

# **CHAPTER ONE**

## **INTRODUCTION**

### **1.1 Background to the Study**

Corporate governance has been an issue of global concern long before now. However, it came to limelight in the 1980s as a result of the fallout of the Cadbury report in the United Kingdom, which concentrated on the financial aspects of corporate governance. Immediately followed suits, the issue of corporate governance transmitted across all developed and developing countries (Akpan & Rima, 2012). Proper governance of companies is as crucial to the world economy as the proper governance of countries and will converge in associated issues of competitiveness, corporate citizenship, social and environmental responsibility. The governance of banks becomes even more prominent considering their role in financial intermediation in developing economies. Simpson (2009) notes that the impact of the failure of the banking system can have immense cost, as it has repeatedly been seen that bank failure cost developing countries up to 15% of their GDP and losses that outweigh aids received. The major challenge of world's economy today is not in the area of manufacturing modern equipment that will help fight government rebellions or any such crises that may occur in the economy. However, solving the problem of governance can help to totally strengthen an economy and improve the living standards of its citizenry. This is evident in the fact that many companies all over the world suffer from the impact of bad governance and which in effects results to costly impact on the performance of organizations in the economy (Bebeji, Mohammed & Tanko, 2015).

Corporate governance has become an integral part of deposit money banks financial performance and returns to the shareholders. Corporate financial misconduct of managers in the banking sector has been a major problem in sustainability and performance of banks globally, including Nigeria. Vives (2011) asserted that the financial

industry exhibits severe market failure arising from excessive risk-taking because of the agency issue. The global financial crisis of 2007-2009, which disrupted the financial sector, also affected the Nigerian banking industry (Sanusi, 2012). The Nigerian banking sector witnessed a significant collapse that affected some leading banks. The CBN classified 8 of 24 Nigerian banks as distressed because of nonperforming loans and 13.3 billion dollars in toxic assets (Cook, 2011). CBN removed the corporate financial leaders because of their poor governance and corporate financial misconduct (Adegbite & Nakajima, 2011).

Nwagbara (2012) noted poor governance and unethical leadership are at the centre of the corruption in Nigerian banking sector. Oyerinde (2014) noted that regulators failed to avert the financial crisis through required execution of regulations. The CBN needs to prompt banks to adopt good corporate governance practices through implementation of rules and regulations for improved performance and value for shareholders (Nworji, Adebayo, & David, 2011). Corporate financial executives should ensure alignment with risk management objectives and self-regulation critical to self-governance, diligence, control, and adherence to their strategies within the structure of the regulators in the country (Onuoha, Ogbuji, Ameh, & Oregwu, 2013). The importance of a vibrant, transparent and healthy banking system in the mobilization and intermediation of fund, for the growth and development of the economy need not be over- emphasized. The situation where the public losses confidence in the financial institutions, can result in panic and consequential financial and economic woes. The absence of confidence in any organization is attributable to opaque management practices with deleterious effect on its performance. Currently many country leaders all over the world has increased concern over corporate governance due to the increase of reported cases of frauds, inside trading, agency conflicts among other corporations saga (Enobakhare, 2010).

There are many ways of defining corporate governance, ranging from narrow definitions that focus on companies and their shareholders, to broader definitions that incorporate the accountability of companies to many other groups of people, or 'stakeholders'. The Cadbury Report (1992) was set up by the Committee on the Financial Aspects of Corporate Governance, known as the Cadbury Committee in May 1991 by the Financial Reporting Council, the London Stock Exchange, and the accountancy profession. The report made far reaching recommendations on corporate governance concerning the way in which companies are directed and controlled. The central components of the voluntary code of corporate practice are: that there be a clear division of responsibilities at the top, primarily that the position of Chairman of the Board be separated from that of Chief Executive, or that there be a strong independent element on the board; that the majority of the Board be comprised of outside directors; that remuneration committees for Board members be made up in the majority of non-executive directors; and that the Board should appoint an Audit Committee including at least three non-executive directors.

Corporate performance is an important concept that relates to the way and manner in which financial, material and human resources available to an organization are judiciously used to achieve the overall corporate objective of an organization. It keeps the organization in business and creates a greater prospect for future opportunities. The overall effect of good corporate governance should be the strengthening of investor's confidence in the economy of our country. Corporate governance is therefore about building credibility, ensuring transparency and accountability as well maintaining an effective channel of information disclosure that would foster good corporate performance. It is therefore crucial that banking sector observe a strong corporate governance ethos. Massive corporate collapses resulting from weak systems of corporate governance have

highlighted the need to improve and reform corporate governance at an international level. The Enron in the USA, Cadbury in Nigeria and other similar cases around the world have led to enactment of the Sarbanes–Oxley Act in July 2002 in the USA, the Higgs Report and the Smith Reports in 2003 in the UK and the standard code for corporate governance for banks in Nigeria which became operational in 2006 amongst others. Corporate governance is the system of checks and balances, both internal and external to companies, which ensures that companies discharge their accountability to all their stakeholders and act in a socially responsible way in all areas of their business activity (Solomon & Solomon, 2004).

The Nigerian banking system has undergone remarkable changes over the years in terms of the number of institution, ownership structure and the depth and breadth of the operations. These changes have been influenced largely by the opportunities presented by the deregulation of the financial sector, globalization of operations, technological advancements, impact of global economic downturn and the adoption of regulatory guidelines that conform to international standards. The developments in the Nigerian banking industry show that absence of good corporate governance was mainly responsible for the dismal performance of the industry as a catalyst for economic growth. In 1992, Bank of Credit and Commerce International (including its Nigerian affiliate) went bust and lost billions of dollars for its depositors, shareholders and employees and several others.

Given the nature of banking business and the antecedents of the operators such as unrecoverable loans, unethical malpractices, illiquidity, insider abuses, poor quality services and weak supervisory structures etc. of Nigeria banks, corporate governance is fundamental to the nation's financial stability Afrinvest, (2010). Shleifer & Vishny (1997) opined that effective corporate governance reduces control rights, shareholders

and creditors confer on managers, increasing the probability that managers invest in positive net present value projects. Thus, the relationship of the board and management, according to Al-faki (2006), should be characterized by transparency to shareholders, and fairness to other stakeholders. The issue of corporate governance is important and indispensable for the realization of the basic corporate objective of profitability and liquidity.

It is therefore necessary to point out that the concept of corporate governance of banks and very large firms have been a priority on the policy agenda in developed market economies for over two decades. Further to that, the concept is gradually taken as a priority in the African continent. Indeed, it is believed that the Asian crisis and the relative poor performance of the corporate sector in Africa have made the issue of corporate governance a catchphrase in the development debate (Berglof & Von -Thadden, 1999).

Several events are therefore responsible for the heightened interest in corporate governance especially in both developed and developing countries. The subject of corporate governance leapt to global business limelight from relative obscurity after a string of collapses of high profile companies. Enron, the Houston, Texas based energy giant and WorldCom the telecom behemoth, shocked the business world with both the scale and age of their unethical and illegal operations. These organizations seemed to indicate only the tip of a dangerous iceberg. While corporate practices in the US companies came under attack, it appeared that the problem was far more widespread. Large and trusted companies from Parmalat in Italy to the multinational newspaper group Hollinger Inc., Adephia Communications Company, Global Crossing Limited and Tyco International Limited, revealed significant and deep-rooted problems in their corporate governance. Even the prestigious New York Stock Exchange had to remove its director

(Dick Grasso) amidst public outcry over excessive compensation (La Porta, Lopez & Shleifer 1999). In developing economies, the banking sector among other sectors has also witnessed several cases of collapses, some of which include the Alpha Merchant Bank Ltd, Savannah Bank Plc, Societe Generale Bank Ltd (all in Nigeria), The Continental Bank of Kenya Ltd, Capital Finance Ltd, Consolidated Bank of Kenya Ltd and Trust Bank of Kenya among others (Akpan, 2007).

In Nigeria, the issue of corporate governance has been given the front burner status by all sectors of the economy. For instance, the Securities and Exchange Commission (SEC) set up the Peterside Committee on corporate governance in public companies. The Bankers' Committee also set up a sub-committee on corporate governance for banks and other financial institutions in Nigeria. This is in recognition of the critical role of corporate governance in the success or failure of companies (Ogbechie, 2006:6). Corporate governance therefore refers to the processes and structures by which the business and affairs of institutions are directed and managed, in order to improve long term shareholders value by enhancing corporate performance and accountability, while taking into account the interest of other stakeholders (Jenkinson & Mayer, 1992). Corporate governance is therefore, about building credibility, ensuring transparency and accountability as well as maintaining an effective channel of information disclosure that will foster good corporate performance.

Although corporate governance in developing economies has recently received a lot of attention in the literature (Lin 2000; Goswami 2001; Oman 2001; Malherbe & Segal 2001; Carter, Colin & Lorsch 2004; Staikouras, Maria-Eleni, Agoraki, Manthos & Panagiotis 2007; McConnell, Servaes & Lins 2008; Bebchuk, Cohen & Ferrell 2009), yet corporate governance of banks in developing economies as it relates to their financial performance has almost been ignored by researchers (Caprio & Levine 2002; Ntim 2009).

Even in developed economies, the corporate governance of banks and their financial performance has only been discussed recently in the literature (Macey & O'Hara, 2001). The few studies on bank corporate governance narrowly focused on a single aspect of governance, such as the role of directors or that of stock holders, while omitting other factors and interactions that may be important within the governance framework. Feasible among these few studies is the one by Adams and Mehran (2002) for a sample of US companies, where they examined the effects of board size and composition on value. Another weakness is that such research is often limited to the largest, actively traded organizations- many of which show little variation in their ownership, management and board structure and also measure performance as market value. In Nigeria, among the few empirical studies on corporate governance are the studies by Sanda , Mukailu & Garba (2005), Ogbechie (2006) and Uwuigbe (2011) that studied the corporate governance mechanisms and firm's performance.

## **1.2 Statement of the Problem**

In 2003, the Nigerian Securities and Exchange Commission (SEC) adopted a Code of Best Practices on Corporate Governance for publicly quoted companies in Nigeria. This code was reviewed in 2011 and in continuation of its efforts at building a robust banking industry, the Central Bank of Nigeria (CBN) issued an Exposure Draft Code for Banks in Nigeria (the Code) in July 2012. These Codes help to complement and enhance the effectiveness of the SEC code, which was implemented in 2006 and reviewed later. It were stated that the industry consolidation poses additional corporate governance challenges arising from integration processes, Information Technology and culture (Uwuigbe, 2011). The code further indicate that two-thirds of mergers world-wide failed due to inability to integrate personnel and systems and also as a result of the

irreconcilable differences in corporate culture and management, resulting in Board of Management squabbles.

Akpan (2007) disclosed that information from the National Deposit Insurance Commission report (2006) shows 741 cases of attempted fraud and forgery involving N5.4 billion and a total of 12,279 fraud cases were reported in 2015 which represent an increase of 15.71% over the 10,612 fraud cases reported in 2014. Soludo (2004) opined that a good corporate governance practice in the banking industry is imperative, if the industry is to play an effective role in the overall development of Nigeria economy. Sanusi (2010), stated that the current banking crises in Nigeria, has been linked with governance malpractice within the consolidated banks which has therefore become a way of life in large parts of the sector. He further stated that corporate governance in many banks failed because boards ignored these practices for various reasons including being misled by executive management, participating themselves in obtaining un-secured loans at the expense of depositors funds and not having the qualifications to enforce good governance on bank management.

The series of widely publicized cases of accounting improprieties recorded in the Nigerian banking industry in 2009 (for example, Oceanic Bank, Intercontinental Bank, Union Bank, Afri Bank, Fin Bank, Spring Bank and Bank PHB) were related to the lack of vigilant oversight functions by the boards of directors, the board relinquishing control to corporate managers who pursue their own self-interests and the board being remiss in its accountability to stakeholders (Uadiale, 2010) as quoted by (Uwuigbe, 2011). Poor corporate governance was identified as one of the major factors in virtually all known instances of bank distress in Nigeria. Weak corporate governance was seen manifesting in form of weak internal control systems, excessive risk taking, override of internal control measures, absence of or non-adherence to limits of authority, disregard for cannons of



prudent lending, absence of risk management processes, insider abuses and fraudulent practices remain a worrisome feature of the banking system (Soludo, 2004b). This view is supported by the Nigeria Security and Exchange Commission (SEC) survey in April 2004, which shows that corporate governance was at a rudimentary stage, as only about 40% of quoted companies including banks had recognized codes of corporate governance in place. This, as suggested by the study may hinder the public trust particularly in the Nigerian banks if proper measures are not put in place by regulatory bodies. Based on the foregoing, the researcher seeks to examine the effect of corporate governance practices on the profitability and efficiency of deposit money banks in Nigeria from 2000 to 2016. This study attempts to examine the behavioral patterns of banks performance indicators in response to stimuli provided by the corporate governance index of the banking industry in Nigeria.

### **1.3 Objectives of the Study**

The broad objective of this study is to examine the effect of corporate governance practices on profitability and efficiency of deposit money banks in Nigeria. Specifically the study sought:

- i. To examine the effect of corporate governance practices on Return on Asset (ROA) of deposit money banks in Nigeria.
- ii. To examine the effect of corporate governance practices on Return on Equity (ROE) of deposit money banks in Nigeria.
- iii. To evaluate the effect of corporate governance practices on Net Interest Margin (NIM) of deposit money banks in Nigeria.
- iv. To examine the effect of corporate governance practices on Assets Utilization (AU) of deposit money banks in Nigeria.

v. To examine the effect of corporate governance practices on Operating efficiency (OE) of deposit money banks in Nigeria.

vi. To determine the effect of corporate governance practices on *Tobin's Q* of deposit money banks in Nigeria.

#### **1.4 Research Questions**

The following question were raised to guide this study:

i. To what extent does corporate governance practices affect return on assets of deposit money banks in Nigeria?

ii. How does corporate governance practices affect return on equity of deposit money banks in Nigeria?

iii. To what measures does corporate governance practices affect Net interest margin of deposit money banks in Nigeria?

vi. How does corporate governance practices affect Asset Utilization of deposit money bank in Nigeria?

v. How has corporate governance practices affected the Operating efficiency of deposit money banks in Nigeria?

vi. How does corporate governance practices affect Tobin's Q of deposit money banks in Nigeria?

#### **1.5 Research Hypotheses**

The following hypotheses were formulated for this study

H<sub>01</sub>: Corporate governance has no significant effect on Return on Assets of deposit money banks.

H<sub>02</sub>: Corporate governance has no significant effect on Return on Equity of deposit money banks.

H<sub>03</sub>: Corporate governance has no significant effect on Net interest margin of deposit money deposit banks in Nigeria.

H0<sub>4</sub>: Corporate governance has no significant effect on Asset Utilization of deposit money banks in Nigeria.

H0<sub>5</sub>: Corporate governance has no significant effect on Operating efficiency of deposit money banks in Nigeria.

H0<sub>6</sub>: Corporate governance has no significant effect on Tobin's Q of deposit money banks in Nigeria.

## **1.6 Significance of the Study**

This study would be of immense value to many. The significance of the study would be useful to various organs such as:

**Investors:** The understanding of the effect of corporate governance on performance of banks in Nigeria will enhance the ability of investors to exploit desired profitable ventures and remain invested.

**Policy makers:** it will enlighten them more on the relationship between corporate finance and performance of bank in Nigeria. It will throw more light on the benefit of corporate finance as well formulating a trade policy.

**CBN:** Central bank of Nigeria authorities would find the result of the study useful for appraising the performance of Nigerian banks. It would also be paramount significant to the government for the public policy purpose in the quest for sustainable economic growth.

**The Academicians:** However, the academicians and the students of Financial Management will be provided with current trend in the knowledge of the effect of corporate governance on the performance of Nigeria banks in Nigeria. The finding would lead to enrichment of finance literature.

## **1.7 Scope of the Study**

The study is delineated to examine the effect of corporate governance practices on the profitability and efficiency of deposit money banks in Nigeria between the period of 2005 to

2017. The choice of this sector is based on the fact that the banking sector's stability has a large positive externality and banks are the key institutions maintaining the payment system of an economy that is essential for the stability of the financial sector. Financial sector stability, in turn has a profound externality on the economy as a whole. Furthermore, we focused only on banking industry because corporate governance problems and transparency issues are important in the banking sector due to the crucial role in providing loans to non-financial firms, in transmitting the effects of monetary policy and in providing stability to the economy as a whole.

### **1.8 Limitations of the Study**

This study is limited by some factors which include difficulty is assessing necessary data on corporate governance. Hence, this research used board size, independent audit committee, block shareholding, director's shareholding, non-executive directors, return on assets, return on equity, Tobin's Q, net interest margin operational efficiency and asset utilization

### **1.9 Operational Definition of Key Variables**

#### **Agency Theory**

Agency theory is defined as the relationship between the principals, such as shareholders and agents such as the company executives and managers. In this theory, shareholders who are the owners or principals of the company, hires the agents to perform work. Principals delegate the running of business to the directors or managers, who are the shareholder's agents.

#### **Corporate Governance**

Corporate Governance is the manner in which systems, procedures, processes and practices of a bank are managed so as to allow positive relationships and the exercise of power in the management of assets and resources with the aim of advancing shareholders' value and shareholders' satisfaction together with improved accountability, resource use and transparent

administration. It is also defined as to the system by which corporations are directed and controlled.

The governance structure specifies the distribution of rights and responsibilities among different participants in the corporation such as the board of directors, managers, shareholders, creditors, auditors, regulators, and other stakeholders and specifies the rules and procedures for making decisions in corporate affairs

### **Internal Control**

The process of ensuring achievement of an organization's objective in operational effectiveness and efficiency, reliable financial reporting and compliance with laws, regulations, and policies.

### **Governance Structure**

Governance structure specifies the distribution of rights and responsibilities among different participants in the corporation, such as, the board, managers, shareholders and other stakeholders, and spells out the rules and procedures for making decisions on corporate affairs.

### **Shareholder**

A person, company, or institution that owns at least one share of a company's stock. A shareholder is an individual or institution including a corporation that legally owns one or more shares of a stock in a public or private corporation. Shareholders may be referred to as members of a corporation. Legally, a person is not a shareholder in a corporation until his or her name and other details are entered in the register of shareholders.

### **Debtholder**

Holder of a bond, the holder receives regular interest payment and return of the principal. Debtholders are given precedence over stock holders in case of asset liquidation. Debtholder is also called bond holder.

## **CHAPTER TWO**

### **REVIEW OF RELATED LITERATURE**

This chapter attempts to review the related literature, this chapter highlights detailed effect of corporate governance practices on profitability and efficiency of deposit money banks in Nigeria, it is divided into the conceptual, theoretical, and empirical review of literature. Conceptual issues define detail definition of the chosen variables both dependent and independent. The theoretical literature concerns itself with theories that relate corporate governance while the empirical literature identifies the element of corporate governance strategies that bear significant or insignificant effect on deposit money banks as viewed by both local and foreign writers. Summary of literature tries to bring out the gap in already reviewed literature.

#### **2.1 Conceptual Issues**

##### **2.1.1 Corporate Governance**

Corporate governance is a uniquely complex and multi-faceted subject. Devoid of a unified or systematic theory, its paradigm, diagnosis and solutions lie in multidisciplinary fields of Economics, Accountancy and Finance among others (Cadbury, 2002). In any organization, corporate governance is one of the key factors that determine the health of the system and its ability to survive economic shocks. The health of the organization depends on the underlying soundness of its individual components and the connections between them. According to Morck, Shleifer and Vishny (1989), among the main factors that support the stability of any country's financial system include: good corporate governance; effective marketing discipline; strong prudential regulation and supervision; accurate and reliable accounting financial reporting systems; a sound disclosure regimes and an appropriate savings deposit protection system.

Corporate governance has been looked at and defined variedly by different scholars and practitioners. However they all have pointed to the same end, hence giving more of a consensus in the definition. Coleman and Nicholas-Biekpe (2006) defined corporate governance as the relationship of the enterprise to shareholders or in the wider sense as the relationship of the enterprise to society as a whole. However, Mayer (1999) offers a definition with a wider outlook and contends that it means the sum of the processes, structures and information used for directing and overseeing the management of an

organization. The Organization for Economic Corporation and Development (1999) has also defined corporate governance as a system on the basis of which companies are directed and managed. It is upon this system that specifications are given for the division of competencies and responsibilities between the parties included (board of directors, the supervisory board, the management and shareholders) and formulate rules and procedures for adopting decisions on corporate matters.

In another perspective, Arun and Turner (2002b) contend that there exists a narrow approach to corporate governance, which views the subject as the mechanism through which shareholders are assured that managers will act in their interests. However, Shleifer and Vishny (1997), Vives (2000) and Oman (2001) observed that there is a broader approach which views the subject as the methods by which suppliers of finance control managers in order to ensure that their capital cannot be expropriated and that they can earn a return on their investment. There is a consensus, however that the broader view of corporate governance should be adopted in the case of banking institutions because of the peculiar contractual form of banking which demands that corporate governance mechanisms for banks should encapsulate depositors as well as shareholders (Macey & O'Hara 2001). Arun and Turner (2002b) supported the consensus by arguing that the special nature of banking requires not only a broader view of corporate governance, but also government intervention in order to restrain the behavior of bank management. They further argued that, the unique nature of the banking firm, whether in the developed or developing world, requires that a broad view of corporate governance, which encapsulates both shareholders and depositors, be adopted for banks. They posit that, in particular, the nature of the banking firm is such that regulation is necessary to protect depositors as well as the overall financial system. This study therefore adopts the broader view and defines corporate governance in the context of banking as the manner in which systems, procedures, processes and practices of a bank are managed so as to allow positive relationships and the exercise of power in the management of assets and resources with the aim of advancing shareholders' value and shareholders' satisfaction together with improved accountability, resource use and transparent administration.

The Organization for Economic Cooperation and Development (OECD) also defines corporate governance as the system by which business corporations are directed and controlled. The Asian Development Bank defined the concept as the manner in which authority is exercised in the management of a country's social and economic resources for

development (Eng & Mak, 2003; Cheng, 2008; Cadbury, 2002). Corporate governance was described to be a way and manner in which the affairs of companies are conducted by those charged with that duty. In Nigeria, the governance of a limited liability company is the responsibility of its board of directors. Dozie (2003) believes that corporate governance is characterized by transparency, accountability, probity and the protection of stakeholders' rights. Oyediran (2003) further observes that corporate governance refers to the manner in which the power of a corporation is exercised in the management of its total portfolio of socio and economic resources with the aim of increasing shareholders' value and safeguarding the interest of other stakeholders in the context of its corporate mission. Prowse (1998) posits that corporate governance refers to the rules, standards and organizations in an economy that govern the behavior of business owners, directors, and managers and define their duties and accountability to outside investors. Solomon and Solomon (2004) view it as the mechanism of checks and balances, both internal and external to companies, which ensures that organizations discharge their accountability to stakeholders and act in a socially responsible manner. Monks and Minow (1996) opine that corporate governance is the relationship among various participants in understanding the direction and performance of business organizations.

This concept can be perceived as structure and processes to direct and control corporations and to account for their operations (Neuberger & Lank, 1998). Another opinion put across by Sanda, Garba & Mikailu (2005) sees corporate governance as the ways in which all parties interested in the wellbeing of the corporation try to ensure that managers and other parties take necessary approach to safeguard the interest of all investors. Iskander and Chamlou (2000) stated that corporate governance is important not only to attract long-term foreign capital, but more especially to broaden and deepen local capital markets by attracting local investors both individual and institutional. Nielsen (2000) reported that corporate governance is the system of rights, structures and control mechanisms recognized internally and externally for the management of a listed public limited liability company, with the aim of protecting the interests of stakeholders. Conclusively, what is evident from the various definitions reviewed is that corporate governance is the set of structures, processes, cultures and systems through which objectives are determined and companies are directed and controlled. Majority of the definitions are similar but presented in different ways.



