intensity, among others, have been found to feature prominently in determining firms' financing and investing decisions. Based on this, it has also been argued that firm-specific characteristics may have the potential to play a pivotal role in determining a firm's tax avoidance stratagem. Researchers have therefore traditionally examined the issue of corporate tax avoidance from the lens of how well firm-level characteristics explain the phenomenon.

2.4.2.1 *Firm size and corporate tax avoidance*

Of the firm-specific characteristics thought to impact tax avoidance, a perusal of the literature suggests that firm size is the characteristic mostly examined or controlled for in the study of the corporate tax avoidance phenomenon. This is because two competing hypothesis in the literature suggest that firm size may present as a factor to contend with in deciphering firm-level avoidance. The political cost hypothesis, as postulated by Watts and Zimmerman (1978) and Zimmerman (1983), argues that larger firms, due to their greater visibility tend to bear more regulation and by juxtaposition therefore pay more taxes. The association, therefore, given the said high visibility, between firm size and corporate tax avoidance, according to proponents of the political cost hypothesis is that larger firms pay more taxes and by doing so thus avoid/ evade less than smaller firms. Conversely, the alternative hypothesis- the political power hypothesis

argues that larger firms have more financial muscle to manipulate tax payments to their advantage. Thus, under the political power hypothesis, larger firms are seen to avoid more.

Several researchers (e.g. Gupta & Newberry, 1997; Philips, 2003; Richardson & Lanis, 2007; Taylor & Richardson, 2013; Edwards, Schwab & Shevlin, 2013) measure firm size as the natural logarithm of the book value of total assets of the firm whereas studies such as Armstrong, Blouin and Larcker (2012) and Gaertner (2013) measure firm size using change in market value of assets and the natural logarithm of market capitalization respectively. Alternatively, Crabbe (2010) argued in favour of measuring firm size as number of employees of the firm. The argument by Crabbe (2010) in favour of the number of employees measure was in order to avoid colinearity between firm size and other variables scaled by total assets. Different measures of firm size therefore abound.

Arising in part from the different measures of firm size, the findings of various empirical studies on the association between firm size and corporate tax avoidance have been found to be mixed. Gupta and Newberry (1997) who performed a pre and post 1986 US tax reform period analysis of the determinants of corporate ETRs in the US, found a positive association between ETR and firm size in the pre-reform period and an inverse association in the post-reform period. Similar studies such as Richardson and Lanis (2007), Md Noor, Fadzillah and Matsuki (2010) as well as Hsieh (2012), who replicated Gupta and Newberry to specifically study firm level determinants of ETR in different countries, have all documented a significant positive association between ETR and firm size, implying that larger firms are less inclined to tax avoidance. Other studies that focused on other determinants of tax avoidance, of necessity have to control for the various firm-specific characteristics. Therefore studies such as Rego (2003), Loretz and Moore (2009), Minnick and Noga (2010), Dyreng, Hanlon and Maydew (2010),

Crabbe (2010), Harrington and Smith (2011), as well as Cheng, Huang, Li and Stanfield (2012) all control for firm size. All the aforementioned studies found a positive association between firm size and avoidance, thereby lending credence to the political cost view of the firm size effect. In contrast, studies such as Philips (2003), and Wang (2012) found a statistically significant inverse relation between firm size and avoidance. Yet other studies such as Armstrong, Blouin and Larcker (2012), Taylor and Richardson (2013a), and Gaertner (2013) all found no significant association between firm size and tax avoidance. The results on the association between firm size and corporate tax avoidance are therefore mixed.

2.4.2.2 Profitability and corporate tax avoidance

Profitability is another firm characteristic that theory posits is likely to determine firm-level avoidance. From an intuitive point, this view is premised on the fact that profitability implies the firm having more funds at its disposal for both investments and paying dividends; thereby mitigating the need for engaging in tax avoidance. Given the said intuitive hypothesis, therefore, profitability should, theoretically, have the effect of decreasing firms' tax avoidance. Profitability has been often measured in the literature on corporate tax avoidance as return on assets (ROA). For instance, several studies such as Gupta and Newberry (1997), Philips (2003), Minnick and Noga (2010), Armstrong, Blouin and Larcker (2012), Taylor and Richardson (2013b), Edwards, Schwab and Shevlin (2013); amongst others, all proxied profitability by ROA. Dyrenget *al*(2010) however measured profitability as earnings before interest and tax while Gaertner (2013) measured profitability as return on equity (ROE).

The empirical evidence provided by studies such as Gupta and Newberry (1997), Rego (2003), Richardson and Lanis (2006), Frank, Lynch and Rego (2010), Wang (2012), Khaoula

and Ali (2012), Rego and Wilson (2012), McGuire, Wang and Wilson (2012), and Gaertner (2013) showed that there is a positive and significant association between profitability and avoidance; proof that more profitable firms engage less in avoiding taxes. Their findings are in consonance with the intuitive conjecture that profitable firms avoid less and may also be attributable to the argument that profitable firms tend to be more transparent than their non-profitable counterparts. The transparency angle is documented by Wang (2010) who studied the association between opacity and tax avoidance and found that more profitable firms are more transparent and therefore avoid taxes less than their opaque counterparts. However, the results cannot be said to be conclusive as other studies such as Phillips (2003) Boone *et al* (2013), Edwards, Schwab and Shevlin (2013) and Taylor and Richardson (2013b) have all found a negative association between tax avoidance and firm profitability. The empirical results on the association between profitability and corporate tax avoidance are therefore also mixed.

2.4.2.3 *Capital intensity and corporate tax avoidance*

Capital intensity, mostly measured by researchers as the level of property, plant and equipment (PPE) is also another firm characteristic touted to be associated with variations in corporate ETRs and is also a source of book-tax differences. This is in view of the fact that having large amounts of PPE allow for higher depreciation charges on one hand and/ higher qualifying capital allowances on the other. Given the likelihood that firms with such large amounts of PPE will have lower ETRs or greater book-tax differences, studies using one or both of these measures of tax avoidance usually control for capital intensity. In line with economic theory, the firm-specific determinants studies (Gupta & Newberry, 1997; Richardson & Lanis, 2006; as well as Noor Md, Fadzillah & Matsuki, 2010) found statistically inverse associations, all through their models, between capital intensity and tax avoidance as measured by ETR.

However, in specifically studying determinants of thinly capitalized avoidance, Taylor and Richardson (2013b) found a significant positive association between capital intensity and thin capitalization in their ordinary least squares estimate but found a positive but statistically not significant association using their logit estimate. Edwards, Schwab and Shevlin (2013) and Ding, Duan, Hou and Zhang (2013) found statistically not significant negative associations between their measures of capital intensity and tax avoidance. The results for capital intensity and tax avoidance are therefore also mixed.

2.4.2.4 Financial leverage and corporate tax avoidance

Financial leverage is another variable frequently emphasized on by studies in relation to tax avoidance. This is premised on the fact that interest payments for debt are tax deductible; as such leverage serves as a sort of tax shield for firms. Strictly speaking, the tax shield, unless aggressively exploited does not constitute an act that is thought to be on the other side of the moralistic argument on tax avoidance. However, in addition to the tax shield, highly levered firms may likely be financially constrained and as such have a motivation to engage in more tax avoidance. Consistent with this argument, Harrington and Smith (2011) who examined the relationship between tax avoidance and capital structure in US corporations, found that firms that pursue tax avoidance activities issue more long-term debt as a form of financing and thus have higher average leverage after a re-financing. On the other hand, Graham and Tucker (2006) examined forty-four US tax shelter cases, over the period from 1975 to 2000, found that firms in their sample use proportionally less debt when they engage in tax sheltering implying that shelters (their measure of actual tax avoidance) are non-debt tax shields that substitute for the use of interest deductions. Furthermore, in relation to debt financing by corporations in the US, Badertscher, Katz and Rego (2012) who used four measure of tax avoidance (GAAP ETR, cash

ETR, discretionary permanent tax differences and shelters) found that greater debt financing of private equity- backed firm years substantially reduces the marginal tax rate for the said firms as well as their need for more aggressive tax strategies.

Studies that specifically focused on firm characteristics and tax planning such as Gupta and Newberry (1997), Richardson and Lanis (2007) and Md Noor, Fadzillah and Mtsuki (2010), have all found a negative and significant association between financial leverage and tax avoidance (GAAP ETR). Other empirical studies that include financial leverage in their models as a control variable such as Gaetner (2013) and Edwards *et al*(2013) have also documented a negative and significant association between financial leverage and tax avoidance. Conversely, a study by Philips (2003) that examined the effects of incentives on tax planning in US companies, while controlling for various firm-specific characteristics including financial leverage, found a positive association between financial leverage and tax avoidance. The positive result documented in Phillips (2003) is also echoed in Ding *et al*(2013). The empirical results on the association between corporate tax avoidance and leverage are therefore also mixed.

2.5 Consequences of Corporate Tax Avoidance

A focal reason why corporate tax avoidance is such a topical issue lies in its consequences. According to Dyrenge *et al*(2010), this aspect (consequences) of corporate tax avoidance has, however, received less attention from researchers. One of the foremost issues amongst the consequences, is the fact that corporate tax avoidance leads to a substantial loss in revenues accruable to the purse of government. These lost revenues have implications in the provision of public goods, general government administration as well as fiscal policy. Cobham (2005) estimated that US\$285 billion per year is lost by developing countries because of tax

evasion in the domestic informal (shadow) economy. A recent media report states that a non-government organization (NGO), Christian Aid estimated that tax evasion alone costs developing countries \$160 billion annually (CFM News mobile, 2013). These losses significantly affect GDP for the developing world. Fuest and Riedel (2009) documented the effect of these losses and highlighted that tax to GDP for developing countries as at 2005 was between 12% - 15%. A substantially low figure when compared with the thirty-five percent average for the developing world. In the US, a 2001 IRS Tax Compliance Measurement Programme (TCMP) report quoted in Slemrod (2004) states that corporations avoided taxes to the tune of \$29.9 billion, representing an under reporting rate for corporations of about 17.4%. The under-reporting rate for individuals, in that same year, stood at 13.8%. Harnessing all these lost revenues, especially for developing countries, is seen as a most promising medium and long-term source of new funds for development (Cobham, 2005).

