IMPACT OF TAX PLANNING ON THE VALUE OF LISTED MONEY DEPOSIT BANKS IN NIGERIA

BY

SAIFUDDEEN IBRAHIM
SPS/14/MAC/00043

A DISSERTATION SUBMITTED TO THE DEPARTMENT OF ACCOUNTING, FACULTY OF MANAGEMENT SCIENCES, BAYERO UNIVERSITY, KANO, IN PATIAL FULFULMENT OF THE REQUIREMENTS FOR THE AWARD OF MASTER OF SCIENCE (M.SC) DEGREE IN ACCOUNTING

JUNE, 2021

DECLARATION

I Saifuddeen Ibrahim, hereby declare that this work is the product of my own research efforts and has not been presented anywhere for the award of a degree or a certificate. All sources and materials used have been duly acknowledged in the references lists, and any act of commission or omission is not intentional.

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SAIFUDDEEN IBRAHIM
SPS/14/MAC/00043

CERTIFICATION

This is to certify that this research work for this dissertation and the subsequent write-up of this dissertation by Saifuddeen Ibrahim (SPS/14/MAC/00043) were undertaken under my supervision.

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Professor Muhammad Aminu Isa (Supervisor) Date

APPROVAL

This is to certify that this dissertation has been examined and approved for the award of degree of Master of Science (M.Sc) in Accounting in the Department of Accounting, Faculty Management Sciences, Bayero University, Kano.

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Professor Muhammad Tanko
(External Examiner) Date

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Professor Hannatu Sabo Ahmad Date
(Internal Examiner)

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Professor Muhammad Aminu Isa Date
(Supervisor)

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Professor Muhammad Aminu Isa Date
(Head of Department)

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Professor Mustapha Muhammad Isa Date
(Dean, School of Postgraduate Studies)

ACKNOWLEDGEMENTS

I express my gratitude to my Creator, the omnipotent, the omniscient and the omnipresent for creating, guiding and blessing me with the desire to study, and bestowing me with good health, perseverance and endurance to complete this M. Sc Accounting degree programme.

My sincere appreciation goes to my Supervisor Professor Muhammad Aminu Isa. He has patiently guided and propelled me along this extended journey by allocating his precious time not only for supervising this dissertation, but also for providing vital inputs whose glaring impact is seen in every paragraph of this dissertation. Similarly, I want to sincerely appreciate the effort of my Internal Examiner in person of Professor Hannatu Sabo Ahmad for her un-relented efforts in my academic career.

My special appreciation goes to the entire academic and non-academic staff of the Department of Accounting, Bayero University Kano. Specifically, I am grateful to Professor Kabir Isa Dandago, Professor Ali Sulaiman Kantudu, Professor Bashir Tijjani, Professor Muhammad Liman Muhammad, Professor Junaid Muhammad Kurawa, Professor Kabir Tahir, Professor Ibrahim Magaji Barde, Professor Hannatu Sabo Ahmad, Professor Dije Suleiman Muhammad, Associate Professor Muhammad Aminu Isa, Dr. Ishaq Alhaji Samaila, Dr. Rabiu Ado, Dr. Mukhtar Musa Bako, Dr. Zaharaddeen Salisu Maigoshi, Dr. Sadiq Rabi'u Abdullahi, Dr. Maimuna Adamu Salihu, Dr Naja'atu Bala Rabi'u, Dr. Asma'u Mahmood Baffa, Dr.. Zaharaddeen Abdullahi, Dr. Sunusi Ridwan Ayagi, Dr. Shamsuddeen Mamuda Ali and Dr. A'isha Ummi Ali, also the non-academic staff of the same department, your encouragements have always transformed my determination.

My profound gratitude goes also to my brothers and sisters Abdullahi Ibrahim, Hadiza Dangana, Marsiyya , Samira, Najaatu, Hidaya and our younger brother Muktar, my beloved wife Amina Bello Rabiu my children Hafsat, Abdulkadir and Muhammad, for the concern, care and lovely advice given to me. Their words and contributions really count a lot towards the accomplishment of this work. Friends especially Sageer, Saminu, Sulaiman and Abubakar Saad . I am equally grateful to all my M.Sc course mates especially Abdulrahman Maina,Yahaya Umar Usman, Ahmad Moh'd Musa, Ahmad Muh'd Bose, Ahmed Tanimu, Ali Ciroma , Ibrahim, Farida Ahmed Usman, Kabiru Wudil and Usman Hassan just to mention but few.

DEDICATION

This dissertation is dedicated to my parents, Late Alhaji Ibrahim Baba and HajiyaAsma'u Abdullahi. May Allah (S.W.T) grant them eternal rest. Ameen

TABLE OF CONTENTS

CHAPTER THREE: RESEARCH METHODOLOGY

CHAPTER FOUR: RESULTS AND DISCUSSION

CHAPTER FIVE: SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

LIST OF TABLES

ABSTRACT

This study examines the impact of tax planning on the value of listed commercial money banks in Nigeria. To achieve this purpose, hypotheses were formulated and a review of extant literature was made. Non-survey, descriptive research design was adopted and the population of the study consists of the (16) listed commercial money banks in Nigeria. Data for the study were generated from the listed commercial money banks' annual report and accounts for a twelve-year period; 2006–2018. In addition to descriptive statistics and correlation analysis, the stated hypotheses were statistically tested with regression analysis. The findings reveal that effective tax rate has no significant impact on value of listed commercial money banks in Nigeria. The non-impact goes contrary to the prediction of Hoffman's tax planning theory. Also, cash effective tax rate and tax savings from tax planning activities have positive and significant impact on the value of listed commercial money banks in Nigeria. It was therefore, recommended that Federal Inland Revenue Service (FIRS) should reviewed tax assessment and returns of listed commercial money banks in Nigeria, in order to minimize any form of strategic tax behavior by management; and to periodically conduct tax audit of the various banks to examine whether there was any form of mischaracterization of financial statements; and any bank that violates the provision of tax laws in the act of tax planning should be properly investigated and prosecuted.

CHAPTER ONE

INTRODUCTION

1.1 Background to the study

Tax planning has been an effective strategy used by corporate bodies to achieved lower tax burden and increase firms after tax profits. Thus, corporate tax managers explore provisions of tax laws or some loopholes within Nigerian tax laws to accomplished effective tax minimization scheme. Tax planning is a year-round activity that involves advance tax anticipation of firm's transaction aimed at reducing the overall tax burden and maximized firm's after-tax earnings (Oyebamiji, 2016). Thus, it is seen as the transfer of resource from the government copper to the shareholder's pocket. Therefore, minimum tax liability reduces cash outflows and increase cash inflow informs of tax saving that provides more fund for investment into other profitable ventures within the firms. Moreover, Tax planning activities when successfully undertaken are not only expected to increase firms after tax profit, but also, increase its value thereby sending positive signals to shareholders (Hoffman, 1967).

Tax planning activities are fully managerial issues therefore, the presents of information asymmetry between shareholders and managers could give for managerial opportunism resulting in negative associations (Desai &Dharmapala, 2007). Tax planning decisions, similar to a firm's operational decisions, are made in a competitive environment. This implies that various stakeholders of the company can observe tax payments made by the company and evaluate these against the relevant gazed sets and this idea leads to interdependencies in the tax planning activities of a company. While tax planning activities can result in tax savings, banks need to outline the changes which occur from reputational loss into their tax planning activities (Loretz& Moore 2009). Therefore, tax managers need to balance the benefits of tax planning activities

against the cost of its implementation. In this study, Tax planning activities are represented by effective tax rate (ETR), cash effective tax rate (cashETR) and tax saving.

Effective tax rate (ETR) is used in taxation literature to captured the level of tax planning activities thereby measuring firms tax burden (Chiou, Hsieh & Lin, 2014). It is the ratio of tax paid by firms to its profit before tax or its cash from operating cash flow. Effective tax rate is the average tax rate paid by the company on its earned income. It's often used by investors as profitability metric for a company. The ETR is the acceptable index for measuring firms tax burden it's based on tax expenses to taxpayer's pre-tax income, which is different from the statutory tax rate which is imposed on the taxable income. Lower effective tax rate (ETR) signified minimum tax liability and higher after-tax profit which eventually will translate into higher firm value, while higher ETR means huge tax liabilities and lower after-tax profit, and also, indicates that the companies are not efficient in their tax minimization strategy. Therefore, efficient tax planning activities reduced firms tax burden, that is by achieving lower effective tax rate and increased firm after earnings.

Firm value is generally taken to mean an economic measure reflecting the market value of a whole business. It is a summation of the claims of all contributors to the assets of a firm namely: creditors (secured and unsecured) and equity holders. In finance literature, firm value is the sum of the market value of equity and the market value of debt (Nwaobia, Kwarbai & Ajibade, 2015). Bank value is enhanced when shareholders' wealth is increased through profits and improved cash flow, hence, the importance of tax planning as an integral part of the financial planning programme of any entity. These concepts are therefore significant for listed deposits money bank in Nigeria who may seek to improve on all their tax savings and firm value. In addition, to moderate the effect of taxes on liquidity and profitability of corporate bodies and by extension

firm value, tax planning becomes imperative. But unfortunately, many firms are ignorant of the strategies they can adopt to legally mitigate their tax burdens.

Banks are the key of the economy of any country. They occupy central position in the country's financial system and are essential agents in the development process. Banks as financial intermediaries channel funds from surplus economic units to deficit ones. This leads to stimulating economic growth and development of an economy. In recognition of the multiplier effect that banks create on the economic growth and development, various measures are put in place by regulatory authorities to ensure that banks operate successfully as well enhanced its value in a corporate manner. Through financial intermediation, banks facilitate capital formation (investment) and promote economic growth. The decade between 1998 and 2008, was particularly traumatic for the Nigerian banking industry; with the magnitude of distress reaching an unprecedented level, thereby, making it an issue of concern not only to the regulatory institutions but also to the policy analysts and the general public. Thus, the need for a drastic overhaul of the industry was quite apparent (Afolabi, 2004). Therefore, banks success can be measured in different ways.

In furtherance of this general overhauling of the financial system, the Central Bank of Nigeria introduced major reform programmed that changed the banking landscape of the country in 2004. The primary objective of the reform is to guarantee an efficient and sound financial system that would lead to enhanced value as well as profit maximization to the shareholders in the industry. The reforms are designed to enable the banking system develop the required resilience to support the economic development of the nation by efficiently performing its functions as the pivot of financial intermediation (Lemo, 2005). According to Afolabi (2004) the reforms were also to ensure the safety of depositors' money, position banks to play active developmental roles

in the Nigerian economy, and become major players in the sub-regional, regional and global financial markets. The key elements of the 13-point reform programme in Nigeria (CBN, 2016) include: Minimum capital base of N25 billion with a deadline of 31st December, 2005; Consolidation of banking institutions through mergers and acquisitions and Zero tolerance for weak corporate governance, misconduct and lack of transparency.

There is no gainsaying on the fact that the rationales behind bank's value today is inclined to it performance. However, there is a serious concern as to the value of some of the listed deposits money banks operating in the sector despite attaining a minimum capital base of ₦24 billion. The situation has become intense to the extent that the Central Bank of Nigeria (CBN) in 2009 had to bailout some banks. Some of the reasons attributed to the bailout are issues of corporate value, resulting from unnecessary increase in non-performing loans (El-maude, Abdul-rahman& Ibrahim, 2017).

1.2 Statement of the Problem

Examining the impact of tax planning on firm value has become essential especially when one looks at some of the financial indicators of the banks operating in Nigerian banking industry, some have been increasing but still the banks experience problems of high corporate tax rates and multiples of other taxes that lead to high effective tax rates far above the statutory company income tax rate. Many of these taxes from the different levels of government overlap and are forcefully extracted from corporate organizations. The effect of these exactions of course is high-cost structure for firms (Nwaobia, 2014). In addition, tax costs and eventual payout deplete the disposable income of individuals as well as the distributable profits of corporate organizations. These taxes in fact, do translate to a substantial cost to organizations and if not properly planned and managed can have adverse impact on the bottom line, cash flow and capacity to invest. This

raised a concern as to whether such a phenomenon could be attributed to the issues of high corporate tax rate.

Another issue of concern is the conflicting views in the literature concerning the potential outcome of tax planning and corporate firm value. Whilst, other authors like Kiabel and Akenbor (2014) are of the view that tax planning gives excessive powers to management over the resources of the bank, and also violates the rules of good corporate governance, though it increases the market value of banks; others like Rego (2003) and Frank, Lynch and Rego, (2009) reported that large firms have sufficient resources and better opportunities to undertake tax planning strategies, for example, by utilizing the tax incentives provided to them. An effective tax planning strategy will reduce a firm's effective tax rates, to the extent that it falls below the statutory tax rate.

These conflicting positions warrant taking into consideration the impact of tax planning on firm value and this therefore stimulates investigating deposit money banks operating in Nigeria. While previous empirical studies such as Riza (2003), Viavo (2007) and Friese and Mayer (2008) have established that tax planning has a significant influence on value of a firm, it should be noted that tax planning has its associated costs. Such costs include administrative costs for lawyers, accountants and consultants in designing the strategies; and also, the risk of legal challenge and penalty.

Similarly, Viava (2007) clearly pointed out that the penalty and administrative costs associated with tax planning seem to outweigh it benefits. Besides, when management engages in transactions designed solely to minimize tax liability, they may mischaracterize such transactions by manipulating financial and operating results in order to avoid the risk of tax audit and penalty. Such mischaracterization violates the rules of corporate governance (transparency, accountability

and accurate disclosures). On one hand, tax planning increases corporate profitability and on the other hand, the payment of appropriate taxes is considered to be an important factor of social responsibility (Sartori, 2009). Shareholders' interest in corporate social responsibility has extremely increased in recent times. Paying a fair amount of taxes infers ethical behavior that companies are generally required to present to the public. Therefore, any act of minimizing tax liability is unethical behavior, and is not in the interest of shareholders and other stakeholders (Sartori, 2009).