### **2.1.2 Dependent Variables**

Previous literature shed light on the profitability as a measure (proxy) of deposit money bank performance by providing prior key research that presents the relationship between corporate governance strategies and deposit money bank performance along with more recent suggested amendments for this proxy. Generally, a considerable number of recent studies on bank performance using corporate governance practices and profitability efficiency ratio have applied mainly accounting-based performance measures such as Return on Equity and Return on Asset in addition net interest margin, asset utilization, operating efficiency and Tobin's q as proxies for deposit money bank performance (Babatunde & Olaniran, 2009; Haat, Rahman & Mahenthiran, 2008; Zeitun & Tian, 2007; Hassan & Halbouni; 2013; Almatari; 2014; Mule & Mukras ;2015; Roa & Desta ;2016 and Nidhi & Anil, 2016). Olowookere 2008, only used profitability-based such as operating efficiency in his study but limited to non-financial firms. In line with empirical studies from recent literature on bank performance, this study uses the terms for accounting based, market based and productivity based measurement to measure firm performance.

#### **2.1.2.1 Return on Assets (ROA)**

The return on assets ratio, often called the return on total assets, is a profitability ratio that measures the net income produced by total assets during a period by comparing net income to the average total assets. In other words, the return on assets ratio or ROA measures how efficiently a company can manage its assets to produce profits during a period. Since company assets' sole purpose is to generate revenues and produce profits, this ratio helps both management and investors see how well the company can convert its investments in assets into profits. It can be as a return on investment for the company since capital assets are often the biggest investment for most companies (Babatunde & Olaniran, 2009). In this case, the company invests money into capital assets and the return is measured in profits. Return on assets (ROA) is an indicator of how profitable a company is relative to its total assets. ROA gives a manager, investor, or analyst an idea as to how efficient a company's management is at using its assets to generate earnings. Return on assets is displayed as a percentage and it's calculated as:

$$**ROA = Net Income / Total Assets**$$

Note: Some investors add interest expense back into net income when performing this calculation because they'd like to use operating returns before cost of borrowing.

Effect of Return on Assets (ROA) of the Income Growth According Prastowo (2002:86), Return on Assets (ROA) is used to measure the effectiveness of the company in generating profits by exploiting its assets. This ratio may give an indication of good or bad neighbor management in implementing cost control or management of his property. Return on Assets (ROA) is often used as a tool to measure the rate of return on total assets after interest expense and taxes, (Brigham, 2001). The high Return On Assets (ROA) will be good for the company. Value Return on Assets (ROA) high would indicate that the company is able to generate profits relatively high value assets. Investors would like the company to the value of Return on Assets (ROA) is high, as companies with Return on Assets (ROA) which is capable of producing high levels of corporate profits is greater than the Return on Assets (ROA) is low (Ang, 2001). Return on Assets (ROA) is a financial ratio used to measure the degree to which the assets have been used to generate profits. The greater Return on Assets (ROA) Shows that the better the company's performance, because of the greater rate of return on investment. (Riyanto, 2001). According to Harahap (2002), the profitability of a company's ability to generate earnings for a certain period.

#### **2.1.2.2 Return on Equity (ROE),**

The ratio of net profit to shareholders' equity (also called book value, net assets or net worth), expressed as a percentage. A measure of how well a company uses shareholders' funds to generate a profit. Return on equity (ROE), is a financial ratio that measures the return generated on stockholders'/shareholders' equity, the book or accounting value of stockholders'/shareholders' equity which reflects the accumulation over time of amounts received by the company from stock/share issues plus the profits/earnings retained by the company, i.e., not yet distributed in dividends (accounting value of shareholders' equity is also equal to a company's net assets, i.e., assets minus liabilities). The typical formula can be expressed as follows:

**ROE = profit for the year (or net income after taxes) / stockholders' or shareholders' equity**

This is generally calculated over a year and expressed as a percentage, so a company that generated ₦100 worth of profit for the year for ₦1000 of equity has a ROE of 10%. ROE is often said to be the ultimate ratio or 'mother of all ratios' that can be obtained from a company's financial statement. A company can only create shareholder value, economic profits, if the ROE is greater than its cost of equity capital (the expected return shareholders

require for investing in the company given the particular risk of the company). Furthermore, the ROE can be decomposed to understand the fundamental drivers of value creation in a company. This is known as the DuPont decomposition and can be calculated as:

$$\text{ROE} = \text{return on assets (ROA)} \times \text{gearing (also called leverage)}$$
$$\text{ROE} = (\text{profit for the year} \div \text{assets}) \times (\text{assets} \div \text{shareholders' equity})$$

Earnings To Growth Ratios Return on Equity (ROE) shows the extent to which companies manage their own capital (net worth) effectively, measure the profitability of the investment that has been made owners of their own capital or shareholders of the company. Ang (2001) which states that the higher the ratio Return on Equity (ROE) will increase the profit growth. Return on

Equity (ROE) indicates the profitability of own capital or often referred to as business profitability (Sawir, 2005). The higher the value the higher the ROE level of profit generated due to additional working capital can be used to finance the company's operations that could ultimately result in profit, (Suwarno: 2004). Irawan (2011) in his research found that the results of the Return On Equity (ROE) effect on profit growth. This is due to the nature and pattern of investments made by the company are very precise so that all assets can be used efficiently so that profits be maximized. In addition to the revenue generated by capital from debt can be used to cover the cost of capital

### **2.1.2.3 Tobin's Q**

Tobin's Q measures performance in terms of company valuation; it is identified as market capitalization plus the total company debt divided by total assets (Weir, Laing, & McKnight, 2002). Kohl and Schaefer, (2012) describe Tobin's Q as the current market value of the company divided by the replacement cost of the assets, which is measured by the book value of the firm's assets. Market value is calculated in various ways by different researchers (Bhagat, & Jefferis, 2005). Tobin's Q is the ratio of the firm's market value to its book value. The firm's market value is calculated as the book value of assets minus the book value of equity plus the market value of equity (Belkhir, 2009). It has also been calculated as the market value of assets divided by the book value of assets (Ehikioya, 2009).

A firm's Tobin's Q is greater if it is more than 1; this Tobin's Q value implies that the firm is implementing a growth strategy and gives investors a positive perception regarding the firm's growth opportunities. That is, a ratio greater than 1 indicates that the market value is higher than the company's recorded assets. Hence, a higher Tobin's Q encourages

companies to invest more capital, as the value of the company is more than the price they paid. In contrast, a ratio below 1 gives investors a perception of negative growth expectations and indicates that the firm should not reinvest in the same stock of assets. A good or improving investment opportunity is regarded as an indicator that the firm is exhibiting, or has embedded, good corporate governance principles and structures (Evans, Evans & Loh, 2002). In summary, Tobin's Q compares the ratio of a company's market value and the value of a company's assets.

The primary measure of firm value is Tobin's Q; its main benefit is that it reflects the value of intangible factors, such as management competence, growth opportunities and corporate governance, compared to other measures (Kohl & Schaefers, 2012). Consequently, the higher the Q value, the more effective the corporate governance and the better the market perception of the company. A lower Q value suggests less effective corporate governance and greater managerial discretion (Weir, Laing & McKnight, 2002).

#### **2.1.2.4 Net Income Margin**

**Net interest margin ratio** is one of the most important measurements to quantify financial effectiveness in an intermediary institution (Golin, 2001). Net interest margin (NIM) is defined by the ratio of net interest income to total earning asset. Increase in interest margin leads to growth in profitability and capital; but it may affect efficiency and competition, thereby economic growth. This indicates that Net Interest Margin (NIM) is one factor that affects economic efficiency. As a result, policy makers in different part of the world have been working to establish optimal intermediation cost that bring stable and efficient banking system, leading to economic efficiency and growth. However, Demirgüç-Kunt and Huizinga [9] revealed that decrease in NIM may not match with efficiency improvement of banks. It is, therefore, essential for policymakers and bank experts to look for those determinants of NIM that affect efficiency of banking business net interest margins (NIM) remain one of the principal elements of bank net cash flows and after-tax earnings. As a result, despite earnings diversification, variations in net interest income remain a key determinant of changes in profitability for a majority of banks. However, research in the area of bank interest-rate risk and the behavior of NIM has been largely limited since the late 1980s, when the savings and loan crisis brought the issue of interest-rate risk to the fore. This result is consistent with the common notion that bank stock investors need to receive a net-of-company-tax return that is independent of this company tax.

The existence of an explicit deposit insurance scheme coincides with lower interest margins. The effect on bank profitability is also negative, although it is not significant. These results

may reflect design and implementation problems inherent in explicit deposit insurance systems. Regarding financial structure, banks in countries with a more competitive banking sector – where banking assets constitute a larger portion of the GDP -- have smaller margins and are less profitable.

The bank concentration ratio positively affects bank profitability, and larger banks tend to have higher margins. A larger stock market capitalization to GDP increases bank margins, reflecting possible complementarity between debt and equity financing. A larger stock market capitalization to bank assets, however, is related negatively to margins, suggesting relatively well-developed stock markets can substitute for bank finance. Finally, we find that legal and institutional differences matter. Indicators of better contract enforcement, efficiency of the legal system and lack of corruption are associated with lower realized interest margins and lower profitability. Investigating banking spreads and profitability. The efficiency of bank intermediation can be measured by both *ex-ante* and *ex-post* spreads. *Ex-ante* spreads are calculated from the contractual rates charged on loans and rates paid on deposits. *Ex-post* spreads consist of the difference between banks' actual interest revenues and their actual interest expenses. The *ex-post* measure of the spread generally differs from the *ex-ante* measure on account of loan defaults. The *ex-post* spread is more useful, as it controls for the fact that banks with high-yield, risky credits are likely to face more defaults. An additional problem with using *ex-ante* spread measures is that data are generally available at the aggregate industry level and are put together from a variety of different sources and thus are not completely consistent. For these reasons, we focus on *ex-post* interest spreads. As a measure of bank efficiency, we consider the accounting value of a bank's net interest income over total assets, or the net interest margin. In the data set, the accounting data is organized so as to be comparable internationally.

All the same, there may remain differences in accounting conventions regarding the valuation of assets, loan loss provisioning, hidden reserves, etc. it is widely believed that a low interest rate environment negatively influences bank net interest margin (hereinafter NIM) and bank profitability. A major attributing factor is maturity mismatch as liabilities are normally of shorter maturity than assets and hence more interest sensitive. This is a simplistic assumption. It does not take into account the actual composition of assets and liabilities and the changes caused by the restructuring of bank balance sheets. Moreover, assets might also be more interest rate sensitive if variable rate contracts are common, and competition might prevent

banks from changing deposit interest rates in accordance with their profit maximizing intentions (Ennis et al., 2016). At the end, it is the spread between the interest rates on the asset and liability side that determines the net interest margin and not the level of (market) interest rates itself. However, in the period of very low or even negative interest rates, banks might (have) hit the interest rate lower bound on the liability side, meaning that the spread cannot remain unchanged, but can only fall due to continuing pressures on the asset side. The NIM level and dynamics indicate the efficiency of financial intermediation. High-interest margins indicate inefficient and costly intermediation of banks that discourages investment and strengthening of domestic savings. The presence of foreign capital through investment and the dominant presence of international banks in the domestic financial market would, as expected, promote the efficiency and competitiveness of the domestic financial system and consequently increase the efficiency of financial intermediation (Novo & Almir, 2015)

#### **2.1.2.5 Operational Efficiency**

Operational efficiency specifically measures how efficiently firm's product has been produced, held and distributed. Kolapo (2006) posited that a firm that is not operationally efficient will not achieve satisfactory return on owners' equity and later finds it difficult to survive adverse economic conditions. Like other firms, banks are not charitable organizations and are out to maximize shareholders wealth by transforming inputs into financial products and services at a lower cost relative to revenue generated from operation. The concept of operational efficiency is crucial for bank survival especially when one view banks as service organizations with overhead constituting the most significant overhead. It is evident that banks generate significant proportion of their income through interest received on disbursed loans and customers' deposits constitute the larger source of this lending, hence, the need to be adequately capitalized is paramount. If an operationally efficient bank requires to be adequately capitalized, it is necessary to critically evaluate the influence of bank's capital adequacy on their operational efficiency. The banking systems of many developing economies have exhibited poor performance, perhaps, in part, due to excessive government regulations and unfavorable business environment. To address this problem, various financial liberalizations, reforms and restructuring programs have been implemented in an effort to foster banking efficiency and a better allocation of resources (Isik & Hassan, 2003). The impact of these measures on bank efficiency has been widely studied with approximately 95% of these works focusing on banks of industrialized countries. However, only a limited number of these studies have examined the impact of capital adequacy on banks operational

efficiency in developing economies (Kwan, 2003). Studies on the importance of operating efficiency for banks in other economies revealed that the key determinants of operational efficiency were affected by the global financial crisis (Siraj & Pillai, 2011). This reinforces the need to understand the drivers of operational efficiency for proper risk management in the Nigerian Deposit Money Banks. The high interest charged by Nigerian banks could be attributed to the inability to push their operational costs downwards despite the increase in capital base of Nigerian banks.

This may be due to many challenges in respect of costs and management of risks which banks are exposed to operating efficiency is one of the most critical risks faced by financial institutions in the Nigerian environment. For the banking institution to make the best use of their capital base, it is paramount for the sector to operate efficiently. From happenings in the banking sector, it is evident that some banks were able to meet the 2005 re-capitalization of N25b but still failed in 2009. Could this be a signal that some of the capitals raised by banks on the stock exchange were fictitious as earlier raised by Sanusi (2010)? Surprisingly, few years after the much publicised consolidation in Nigeria, some of these banks that merged together or absorbed other smaller banks to meet up with the N25b requirement were later declared distress in 2009. However, some of the banks which were able to withstand the recapitalization exercise of 2005 without absorbing or merging with other banks are still sound up till date and they are not failing. Could it be that, those few banks that stood alone throughout these hurdles are operating efficiently without any distress because of their broad and adequate capital base? From the empirical literature, it is worthy of note that not many studies have examined the relationship between capital adequacy and operational efficiency of banks in Nigeria. However, some researchers in developed and other developing economies have examined the impact of bank capital adequacy on operational efficiency and they found out that well-capitalized banks are better run with low unit cost; thereby operating efficiently. Some of these studies include: Berger and Young (1997) in the United State of America; Kwan and Eisenbeis (1997) in Turkey; Ncube (2009) in South Africa; Dhanapal and Ganesan (2012) in India; Abusharba, Triyuwono, Ismail and Rahuman (2013) in Indonesian; Odunga, Nyangweso, Carter and Mwarumbva (2013) in Kenya; Odunga, Nyangweso and Nkobe (2013) in Keny

Deposit Money Banks play an important role as financial intermediaries for savers and borrowers in an economy. All sectors depend on banking sector for their very survival and growth. Operational efficiency of banks is, therefore, essential for a well-functioning economy.

Operational efficiency is simply defined as the ability to deliver products and service cost effectively without sacrificing quality. Shawk (2008) defined operational efficiency as what occurs when a right combination of people, process and technology come together to enhance the productivity and value of any business operation, while driving down the cost of routine operations to a desired level. According to Beck et al. (2000), Efficiency in intermediation of funds from savers to borrowers enables allocation of resources to their most productive users. The more efficient a financial system is in resource generation and in its allocation, the greater its contribution to productivity and economic growth. According to Chen (2001), Efficiency in banking has been tactically defined and studied in different dimensions including: (i) Scale efficiency (ii) Scope efficiency and (iii) Operational efficiency, a wide concept sometimes referred to as x-efficiency. Scale and Scope economies, for example, are achieved from the firms' output expansion resulting in an increase in the industry's output and reduction in the costs of production thus leading to the strong technological external economy. A bank has the scale efficiency, when it operates within the range of constant return to scale. Scope efficiency comes into play when the bank operates in different numerous locations. But the main area of interest in this study, which is operational efficiency, refers to the efficient utilization of human and material resources or the efficient use of people, machine tools and materials funds. Better utilization of any or a combination of these three, can increase output of goods and services and reduce costs. Operational efficiency is the tactical planning of an organization to maintain a safe balance between cost and productivity. It identifies the wasteful processes that contribute to loss of resources and organizational profits. It deals with minimizing waste and maximizing the benefits of the bank.

#### **2.1.2.6 Asset Utilization**

Asset utilization ratios provide measures of management effectiveness. These ratios serve as a guide to critical factors concerning the use of the firm's assets, inventory, and accounts receivable collections in day-to-day operations. Asset utilization ratios are especially important for internal monitoring concerning performance over multiple periods, serving as



warning signals or benchmarks from which meaningful conclusions may be reached on operational issues. An example is the total asset turnover (TAT) ratio.

This ratio offers managers a measure of how well the firm is utilizing its assets in order to generate sales revenue. An increasing TAT would be an indication that the firm is using its assets more productively. For example, if the TAT for 2003 was 2.2 $\times$ , and for 2004 3 $\times$ , the interpretation would follow that in 2004, the firm generated \$3 in sales for each dollar of assets, an additional 80 cents in sales per dollar of asset investment over the previous year. Such change may be an indication of increased managerial effectiveness.

Asset utilization ratios measure how efficient a business is at using its assets to make money. A business's receivables turnover, which is defined as its credit sales divided by the value of its accounts receivable from customers, indicates whether a business is able to turn the goods and services it sells into money that is available for other purposes (Shawk, 2008). Inventory turnover is another asset utilization ratio, found by dividing the cost to produce the goods sold during a specified time period by the average value of the business's product inventory during that same time period.

Financial ratios help investors determine which businesses to buy into. These ratios also help business leaders discern whether particular strategies are working. While there are dozens of types of financial ratios available to analysts, profitability ratios and asset utilization ratios are among the most common and easy to calculate. Each type of ratio reveals something different about a business, but they deal with some of the same measurements and issues. Profitability ratios are a series of financial ratios that show how much profit a business is earning within a certain context. The gross profit margin is the most common profitability ratio. It is calculated as profit divided by sales and reveals how much a business is able to earn for itself as a percentage of its total sales revenue (Ncube, 2009). Another profitability ratio is the return on assets, which is found by dividing total income by total assets. This ratio shows how much money a business takes in relative to the value of the assets that the business holds. One of the key differences between profitability ratios and asset utilization ratios is the fact that asset utilization ratios are more specific. While profitability ratios measure overall performance in terms of profits, asset utilization ratios focus on specific measurements within the business such as the value of its inventory and the length of time it takes to collect accounts receivable. Asset utilization ratios also focus on efficiency, while profitability ratios primarily reveal raw performance. Since the goal of every business is to

create profit, profitability ratios are extremely important. A business with a negative profitability ratio is spending more than it makes, which presents an unsustainable situation.

However, to an investor, asset utilization ratios may reveal more about how well a business is being managed and how likely it is to succeed in the future. High profitability ratios can come from spontaneous shifts in demand or a lack of competition. But asset utilization ratios depend on a business's ability to sell the products it makes and collect on its sales. A similar measure is the fixed asset turnover (FAT) ratio. Fixed assets (such as plant and equipment) are often more closely associated with direct production than are current assets (such as cash and accounts receivable), so many analysts prefer this measure of effectiveness (Dhanapal & Ganesan, 2012). Two other asset utilization ratios concern the effectiveness of management of the firm's current assets. Inventory is an important economic variable for management to monitor since dollars invested in inventory have not yet resulted in any return to the firm. Inventory is an investment, and it is important for the firm to strive to maximize its inventory turnover. The inventory turnover ratio is used to measure this aspect of performance.

## **2.2. Deposit money bank**

The role of Deposits Money Banks (DMBs), otherwise known as commercial banks is central to financing economic activity in any economy, especially, in developing country like Nigeria. Consequently, a sound and profitable banking sector is better able to withstand negative shocks and contribute to stability of financial system, thus assist in rapid economic growth and development of a nation. According to Chirwa and Mlachilla (2004), banks act as financial intermediaries, play a key role in transforming deposits into financial assets, they channel funds from entities with surplus liquidity to those with deficit liquidity thereby facilitating capital formation and trade; banks also play a key role in filtering information by screening borrowers and monitoring their activities in financial system characterized by incomplete and asymmetric information.

Nigeria commercial banking sector has recorded substantial growth and development in recent years following the consolidation regime of the Central Bank of Nigeria (CBN) in 2005 which make it mandatory for any commercial bank in Nigeria have minimum of 25billion naira as equity fund. According to the apex bank, the policy resulted in unprecedented growth in their operations in Nigeria, for example, between 2006 and 2009 total deposit liabilities grow by 65%, total asset by 148%, loan and advances 225% capital and resources 192%. However, by June 2009, a shock wave went through the sector after a

special examination (stress-test) by CBN which revealed massive mismanagement of depositors fund through uncollateralised loans, non-booking of non- performing loans and creative accounting practices among many other very serious infractions by management of some of these banks. To remedy the grievous situation the apex bank has to inject about N620billion to bailout some of distressed banks. Nigeria banks are perceived by Nigerians to be earning super profit which the findings of Flamini, et. al., (2009) seems to support. They reported that Commercial Banks appear very profitable in Sub-Saharan Africa reporting an average return on asset of about 2 percent over the last 10 years, which is, significantly higher than bank returns in other parts of the world. This picture holds true whether returns on assets are assessed by country, by country income groups or by individual banks. The determinants of banks profitability have attracted the interest of academic researchers, bank management, financial markets as well as bank regulators.

### **2.1.3 Independent Variables**

#### **2.1.3.1 Board size**

According to the Security and Exchange Commission, Code of Corporate Governance, 2003 all listed companies in the Nigeria Stock Exchange should have a sufficient board the size relative to the scale and complexity of the company's operation and be composed in such a way to ensure diversity of experience without compromising independence, compatibility, integrity and availability of members to attend meeting, also the size should not be less than five (5) comprising executives and non-executives members. Several prior studies investigate the association of different board characteristics (board the size inclusive) and earnings management in different context, such as Ali, Salleh and Hassan (2010) that examines the association between managerial ownership and managing earnings activities among listed firms in Malaysia within the periods of 2002 as well as 2003. The result shows a negative association among board the size and managing earnings practices. Similarly, Dimitropoulos (2011) analyze the effect of the size of the board, directors' independence, etc. on the accounting manipulation among football clubs companies in some selected Europeans Union countries. The result from 268 firm year observation shows that the size of the board is positively associated with accounting manipulation. Aygun, Ic and Arvas (2010) ascertain the relationship between board governance and managing earnings activities. The result shows a negative relationship between the size of the board and accounting manipulation. Nor Haron, Nik Saleh and Abdulrashid (2011) ascertain the relationship among the percentage of family members on board and managing earnings activities among the sample of 236 listed

companies in Malaysia for the 2009. The regression analysis result appears that the size of the board is positively correlated to accounting manipulation. Emna, Trabelsi and Mataousi (2011) observe the interaction between directors' independence, the size of the board and real window dressing among the sample of 4170 U.S Initial Public Offering (IPO) during 1998 to 2011. The result indicates the size of the board is negatively associated to accounting manipulation.

According to agency theory, board the size of a firm is organized depending on the scope and complexity of the firms' production process, that is to say larger complex processes lead to the larger firms (Fama & Jensen, 1983). Abdulrahman and Mohamed Ali (2006) observed that board characteristics have an effect on earnings management. But some studies suggested that smaller board that ranges from four to six may have more effective decision (Pearce & Zahra, 1992)

Ghosh, Marra and Moon (2010) investigate, audit committee and accounting manipulation. The result found that the size of the board is positively related to accounting manipulation. Chekili (2012) also found the size of the board is positively related to earnings management in Tunisian firms. Kumari and Puttana (2014) examine board characteristics as control mechanisms for managing earnings, the result shows that the size of the board is positively and significantly associated to accounting manipulation practices. Similarly, Zgarni, Halioui and Zehri (2014) assessed the interactions of BOD characteristics in the mitigating level of accounting manipulation in emerging markets. Result found a positive significant between the size of the board and accounting manipulation. Therefore, the hypothesis is constructed as follows:

### **2.1.3.2 Independence of Audit Committee**

Independence of audit committee: It is an essential factor for an audit committee to ensure that management is held accountable to shareholders (Blue Committee 1999, Cadbury Committee 1992 and Treadway Commission 1987). The Code of Corporate Governance states that the majority of audit committee members must be independent and the chairman should be an independent non-executive director. It enhances the effectiveness of monitoring functions. It serves as a reinforcing agent to the independence of internal and external auditors. It is posited that the more independent the audit committee, the higher the degree of oversight and the more likely that members act objectively in evaluating the propensity of the company accounting, internal control and reporting practices. This indicates that an

independent audit committee is able to help companies sustain the continuity of business although when they are faced with financial difficulties, they are expected to propose certain action plans to mitigate the problem.