Another consequence of corporate tax avoidance lies in the fact that it is likely to impact firm value. Various studies suggest that investors are able to factor in the avoidance activities and this affects firm value. This is because the lower ETRs of companies that engage in tax avoidance activities actually serves as a signal to the discerning investor as to the occurrence of any such activity. The nature of the effect is however, not clear. Desai and Dharmapala (2009b) examined whether investors fully capture the value of corporate tax avoidance activity in their analysis. Using a sample of 862 US firms, over the period 1993-2001. They regressed firm value, as measured by Tobin's q, against book-tax gap- their measure of corporate tax avoidance, a vector of control variables and corporate governance variables which were modelled as mediators. They found that firm value is affected by corporate tax avoidance and that corporate governance does indeed act as a mediator of the relationship between the two. Robinson and

Schmidt (2011) also examined whether firms' disclosure practices under Financial Interpretations Number 48 (FIN 48), which requires disclosure of uncertain tax benefits (possible tax avoidance)- a move at making firms more transparent to outsiders, affects investor's response to such disclosures. Having examined variations in disclosure quality for their sample firms, they found that investors appear to reward firms for low disclosure quality, suggestive of investors being primarily concerned with proprietary costs of disclosure rather than increased transparency.

Distributive justice is a key function of government which it seeks to achieve by the imposition of taxes. The logic of it is simple, and is one of the arguments for government intervention in the economy. The government aims to reduce inequity in income within the populace by taxing those with more income in order to supply those with less income with the basic necessities, which without the government intervention; they may not afford to have. This cannot be achieved in the presence of individual or corporate tax avoidance. This failure to achieve distributive justice has welfare implications from the economical viewpoint.

Another consequence of corporate tax avoidance is that it is liable to engender reputational loss for managers as well as the firm. Reputational loss for managers may dent their careers because it gives the impression that they are untrustworthy. Whereas reputational loss for the firm may, in addition to depressing firm value, compromise relations with customers because of some perceptions they develop regarding the avoidance. This consequence has been verified by the work of Loretz and Moore (2009). The possibility of reputational loss to customers, by companies with well-known brands is also explored in a very recent working paper by Austin and Wilson (2013).

Corporate tax avoidance also leads to more tax authority scrutiny as in the case of US IRS audits. Penalties, once the avoidance is deciphered, are another consequence. The effect of the penalties, however, argues Sandmo (2004) depend crucially on who is being penalised- the corporation or the manager. In addition to all the preceding consequences, another effect is that it forces government to make more enactments of law. The down side of this is that the new laws may only serve to complicate matters as their weakness will definitely be found and exploited.

Another possible consequence of corporate tax avoidance is that in the case of tax sheltering in particular, one economy may fare better at the expense of another economy. This may also be characterized as unfairness. Desai, Foley and Hines (2006) examined whether tax havens divert economic activity by constructing a theoretical model of haven activity. The model revealed that contrary to the assumption that when multinationals engage tax havens; they divert economic activity from nearby non- tax havens, tax haven activity actually boosts activity in nearby non-tax havens. Their findings should however not be misconstrued to conclude that tax havens do not distort activity. This is because they only examined nearby non-tax havens, suggesting that proximity plays a factor in the findings. Arguably, a study of non-tax havens of an increased distance from the havens may yield different results.

2.6 Theoretical Framework

This study is situated within an agency theoretical framework. As a theory, agency theory has had a somewhat long history. According to Fama and Jensen (1983), the theory can be traced as far back to the interest shown by scholars such as Smith (1776), Berle and Means (1932) and Jensen and Meckling (1976), in corporations characterized by separation of ‘ownership’ and ‘control’. Eisendhart (1989) alternatively posits that the origins of agency

theory can be traced to the period of the 1960s and early 1970s; a period that heralded the publication of studies such as Wilson (1968) and Arrow (1971) on risk sharing among individuals as well as studies such as Ross (1973) and Jensen and Meckling (1976) on how the agency problem arises with co-operating parties that have different goals and different risk preferences.

In characterizing the agency relationship, Ross (1973: 134) posits that “the agency relationship is one of the oldest and codified modes of social interaction and that essentially all contractual arrangements, such as that between employer and employee or the state and the governed, contain important elements of agency”. However, notwithstanding the origins of the theory, of particular interest to this study is the way the framework is put forth by Jensen and Meckling (1976).

According to Jensen and Meckling (1976:5), “an agency relationship is a contract under which one or more persons (the principal(s)) engage another person (the agent) to perform some service on their behalf which involves delegating some decision making authority to the agent”. This delegating of decision making is alluded to form the backbone of a host of tensions between the several parties that make up the firm. Thus the agency theory perspective, put forth by Jensen and Meckling (1976) argues that the agent (managers/ executives) of a corporation will not ordinarily act in the best interest of the principal (owners/ shareholders). This is because the principal and the agent have diverging goals and in addition to the goal divergence, the typical agent is risk averse. If the principal therefore hopes to achieve some degree of goal alignment between himself and the agent, the theory suggests that the principal needs to provide sufficient incentives for the agent to act in his best interest. In addition to the incentives, the principal also needs to have some means of monitoring the agent so that he acts to maximize the wealth of

the owner. Bonding costs may or may not be incurred by the agent in facilitating the goal convergence between him and the principal. In practice, the incentives are usually provided through the use of cash or share-based bonus schemes or a combination of both; while the need for monitoring is accomplished by having a board of directors as a part of corporate governance mechanisms.

In reviewing the theory of corporate tax avoidance, Hanlon and Heitzman (2010) posit that the theory of corporate tax avoidance within an agency framework is still in a developing stage; thereby suggesting that as an agency issue corporate tax avoidance is yet to gain prominence. The separation of ownership from control within companies is however at the heart of arguments of corporate tax avoidance as an agency issue (Slemrod, 2004; Chen & Chu, 2005, Desai & Dharmapala, 2007). This is because such separation means that "... in a large, publicly held corporation, decisions about taxes (and *inter alia*, accounting) are not made by shareholders directly but rather by their agents, whether that is the chief executive officer or the vice president for taxation" (Slemrod, 2004). Desai and Dharmapala (2006) further argued that agency issues crop up in relation to corporate tax avoidance because of the complexity and obfuscation (concealment) necessary to proliferate the said avoidance. Armstrong *et al* (2014) further the agency perspective argument by positing that corporate tax avoidance can be viewed from the perspective of being an investment like any other investment made by a company through its managers. As an investment, managers can therefore over or under invest in the tax avoidance issue thereby leading to agency conflicts.

In addition to the above varied nuances of how corporate tax avoidance constitutes an agency issue, the average effective tax rate (ETR) is a measure by which shareholders can explicitly or implicitly tie the compensation of managers to in order to align the incentives of

decision makers with that of owners (Slemrod, 2004). Hanlon (2003), further pointed out that the information in the tax expense, while strictly not an avoidance issue, nonetheless serves as an alternative benchmark/ measure of performance in respect of financial accounting earnings.

These preceding arguments, in addition to the study's earlier adoption of a broad conceptualization of corporate tax avoidance as being any activity that results in the reduction of a firm's explicit taxes (Hanlon & Heitzman, 2010), mean that, from the shareholders' (owners) perspective, tax avoidance is a desirable act as it serves to increase after tax returns. Thus, corporate tax avoidance can be studied within an agency framework. Eisendhart (1989: 70) also lends strength to this study's adoption of the agency perspective by arguing that "due to the contributions of agency theory to organizational theory, the testability of the theory as well as the fact that the theory has empirical support; it seems reasonable to urge for the adoption of an agency theory perspective when investigating the many problems that have a principal-agent structure".

CHAPTER THREE

RESEARCH METHODOLOGY

3.1 Introduction

This chapter presented and explained the research methodology adopted by the study. Specifically, the chapter discussed the research design that was adopted for the study; nature and type of data that was sourced as well as the method by which the said data was collected. In addition, the population of the study, sampling criteria, model specification, data analysis techniques, variable definition and measurement as well as justification(s) for the adoption of each of the techniques so chosen were discussed.

3.2 Research Design

Research design influences what materials need to be collected (source of data), how such materials are actually collected (method of data collection) and how the materials are

integrated and processed (data analysis techniques) in order to achieve the final output-the research itself. Therefore, in designing a research framework, Creswell (2003) suggested adopting a general framework which could either be quantitative, qualitative or mixed methods approaches. In line with this, therefore, the general research framework that was adopted by this study is quantitative.

A quantitative framework was adopted because quantitative research deals with data that lends itself to defined measurement in numerical terms. Under this general quantitative framework, Creswell (2012) identifies three designs; experimental, correlational and survey. Given this perspective, the study therefore adopted a correlational research design. Correlational research design is ideal in providing context, in dealing with many variables and in establishing the total pattern of relationships (Brom& Hedges, 2009 in Creswell, 2012:353).

Correlational research design involves relating two or more variables with the aim of explaining and predicting the relationship between the said variables. Such a design is therefore considered apt for this research project, given that the study aims to examine the association between internal governance mechanisms and corporate tax avoidance. The design allows for not only the establishment of an association between internal governance mechanisms and corporate tax avoidance but also an estimation of the extent of the variability in corporate tax avoidance that is associated with the said mechanisms.

3.3 Source of Data and Method of Collection

In concordance with the research methodology framework being quantitative, the data used in this study was collected from secondary source only. Specifically, data was sourced from the published financial statements of the banks for the period 2006-2014. This was augmented,

where necessary, with the financial information of the banks as contained in the Nigeria Stock Exchange (NSE) fact book. The research method was therefore archival; involving data being hand collected by the researcher from the said financial statements.

3.4 Population and Sample of the Study

The target population of this study was all the Deposit Money Banks (DMBs) quoted on the Nigeria Stock Exchange (NSE) as at 31st December 2014. Going by records extracted from the NSE website, the number of listed DMBs as at that date was 15 (NSE Fact book, 2014). Given that the sector being studied does not consist of many elements, a census approach would have been employed. However, Eco Bank Nigeria Plc. was not included in the final analysis because for several years of the study period there are no local financial reports on the bank. The banks therefore studied are as follows:

Access Bank Nigeria Plc, Diamond Bank Nigeria Plc, Fidelity Bank Nigeria Plc, First Bank Nigeria, First City Monument Bank, Guaranty Trust Bank Plc, StanbicBank Plc, Skye Bank Plc, Sterling Bank Plc, Union Bank Nigeria Plc, United Bank for Africa Plc, Unity Bank Plc, Wema Bank Nigeria Plc, and Zenith Bank Nigeria Plc.

The final sample therefore constituted 14 DMBs which yielded 126 firm-year observations on the dependent variable. The full panel data set is however an unbalanced one because observations on the independent and control variables varied from a minimum of 117 to maximum of 126.