A review of extant literature such as Avi-Yonah (2005), Ribstein (2006), Auerbach (2006) and Oyerinde (2010) revealed that utmost interest of shareholders is wealth maximization, and one reliable means of achieving this, is through cost minimization. Okoye and Akenbor (2010) claim that one of the costs of doing business and which constitutes a serious barrier to wealth maximization is taxation. In order to minimize the cost of taxation, tax planning becomes imperative for management. Thus, necessitate the study of tax planning on firm value in the Nigerian listed deposits money banks, even though there are various studies conducted on evaluating tax planning and corporate governance such as Sanda, Mikailu and Garba (2005), Desai and Dharmapala (2008), Muhammad (2009), Rohaya, NurSyazwani, and Nor'Azam, (2010),Abdul-wahab (2010), Balakrishnan, Blouin and Guay, (2011), Sabli, and Noor, (2012), Gatsi, Gadzo and Kportorgbi, (2013), Nwaobia, (2013), Kiabel and Akenbor, (2014) Mahfound (2015), Maina and Menba, (2016). However, several others have examined tax planning on firm value such as Noor, Fadzillah and Mastuki, (2010); Garbarino, (2011); Armstrong, Blouin, and Larcker, (2012); Abdul-Wahab and Holland, (2012) and Kportorgbi, (2013). By contrast, a limited number of research studies have examined tax planning on firm value of companies in developing economies such as Desai and Dharmapala (2009); Chasbiandani and Martani, (2012);

Ftouhi, Ayed and Zemzem, (2014); Kawor and Kportorgbi (2014) and Heitzman and Ogneva (2015). Although, Carter, Simkins and Simpson, (2003); Aliani, and Zarai, (2012) and Lasteri and Wardhani (2015) gave emphasis on tax planning to firm value with board diversity as moderating variable. Yet few studies give concern to the Nigerian context in which tax planning in terms of financial indicator is examined in relation to firm value. This forms the rationale behind examining the impact of tax planning on firm value in the Nigerian listed deposits money banks. In the light of the above the following research question were raised to serve as a guide for the study:

i. What is the impact of effective tax rate on the value of listed commercial banks in Nigeria?
ii. What is the impact of cash effective tax rate on the value of listed commercial banks in Nigeria?
iii. What is the impact of Tax Saving on the value of listed commercial banks in Nigeria?

1.3 Objectives of the Study

Consequent upon this, the study seeks to examine the impact of tax planning on the value of listed deposit money banks in Nigeria; specifically, it will examine the following impact of;

1. Effective tax rate on the value of listed commercial money banks in Nigeria.
2. Cash effective tax rate on the value of listed commercial money banks in Nigeria.
3. Tax Saving on the value of listed commercial money banks in Nigeria.

1.4 Hypotheses of the Study

Based on the statement of the problem and objectives of the study, the following hypotheses were postulated in null form in other to serve as a guide for the study:

H_{O1}: Effective tax rate does not have significant impact on the value of listed money deposit banks in Nigeria.

H_{O2}: Cash effective tax rate does not have significant impact on the value of listed deposit money banks in Nigeria.

H_{O3}: Tax Savings does not have significant impact on the value of listed deposit money banks in Nigeria.

1.5 Significance of the Study

The study aimed at examining the impact of tax planning on firm value of listed deposit money banks in Nigeria. Findings of this study will be of significance to shareholders, management, investors, regulatory bodies, researchers, accountants, stockbrokers, financial analysts, general public and scholars as firm value is a useful medium for managers to communicate with the outside world. The banking industry as a key player in the economy of any country, Nigeria not an exception, is a driven force for sustainable growth and development.

Methodologically, the study will contribute to the body of knowledge by examining the valuation consequences of tax planning; this study provides insight into the implication of tax planning on firm value. The study contributes to taxation and corporate values literature by highlighting the implication of tax planning on firm value for shareholders' valuation. It also provides insight to authorities, practitioners' and academics about the implication of disclosed tax and performance

information for shareholders. In addition, the implication of this study are expected to assist the management to understand tax planning strategies useful to bank managers in a bid to lawfully avoid tax dues.

Theoretically, the study's findings would however have a policy implication for emerging market economy such as Nigeria, through regulatory agencies empowered with the task of monitoring the affairs of financial institutions. The study would as well emphasize on tax planning and firm value theories emanating from developed countries which are also applicable in Nigeria. Political cost theory and the Managerial Opportunism theory; Hoffman's (1961) tax planning theory and Scholes-Wolfson (1992) tax planning theory; and Agency theory would be use to explain the disparity in the degree of tax planning on firm's value as documented in the annual reports of the listed deposits money banks investigated of this study.

Practically, the study view firm's value as one of the fundamental key indices to the survival of a firm. However, managers and investor can gauge whether the firm's value plans are realistic based on the current performance. Thus, examining tax planning on firm value is important for a thorough understanding of the relation between tax planning and firm value on one hand and regarding how investors perceive the risk of tax planning on another hand. It is with a desire to fill this gap that this study is undertaken. This work extends prior research on the willingness of firms to decrease their corporate taxes.

1.6 Scope of the Study

The study covered all the listed deposits money banks in Nigeria over the period 31st December 2006 to 31st December 2018. The study covers a period of twelve years (2006 - 2018). The twelve years' period would be considered adequate to examine the impact of tax planning on firm value of the Nigerian listed commercial money banks. However, this period will provide the

basis for analyzing and assessing the patterns of listed deposits money banks performance over the period. In addition, the study would exclude unlisted deposit money banks on the main board of the Nigerian Stock Exchange as at 31st December, 2018.

CHAPTER TWO
LITERATURE REVIEW

2.1 Introduction

This chapter reviewed the literature on the concept of tax planning and bank value. Also, it covered empirical studies that were carried out relevant to the topic under study with the view to come up with a clear research gap. Also, the theories underpinned the study was reviewed.

2.2.1 The Concept of Tax Planning

Tax planning activities are seeing as the transfer of cash from government coffer to the shareholders as oppose to the tax which seek to transfers fund to government by corporate entities. Tax planning is defined as the arrangement of entities financial statement with aims to minimize its tax liabilities. In other words, tax planning is an activity conducted by the taxpayer to reduce the tax liable upon him/her by taking advantage of certain provision of tax laws. Tax planning in essence involves the application of relevant incentive provisions for corporate tax payers based on enabling tax laws through an in-depth understanding of the tax policies and other regulations as clearly stated in the nation's government fiscal policies. The Corporate tax planning incentives as contained in the CITA 2004 as amended, PITA 2011 as amended and other laws include: pioneer status incentive, commencement rule, cessation rule, investment allowance, and roll-over loss relief. Others include business location or area of operation (free trade zone, rural area investment allowances), tax exemption benefits on interest on a loan granted by a foreign company to any business in Nigeria, asset acquisition timing for claims of capital allowances(ICAN, 2019).

Corporate tax planning process required the services of tax expert in order to identify tax problems and the opportunities the firm has so as to capitalized on the loopholes to minimized

tax liabilities and increase after tax profit (Fagbemi, Olaniyi&Ogundipe 2019). Tax planning is defined as the analysis of financial situation or plan from tax perspective, the idea is to ensure tax efficiency. Wahab and Holland (2012) define tax planning as all activities designed to produce a tax benefit. In other words, it is the planning and operation of business activities within the context of existing legislation in such a way that the business realizes the optimal or best tax position while achieving its set goals (Kiabel and Nwikpasi, 2001:34),therefore, tax planning include not only strategies aimed at the minimization of tax liability but also considers the cash flow effect on the business in terms of when it is most advantageous for a business to settle its tax liability without incurring any penalty. In a nutshell, tax planning is an act of transferring value from the state to the firm. Scholes et al. (2008) defined effective tax planning as the tax planning that maximizes the firm's expected discounted after-tax cash flows.In the same vein, Morien (2008) put forward different types of tax planning strategies to include strategies for obtaining tax deductions; strategies for obtaining tax credits and offsets; strategies for moving income away from an entity paying a high rate of tax to an entity paying a lower rate of tax; strategies for moving profits and losses between tax years, either to defer tax or take advantage of a more favorable tax rate and strategies for reducing the amount of assessable capital gains tax from an investment sold at a profit. Each of these strategies embodies several elements to deal with in implementing the strategy, Also, Oyebanji and Oyebanji (2017) defined tax planning as the conscious effort to take advantage of the provisions of various tax laws with a view to maintained minimum tax liability.

Tax planning activities are measured in taxation literature using effective tax rate (ETR), cash effective tax rate (CETR) Book tax difference (BTD). It is used to measure the tax burden of a corporate entity. Lower effective tax rate or cash effective tax rate signified successful tax

planning activities whereas higher percentage of ETR indicates higher tax burden signifying that the firm engaged less in tax planning activities. It is measures as the cash tax paid divided by profit before tax, while in the case of cash effective tax rate divided by net cash flow from operating activities. Book tax difference captures tax planning activities as the difference between the income presented to the capital market and the taxable income.

2.2.2 The Concept of Firm Value

Firm value can be seen from different perspective. From the balance sheet approach, firm value is seen as the value in firm's assets. This approach sees firm value from the balance sheet perspective. From another dimension, the concept of firm value is conceived as a function of future cash flows and level of return. Brigham (1999) defines firm value as the value given to management of financial markets and corporate organizations as the company continues to grow. This value is determined by market perceptions of company's performance sustainability that represented by market value of shares outstanding. Siallagan and Machfoedz (2006) stated that firm's main goal was to maximize its value. Low earnings quality will create bad decision-making by investors and creditors, so that company's market performance will decline. Pawestri (2006) states that firm's market value will be reflected in its market stock price.Christiawan and Tarin (2004) argued that some concept of value that describe firm value, among others are: the nominal value, market value, intrinsic value, book value and liquidation value. They, however, concluded that most representative concepts to determine firm value is intrinsic value, but it is very difficult to estimate the intrinsic value, because of its determination requires the ability to identify significant variables that determine the profitability of a company. Those variables differ from one company to another. Therefore, market value is used by reason of ease of data was also based on an assessment of a moderate. Haruman (2008) opined that higher firm value can attract

investment. Investors interested return or profit to be derived from the investment in form of embedded capital gains and dividends, being a part of advantage given to shareholders. In this case the manager must decide whether the profits from company during the period will be distributed in whole or in part only distributed as a dividend and remainder being held companies or so-called retained earnings.

Leland and Toft (1991) defined the value of a firm as the value of its assets plus the value of tax benefits enjoyed as a result of debt minus the value of bankruptcy cost associated with debt. This suggests that efficient utilizations of debt have positive effect on values. Modigliani (1980) points out that, the value of a firm is the sum of its debt and equity and this depends only on the income stream generated by its assets. The value of the firm's equity is the discounted value of its shareholder's earnings called net income. That is, the net income divided by the equity capitalization rate or expected rate of return on equity. The net income is obtained by subtracting interest on debt from net operating income. On the other hand, the value of debt is the discounted value of interest on debt. Consistent with agency costs theory, prior literature indicate that debt is value reducing for high growth firms and it is value enhancing for low-growth firms. Jensen (1986) posits that when firms have more internally generated funds than positive net present value projects; debt forces the managers to pay out funds that might otherwise have been invested in negative net present value projects. This over-investment problem can be lessened if managers are forced to pay out excess funds for servicing debt, therefore enhancing the firm's value. Myers (1993) suggests that, a firm with outstanding debt may have the incentive to reject projects that have positive net present value if the benefits from accepting the project accrue to the bondholders without also increasing shareholders' wealth. This under – investment problem can harm the value of firms, especially for the firms with high levels of future investment

opportunities. Aggarwal and Kyaw (2006) also posit that, the value of the firm is the optimal debt structure and is determined by balancing the agency costs and other costs of debts as a means of alleviating the under and over-investment problems. Specifically, when firms have surplus cash flows, debt will force managers to pay out funds that might otherwise have been invested in negative net present value projects.

However, firms with outstanding debt may have incentives to reject projects that have positive net present value if the benefit from accepting the project accrues to the bondholders without also increasing shareholders‟ wealth. In addition, McConnell and Servas (1995) posit that, the seeds of under-investment problem lie in the solution of over investment problem. Their evidence supports the contention that for low-growth firms, leverage act as a monitoring mechanism to enhance firm value, whereas for high-growth firms, leverage causes under investment and destroys the value of a firm.

2.3 Empirical Review on Tax Planning and Firm Value

This subsection presents an empirical review of previous related literature on the impact of tax planning on firm value. The review is arranged in descending order from the most recent studies conducted to the earliest. The first study is an empirical paper by Christina (2019) examined the effect of corporate tax planning on firm value. The population of the study consisted of manufacturing companies listed on the Indonesian Stock Exchange (IDX) from 2014 to 2016. They used 43 respondents through purposive sampling and the hypotheses were tested using multiple regressions with EViews program to determine the relationship between each independent variable to firm value. The empirical results show that tax planning that is measured by the cash effective tax rate has a negative effect on firm value, while tax planning measured by effective cash rate and tax savings has no effect on firm value. This indicates that cash effective

tax rate is more appropriate measure to capture tax planning activities in the Nigerian banking industry.