Audit committee (AC) is a committee to be established by all listed companies in the Nigerian stock exchange, which is charged with the responsibility of overseeing the integrity of financial statements produced by the companies, as well as its compliance with legal requirement (SEC-CCG, 2003). According to SEC Code of Corporate Governance 2003, the audit committee should consist not less than three directors of which independent directors should have the majority, and the committee is chaired by independent non-executive director. Cadbury Committee (1992) and Al-Matari, Al-Swidi, Fadzil and Al-Matari (2012) described the size of the audit committee as a characteristic that is regarded to be significant for the successful discharge of its duties. The size of at least of three (3) executives has been suggested by corporate governance reports (BRC, 1999; New York Stock Exchange, 2002; CMA, 2006). Sun, Lan and Liu (2014) explore the efficiency of independent audit committee characteristics in mitigating the level of earnings management activities for United States firms. The separation of corporate ownership and control resulted into agency conflict / problems that require the effective functioning of audit committees as governance mechanisms to solve. The audit committee is seen as an effective subcommittee of a board of directors, which is important in good corporate governance (Abbott, Park & Parker, 2000; Jensen & Meckling, 1976). Garcia-Meca and Sanchez-Ballesta (2009) argue that an independent audit committee could enhance the quality and credibility of financial reporting.

Cohen and Hanno (2000) emphasize the significance of audit committee independence to appraise management actions regarding risk assessment. In addition, independent directors do not have personal or economic interests in the company in their role of overseeing and monitoring the company's executive management as professional referees (Munro & Buckby, 2008). Thus, independent directors are viewed as being better prepared for maintaining the integrity of external financial statements (Bradbury, 1990). According to the Australian Corporate Governance Principles and Recommendations (2007), companies are required to have at least three members and consist only of non- executive directors and a majority of independent directors in the audit committee. The UK Corporate Governance Combined Code (Financial Reporting Council, 2003,) emphasizes the audit committee's independence from managers: While all directors have a duty to act in the interests of the company, the

audit committee has a particular role, acting independently from the executive, to ensure that the interests of shareholders are properly protected in relation to financial reporting and internal control. In the Codes of Corporate Governance in the Nigeria SEC. (2016), audit committees should include at least three non-executive board members, of whom at least two should be independent members, and they should be chaired by independent members. An audit committee is considered as a monitoring mechanism that establishes a proper communication relationship between the board of directors, the internal monitoring system and the internal and external auditors to improve the audit attestation function of external financial reporting and external auditor independence (Blue Ribbon Committee, 1999 and Bradbury, 1990). Independent directors can support external auditors over executive management regarding external auditor–management conflict situations

### **2.1.3.3 Block holders**

Ownership concentration is higher in developing countries, where investors have less protection (La Porta et al. 1999; Shleifer & Vishny, 1997). This can imply a stronger incentive and ability of principals to monitor agents, reducing managerial opportunism (La Porta et al., 1999 and Shleifer & Vishny, 1997). Alchian and Demsetz (1972) argued that the equity of ownership has been suggested as a control mechanism to control managers by shareholders to mitigate agency conflicts within the firm. They state that this internal control mechanism is significant in determining the shareholders wealth, firm objective and the level of discipline of managers. In such a context, a large shareholder appears as the shareholders best way to control and monitor the managers.

Shleifer and Vishny (1986) argued that when the ownership structure is concentrated, large and controlling shareholders contribute to the mitigation of the agency problems because they have the incentives, motivations and capacity to monitor the managers for the shared benefit of control (i.e. the mutual benefit of all shareholders, whether large or small). High concentration of ownership is not necessarily a disadvantage to firm performance. As mentioned previously, shareholders with greater stakes in a company have greater incentive to control and monitor managers or insiders (Holderness, 2003). This represents the positive outcome of the self-interest of large shareholders, known as the shared benefits of control hypothesis. For example, large shareholders may exert influence in the appointment of independent directors or have advisory voting on executive pay packages.

Grossman and Hart (1986) suggested that large shareholders bear monitoring costs, and their share of benefits will be proportionate to their cash flow rights (dividends or capital gains), and the pursuant benefits of monitoring by large shareholders is accrued by all shareholders proportional to cash flow rights. Other factors being constant, a rise in block holder stake endows large shareholders with a greater interest in increasing firm value (Holderness, 2003). Indeed, it has even been argued that in such situations small shareholders "free-ride" firm success achieved by larger shareholders while bearing no monitoring costs, thus obtaining benefits disproportionate with their input to the firm. Different studies in developed and developing countries (e.g. Hiraki et al., 2003 for Japanese firms, Gorton & Schmid, 2000 for German companies, Claesses & Djankov, 1999 for Czech companies and Xu & Wang, 1999 for Chinese listed firms) found a positive relationship between concentrated ownership and firm performance. The result of the positive relationship might support the idea of Shleifer and Vishny (1997) and La Porta et al. (1998), who stated that since the investor protections is weak in emerging markets, ownership concentration might play an alternative corporate governance mechanism in these markets. Therefore, concentrated ownership means more control in the hands of large shareholders, which translates into better monitoring of managers in the interest of all shareholders.

However, Jensen et al. (1976) with regard to agency theory observed that higher ownership concentration could induce the prioritization of self-interest by large shareholders and the consequent expropriation of firm resources (i.e. wealth), resulting in decreased firm performance. Clearly when there is a higher risk of expropriation there is more incentive for majority/dominant shareholders to avoid information disclosure and such firms are likely to have weak monitoring controls (which facilitate expropriation). The expropriation effect arises because majority shareholders are motivated not only the benefits they derived from pecuniary returns but also the utility generated by various non-pecuniary aspects of their entrepreneurial activities (Jensen et al., 1976). A clear example of this in family-controlled firms is the desire of majority shareholders to pass on control and majority ownership of the firm to subsequent generations (Bhaumik & Gregoriou, 2010).

In developing economies, majority ownership of large firms is often used by concentrations of power (e.g. families) to create what called "non-pecuniary income", such as the ability to deploy resources to suit one's personal preferences (Demsetz & Lehn 1985). In addition to having concentrated ownership of firms, majority shareholders are able to dominate the

executive and management structure of firms by filling key positions; such owner- managers are in a position to execute activities that benefit them but which may be detrimental to the interests of minority shareholders and the firm performance. Thus, the fundamental problem of concentrated ownership is the opportunities for nepotism that arise from it. Grossman and Hart (1980) suggested that the private benefits of control that are not shared by small shareholders are more pertinent to large shareholders than general firm success. The private benefits of control are related to the expropriation hypothesis, which suggests that a secondary form of agency costs are borne by firms with controlling large shareholders at the expense of smaller shareholders (La Porta et al., 2000; Shleifer & Vishny, 1997). In cases with multiple blocks of major shareholders the situation becomes more complex due to the diverse interests of different large shareholders, with the possibility of both positive and negative outcomes for firm performance (La Porta et al. 2000).

Expropriation can occur due to the entrenchment of owner-managers, who can continue to control firms despite poor performance (Daniels & Halpern, 1996); also, if managers are major shareholders, they are expected to block any hostile takeover attempts (Stulz, 1988), which represents an agency costs amounting to expropriation of minority shareholders by undermining firm performance. Large block holders also can have a tendency to project their personal preferences onto organizational actions, even if these are against the company ethos/goals as a whole (Holderness & Sheehan, 1998; Shleifer & Vishny, 1997).

Different studies in developing countries (Chen, Firth & Xu; (2009) for Hong Kong firms; Gunasekarage, Hess & Hu (2007) in China; Gursoy & Aydogan, (2002) for Turkish non-financial firms) found that firms with concentrated ownership are not associated with better operating performance or higher firm valuation. The negative relationship between the concentrated ownership and firm performance might be because highly concentrated ownership in the hand of large shareholders might potentially lead large shareholders to worry more about their own interests rather than those of other shareholders and firm performance as a whole.

As illustrated above, literature shows mixed results about the relationship between the large shareholders and firm performance. Shleifer and Vishny (1986) argued that from the efficient monitoring hypothesis and the convergence of the interest hypothesis, large shareholder who held large shares have the ability and the incentive to exert control and to compel the management to take actions to improve the company performance. Based on the



expropriation hypothesis, due to the diverse interests of different large shareholders, there is a possibility of both positive and negative outcomes for firm performance (Ahmed & Hamdan, 2015) Business organizations in emerging countries (including Nigeria) are characterized by high concentration of ownership, often in the form of family or companies controlled businesses. In this context, this study investigated the effect of the large owners on the performance of Nigerian listed firms. This study used the 5% cut-off level, based on the Code of corporate governance (2003) as amended and the Companies and Allied Matters Act (CAMA) (1990) as amended classification of large shareholders as those who own 5% or more of a firm.

#### **2.1.3.4 Directors shareholding**

While shareholders are interested in maximizing their returns, managers are concerned with enhancing their personal wealth and their future career opportunities. This will result in a conflict of interest between shareholders and managers, as the former are interested in ensuring that their financial capital is not expropriated or invested in unprofitable projects (Jensen et al., 1976; Fama, 1980; Jensen, 1993). The expropriation may be manifest in three different ways: investment in projects that benefit the managers rather than the interests of the company, manipulation of transfer pricing and management entrenchment. Theoretically, the convergence of interest or the alignment of interest's hypothesis has been suggested as a mechanism to be used to align the interests between managers and shareholders. With regards to the alignment of interests from the agency theory perspective, Sappington, (1991) suggests that in order to align the interests of managers with shareholders it is important to create incentives for the managers to increase the value maximization. Jensen et al., (1976) state that the incentive of director/managerial ownership is expected to motivate agents to create total surplus, because as managerial ownership increases the interests of the shareholders and managers become more aligned, thus the incentive for opportunistic behavior decreases. In other words, the greater the stake managers have in the firm (i.e. share ownership), the greater the costs they will incur for not maximizing the wealth of shareholders. Hence, aligning the interests between principals and agents resolves for the agency problem and achieves the main goal of the shareholders, which is value maximization, consequently affecting firm performance positively. Shleifer & Vishny (1997) and Becht et al., (2003) stated that managers are not interested only in avoiding the agency problem, but are motivated by other reasons such as their career growth and their reputation. It is well known that managers should consider the importance of their

reputation and their image to protect it in order for any further opportunities to work in the future.

Different studies (e.g. Owusu-Ansah, 1998; Palia & Lichtenberg 1999; Weir et al., 2002; Krivogorsky, 2006; Kapopoulos & Lazaretou, 2007; Mangena & Tauringana, 2007; Bhagat & Bolton, 2008) reported a positive impact of the managerial ownership on firm performance. Owusu-Ansah (1998) in his study of a sample of 49 listed Zimbabwean firms in 1994 found that director ownership affects the mandatory disclosure positively. In addition, Mangena and Tauringana (2007) investigated the relationship between managerial ownership and firm performance measured by ROA and Tobin's Q for a sample of 72 listed Zimbabwean firms from 2002 to 2004. They reported a positive relationship. Their findings support the notion that as managerial ownership increased the interests of the shareholders and managers become more aligned, therefore it is more likely that the agency problem will be resolved which might affect the firm performance positively. However, some studies (e.g. De Angelo & De Angelo 1985; Haniffa & Hudaib, 2006; Ho and Williams, 2003; Lin, 2002; Sanda et al., 2005) found that managerial ownership negatively affects the firm performance. Lins (2000) provided evidence of the relationship between firm performance and management ownership across firms from 18 emerging markets. His results suggested that the separation of management ownership and control had a significant negative relation to value in countries with low shareholder protection. The final stream introduced by Dalton et al., (2003) and Sheu and Yang, (2005) reported that there is no relationship between director ownership and firm performance. In other words, the director ownership does not affect the firm performance. Consistent with agency theory view that managerial ownership is expected to align the interests of the shareholders with agents, thus reducing the agency problem and maximizing shareholders' wealth, leading to better firm performance. In this context, this study investigated the influence the managerial ownership on performance of listed firms in Nigeria

#### **2.1.2.5 Non-executive directors**

There are outside directors who are independent of the company. They are called independent directors because they have neither personal nor business relationships with the company (Ogbechie & Koufopoulos, 2014). In other words, non-executive is any director who is not a representative or member of the immediate family of a shareholder and who has no business relationship with the company for the past three years or more and who has the ability to control or significantly influence the board or management of the company. Non-executive

directors are usually chosen because they have appropriate caliber, skills and personal qualities, and breadth of experience. More so, non-executive directors may have some specialist knowledge that will help in provide the board with valuable insights or, key contacts in related industries that may contributed in improving the financial performance of such industries. In addition, one of the utmost importance's of non-executive directors is that they are independence of the management of the company and any of its interested parties. This means they can bring a degree of objectivity to the board's deliberations, and play a valuable role in monitoring executive management.

Furthermore, the presence of non-executive directors is generally believed to have provided better governance, effective monitoring, and quality performance. non-executive independent directors reduce firm performance and this negative effect was even more important during the recent financial crisis (Priya & Nimalathasan, 2013), as the non-executive independent directors prefer conservative business strategies in order to protect shareholders , but this behavior add more cost and lower firm's Numerous studies have evidenced that the proportion of non-executive independent directors is correlated to firm performance (Agrawal &Knoeber, 1996). This shows that companies with more non-executive independent directors tend to be more profitable than those with fewer non-executive independent directors. This also suggests that increasing the level of the proportion of non-executive independent directors should simultaneously increase firm performance as they are more effective monitors of managers (Adams& Mehran, 2003). Therefore, we expect positive financial performance of deposits money banks in Nigeria with the presence of non-executive independent directors. Non-executive directors are associated with the responsibility for monitoring managers and thereby reducing agency costs that arise from the separation of ownership and control in day-to-day company management.

The importance of non-executive and independent directors is underscored by CBN code of corporate governance that stipulates that the number of non-executive directors on the board of banks should be more than those of executive directors and that at least two (2) non-executive board members should be independent directors (who do not represent any particular shareholder interest and hold no special business interest with the bank), (CBN, 2006). Thus, higher proportions of independent and non-executive directors on boards are expected to induce a more effective monitoring function, which then leads to more reliable financial statements. This is due to the incentive for non-executive and independent board

members to develop reputations as experts in decision-making (Fama & Jensen, 2005) and to provide an unbiased assessment of a managements actions. Their study explored board independence based on the agency theory.

## **2.2 Theoretical Review**

Corporate governance is central to the management and operation of modern companies, and there is an ongoing debate about which theoretical models are appropriate (Letza, Sun & Kirkbride, 2004). However, a lack of consensus in the definition of corporate governance has resulted in researchers from different backgrounds (finance, economics, sociology and psychology) proposing different theoretical views that are all aimed at understanding the complex nature of the concept (Lawal, 2012). A number of diverse fundamental theories underline corporate governance, including the original agency theory, stewardship theory, stakeholder theory, resource dependency theory, transaction cost theory and political theory (Abdullah & Valentine, 2009).

Our discussions on corporate governance theories will be focused on the agency theory and the stewardship theory perspectives.

### **2.2.1 Stewardship Theory**

*“A steward protects and maximizes shareholders wealth through firm performance, because, by so doing, the steward’s utility functions are maximized”* (Davis, Schoorman and Donaldson, 1997:25 cited in Cullen, Kirwan and Brennan, 2006:13). The stewardship perspective suggests that the attainment of organizational success also satisfies the personal needs of the steward. The steward identifies greater utility accruing from satisfying organizational goals than through self-serving behavior. Stewardship theory recognizes the importance of structures that empower the steward, offering maximum autonomy built upon trust. This minimizes the cost of mechanisms aimed at monitoring and controlling behaviors (Davis, Schoorman and Donaldson, 1997).

Daily, Dalton & Canella (2003) contend that in order to protect their reputations as expert decision makers, executives and directors are inclined to operate the firm in a manner that maximizes financial performance indicators, including shareholder returns, on the basis that the firm’s performance directly impacts perceptions of their individual performance. According to Fama (1980), in being effective stewards of their organization, executives and directors are also effectively managing their own careers. Similarly, managers return finance

to investors to establish a good reputation, allowing them to re-enter the market for future finance (Shleifer and Vishny, 1997).

Muth and Donaldson (1998) described stewardship theory as an alternative to agency theory which offers opposing predictions about the structuring of effective boards. While most of the governance theories are economic and finance in nature, the stewardship theory is sociological and psychological in nature. The theory as identified by Sundara-Murthy and Lewis (2003) gives room for misappropriation of owners' fund because of its board structure i.e. insiders and the chairman/CEO duality role.

Whereas agency theorists view executives and directors as self-serving and opportunistic, stewardship theorists, reject agency assumptions, suggesting that directors frequently have interests that are consistent with those of shareholders. Donaldson and Davis (1991) suggest an alternative "model of man" where "organizational role-holders are conceived as being motivated by a need to achieve and gain intrinsic satisfaction through successfully performing inherently challenging work, to exercise responsibility and authority, and thereby to gain recognition from peers and bosses" (Donaldson & Davis, 1991, p.51). They observed that where managers have served a corporation for a number of years, there is a "merging of individual ego and the corporation" (Donaldson & Davis, 1991, p.51). Equally, managers may carry out their role from a sense of duty. Citing the work of Silverman (1970), Donaldson and Davis argued that personal perception motivates individual calculative action by managers, thus linking individual self-esteem with corporate prestige. Davis, Schoorman and Donaldson, (1997) argued that a psychological and situational review of the theory is required to fully understand the premise of stewardship theory. Stewardship theory holds that there is no inherent, general problem of executive motivation (Cullen, Kirwan & Brennan, 2006). This would suggest that extrinsic incentive contracts are less important where managers gain intrinsic satisfaction from performing their duties.

### **2.2.3 Agency Theory**

In its simplest form, agency theory explains the agency problems arising from the separation of ownership and control. It "*provides a useful way of explaining relationships where the parties' interests are at odds and can be brought more into alignment through proper monitoring and a well-planned compensation system*" (Davis, Schoorman & Donaldson, 1997:24). In her assessment and review of agency theory, Eisenhardt (1989) outlines two streams of agency theory that have developed over time: Principal-agent and positivist.

- **Principal-agent relationship:** Principal-agent research is concerned with a general theory of the principal-agent relationship, a theory that can be applied to any agency relationship e.g. employer employee or lawyer-client. Eisenhardt describes such research as abstract and mathematical and therefore less accessible to organizational scholars. This stream has a greater interest in general theoretical implications than the positivist stream.
- **Agency theory and the firm: a positivist perspective:** Positivist researchers have tended to focus on identifying circumstances in which the principal and agent are likely to have conflicting goals and then describe the governance mechanisms that limit the agent's self-serving behavior (Eisenhardt, 1989). This stream has focused almost exclusively on the principal-agent relationship existing at the level of the firm between shareholders and managers. For example, Jensen and Meckling (1976), who fall under the positivist stream, propose agency theory to explain, inter alia, how a public corporation can exist given the assumption that managers are self-seeking individuals and a setting where those managers do not bear the full wealth effects of their actions and decisions.

The agency theory has its roots in economic theory and it dominates the corporate governance literature. Daily, Dalton & Canella (2003), point to two factors that influence the prominence of agency theory. Firstly, the theory is a conceptually simple one that reduces the corporation to two participants, managers and shareholders. Secondly, the notion of human beings as self-interested is a generally accepted idea.

### **2.2.3.1 Agency Problem:**

Eisenhardt (1989 p.58) explains that the agency problem arises when “(a) *the desires or goals of the principal and agent conflict and (b) it is difficult or expensive for the principal to verify what the agent is actually doing*”. The problem is that the principal is unable to verify that the agent is behaving appropriately.

Shleifer and Vishny (1997) explain the agency problem in the context of an entrepreneur, or a manager, who raises funds from investors either to put them to productive use or to cash out his holdings in the firm. They explain that while the financiers need the manager's specialized human capital to generate returns on their funds, the manager, since he does not have enough capital of his own to invest or to cash in his holdings, needs the financier's funds. But how can financiers be sure that, once they sink their funds, they get anything back

from the manager? Shleifer and Vishny further explained that the agency problem in this context refers to the difficulties financiers have in assuring that managers do not expropriate funds and/or waste them on unattractive projects.

Drawing on the work of Jensen and Meckling (1976), Fama and Jensen (1983) seek to explain the survival of organizations characterized by the separation of ownership and control and to identify the factors that facilitate this survival. Their paper is concerned with the survival of organizations in which important decision agents do not bear a substantial share of the wealth effects of their decisions.

### **2.2.5 Agency Relationships in the Context of the Firm**

The agency relationship explains the association between providers of corporate finances and those entrusted to manage the affairs of the firm. Jensen and Meckling (1976, p.308) define the agency relationship in terms of “*a contract under which one or more persons (the principal(s) engage another person (the agent) to perform some service on their behalf which involves delegating some decision-making authority to the agent*”.

Agency theory supports the delegation and the concentration of control in the board of directors and use of compensation incentives. The board of directors monitor agents through communication and reporting, review and audit and the implementation of codes and policies.

### **2.2.7 Summary of the Theory**

In summary, under the dominant paradigm, the agency relationship between shareholders (principals) and managers (agents) is thwarted by conflict. The agency problem arises primarily from the principals’ desire to maximize shareholder wealth and the self-interested agents attempt to expropriate funds. Contracts partly solve this misalignment of interest. In a complex business environment, contracts covering all eventualities are not attainable. Where contracts fail to achieve completeness, principles rely upon internal and external governance mechanisms to monitor and control the agent. Writing and enforcing contracts and the operation of governance mechanisms give rise to agency costs. Further, the inherent residual loss, arising when the agent does not serve to maximize shareholder wealth, adds to the agency costs.

The agency theory, posit that the control function of an organization is primarily exercised by the board of directors. With regard to the board as a governance mechanism, the issues that appear most prominent in the literature are board composition (in particular board size, inside

versus outside directors and the separation of CEO and chair positions) and the role and responsibilities of the board (Biserka, 2007)

In relation to the research objectives, this study will adopt the agency theory because, it focuses on the board of directors as a mechanism which dominates the corporate governance literature. The theory, further explain the association between providers of corporate finances and those entrusted to manage the affairs of the firm. This is also in accordance to the works of Ross (1973); Fama (1980); Sanda, Mukaila and Garba (2003) and Anderson, Becher and Campbell (2004).

## **2.3 Theoretical Expositions**

### **2.3.1 Historical Overview of Corporate Governance**

The foundational argument of corporate governance, as seen by both academics as well as other independent researchers, can be traced back to the pioneering work of Berle and Means (1932). They observed that the modern corporations having acquired a very large size could create the possibility of separation of control over a firm from its direct ownership. Berle and Means' observation of the departure of the owners from the actual control of the corporations led to a renewed emphasis on the behavioral dimension of the theory of the firm. Governance is a word with a pedigree that dates back to Chaucer. In his days, it carries with it the connotation "wise and responsible", which is appropriate. It means either the action or the method of governing and it is in the latter sense that it is used with reference to companies. Its Latin root, "*gubernare*" means to steer and a quotation which is worth keeping in mind in this context is: 'He that governs sits quietly at the stern and scarce is seen to stir' (Cadbury, 1992:3). Though corporate governance is viewed as a recent issue but nothing is new about the concept because, it has been in existence as long as the corporation itself (Imam, 2006). Over centuries, corporate governance systems have evolved, often in response to corporate failures or systemic crises. The first well-documented failure of governance was the South Sea Bubble in the 1700s, which revolutionized business laws and practices in England. Similarly, much of the security laws in the United States were put in place following the stock market crash of 1929. There has been no shortage of other crises, such as the secondary banking crisis of the 1970s in the United Kingdom, the U.S. savings and loan debacle of the 1980s, East-Asian economic and financial crisis in the second half of 1990s (Flannery, 1996). In addition to these crises, the history of corporate governance has also been punctuated by a series of well-known company failures: the Maxwell Group raid on the



pension fund of the Mirror Group of newspapers, the collapse of the Bank of Credit and Commerce International, Baring Bank and in recent times global corporations like Enron, WorldCom, Parmalat, Global Crossing and the international accountants, Andersen (La Porta, Lopez and Shleifer 1999). These were blamed on a lack of business ethics, shady accountancy practices and weak regulations. They were a wake-up call for developing countries on corporate governance. Most of these crisis or major corporate failure, which was a result of incompetence, fraud, and abuse, was met by new elements of an improved system of corporate governance (Iskander and Chamlou, 2000).