3.5 Method of Data Analysis

Given the correlational research design adopted by the study, regression technique was used to estimate the relationship between the variables under study. This was preceded and

augmented by correlation analysis and the use of descriptive statistics. The correlation analysis was deemed necessary as a first step to assessing the existence of an association between the variables of the study. The descriptive statistics on the other hand served as a first step to assessing the nature of the sampling distribution from which the variables were drawn. Assessing the nature of the sampling distribution for the individual variables is particularly important because the nature of the sampling distribution (i.e. whether Gaussian, Poisson, Chi-square, or other) is a key assumption for the class of parametric tests of which regression belongs to. The specific descriptive statistics employed were analysis of minimum and maximum values, means, medians, skewness, kurtoses, ranges and standard deviations.

The regression technique used by the study was a dynamic panel data estimator; the Generalized Method of Moments (GMM) of Arellano and Bond (1991). The GMM estimator was used because of its ability to tackle the issue of endogeneity (due to simultaneity) said to be present in studies related to corporate governance outcomes (Hermalin & Weisbach, 2003; Roberts & Whited, 2012) and the fact that similar studies such as Minnick and Noga (2010) employ it in their estimation. Several methods exist to tackle endogeneity concerns amongst which are fixed effects modelling, simultaneous equations, differencing, use of instruments as well as the GMM (Roberts & Whited, 2012). However Minnick and Noga (2010) argue that an instrumental variables approach may not be feasible in corporate governance-related ETR studies because finding suitable exogenous instruments may be very difficult. In addition, they also posit that fixed effects models may be biased because such models ignore past performance and past governance choices (Minnick & Noga, 2010: 712). The GMM estimator is therefore superior to the other two methods of tackling endogeneity because it allows for the introduction of lags of

the dependent variable in addition to lags of potentially endogenous variables into the estimated function and also controls for both year and company effects.

As a prelude to the GMM estimation, ordinary least squares (OLS) multiple regression was performed to facilitate regression diagnostics such as testing for heteroskedasticity and multicollinearity. A further OLS regression was also conducted as a necessary prelude to assessing whether the moderators included in the final model contribute to model explanatory power. According to Hair, Black, Babin and Anderson (2010) whenever a moderator is to be included in a model, the model must first be estimated without the moderator and its coefficient of determination (R^2) noted. Secondly, the model with the moderator should be estimated, its R^2 also noted. Finally an assessment is made of the change in R^2 . If the change in R^2 is statistically significant, then a significant moderator effect is present whether the individual variables are significant or not.

3.6 Variables, Measurements and Model Specification

The dependent variable (outcome) of the study is the variable of interest. In this study, the outcome variable is corporate tax avoidance. Corporate effective tax rates (ETRs) were used to proxy for individual banks' tax avoidance.

The independent variables of this study are six (6) internal governance mechanisms; four "predictors" and two "moderators". According to Baron and Kenny (1986: 1174) "moderators and predictors are at the same level in regard to their role as causal variables antecedent or exogenous to certain criterion effects." The predictors therefore studied were: board size, board independence, board shareholding, and ownership concentration while the moderators were the effects of two interaction variables; the interaction between ownership concentration and board

size as well as the effect of interaction between ownership concentration and board independence on tax avoidance among DMBs.

Four firm-specific characteristics were selected as control variables and included in the models of the study. These were firm size, profitability, capital intensity and financial leverage. Firm size was included as control because of several assertions in the literature that larger firms are on the one hand likely to bear more taxes due to their visibility (Political cost hypothesis of Watts & Zimmerman, 1978, Zimmerman, 1983 and Watts & Zimmerman, 1990). On the other hand, it is argued that larger firms are likely to bear less taxes due to their high level of sophistication which in turn gives them greater financial muscle to manipulate tax payments in their favor (Zimmerman, 1983; Gupta & Newberry, 1997; Mills, Erickson & Maydew, 1998; Richardson & Lanis, 2007).

Profitability was also controlled for because ETRs are computed by dividing tax liability by profit. To a large extent therefore ETR is contingent on the amounts of profits made by an entity. Not controlling for such an association is therefore likely to bias parameter estimates for the independent variables. Several other related studies such as Minnick and Noga (2010), Hsieh (2012) and Armstrong *et al* (2015) also control for it.

Capital intensity was controlled for because of the effect of depreciation charges on profit and therefore by association ETR. Since ETR is a book value measure of tax preferences and capital allowances are granted to entities with qualifying capital expenditure, it is necessary to control for the effects of capital intensity on estimated ETRs. Studies such as Gupta and Newberry (1997) and Richardson and Lanis (2007) have earlier found significant associations between a firm's level of capital intensity and ETR.

Financial leverage represents the advantage which debt financing offers firms. Since interest payments that have to do with debt in an entities capital structure are tax deductible, debt in a firms' capital structure allows firms to have financial leverage in respect of their tax payments. Therefore studies on corporate ETRs often control for the effect of financial leverage. Related studies such as Gupta and Newberry (1997), Richardson and Lanis (2007), Edwards *et al* (2013) and Armstrong *et al* (2015) have either directly examined or controlled for it.

3.6.1 Model specification

The primary specification of the model that was tested in the study is as follows:

Tax avoidance=f (Internal corporate governance mechanisms).

There are however strong arguments in the literature that firm-specific characteristics are also likely to influence the degree of tax avoidance by firms. Thus, in order to control for the effect of such firm-specific characteristics the model was further specified as:

Tax avoidance=f (Internal corporate governance mechanisms, Firm characteristics).

The internal corporate governance variables included in the model are board of directors' shareholding, block ownership concentration, board size, and board independence while the firm-specific controls were restricted to firm size, capital intensity, profitability and leverage.

The basic panel econometric form of the model is therefore given by:

$$ETR_{it} = \alpha_0 + \beta_1 Bsize_{it} + \beta_2 Bindp_{it} + \beta_3 BShare_{it} + \beta_4 Oconc_{it} + \beta_5 Fsize_{it} + \beta_6 ROA_{it} + \beta_7 Capint_{it} + \beta_8 Flev_{it} + \mu_{it} \dots \dots \dots i$$

The basic model with the inclusion of moderation variables is given by:

$$ETR_{it} = \alpha_0 + \beta_1 Bsize_{it} + \beta_2 Bindp_{it} + \beta_3 BShare_{it} + \beta_4 Oconc_{it} + \beta_5 Oconc * Bsize_{it} + \beta_6 Oconc * Bindp_{it} + \beta_7 Fsize_{it} + \beta_8 ROA_{it} + \beta_9 Capint_{it} + \beta_{10} Flev_{it} + \mu_{it} \dots \dots \dots ii$$

The final model estimated was a dynamic panel model given by:

$$ETR_{it} = \alpha_0 + \alpha_i ETR_{it-1} + \alpha_i ETR_{it-2} + \beta_1 Bsize_{it-1} + \beta_2 Bindp_{it-1} + \beta_3 BShare_{it-1} + \beta_4 Oconc_{it-1} + \beta_5 Oconc * Bsize_{it-1} + \beta_6 Oconc * Bindp_{it-1} + \beta_7 Fsize_{it} + \beta_8 ROA_{it-1} + \beta_9 Capint_{it} + \beta_{10} Flev_{it} + \mu_{it} \dots \dots \dots iii$$

3.6.2 Variable Definition and Measurement

ETR_{it} : the GAAP effective tax rate of bank i at time t . This is measured as current tax expense divided by earnings before interest and tax (EBIT). This was used to proxy for banks' tax avoidance. ETRs are set to 0.000 to avoid the problems of distorted ETRs arising from book loss (negative denominator) and tax credit (negative numerator) which gives a positive figure even though taxes were not paid in that period. ETRs are also set to 1.000 for any ETR computed based on a book loss (negative denominator) and a tax expense (positive numerator) which tends to give a negative figure even though taxes were paid in that year by the entity. The measure with its attendant modification is consistent with Gupta and Newberry (1997), Richardson and Lanis (2007) as well as several other researchers.

$Bindp_{it-1}$: board independence of bank i at time $t-1$. This is measured as the proportion of non-executive/ outside directors on the board expressed as a percentage. The

measurement is consistent with the requirements of the various corporate governance codes as well as other researches such as de Andres and Vallerdo (2008) and McKnight and Weir (2009).

$Bsize_{it-1}$: board size of bank i at time $t-1$. Board size is measured as the total number of directors serving on the board. This measure is the norm with other researches including Ibrahim (2009) and Muhammad (2009) amongst others.

$Bshare_{it-1}$: board of directors' shareholding of bank i at time $t-1$. This is measured as the proportion of total share ownership of directors of the board to total number of shares outstanding for the banks in the same period. This measure is consistent with Muhammad (2009) and Byrd (2010).

$Oconc_{it-1}$: high ownership concentration. This is a dummy variable coded 1 for bank-year observations with ownership concentration \geq the mean ownership concentration ratio value of 0.2767 for the banks in the studied panel and 0 for bank-year observations with ownership concentration less than the mean value. The actual ownership concentration ratio for each bank-year is arrived at by taking the aggregate percentage of shares owned by outside individuals and institutions, in each of the studied years, if five percent and above for the examined banks.

$Oconc*Bsize_{it-1}$: interaction between the dummy for ownership concentration and board size of bank i at time $t-1$.

$Oconc*Bindp_{it-1}$: interaction between the dummy for ownership concentration and board independence of bank i at time $t-1$.

$Fsize_{it}$: firm size of bank i at time t ; measured as the natural logarithm of the book value of total assets at the beginning of the period. This is consistent with Gupta and Newberry (1997), Richardson and Lanis (2007), Lanis and Richardson (2011), Edwards *et al* (2013) as well as several other researchers.

ROA_{it-1} : profitability of bank i at time $t-1$; measured as earnings before interest and tax divided by total assets. The measure is consistent with Gupta and Newberry (1997), Richardson and Lanis (2007), Edwards *et al* (2013) as well as several other researchers.

$Capint_{it}$: capital intensity of bank i at time t ; measured as the beginning of period balance of property, plant and equipment divided by book value of total assets. This is also consistent with several other researchers, amongst which are Gupta and Newberry (1997), Richardson and Lanis (2007), and Edwards *et al* (2013).

$Flev_{it}$: financial leverage of bank i at time t ; measured as the amount of total liabilities divided by total assets (both @ book value). This is consistent with Hsieh (2012), Keen and deMooij (2012), Edwards *et al* (2013), deMooij, Keen and Orihana (2013) and Armstrong *et al* (2015).

$\beta_1, \beta_2 \dots \dots \beta_{10}$: coefficients of the estimated variables.

u_{it} : error or disturbance term

CHAPTER FOUR

DATA ANALYSIS AND INTERPRETATION

4.1 Introduction

This chapter covers the analysis of the data extracted for the study on the effect of corporate governance mechanisms on tax avoidance by deposit money banks in Nigeria. 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 being studied were also presented and discussed. Given the results, the hypotheses of the study were then tested. A discussion of the findings of the study was given as the concluding part of the chapter.