Similarly, Thanjunpong and Awirothananon (2019) examine the effect of tax planning on financial performance in the stock exchange of Thailand within the year 2014 and 2016. Purposive sampling technique was adopted which excludes the financial sector, and it consisted of 873 firm-years. The tax planning was measured by effective tax rate (ETR) and the ratio of tax expenses to total assets, while the financial performance was measured by return on equity. They found that the Tax Planning has both effects on the Financial Performance. The effect is positive when measured by ETR, while it is negative if measurement is TAX/ASSET. However, a similar study in the Nigerian context could produce difference results. Also, the ratio of tax expenses to total assets would not reflect tax planning activities.

Fagbemi,Olaniyi and Ogundipe (2019) examined the corporate tax planning and financial performance of systemically important banks in Nigeria. Ex-post facto was adopted as the researchdesign, while Pooled OLS was used to analyze the data. Secondary data derived from the annual reports of the eight systematically important banks were utilized in the study. The study showed that the effective tax rate has a negative and significant impact on financial performance. Thin capitalization has a positive significant impact on the financial performance of systematically important banks in Nigeria, whereas capital intensity and the lease option have demonstrated an insignificant impact on the financial performance of systematically important banks in the country. The study concluded that corporate tax planning affects financial performance depending on the adopted tax planning strategies. The draw back of this study is neglecting the other banks in the industry, also, thin capitalization though one of strategy to achieved tax avoidance but does not appropriately measures tax burden.

Razali, Ghazali, Lunyai and Hwang (2018) examined tax planning and firm value of 387 sample data from Malaysia data streams for a period of three years from 2014- 2016. The regression results show that tax planning proxied by ETR has positive and significant impact on value while book-tax differences (BTD) has no significant impact on tax planning. In summary, shareholders are not necessarily responding only to aggregate tax saving in valuing tax planning- they also value the components of tax planning. This suggests that tax planning activities does not improve firm value, also, the period cover by the study is only three year which could be inadequate to capture tax planning activities.

Yee, Sapiei, and Abdullah (2018) examine the link between tax avoidance and firm value and identify the moderating effect of corporate governance in this digital era. Corporate tax avoidance activities have been considered as value-enhancement activities to the companies and better quality of corporate governance would positively related to firm value. The study used a sample of Malaysian Public Listed Companies (PLCs) which ranked the top 100 companies of good disclosure in the Malaysia-ASEAN corporate governance report 2014. It was conducted using cross-sectional data by observing a final sample of 82 PLCs at one point in time. Findings provide evidence from Malaysia that corporate tax avoidance behavior would actually reduce firm value and corporate governance has moderating effect on the relationship between tax avoidance and firm value.

In the same vein, Salawu, Ogundipe and Yeye (2017) studied the Granger Causality between Corporate Tax Planning and Firm Value of Non-Financial Quoted Companies in Nigeria between 2004 and 2014. A panel data of financialcharacteristic of 50 non-financial quoted firms spreading over ten sectors were collected from the audited annual financial reports of the sampled firms and the Nigerian Stock Exchange fact books. The pairwise VAR Granger

Causality test conducted between tax planning and firm value shows that there is no causality between tax planning and firm value within the sampled period at 5% level of significance. This implies tax planning did not granger causes firm value and vice versa. This result indicates that causality do not runs in any direction between Tax Planning (ETR) to Firm Value (Tobin Q). These suggest that there is a significant non-directional causality between Tax Planning (ETR) to Firm Value (Tobin Q) meaning that the two null hypotheses are accepted. That is, there was no significant casual nexus between Tax Planning (ETR) to Firm Value (Tobin Q). in another study,

Salawu and Adedeji (2017) examine the impact of corporate governance on tax planning of non-financial quoted companies in Nigeria between 2004 and 2014. A sample of fifty (50) companies out of 151 non-financial quoted companies that covers 10 sectors were purposively selected using stratified random sampling basis. The data used in the analysis were collected from the audited financial statement of the selected non-financial quoted companies in Nigeria and the Nigerian Stock Exchange Fact book and analyzed using generalizes method of moments (GMM). The results show among others that there is positive a relationship between Effective Tax Rates (ETR) and firm value (Tobin's Q). This indicates that much need to be done for non-financial firm in Nigeria with tax planning activities in order to enjoy its benefit.

On the contrast, Olajide (2017) studied the impact of tax planning on firm performance in Nigeria. Using a sample size of fifteen companies, five from Manufacturing, banking and insurance companies for a period of ten years (2003-2012). The study found that tax planning activities has no impact on firm performance. This could be attributes to the combination of manufacturing and companies from financial services industry, these companies are highly regulated compare to manufacturing industry.

Oyeyemi and Babatunde (2016) examined the influence of corporate tax planning on the financial performance of manufacturing firms quoted on Nigerian Stock Exchange using annual reports and accounts of 10 selected firms out of 28 firms listed under consumer goods sector through judgmental sampling technique. The study was an empirical survey and expost-facto in nature, and secondary data from annual accounts of the sampled firms was used. The study employed Generalized Least Square (GLS) method of regression based on the outcome of Hausman's model estimation test. The study established that aggressive tax planning such as thin capitalization, tax law incentives and other benefits of loopholes in Nigerian tax laws have not been fully utilized by the Nigerian firms. This suggests the need by the Nigerian companies to engage in tax planning activities which if successfully undertaken it would improve firms after-tax profit.

In Brazil, Santa and Rezende (2016) investigated the relation between corporate tax avoidance and firm value of publicly traded companies. The study used a panel data analysis to verify the outcome including 323 publicly traded companies in the stock market from 2006 to 2012, totaling 1,704 firm-year type observations. Book-Tax-Difference and effective tax rate were adopted as proxy for tax avoidance, controlled by total accruals, such as proxy for tax avoidance and Tobin's q as proxy for firm value. The results showed that tax avoidance and firm value are negatively associated. It was also evaluated the corporate governance effect, finding limited disclosures that can mitigate to value destruction. The study is aged and not domiciled in Nigeria. Appolos, Jerry and Grace (2016) examined the effect of tax planning on firm value of Consumer goods firms in Nigeria. Ex-post facto research design was adopted. The study covered 50 firm-year observations for the period, 2010-2014. Data were drawn from the published financial statements of the sampled companies and analyzed using descriptive and inferential

statistics centered on specified panel regression model. The joint effect of the considered tax planning proxies on the firm value was significant. While Effective tax rate (ETR), Dividend (DIV) and Firm age (FAG) are positively and significantly related to firm value, firm size, leverage and tangibility exert negative effect on firm value. The study concluded that a holistic approach to tax planning and optimal mix of tax planning strategies are important determinants of their effect on firm value. This indicates that the sample companies are effective and efficient in tax planning activities.

Assidi, Alliani and Ali (2016) investigated the relationship between corporate tax optimization and the firm's value in the Tunisian context over an 11-year period. The empirical results revealed that tax optimization, accruals and investment increased the firm's value. After dividing the sample between listed and non-listed firms, the study concluded that, compared to non-listed firms, the listed firms were better able to optimize tax through adopting a tax policy. The findings help decision makers, researchers and practices to better understand the role of tax optimization in the management of firms and, also, in their performance. On the contrast, Ogundajo and Onakayo (2016) examined the influence of corporate tax planning on the financial performance of manufacturing firms quoted on Nigerian Stock Exchange using annual reports and accounts of 10 selected firms out of 28 firms listed under consumer goods sector. The study employed Generalized Least Square (GLS) method of regression based on the outcome of Hausman's model estimation test. The study established that aggressive tax planning such as thin capitalization, tax law incentives and other benefits of loopholes in Nigerian tax laws have not been fully utilized by the Nigerian firms. The study recommended that manufacturing firms in Nigeria should make tax planning as part of the firm's strategic financial planning, employ the service of expertise in tax practices due the complexity and dynamitic of Nigeria tax laws and

also to effectively utilize all-inclusive tax planning strategies available in order to further influence financial performance positively. However, replicated study in the financial subsector such as banking industry in Nigeria could produce different results.

Also, Maina and Menba (2016), determine the relationship between corporate taxes and performance of Medium size Enterprises, to ascertain the relationship between value-added tax and the performance of Medium size Enterprises, to determine the impact of custom duty on the performance of Medium size Enterprises and to examine the relationship between capital gains and the performance of Medium size Enterprises. The study targeted Medium size Enterprises within Kiambu County. The study adopted descriptive research design questionnaires and interview guides were used to collect data from the respondents. The study used both quantitative and qualitative data. The hypotheses were tested using correlation analysis. A multiple regression was conducted to determine the relationship between independent and dependent variables. The study found that tax policies influences financial performance. The peculiar problems of small scale business around the globe might made measuring tax planning activities difficult. In the same vein, Ftouhi, Ayed and Zemzem (2015) studied the effect of tax planning on firm value in the European context. The study was based on listed companies on Euronext 100 index from 2008-2012. Effective tax rate was used to measure tax planning, while firm value was represented by Tobin's Q. The multiple regression results show that tax planning has negative and significant impact on firm value. The study further found that tax savings has positive and significant impact on firm value. This suggests that the tax planning has improved firm performance

Katz, Khan and Schemtz (2015) studied found mixed evidence on the implications of tax avoidance on firm value as measured by Tobin's Q or stock price reactions. The take-away from

prior literature is that increased opportunities for rent extraction associated with tax avoidance (e.g., in low governance firms), might negatively affect the after-tax value of the firm. The study investigates the association between tax avoidance and firm fundamentals (leverage, profitability, and asset utilization), using DuPont analysis. The results document that tax avoidance unambiguously lowers future pretax accounting rates of return (i.e., return on equity, return on net operating assets, and return on operating assets), largely due to inefficient utilization of operating assets and operating liabilities. These results also hold in different contexts that mitigate rent extraction, including when firms have foreign operations and good governance. However, when the measures of profitability were used separately a different result could be obtained.

In a study by Aganyo (2014) examined the effects of corporate tax planning on firm value for companies listed at the Nairobi Securities Exchange. This study was designed as a causal predictive research design. The population of the study was all the companies listed on the Nairobi Securities Exchange. Secondary data was sourced from the CMA, respective company websites, and the african financials website on the variables of interest for the five-year period 2009 to 2013 for 20 companies with complete data. A descriptive analysis was used to describe the data in terms of mean scores and standard deviations among other descriptive statistics. In order to examine the effect of tax planning on firm value, regression analysis was carried out. Since the data collected was panel data, the analysis was performed using panel data regression techniques with the aid of Eviews 7 analysis software. The major finding was that tax planning had a negative and significant impact on the value of the firm. The study concludes that tax planning influences the value of listed firms in Kenya. This implies that tax planning activities had no influence on the value of listed firms in Ghana. Also, the study is aged.

In Ghana, Kawor and Kportorgbi (2014) examine the Effect of Tax Planning on Firms Market Performance. The study sought to ascertain the level of tax planning of firms and to explore the relationship between tax planning and firms' market performance. The study used 22 non-financial companies listed on the Ghana Stock Exchange over a twelve-year period from 2000 to 2012. The longitudinal correlative designed was used. The results indicated that that firms' tendency to engage in intensive tax planning activities reduces when tax authorities maintain low corporate income tax rates. Secondly, tax planning has a neutral influence on firms' performance. The findings challenged the general perception that every cedi of tax savings from tax planning reflect in the pocket of investors. It was concluded that investors must institute systems to ensure tax planning benefits reflect significantly in their pockets.

Palanca and Zamudio (2013) examined the analysis of the agency perspective on tax avoidance and firm value under different corporate governance structures: the case of firms in the Philippine stock exchange. A panel dataset was used which includes relevant firm-specific characteristics of publicly-listed firms in the Philippine Stock Exchange (PSE). They construct the financial information from secondary sources, annual financial statements of the sample firms over eight-year period of 2003 to 2010. Results from a System GMM Dynamic Linear Panel Data Estimation on a unique panel dataset from frequently-traded firms show that corporate tax avoidance may, at best, have no effect, and at worst, actually increase stock price crash risk and erode firm value, contrary to intuition. Their findings imply that the aforementioned conflict between taxpayers and the government is non-existent, and that the corporate governance structure can play a role in minimizing stock price crash risk, allowing for various implications for tax policy.

Chasbiandani and Martani, (2012) examined tax planning and firm value using a sample of non-financial firms in Indonesia for a period of two years (2010-2011). Tax avoidance were proxied by cash effective tax rate(cETR), while firm value represented by Tobin's Q. The statistical analysis revealed negative and significant impact of cETR on Tobin'Q. This indicates lower tax burden and higher value. Similarly, In UK, Wahab and Holland (2012) examined the relationship between shareholder's valuation of corporate income and tax planning with corporate governance as moderating variable in UK contexts. They found evidence of negative significant relationship between the level of tax planning and firm value which is robust to controlling for CG. Also, their study found no significant relationship between firm value and tax planning with CG as a moderating variable. This suggests the presents of corporate governance attributes does not changes the relationship between tax planning and firm value.

Previous research on the impact of tax planning on firm value shows that tax planning is important to shareholders as it involves a decrease in tax cost that significantly burdens the firms and shareholders (Chen et al. 2010). However, shareholders might not favor tax planning due to the potential non tax costs involved in it. Therefore, tax planning might have both positive and negative impacts on firm value since shareholders might value tax planning differently depending on their expectations.Desai and Dharmapala (2009), investigate the relationship between tax avoidance activities and firms' value using a sample 862 US firms. Tax avoidance is measured by book-tax gap while Tobin's Q is the proxy for the firm value. Institutional ownership was used as a measure of CG. It was found that tax avoidance activities have no direct significant relationship with firm value. Furthermore, the results reveal a significant positive effect of tax avoidance on firm value for well-governed firms. In other word, their research documented that the relationship between tax avoidance activities and firms' value to be

correlated with firms' CG. Therefore, they suggest that shareholders value tax planning activities by positioning both their magnitude and risk in the US firms. Also, Wang (2010) examined the relation among tax avoidance, corporate transparency and firm value. Cash effective rates and permanent book-tax difference was used to measured tax avoidance, with firm value as proxy by Tobin's Q using sample S and P 1500 of firms for a period eight years (1994-2001). They found positive significant relationship between tax avoidance and firm value.However, book tax differences may be as a result of management opportunistic behavior such as earning management.