### **2.3.2 Corporate Governance and Banks**

Corporate governance is a crucial issue for the management of banks, which can be viewed from two dimensions. One is the transparency in the corporate function, thus protecting the investors' interest (reference to agency problem), while the other is concerned with having a sound risk management system in place (special reference to banks) (Jensen and Meckling, 1976).

The Basel Committee on Banking Supervision (1999) states that from a banking industry perspective, corporate governance involves the manner in which the business and affairs of individual institutions are governed by their boards of directors and senior management. This thus affect how banks:

- i) Set corporate objectives (including generating economic returns to owners);
- ii) Run the day-to-day operations of the business;
- iii) Consider the interest of recognized stakeholders;
- iv) Align corporate activities and behavior with the expectation that banks will operate in safe and sound manner, and in compliance with applicable laws and regulations; and protect the interests of depositors.

The Committee further enumerates basic components of good corporate governance to include:

- a) the corporate values, codes of conduct and other standards of appropriate behavior and the system used to ensure compliance with them;
- b) a well-articulated corporate strategy against which the success of the overall enterprise and the contribution of individuals can be measured;

- c) the clear assignment of responsibilities and decision making authorities, incorporating hierarchy of required approvals from individuals to the board of directors;
- d) establishment of mechanisms for the interaction and cooperation among the board of directors, senior management and auditors;
- e) strong internal control systems, including internal and external audit functions, risk management functions independent of business lines and other checks and balances;
- f) special monitoring of risk exposures where conflict of interests are likely to be particularly great, including business relationships with borrowers affiliated with the bank, large shareholders, senior management or key decisions makers within the firm (e.g. traders);
- g) the financial and managerial incentives to act in an appropriate manner, offered to senior management, business line management and employees in the form of compensation, promotion and other recognition;
- h) Appropriate information flows internally and to the public.

On a theoretical perspective, corporate governance has been seen as an economic discipline, which examines how to achieve an increase in the effectiveness of certain corporations with the help of organizational arrangements, contracts, regulations and business legislation. It is not a disputed fact that banks are crucial element to any economy; this therefore demands that they have strong and good corporate governance if their positive effects were to be achieved (Basel Committee on Banking Supervision, 2003). King and Levine (1993) and Levine (1997) emphasized the importance of corporate governance of banks in developing economies and observed that: first, banks have an overwhelmingly dominant position in the financial system of a developing economy and are extremely important engines of economic growth. Second, as financial markets are usually underdeveloped, banks in developing economies are typically the most important source of finance for majority of firms. Third, as well as providing a generally accepted means of payment, banks in developing countries are usually the main depository for the economy's savings.

Banking supervision cannot function if there does not exist what Hettes (2002) calls “correct corporate governance” since experience emphasizes the need for an appropriate level of responsibility, control and balance of competences in each bank. Hettes explained further on this by observing that correct corporate governance simplifies the work of banking

supervision and contributes towards corporation between the management of a bank and the banking supervision authority.

Crespi, Cestona and Salas (2002) contend that corporate governance of banks refers to the various methods by which bank owners attempt to induce managers to implement value-maximizing policies. They observed that these methods may be external to the firm, as the market for corporate control or the level of competition in the product and labor markets and that there are also internal mechanisms such as a disciplinary intervention by shareholders (what they refer to as proxy fights) or intervention from the board of directors. Donald Brash the Governor of the Reserve Bank of New Zealand when addressing the conference for Commonwealth Central Banks on Corporate Governance for the Banking Sector in London, June 2001 observed that:

Improving corporate governance is an important way to promote financial stability. The effectiveness of a bank's internal governance arrangements has a very substantial effect on the ability of a bank to identify, monitor and control its risks. Although banking crises are caused by many factors, some of which are beyond the control of bank management, almost every bank failure is at least partially the result of mis-management within the bank itself. And mis-management is ultimately a failure of internal governance. Although banking supervision and the regulation of banks' risk positions can go some way towards countering the effects of poor governance, supervision by some external official agency is not a substitute for sound corporate governance practices. Ultimately, banking risks are most likely to be reduced to acceptable levels by fostering sound risk management practices within individual banks. An instilling sound corporate governance practice within banks is a crucial element of achieving this.

Carse, Deputy Chief Executive of the Hong Kong Monetary Authority, also observed in 2000 that:

*Corporate governance is of course not just important for banks. It is something that needs to be addressed in relation to all companies' ... sound corporate governance is particularly important for banks. The rapid changes brought about by globalization, deregulation and technological advances are increasing the risks in banking systems. Moreover, unlike*

*other companies, most of the funds used by banks to conduct their business belong to their creditors, in particular to their depositors. Linked to this is the fact that the failure of a bank affects not only its own stakeholders, but may have a systemic impact on the stability of other banks. All the more reason therefore is to try to ensure that banks are properly managed.*

#### **2.3.4 Elements of Corporate Governance in Banks**

Different authors and management specialists have argued that corporate governance requires laid down procedures, processes, systems and codes of regulation and ethics that ensures its implementation in organization (Altunbas, Evans and Molyneux, 2001). Some suggestions that have been underscored in this respect include the need for banks to set strategies which have been commonly referred to as corporate strategies for their operations and establish accountability for executing these strategies. El-Kharouf (2000), while examining strategy, corporate governance and the future of the Arab banking industry, pointed out that corporate strategy is a deliberate search for a plan of action that will develop the corporate competitive advantage and compounds it.

In addition to this, the BCBS (1999) contends that transparency of information related to existing conditions, decisions and actions is integrally related to accountability in that it gives market participants sufficient information with which to judge the management of a bank. The Committee advanced further that various corporate governance structures exist in different countries hence, there is no universally correct answer to structural issues and that laws do not need to be consistent from one country to another. Sound governance therefore, can be practiced regardless of the form used by a banking organization. The Committee therefore suggests four important forms of oversight that should be included in the organizational structure of any bank in order to ensure the appropriate checks and balances. They include:

- 1) oversight by the board of directors or supervisory board;
- 2) oversight by individuals not involved in the day-to-day running of the various business areas;
- 3) direct line supervision of different business areas, and;
- 4) Independent risk management and audit functions.

In summary, they demonstrate the importance of key personnel being fit and proper for their jobs and the potentiality of government ownership of a bank to alter the strategies and objectives of the bank as well as the internal structure of governance hence, the general principles of sound corporate governance are also beneficial to government-owned banks. The concept of good governance in banking industry empirically implies total quality management, which includes six performance areas (Klapper and Love, 2002). These performance areas include capital adequacy, assets quality, management, earnings, liquidity, and sensitivity risk. Klapper and Love argued that the degree of adherence to these parameters determines the quality rating of an organization.

### **2.3.5 Regulation and Supervision as Elements of Corporate Governance in Banks**

In most instances, it has been argued that given the special nature of banks and financial institutions, some forms of economic regulations are necessary. However, there is a notable shift from such regulations, which have always been offered by governments over time in different economies all over the world. As observed by Arun and Turner (2002e), over the last two decades, many governments around the world have moved away from using economic regulations towards using prudential regulation as part of their reform process in the financial sector. They noted that prudential regulation involves banks having to hold capital proportional to their risk-taking, early warning systems, bank resolution schemes and banks being examined on an on-site and off-site basis by banking supervisors. They asserted that the main objective of prudential regulation is to safeguard the stability of the financial system and to protect deposits.

However, Brown (2004) observed that the prudential reforms already implemented in developing countries have not been effective in preventing banking crises, and a question remains as to how prudential systems can be strengthened to make them more effective. Barth, Caprio and Levin (2001) argued that there have been gray areas in the ability of developing economies to strengthen their prudential supervision and questions have been raised on this issue for several reasons:

1. It is expected that banks in developing economies should have substantially higher capital requirements than banks in developed economies. However, many banks in developing economies find it very costly to raise even small amounts of capital due to the fear of fund mismanagement by shareholders.

2. There are not enough well trained supervisors in developing economies to examine banks.
3. Supervisory bodies in developing economies typically lack political independence, which may undermine their ability to coerce banks to comply with prudential requirements and impose suitable penalties.
4. prudential supervision completely relies on accurate and timely accounting information

However, in many developing economies, accounting rules, if they exist at all, are flexible, and typically, there is a paucity of information disclosure requirements.

Barth et al. further argued that if a developing economy liberalizes without sufficiently strengthening its prudential supervisory system, bank managers would find it easier to expropriate depositors and deposit insurance providers. A prudential approach to regulation will typically result in banks in developing economies having to raise equity in order to comply with capital adequacy norms. They maintained the argument that prior to developing economies deregulating their banking systems, much attention will need to be paid to the speedy implementation of robust corporate governance mechanisms in order to protect shareholders.

In an earlier discourse, Arun and Turner (2002a) argued that in developing economies, the introduction of sound corporate governance principles into banking has been partially hampered by poor legal protection, weak information disclosure requirements and dominant owners. They observed further that in many developing countries, the private banking sector is not enthusiastic to introduce corporate governance principles due to the ownership control.

Besides control mechanisms in banks, supervision of banks is another concept that can have both positive and negative impact on the performance of banks. The Basel Committee on Banking Supervision (1999) upheld that banking supervision cannot function as well if sound corporate governance is not in place and, consequently, banking supervisors have strong interests in ensuring that there is effective corporate governance at every banking organization. They added that supervisory experience underscores the necessity of having the appropriate levels of accountability and checks and balances within each bank and that, sound corporate governance makes the work of supervisors infinitely easier. Sound corporate governance therefore can contribute to a collaborative working relationship between management and bank supervision.

It is clear that the development of corporate governance in banking requires that one understand how regulation affects the principal's delegation of decision making authority and what effects this has on the behavior of their delegated agents (Coleman and Nickolas-Biekpe, 2006). They further suggest that regulation has at least four effects on the principle regulation of decision-making:

- a. The existence of regulation implies the existence of an external force, independent of the market, which affects both the owner and the manager.
- b. If the market, in which banking firms act is regulated, one can argue that the regulations aimed at the market implicitly create an external governance force on the firm.
- c. The existence of both the regulator and regulations implies that the market forces will discipline both managers and owners in a different way than that in unregulated firms.
- d. In order to prevent systemic risk, such as lender of last resort, the current banking regulation means that a second and external party is sharing the banks' risk.

From the above, the external forces affecting corporate governance in banks include not only distinctive market forces but also regulation. The truth about bank regulation is that governance in banks must be concerned with not only the interests of owners and shareholders but with the public interest as well. Additionally, regulation and its agent (the regulator) have a different relationship to the firm than the market, bank management or bank owners.

However, as observed in the banking firm, there exists another interest; that of the regulator acting as an agent for the public interest. This interest exists outside of the organization and is not necessarily associated, in an immediate and direct way, to maximization of bank profits. The mere existence of this outside interest will have a profound effect on the construction of interests internal to the firm (Freixas and Rochet, 2003). Thus, because the public interest plays a crucial role in banking, pursuit of interests internal to the firm requires individual banks to attend to interests external to the firm. This implies a wider range of potential conflict of interests than is found in a non-bank corporation. In bank corporations, the agent respond not only to the owner's interest, but also to the public interest expressed by regulation through administrative rules, codes, ordinances, and even financial prescriptions.

In summary, the theory of corporate governance in banking requires consideration of the following issues:

- Regulation as an external governance force separate and distinct from the market

- Regulation of the market itself as a distinct and separate dimension of decision making within banks
- Regulation as constituting the presence of an additional interest external to and separate from the firm's interest
- Regulation as constituting an external party that is in a risk sharing relationship with the individual bank firm.

Therefore, theories of corporate governance in banking, which ignores regulation and supervision, will misunderstand the agency problems specific to banks. This may lead to prescriptions that amplify rather than reduce risk. In Nigeria, the regulatory functions, which is directed at the objective of promoting and maintaining the monetary and price stability in the economy is controlled by the Central Bank of Nigeria while the supervisory bodies are Nigeria Deposit Insurance Corporation and the Central Bank of Nigeria (CBN, 2006) . In other words, if one accepts that regulation affects the banking sector in an important way, one must also accept the fact that this has important implications for the structure and dynamics of the principal agent relationship in banks.

## **2.4 Empirical Studies**

This section reviews past works that have tried to validate empirically the relationship that exists between measures of corporate governance and firm performance. Several mechanisms of corporate governance identified in the literature have influencing firm performance. Given below are some of these mechanisms along with their direction of effect on firm performance.

### **2.4.1 Corporate Governance Mechanisms and Return on Assets**

Rostami, Rostami, and Kohansal (2016) investigated the effect of corporate governance components on return on assets and stock return of companies listed in Tehran Stock Exchange. 469 firm year observations were collected using systematic sampling technique for a period of seven years. Six internal components of a corporate governance system such as ownership concentration, institutional ownership, Board independence, Board size, CEO duality and CEO tenure were used as independent variables while return on assets and stock return, as the firm financial performance evaluation criteria, were dependent variables. The control variables of this study were the market value of the equity and the ratio of book value to market value of the equity. The results, which were based on estimated generalized least square method, indicated that there is a significant positive relationship



between ownership concentration; Board independence; CEO duality; CEO tenure and return on assets. On the other hand, there is a significant negative relationship between institutional ownership; Board size and return on assets. Besides there is a significant positive relationship between institutional ownership Board independence; CEO duality; CEO tenure and stock return. However, there is a significant negative relationship between ownership concentration and Board size with stock return.

Nidhi and Anil, (2016) examined the role of audit committee characteristics (independence and frequency of meetings) in addition with other components of corporate governance (duality, promoter shareholding, board composition, and board size) in improving firm performance. Fixed effect panel data regression was applied on 235 non-financial public limited companies listed in NSE 500. The time period considered was ten years (2004 to 2013). Return on Assets and Market Capitalization were used as proxies of firm performance. Results reveal significant positive association of board size and CEO-Chairman dual role with firm performance measured by return on assets. However, findings did not reveal any additional effect of audit committee independence and its meeting frequency on the financial performance of Indian firms. Regulators and policy makers may re-examine the significance of greater independence of board and audit committee in context of firm performance.

Rao and Desta, (2016) studied the effect of corporate governance on financial performance of Ethiopian commercial banks. The annual reports of the sampled commercial banks were the sources of data. The proxy used for financial performance was return on asset. Content analysis was applied to determine the level of disclosure using un-weighted checklist. Accordingly, the level of disclosure practice was measured by the ratio of disclosure score of commercial banks to their total obtainable scores. In addition, correlation and regression analyses were used to determine the relation between corporate governance and financial performance. The results indicated that disclosure practice, board size, board gender diversity and ownership type have no significant impact on the financial performance of Ethiopian commercial banks. However, asset size and capital structure have positive significant effect on the return on assets.

Hussain, Ashfaq, and Muhammad, (2016) assessed corporate governance structure by using the data of 80 non-financial firms listed on Karachi Stock Exchange Pakistan during 2010 to 2014. Hypotheses of the study were tested by using both descriptive and inferential statistics. The findings indicate that board size and audit committee is positively related to the firm performance (ROA). In contrast, board composition and CEO duality are negatively related to the firm performance (ROA). As far as controlling variables is concerned, leverage

is negative, whereas firm size is positively related to all measures of performance. Empirical findings concluded that corporate governance practices affect the firm performance. Therefore, it is suggested that managers should understand the governance mechanisms to work more efficiently in the firm.

Dabor, Isiavwe and Ajagbe, (2015) evaluated the impact of corporate governance on firm performance of selected companies quoted on the Nigerian stock exchange. A sample of 248 companies was selected employing simple random sampling technique. The researchers used the econometrics analysis software E-views 7.0 to analyze the data. Return on assets was used as the proxy for firm performance while board size, board independence, board gender diversity and ownership structure were variables used for measuring corporate governance. The results reveal that there is significant negative relationship between board size and firm financial performance measured by ROA. Board independence, ownership structure and board gender diversity do not have significant impact on firm performance. The study suggests that statutory bodies should enact laws that will mandate all firms to maintain small board size.

Bebeji, Muhammed and Tanko, (2015) examined the effects of board size and board composition on the performance of Nigerian banks. The financial statements of five banks were used as a sample for the period of nine years and the data collected were analyzed using the multivariate regression analysis. The paper found that board size has significant negative impact on the performance of banks in Nigeria. This signified that an increase in Board size would lead to a decrease in ROA. On the other hand, board composition has a significant positive effect on the performance of banks in Nigeria. This showed that an increase in board composition led to a increase in ROA. It is recommended that banks should have adequate board size to the scale and complexity of the organization's operations and be composed in such a way as to ensure diversity of experience without compromising independence, compatibility, integrity and availability of members to attend meetings. The board size should not be too large and must be made up of qualified professionals who are conversant with oversight function. The Board should comprise of a mix of executive and non-executive directors, headed by a Chairman.

Mule and Mukras, (2015) assessed the relationship between financial leverage and the financial performance of listed firm in Kenya. They use annual data for the period 2007 to 2011. Various panel procedures were used. The study found reasonably strong evidence that financial leverage significantly and negatively affects the performance of listed firms in Kenya using ROA,

Assefa and Megbaru, (2014) examined the effect of corporate governance structure on financial performance of firms. They used return on asset and operating profit margin as dependent variables; board size, board independence, frequency of board meetings, audit committee and board ownership as independent indicators, and financial leverage and firm growth rate were used as control variables. The researchers used both correlation analysis and pooled panel data with cross-sectional nature. The econometric regression result showed that board size is negatively and significantly associated to the indicators of financial performance: gauged by return on asset and operating profit margin. Both board independence and board ownership have positive relationships and significant effects on the two indicators of commercial banks financial performance. The result shows that audit committee is negatively and significantly correlated to return on asset with negative and insignificant impact on operating profit margin. Frequency of board meeting remains positive in terms of its direction of connection and immaterial in its affiliation with the two financial performance indicators of commercial banks under investigation.

Almatari, (2014) investigated the relationship between the corporate governance mechanisms (board of director's characteristics, the audit committee characteristics, and the executive committee) and the performance of listed companies in Oman for the year 2008 to 2012. The study was based on agency and the resource dependence theories. Data were gathered from the annual reports of 78 non-financial listed firms while panel data methodology was adopted for the analysis. Independent variables used were firm size, leverage, industry and years of establishment as control variables. Random effect model was used to examine the effect of the predictors on the firm performance indicators measured by Return on Assets. The secretary role, leverage and time period (2011) were negative predictors of ROA. From the practical and the theoretical contribution points of view, this study indicate that the resource dependence theory is more significant compared to the agency theory when describing corporate governance practices in Oman.

Amer, (2014) examined the relationship between corporate governance and firm performance of companies listed in Abu Dhabi Stock Exchange. The dataset was drawn from the Abu Dhabi Exchange Shareholding Company's guide for years 2007 to 2011. The study used pooled regression analysis on 281 firm/year observations. Return on Assets (ROA), was used as measure of firm performance while independent variables included institutional ownership, governmental ownership, board size, and audit quality. The study controlled for the relationship between the dependent and independent variables by including firm size, debt

ratio, dividend yield, and age of the firm. Results showed significant positive impact of corporate governance measures on firm performance (except for Audit quality).

Wanyama and Olweny, (2013) examined the linkage between corporate governance mechanism measured by board size, board composition, CEO duality and leverage and how they affect the financial performance of listed insurance Companies in Kenya. Firm performance was measured by Return on Assets (ROA). This study adopted a descriptive research design. The study population was all those insurance Companies which were quoted on the Nairobi Securities Exchange as at December 2012. The primary data were collected through the administration of questionnaires to the staff in those listed insurance firms. Stratified random sampling technique was used to obtain the sample staff for the purpose of administering questionnaires. In addition secondary data were collected using documentary information from Company annual accounts for the period 2007 to 2011. Reliability test was carried out using Cronbach's alpha model. Both descriptive and inferential statistics were used. Data was analyzed using a multiple linear regression model. The study found that board size was found to negatively affect the financial performance of insurance companies listed at the NSE. There was a positive relationship between board composition and firm financial performance. However, the most critical aspect of board composition was the experience, skills and expertise of the board members as opposed to whether they were executive or non-executive directors. Similarly, leverage was found to positively affect financial performance of insurance firms listed at the NSE. On CEO duality, the study found that separation of the role of CEO and Chair positively influenced the financial performance of listed insurance firms.

Cheema and Muhammad, (2013) assessed the relationship between the corporate governance variables and firm financial performance in Cement industry of Pakistan. This study gave attention to three variables which include board Size, Family controlled firms, and CEO duality. Firm's performance is measured through return on assets, and earnings per share, debt to equity and current ratio. It revealed that family own cement firms have high profitability and high earnings per share as compared to non-family cement industries. Similarly board size showed significant results. It showed that board size affect the performance of firms. Hence their hypothesis of negative relation of board size to firm performance was rejected. It revealed that board size has positive relation with cement industry performance in Pakistan.

Danoshana and Ravivathani, (2013) investigated the impact of corporate governance mechanisms on the performance of listed financial institutions in Sri Lanka as main objective

and recommend a suitable corporate governance practices for improving performance of listed financial institutions. The researchers used Return on assets as the key variable that defined the performance of the firm. On the other hand, board size, meeting frequency and audit committee of the company were used as variables to measure the corporate governance. Twenty five listed financial institutions were selected as sample size for the sample period of 2008 to 2012. The data were collected through the secondary sources. According to the analysis, variables of corporate governance (board size and audit committee size) have significant positive impact on firm's performance. However, meeting frequency has negative impact on firm's performance.

Manawaduge and Anura, (2013) examined the impact of ownership concentration and structure on the performance of public listed firms in Sri Lanka. For this purpose, they carried out an analysis based on a regression model using pooled data for a sample of 157 Sri Lankan public listed firms for nine years period between 2000 and 2008. This study provided useful information on the relationship between various ownership concentration and structure measures and their influence on both accounting and market performance. Empirical findings indicated that a significant relationship exists between ownership concentration, measured by three largest shareholders (SH3) and the accounting performance measure ROA. The Herfindahl (HERF) index also has positive and significant impact on ROA. This result suggested that a greater concentration of shares lead to either effective monitoring of management behavior or larger internal ownership which results in better performance. However, ownership concentration did not show any significant effect on market-based performance measures, which points to the existence of market anomalies and inefficiencies which are common to most emerging markets such as Sri Lanka's.

Hassan and Halbouni, (2013) investigated the effect of corporate governance mechanisms on the financial performance of the United Arab Emirates (UAE) listed firms. 95 UAE listed firms affiliated to financial and non-financial sectors were selected. Relationship corporate governance mechanisms used were voluntary disclosure, CEO duality, board size, board committee and audit type while control variables adopted were firm size, industry type, firm listing years and leverage. Secondary data were collected from published accounts of the selected firm for year 2008. Accounting-based measure of return on assets (ROA) and return on equity (ROE) were employed to measure the UAE firms' performance. Findings revealed that voluntary disclosure, CEO duality and board size are significantly influencing the UAE (ROA) and ROE.

Akhtar, Benish and Haleema, (2012) investigated the relationship between the financial leverage and the financial performance of the fuel and energy sector in Pakistan. The paper also examines the generalization that firms with higher profitability may choose high leverage by using various statistical tools. The findings of the study show a positive relationship between the financial leverage and the financial performance of the companies by accepting the alternate hypothesis H1 and H0 is rejected. Data were collected from the relevant annual reports of public limited companies registered on the Karachi Stock Exchange (KSE) (2000 to 2005) and statistics provided by State bank of Pakistan. The financial performance measured key indicators commonly used such as return on assets; dividend cover ratio; dividend ratio to equity; net profit margin; earning per share before tax; earning per share after tax; sales as percentage of total assets and earning per share before tax growth as a percentage of sales growth. On the other hand the independent variables, financial leverage engaged the key leverage indicators commonly used including the gearing ratio, debt equity ratio and debt equity ratio. The results of the study confirmed that the firms having higher profitability may improve their financial performance by having high levels of financial leverage. The study provided evidence by evaluating different facts. It revealed that the players of the fuel and energy in Pakistan can improve at their financial performance by employing the financial leverage and can arrive at a sustainable future growth by making vital decisions about the choice of their optimal capital structure.