4.2 Descriptive Statistics

Table 4.1 reports the descriptive statistics for both the dependent variable, ETR, independent variables and control variables that were studied.

Table 4.1: Descriptive Statistics

Variable	N	Mean	Std. Dev.	Median	Min.	Max.	Skewness	Kurtosis
ETR	126	0.1313	0.2034	0.084	0	1	3.5563	15.2603
Bsize	118	13.8050	2.9764	14	5	20	-0.5697	3.5801
Bindp	118	0.5880	0.1269	0.571	0.286	0.909	0.7300	3.3199
Bshare	117	0.1244	0.1394	0.069	0	0.609	1.4918	4.8074
Oconc	123	0.3790	0.4871	0	0	1	0.4987	1.2487
ROA	125	0.0473	0.0346	0.052	-0.171	0.115	-2.7928	16.4144
Capint	124	0.0323	0.0162	0.0305	0	0.091	0.1703	3.5962
Flev	126	0.8434	0.0728	0.853	0.548	1	-0.8669	5.2686
Fsize	126	20.3226	0.9158	20.3805	18.202	22.142	-0.2533	2.3302
OConc*Bsize	118	5.2881	6.8239	0	0	20	0.6501	1.6757
OConc*Bind	118	0.2372	0.2993	0	0	0.909	0.5587	1.5396

Source: STATA Output as per appendix

From the table it can be seen that the independent variable, ETR has a minimum value of 0.000 and a maximum value of 1.000. The minimum value of 0.000 is as a result of the adjustment made to any ETR computed based on a book loss (negative denominator) and a tax refund (negative numerator) which tends to give a positive figure even though taxes were not paid in that year by the entity. The maximum of 1.000 is as a result of adjusting the ETR of entities that reported a book loss (negative denominator) but paid taxes (positive numerator). Mean ETR for the period was 13.16% with standard deviation of 0.2035. The median value was 8.40%. The difference between the mean value with its median counterpart suggests some degree of non-normality in the data. This is corroborated by a skewness value of 3.556 and kurtosis of 15.260; indicating the presence of outliers in the data set. The mean ETR is also well below the statutory corporate income tax rate of 30% and is therefore indicative of extensive tax planning in the DMBs.

The explanatory variables are board size, board independence, board shareholding and block ownership concentration. Board size for the period ranged from a minimum of 5 to a

maximum of 20 persons. This is within the acceptable range as given by the CBN code of corporate governance (2014). Mean board size over the period was 13 persons while the median was 14 persons with standard deviation of 2.9764. This indicates that on average boards of directors in Nigerian DMBs are neither too large nor too small; given the suggestions on optimal board size by Jensen (1993) and Sandaet *al* (2010). Board size skewness value of -0.5697 and kurtosis of 3.5801 suggest no significant departure from symmetry; as such the data set on board size appears to be relatively normal.

Board independence for the studied DMBs ranged from a minimum of 28.6% to a maximum of 90% indicative of wide variation in independence during the period under study. This is likely due to earlier periods where corporate governance requirements had not yet become consolidated. The mean and median values of board independence are quite close at 58.8% and 57.1% respectively. The standard deviation of the mean value is 0.1269. On average therefore, given the measure of board independence, boards of DMBs in Nigeria appear to be independent. The skewness and kurtosis values for board independence stand at 0.73 and 3.32 respectively. Taken together the descriptive statistics for board independence suggest that the data set is relatively normal.

Board shareholding for the period ranged from a minimum of 0.00% to a maximum of 61%. This suggests wide variation in equity ownership patterns by boards which may have significant impact on tax planning ability. Mean board equity ownership for the period under study was 12.4% with standard deviation of 0.1394 while median ownership was 6.9%. The somewhat wide disparity between mean and median values of board equity ownership also suggest that the effect of board ownership on tax planning may be driven by entity specific

differences. The skewness values of 1.4919 and kurtosis of 4.8074 suggest some little departure from symmetry for the variable.

Ownership concentration for the period ranged from 0.00% to 99.00% suggestive of wide variations between the studied entities in concentrated ownership. Mean concentration was 27.60% well above the 5% necessary to have some degree of influence over decisions. The high ownership concentration dummy has a mean value of 0.3790 with standard deviation of 0.4871. The mean value of the dummy indicates the probability that 1 (i.e. reference to high ownership concentration values) will be observed. The value of 37.90% gives the proportion of DMB-year observations in the sample having high ownership concentration. Skewness and kurtosis values for the ownership concentration dummy are 0.4987 and 1.2487 respectively. However, no inferences on normality are made regarding the values because dummy variables are typically binomial distributions.

The interaction terms both yielded 118 bank-year observations each. The mean value for the interaction between board size and high ownership concentration is 5.2881 with standard deviation of 6.8239 while mean interaction between board independence and high ownership concentration was 0.2372 with standard deviation of 0.2993. Both moderators appear to be platykurtic having kurtosis values of 1.6757 and 1.5396 respectively for the board size and board independence moderators. The distribution of both moderators however have low positive skew values of 0.6501 and 0.5587. Taken together, the descriptive statistics for both moderators suggest some degree of non-normality with their individual distributions.

The control variables of the study were profitability (ROA), capital intensity (CINT), financial leverage (Flev) and firm size (Ln Total Assets). ROA for the period ranged from a minimum of -17.1% to a maximum of 11%. Mean ROA was 4.73% while the median was 5.2%.

Standard deviation of ROA was 0.3456, skewness -2.79 and kurtosis of 16.41. Overall, there is some degree of wide variation in profitability among the studied DMBs. Capital intensity for the period ranged from 0.00% to 9.10% with a mean of 3.23% and median of 3.05%. On average therefore Nigerian DMBs are not highly capital intensive. The skewness and kurtosis values of 0.7103 and 3.5962 for CINT suggests little significant departure from symmetry for the said variable.

Financial leverage for the DMBs over the study period ranged from 54.8% to 100% indicative of high variation in the sector and high debt capacity that can be exploited for tax planning purposes. The mean value was 84.3% with standard deviation of 0.0729. The mean is close to the median value of 85.30% and as such suggests that mean leverage is fairly representative for the industry. The high average financial leverage values are not surprising given the peculiarities of banks as institutions of financial intermediation. Skewness value of -0.86990 and kurtosis of 5.2686 signify some departure from symmetry within the Flev data set but the figures are not so alarming as to suggest the presence of outliers. Firm size as measured by the natural logarithm of total assets has a mean of 20.3226 with a standard deviation of 0.9158 while the median value was also very close to the mean at 20.3805. The skewness value of -0.2533 indicates a slight negative departure from symmetry while the kurtosis value of 2.3302 indicates that the sampling distribution for total assets is relatively mesokurtic.

4.3 Correlations of Variables

Table 4.2 reports the Pearson correlation coefficients (R), in a matrix form, among variables of the study. The correlation coefficients provide a preliminary assessment of both the direction and strength of relationship between the dependent variable and the explanatory variables as well as between the explanatory variables themselves.

Table 4.2: Correlation Matrix

	ETR	Bsize	Bindp	Bshare	Oconc	ROA	Capint	Flev	Oconc*Bind	Oconc*Bsz	Fsize
ETR	1.0000										
Bsize	-0.0655	1.0000									
Bindp	0.0093	0.1351	1.0000								
Bodshare	-0.0001	-0.0023	-0.0975	1.0000							
Oconc	-0.1907	-0.1451	0.0485	-0.0851	1.0000						
ROA	-0.3699	0.0523	-0.0011	0.0931	0.1352	1.0000					
Capint	0.2416	0.0096	0.1067	-0.2459	0.0142	0.0177	1.0000				
Flev	0.1469	-0.0470	-0.0919	-0.0850	0.1233	-0.2808	0.0561	1.0000			
Oconc*Bind	-0.2094	-0.1296	0.1486	-0.0852	0.9783	0.1721	0.0324	0.1125	1.0000		
Oconc*Bsz	-0.2099	0.0562	0.0591	-0.0671	0.9565	0.1392	-0.0132	0.0920	0.9412	1.0000	
Fsize	-0.0571	0.2055	-0.1540	-0.3680	0.0761	0.0166	-0.0993	0.2311	0.0627	0.1227	1.000

Source: STATA Output as per appendix

From table 4.2 it can be seen that the correlation between ETR and board size is negative (i.e. R of -0.0655). Going by the benchmark for effect sizes as posited by Cohen (1988, 1992) and Cohen, Manion and Anderson (2000) the coefficient appears relatively small. The negative coefficient implies that board size and tax avoidance are moving in opposite directions. ETR is however positively correlated with board independence (i.e. R of 0.0093). The sign of the coefficient suggests that that board independence and ETR are moving in the same direction, that is to say as board independence increases ETR also increases. In terms of strength of association, the association between board independence and ETR appears weak. Board equity ownership is negatively correlated with ETR (i.e. R of -0.0001). The sign of the association suggests that as board equity ownership increases, ETR decreases. However the magnitude of the association appears to be very small. High block ownership concentration is also negatively correlated with ETR with a correlation coefficient of -0.1907. This is slightly higher than for board size, independence and ownership but also appears to be small. The negative sign suggests that as block ownership concentration increases ETR decreases. Both interaction terms are inversely related to ETR with the interaction term between high ownership concentration and board size having a correlation coefficient of -0.2099 while the interaction term between high ownership

concentration and board independence has a correlation coefficient of -0.2094. Overall, the strength of association between the dependent variable and the independent variables is small with that of the interaction terms appearing to be strongest. However as Cohen (1992) cautions small effect sizes, of which the correlation coefficient measures, need not necessarily be trivialized in forming a basis for estimating the extent of relationship between variables.

Regarding the control variables, ROA is negatively correlated with ETR (i.e. R of -0.3699). The sign of the coefficient suggests as ETR is increasing, profitability is moving in the opposite direction. Capital intensity is positively correlated with ETR (i.e. R of 0.2416). The sign of the coefficient suggests that as capital intensity for DMBs in Nigeria increases, ETR also increases. Financial leverage is positively correlated with ETR (i.e. R of 0.1469) meaning that ETR is increasing as financial leverage for the DMBs is increasing. Lastly, the correlation matrix reveals that firm size is negatively correlated with ETR (i.e. R of -0.0571); a sign that implies that as firm size increases, ETR decreases in the DMBs.

None of the independent variables nor controls appear highly correlated with each other. This is evidenced by a maximum correlation coefficient of -0.3680 between firm size and board shareholding. Since none of the correlations exceeds or is equal to 0.8, the potential for harmful multi-collinearity is low (Kennedy, 2008). The absence of harmful multi-collinearity will however have to be confirmed by further robust tests such as the variance inflation factor (VIF) and corresponding Tolerance (TOL) values.