2.4 Theoretical Framework

This study is anchored on the Hoffman's Tax planning theory, the Managerial Opportunism theory (an extension of the agency theory).

2.4.1 Hoffman's Tax Planning Theory

According to Hoffman (1961;256) tax planning seeks to divert cash, which would ordinarily flow to tax authorities, to the corporate entities. Tax planning activities are desirable to the extent that they reduce taxable income to the barest minimum, without sacrificing accounting income. The theory is premised on the fact that firms tax liability is based on taxable income rather than accounting income. The idea is thus to intensify activities that reduce taxable income but has no indirect relationship on accounting profit. The theory thus recognized a positive association between firm tax planning activity and firm performance.

According to Hoffmann (1961;259), taxation, mostly are based on business or accounting concepts, thus a firm can modify such activities towards the attainment of reduction in tax

liability. Hoffmann identified some ambiguity and loopholes in tax laws due to unclear intentions of the legislators and concluded that successful tax schemes work with the legal concepts and precise wording of the statute and complying with these concepts very precisely as it relates to individual firm tends to be advantageous to firms in form of tax savings.

Hoffman (1961) also recognized the role of tax cost in the tax planning activities. The theory thus provided that the positive association between tax planning and corporate performance is on a basic assumption that tax benefits from the tax planning exceed tax cost. The scope of the Hoffman's tax planning theory does not address the dynamics of tax planning and market performance. As capital markets develop and the separation of ownership and control of corporate bodies become well-spread, the need for a comprehensive tax planning theory is imperative. This need is rather addressed through the empirical perspective than through theoretical perspective (Inger, 2012). Furthermore, the theory of tax planning as explained by Hoffman (1961) seeks to divert cash, which would ordinarily flow to tax authorities, to the corporate entities. It is simply using legal means to reduce tax liability through activities that are desirable to the extent that they reduce taxable income to the barest minimum, without sacrificing accounting income. As highlighted by Kawor&Kportorgbi (2014) the theory is premised on the fact that firm's tax liability is based on taxable income rather than accounting income which is the case in Nigeria. The theory also supports the existence of a positive relationship between tax planning activities and firms' performance.

2.4.3 Managerial Opportunism Theory

The proponents of the Managerial Opportunism theory, Desai and Dharmapala (2006) and Desai, Dyck and Zingales (2007) consider the interaction of tax planning activities and the agency problems inherent in public companies. The theory argues that the obfuscatory tax planning

activities can create a shield for managerial opportunism and the diversion of rents. They posit that straightforward diversion and subtle forms of earnings manipulation can be facilitated when managers undertake tax avoidance activity. It is their view that tax planning has the direct effect of increasing corporate profitability and firm value only for firms with strong governance institutions. Where there are weak governance institutions, increased opportunities for managerial rent diversion dominate these effects.

The agency view of tax avoidance on the other hand emphasized on the inability of the tax savings through tax planning strategies to transform into enhancement of after-tax return due to agency problem of managerial opportunism or resource diversion. Desai and Dharmapala (2009) opined that complex tax avoidance transactions can provide management with the tools, masks, and justifications for opportunistic managerial behaviors, such as earnings manipulations, related party transactions, and other resource-diverting activities thus, tax savings may not actually result to increase on firms' after-tax rate of return. Using a case analysis, Desai (2005) provides detailed evidence on how these opportunistic managerial behaviors can be facilitated by tax avoidance. This agency view of tax avoidance is attracting increasing attention in the literature (Hanlon and Heitzman, 2009). For example, Desai and Dharmapala (2006) show that strengthened equity incentives actually decrease tax avoidance for firms with weaker governance, consistent with the view that tax avoidance facilitates managerial diversion. Chen et al. (2010) find that family firms are less tax aggressive than their non-family counterparts. The authors conclude that family owners appear to forgo tax benefits to avoid the non-tax cost of a potential price discount arising from minority shareholders‟ concern about family rent seeking masked by tax avoidance activities.

The literature has also begun examining the stock market consequences of tax avoidance activities under the agency perspective. Desai and Dharmapala (2009a) find no relation between tax avoidance and firm value; however, they do find a positive relation between the two for firms with high institutional ownership. Their finding suggests that tax avoidance has a net benefit in an environment in which monitoring and control effectively constrain managerial opportunism afforded by tax avoidance activities. Hanlon and Slemrod (2009) examine the market reaction to news about a firm's involvement in tax shelters. The authors find a negative market reaction to tax shelter disclosure, suggesting that investors are concerned about the possibility that tax shelters are intertwined with managerial diversion and performance manipulation. Furthermore, the authors find that the negative reaction is less pronounced for firms with stronger governance; however, this result seems to be sensitive to how governance is empirically measured.

These theories are relevant to this study, a firm which maximizes the loopholes in the corporate tax laws and which maintain an optimal gearing thus having tax shield on the deductible interest tends to lessen its tax burden and increases its after tax returns (Hoffman's theory). From the agency point of view, a firm might have utilized all the strategies in reducing its tax burden but the savings not transformed into corporate financial benefit due to agency problem. The agency view theory is of the assertion that managers with their personal interest in conflict with the global interest of the entity might divert such savings to other investment for personal gains. Lastly, the political cost theory believed that larger firms tends to be more matured and possesses expansive resources thus have the capacity of engaging professionals in the formulations and implementations of their corporate strategies with tax liability inclusive. Based on these theories, effective tax rate (ETR), cash effective tax rate (CETR), tax savings (TS), bank size (BAZ), profitability (ROA), and leverage (LEV) are selected as the explanatory variables for the study.

It can be possible that the agency theory does not provide a full and adequate explanation of the association between tax planning and firm value. Specifically, these theories focus on the link between tax planning and firm value, while stakeholder theories focus on the relationship between firm and many other stakeholders such as tax authorities, political groups, employees, customers and the public in general. Contrary to the agency theory that print out shareholders' model drawing a unique relationship established between shareholders and CEOs, the partnership approach is presented as a broader vision based on a partnership model, which includes all stakeholders of the company.

2.5 An Overview of the Nigerian Banking Industry

The banking industry in Nigeria plays an important role in promoting economic growth and development through the process of financial intermediation. Many economists have acknowledged that the financial system, with banks as its major component, provide linkages for the different sectors of the economy and encourage high level of specialization, expertise, economies of scale and a conducive environment for the implementation of various economic policies of government intended to achieve non-inflationary growth, exchange rate stability, balance of payments equilibrium, high levels of employment and value creation among others. The role of finance in economic development is widely acknowledged in the literature. In particular, El-maude, Abdul-rahman and Ibrahim (2016) put the role of financial intermediation at the center of economic development. They argued that financial intermediation through the banking system played a pivotal role in economic development by affecting the allocation of savings, thereby improving productivity, technical change and firm value. They believed that efficient allocation of savings through identification and funding of entrepreneurs with the best chances of successfully implementing innovative products and production processes are tools to achieve this objective.

The Nigerian banking sector has gone through different phases of banking operations, which could be classified into seven phases namely unguided/laissez-faire phase (1930-1959), control/indigenization era (1960-1985), de-control/market deregulation (1986-1993), guided deregulation (1994-1998), universal banking era (1999-2003), consolidation era (2004-2008) and post-consolidation era 2009 to date. During each of these periods, the basic operational mandate of banks ranging from deposit mobilization, value creation, promotion of a payment system, execution of monetary policies, agency functions and other miscellaneous functions remained the

same. However, each phase in this process of banking development could be associated with different approaches to the discharge of these functions.

The banking industry as regulated by the Central Bank of Nigeria (CBN) and Nigerian Deposit Insurance Company (NDIC)is mad**e** up of Deposit Money Banks usually referred to as commercial banks and other financial institutions which includes Micro-finance Banks, Finance companies, Bureau De Change, Discount Houses and Primary Mortgage Institutions. These two regulators are government institutions set up by law to regulate, monitor and control the activities of the actors in the banking industry, and entire financial sector in Nigeria. They also guarantee the payment of deposits up to a maximum limit in accordance with the statue in the event of failure of an insured financial institution.

Before the then CBN governor Soludo announced a major bank recapitalization programme on July 6, 2004, many banks had exhibited several weaknesses including under capitalization, illiquidity, weak corporate governance, poor asset quality and poor earningsi.e valuation (Onwumere, et al, 2006). The programme was primarily introduced to firm up bank capitalization and ensure compliance with corporate governance, because a strong capital base and a good corporate governance can help banks to absorb losses arising from non-performing liabilities and to foster value creation within the industry (Ajayi, 2005). However, twenty-five (25) commercial banks that attained the capitalization requirement of 25 billion naira through consolidation emerged out of the 87 banks that were in existence at the end of 2004. Though the consolidation of banks in Nigeria resulted in a decrease in the number of nonperforming banks, decrease in non-performing loans, increase in bank branches, increase in total asset of banks, increase in total deposits, and increase in net interest margin. The huge capital inflow to the banks did not guarantee banking sector stability for a reasonable period. Despite all the admitted

improvements, performance was lower in Nigerian banks than what obtained in some other countries (IMF Report 2008). These and other problems led to a major banking reform in August 14, 2009, when eight of the 24 banks were found to be in grave conditions of illiquidity, capital inadequacy and poor corporate governance, slow growth rate (Sanusi, 2009).

Soludo (2004) opined that the problems facing most of the Nigerian banks include persistent illiquidity, poor CG and asset quality and unprofitable operations. Nigerian banks seemed whole dependent on government and government owned parastatals. The implication of Soludo's view were that the resources of such banks can not contribute to the growth of the economy, making their operations highly vulnerable to savings in government revenue which is arising from the uncertainties of the international market. Against this background, the Central Bank of Nigeria introduced a minimum capitalization base for banking institutions to meet up the demand of the customers. Full compliance was required before the end of year 2005, with a view to enhancing corporate governance, bank efficiency and size. The banking reform required banks in Nigeria to have a minimum capital based of #25billion. This shows that a number of existing banks had to consolidate their capitalization through Merger and Acquisition. Affected banks were therefore required to make strategic decisions on how to consolidate.

In executing the 2009 reform programme, the CBN injected the sum of N620 billion into the eight banks found to be non-performing in a bid to stabilize their operations and to foster economic activities. The banks that made some profits obviously were not affected and their mostly deposits money banks. For instance, Zenith Bank Plc reported N58.6 million profit after tax in 2015 (Zenith Bank Annual Report), and First Bank Plc reported up to N48.074 billion in the same period (First Bank Annual Report). Thus, these issues raised above give emphasis to the need for a thorough evaluation of the performance of the banking industry in Nigeria.

However, overall performance of banks or the strength of a bank depends primarily on the sources of capital funds available to it, quality of corporate governance, and the growth prospects. It also depends on liability management and the investment portfolio management of such funds. Thus, the focus of this capstone is restricted to the activities of deposit money banks. Deposits Money Banks (DBMs) makes profit on the interest earned on borrowed funds through lending spreads, and on commissions it charges for services they render. However, to augment their income, they can also choose to borrow more money from their own account (e.g. from central banks or other financial institutions) and then lend it to corporate bodies and individuals at a higher interest rate. This connection between borrowed funds, clients' deposits, shareholders' funds as well as own funds must be managed in such a way that DMBs would remain solvent at all times. However, some critics have drawn attention to the fact that assets differ in their ability to absorb losses and that leverage ratio is not sufficient for determining the risk assumed by the banks (Chen, 2013). The primary role of DBM's in the economy is that of financial intermediation between lenders and borrowers: banks allocate depositors' and investors' funds to the sectors of the economy, in which the risk in return appears to be the more attractive. Their expertise in evaluating risk profiles and expected returns contributed a lot in mitigating problems of inefficient resources allocation (Benjamin &Scantigna, 2016). Furthermore, depositors often demand for products and services that have to do with high levels of liquidity (such as call deposits or short-term time deposits). According to Andrea and Giovanna (2015), by building up large pools of deposits and by reducing the risk for swift movements of all deposit balances, banks can transform the maturity of capital and allow for sustainable financing while maintaining a high level of liquidity. Hence, DMBs serve an important function in every developed society in a redistributive relationship and a facilitator for

efficient capital allocation. Closely linked to the bank's role of intermediation is risk management. Banks minimize risks by conducting the expert credit worthiness analysis, and by redistributing or pooling resources through the use of financial instruments (Kiema, &Jokivoulle, 2014).

A bank performance also depends on the level of efficiency exhibited in the application of human, financial and material resources available to a bank. In managing the resources available to a bank, bank managers face several risks such as liquidity risks, earnings risks, operating risks, credit risks, interest rate risks, investment risks, foreign exchange risks, fraud risks and loss of confidence risks. It is important to mention that banks operate on the premise of minimizing risks. However, a bank that endeavors all risks cannot adequately serve the credit needs of its customers or respond appropriately to the demands of economic development. On the other hand, a bank that takes excessive risks would easily run into liquidity crisis and capital adequacy problems. Most often, management efficiency is affected by several indices like good corporate governance and the ability to drive the organization to higher value.

From the foregoing, it can be inferred from the overview that the listed deposits money banks in Nigeria, contribute significantly to the economic activities in the country as seen from the trend in their performance today. Thus, this study relies on its use as a mapping device from which the researcher can draw inference and synchronize the research expectations.