Zied, (2012) investigated the impact of the presence of audit committees on the financial performance of Tunisian companies. 26 Tunisian firms listed on the Tunis Stock Exchange over a period which lasts 4 years (2007 to 2010) were selected. He found that the independence of the audit committee has a significant effect on financial performance of firms measured by ROA. He recommended for at least a member of the audit committee with a professional accounting certificate or a related field or with experience in accounting or finance in order to improve the financial performance of companies in Tunisia.

Rashid, De Zoysa, Lodh & Rudkin, (2010) examined the influence of corporate board composition in the form of representation of outside independent directors on firm economic performance in Bangladesh. A linear regression analysis was used to test the hypotheses. The result showed that the outside independent directors cannot influence firms' economic performance. The results also confirmed that board size has a significant negative explanatory power in influencing firms' performance under the ROA and ROE measures of performance, This is indicative of information asymmetries between inside and outside

directors. The results also showed that the firm size has a significant positive explanatory power in determining firm's performance in the ROA measure.

Olowookere (2008) investigated the impact of corporate governance on firm financial and productivity performance as well as comparing the effect of corporate governance on performance (financial and productivity) of the Nigerian listed firms before and after the release of the code of corporate governance in 2003. He utilized data for 64 non-financial firms listed on the first tier securities market of the Nigerian Stock Exchange for the period 2002 to 2006. Panel regression estimates show that block holding and Debt have significant positive association with ROA whereas audit membership independence and size have significant inverse relation

Zeitun and Tian (2007) studied the relationship between ownership structure and concentration and firm performance in Jordanian publicly traded firms for a sample of 59 firms' from 1989 to 2002. They found that there is a significant relation between ownership concentration C5 (the percentage of the first five largest shareholders) and the accounting performance measure ROA. Secondly, the HERF is not significant at any level of significance in any measure of performance. The insignificance of the Herfindahl (HERF) index showed that there could be a nonlinear relationship between ownership concentration and a firm's performance. Thirdly, they also found that there is a negative significant relation between government ownership and a firm's accounting performance ROA.

Sanda, Mikailu & Garba (2005) examined the relationship between internal governance mechanisms and firm financial performance. They used pooled OLS regression analysis on panel data for the period 1996 to 1999 for a sample of 93 firms listed on the Nigerian Stock Exchange. They found that directors' shareholding has significant negative relation with return on assets.

Kiel and Nicholson (2002) examined the relationships between board composition and corporate performance in 348 of Australia's largest publicly listed companies and described the attributes of these firms and their boards. They found that, after controlling for firm size, board size is positively correlated with firm value ROA.

Eisenberg, Sundgren & Wells (1998) investigated larger board size and decreasing firm value in small firms in Finland with a sample of 785 healthy firms and 94 bankrupt firms. The sample of healthy firms is a random sample drawn from the database of Asiakastieto Oy, a Finnish credit bureau. They found negative correlation between board size and ROA extended to small firms with small boards in Finland. A finding supports the hypothesis that problems in communication and coordination can extend to smaller boards

and firms. It also suggests that agency problems at the levels faced by Fortune 500 companies are not a prerequisite to the existence of a board-size effect. The effect presence in small to medium size firms with small boards shows that board-size effects can exist even when there is less separation of ownership and control than in large firms this connotes that there is no optimal board size. And if there is an ideal board size, it is not effective in Finland. Firm's performance in Finland suggests that the ideal board size varies with firm size that is the higher the size of the firm the higher the likelihood of increases board size.

#### **2.4.2 Corporate Governance Mechanisms and Return on Equity**

Rao and Desta (2016) studied the effect of corporate governance on financial performance of Ethiopian commercial banks. The annual reports of the sampled commercial banks were the sources of data. The proxy used for financial performance was return on equity Content analysis was applied to determine the level of disclosure using un-weighted checklist. Accordingly, the level of disclosure practice is measured by the ratio of disclosure score of commercial banks to their total obtainable scores. In addition, correlation and regression analyses were used to determine the relation between corporate governance and return on equity. The results indicated that disclosure practice, board size, board gender diversity and ownership type have no significant impact on the financial performance of Ethiopian commercial banks. However, asset size and capital structure have significant effect on the return on equity.

Hussain, Ashfaq and Muhammad (2016) examined corporate governance structure by using the data of 80 non-financial firms listed on Karachi Stock Exchange Pakistan during 2010 to 2014. Hypotheses of the study were tested by using both descriptive and inferential statistics. The findings indicated that board size and audit committee is positively related to the firm performance ROE. In contrast, board composition and CEO duality are negatively related to the firm performance ROE. As far as controlling variables is concerned, leverage is negative, whereas firm size is positively related to ROE as measure of performance. Empirical findings concluded that corporate governance practices affect the firm performance. Therefore, it is suggested that managers should understand the governance mechanisms to work more efficiently in the firm.

Anca-Elena (2015) examined the impact of corporate governance variables on firms' financial performance. Influence of corporate governance variables size of the board, proportion of non-executive independent directors, directors' ownership, and directors' remuneration structure on firms' financial performance measured by return on equity (ROE) was researched using the firms traded in German index DAX30. Data were collected for five



years 2009 to 2013 from the audited annual reports of each company while panel regression analysis was used. He found that some of corporate governance variables do influence firms' performance. The number of directors on board has a negative impact on financial performance, while variables like board independence or executive directors' remuneration are positively correlated with firms' financial performance measured by return on equity.

Mule and Mukras (2015) investigated the relationship between financial leverage and the financial performance of listed firm in Kenya. They used annual data for the period 2007 to 2011. Various panel procedures were used. The study found that financial leverage has negative but insignificant effect on ROE

Bebeji, Muhammed and Tanko (2015) examined the effects of board size and board composition on the performance of Nigerian banks. The financial statements of five banks were used as a sample for the period of nine years and the data collected were analysed using the multivariate regression analysis. They find that board size has significant negative impact on the performance (ROE) of banks in Nigeria. This signified that an increase in Board size would lead to a decrease in ROE. On the other hand, board composition has a significant positive effect on the performance of banks in Nigeria. This shows that an increase in Board composition led to an increase in ROE. It is recommended that banks should have adequate board size to the scale and complexity of the organization's operations and be composed in such a way as to ensure diversity of experience without compromising independence, compatibility, integrity and availability of members to attend meetings. The board size should not be too large and must be made up of qualified professionals who are conversant with oversight function. The Board should comprise of a mix of executive and non-executive directors and headed by a Chairman.

Gupta and Newalka (2015) investigated the impact of corporate governance in the determination of firm performance. The simple random sampling method was adopted while choosing the sample firms. 30 companies were selected from those that were listed in National stock exchange as the sample of the study. The relationship between four Corporate Governance mechanisms (board size, chief executive status, annual general meeting and audit committee) and two firm performance actions return on equity (ROE) and market book value (MBV) were examined. They used two sets of secondary data (governance ratings and corporate profitability variables) over a period of five years from financial year 2010/11 to financial year 2014/15 in their analysis. The test applied was (Pearson Correlation and Multiple Regression analysis) to check the importance and dependency of the noted

variables. They found that all corporate governance mechanisms selected have positive impact on return on equity.

Dabor, Isiauwe and Ajagbe (2015) investigated the impact of corporate governance on firm performance of selected companies quoted on the Nigerian Stock Exchange. A sample of 248 companies was selected employing simple random sampling technique. The researchers used the econometrics analysis software E-views 7.0 to analyze the data. Return on equity was used as gauge for firm performance, while board size, board independence, board gender diversity and ownership structure were variables used for measuring corporate governance. The results revealed that there is significant negative relationship between board size and firm financial performance. Board independence, ownership structure while board gender diversity do not have significant impact on firm performance. The study suggested that statutory bodies should enact laws that will mandate all firms to maintain small board size.

Assefa and Megbaru (2014) examined the effect of corporate governance structure on financial performance of firms. They used return on equity and operating profit margin as dependent variables whereas board size, board independence, frequency of board meetings, audit committee and board ownership were used as independent indicators, and financial leverage and firm growth rate were used as control variables. The researchers used both correlation analysis and pooled panel data with cross-sectional nature. The econometric regression result showed that, board size is negatively and significantly associated to all the two indicators of financial performance: return on equity and operating profit margin. Both Board independence and Board ownership have positive relationships and significant effects on the two indicators of commercial banks financial performance. The result showed that audit committee negatively and significantly correlated to return on equity though with negative and insignificant impact on operating profit margin. Frequency of board meeting has positive impact on performance in terms of its direction of connection and immaterial in its affiliation with the two financial performance indicators of commercial banks under investigation.

Muhammad, Rashid and Malik (2014) examined the relationship between corporate governance mechanisms and performance of the firms. Audit committee and CEO duality were taken as corporate governance mechanisms and profit margin and return on equity represented measures of performance of the firm for a sample of 11 listed firms in Pakistan for year 2010 to 2011. Results revealed positive significant relationship of return on equity and profit margin with audit committee. However, this study could not provide a significant

relationship between CEO duality and return on equity; profit of the firm. The findings of study helped policy makers in setting of proper policies. The finding also determines the importance of audit committee and CEO duality in terms of profitability.

Danoshana and Ravivathani (2013) investigated the impact of corporate governance indicators on the performance of listed financial institutions in Sri Lanka as main objective and recommend a suitable corporate governance practices for improving performance of listed financial institutions. To achieve these objectives, the researchers used return on equity as the dependent variable that defined the performance of the firm. On the other hand, Board size, Meeting frequency and audit committee of the company were used as variables to measure the corporate governance. Twenty five listed financial institutions were selected as sample size for the period of 2008 to 2012. The data were collected through the secondary sources. According to the analysis, selected variables of corporate governance significantly impact on firm's performance as board size and audit committee size have positive effect on firm's performance. However, meeting frequency has negative impact on firm's performance measured by return on equity.

Manawaduge and Anura (2013) examined the impact of ownership concentration and structure on the performance of public listed firms in Sri Lanka. For this purpose they carried out an analysis based on a regression model using pooled data for a sample of 157 Sri Lankan public quoted firms for nine year period between 2000 and 2008. This study provided useful information on the relationship between various ownership concentration and structure measures and their influence on accounting performance. Empirical findings indicate that a significant relationship exists between ownership concentration, measured by three largest shareholders (SH3) and the accounting performance measure (ROE). The result also revealed that the Herfindahl (HERF) index has a positive and significant impact on ROE. The result suggested that a greater concentration of shares leads to either effective monitoring of management behavior or larger internal ownership which results in better performance.

Uwuigbe and Fakile (2012) investigated the linkage between corporate governance and financial performance of banks, this study contributed to the existing literature by assessing the effect of board size on the performance of banking sector in a developing economy like Nigeria. This study made use of a range of data drawn from the Nigerian Stock Exchange fact book (2008), which contained information on board size and the performance proxy (return on equity). Regressing performance on board size, it was observed that banks with board size below 13 are more viable than those with board size above 13. The study further observed that banks with larger boards recorded profits lower than those with smaller

boards. The study concluded that there is a significant negative relationship between board size and bank financial performance with a t- value of -1.977 and a p- value of 0.053. This is because, increase in board size occurs with increase in agency problems (such as director free-riding) within the board and the board becomes less effective. However, the researchers recommended a smaller board size for better financial performance and to reduce the problem of free-rider of banks in Nigeria by board members.

Hassan and Halbouni (2013) investigated the effect of corporate governance mechanisms on the financial performance of the United Arab Emirates (UAE) listed firms. 95 UAE listed firms affiliated to financial and non-financial sectors were selected. Corporate governance mechanisms used were voluntary disclosure, CEO duality, board size, board committee and audit type while control variables adopted were firm size, industry type, firm listing years and leverage. Accounting-based measure of return on equity (ROE) was employed to measure the UAE firms' performance. Secondary data were collected from published accounts of the selected firm for year 2008. Findings revealed that voluntary disclosure, CEO duality and board size are significantly influence the UAE accounting-based performance measure, ROE.

Zied (2012) investigated the Impact of the presence of audit committees on the financial performance of Tunisian companies. 26 Tunisian firms listed on Tunis Stock Exchange over a period of 4 years (2007 to 2010) were selected. He found that the independence of the audit committee have a significant effect on financial performance of firms measured by ROE. He recommended that at least one member of the audit committee must possess a professional accounting certificate or in a related field or with experience in accounting or finance in order to improve the financial performance of companies in Tunisia.

Uadiale (2010) examined the impact of board structure on corporate financial performance in Nigeria. Dependent variables used to proxy financial performance were return on equity (ROE) and return on capital employed (ROCE). Based on the extensive literature, four board characteristics (board composition, board size, board ownership and CEO duality) were identified as independent variables. The Ordinary Least Squares (OLS) regression was used to estimate the relationship between corporate performance measures and the independent variables. Findings from the study showed that there is strong positive association between board size and corporate financial performance (ROE). Evidence also exists that there is a positive association between outside directors sitting on the board and corporate financial performance (ROE). However, a negative association was observed between directors' stockholding and firm financial performance measured (ROE). In

addition, the study revealed a negative association between ROE and CEO duality, while a strong positive association was observed between ROCE and CEO duality. The study suggested that large board size should be encouraged and the composition of outside directors as members of the board should be sustained and improved upon to enhance corporate financial performance.

Olowookere (2008) investigated the impact of corporate governance on firm financial (ROE) and productivity performance as well as comparing the effect of corporate governance on before and after the introduction of Code of Corporate Governance in Nigeria. He utilised data for 64 non-financial firms listed on the first tier securities market of the Nigerian Stock Exchange for the period 2002 to 2006. Panel regression estimates show that board size and Debt have significant positive association with return on equity (ROE) while outside board directors, director shareholding, size and square of board size have negative correlation.

Zeitun and Tian (2007) investigated the relationship between ownership structure / concentration and firm performance in Jordanian publicly traded firms for a sample of 59 firms' from 1989 to 2002. They found that there is a significant relation between ownership concentration C5 (the percentage of the first five largest shareholders) and the accounting performance measure ROE. Secondly, the HERF is not significant at any level of significance in any measure of performance. The insignificance of the Herfindahl (HERF) index showed that there could be a nonlinear relationship between ownership concentration and a firm's performance. Third it they also observed that there is a negative significant relation between government ownership and firm's accounting performance (ROE),

Sanda, Mikailu and Garba (2005) examined the relationship between internal governance mechanisms and firm financial performance. They used pooled OLS regression analysis on panel data for the period 1996 to 1999 for a sample of 93 firms listed on the Nigerian Stock Exchange. They found that board size has significant positive relationship with return on equity

Kiel and Nicholson (2002) examined the relationships between board composition and corporate performance in 348 of Australia's largest publicly listed companies and described the attributes of these firms and their boards. They observed that, after controlling for firm size, board size is positively correlated with firm value ROE.

### **2.4.3 Corporate Governance Mechanisms and Net Interest Margin**

Olowookere, (2008) investigated the impact of corporate governance on firm performance. He utilised data for 64 non-financial firms listed on the first tier securities market of the Nigerian Stock Exchange for the period 2002 to 2006. Panel regression

estimates show that board size, audit committee independence and block holding have significant positive correlation with price earnings ratio whereas firm size and square of board size have significant inverse relationship.

Sanda, Mikailu and Garba (2005) examined the relationship between internal governance mechanisms and firm financial performance. They used pooled OLS regression analysis on panel data for the period 1996 to 1999 for a sample of 93 firms listed on the Nigerian Stock Exchange. Results revealed that directors' shareholding has significant inverse relation with price earnings ratio while ownership concentration has significant positive correlation.

#### **2.4.4 Corporate Governance Mechanisms and Tobin's q**

Mule and Mukras (2015) examined the relationship between financial leverage and the Tobin's q of listed firm in Kenya. They used annual data for the period 2007 to 2011. Various panel procedures were used. The study found reasonably strong evidence that financial leverage significantly and negatively affects the performance of listed firms in Kenya using Tobin's Q). Similarly, ownership concentration is a pertinent negative predictor of financial performance measured in terms of Tobin's Q.

Al-Matar, Al-Swidi and Bt-Fadzil (2014) examined the association between the board of directors' characteristics, audit committee characteristics and the executive committee characteristics and the performance of the Oman companies. The data comprised of 162 non-financial firms because financial and non-financial companies employ different methods and they have different structures. The study attempted to bridge the gap in the existing literature and reviewed the association between corporate governance mechanisms and firm performance in the emerging market of Oman. It focused on adding new important variables of corporate governance mechanisms like board change, the role of secretary on the board, the legal counsel and the executive committee characteristics that improve firm performance. The findings indicated a significantly positive relationship between board size, board meeting, audit committee independence and executive committee independence, and the Tobin's Q. On the other hand, board independence and legal counsel are significantly and negatively related to Tobin's Q. Moreover, positive but insignificant relationship was found between CEO tenure, CEO compensation, audit committee size, and the firm performance (Tobin's Q). Furthermore, board change, the role of the secretary on the board, audit committee meeting, executive committee size and executive committee

meeting revealed a negative but insignificant association with firm performance (Tobin's Q)

Arouri, Hossain and Muttakin (2014) investigated the effect of ownership structure and board composition on bank performance as measured by Tobin's Q and market to book value in Gulf Co-Operation Council (GCC) countries. A dataset of 58 listed banks of GCC countries for the period 2010 was used with multivariate regression analysis. The result showed that the extent of family ownership, foreign ownership and institutional ownership has a significant positive association with bank performance measured by tobin's q. However, government ownership does not have a significant impact on performance. Other governance variables such as CEO duality and board size appear to have an insignificant impact on performance. It implies that better corporate governance mechanisms are imperative for every company and should be encouraged for the interest of the investors and other stakeholders. The study concluded that ownership as an indicator of corporate governance is more effective for GCC countries. The study also noted that unlike in western countries, corporate boards may not be an effective corporate governance mechanism in GCC countries.

Amer (2014) examined the relationship between corporate governance and Tobin's q of companies listed in Abu Dhabi Stock Exchange. The dataset was drawn from the Abu Dhabi Exchange Shareholding company's guide for years 2007 to 2011. The study used pooled regression analysis on 281 firm/year observations. Tobin's Q score was use as dependent variable while independent variables included institutional ownership, governmental ownership, board size, and audit quality. The study controlled for the relationship between the dependent and independent variables by including firm size, debt ratio, dividend yield, and age of the firm. Results showed significant positive impact of corporate governance measures on firm performance (except for Audit quality).

Al-matari (2014) examined the relationship between the corporate governance mechanisms (board of director's characteristics, the audit committee characteristics, and the executive committee) and the performance of listed companies in Oman for the year 2008 to 2012. The study was based on agency and the resource dependence theories. Data were gathered from the annual reports of 78 non-financial listed firms while panel data methodology was adopted for the analysis. Independent variables used were firm size, leverage, industry and years as control variables. The result of the random effect model was used to examine the effect of the predictors on the firm performance indicators measured by

Tobin's Q. The statistical results showed that board size, board meeting and time period (2010) were a positive determinant of Tobin's Q while audit committee meeting and executive committee existence were negative determinants of Tobin's Q. From the practical and the theoretical contribution points of view, this study indicated that the resource dependence theory is more significant compared to the agency theory when describing corporate governance practices in Oman.

El-Faitouri (2014) examined whether board of director characteristics have an impact on corporate performance. He used a generalized method of moment's regression model developed by (Wintoki, Linck, & Netter, 2011). Data for the analysis were extracted from Board, FAME, and Data stream databases for the period 1999 to 2009. The final sample included a total of 634 UK firms listed in the London Stock Exchange. The results suggested that board structure is partly determined by past corporate performance. However this study found that there is no relation between characteristics of the board of directors and corporate performance measured by Tobin's Q. This is inconsistent with much prior empirical studies and policy recommendations on corporate governance that suggested that corporate governance mechanisms improve corporate performance. The findings concluded that the earlier corporate governance studies that do not take into account the dynamic nature of corporate governance may be affected by bias.

Bruno (2013) studied the impact of board size, the proportion of independent directors on the board, the presence of both women and foreign directors on the board and meetings' frequency, on firm performance. A sample of 398 companies from eleven European countries was selected over the fiscal year of 2010. She carried out the statistical analysis through ordinary least squares regressions, where firm performance measure Tobin's Q was the dependent variable. In all models, she controlled for firm performance using firm size and the level of debt. In order to test for the sensitivity of his results, she alternatively controlled for the industry, country and system effect. She finds that the results are more robust when controlling for the system effect. Moreover, when testing for endogeneity, she found that our sample firms do not suffer from this problem for board size, but show suspicions regarding an endogenous relationship between board independence and firm performance. As for the results: the most outstanding outcome is that the presence of foreign directors on the board is significant and positively linked to Tobin's Q. When controlling for the system effect, the proportion of independent directors exerts a significant positive impact on firm performance. Board meetings exhibit a significant negative impact on Tobin's Q also when controlling for the system effect. Control variables: the natural



logarithm of assets (negative) and debt-to-assets ratio (positive) were found to be significantly related to firm performance.

Hassan and Halbouni (2013) investigated the effect of corporate governance mechanisms on the financial performance of the United Arab Emirates (UAE) listed firms. 95 UAE listed firms affiliated to financial and non-financial sectors were selected relationship corporate governance mechanisms used were voluntary disclosure, CEO duality, board size, board committee and audit type while control variables adopted were firm size, industry type, firm listing years and leverage. Secondary data were collected from published accounts of the selected firm for year 2008. The market measure (Tobin's Q) was employed to measure the UAE firms' performance. Findings revealed that none of the governance variables significantly affects firms' market performance measured by Tobin's q.

Kumar and Singh (2013) examined the effect of corporate board size and promoter ownership on firm value for selected Indian companies. The study analyses the corporate governance structure of 176 Indian firms listed on the Bombay Stock Exchange using linear regression analysis. The empirical findings show a negative relationship of board size with firm value (TQ) and significant positive association of promoter ownership with corporate performance. The study suggests that only above a critical ownership level of 40 percent does promoter's interest become aligned with that of the company, resulting in positive effect on firm value. The study implies that for emerging economies like India, it is practical to have greater ownership control by promoters to enhance company value. Also, it is not advisable to have a board size above certain limit.

Awunyo-Vitor and Baah, (2012) examined the effect of share ownership and investors' involvement on performance of investee companies. The study was conducted using panel data regression analysis and performance was measured by using Tobin's Q. Significant statistical relationships were found in this research. The results of the research suggest that share ownership on the Ghana Stock Exchange is heavily concentrated in the hands of Ghanaians and that ownership concentration, institutional and insider ownership precipitated higher firm financial performance. There is the need to encourage concentrated ownership structure. Also, investments by insider and institutional ownerships should be promoted in order to ensure proper monitoring, reduced agency costs and improve performance.

Fauzi and Locke (2012) investigated the role of board structure and the effect of ownership structures on firm performance in New Zealand's listed firms. They used a balanced panel of 79 New Zealand listed firms and employed a Generalized Linear Model

(GLM) for robustness. The result revealed that board of directors, board committees, and managerial ownership has a positive and significant impact on firm performance (Tobin's q). Meanwhile, non-executive directors, female directors on the board and block holder ownership lower New Zealand firm performance.

Humera, Maryam, Khalid, Sundas and Bilal (2011) investigated the relationship between corporate governance and firm's performance of twenty firms listed at Karachi Stock Exchange. The performance of corporate governance is measured by leverage and growth while performance of the firms is measured by Tobin's Q. The data set was obtained from the annual reports for the year 2005 to 2009. The multiple regression models are applied to test the significance of corporate governance and firm performance. The result showed that leverage and growth have a positive relationship with Tobin's Q, which confirms a significant effect in measuring performance of the firm. It means that firms that have good corporate governance measures perform well as compared to the firms that have no or less corporate governance practices.