4.4 Robustness Tests

In order to ascertain that the assumptions of the classical linear regression model (CLRM) have been met and also to ascertain whether to proceed with the inclusion of both moderator variables in estimation, two regression models were run. Model 1 consists of OLS

estimates of the relationship between ETR and all other co-variates with the exception of the two moderators while Model 2 represents estimates of all the co-variates including both moderator variables. Both models were tested for heteroskedasticity and for multi-collinearity. The OLS results together with accompanying heteroskedasticity and multicollinearity test statistics are provided in Table 4.3.

Table 4.3: Summary of OLS Results & Regression Diagnostics

	Model 1		Model 2	
	Coefficient	t-statistic	Coefficient	t-statistic
Intercept	0.0059	0.01	-0.0007	0.00
Bsize	-0.0033	-0.57	-0.0074	-0.90
Bindp	0.0216	-0.17	0.0251	0.17
Bshare	0.0586	0.44	0.0607	0.45
Oconc	-0.0680	-2.02**	-0.2098	-1.51*
ROA	-0.9922	-1.91*	-0.9621	-1.81*
Capint	2.2928	2.19**	2.4339	2.27**
Flev	0.3868	1.64*	0.4154	1.73*
Fsize	-0.0087	-0.41	-0.0071	-0.33
Oconc*Bind			0.0387	0.13
Oconc*Bsize			0.0085	0.72
R ²	0.1526		0.1570	
Adj. R ²	0.0886		0.0895	
F-Statistic	2.39**		1.94**	
Mean VIF	1.23		12.43	
Hetest	164.52***		160.70***	

*** Denotes significance at 1%.

** Denotes significance at 5%.

* Denotes significance at 10%.

From the results in Table 4.3, it can be seen that Model 1 has an R^2 of 15.26% while Model 2 has an R^2 of 15.70%. The higher R^2 of Model 2 indicates that the inclusion of the two interaction terms has increased model explanatory power by 0.44%. The increase in adjusted R^2 from 8.86% to 8.95% also corroborates the increased explanatory power of the moderators. Based therefore on the results, both interaction terms were then included in the final model estimation.

A key assumption necessary for OLS regression results to be unbiased and consistent is that the variance of the error term should be constant (homoskedasticity). The Breusch-Pagan / Cook-Weisberg test for heteroskedasticity was therefore conducted for both models. Under the null hypothesis that assumes constant variance of the error term, the test reported a Chi-square statistic of 164.52 and 160.70 for Models 1 and 2 respectively which both have p-values of 0.000. The p-values which are statistically significant at 1% therefore suggest the rejection of the null hypothesis of constant variance in favour of the alternate hypothesis of non-constant variance (i.e. heteroskedasticity).

Further robustness tests were conducted on both models in the form of tests for multi-collinearity. According to Hairet *al* (2010), multi-collinearity is a situation whereby two or more of the co-variates in a model are highly correlated. While the presence of multi-collinearity does not necessarily prevent OLS estimates from being best linear unbiased estimators (BLUE), high amounts may cause the OLS estimators to have large variances and covariances, making precise estimation to be difficult. (Gujarati & Porter, 2009: 327). To test for the absence of harmful multi-collinearity the variance inflation factor (VIF) test and corresponding tolerance values (1/VIF) were computed. The rule of thumb is that VIF should be less than 10 and values of

1/VIF approaching 1 are evidence that a co-variate (X_{ij}) is not collinear with the other co-variates (Gujarati & Porter, 2009). Table 4.3 gives the mean VIF for both Model 1 and Model 2. Mean VIF for Model 1 is 1.23, a value which is also lower than the accepted benchmark while that for Model 2 is 12.43, quite high due to the presence of the moderators. Individual variable VIF and Tolerance values are given in the appendix. From the results in the appendix it can be seen that for all the individual co-variates VIF values are consistently lower than the benchmark of 10 except those for the two interaction terms which are both above 10. In addition, with the exception of the two moderated terms, all other Tolerance values are greater than 0.5 and are thus closer to 1 than to 0, indicating no obvious collinearity issues. High VIF and low Tolerance values for interaction terms that appear to indicate multicollinearity do not however present much cause for concern and as such can be disregarded (Voss, 2004; Allison, 2012).

4.5 Presentation and Analysis of GMM Results

Table 4.4 reports the results of the generalized method of moments (GMM) estimation of the effect of internal corporate governance mechanisms on ETRs of the studied DMBs. The results were gotten using the Arellano-Bond dynamic panel GMM estimator in STATA 13. The use of the GMM estimator is in response to endogeneity concerns raised by researchers such as Hermalin and Weisbach (2003) with regards studies on corporate governance outcomes. GMM is also used by a related study (Minnick & Noga, 2010) to address the endogeneity issue.

Following Minnick and Noga (2010), two lags of the dependent variable were estimated together with 1 lag each for the six co-variables thought to be endogenous. The lagged co-variables were: board size, board independence, board shareholding and ownership concentration as well as the two moderating variables; ownership concentration*board size and ownership

concentration*board independence. In addition, one of the control variables ROA was also lagged. The introduction by the estimator of lags of the said independent variables meant that current values of the variables were automatically dropped from analysis. This was done by the estimator so as to avoid multi-collinearity. It is therefore the estimated lagged values of the endogenous independent variables that have been reported.

Another issue that arises is that having lags of the dependent variable within the model introduces some degree of autocorrelation into the model. To address the autocorrelation concerns and simultaneously address the issue of the presence of heteroskedasticity, the robust option in STATA 13 was employed. The robust option uses Huber-White sandwich estimators to correct the standard errors of the estimated coefficients such that both heteroskedasticity and autocorrelation are kept to the minimum.

Table 4.4: Summary of GMM Results

	Coefficient	Robust Std. Err.	Z	P> z	
Intercept	3.2133	1.1476	2.8000	0.0050	***
ETR_L1	-0.2926	0.0793	-3.6900	0.0000	***
ETR_L2	-0.2606	0.0792	-3.2900	0.0010	***
Bsize_L1	-0.0083	0.0095	-0.8800	0.3810	
Bindp_L1	0.4541	0.2476	1.7500	0.0790	*
Bshare_L1	-0.4255	0.1979	-2.3000	0.0220	**
Oconc_L1	0.0754	0.1346	-1.0100	0.3130	
ROA_L1	-3.6085	0.6086	-5.9300	0.0000	***
Oconc*Bindp	-0.9329	0.3487	-2.6800	0.0070	***
Oconc*Bsize	0.0269	0.0102	2.6300	0.0080	***
Capint	-0.0031	1.1992	0.0000	0.9980	
Fsize	-0.1616	0.0719	-2.2500	0.0250	**
Flev	0.5315	0.5250	1.0100	0.3110	
AR(1) test	-1.6827			0.0924	*
AR(2) test	1.5813			0.1138	
Wald	714.3				

chi2(12)

Prob> chi2 0.0000 ***

*** Denotes significance at 1%.

** Denotes significance at 5%.

* Denotes significance at 10%.

From the results, it can be seen that the Wald chi-square statistic is 714.30 with a p-value of 0.000. This indicates that the model is well fitted. The AR (1) and AR (2) tests results reported coefficients of -1.6827 and 1.5813 respectively. While the p-value of 0.0924 for the AR (1) statistic suggests that there is first-order autocorrelation in the model, the p-value of 0.1138 for the AR (2) statistic shows that there is no second-order autocorrelation. Thus the AR tests provide no evidence of misspecification. Both estimated lags of the dependent variable (ETR_L1 and ETR_L2) are negative and statistically significant at the 1% level. Lagged board size has a negative coefficient of -0.0083 but this is however not statistically significant. Lagged board independence has a coefficient of 0.4541 and is statistically significant at 10%. Lagged board shareholding has a coefficient of -0.4255 which is statistically significant at 5%. Lagged ownership concentration has a coefficient of 0.0754 which is however not significant. Lagged interaction between high ownership concentration and board size has a coefficient of 0.0269 which is significant at 1% while lagged interaction between high ownership concentration and board independence has a coefficient of -0.9329 which is also significant at 1%. Of the control variables lagged profitability (ROA) has a coefficient of -3.6085 and is statistically significant at 1% while capital intensity has a coefficient of -0.0031 which is however not statistically significant. Firm size has an estimated coefficient of -0.1616 which is statistically significant at 5% while the estimated coefficient of financial leverage was 0.5315 and is not statistically significant. Finally, the intercept has a coefficient of 3.2133 which is statistically significant at 1%.

4.6 Tests of Hypotheses

The hypotheses of the study are tested in this section using the results already presented in Table 4.4. To test the hypotheses, the level of significance (α) is set at 10%. The criteria for rejection of null hypothesis being that any coefficient with a p-value of 0.10 or less should be rejected.

Test of hypothesis one

H₀₁: board size has no significant effect on corporate tax avoidance among DMBs in Nigeria.

Results show that lagged board size has a coefficient of -0.0083 with p-value of 0.3810. This indicates that the variable is statistically not significant. The results therefore do not provide sufficient evidence for the rejection of H₀₁.

Test of hypothesis two

H₀₂: board independence has no significant effect on corporate tax avoidance among DMBs in Nigeria.

Results document that lagged board independence has a coefficient of 0.4541 with a p-value of 0.0790 which is statistically significant at exactly 10%. The results therefore provide impetus for the rejection of H₀₂.

Test of hypothesis three

H₀₃: board shareholding has no significant effect on corporate tax avoidance among DMBs in Nigeria.

From the results it can be seen that lagged board shareholding has a coefficient of -0.4255 with a p-value of 0.0220; indicating statistical significance at the 10% level and less. Based on the result H_{03} is rejected.

Test of hypothesis four

H_{04} : high ownership concentration has no significant effect on corporate tax avoidance among DMBs in Nigeria.

Results on the lagged ownership concentration dummy show a coefficient of 0.0745 with a p-value of 0.3130 which is not statistically significant at 10%. Therefore H_{04} is not rejected.

Test of hypothesis five

H_{05} : the relationship between board size and tax avoidance among DMBs in Nigeria is not moderated by high ownership concentration.

The results show that the coefficient of the interaction between high ownership concentration and board size is 0.0269 with a p-value of 0.0080. The coefficient is therefore statistically significant at less than 10% and provides a basis for the rejection of H_{05} .

Test of hypothesis six

H_{06} : the relationship between board independence and tax avoidance among DMBs in Nigeria is not moderated by high ownership concentration.

From the results it can be seen that the coefficient of the interaction between high ownership concentration and board independence is -0.9329 with a p-value of 0.0070. Since the coefficient is statistically significant at less than 10%, H_{06} is hereby rejected.