CHAPTER THREE
RESEARCH METHODOLOGY

3.1 Introduction

This chapter presents the research design, population, sample size and sampling technique, data collection and methods of analysis and presentation used in the study. The chapter also discussed variables of the study and their measurement, the model and techniques of data analysis.

3.2 Research Design

The study used a non-survey research design and was out based on historical panel data. The design was used to establish the causal relationship between tax planning on value of commercial money banks in Nigeria. The design is believed to be adequate and appropriate to estimates the empirical relationship of tax planning on market value of commercial money banks in Nigeria.

3.3 Population of the Study

The population of the study consists of all the sixteen (16) listed commercial money banks on the first-tier securities market of the Nigeria Stock Exchange as at 31st December 2018. Table 3.1 contained the list of the population.

Table 3.1: Population of the Study

S/no	Name of Banks	Year of Listing
1	Access Bank	1998
2	Diamond Bank	2005
3	Eco Bank	2006
4	Fidelity Bank	2005
5	First Bank Nig. Plc	1971
6	First city Monument Bank Plc	2004
7	Guarantee Trust Bank Plc	1996
8	Ja'iz Bank Plc	2012
9	Skye Bank	2005
10	Stabic IBTC Bank Plc	2005
11	Sterling Bank Plc	1993
12	Union Bank Plc	1970
13	United Bank for Africa Plc	1970
14	Wema Bank Plc.	1991
15	Zenith Bank Plc.	2004
16	Unity Bank Plc.	2005

Source: NSE Fact book 2018

3.4 Sample Size and Sampling Technique

Censor sampling was used to arrive at a sample of 15 commercial banks. A filter was design to enable the researcher have access to the reports and accounts of the sampled listed money deposit banks from 2006-2017. Hence, Ja'iz Bank Plc is disqualified as its annual reports and accounts covering the time for the study are not available. The study considered the sample population of all the listed commercial money banks in Nigeria with data covering the period of the study.

Table 3.2 Sample Size of the Study

S/no	Name of Banks	Year of Listing
1	Access Bank	1998
2	Diamond Bank	2005
3	Eco Bank	2006
4	Fidelity Bank	2005
5	First Bank Nig. Plc	1971
6	First city Monument Bank Plc	2004
7	Guarantee Trust Bank Plc	1996
8	Skye Bank	2005
9	Stabic IBTC Bank Plc	2005
10	Sterling Bank Plc	1993
11	Union Bank Plc	1970
12	United Bank for Africa Plc	1970
13	Wema Bank Plc.	1991
14	Zenith Bank Plc.	2004
15	Unity Bank Plc.	2005

Source: Generated from Table 3.1

3.5 Sources and Methods of Data Collection

This study is based on secondary source of data which are extracted from the annual reports and accounts of the listed deposits money banks in Nigeria for the periods (2006-2018) of the study. Previous studies (Rahim &Saad, 2016 and Hassan, 2016) justify the use of secondary data in the study. Therefore, the data obtained from the source relate to both dependent (firm value) and

explanatory variables (Effective tax rate, cash effective tax rate, tax savings profitability leverage and bank size).

3.6 Variables of the Study and their Measurement

The study employed two (2) set of variables dependent and explanatory variables. The dependent variable is the market value represented by Tobin's Q, while the explanatory variable is divided in to two: the independent variable which includes effective tax rate (ETR), cash effective tax rate (CETR) and tax savings (TS) and control variables that includes profitability (ROA), Leverage, and Bank size

3.6.1 Dependent Variables

The depended variable of the study is the market value of deposits money banks which is proxies by Tobin's Q (market capitalization plus book value of debt scaled by total assets). Scholars have widely employed Tobin's Q as a proxy for firm value, particularly in valuing publicly traded companies (Nwaobia, Kwarbai&Ajibade, 2015; & Smithson &Simkins 2005).

3.6.2 Explanatory Variables

The explanatory variables of the study include effective tax rate, cash effective tax rate, tax savingsand bank size, profitability, and leverage served as control variables.

Independent Variables

The study employed the following as independent variables viz; effective tax rates, cash effective tax rate, tax savings, bank size, profitability, and leverage:

i. **Effective Tax Rate (ETR):** This is defined as the tax paid in year t_{-1} divided by profit before tax in year t as used by Rego (2003), Khaoula, Amor and Ayed (2013) and Kawor and Kportorgbi (2014) to measure a reflect tax planning activities that decreases a firm's tax liability. ETR is a commonly used measure of a firm's tax

burden. ETR provides a basic summary statistic of tax performance which describes the amount of taxes paid by a company relative to its profit before tax.

ii. **Cash Effective Tax Rate:** This is another measure of tax planning widely used in taxation literature to capture tax planning activities. It is measures as cash tax paid scaled by net operating cash flow.

iii. **Tax Savings:** This is defined as the difference between effective tax rate and statutory tax rate of 30% applicable to corporate bodies in Nigeria as used by Kawor and Kportorgbi (2014)

Control Variables

i. **Bank Size (BAZ):** This is measured as the log of total asset. It's widely believed that, Large firms are reported to have sufficient resources and better opportunities to undertake tax planningstrategies, for example, by utilizing the tax incentives provided to them. (Nwaobia, 2014).

ii. **Profitability (ROA):**Returns on asset reflect the management ability to generate profits on the investments that has been made. The rationale behind the choice of return on asset is that a successful tax planning activity will increase profit to be earned. It is measured as profit before tax divided by total asset.

iii. **Leverage (LEV):** This is defined as the interest-bearing debt divided by total assets. Garko, 2015)

3.7 Techniques for Data Analysis

The study would use three (3) techniques for the purpose of data analysis which are descriptive statistics, correlation, multiple regressions.

i. Descriptive Statistics

Descriptive analysis is used to present data in a summarized form and more justifiable manner. The data is presented in term of mean, standard deviation, minimum and maximum of both dependent variable and explanatory variables of the study.

ii. Correlation Result

Correlation analysis was used to determine the level of association between the tax planning and value of the commercial banks in Nigeria. The result of the correlation matrix was used in developing the assumptions for the regression because the result might reveal the nature of the associations, as there is no association if the value of the result is 0. On the other hand, a correlation of ±1.0 means there is a perfect positive or negative associatio**n.**

iii. Multiple Regressions

Multiple regressions were used to measure the overall impact of tax planning on the value of deposits money banks in Nigeria. The following models were used to estimate the impact of independent variable on the dependent variable which is the modification of Ftouhi, Ayed and Zemzem (2015).

3.7.1 Model Specification

The model of the study used to empirically test the hypothesis formulated was adopted from the work of Kawor and Kportorgbi (2014) with modification.

$$\textit{Tobin's } Q = \beta_{0it} + \beta_1 ETR_{it} + \beta_2 CETR_{it} + \beta_3 TS_{it} + \beta_4 ROA_{it} + \beta_5 LEV_{it} + \beta_6 BS_{it} + \varepsilon_{it} \ldots$$

Where:

$\beta_0 - \beta_{5it}$ = Regression coefficient of Independent Variables

CHAPTER FOUR

RESULTS AND DISCUSSION

4.1 Introduction

This chapter presents, analyses, interprets and discusses the result obtained from the data generated for the study. The data relating to each of the statistical hypotheses of the study were presented and analyzed using descriptive statistics, correlation matrix and multivariate regression analysis. The chapter is categorized in to three sub-sections. Thus, the first section starts with the robustness test of the independents and the dependent variables. While the second section presents descriptive statistics, correlation and regression result of the dependent variable and explanatory variables, whereas, the third section discusses the implication of the study findings.

4.2 Robustness Test of Independent and Dependent Variables

This test is conducted to ensure the validity of all statistical inferences and fitness of the model, so that the impact of the distribution problem is mitigated. To achieve these the following test are conducted.

4.2.1 Multicollinearity Test

Multicollinearity implies that one independent variable is a linear function of another independent variable. It is an assumption for the multiple regression models that the independent variables are not perfectly correlated. Multicollinearity exists, when there is a perfect correlation between two or more independent variables and where there is a perfect correlation among the dependents variables errors may be inflated and the estimates for a regression model cannot be uniquely computed. Thus, this study employs Variance Inflation Factor (VIF) to check whether there is evidence of Multicollinearity in this study. The VIF measures the variance of an estimator compared to what the variance would have been if the independent variable was not

collinear with any of the other explanatory variables (Aczel 1993 as cited in Garko, 2016). However, VIF in excess of 10 denote presence of Multicollinearity. Thus, multicollinearity test was conducted to check whether there is a correlation between independent variables which will mislead the result of the study. The result shows that the VIF is less than 5 which signifies absence of multicollinearity (See Appendix A).

4.2.2 Hausman Specification Test

In view of the fact that there is a trade-off between the efficiency of the random effect (RE) approach and the reliability of the fixed effect (FE) approach, afterward the Hausman specification test was carried-out to choose between fixed or random effect models. It basically tests whether the unique errors (term error) are correlated with the regressor (Samaila, 2014). The fixed effects regression represents an impartial way of controlling omitted variables in a panel set of data. However, it is based on the assumption that those time-invariant characteristics are unique to the individual firms and should not be correlated with other firm's characteristics (Abubakar 2013 as cited in Samaila, 2014). It therefore, eliminates the effect of those time-invariant characteristics from the independent variables in order to assess the independents' net effect in the model.

Contrary to the fixed effects, the random effects presume that the disparity across entities is random and uncorrelated with the independent variables included in the model. Thus, an essential assumption for selecting the random effect estimation is that the unobserved heterogeneity should not be correlated with the independent variables (Garko, 2016). Thus, Hausman specification test was carried to check for exogeneity, and the prob>chi2 is the criteria used in choosing between the efficiency of fixed and random effect regression results. Sequel to this, where the prob>chi2 is less than 0.1, fixed effect result will be selected, and where the

prob>chi2 is greater than or equal to 0.1, then random effect result will be selected. As such, the result of the test reveals that the fixed and random effect are correlated with prob>chi2 of 0.000 (See appendix A). Hence, the result of the test suggests that, fixed effects model is more efficient than random effect results.However, the study could not use the fixed because the data is supered from heteroskedasticity, autocorrelation and cross-sectional dependency. Thus, this employed the used of panel Corrected Standard Error (PCSE) as suggested by Moundigbaye et al.,2018)

4.3 Descriptive Statistics

This sub section presents the descriptive statistics of the data extracted on the study and the explanatory variables of the study. It presents the data in a summarized form which includes mean value, maximum value, minimum value and standard deviation of both dependent variable (Tobin's Q) and the explanatory variables (ETR, CETR, TS, ROA, LEV and bank size). This provides a basic insight in to the nature of the data upon which analysis is done.

Table 4.1: Descriptive Statistics

Variable	Obs	Mean	Std. Dev.	Min.	Max	Skewness	Kurtosis
Tobin's Q	195	0.404	0.382	0.055	1.605	1.849	5.973
ETR	195	0.120	0.118	-0.005	0.404	0.777	2.756
CETR	195	0.009	0.053	-0.103	0.142	0.467	4.352
TS	195	0.129	0.169	-0.680	0.887	-0.955	8.274
ROA	195	0.020	0.024	-0.038	0.074	0.096	3.735
Lev	195	0.147	0.172	0.000	0.561	1.277	3.333
Bsize	195	11.845	0.460	10.860	12.915	-1.155	2.371

Source: Stata Output

Table 4.1 shows the mean score of 0.404 for Tobin's Q and a minimum value of 0.055 with a maximum value of 5.973. The standard deviation of 0.382 signifies insignificant variation among the sample deposit money banks in Nigeria in terms of firm value. The average score for effective tax rate from Table 4.1 is 0.120 and maximum value of 0.404, this implies that on average, the effective tax rate of deposit money banks in Nigeria is 12% and the maximum tax burden measures by ETR is 40% with minimum rate of -0.51%. The standard deviation of 0.118 indicates small variation among the sampled banks in terms of ETR. The cash effective tax rate which is measures as tax paid divided by net operating cash flow has a mean score of 0.009 and maximum value of 0.142 with minimum value of -0.10. This indicates that, the average CETR is 0.9% and the maximum burden is 14%. The standard deviation of 0.053 suggests insignificant variation among the sample banks in terms of CETR. Similarly, tax saving which is another proxy for tax planning has a mean score of 0.129 and a minimum value of -0.680 with maximum value of 0.887. This suggests that on average, the tax saving from tax planning activities is 12.9% and maximum saving of 89%. The standard deviation of 0.169 implied significant

variation among selected banks in terms of tax savings. Profitability proxied by return on assets (ROA) has an average of 0.020 and maximum of 0.074, this indicates that on average, the deposits money banks in Nigeria earned a profit of 2% and a maximum of 7.4% on assets employed within the period of the study and has a minimum loss of -3.4%. The standard deviation of 0.024 suggests small variation among sampled banks in terms of ROA. Leverage measured as the proportion of interest-bearing debt to total assets shows a mean score of 0.147 and maximum value of 0.561 with minimum value of 0.00. This indicates that average debts in financing the bank's assets are 14.7% and maximum of 56%. The minimum value 0.000 indicates that some banks did not incurred debt within the period of the study. The bank size has a mean score of 11.848 and minimum value of 10.860 with maximum value of 12.915. The standard deviation of 0.460 indicates insignificant variation among the sample banks in terms of bank size.

4.4Correlation Results

Table 4.2 presents the correlation matrix of the variables. Correlation matrix shows what type of relationship exists between two variables. It explains change in one variable because of the change in another variable. The correlation matrix is use to describe the strength of relationship between two variables in this study. In order to examine the strength and relationships among the regressions, a correlation matrix of the variables for the sample deposits money banks is discussed in Table 4.2 below.