Rashid, De Zoysa, Lodh and Rudkin (2010) examined the influence of corporate board composition in the form of representation of outside independent directors on firm economic performance in Bangladesh. A linear regression analysis was used to test the hypotheses. The results showed that the outside independent directors cannot influence firms' economic performance. The results also confirmed that board size has a positive explanatory power in influencing firm performance under Tobin's Q measure. This is indicative of information asymmetries between inside and outside directors. The results further indicated that rather, CEO-duality, firm debt and firm size all have significant explanatory power in determining firm's performance under the market based performance measure by Tobin's q.

Guest (2009) examined the impact of board size on firm performance for a large sample of 2,746 UK listed firms over 1981 to 2002. The UK provides an interesting institutional setting, because UK boards play a weak monitoring role and therefore any negative effect of large board size is likely to reflect the malfunction of the board's advisory rather than monitoring role. He found that board size has a strong negative impact on Tobin's Q and share returns. The result is robust across econometric models that control for different types of endogeneity. He also found no evidence that firm characteristics that determine board size in the UK lead to a more positive board size and firm performance relation. In contrast, he discovers that the negative relation is strongest for large firms, which tend to have larger boards. Overall, his evidence supports the argument that problems of poor communication and decision-making undermine the effectiveness of large boards.

Olowookere (2008) investigated the impact of corporate governance on firm performance. He utilized data for 64 non-financial firms listed on the first tier securities market of the Nigerian Stock Exchange for the period 2002 to 2006. Panel regression estimates show that outside board directors, block holding and square of board size have significant positive relation with Tobin's  $q$  while independence of board, directors' shareholding, audit committee independence and firm size have negative correlation.

Zeitun and Tian (2007) investigated the relationship between ownership structure/concentration and firm performance in Jordanian publicly traded firms for a sample of 59 firms' from 1989 to 2002. They found that there was a significant relation between ownership structure mixes and Tobin's  $Q$  as performance measure.

Aljifri and Moustafa, (2007) investigated the effect of some internal and external corporate governance mechanisms on the UAE firm performance using Tobin's  $q$  as dependent variable. They utilized a sample of 51 listed firms in either the Dubai Financial Market or the Abu Dubai Securities Market. Accounting and market data available for 2004 were used. The cross-sectional regression analysis was employed to test the hypotheses of the study. The results showed that the governmental ownership, the debt ratio (total debt/total assets), and the payout dividends ratio have a significant impact on the firm performance; whereas the institutional investors, the board size, the firm size (sales), and the audit type showed a non-significant impact. They concluded that three of the corporate governance mechanisms in the UAE used in this study appeared strong enough to affect the firm performance. However, the other four mechanisms were found to have a weak effect on the firm performance which could be a result of the significant absence of some aspects of corporate governance practices and lack of enforcement of rules.

Sanda, Mikailu and Garba (2005) assessed the relationship between internal governance mechanisms and firm performance measured by Tobin's  $q$ . They used pooled OLS regression analysis on panel data for the period 1996 to 1999 for a sample of 93 firms listed on the Nigerian Stock Exchange. Results revealed that directors' shareholding has significant inverse relation with Tobin's  $q$  whereas ownership concentration has significant positive association.

Kiel and Nicholson (2002) evaluated the relationships between board composition and corporate performance in 348 of Australia's largest publicly listed companies and described the attributes of these firms and their boards find a positive relationship between the proportion of inside directors and the market-based measure Tobin's  $q$  of firm performance.

#### **2.4.5 Empirical Review on Operating Efficiency**

According to Rozzani and Rahman (2013), banks should be able to function efficiently to ensure their contribution to overall economic growth. In a vibrant and competitive banking system, only strong, technically efficient and profitable banks can promise a realistic return to their stakeholders and reduce the probability of bankruptcy (Adusei, 2016). It is also indicated that an efficient banking sector will be better able to withstand negative shocks and contribute to the stability of the financial system (Delis & Papanikolaou, 2009). Thus, it is crucial to analyze the efficiency performance of banks and the factors behind their efficiency performance. Previous studies showed that commercial bank in Ethiopia recorded varied efficiency score over the first GTP I period. That is, some of the commercial banks are deemed to be efficient while others, specially the government banks are found to be inefficient (Alemu, 2016). Thus, it is crucial to study the environmental factors behind such diverse efficiency score among commercial banks in

Ethiopia and formulate appropriate strategy to address the inefficiency. Studies have been conducted to examine the determinants of efficiency of banks in different parts of the world. For instance, Sufian (2009) estimated the determinants of Malaysian banks' efficiency using a Multivariate Tobit regression. The author considered three alternative approaches which include the operating approach, value added approach and intermediation approach. Accordingly, in the intermediation approach, size of the banks' total assets has positive and significant effect on bank efficiency, while bank deposit, bank management quality and bank size have negative and significant effect. In the operating approach; Bank loan intensity (ratio of total loan to total bank

asset), bank risk, diversification towards non-interest income are found to have positive and significant effect on bank efficiency, while Bank management quality, return on assets, GDP have negative and significant effect on bank efficiency. The results based on the Value-added approach also revealed that bank loan intensity, diversification towards non-interest income, return on assets have positive and significant effect on bank efficiency, while Bank management quality, total book value of shareholders equity over total assets, GDP have negative and significant effect. See lanatha (2012) evaluated the drivers of Technical Efficiency (TE) of Sri Lankan Commercial Banks over the period 1989–2009 using an ordinary least square method. The author used four alter-native approaches which include the TE in asset transformation, TE in intermediation, the super TE in asset transformation and the super TE in intermediation. Under TE in the asset transformation; operational risk, change in market capitalization and inflation have positive and significant effect on technical efficiency

while assets quality, capital strength, profitability, product quality, purchased funds, market share and liquidity have negative and significant effect. Under the TE in intermediation approach; gross interest margin, operational risk, purchased funds, inflation, ownership structure and age have positive and significant effect on technical efficiency while market share has negative and significant effect on technical efficiency. Under the super TE in asset transformation; operational risk and change in market capitalization have positive and significant effect while assets quality and liquidity have negative effect on technical efficiency. Finally under the super TE in intermediation approach; gross interest margin and ownership structure have positive and significant effect on technical efficiency while market share have negative and significant effect on technical efficiency .Alrafadi, Kamaruddin, and Yusuf (2014) estimated the determinants of the efficiency of Libyan Banks over the period 2004–2010 using Tobit model. The study revealed that return on assets, size of operation, capital adequacy and government link of bank and efficiency have positive and significant effect on overall technical efficiency, while risk, bank size, mergers and ownership structure have negative and significant effect on overall technical efficiency. It has also shown that return on assets, size of operation, capital adequacy and government link of bank and efficiency have positive and significant effect on pure technical efficiency, while risk, bank size, mergers and ownership structure have negative and significant effect on pure technical efficiency. Řepková (2015) evaluated the Banking efficiency determinants in the Czech Banking Sector over the period 2001–2012 using ordinary least square method. The study revealed that the level of capitalization, liquidity risk and riskiness of portfolio have positive and significant effect on banks efficiency while return on asset, interest rate and GDP have negative and significant effect on banks efficiency. Singh and Fida (2015) estimated the determinants of the Technical efficiency of Oman banking sector using Tobit model. The study revealed that capital adequacy, liquidity and profitability have positive and significant effect on technical efficiency, while Bank size has positive but insignificant effect.

Sharma, Gounder, and Xiang (2015) examined the determinants of foreign Bank efficiency in a Pacific Island Country using the General Method of Moment (GMM). The author grouped the covariates in the GMM model into Bank-specific factors, Industry-specific factors and Macroeconomic factors and three models are estimated. Accordingly, from the bank-specific factors Credit risk is found to have positive and significant effect, while personal expense and capital risk have negative and significant effect. From the Industry-specific factors, credit risk is found to have positive and significant effect on bank efficiency, while personal expense

has negative and significant effect. From macroeconomic factors it is shown that credit risk has positive and significant effect on bank efficiency, while personal expense has negative and significant effect. Adusei (2016) examined the determinants of the technical efficiency in rural and community banks in Ghana using binary logit. Due to Multicollinearity problem between fund quality and bank size two models are estimated. Accordingly, the results from the logit model without fund quality revealed that return on Assets has positive and significant effect on technical efficiency while Bank size, credit risk and capitalization have negative and significant effect on technical efficiency. On the other hand, the results from logit model without bank size showed that return on assets and credit risk have positive and significant effect on technical efficiency, while capitalization and fund quality have negative and significant effect.

Tesfay (2016) examined the determinants of commercial Banks efficiency in Ethiopia over the period 2003–2012 using Tobit model. The study results revealed that deposit liquidity is found to have positive and significant effect on bank efficiency, while bank size has negative and significant effect on bank efficiency. The remaining covariates which include Profitability, loan quality, expenses, bank size and diversification did not have significant effect on bank efficiency.

Despite the efforts made to examine the determinants of banks efficiency in different parts of the world studies regarding the commercial banks in Ethiopia is scanty. The study conducted by Tesfay (2016) fails to incorporate many relevant variables like level of capitalization, ownership structure and market concentration in efficiency/inefficiency model. On the other hand, the current study emphasized on the GTP I period and thus different from that of Tesfay (2016).

Moreover, the government of Ethiopia is implementing the second GTP II and banks are supposed to play a vital role for the achievement of this plan. Thus, evaluating the determinants of the technical efficiency of commercial banks over the GTP I period and indicating solutions to improve efficiency is crucial to improve their role for the GTP II. Thus, using DEA and Tobit model, this study tried to examine the determinants of technical efficiency of commercial banks in Ethiopia over the period 2011–2014.

#### **2.4.5 Corporate Governance Mechanisms and Assets Utilization**

Adewuyi and Olowookere (2009) examined the impact of corporate governance on Assets Utilization in Nigerian. They utilized the data for 64 non-financial firms listed under

the first tier securities market of the Nigerian Stock Exchange for the period 2002 to 2006. They employed panel regression techniques, the paper establishes governance measures like ownership concentration and debt-equity ratio as drivers of firms' productivity, while the impacts on productivity on other major governance mechanisms like board size, board independence and independent audit membership, are insignificant. However, it is suggested that caution be exercised in relying on findings that show financial performances as governance enhanced, as financial measures can be more easily distorted by prices, market imperfections and the choice of accounting techniques.

Olowookere (2008) investigated the impact of corporate governance on Assets Utilization performance of the Nigerian listed firms. He utilized data for 64 non-financial firms listed on the first tier securities market of the Nigerian Stock Exchange for the period 2002 to 2006. Panel regression estimates showed that board independence and leverage generally increase firm productivity performances, while board size, directors' shareholding and ownership concentration have non-linear effects on performance measured by Assets Utilization. Moreover, larger firms are characterized by lower performance, while contrary to the study expectation, independence of audit committee membership dampened performance.

Xu and Wang (1999) evaluated whether ownership structure significantly affect the performance of public companies in China within the framework of corporate governance. Independent variable used was ownership concentration while dependent indicator was labour productivity. They found that Assets Utilization tends to decline as the proportion of state share increases. These results suggested that the importance of large institutional shareholders on corporate governance, the inefficiency of state ownership and the potential problem in an overly dispersed ownership structure.

There have been some studies on the degree of compliance with some codes of corporate governance, and others testing whether compliance can be associated with improved firm value. High compliance has been documented for the British code (Mallin & Ow-Young, 1998; Dedman, 2000); the German code (von Werder, Talaulicar & Kolat, 2005); the Spanish code (Fernandez-Rodriguez, Gomez-Anson & Cuervo-Garcia, 2004); the Portuguese code (Alves & Mendes, 2004). Conversely, de Jong and Roosenboom (2002) document that compliance with the first code of corporate governance in the Netherlands, known as the Peters (1997) Code, was generally weak in the period 1997-2002. Contrary to the findings of the Peters code, Akkermans Ees, Hermes, Hooghiemstra, Laan, Postma and Witteloostuijn (2007) reported high compliance with the new Dutch corporate governance (Tabaksblat) code.

Among studies on the nature of relationship between compliance and Assets Utilization are Jain and Rezaee (2006) who find that compliance with the Sarbanes-Oxley Act (SOX) of 2002 has positive impacts on the value of US firms; Chhaochharia & Grinstein (2007) attempt to separate the effect of SOX on returns between large and small firms, and they find that large firm that are less compliant have greater value, but small firm that are less compliant have lower value. The findings of de Jong et al. (2005) for the Netherlands and Ponnu (2008) for Malaysia are similar. They both find that compliance notwithstanding; codes of corporate governance have no significant impact on firm performance. This can be explained along the argument of Carver (2007) who claimed that enactment of corporate codes only makes firms interested in legal compliance rather than corporate governance per se, and this may constrain the expected impact of corporate governance on performance. The seven governance mechanisms outlined are contained in the Nigerian Code; therefore in what follows the degree of compliance with the provisions of the Code and its performance impact are measured.

Out of the literature reviewed in Nigeria only Olowookere, (2008) used Assets Utilization directly but his result showed no significant difference in the performance between these two sub-samples this may be due to the short period of time of the study that is six years. This motivated the researcher to go into further investigation.

Furthermore the study recommended that deliberate steps be taken to ensure mandatory compliance with SEC code of best practice for all sectors in Nigeria. In addition, deliberate efforts should be made in setting up a follow-up and compliance team to make sure that all listed firms Nigerian do not only comply but meet up with the different expectations of the regulatory body as mandated in the code of corporate governance.

However, the study was limited to only three sectors of the economy which does not allow for a more robust result consequently; the researcher extends the body of knowledge by using thirteen sectors of the economy. In addition the previous study used individual sector for the basis of comparison but this study combines the financial and non-financial sectors of the selected sectors thereby making the study to be more robust.



**Table: 2.1. Summary of Literature Reviewed**

Author(s)	Research objective	Methodology	Key findings
Parker, Peters & Turetsky (2002)	Investigated various corporate governance attributes and financial survival	176 financially stressed firms 1988-1996 Regression analysis	Companies that replaced their CEO with an outside director were more than twice as likely to experience bankruptcy. The result revealed a dynamic relationship between larger levels of insider ownership and firm survival.
Kiel & Nicholson (2003a)	Examine the relationship between board demographics and performance	348 public listed companies ASX 1996 SPSS analysis Tobin's Q	The positive correlation between the proportion of inside directors and the market-based measure of firm performance. There was positive correlation between Board size and firm value.
O'Sullivan & Diacon (2003)	(1) Examined whether mutual insurers employ stronger board governance than their proprietary counterparts. (2) Considered the impact of board composition on the performance of proprietary(stock) and mutual companies	Data regression analysis 53 life insurers operating in the UK over the period 1984-1991	Mutual insurers had greater non-executive representation on their boards. Lack of consistent evidence for non-executive monitoring and impact on performance

Dulewicz & Herbert (2004)	Investigated whether there is any relationship between board composition and behaviour, and company performance	Data based on an original study of 134 responses from a cross-section of businesses. Follow-up data based on 86 listed companies (1997-2000) SPSS analysis CAROTA (cash flow return on total assets) ratio used for performance analysis.	Board practices on identified tasks not explicitly linked to company performance Limited support that businesses with independent boards are more successful than others.
Uzun, Szewczyk & Varma (2004)	Examined the relationship between fraud and board composition, board size, board chair, committee structure and frequency of board meetings,	Constructed database for a sample of 266 companies (133 that accused of committing fraud and 133 no-fraud) during the period 1978-2001 Regression analysis	There is a definite relation between Board composition and structure of oversight committees and incidence of corporate fraud. A higher proportion of independent directors indicated a less likelihood of fraud
Dalton, Daily, Ellstrand & Johnson (1998)	Reviewed research on the relationships between board composition, leadership structure and financial performance	Meta-analysis of 54 empirical studies of board composition, 31 empirical studies of board leadership Structure	No meaningful relationship between board composition leadership structure and financial performance.
Millstein & Macavoy (1998)	Investigated Directors behaviour and firms performance	Empirical study of 154 firms using 1991-1995 data	Substantial and statistically significant correlations between an active board and corporate performance

Muth & Donaldson (1998)	Examined board independence and performance based on agency stewardship theory.	145 listed companies 1992-1994 Statistical analysis	Empirical results inconclusive that board independence has a positive effect on performance
Lawrence & Stapledon (1999)	Examined the relationship between board composition and corporate performance. Also considered whether independent directors have a positive influence on executive remuneration	Empirical studies – data sample selected from ASX listed companies in 1995. Regression analysis 700 executives tested	No statistically significant relationship between the proportion of NEDs and adjusted shareholder returns Little evidence that board size affects share price performance. No evidence that the proportion of executive directors influences CEO remuneration
Li & Ang (2000)	Investigated the impact of the number of directorships on Directors' performance.	Empirical studies- sample consisted of 121 listed firms and 1195 directors 1989-1993 Regression analysis	Negligible effect on the company's share value based on number of directorships- considering just the number of appointments may not reflect how an executive performs in corporate monitoring
Rhoades, Rechner & Sundaramurthy (2000)	Examined the insider/outsider ratio of boards and company Performance. Also examined the potential moderating effects of	Meta-analysis of 37 studies across 7644 organizations based on initial search of 59 reports with quantitative data on	Overall conclusions are that there is a small positive relationship between board composition and financial performance. The managerial implications of

	different operational definitions of monitoring and performance.	follow-up and performance 1966-1994	board composition in monitoring.
Bhagat & Black, (2002)	Investigated the relationship between the corporate governance (board composition, board size, board independence) and firm performance	934 companies using data from 1985-1995 Regression analysis	Low-profitability firms increase the independence of their boards. However, the performance of enterprises with more independent boards and those without an independent board are identical.
Raji (2012)	Examined the relationship between ownership structure and the performance of listed companies on the Ghana Stock Exchange	35 Financial Institutions in Ghana using Pearson's Product Moment Correlation and Logistic Regression as method of analysis	The significant negative relationship between ownership concentration and firm performance. Also an active linkage between insider ownership and firm performance.
Momoh & Ukpong, (2012)	Investigated the relationship between corporate governance and insurance industry financial Performance in Nigeria	Dividend Yields, Profit Margin and Return on Equity. Reliability analysis and statistical inference analysis were adopted	They discovered that there is significant relationship between corporate governance and insurance industry financial Performance in Nigeria. They also found that dividend yield of insurance industry is dependent on the return on equity and profit margin among other factors

<p>Amba (2013)</p>	<p>Investigated relationship between firm's performance and Corporate Governance. He used 39 firms for the period 2010 to 2012</p>	<p>The independent variables employed: CEO duality, Chairman of Audit Committee, the proportion of Non-executive directors, concentrated ownership structure and institutional investors. The dependent variables are the gearing ratio of businesses and Returns on Assets. He adopted Multiple Regression Analysis.</p>	<p>There was a significant positive relationship between firm's performance and CEO, duality proportion of non-executive director. Also, leverage has a negative correlation with having Board members as the Chairman of Audit Committee while percentage of institutional ownership has a positive influence on firms' financial performance</p>
<p>Akpan and Riman (2012)</p>	<p>Examined relationship between the corporate governance and bank profitability in Nigeria (2005-2008)</p>	<p>Board size number of shareholder return on assets, Non-performing loans Return on Equity Total Assets and Total Equity. Using Ordinary Least Square Regression Analysis</p>	<p>Their result revealed a significant positive association between the corporate governance (Board size) and Return on Assets and Return on Equity. Also, there is no statistical linkage between Non-performance loan and size Bank director. However, number of shareholders has a positive relationship with Non-performing Loans</p>

<p>Kwanbo &amp; Abdul-Qadir (2013)</p>	<p>Investigated Performance of Banks in the Post-Consolidation Era in Nigeria and Corporate Governance</p>	<p>Board Composition, Executive duality using multiple regressions (ANOVA)</p>	<p>Findings reveal the absence of a significant connection between the variables and the mechanisms of corporate governance. They observed that adherence to these codes promoted the overall effectiveness in functions of the sampled banks that is their operational performance.</p>
<p>Magbagbeola (2005)</p>	<p>Examined the corporate governance mechanisms and bank performance in Nigeria between 1999 and 2004</p>	<p>Board composition, board size, CEO tenure, ownership structure as independent variables while Return on Assets and Return on Equity were used to measure bank financial performance. The method adopted was Panel data analysis.</p>	<p>He discovered that increasing shareholders' funds would enhance the banks' financial performance and capital formation in the economy. He, therefore, recommends that a bank's board should comprise ten members, seven of whom should be non executive directors (including the chairperson). Also, CEO tenure of not more than five years is sufficient for firm improved performance</p>
<p>Okoi &amp; Ocheni (2014)</p>	<p>Examine the effect of corporate governance on the performance of commercial banks in</p>	<p>profitability ratio was used as dependent variable while capital adequacy, asset base,</p>	<p>The findings revealed that the profitability of banks increased within the years under review as assets base</p>

	Nigeria and the determination of governance effect on profitability of banks	policy shift, investment ratio, liquidity ratio and inflation rate were Independent variables. Ordinary Least Square (OLS) technique was used to estimate the variables using multiple linear regression models.	of the banks increased and further shows that as policy shift and investment increases profitability of banks also increases.
Onakoya, Ofoegbu & Fasanya	Examined the impact of corporate governance on bank performance in Nigeria using pooled time series data	The earnings for the year 2005-2009 measured by profit after tax using interest rate policy reform as a dummy variable and dependent variable includes inflation rate, Real Gross Domestic and Product Broad Money Supply (M2). Both were used to design a model in logarithm form	The findings revealed that corporate governance have been on the low side and have impacted negatively on bank performance and that Increasing rate of inflation affected bank performance negatively inferring that a one percent increase in inflation rate, results, to approximately 1.89% fall in the performance of the selected banks

**Source: Author's compilation 2016**

### **2.4.3 Summary of Theories**

This study is based mainly on agency theory which is usually applied in explaining the relationship between managers and equity holders with no explicit recognition of other parties interested in the well-being of the organization. There is often conflicting interest between the managers and shareholders, for example, while manager will want to continue to reinvest profit of the firm even when the return on investment is less the cost of funds, the shareholder will prefer to share the profit rather than reinvesting it. Therefore, there is need to coordinate the interest and activities of the manager so as to align with the interest of shareholders. Hence, corporate governance serves as coordinating mechanism which ensures that managers (agent) do not act as against the interest of the shareholders (principal). According to Habbash (2010) the influence of agency theory has been instrumental in the development of corporate governance standards, principles and codes. He argued that agency theory provide a better explanation for the roles of corporate governance. This study therefore investigates the extent the corporate governance indicators affect the performance of firms. In addition the study applied the resource dependence theory which allows the study to examine the effect of outside factors such as non-executive directors.

### **2.5 Gap in Literature**

Majority of the empirical studies reviewed from most developed countries such as: (Shahwan, 2015; Afrifa, & Tauringana, 2015; Duke II & Kankpang 2011; Mashayekhi & Bazaz, 2008; Fanta, Kemal & Waka 2013; Gupta et al. 2015; Rostani, et al, 2016; Hussain, et al., 2016) are with varied conclusion. Furthermore the methods applied in their analyses are also diverse while time frame for most of them does not bear current date. Also, the period used did not include the financial reform era of such countries. Even the extant studies done in Nigeria like (Sanda et al. 2005; Olowookere 2008; Uadiale, 2010; Akpan & Riman, 2012; Kwanbo & Abdul-Qadir, 2013; Bebeji et al. 2015; Dabor et al., 2015) also produced varied conclusions like the foreign authors. The methodologies adopted were not too robust enough to cross-examine research data, and most of the works theoretical frameworks was at the initial stage of corporate governance practice in Nigeria. Hence, this study tries to fill these voids in the literature by examining the effect of corporate governance practices on the profitability and efficiency of deposit money banks in Nigeria. This research work also gave attention to relevant theories and methodologies and extension of period to seventeen years instead of ten years maximum earlier used in some studies in order to enhance a robust result.



## **CHAPTER THREE**

### **RESEARCH METHODOLOGY**

#### **3.1 Research Design**

An *ex-post facto* research design was applied in ascertaining the effect of corporate governance practices on profitability and efficiency of deposit money banks in Nigeria. *Ex post facto* design is a quasi-experimental study examining how an independent variable, present prior to the study, affects a dependent variable. It is a systematic empirical inquiry in which the researcher does not have direct control of independent variables because their manifestations have already occurred or because they are inherently not manipulated. Inferences about relations among variables are made, without direct intervention, Independent variables are studied in retrospect for seeking possible and plausible relations and the likely effects that the changes in independent variables produce on a single or a set of dependent variables.