4.7 Discussion of Findings

Amongst the specifically studied internal corporate governance mechanisms in relation to tax avoidance by DMBs in Nigeria, board independence, board shareholding, board equity ownership, the interaction between ownership concentration and board size as well as the interaction between ownership concentration and board independence have been found to be significant. The study also documented that the said significant effects of the internal corporate governance mechanism are lag contingent. Specifically, the study documented a one period lag effect.

Lagged board independence was found to have a positive association with ETR. Holding all other factors constant a 0.45% increase in current period ETR is anticipated by increasing previous year's board independence by 1 unit. This implies that greater board independence will lead to less tax avoidance. The positive sign of the coefficient of board independence is, however, consistent with the results in Minnick and Noga (2010) who documented a positive association between board independence and domestic tax avoidance but not with the avoidance of foreign taxes. Conversely, the results are not consistent with the findings of Khaoula (2013) and are not in tandem with the agency theory prediction that more independent boards should *ceteris paribus* serve to align the interests of principal and agent.

The sign on the coefficient of lagged board shareholding is negative. While this implies an inverse association between the proxy for tax avoidance, ETR and lagged board shareholding, the proper interpretation of the results is that tax avoidance by the DMBs in the current period is increasing with increased previous year's board ownership. The findings are consistent with the Jensen & Meckling (1976) agency theory argument that increased manager ownership should *ceteris paribus* serve to align the interests of principal and agent. In relation to tax avoidance, since the study assumed the position that tax avoidance is generally pro-shareholder the results

are in tandem with the alignment hypothesis. A 1 unit increase in last periods' board shareholding is *ceteris paribus* estimated to decrease current period ETR by 0.43%. The results are not supported by earlier empirical works as no previous study in relation to corporate tax avoidance has been found that incorporated total board equity shareholding in analysis. However, Desai and Dharmapala (2006) have previously found that large ownership stake by the CEO serves as an incentive to engage in tax avoidance.

The coefficient of lagged high ownership concentration is positive but is not statistically significant. However, since lagged high ownership concentration is a dummy variable, the significant positive value of the intercept suggests that mean tax avoidance for low ownership concentration DMB-years is significantly less than that for high ownership concentration DMB-years.

A look at the coefficient of the lagged moderator term for board size revealed that the coefficient is positive. The coefficient of the moderator suggests that *ceteris paribus* in DMBs in Nigeria, a 1 person increase in last periods board size will increase current periods ETR by 0.03% if ownership concentration is 27.6% or above. A possible reason for this is that the additional advisory capacity resulting from the intervention of representatives of those with concentrated ownership is able to prevent some forms of tax avoidance deemed to be value reducing. Conversely, the coefficient of the lagged moderator term for board independence shows a negative and statistically significant coefficient of -0.9329. The coefficient of the moderator suggests that *ceteris paribus* in DMBs in Nigeria, a 1 unit increase in last period's board independence will decrease current period's ETR by 0.93% if ownership concentration is 27.6% or above. The documented inverse association is therefore in line with agency theory. The significance of both moderator coefficients provides strong evidence that the relationship

between board size on one hand and board independence on the other are influenced by the degree of ownership concentration in the studied DMBs.

The control variables were included in the model because standard economic theory argues for their inclusion. Of the four controls, only Lagged profitability and firm size were found to have a significant inverse association with tax avoidance. On average a 1 unit increase in last year's profitability is *ceteris paribus* associated with a 3.6% increase in ETR (tax avoidance) in the current year by the studied DMBs. Results on profitability are in tandem with that of Boone *et al* (2013) and Md Noor *et al* (2010) but contradict the findings in Gupta and Newberry (1997), Richardson and Lanis (2007) and Minnick and Noga (2010). It should however be noted that the aforementioned results study the relationship between the two using profitability at levels. The statistically negative coefficient of firm size implies that a 1 unit increase in current periods' firm size will *ceteris paribus* facilitate more tax avoidance among the studied DMBs by 0.16%. The sign of the coefficient on firm size together with its significance are in line with the political power hypothesis and mirror empirical results in Gupta & Newberry (1997) for their post-tax reform model, Phillips (2003), Richardson and Lanis (2007) and Boone *et al* (2013), among others.

Financial leverage was found to have a positive association with corporate tax avoidance in the DMBs but the relationship is not statistically significant. On average, 1 unit increase in current periods' financial leverage will *ceteris paribus* facilitate less tax avoidance among the studied DMBs by 0.53%. This implies that the DMBs do not enjoy the advantages that financial leverage present with as a tax shield. One reason for this may be because banks both receive and pay interest as opposed to other manufacturing firms that do not receive interest. The documented sign of the association, but not its significance is in tandem with the positive sign

documented by Phillips (2003). The fourth control variable, capital intensity documented a negative but statistically not significant coefficient. The results imply that a 1 unit increase in current periods' capital intensity will *ceteris paribus* facilitate more tax avoidance among the studied DMBs by a meagre 0.003%. However the effect is not significant. While the documented sign is consistent with economic theory, the sign and not significant result is in tandem with Edwards *et al* (2013) and Ding *et al* (2013).

4.8 Implications of Findings

The findings of the study have a number of implications for practice, theory, methodology as well as policy. From a practical perspective, the findings of the study imply that making management co-owners makes them to act in the best interest of owners. The best interest in this case being greater tax avoidance which translates to greater shareholder returns. In addition the findings of the study buttress the argument that concentrated holdings allow shareholders with such holdings to exert more profound monitoring and advisory roles over management.

In respect of theory, the findings of the study provide empirical support regarding the agency view of corporate tax avoidance. However, the results of the study suggest some little modification to the theory. This is because the typical application of the agency framework to firm outcomes is a directly additive function that equates firm outcomes as being a function of managerial incentives, monitoring, bonding costs and residual loss. The typical interpretation of the model does not factor interactions either between the mechanisms themselves or between some other potentially influential characteristics. This study incorporated one of such interaction in its modelling and documented significant results that suggest that the agency framework needs to be revised to accommodate such interactions.

The implications of the study for methodology are that there is need for researchers to pay more attention to the role of moderators in shaping associations between covariates and outcomes. With regards to the influence of shareholders (whether individuals or institutions) with concentrated holdings, academics have often alluded to the fact that they are likely to influence both firm-level outcomes and board monitoring capacity but have hitherto failed to empirically test for this. This study empirically tested the interactions and found them to be significant.

From a policy perspective the findings of the study imply that calls for reforms in respect of corporate governance mechanisms such as board size and independence or concentrated ownership should not be made based on the perceived individual effect of a particular mechanism. Rather, such revisions should take into cognizance what the combined effect of such increase or decrease may lead to.

CHAPTER FIVE

SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

5.1 Summary

Corporate tax avoidance has, over the past few decades, been at the front burner of both theoretical and empirical research as well as public policy discourse in the Western hemisphere. Due to its multifaceted nature it has been studied in the fields of Law, Economics, Accounting

and Finance. The focus of the Accounting and Finance literature has however become more interested in how corporate governance-related mechanisms affect tax avoidance. The interest is not misplaced since boards of directors in particular are instrumental in both defining and providing resources for executing avoidance activities at the corporate level.

In examining the agency framework in relation to tax avoidance, the literature has tended to view avoidance by corporate bodies as either a pro-shareholder outcome or an avenue for managerial rent extraction. Based on the argument that avoidance is a pro-shareholder activity, this study therefore used the agency framework to investigate the effect of corporate governance mechanisms on tax avoidance by DMBs in Nigeria. To achieve this data were obtained on the DMBs for the period 2006-2014. Due to lack of consistent domestic data for 1 out of the 15 DMBs listed on the NSE as at December 2014, only 14 were studied. The study used a correlational design approach to achieve its overall quantitative research framework.

Endogeneity arising from simultaneous causality is a thing of concern in studies of corporate governance outcomes. Therefore, the study used a dynamic panel model estimator, GMM, which is thought to correct for endogeneity. This it does through its ability to use lagged values of the dependent variable in addition to lagged variables of any endogenous independent variables as instruments. The study found that internal corporate governance mechanisms, taken together, significantly affect avoidance by DMBs in Nigeria. Of the specific mechanisms examined; lagged values of board size, board independence and board ownership were found to significantly influence tax avoidance in the studied DMBs. In addition it was found that the relationships between board size on one hand and board independence on the other with corporate tax avoidance are moderated by high ownership concentration. An increase in preceding years' board shareholding is associated with a significant increase in tax avoidance by

DMBs in the current period. Conversely increase in preceding years' board independence serves to reduce tax avoidance by the studied DMBs in the current period. Increasing board size in DMBs with high ownership concentration serves to decrease tax avoidance while increasing board independence in DMBs with greater ownership concentration increases tax avoidance in the DMBs.

5.2 Conclusions

The literature on corporate tax avoidance has often tended to exclude banks from analysis. The usual reason given for their exclusion has often been that their regulation is different from that of other corporate entities. This study therefore isolated only banks for analysis and by doing so provided some insight, previously not documented, into the effect of internal corporate governance mechanisms on tax avoidance among DMBs in Nigeria. Arising from the findings of the study, it is concluded that making management co-owners makes them to act in the best interest of owners. This is because board ownership/ shareholding was found to play a significant role in facilitating increased tax avoidance among the studied banks. It is also concluded that the ability of board independence, i.e. having more number of non-executive directors on the board, as a pro-shareholder monitoring device in respect of tax avoidance in DMBs in Nigeria, is highly contingent upon the presence of owners of high concentrated ownership. It is also concluded that the effect of board size, as an advisory and monitoring corporate governance mechanism, on tax avoidance DMBs in Nigeria is significantly contingent upon the degree of ownership concentration. In DMBs with greater ownership concentration having an additional member on the board serves to decrease tax avoidance activities.

Overall, the results of this study provide evidence that internal governance mechanisms have a combined significant effect on tax avoidance by DMBs in Nigeria. The evidence is

consistent with the agency theory perspective which posits that proper monitoring of corporate outcomes *ceteris paribus* is likely to facilitate outcomes that are in favour of owners. The evidence of combined effect calls to question legislature on individual governance mechanisms. That is to say calls for say greater or smaller board size or calls for any increase or decrease in other individual mechanisms should be made in relation to what the combined effect of such increase or decrease may lead to.

5.3 Limitations of the Study

The results of this study provide some evidence on the effect of internal corporate governance mechanisms on tax avoidance by DMBs in Nigeria. The results should however be considered in the light of some limitations of the study.