Table 4.2: Correlation Matrix

Variables	Tobin's Q	ETR	CETR	TS	ROA	Lev	Bsize	Vif
Tobin's Q	1.000							
ETR	-0.204	1.000					1.78	
CETR	0.116	0.058	1.000					1.02
TS	0.207	-0.634	-0.101	1.000			1.69	
ROA	0.331	0.072	0.083	-0.001	1.0000			1.03
Lev	0.419	-0.104	-0.023	0.767	-0.120	1.000		1.03
Bsize	-0.397	0.3000.065		-0.217	0.025	0.051	1.000	1.11

Source: Stata Output Version 15

Table 4.2 shows the correlation coefficients on the relationship between the dependent variable (Tobin's Q) and the explanatory variable (ETR, CETR, TS, ROA, LEV and Bank size). The values of the correlation coefficient range from -1 to 1. The sign of the correlation coefficient indicates the direction of the relationship (positive or negative) while the density of the value of the correlation coefficient indicates the extent of the relationships. The correlation coefficient on the main diagonal is 1.0, because each variable has a perfect positive linear relationship with itself. The correlation results presented in Table 4.2 indicates a negative relationship between effective tax rate (ETR) and bank size and firm value represented by Tobin's Q of listed deposit money banks with coefficient values of -0.204 and -0.397 respectively. On the other hand, positive associations exist between cash effective tax rate (CETR), tax saving (TS), ROA and Leverage of listed d commercial banks in Nigeria with coefficient values of 0.116, 0.207, 0.331 and 0.419 respectively.

4.5 Regression results

This section presents the regression results of panels corrected standard errors (PCSEs).The summary of the regression results is obtained based on the model of the study.

Table 4.3: Panels corrected standard errors (PCSEs) Regression Results

Variables	Coefficient	z-value	p-value
Constants	4.0081	7.02	0.000***
ETR	-0.0470	-0.21	0.836
Cetr	0.8086	2.07	0.038**
TS	0.1966	1.27	0.204
ROA	5.8703	5.70	0.000***
Lev	1.0423	9.77	0.000***
Bsize	-0.3292	7.02	0.000***
R-square 0.5084			
P-value 0.000			
Wald chi^2 252.07			
Hausman 27.59***			
Hettest 552.62***			
Autocorrelation 16.615**			
Cross sectional 6.516***			

Source: Stata output

Table 4.3 presents panels corrected standard errors (PCSEs) regression resultsof the dependent variable (Tobin's Q) and the explanatory variable of the study. R-square shows the explanatory power of the model while F- value is for the overall significance of the model. Theresults reveal the cumulative R^2 (0.508) which is the multiple coefficients of determination that gives the percentage of the total variation in the dependent variable explained by the explanatory variable. This suggest that 50.8% of the total variation in firm value of commercial banks in Nigeria is influenced by the explanatory variable selected in this study while the remaining(49.2%) are accounted by the variable not selected by this study. The F-ratio is significant at 1% level (p,0.001), indicating that the model is fit in establishing the statistical inference.

The regression results shown in table 4.3 reveal that effective tax rate (ETR) and tax saving (TS)have insignificant influence on firm value of listed commercial banks in Nigeria (β-0.047, z-0.21 p,0.836) and (β0.197, z,1.27 p,0.204). This suggests that the value of listed commercial banks in Nigeria is not affected by the level tax planning activities in industry. The findings support the position of agency theory, however contradicts prior expectation on the tax planning activities.

This is consistent to the work of Oyeyemi and Babatunde (2016), Ogundajo and Onakoya (2016) Salawu et al (2017) and Christina (2019). But contradicts the position reached in Razali et al. (2018), Yee et al (2018) Fagbemi et al (2019) and Thanjunpong and Awirothananon (2019).Further, the results show that cash effective tax rate proxies as tax paid scaled by net operating cash flow has positive and significant impact on the value of listed commercial banks in Nigeria (β0.809, z,2.07 p,0.038). This implies that as the cash Effective rate increase, all things being equal the value of listed commercial bank in nigeria increase. This is line with position established in Assidi et al (2016) Appolos et al (2017) and Salawu and Adedeji (2017), but contrary to the work of Olajide (2017) and Christina (2019). Finally, with regards to the control variables return on assets (ROA) and leverage are found to have positive and significant influence on the value of listed commercial banks in Nigeria. while bank size is not contributing towards improving bank value.

4.6 Test of Hypotheses

In chapter one of this study, three research hypotheses are postulated to empirically test the impact of tax planning on value of listed commercial money banks in Nigeria. The decision was based on the significance of correlation coefficient and p-values. In testing the hypotheses, the researcher adopts 1%, 5% and 10% level of significance as used in social sciences research. To determine if the hypotheses can be accepted or rejected, the p>/t/ value was compared with 0.1 in

the regression, the null hypotheses was accepted if the P>/t/ value is less than or equal to 0.1, and rejected if otherwise.

Hypotheses I:

H_{O1}Effective tax rate has no significant impact on value of listed deposits money banks in Nigeria

Table 4.3 shows the coefficient of β-0.047 and thep-value of 0.836,this signifies that effective tax rate does not significantly influence the value of commercial banks in Nigeria. Therefore, the study provides evidence for not rejecting hypothesis one. Thus, H_{01} is supported.

Hypotheses II:

H_{O2}. Cash effective tax rate has no significant impact on value of listed deposits banks in Nigeria.

Table 4.3shows the coefficient ofβ0.809 and the p-value of 0.038 signifying that cash effective tax rates measures as cash tax paid scaled by net cash flows has positive and significant impact on value of listed deposit money banks in Nigeria at 5% level of significance. Consequently, the study failed to reject the null hypothesis. This suggest that tax planning play no role in influencing bank value of deposit money banks in Nigeria. Thus, H_{02} is not supported.This can be attributes to managerial decision regarding to tax planning activities that favour other stakeholder than the shareholders. The finding is consistent with agency theory assertion that not all management decisions help to achieved wealth maximization.

Hypotheses III:

H_{O3} Tax Savings has no significant impact on value of listed deposits money banks in Nigeria.

Table 4.3 shows the coefficient of β0.197 and the p-value of 0.204. This implies that tax saving as a proxy of tax planning has no significance impact on the value of listed commercial bank in Nigeria. Accordingly, the results form a basis for not rejecting hypothesis three. Hence, H_{03} is supported.

4.7 Policy Implication of the Findings

The study like previous studies has several practical, regulatory and theoretical implications. These implications represent the contributions of the study which are expected to benefit the professional accountants in practice, regulatory bodies and future researchers.

The finding has an important policy implication as the management of the listed commercial bank in Nigeria should not rely much on tax planning activities in improving bank value. Also, the tax consultants and other professional in practice should look for a new strategy of tax planning so as minimize tax cost and improve it is after earnings.

Theoretically, the study supported the position of managerial opportunism theory which is an extension of agency theory that management might engage in opportunist behavior to satisfied their own interest at the expense of the overall interest in the name of tax planning. This is because corporate tax decision is purely managerial affairs.

CHAPTER FIVE

SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

5.1 Summary

Chapter one deals with the general introduction of the study which comprises of background to the study, statement of the problem, objective of the study, statement of research hypotheses, significance of the study and scope and limitations of the study. In chapter two, the researcher reviewed relevant and related literature which includes the concept of corporate tax planning and firm value, empirical studies on tax planning and firm value, as well as, theoretical framework which comprises of the Hoffman's Tax planning theory, Political cost theory, the Managerial Opportunism theory (an extension of the agency theory) and Stakeholders theory which serve as the bedrock for this study. Chapter three is all about the research design, population of the study, working population of the study, sources and method of data collection, technique of data analysis (descriptive statistics, correlation and Random-effect GLS regression analysis) and variables of the study and their measurement (dependent, independent and control variables). Chapter four comprises of the robustness test of independent and the dependent variables, results and discussion and testing of the hypotheses of the study. While chapter five deals with summary of the study, conclusions, recommendations, as well as, the limitations of the study.

Based on the results of the regression analysis conducted, the following are the summary of the major findings:

i. Effective tax rate has no significant impact on value of listed commercial money banks in Nigeria. The non-impact goes contrary to the prediction of Hoffman's tax planning theory.
ii. Cash effective tax rate as measure of tax planning activities has positive and significant influence on value of commercialbanks in Nigeria.

iii. Tax savings from tax planning activities has insignificant impact on value of listed money deposit banks in Nigeria.

5.2 Conclusions

In line with the analyses, results and discussions in the preceding chapter, the following conclusions are drawn:

i. Effective tax rate measures as cash tax paid in year t scaled by profit before tax in year t-1 has no measure role to play in improving banks value through tax planning. This implies that the tax burden of deposit money banks has no impact on their value.

ii. Cash effective tax rate proxied by cash tax paid scaled by net cash from operating activities has positive influence in enhancing the value of listed commercial banks in Nigeria.

iii. Tax planning activities can't be considered as major strategy in obtaining tax savings benefit.

5.3 Recommendations

Based on the findings and conclusions reached in this research work, the following recommendations are proffered.

i. Management of commercial banks should consider other factors that could improve banks value instead of engaging more in tax planning activities.

ii. Banks' should use tax expert and consultants for effective tax planning that will meet corporate tax needs and should not hinge their firm value maximization mechanism on tax planning alone since this has been found in this study to explain variations in firm value indicator from a weak position.

5.4 Limitations and Areas for Future Research

Though this research has provided some useful insights into the firm value of Nigerian listed commercial money banks, however, there are a number of limitations inherent in the study which the reader needs to put into consideration when evaluating the evidence.

i. The study was restricted to listed commercial money banks on the Nigerian Stock Exchange (NSE), although the Nigeria banking industry comprises of many banks that were unquoted and operate as money deposit banks. Thus, the use of listed deposits money banks limits the generalizability of the results. Even though data availability from the listed banks nullifies this limitation, the investing public is more interested in financial performance of listed deposit money banks than unlisted ones.

ii. Since the research was conducted in the listed commercial money banks, it is questionable whether its findings can be generalized to other industries in the Nigerian economy due to differences among industries that formed the Nigerian economy. However, due to the nature and contributions of the Nigerian financial sector (Nigerian banking industry) to the Nigeria's economy; this study is called-for.

iii. The regression model of the research used dependent and explanatory variables which can be measured in many ways. For instance, the market value of equity can be proxied as lagged share price or annual closing price of market price of equity, and Tobin's q by return on assets. Leverage can be proxied as debt to equity. Likewise, size can be proxied as total turnover, age as year of incorporation.

iv. The study period 2006 to 2018 is relatively small when compared with studies in developed world. A study for a relatively longer period may be able to accommodate

inter commercial money banks comparison rather than the use of dummy variable. If used, the approach may likely produce different result.

v. Also, an attempt can be made to examine the impact of tax planning and corporate governance on firm value using two different models as performance measures such as return on assets and return on equity.

Despite these limitations, this research work is a comprehensive study on tax planning and firm value of listed commercial banks in Nigeria using the annual reports and accounts published by the NSE. The findings in some instances validate what was known in existing literatures. On the contrary, it invalidates what was known in prior studies. In addition, it represents an extension to prior studies in Nigeria.