#### **3.2 Nature and Sources of Data**

The data used in this research work are secondary in nature and were derived from audited financial statements of the selected deposit money banks listed in the Nigerian Stock Exchange (NSE) for a period of thirteen (13) years that is, from 2005 to 2017. Some of the annual reports that were not available in the NSE fact book were either collected from the corporate offices of concerned banks or downloaded from the banks' corporate websites.

#### **3.3 Population of Study**

All the deposit money banks listed on the floor of the Nigerian Stock Exchange constitute the population of the study. These banks have submitted their financial statement to the NSE within the period reviewed as part of regulatory requirement to be operating on the exchange. The study focusing on deposit money banks is based on



shareholding; and control variables: size of the banks and capital structure. As a result, the modified of Rostami, Rostami and Kohansal (2016) which is now the model of this study with assimilation of the different measurement of profitability and efficiency of the banking sector: return on assets, return on equity, net income margin, assets utilization, operational efficiency and Tobin Q is stated as:

$$ROA = f(BS, OBD, IAC, BSH, DSH, BSIZE, CS) \dots \dots \dots 3.2$$

$$ROE = f(BS, OBD, IAC, BSH, DSH, BSIZE, CS) \dots \dots \dots 3.3$$

$$NIM = f(BS, OBD, IAC, BSH, DSH, BSIZE, CS) \dots \dots \dots 3.4$$

$$AU = f(BS, OBD, IAC, BSH, DSH, BSIZE, CS) \dots \dots \dots 3.5$$

$$OE = f(BS, OBD, IAC, BSH, DSH, BSIZE, CS) \dots \dots \dots 3.6$$

$$TQ = f(BS, OBD, IAC, BSH, DSH, BSIZE, CS) \dots \dots \dots 3.7$$

The models were transformed in econometric format for estimation based on the assumption of a linear regression model as follows:

**Model 1**

$$ROA_t = \beta_0 + \beta_1 BS_t + \beta_2 OBD_t + \beta_3 IAC_t + \beta_4 BSH_t + \beta_5 DSH_t + \beta_6 BSIZE_t + \beta_7 CS_t + \mu_t \dots \dots \dots 3.8$$

**Model 2**

$$ROE_t = \beta_0 + \beta_1 BS_t + \beta_2 OBD_t + \beta_3 IAC_t + \beta_4 BSH_t + \beta_5 DSH_t + \beta_6 BSIZE_t + \beta_7 CS_t + \mu_t \dots \dots \dots 3.9$$

**Model 3**

$$NIM_t = \beta_0 + \beta_1 BS_t + \beta_2 OBD_t + \beta_3 IAC_t + \beta_4 BSH_t + \beta_5 DSH_t + \beta_6 BSIZE_t + \beta_7 CS_t + \mu_t \dots \dots \dots 3.10$$

**Model 4**

$$AU_t = \beta_0 + \beta_1 BS_t + \beta_2 OBD_t + \beta_3 IAC_t + \beta_4 BSH_t + \beta_5 DSH_t + \beta_6 BSIZE_t + \beta_7 CS_t + \mu_t \dots \dots \dots 3.11$$

**Model 5**

$$OE_t = \beta_0 + \beta_1 BS_t + \beta_2 OBD_t + \beta_3 IAC_t + \beta_4 BSH_t + \beta_5 DSH_t + \beta_6 BSIZE_t + \beta_7 CS_t + \mu_t \dots \dots \dots 3.12$$

**Model 6**

$$TQ_t = \beta_0 + \beta_1 BS_t + \beta_2 OBD_t + \beta_3 IAC_t + \beta_4 BSH_t + \beta_5 DSH_t + \beta_6 BSIZE_t + \beta_7 CS_t + \mu_t \dots \dots \dots 3.13$$

Where:

ROA is Return on Assets

ROE is Return on Equity

NIM is Net Income Margin

AU is Assets Utilization

OE is Operational Efficiency

TQ is Tobin's Q

BS is Board Size

OBD is Outside Board Directors

IAC is Independence Audit Committee

BSH is Block Shareholding

DSH is Director's Shareholding

BSIZE is Banks' Size

CS is Capital Structure

$\mu$  = Stochastic or disturbance term.

$t$  = Time dimension of the variables

$\beta_0$  = Constant or intercept

$\beta_{1-7}$  = Coefficients to be estimated or the coefficients of slope parameters

### 3.6 Description of Variables

The measurements of profitability and efficiency of deposit money banks in Nigeria are the dependent variables: Return on Assets (ROA) Return on Equity (ROE), Net Income Margin (NIM), Assets Utilization (AU), Operational Efficiency (OE) and Tobin's Q. The independent variables are the corporate governance indicators *vis a viz*: Board Size (BS), Outside Board Directors (OBD), Independent Audit Committee (IAC), Block Shareholding (BSH) and Directors' Shareholding (DSH). Two control variables that may affect profitability and efficiency of deposit money banks were included in the model – Bank Size (BSIZE) and Capital Structure (CS).

#### 3.6.1 Dependent Variables

**ROA is return on assets:** Return on assets shows how proficient a company's assets are in generating profits. It indicates the effectiveness of the company's assets in

increasing shareholders' economic interests (Haniffa & Hudaib, 2006). Return on assets measured by net income over total assets at the end of the year, and it is an indicator of how profitable a company is relative to its total assets. Return on assets gives an idea regarding how efficient management is at using its assets to generate earnings.

**ROE is return on equity:** Return on equity focuses just on the equity component of the investment and it specifies the earnings left over for equity investors after debt service costs have been factored into the equity invested in the asset (Damodaran, 2007). Return on equity is the amount of net income returned as a percentage of shareholders' equity, and it measures a corporation's profitability by revealing how much profit a company creates with the money that shareholders have invested (Khatab, Mashood, Zaman, Salem, & Saeed, 2011). Thus, a higher ratio indicates a higher return. This measure is expected to indicate a positive association between corporate governance and firm performance.

**NIM is net income margin:** Net income margin is defined by the ratio of net interest income to total earning asset. Increase in interest margin leads to growth in profitability and capital; but it may affect efficiency and competition, thereby economic growth. This indicates that net interest margin is one factor that affects efficiency of deposit money banks.

**AU is Assets Utilization:** Assets utilization measure how efficient a business is at using its assets to make money. A business's receivables turnover, which is defined as its credit sales divided by the value of its accounts receivable from customers, indicates whether a business is able to turn the goods and services it sells into money that is available for other purposes.

**OE is operational efficiency:** Operational efficiency specifically measures how efficiently bank's product has been developed, held and distributed. Kolapo (2006) posited that a bank that is not operationally efficient will not achieve satisfactory return on owners' equity and later finds it difficult to survive adverse economic conditions.

**TQ is Tobin's Q:** This is a market profitability indicator as it deals with the market value of the banks' common stock. Tobin's Q as applied in this study is the current price of banks' shares at the last day of trading in the month of December of every year multiplied by the number of outstanding share, and then divided by the total assets of the bank. TQ ratio between 0 and 1 the stock is under-valued while TQ ratio greater than 1 the stock is over-valued.

**BS is board size:** Board size refers to the total number of directors on the board of each sample bank which is inclusive of the CEO and Chairman for each accounting year. This includes independent directors, executive directors, and non-executive directors.

**OBD is outside board directors:** An outside board director also known as a non-executive director is a member of a company's board of directors who are not part of the executive team. A non-executive director typically does not engage in the day-to-day management of the organization but is involved in policy making and planning exercises. However, in the context of this research, it implies percentage of non-executive directors relative to the entire board.

**IAC is independent audit committee:** Independent audit committee is made up of independent outside directors that are charged to provide oversight management practices in key governance areas such as risk management, internal audit, value and

ethics governance and financial stability. However, it indicates members of the audit committee that are not on the board in this study.

**BSH is block shareholding:** A block shareholder is an outside ownership (block-holding that exceeds 5% of the outstanding shares of the bank) or the number/percentage of shares held by institutions. In the context of this work, it shows substantial shareholders with 5% and above shareholding.

**DSH is directors' shareholding:** This refers to the number of shares owned by directors of the banks or in a related corporation that its shares in which the directors have interest and the nature and extent of that interest. In the context of this study, it is the percentage of total shares owned by the directors.

**BSIZE is bank size:** The size of a bank is pertinent in determining the extent to which companies perform. In studying the effect of corporate governance firm performance, bank size is often introduced as a control variable. Bank size as applied in the context of this research work is natural logarithm of total assets.

**CS is capital structure:** Leverage or debt ratio has often featured in capital structure related researches is also a control variable because the decision of a bank to introduce debt which is a financing decision studied in the process of financial management.

### **3.7 Method of Data Analysis**

To determine the effect of corporate governance practice on profitability and efficiency of deposit money banks, the study applied a panel data analysis. Before estimating the models, diagnostic tests of heteroscedasticity, serial correlation, Ramsey RESET Test, Multi-collinearity and normality test were conducted. This is to ensure that the models are in line with basic econometric assumptions. The panel regression model took the form of the fixed effects model, random effects model and the pooled ordinary least square model in order to establish the most appropriate

regression with the highest explanatory power, that is better suited to the data set employed in the study i.e. a balanced panel. The pooled ordinary least square in the first instance. However, in view of the weaknesses associated with it, the fixed effects model and random effect model to capture the performance of the firms considered in the study. In order to choose the most appropriate model of interpretation, the Hausman specification test was conducted. The Hausman specification test is the conventional test of whether the fixed or random effects model should be used. The question is whether there is significant correlation between the unobserved unit of observation specific random effects and the independent variables. If no such correlation exists, then the random effects model may be more appropriate. But when such a correlation exists, the fixed effects model would be more suitable because the model would be inconsistently estimated.

### **3.7.1 Panel Unit Root Test**

In an attempt to estimate the relationship between profitability and efficiency and corporate governance practice of deposit money banks in Nigeria, the panel unit root test was first performed on the variables concerned. The essence of the panel unit root to avert the occurrence of spurious results. To this effect, both the Levin, Lin and Chu (LLC) test and Breitung panel unit root tests were employed. The null hypothesis of the LLC test is that the variable is stationary. The null hypothesis of stationarity is accepted only when the p-value is less than 0.05. On the other hand, the Breitung panel unit root test method differs from LLC in two distinct ways. First, only the autoregressive portion (and not the exogenous components) is removed when constructing the standardized proxies. Second, the proxies are transformed and detrended.



### **3.7.2 Granger Causality Test**

The Granger Causality test was used to examine the effect of corporate governance practice on profitability and efficiency of deposit money banks. The granger causality test depicts the extent to which profitability and efficiency of deposit money banks can be explained by past values corporate governance practices. When deposit money banks corporate governance help in the prediction of profitability and efficiency, then profitability and efficiency is said to be granger caused by deposit money banks corporate governance practice. Alternatively, corporate governance practice is said to be granger caused by deposit money banks profitability and efficiency when the coefficients on the lagged of deposit money banks profitability and efficiency ratios are statistically significant.

### **3.7.3 Kao Residual Co-integration Test**

Kao panel Co-integration test is an Engle-Granger based co-integration for panel data. Kao (1999) noted that the null hypothesis of no co-integration for panel data exists in two test. The first is a Dickey-Fuller types test while the other is an Argumented Dickey-Fuller type test.

### **3.7.4 Johansen Fisher Panel Co-integration**

This step seeks to identify the number of co-integrating relationships that exist among these variables. This study applied the Johansen Fisher panel co-integration methodology that was developed for testing co-integration relationship for panel data analysis. This test identifies the number of stationary long-run relationships that exist among the set of integrated variables. It offers two tests, the trace test and the eigenvalue test, with a view to identifying the number of co-integrating relationships.

### **3.8 Criteria for Result Interpretation**

The criteria for judging interpretation of result and discussion of findings for this research were all based on three global statistics criteria namely, Adjusted R-Squared,

F-Statistic and Durbin Watson test of autocorrelation. The satisfaction by a model of these three global statistics as well as relative use of model, inferences from such estimated model cannot be statistically relied upon.

- 3.8.1 Coefficient of Determination ( $R^2$ ):** This is the summary measure that tells how well the simple regression line fits the data. It is a non-negativity quantity. Its limits are  $0 < r^2 < 1$ . An  $R^2$  of 1 means a perfect fit on the other hand an  $R^2$  of zero means that there is no relationship between dependent and independent variables.
- 3.8.2  $F^*$  Statistic:** This measures the overall joint significance of the entire regression plane. It aims at findings if the entire influences of the explanatory variations do actually have any significance influences on the dependent variables. When the tabulated  $F$  is more than the calculated  $F$  at 5% level of significance and  $n-k$  degree of freedom the null hypothesis rejected and the alternative accepted.
- 3.8.3 T-statistic:** This test shows the significance of the parameter estimates. The obtained value of the T- ratio was compared with the tabulated value the decision rule is that when the calculated value of t-statistics is greater than the t value at 5% level of significance and  $n-k$  degree of freedom. The null hypothesis will be rejected and the alternative accepted
- 3.8.4 Durbin Watson Autocorrelation Test:** The term autocorrelation may be defined as the correlation of a time series data with its own past and future values. The classical model assures that disturbance term relating to any observation is not influence by the disturbance term relating to any other observation. Autocorrelation can be caused by several factors such as specification bias (excluded variables case), manipulation of data, data transformations and non- stationary of data. The most celebrated test for detecting autocorrelations is the developed by statistician Durbin and Watson it is popularly known As Durbin- Watson d- statistics.

### 3.9 A Priori Expectation

The stakeholder's theory served as the theoretical framework of this research work thus regression output were analysed based on the assumptions of this theory - stakeholder's theory. If the percentage of outside board directors is high, the better the profitability and efficiency of the banks. In this regard, a positive relationship between outside board directors and profitability and efficiency of deposit money banks. Block shareholding reveals a negative relationship with net income margin and return on equity but a positive relationship with return on assets. The higher the directors' shareholding, the lesser the net income margin and return on equity but the greater the return on assets. Independent audit committees that are independent from management positively affects banks' profitability and efficiency because they are not subject to potential conflicts of interest that reduce their monitoring capacity. The size of the bank and capital structure decision positively affect performance of the banks. The supposed signs of the corporate governance practices and control variables are elucidated in Table 1.

**Table 1: A Priori Expectation of the Corporate Governance Practice and Control Variables**

<b>Symbol</b>	<b>Variable</b>	<b>Substitution</b>	<b>Supposed Signs</b>
BS	Board Size	Corporate Performance	-
OBD	Outside Board Directors	Corporate Performance	+
IAC	Independent Audit Committee	Corporate Performance	+
BSH	Block Shareholding	Corporate Performance	+
DSH	Directors' Shareholding	Corporate Performance	+
BSIZE	Bank Size	Control Variable	+
CS	Capital Structure	Control Variable	-

*Source: Researcher's Assumption based on the Postulation of the Stakeholder's Theory*

## CHAPTER FOUR

### DATA PRESENTATION AND ANALYSIS

#### 4.1 Presentation of Data

The average data of corporate governance practice and profitability and efficiency of deposit money banks as ascertained by the E-views 9.0 software using the *Mean plus SD Bound* are presented in this section. The data on board size, outside board directors, independent audit committee, block shareholding, directors' shareholding, size of the bank and capital structure are detailed in Table 2, while Table 3 provides the equivalent data on return on assets, return on equity, net income margin, assets utilization, operational efficiency and Tobin's Q from 2005 to 2017.

**Table 2: Corporate Governance Variables of Deposit Money Banks in Nigeria from 2005 to 2017**

Year	BS	OBD (%)	IAC (%)	BSH (%)	DSH (%)	BSIZE (₦'000)	CS (%)
2005	12	41.90	50.00	70.80	11.00	145,000,000	83.80
2006	13	35.80	51.00	68.20	11.30	334,000,000	84.00
2007	13	34.40	51.00	70.40	10.70	511,000,000	83.60
2008	14	38.80	50.00	76.00	10.00	844,000,000	83.60
2009	13	34.00	50.00	75.80	12.10	833,000,000	83.80
2010	14	42.00	50.00	78.40	10.80	920,000,000	79.90
2011	15	40.30	50.00	80.00	9.50	1,150,000,000	86.00
2012	15	41.30	50.00	77.80	8.40	1,350,000,000	79.50
2013	15	35.80	50.00	80.60	8.30	1,490,000,000	75.10
2014	14	38.70	50.00	81.70	7.00	1,700,000,000	78.80
2015	15	56.00	50.00	80.10	9.90	1,500,000,000	68.80
2016	15	59.70	50.00	76.90	8.90	1,710,000,000	69.30
2017	15	57.80	50.00	79.20	10.00	1,860,000,000	96.20

*Source: Annual Reports of sampled Deposit Money Banks from 2005 to 2017; and e-views 9.0 output data*

#### 4.1.1 Trend in Profitability and Efficiency of Deposit Money Banks

##### Return on Assets

The average return on assets of deposit money banks' was 1.10% in 2005, which had risen by 60.21% by the end of 2007 to settle at 2.84% before depreciating to 0.58% in the following year - 2008. The return on assets continued to depreciate from 2001 to 2004. From 2005 to 2011, as shown in Table 2, Fig. 1 and 2 return on assets gradually decline from 1.10% in 2005 to 0.46% in 2011. From 2013 to 2017, return on assets was on the depreciating end with the exception of 2016 when it was 1.84%.

**Table 3: Profitability and Efficiency of Deposit Money Banks in Nigeria from 2005 to 2017**

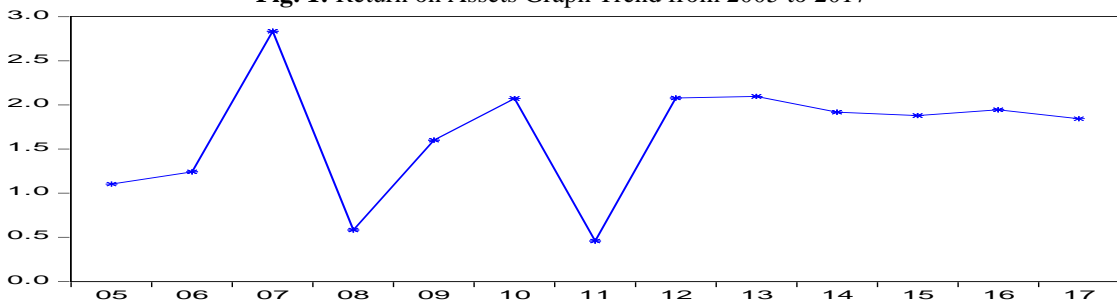
Year	Return on Assets (%)	Return on Equity (%)	Net Income Margin (%)	Assets Utilization (%)	Operational Efficiency (%)	Tobin's Q (%)
2005	1.10	-4.25	-11.00	4.90	469.00	56.00
2006	1.24	9.24	12.00	2.30	651.00	33.00
2007	2.84	14.49	23.00	2.60	583.00	66.00
2008	0.58	5.53	10.00	-2.60	154.00	26.00
2009	1.60	4.75	7.00	-1.10	733.00	14.00
2010	2.07	11.71	22.00	2.30	176.00	18.00
2011	0.46	4.99	4.00	0.20	186.00	8.00
2012	2.08	14.46	23.00	2.30	445.00	13.00
2013	2.10	12.69	29.00	4.50	468.00	17.00
2014	1.92	11.67	25.00	2.30	413.00	19.00
2015	1.88	10.37	25.00	1.90	735.00	15.00
2016	1.95	8.14	29.00	2.20	1025.00	11.00
2017	1.84	8.73	27.00	1.90	1032.00	23.00

*Source: Annual Reports of sampled Deposit Money Banks from 2005 to 2017; and e-views 9.0 output data*

### Return on Equity

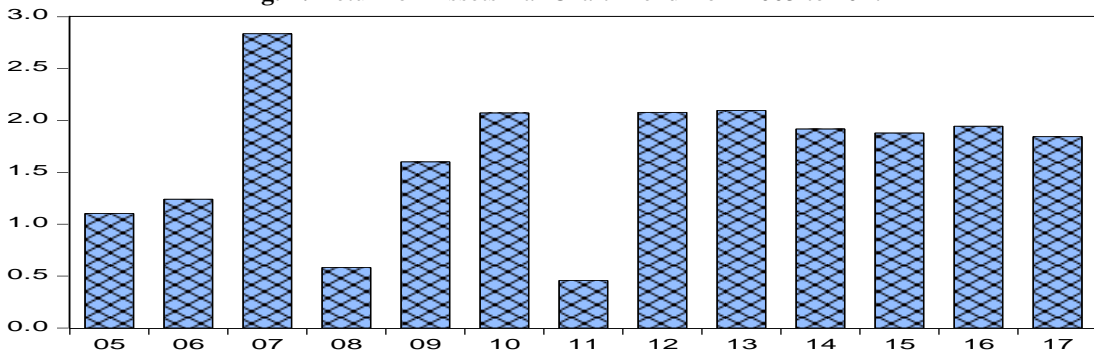
Return on equity of deposit money banks' have been impressive when compared with return on assets. From -4.25% in 2005, it rose to reach 11.70% at the end of 2010 but quickly decline in 2011 to 4.99%. From 2012 to 2017, deposit money banks' return on equity fell from 14.46% to 8.73%. The variation in deposit money banks' return on equity is depicted in Fig. 3 and 4.