As a first caveat, it should be borne in mind that the study only examined DMBs in Nigeria. The choice of Nigeria only was informed by the fact that corporate tax avoidance has been relatively understudied regarding the country. Differences in political, economic and social orientations may however mean that results from Nigeria alone may not be generalizable to other countries; both within and outside Africa. Banks were chosen because they have been touted to be architects of various structured transactions, both for themselves and their customers. The fact that they bear greater regulation than other corporate entities suggests that the results of the study may not readily be generalizable to other sectors.

A second limitation of the study is in respect of the measurement of tax avoidance. While the GAAP ETR as a measure of tax avoidance has been widely used, previous researchers' in respect of the manner in which it captures tax avoidance need to be heeded. According to Phillips (2003: 869), financial statement based ETR does not reflect implicit taxes. Therefore tax planning strategies that lower ETR may also result in implicit taxes which have the effect of

reducing some tax benefits of other activities. Hanlon and Heitzman (2010) also caution that ETR does not appropriately recognize particular tax deferral strategies such as more accelerated depreciation charges and for absorbing some tax planning strategies and treating them as avoidance.

Thirdly, the study only looked at four out of several other internal governance mechanisms together with two moderating variables. The incentive of the CEO as well as that of the tax director and expertise of directors may all contribute to avoidance. There omission in analysis was due, in part, to data availability issues with regards to the measurement of the proxies necessary to incorporate the said variables in analysis. Details of bonus plans for executives do not enjoy full disclosure in Nigerian financial statements. Also, information necessary to fully proxy expertise for directors is not sufficient in the financial statements.

Finally, the data collected for the purpose of this study was wholly secondary in nature; consisting of measures taken from annual financial statements. While the use of secondary data is not in itself totally bad, some degree of caution is warranted in drawing conclusions in respect of financial statements prepared by management (Whittington, 2010)

The above mentioned limitations do not however serve to invalidate the findings of this research.

5.4 Recommendations

This thesis highlights the importance of internal governance mechanisms in the scheme of tax avoidance at the corporate level. Based on the findings of the study the following recommendations are made:

- i. Since increased cumulative equity ownership by members of the boards of directors of DMBs significantly aligns the interests of owners and directors in relation to the goal of paying less taxes, owners should institute more share-based bonuses for executive directors and/ require non-executive directors to take up some minimum number of shares during their tenures. Having such arrangements will serve as strong incentive for the board to render strategic advice on and implement more tax reduction strategies.
- ii. Also, since having higher ownership concentration levels that amount to 27.6% and above seems to influence the efficacy of monitoring rendered by non-executive directors with regards to tax avoidance among DMBs as well as the quality of advice rendered by the board (represented by board size), it is recommended that shareholders, institutional or blocks should ensure that they possess ownership stakes of at least 27-30%. The 30% concentrated holdings will guarantee compliance with the several codes of corporate governance without necessarily making the boards overly independent.
- iii. In addition, since the study documented findings that are pro-shareholder as against pro-government; in respect of the effect of the studied corporate governance mechanisms on tax avoidance in DMBs, it is recommended that government review the provisions of the current existing codes of corporate governance. This is necessary, because it appears that in respect of tax avoidance, the provisions of the codes regarding board size and board independence favour greatly favour owners.

5.5 Suggested Areas for Further Research

The study examined the effect of corporate governance mechanisms on tax avoidance only in DMBs in Nigeria. Sectorial peculiarities mean that the results of the study may not be

generalizable to other sectors. Therefore, future research may wish to extend analysis to other sectors of the Nigerian economy.

Also, since only six internal corporate governance mechanisms were examined by the study, future research may wish to examine the effect of other internal governance mechanisms such as managerial compensation incentives and financial expertise on corporate tax avoidance.

Since the study utilized secondary data only in its analysis, future research may wish to design appropriate instruments for the collection of primary data so as to present evidence from the field.

Lastly, in view of the recession currently facing the Nigerian economy, future research may wish to look at whether the incentives for firms to avoid tax differ under different economic cycles.

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- <http://agecoext.tamu.edu/files/2013/10/rm8-5.pdf>
- <http://www.webpages.uidaho.edu/~mbolin/odunlade.pdf>
- http://www.europarl.europa.eu/RegData/bibliotheque/briefing/2013/130574/LDM_BRI%282013%29130574_REV1_EN.pdf “Tax avoidance methods”
- http://www.taxjusticeblog.org/archive/federal_tax_issues/tax_avoidance_tax_evasion_and/offshore_abuses/ “On whether OECD rules to stop avoidance will work”

APPENDIX I
DETAILED CALCULATIONS

_____ (R)
/___ / ___/ / ___/
___/ / /___/ / /___/ 13.0 Copyright 1985-2013 StataCorp LP
Statistics/Data Analysis StataCorp
4905 Lakeway Drive
MP - Parallel Edition College Station, Texas 77845 USA

800-STATA-PC <http://www.stata.com>

979-696-4600 stata@stata.com

979-696-4601 (fax)

3-user 8-core Stata network perpetual license:

Serial number: 501306208483

Licensed to: Aisha Nuhu Mohammed

Ahmadu Bello University Zaria

Notes:

1. (/v# option or -set maxvar-) 5000 maximum variables

. use "C:\Users\USER\Desktop\Research data\Interractions.dta"

. xtset u year, yearly

panel variable: u (strongly balanced)

time variable: year, 2006 to 2014

delta: 1 year

. suetrbsizebindpbodshareownconroacapintflevtasset

Variable	Obs	Mean	Std. Dev.	Min	Max
etr126	.1315714	.2034996	0	1	
bsize118	13.80508	2.976427	5	20	
bindp118	.5880763	.1269602	.286	.909	
bodshare117	.1243675	.1393822	0	.609	
owncon123	.2766667	.2717649	0	.99	
roa	125	.047344	.0345569	-.171	.115
capint	124	.0322742	.0162137	0	.091
flev126	.8442381	.0740344	.548	1	
tasset	126	9.71e+08	8.34e+08	8.04e+07	4.13e+09

. suetrbsizebindpbodshareownconroacapintflevfsizeindi_meanowncindowncbsz

Variable	Obs	Mean	Std. Dev.	Min	Max
etr	126	.1315714	.2034996	0	1
bsize	118	13.80508	2.976427	5	20
bindp	118	.5880763	.1269602	.286	.909
bodshare117	.1243675	.1393822	0	.609	
owncon123	.2766667	.2717649	0	.99	
roa	125	.047344	.0345569	-.171	.115
capint	124	.0322742	.0162137	0	.091
flev	126	.8442381	.0740344	.548	1
fsize126	20.32256	.9157936	18.202	22.142	
indi_mean124	.3790323	.4871143	0	1	
Owncind118	.2372373	.2993175	0	.909	
owncbsz118	5.288136	6.823917	0	20	

. suetrbsizebindpbodshareownconroacapintflevtassetfsizeindi_meanowncindowncbsz, detail

ETR

Percentiles	Smallest		
1%	0		
5%	.004		
10%	.013	0	Obs 126
25%	.036	0	Sum of Wgt. 126

50%	.084		Mean	.1315714
		Largest	Std. Dev.	.2034996
75%	.135	1		
90%	.207	1	Variance	.0414121
95%	.36	1	Skewness	3.556321
99%	1	1	Kurtosis	15.26003

BSIZE

Percentiles		Smallest		
1%	5	5		
5%	8	5		
10%	10	7	Obs	118
25%	12	7	Sum of Wgt.	118
50%	14		Mean	13.80508
		Largest	Std. Dev.	2.976427
75%	16	19		
90%	17	19	Variance	8.859119
95%	19	20	Skewness	-.5696672
99%	20	20	Kurtosis	3.5801

BINDP

Percentiles		Smallest		
1%	.375	.286		
5%	.4	.375		
10%	.455	.385	Obs	118
25%	.5	.385	Sum of Wgt.	118

50%	.571		Mean	.5880763
		Largest	Std. Dev.	.1269602
75%	.643	.875		
90%	.833	.882	Variance	.0161189
95%	.857	.882	Skewness	.7300164
99%	.882	.909	Kurtosis	3.319968

BoD Share

Percentiles		Smallest		
1%	0	0		
5%	0	0		
10%	.002	0	Obs	117
25%	.017	0	Sum of Wgt.	117
50%	.069		Mean	.1243675
		Largest	Std. Dev.	.1393822
75%	.194	.5		
90%	.321	.513	Variance	.0194274
95%	.438	.599	Skewness	1.491898
99%	.599	.609	Kurtosis	4.80743

OWNCON

Percentiles		Smallest		
1%	0	0		
5%	0	0		
10%	0	0	Obs	123

25%	.076	0	Sum of Wgt.	123
50%	.226		Mean	.2766667
		Largest	Std. Dev.	.2717649
75%	.374	.99		
90%	.608	.99	Variance	.0738562
95%	.94	.99	Skewness	1.206003
99%	.99	.99	Kurtosis	3.82741

ROA

Percentiles		Smallest		
1%	-.072	-.171		
5%	-.008	-.072		
10%	.021	-.07	Obs	125
25%	.04	-.04	Sum of Wgt.	125
50%	.052		Mean	.047344
		Largest	Std. Dev.	.0345569
75%	.064	.101		
90%	.075	.101	Variance	.0011942
95%	.084	.106	Skewness	-2.792771
99%	.106	.115	Kurtosis	16.41447

CAPINT

Percentiles		Smallest		
1%	0	0		
5%	.009	0		

10%	.014	.007	Obs	124
25%	.021	.007	Sum of Wgt.	124
50%	.0305		Mean	.0322742
		Largest	Std. Dev.	.0162137
75%	.04	.065		
90%	.056	.07	Variance	.0002629
95%	.063	.071	Skewness	.7103215
99%	.071	.091	Kurtosis	3.596269

FLEV

Percentiles	Smallest		
1%	.593	.548	
5%	.714	.593	
10%	.75	.69	Obs 126
25%	.811	.693	Sum of Wgt. 126
50%	.853		Mean .8442381
		Largest	Std. Dev. .0740344
75%	.887	1	
90%	.914	1	Variance .0054811
95%	.971	1	Skewness -.7868455
99%	1	1	Kurtosis 5.138796

TASSET

Percentiles	Smallest
1%	9.96e+07 8.04e+07

5%	1.29e+08	9.96e+07		
10%	1.83e+08	1.00e+08	Obs	126
25%	3.29e+08	1.07e+08	Sum of Wgt.	126
50%	7.10e+08		Mean	9.71e+08
		Largest	Std. Dev.	8.34e+08
75%	1.36e+09	3.19e+09		
90%	2.10e+09	3.76e+09	Variance	6.96e+17
95%	2.64e+09	3.87e+09	Skewness	1.531378
99%	3.87e+09	4.13e+09	Kurtosis	5.440788