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Appendix A

```
  ___  ____  ____  ____  ____ (R)
 /__    /   ____/   /   ____/
___/   /   /___/   /   /___/   14.0   Copyright 1985-2015 StataCorp LP
  Statistics/Data Analysis            StataCorp
                                      4905 Lakeway Drive
     Special Edition                  College Station, Texas 77845 USA
                                      800-STATA-PC        http://www.stata.com
                                      979-696-4600        stata@stata.com
                                      979-696-4601 (fax)

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Notes:
      1.  Unicode is supported; see help unicode_advice.
      2.  Maximum number of variables is set to 5000; see help set_maxvar.

. *(10 variables, 180 observations pasted into data editor)

. summarize tobinsq etr cetr ts roa lev bsize

    Variable |        Obs        Mean    Std. Dev.       Min        Max
-------------+---------------------------------------------------------
     tobinsq |        180    .4697794    .7631572      .0287     6.9058
         etr |        180      .13226    .1669922     -.5871      .9804
        cetr |        180   -.0062978    .1007534     -.8081      .2742
          ts |        180    .1194067    .1651111     -.6804      .8871
         roa |        180    .0177194    .0566707     -.5313      .2829
-------------+---------------------------------------------------------
         lev |        180      .13844    .1643359          0      .7097
       bsize |        180    11.83225    .4481705    10.8604    12.8366

. sktest tobinsq etr cetr ts roa lev bsize

                    Skewness/Kurtosis tests for Normality
                                                      ------ joint ------
    Variable |        Obs  Pr(Skewness)  Pr(Kurtosis) adj chi2(2)   Prob>chi2
-------------+-------------------------------------------------------------
     tobinsq |        180     0.0000        0.0000           .         0.0000
         etr |        180     0.0000        0.0000       55.74         0.0000
        cetr |        180     0.0000        0.0000           .         0.0000
          ts |        180     0.0000        0.0000       38.00         0.0000
         roa |        180     0.0000        0.0000           .         0.0000
         lev |        180     0.0000        0.0160       34.65         0.0000
       bsize |        180     0.2925        0.0180        6.40         0.0407

. spearman tobinsq etr cetr ts roa lev bsize
(obs=180)

             |  tobinsq      etr     cetr       ts      roa      lev    bsize
-------------+---------------------------------------------------------------
     tobinsq |   1.0000
         etr |  -0.0900   1.0000
        cetr |   0.1140   0.0701   1.0000
          ts |   0.1398  -0.4442  -0.0260   1.0000
         roa |   0.2808   0.1279   0.1015  -0.0782   1.0000
         lev |   0.2829  -0.0426  -0.0261   0.2092  -0.2798   1.0000
       bsize |  -0.2151   0.2685  -0.0793  -0.0311   0.0049   0.1923   1.0000
```

```
. regress tobinsq etr cetr ts roa lev bsize

      Source |       SS           df       MS      Number of obs   =       180
-------------+----------------------------------   F(6, 173)       =      7.46
       Model |  8.84286986         6  1.47381164   Prob > F        =    0.0000
    Residual |  34.1967534       173  .197669095   R-squared       =    0.2055
-------------+----------------------------------   Adj R-squared   =    0.1779
       Total |  43.0396233       179  .240444823   Root MSE        =     .4446

------------------------------------------------------------------------------
     tobinsq |      Coef.   Std. Err.      t    P>|t|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         etr |   .2231649   .3829643     0.58   0.561    -.5327191    .9790489
        cetr |   .4768759    .333802     1.43   0.155    -.1819728    1.135725
          ts |   .7289221   .3732158     1.95   0.052    -.0077205    1.465565
         roa |   1.872719   .5903402     3.17   0.002     .7075229    3.037916
         lev |   .2589929   .0608479     4.26   0.000     .1388931    .3790928
       bsize |  -.0668253   .0345297    -1.94   0.055     -.134979    .0013284
       _cons |   .9918577   .3986631     2.49   0.014      .204988    1.778727
------------------------------------------------------------------------------

. vif

    Variable |       VIF       1/VIF
-------------+----------------------
         etr |      3.60    0.277810
          ts |      3.48    0.287456
       bsize |      1.06    0.946885
         lev |      1.02    0.976118
        cetr |      1.01    0.986874
         roa |      1.01    0.990636
-------------+----------------------
    Mean VIF |      1.86

. hettest

Breusch-Pagan / Cook-Weisberg test for heteroskedasticity
         Ho: Constant variance
         Variables: fitted values of tobinsq

         chi2(1)      =    16.53
         Prob > chi2  =   0.0000

. regress tobinsq etr cetr ts roa lev bsize, vce(robust)

Linear regression                               Number of obs     =       180
                                                F(6, 173)         =     10.48
                                                Prob > F          =    0.0000
                                                R-squared         =    0.2055
                                                Root MSE          =     .4446

------------------------------------------------------------------------------
             |               Robust
     tobinsq |      Coef.   Std. Err.      t    P>|t|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         etr |   .2231649   .3998041     0.56   0.577    -.5659569    1.012287
        cetr |   .4768759   .2059298     2.32   0.022     .0704176    .8833342
          ts |   .7289221   .4334892     1.68   0.094    -.1266863    1.584531
         roa |   1.872719   2.600511     0.72   0.472    -3.260094    7.005533
         lev |   .2589929   .0709184     3.65   0.000     .1190163    .3989696
```

```
       bsize |  -.0668253   .0722464    -0.92   0.356    -.2094232    .0757726
       _cons |   .9918577   .8668655     1.14   0.254    -.7191365    2.702852
------------------------------------------------------------------------------

. predict e
(option xb assumed; fitted values)

. sktest e

                    Skewness/Kurtosis tests for Normality
                                                      ------ joint ------
    Variable |        Obs  Pr(Skewness)  Pr(Kurtosis) adj chi2(2)   Prob>chi2
-------------+-----------------------------------------------------------------
           e |        180     0.0000        0.0000           .         0.0000

. rreg tobinsq etr cetr ts roa lev bsize

   Huber iteration 1:  maximum difference in weights = .78231962
   Huber iteration 2:  maximum difference in weights = .28297933
   Huber iteration 3:  maximum difference in weights = .25265894
   Huber iteration 4:  maximum difference in weights = .13751864
   Huber iteration 5:  maximum difference in weights = .0758189
   Huber iteration 6:  maximum difference in weights = .03957397
Biweight iteration 7:  maximum difference in weights = .27947565
Biweight iteration 8:  maximum difference in weights = .32499848
Biweight iteration 9:  maximum difference in weights = .14937358
Biweight iteration 10:  maximum difference in weights = .25315395
Biweight iteration 11:  maximum difference in weights = .41602602
Biweight iteration 12:  maximum difference in weights = .37205746
Biweight iteration 13:  maximum difference in weights = .15679785
Biweight iteration 14:  maximum difference in weights = .04981738
Biweight iteration 15:  maximum difference in weights = .02627622
Biweight iteration 16:  maximum difference in weights = .00720572

Robust regression                               Number of obs     =        178
                                                F(  6,       171) =     530.24
                                                Prob > F          =     0.0000

------------------------------------------------------------------------------
     tobinsq |      Coef.   Std. Err.      t    P>|t|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         etr |   .3135599   .1229414     2.55   0.012     .0708816    .5562381
        cetr |   .0919136   .1071903     0.86   0.392    -.1196729    .3035002
          ts |   .3313038   .1204235     2.75   0.007     .0935958    .5690119
         roa |   1.991738   .2834982     7.03   0.000     1.432131    2.551345
         lev |     1.0514   .0199085    52.81   0.000     1.012102    1.090698
       bsize |  -.0883152   .0247625    -3.57   0.000    -.1371947   -.0394358
       _cons |   1.081315   .2944238     3.67   0.000     .5001417    1.662488
------------------------------------------------------------------------------

. xtset company year, yearly
       panel variable:  company (strongly balanced)
      time variable:  year, 2006 to 2017
                delta:  1 year

. xtreg tobinsq etr cetr ts roa lev bsize, re

Random-effects GLS regression                   Number of obs     =        180
Group variable: company                         Number of groups  =         15

R-sq:                                           Obs per group:
     within  = 0.1528                                         min =         12
     between = 0.4105                                         avg =       12.0
```

```
     overall = 0.1992                                        max =         12

                                             Wald chi2(6)      =      34.56
corr(u_i, X)   = 0 (assumed)                 Prob > chi2       =     0.0000

------------------------------------------------------------------------------
     tobinsq |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         etr |   .3234514   .3625676     0.89   0.372     -.387168    1.034071
        cetr |   .5073117    .301107     1.68   0.092    -.0828472    1.097471
          ts |   .7935107   .3575331     2.22   0.026     .0927588    1.494263
         roa |   1.123649   .5685712     1.98   0.048     .0092695    2.238028
         lev |   .2275959   .0599773     3.79   0.000     .1100426    .3451492
       bsize |  -.0540436   .0323116    -1.67   0.094    -.1173732     .009286
       _cons |   .8395217   .3828617     2.19   0.028     .0891264    1.589917
-------------+----------------------------------------------------------------
     sigma_u |  .19189316
     sigma_e |  .39013629
         rho |  .19480039   (fraction of variance due to u_i)
------------------------------------------------------------------------------

. estimates store re

. xtreg tobinsq etr cetr ts roa lev bsize, fe

Fixed-effects (within) regression               Number of obs     =       180
Group variable: company                         Number of groups  =        15

R-sq:                                           Obs per group:
     within  = 0.1542                                         min =        12
     between = 0.3452                                         avg =      12.0
     overall = 0.1903                                         max =        12

                                                F(6,159)          =      4.83
corr(u_i, Xb)  = 0.1601                         Prob > F          =    0.0001

------------------------------------------------------------------------------
     tobinsq |      Coef.   Std. Err.      t    P>|t|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         etr |   .3755405   .3681542     1.02   0.309    -.3515626    1.102644
        cetr |    .522692   .2998077     1.74   0.083    -.0694272    1.114811
          ts |   .8377552   .3646661     2.30   0.023     .1175411    1.557969
         roa |   .8074067   .5813402     1.39   0.167    -.3407379    1.955551
         lev |   .2139216    .061955     3.45   0.001     .0915607    .3362826
       bsize |  -.0494213   .0326599    -1.51   0.132    -.1139245    .0150819
       _cons |   .7807955   .3864707     2.02   0.045     .0175174    1.544074
-------------+----------------------------------------------------------------
     sigma_u |  .25504377
     sigma_e |  .39013629
         rho |  .29940728   (fraction of variance due to u_i)
------------------------------------------------------------------------------
F test that all u_i=0: F(14, 159) = 4.69                     Prob > F = 0.0000

. estimates store fe

. hausman fe re

                ---- Coefficients ----
             |      (b)          (B)            (b-B)     sqrt(diag(V_b-V_B))
             |       fe           re         Difference          S.E.
-------------+----------------------------------------------------------------
         etr |    .3755405     .3234514        .0520891        .0638924
        cetr |     .522692     .5073117        .0153803               .
```

```
          ts |    .8377552     .7935107        .0442445        .0717738
         roa |    .8074067     1.123649       -.3162419        .1211741
         lev |    .2139216     .2275959       -.0136743        .0155291
       bsize |   -.0494213    -.0540436        .0046224         .004757
------------------------------------------------------------------------------
                           b = consistent under Ho and Ha; obtained from xtreg
            B = inconsistent under Ha, efficient under Ho; obtained from xtreg

    Test:  Ho:  difference in coefficients not systematic

                  chi2(6) = (b-B)'[(V_b-V_B)^(-1)](b-B)
                          =       43.71
                Prob>chi2 =      0.0000
                (V_b-V_B is not positive definite)
```

Appendix B

company	year	tobinsq	etr	cetr	ts	roa	lev	bsize
1	2006	1.3422	0	0.0063	0.3	0.0064	0.1429	11.2419
1	2007	0.252	0.4036	0.0058	-0.3015	0.0245	0.252	11.5167
1	2008	0.2573	0.2456	0.0056	0.0544	0.0185	0.0142	12.0136
1	2009	0.1991	0.1046	-0.005	0.1954	0.0416	0.0201	11.8292
1	2010	0.25	0.2427	0.1416	0.0573	0.0243	0.0594	11.8615
1	2011	0.1699	0.1689	0.0264	0.1311	0.017	0.0308	11.9777
1	2012	0.1695	0.2999	-0.0116	0.0001	0.0239	0.0631	12.1806
1	2013	0.1976	0.2465	-0.1033	0.0535	0.0184	0.0706	12.2316
1	2014	0.1671	0.1617	-0.0174	0.1383	0.0233	0.0738	12.2971
1	2015	0.1851	0.0894	-0.0228	0.2106	0.027	0.1256	12.3824
1	2016	0.17	0.0801	-0.0421	0.2199	0.026	0.1203	12.4907
1	2017	0.1499	0.0976	0.0753	0.2024	0.0192	0.0807	12.544
1	2018	1.6051	0.022	0.0897	0.2103	0.0737	0.5608	11.6794
2	2006	0.2994	0.013	0.021	0.287	0.0237	0.04	11.3484
2	2007	0.7148	0.2398	0.0244	0.0602	0.0282	0.3059	11.4945
2	2008	0.4578	0.177	0.0294	0.123	0.025	0.1583	11.7806
2	2009	0.6547	0.1384	0.0401	0.1616	0.015	0.4811	11.7813
2	2010	0.6979	0.3012	-0.0757	-0.0012	0.0173	0.5039	11.7391
2	2011	0.4685	0.1169	0.0143	0.1831	0.0378	0.3864	11.8591
2	2012	0.5147	0.0238	0.0183	0.2762	0.0268	0.4672	12.025
2	2013	0.5082	0.0435	0.0058	0.2565	0.0245	0.44	12.1319
2	2014	0.1274	0.0251	0.0181	0.2749	0.0139	0.0409	12.2431
2	2015	0.4281	0.079	-0.0142	0.221	0.0033	0.3691	12.1918
2	2016	0.3622	0.2555	-0.0107	0.0445	0.002	0.3401	12.2208
2	2017	0.1579	0.4036	0.0145	-0.1036	0.0013	0.1417	12.2293
2	2018	0.0547	0.0099	0.0042	-0.2901	0.0044	0.1352	12.1381
3	2006	1.1306	0.2484	0.0197	0.0516	0.0379	0.1257	11.1209
3	2007	0.4499	0.2882	0.0024	0.0118	0.0324	0	11.4933
3	2008	0.2998	0.1134	0.0036	0.1866	-0.0021	0	11.636
3	2009	0.7532	-0.0051	-0.0053	0.8871	-0.0167	0	11.551
3	2010	0.2176	0	0	0.3	0.0047	0.0083	11.6573
3	2011	0.1302	0.3028	0.0034	-0.0028	-0.0039	0.0583	12.0422
3	2012	0.0545	0	0	0.3	0.0039	0.0444	12.1223
3	2013	0.0545	0.0392	-0.0019	0.2608	0.0072	0.0398	12.1646
3	2014	0.0827	0	0	0	0.0162	0.0827	12.2487
3	2015	0.0755	0	0	0	0.0087	0.0755	12.6729
3	2016	0.0784	0.4036	0.1416	-0.4613	0.0064	0.0784	12.7876
3	2017	0.0771	0.4036	0.0517	-0.3053	0.0129	0.0771	12.8366
3	2018	0.0643	0.248	0.1416	0.052	0.0165	0.0912	12.9151