FSIZE

Percentiles	Smallest		
1%	18.416	18.202	
5%	18.672	18.416	
10%	19.098	18.423	Obs
25%	19.61	18.485	Sum of Wgt.
50%	20.3805		Mean
		Largest	Std. Dev.
75%	21.032	21.882	
90%	21.467	22.046	Variance
95%	21.695	22.077	Skewness
99%	22.077	22.142	Kurtosis

Indi_Mean

Percentiles	Smallest
-------------	----------

1%	0	0		
5%	0	0		
10%	0	0	Obs	124
25%	0	0	Sum of Wgt.	124
50%	0		Mean	.3790323
		Largest	Std. Dev.	.4871143
75%	1	1		
90%	1	1	Variance	.2372804
95%	1	1	Skewness	.4986858
99%	1	1	Kurtosis	1.248687

OWNC*IND

Percentiles		Smallest		
1%	0	0		
5%	0	0		
10%	0	0	Obs	118
25%	0	0	Sum of Wgt.	118
50%	0		Mean	.2372373
		Largest	Std. Dev.	.2993175
75%	.571	.75		
90%	.625	.833	Variance	.089591
95%	.7	.833	Skewness	.5586888
99%	.833	.909	Kurtosis	1.539557

OWNC*BSZ

Percentiles		Smallest		
1%	0	0		
5%	0	0		
10%	0	0	Obs	118
25%	0	0	Sum of Wgt.	118
50%	0		Mean	5.288136
		Largest	Std. Dev.	6.823917
75%	12	18		
90%	16	18	Variance	46.56584
95%	17	18	Skewness	.6501235
99%	18	20	Kurtosis	1.675659

. pwcorretrbysizebindpbodshareownconindi_meanowncindownncbszroacapintfsizflev, star (0.10) sig

| etrysizebindpbodshareownconindi_meanowncind

etr | 1.0000

bsize | -0.0655 1.0000

| 0.4813

bindp | 0.0093 0.1351 1.0000

| 0.9200 0.1446

```

bodshare | -0.0001 -0.0023 -0.0975 1.0000
          | 0.9989 0.9807 0.2980
owncon | -0.1332 -0.0628 -0.0712 -0.1841* 1.0000
         | 0.1418 0.4996 0.4436 0.0469
indi_mean | -0.1907* -0.1451 0.0485 -0.0851 0.7787* 1.0000
           | 0.0339 0.1170 0.6018 0.3617 0.0000
owncind | -0.2094* -0.1296 0.1486 -0.0852 0.7544* 0.9783* 1.0000
          | 0.0228 0.1619 0.1083 0.3634 0.0000 0.0000
owncbsz | -0.2099* 0.0562 0.0591 -0.0571 0.7500* 0.9565* 0.9412*
          | 0.0225 0.5453 0.5250 0.5423 0.0000 0.0000 0.0000
roa | -0.3699* 0.0523 -0.0011 0.0931 0.0926 0.1352 0.1721*
      | 0.0000 0.5740 0.9905 0.3182 0.3082 0.1344 0.0624
capint | 0.2416* 0.0096 0.1067 -0.2459* -0.0498 0.0142 0.0324
        | 0.0069 0.9181 0.2520 0.0078 0.5856 0.8761 0.7291

```

--more--

owncbszroacapintfsizeflev

-----+-----

```

owncbsz | 1.0000
roa | 0.1392 1.0000
     | 0.1328
capint | -0.0132 0.0177 1.0000
        | 0.8877 0.8454
fsize | 0.1227 0.0166 -0.0993 1.0000
       | 0.1857 0.8544 0.2725
flev | 0.0920 -0.2808* 0.0378 0.2311* 1.0000
      | 0.3216 0.0015 0.6765 0.0092

```

. regetrbsizebindpbodshareroacapintfsizeflevindi_mean

Source	SS	df	MS	Number of obs=	115
-----+-----					
Model	.542916829	8	.067864604	F (8, 106) =	2.39
Residual	3.01595391	106	.028452395	Prob> F =	0.0210
-----+-----					
Total	3.55887074	114	.031218164	R-squared =	0.1526
-----+-----					
				Adj R-squared =	0.0886
				Root MSE =	.16868

etr	Coef.	Std. Err.	t	P> t	[95% Conf. Interval]	
-----+-----						
bsize	-.0033384	.0058587	-0.57	0.570	-.0149537	.0082769
bindp	.0216092	.1307055	0.17	0.869	-.2375273	.2807456
bodshare	.0586122	.1331391	0.44	0.661	-.2053491	.3225735
roa	-.9922184	.5204884	-1.91	0.059	-2.024137	.0397005
capint	2.292769	1.048053	2.19	0.031	.2149015	4.370636
fsize	-.0087048	.0210264	-0.41	0.680	-.0503916	.032982
flev	.3868233	.2356437	1.64	0.104	-.0803632	.8540098
indi_mean	-.0680267	.0336517	-2.02	0.046	-.1347446	-.0013089
_cons	.0058621	.4409927	0.01	0.989	-.8684487	.8801729

. hettest

Breusch-Pagan / Cook-Weisberg test for heteroskedasticity

Ho: Constant variance

Variables: fitted values of etr

chi2 (1) = 164.52

Prob> chi2 = 0.0000

. vif

Variable	VIF	1/VIF
-----+-----		
fsize	1.54	0.647737
bodshare	1.38	0.722107
flev	1.24	0.803690
roa	1.17	0.852596
capint	1.16	0.861581
bsize	1.13	0.883781
bindp	1.12	0.895723
indi_mean	1.10	0.910321
-----+-----		
Mean VIF	1.23	

.regetrbsizebindpbodshareroacapintfsizeflevindi_meanowncindowncbsz

Source	SS	df	MS	Number of obs =	115
-----+-----				F (10, 104) =	1.94
Model	.558646319	10	.055864632	Prob> F =	0.0482
Residual	3.00022442	104	.028848312	R-squared =	0.1570
-----+-----				Adj R-squared =	0.0895
Total	3.55887074	114	.031218164	Root MSE =	.16985

etr	Coef.	Std. Err.	t	P> t	[95% Conf. Interval]	
bsize	-.0074121	.0082156	-0.90	0.369	-.0237039	.0088796
bindp	.0251106	.1488945	0.17	0.866	-.2701527	.3203739
bodshare	.0606099	.1344015	0.45	0.653	-.2059133	.3271332
roa	-.9621223	.5327053	-1.81	0.074	-2.018497	.0942523
capint	2.433939	1.072607	2.27	0.025	.3069198	4.560958
fsize	-.0070958	.0213596	-0.33	0.740	-.0494527	.035261
flev	.4154929	.2405247	1.73	0.087	-.0614767	.8924624
indi_mean	-.2097623	.1390138	-1.51	0.092	-.6837357	.2642111
owncind	.0386625	.3041832	0.13	0.899	-.5645442	.6418693
owncbsz	.0084869	.0118402	0.72	0.475	-.0149927	.0319666
_cons	-.0006634	.4442199	-0.00	0.999	-.8815681	.8802413

.hettest

Breusch-Pagan / Cook-Weisberg test for heteroskedasticity

Ho: Constant variance

Variables: fitted values of etr

chi2 (1) = 160.70

Prob> chi2 = 0.0000

.vif

Variable	VIF	1/VIF
indi_mean	54.66	0.018296
owncind	33.14	0.030176
owncbsz	26.19	0.038187

```

bsize | 2.19 0.455689
fsize | 1.57 0.636420
bindp | 1.43 0.699852
bodshare | 1.39 0.718466
flev | 1.28 0.782136
roa | 1.21 0.825264
capint | 1.20 0.834033

```

```

-----+-----
Mean VIF | 12.43

```

```

Arellano-Bond dynamic panel-data estimation      Number of obs=    71
Group variable: u                               Number of groups  =   13
Time variable: year
Obs per group:  min =    3
                avg= 5.461538
                max =    6

```

```

Number of instruments = 72                      Wald chi2 (12)    = 714.30
Prob> chi2           = 0.0000

```

One-step results

(Std. Err. adjusted for clustering on u)

```

-----+-----
                |                Robust
etr |   Coef.      Std. Err.   z   P>|z|   [95% Conf. Interval]
-----+-----
etr |
    L1. | -.2926457   .0792631   -3.69  0.000   -.4479986  -.1372928
    L2. | -.2605951   .0792223   -3.29  0.001   -.415868   -.1053223
bsize |

```

--.	.0030285	.0067957	0.45	0.656	-.0102909	.0163479
L1.	-.0083465	.0095222	-0.88	0.381	-.0270097	.0103166
bindp						
--.	-.0190642	.1495963	-0.13	0.899	-.3122675	.2741391
L1.	.4540756	.2587485	1.75	0.079	-.0530621	.9612132
bodshare						
L1.	-.4255384	.1851495	-2.30	0.022	-.7884248	-.062652
indi_mean						
--.	-.1357341	.1346387	-1.01	0.313	-.399621	.1281529
L1.	.0753798	.1976295	0.38	0.703	-.3119668	.4627265
owncind						
L1.	-.9329065	.34869	-2.68	0.007	-1.616326	-.2494866
owncbsz						
--.	-.0119514	.0082171	-1.45	0.146	-.0280567	.0041539
L1.	.026921	.0102301	2.63	0.008	.0068705	.0469716
roa						
--.	-1.472114	1.41695	-1.04	0.299	-4.249285	1.305056
L1.	-3.608506	.6085984	-5.93	0.000	-4.801337	-2.415675
bodshare	-.0315596	.1522244	-0.21	0.836	-.3299139	.2667947
owncind	.6354861	.2303021	2.76	0.006	.1841023	1.08687
capint	-.0031312	1.1992	-0.00	0.998	-2.35352	2.347258
fsize	-.1615537	.0718535	-2.25	0.025	-.3023839	-.0207235
flev	.5315466	.5250824	1.01	0.311	-.497596	1.560689
_cons	3.21329	1.147615	2.80	0.005	.9640053	5.462575

Instruments for differenced equation

GMM-type: L (2/).etr L(2/2).L.bsize L(2/2).L.bindp L(2/2).L.bodshare

L (2/2).L.indi_mean L (2/2).L.owncind L (2/2).L.owncbsz

L (2/2).L.roa

Standard: D.bsizeD.bindpD.bodshareD.indi_meanD.owncindD.owncbsz

D.roadD.capintD.fsizeD.flev

Instruments for level equation

Standard: _cons

. estatabond

Arellano-Bond test for zero autocorrelation in first-differenced errors

+-----+

|Order | z Prob> z|

|-----|

| 1 | -1.6827 0.0924 |

| 2 | 1.5813 0.1138 |

+-----+

H0: no autocorrelation