4	2006	0.3806	0.003	0.0061	0.297	0.0299	0.0844	11.0791
4	2007	0.5307	0.1973	0.0118	0.1027	0.0203	0	11.3367
4	2008	0.4487	0.1248	0.0096	0.1752	0.0296	0	11.7268
4	2009	0.2039	0.1357	-0.1033	0.1643	0.0091	0	11.7026
4	2010	0.1581	0.1933	0.0355	0.1067	0.0174	0	11.6794
4	2011	0.0838	0.2022	0.0092	0.0978	0.0111	0	11.8689
4	2012	0.0589	0.2949	0.0561	0.0051	0.0233	0	11.9611
4	2013	0.1325	0.1066	0.1416	0.1934	0.0083	0.065	12.0339
4	2014	0.1517	0.2051	0.0346	0.0949	0.0131	0.099	12.0745
4	2015	0.1515	0.0591	0.0086	0.2409	0.0114	0.1153	12.0905
4	2016	0.1486	0.1663	-0.0186	0.1337	0.0085	0.1225	12.1133
4	2017	0.1897	0.09	-0.0262	0.21	0.0147	0.1546	12.1396
4	2018	0.1802	0.0862	0.042	0.258	0.0737	0.0146	12.2355
5	2006	0.6353	0.1472	0.0296	0.1528	0.0367	0	11.7325
5	2007	0.8142	0.114	0.015	0.186	0.029	0.2855	11.8825
5	2008	1.0693	0.1695	-0.0358	0.1305	0.0326	0.5026	12.0665
5	2009	0.6	0.0748	0.0122	0.2252	0.026	0.3131	12.2486
5	2010	0.7435	0.2627	0.1416	0.0373	0.0171	0.5129	12.2928
5	2011	0.6379	0.0751	0.0061	0.2249	0.0161	0.5608	12.3916
5	2012	1.1606	0	0	0	0.003	0.5608	11.4329
5	2013	1.6051	0	0	0	0.0737	0.5608	11.4939
5	2014	0.7016	0	0	0	0.0233	0.5608	12.5429
5	2015	0.551	0	0	0	0.0008	0.4786	12.5228
5	2016	0.5552	0	0	0	0.0151	0.5134	12.5512
5	2017	0.8201	0	0	0	0.0348	0	11.4308
5	2018	1.6051	0.0104	0.0067	0.286	0.0349	0	11.4319
6	2006	0.4082	0.022	0.0059	0.278	0.0341	0	11.0278
6	2007	0.4666	0.2155	0.0122	0.0845	0.0281	0.05	11.4196
6	2008	0.3132	0.1565	-0.0699	0.1435	0.0396	0.0527	11.6676
6	2009	0.2693	0.1658	-0.0784	0.1342	0.0077	0.0587	11.7113
6	2010	0.2702	0.3403	-0.0974	-0.0403	0.0143	0.0474	11.7243
6	2011	0.1966	0.123	0.0141	0.177	-0.0235	0.0323	11.7733
6	2012	0.1143	0	0	0.3	0.0139	0.0303	11.9495
6	2013	0.5874	0	0	0.3	0.0463	0	11.1189
6	2014	0.4771	0	0	0.3	0.0414	0	11.1192
6	2015	0.3199	0.021	0.0215	0.279	0.0195	0	11.1119
6	2016	0.205	0	0	0	0.0285	0	11.1185
6	2017	0.185	0	0	0	0.0116	0	11.1194
6	2018	0.3668	0.0044	0.0013	0.2956	0.0277	0.5608	11.1232
7	2006	0.3328	0.4036	0.0361	-0.6804	0.0329	0.0303	11.4844
7	2007	0.6908	0.1246	0.0322	0.1754	0.0321	0.2439	11.6798

7	2008	0.88	0.1692	0.009	0.1308	0.0379	0.4145	11.8561
7	2009	0.8215	0.3666	-0.1033	-0.0666	0.0255	0.5608	12.0086
7	2010	0.934	0.1348	0.0645	0.1652	0.0446	0.5608	12.0281
7	2011	0.7758	0.2342	0.0896	0.0658	0.0407	0.462	12.1833
7	2012	0.3371	0.2217	-0.1033	0.0783	0.0618	0	12.2096
7	2013	0.3989	0.1532	0.05	0.1468	0.0528	0	12.2798
7	2014	0.3663	0.1257	-0.1033	0.1743	0.0519	0	12.3277
7	2015	0.2804	0	0	0	0.0496	0	12.3575
7	2016	0.2336	0.191	0.0752	0.109	0.0589	0	12.4172
7	2017	0.4142	0.1344	0.0586	0.1656	0.0659	0.0746	12.451
7	2018	0.7851	0.1224	0.1399	0.1776	0.0701	0.0654	12.4334
8	2006	0.1555	0	0	0	0.012	0	11.2398
8	2007	0.2402	0.101	0.0017	0.199	0.0169	0.0609	11.6494
8	2008	0.2428	0.2061	0.012	0.0939	0.026	0.0526	11.8948
8	2009	0.1306	0.1769	-0.0337	0.1231	0.0035	0.0483	11.7939
8	2010	0.1665	0.182	-0.0175	0.118	0.017	0.0446	11.8287
8	2011	0.1904	0.2613	-0.1033	0.0387	0.009	0.0948	11.9508
8	2012	0.1572	0.1811	0.0427	0.1189	0.0147	0.1066	12.0299
8	2013	0.1495	0	0	0	0.0153	0.1224	12.0479
8	2014	0.1425	0	0	0	0.0077	0.1033	12.0827
8	2015	0.2062	0	0	0	-0.0337	0.1832	12.0724
8	2016	0.1944	0	0	0	-0.0337	0.1832	12.0724
8	2017	0.1944	0	0	0	-0.0337	0	12.0724
8	2018	0.1944	0	0	0	-0.0337	0	12.0724
9	2006	0.0545	0	0.1416	0	0.0489	0.0301	11.0445
9	2007	0.0545	0	0	0	0.0359	0.0358	11.1952
9	2008	0.0545	0.2171	0.0341	0.0829	0.0255	0.0353	11.5381
9	2009	0.0545	0.209	-0.0675	0.091	0.0216	0.0382	11.5198
9	2010	0.0545	0.4036	-0.1033	-0.1813	0.0273	0.049	11.5713
9	2011	0.0878	0.1806	0.0499	0.1194	0.0111	0.0878	11.7342
9	2012	1.3116	0	0	0.3	0.0145	0	10.8604
9	2013	1.6051	0	0	0.3	0.0737	0	10.8774
9	2014	1.6051	0	0	0.3	0.0737	0	10.8789
9	2015	1.6051	0.0131	0.0163	0.2869	0.0737	0	10.8803
9	2016	1.6051	0.0323	0.1416	0.2677	0.0162	0.1767	10.9678
9	2017	1.6051	0	0.0862	0	0.0737	0	10.9884
9	2018	1.6051	0.0313	0.0122	0.2687	0.0737	0	11.0332
10	2006	0.3968	0.0014	0.0127	0.2986	0.0039	0.0696	11.0401
10	2007	0.2039	0.4036	0.0104	-0.5044	0.0041	0	11.1643
10	2008	0.1756	0.26	0.0022	0.04	0.0329	0.0468	11.3738
10	2009	0.1247	0.155	-0.0271	0.145	0.0441	0.0691	11.3131

10	2010	0.1409	0.0113	0.0051	0.2887	0.0143	0.0973	11.4109
10	2011	0.0807	0.0499	0.0162	0.2501	0.0069	0.0539	11.7028
10	2012	0.0656	0.0999	-0.0232	0.2001	0.0129	0.0471	11.7636
10	2013	0.0881	0.0845	-0.0144	0.2155	0.0132	0.0548	11.8499
10	2014	0.089	0	0	0	0.013	0.055	11.9162
10	2015	0.1137	0.1522	0.0299	0.1478	0.003	0.0754	11.9028
10	2016	0.1225	0.2596	-0.0048	0.0404	0.0034	0.0992	11.9195
10	2017	0.2229	0.253	-0.0153	0.047	0.008	0.1991	12.0289
10	2018	0.7496	0.4036	0.0435	-0.1381	0.0737	0	11.9644
11	2006	0.6391	0	0	0.3	0.03	0.3673	11.6002
11	2007	0.4269	0	0	0.3	0.0726	0	11.9644
11	2008	0.3748	0.0441	0.0736	0.2559	0.0737	0	11.9644
11	2009	0.582	0.0475	-0.0256	0.2525	-0.0337	0.4437	11.9644
11	2010	0.5173	-0.0051	0.0151	0.3161	0.0561	0.4337	11.927
11	2011	0.3595	0.0476	-0.0087	0.2524	-0.0337	0.2053	11.9165
11	2012	0.3188	-0.0051	0.0123	0.3129	0.0041	0.137	11.9224
11	2013	0.391	0.0297	-0.0018	0.2703	0.0048	0.2278	11.9455
11	2014	0.3639	0.01	-0.0003	0.29	0.0022	0.1955	11.9639
11	2015	0.3078	0.3992	0.06	-0.0992	0.0182	0.1847	11.9992
11	2016	0.2899	0.0121	-0.0032	0.2879	0.0182	0.1847	11.9992
11	2017	0.2135	0.0134	0.0036	0.2866	0.0099	0.0717	12.1255
11	2018	0.3582	0.0119	0.014	0.2881	0.0141	0.0717	12.122
12	2006	0.0713	0.1768	0.0045	0.1232	0.0147	0.002	11.9301
12	2007	0.7008	0.0722	-0.0168	0.2278	0.0207	0.3042	12.0423
12	2008	0.6395	0.2549	0.0178	0.0451	0.0359	0.2863	12.1819
12	2009	0.5969	0.1086	-0.0254	0.1914	0.0114	0.4107	12.1464
12	2010	0.6965	0	0	0	0.003	0.4891	12.0951
12	2011	0.2353	0.2716	-0.0097	0.0284	-0.0225	0.1171	12.2189
12	2012	0.1203	-0.0051	0.004	0.3218	0.0239	0.0592	12.2862
12	2013	0.123	0.1207	-0.0409	0.1793	0.0234	0.022	12.3458
12	2014	0.1436	0.1013	-0.0567	0.1987	0.0181	0.0487	12.369
12	2015	0.1213	0.1019	0.0739	0.1981	0.0229	0.0586	12.3456
12	2016	0.1585	0.1589	-0.0378	0.1411	0.0227	0.1024	12.4048
12	2017	0.2571	0.1439	0.1402	0.1561	0.0184	0.1713	12.4671
12	2018	0.28	0.2584	0.1416	0.0416	0.0154	0.183	12.5553
13	2006	0.0545	0	0	0	0.0072	0.0404	11.308
13	2007	0.1072	0	0	0	0.0072	0.0404	11.308
13	2008	0.0545	0	0	0	-0.0337	0	11.5633
13	2009	0.3024	0	0	0.3	-0.0337	0.2427	11.4096
13	2010	0.3425	-0.0051	-0.1033	0.3126	0.0438	0.2858	11.4846
13	2011	0.0731	0.0766	0.0426	0.2234	0.0084	0.0305	11.5716

13	2012	0.0545	0.2042	-0.005	0.0958	0.0078	0.0287	11.5974
13	2013	0.1584	0.1303	0.1416	0.1697	-0.0337	0.1346	11.606
13	2014	0.1808	-0.0051	-0.0132	0.3127	0.0331	0.1101	11.6163
13	2015	0.2593	0.0451	-0.0168	0.2549	0.0053	0.1589	11.6457
13	2016	0.2671	0.2322	-0.0233	0.0678	0.0037	0.1663	11.6926
13	2017	0.2353	0.1599	-0.0828	0.1401	0.0056	0.1713	11.6846
13	2018	0.28	0.2584	0.1416	0.0416	0.0154	0.183	12.5553
14	2006	0.2918	0	0	0.3	-0.0337	0.0009	11.0796
14	2007	1.1111	-0.0034	-0.003	0.3034	0.0114	0.5542	11.2177
14	2008	1.6051	0.1001	0.0256	0.1999	-0.0337	0.5608	11.1103
14	2009	1.2092	-0.0051	0.0472	0.3051	-0.0232	0.5608	11.1547
14	2010	0.4187	-0.0051	0.0047	0.3406	0.0638	0.3474	11.3078
14	2011	0.3725	0.0075	0.0101	0.2925	-0.015	0.3169	11.3447
14	2012	0.3283	-0.0051	-0.0169	0.4103	-0.0201	0.3001	11.3904
14	2013	0.3995	-0.0051	0.0196	0.3555	0.0059	0.2981	11.5197
14	2014	0.5032	0.1633	-0.0079	0.1367	0.0081	0.3902	11.5827
14	2015	0.5582	0.1109	0.0234	0.1891	0.0077	0.4678	11.5985
14	2016	0.6085	0.1044	0.02	0.1956	0.0078	0.5389	11.6245
14	2017	0.1471	0.1047	-0.0129	0.1953	0.0079	0.095	11.5859
14	2018	0.1606	0.0258	0.0701	0.2742	0.0101	0.072	11.6794
15	2006	0.2251	0.4036	0.0133	-0.3082	0.0249	0.021	11.7843
15	2007	0.3952	0.2492	0.0155	0.0508	0.0263	0.0248	11.9464
15	2008	0.3599	0.1406	0.0082	0.1594	0.0291	0.0206	12.2254
15	2009	0.2989	0.2048	-0.0345	0.0952	0.0202	0.0229	12.1968
15	2010	0.2658	0.3239	0.0542	-0.0239	0.024	0.0156	12.2527
15	2011	0.2314	0.0993	-0.0649	0.2007	0.0263	0.0325	12.3363
15	2012	0.2111	0.1798	0.082	0.1202	0.0386	0.0062	12.3868
15	2013	0.2573	0.1614	0.0644	0.1386	0.0327	0.0021	12.4592
15	2014	0.2569	0.2047	-0.1033	0.0953	0.0315	0.0578	12.5345
15	2015	0.2061	0.1892	-0.0491	0.1108	0.0307	0.0714	12.5741
15	2016	0.1737	0.1489	-0.1033	0.1511	0.0327	0.0683	12.6318
15	2017	0.2174	0.146	-0.0799	0.154	0.0359	0.0867	12.6843
15	2018	0.3396	0.4036	0.1392	-0.3485	0.0388	0.0925	12.6951