**Fig. 1: Return on Assets Graph Trend from 2005 to 2017**



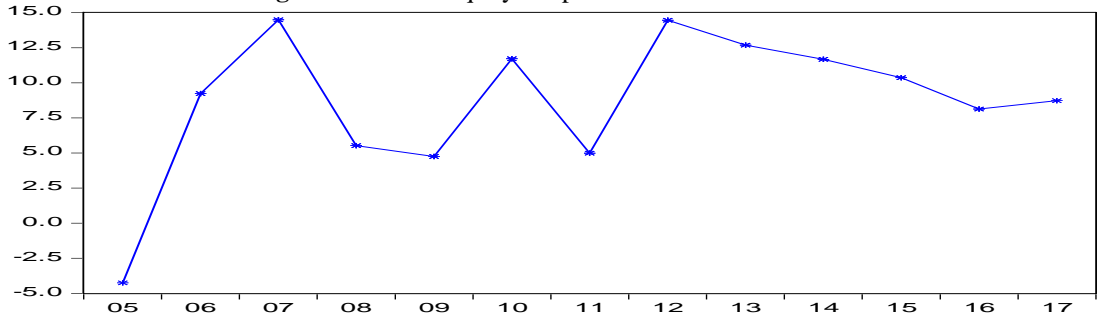
*Source: Annual Reports of sampled Deposit Money Banks from 2005 to 2017; and e-views 9.0 output data*

**Fig. 2: Return on Assets Bar Chart Trend from 2005 to 2017**



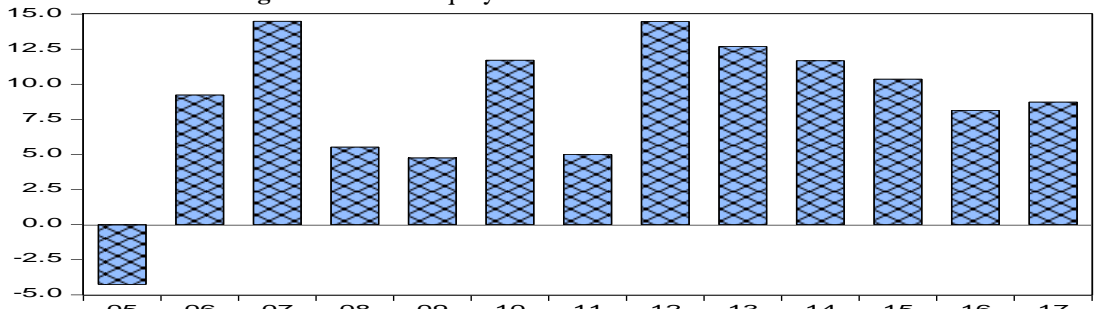
*Source: Annual Reports of sampled Deposit Money Banks from 2005 to 2017; and e-views 9.0 output data*

**Fig. 3: Return on Equity Graph Trend from 2005 to 2017**



Source: Annual Reports of sampled Deposit Money Banks from 2005 to 2017; and e-views 9.0 output data

**Fig. 4: Return on Equity Bar Chart Trend from 2005 to 2017**

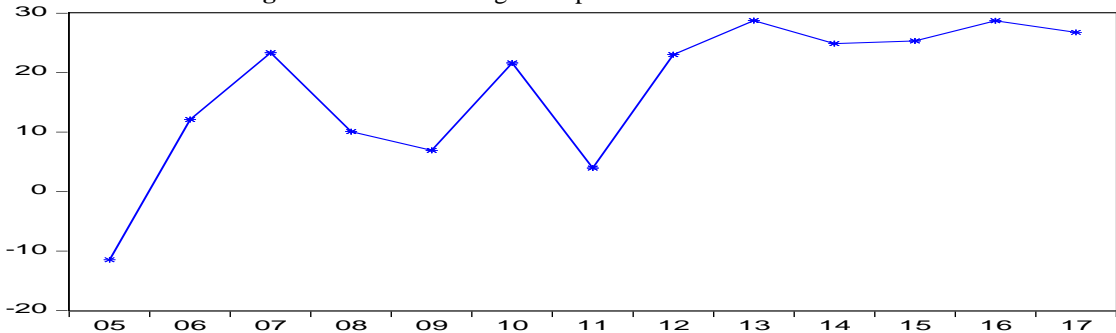


Source: Annual Reports of sampled Deposit Money Banks from 2005 to 2017; and e-views 9.0 output data

### Net Income Margin (NIM)

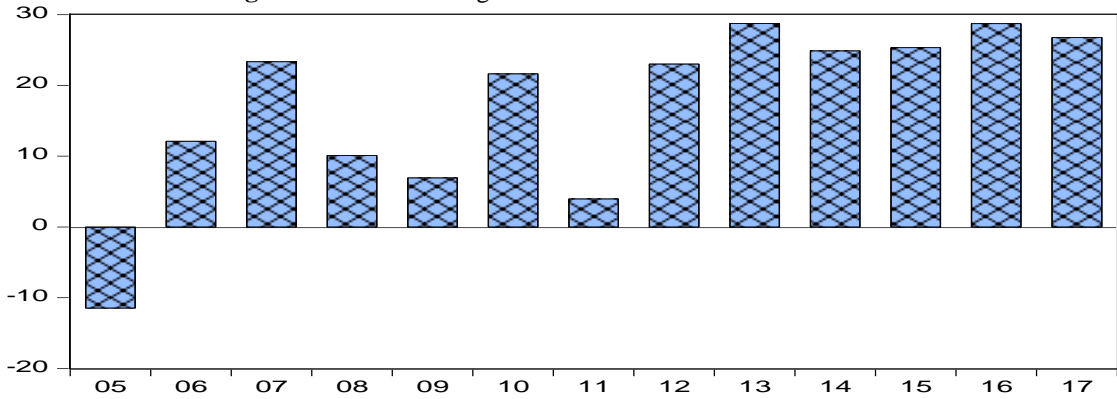
The net income margin of the sampled deposit money banks on Nigerian Stock Exchange have recorded fluctuations from 2005 to 2017. The net income margin was 23.00% in 2007 which later dropped to 7.00% in 2008. The lowest net income margin is 4.00% recorded in 2011 before it rose to 23.00% in 2012, and further increased to 29.00% in 2013. In 2015, it approximated to 27.00% from 29.00% in 2016. Fig. 5 and 6 reveal the movement in net income margin within the period studied.

**Fig. 5: Net Income Margin Graph Trend from 2005 to 2017**



Source: Annual Reports of sampled Deposit Money Banks from 2005 to 2017; and e-views 9.0 output data

**Fig. 6: Net Income Margin Bar Chart Trend from 2005 to 2017**

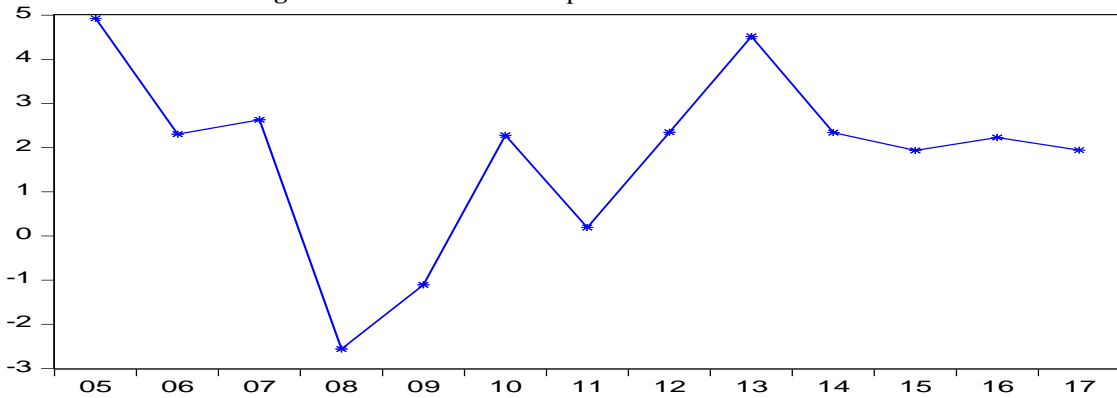


Source: Annual Reports of sampled Deposit Money Banks from 2005 to 2017; and e-views 9.0 output data

**Assets Utilization**

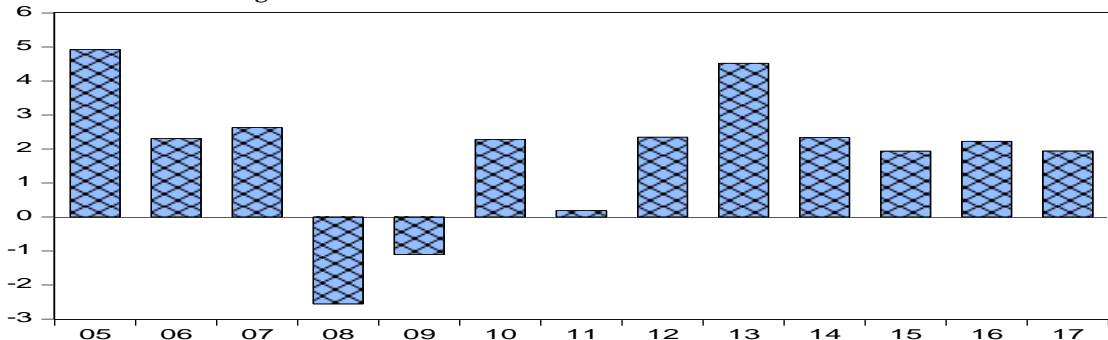
Table 2, Fig.7 and 8 unveil deposit money banks assets utilization ratio in Nigeria. There is marginal distortion in assets utilization ratio of deposit money banks. There have been considerable growth in assets utilization ratio within the period studied except in 2008 and 2009 which may be attributed to the global financial crisis. Assets utilization ratio at the end of 2017 was 1.90% as against 2.20% in 2016.

**Fig. 7: Assets Utilization Graph Trend from 2005 to 2017**



Source: Annual Reports of sampled Deposit Money Banks from 2005 to 2017; and e-views 9.0 output data

**Fig. 8: Assets Utilization Bar Chart Trend from 2005 to 2017**

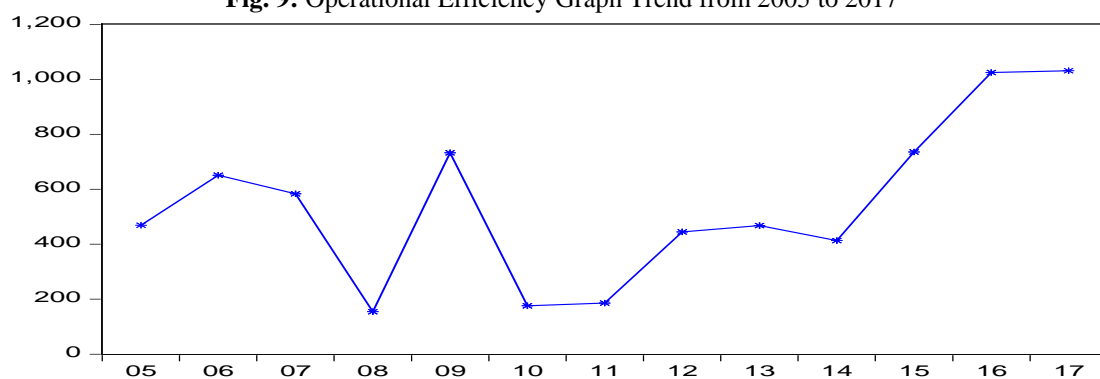


Source: Annual Reports of sampled Deposit Money Banks from 2005 to 2017; and e-views 9.0 output data

## Operational Efficiency

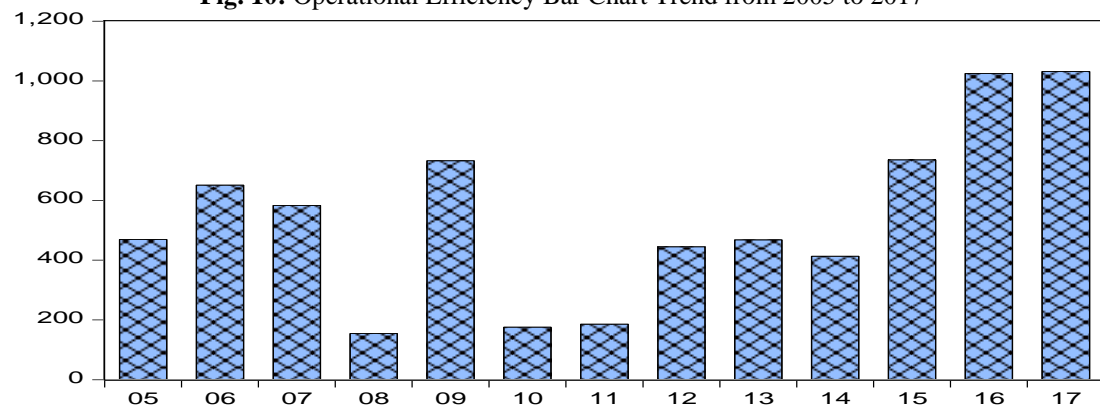
The operational efficiency of the sampled deposit money banks have sustained growth with little fluctuation. Operational efficiency was 469% in 2005. It appreciated to 583% in 2007 before declining to 186% in 2011. In 2012, it rose to 445% but marginally decline to 413% in 2014. Nonetheless, it appreciated to 1032% in 2017 as shown in Fig 9 and 10.

**Fig. 9:** Operational Efficiency Graph Trend from 2005 to 2017



Source: Annual Reports of sampled Deposit Money Banks from 2005 to 2017; and e-views 9.0 output data

**Fig. 10:** Operational Efficiency Bar Chart Trend from 2005 to 2017



Source: Annual Reports of sampled Deposit Money Banks from 2005 to 2017; and e-views 9.0 output data

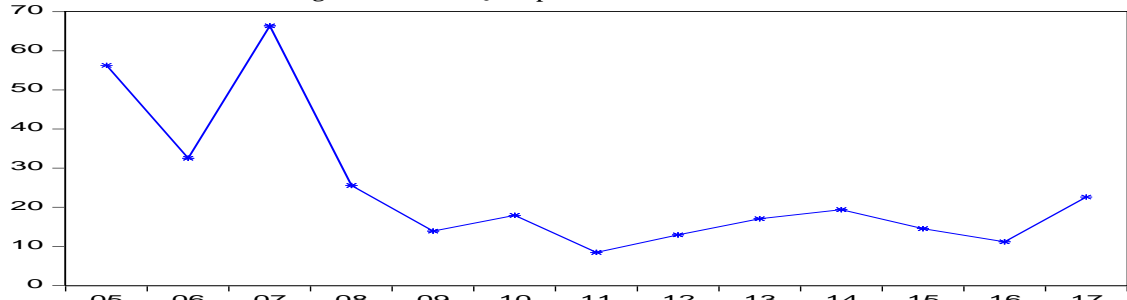
## Tobin's Q

The Tobin's Q of deposit money banks in Nigeria has witnessed a substantial changes over time. In 2005, Tobin's Q was 56%. It decline to 33% in 2006 and later rose to 66% in 2007. However, it drastically depreciated to 26% and 14% in 2008 and 2009 respectively. In 2011 Tobin's Q went down to 8% which is the lowest in the distribution. Nonetheless, it appreciated to 13% in 2012, and except from 2015 and



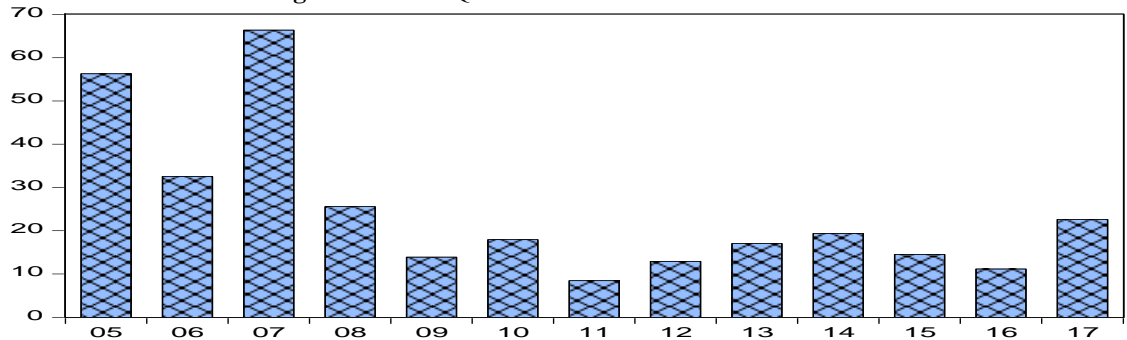
2016, there was sustained growth in Tobin's Q of deposit money banks. This changes in Tobin's Q of deposit money banks is depicted in Fig. 11 and 12.

**Fig. 11: Tobin's Q Graph Trend from 2005 to 2017**



Source: Annual Reports of sampled Deposit Money Banks from 2005 to 2017; and e-views 9.0 output data

**Fig. 12: Tobin's Q Bar Chart Trend from 2005 to 2017**



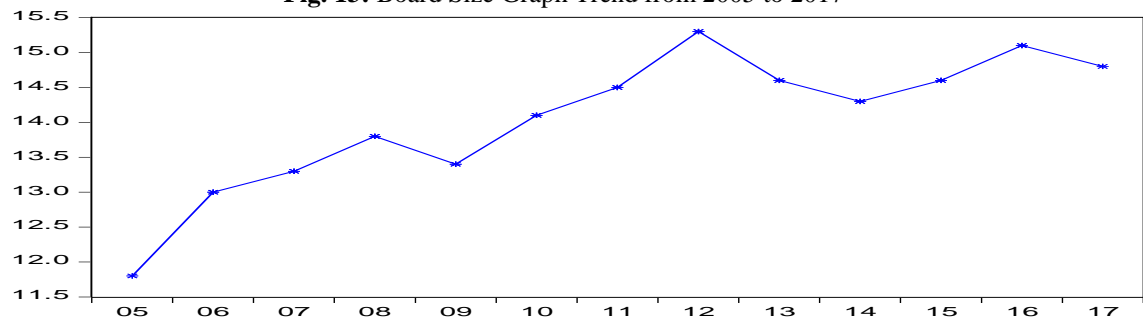
Source: Annual Reports of sampled Deposit Money Banks from 2005 to 2017; and e-views 9.0 output data

#### 4.1.2 Trend in Corporate Governance Practice of Deposit Money Banks

##### Board Size

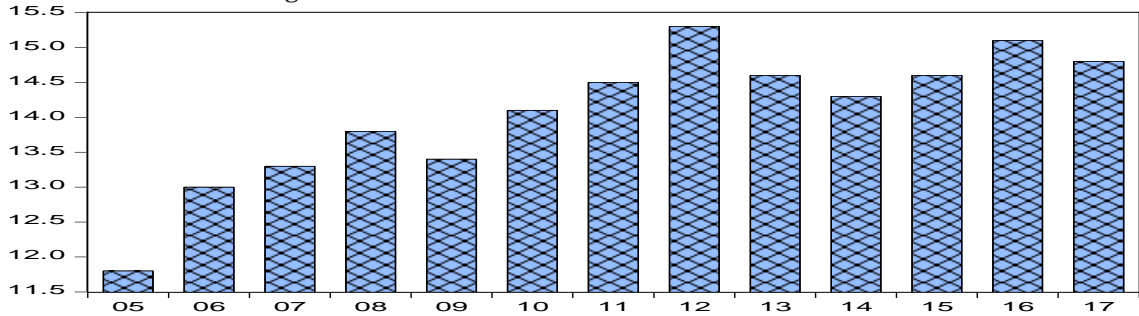
Board size of deposit money banks averaged 12 in the year the banking reform of 2005 was implemented. It increased to 13 in 2006 and 2007 and later 14 in 2008. The global financial crisis led to reduction in board size to 13 in 2009 in a bid to save cost. The size of the board within the period studied is revealed Fig 13 and 14.

**Fig. 13: Board Size Graph Trend from 2005 to 2017**



Source: Annual Reports of sampled Deposit Money Banks from 2005 to 2017; and e-views 9.0 output data

**Fig. 14: Board Size Bar Chart Trend from 2005 to 2017**



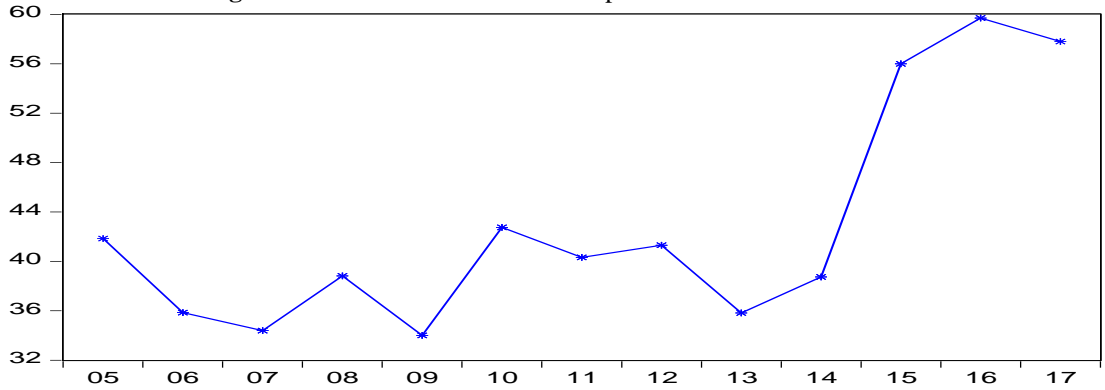
Source: Annual Reports of sampled Deposit Money Banks from 2005 to 2017; and e-views 9.0 output data

**Outside Board Directors**

The outside board directors was 41.90% in 2005. It declined to 34.40% in 2007 then appreciated to 42.00% in 2010 then slumped to 40.30% in 2011. It increased marginally to 41.30% in 2012 but declined to 35.80% in 2013. It again increased to 38.70% in 2014, and this growth was maintained as it was pegged 57.80% in 2017.

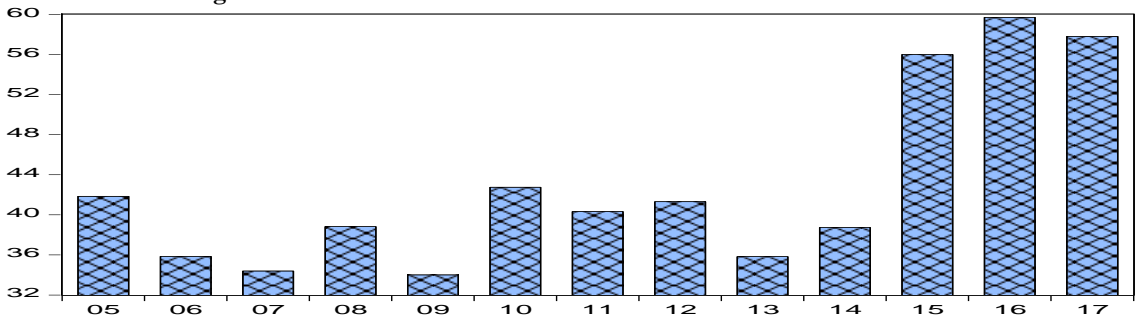
Fig. 15 and 16 entail the changes in outside board directors within the period of the study.

**Fig. 15: Outside Board Directors Graph Trend from 2005 to 2017**



Source: Annual Reports of sampled Deposit Money Banks from 2005 to 2017; and e-views 9.0 output data

**Fig. 16: Outside Board Directors Bar Chart Trend from 2005 to 2017**

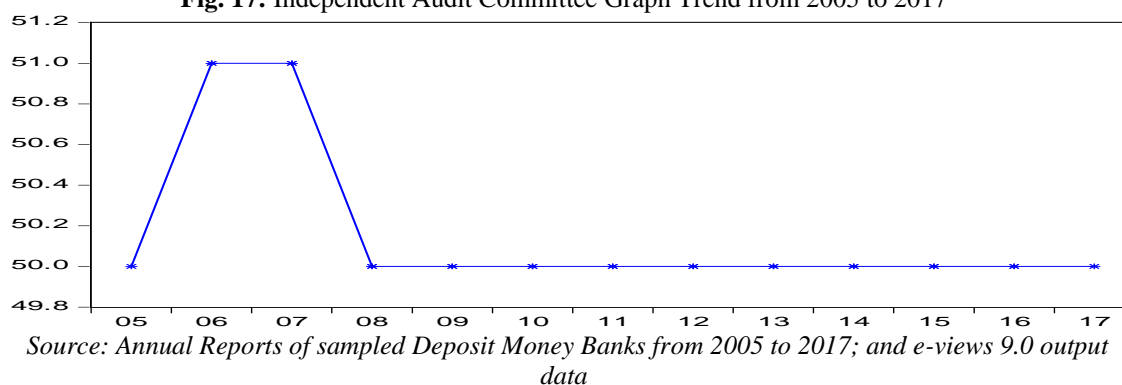


Source: Annual Reports of sampled Deposit Money Banks from 2005 to 2017; and e-views 9.0 output data

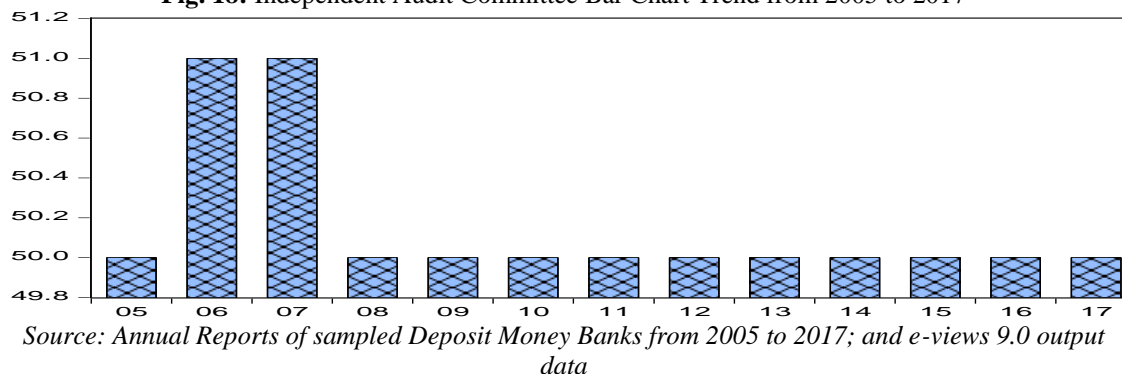
## Independent Audit Committee

The board audit committee in 2005 was 60%. However, with the full implementation of the corporate governance guidelines introduced by the Central Bank of Nigeria for all deposit money banks, the audit committee now comprises equal representation from both management and shareholders of the banks thus, signifying a 50% for board audit committee. Fig. 17 and 18 show the stability in board audit from 2005 to 2017.

**Fig. 17:** Independent Audit Committee Graph Trend from 2005 to 2017



**Fig. 18:** Independent Audit Committee Bar Chart Trend from 2005 to 2017

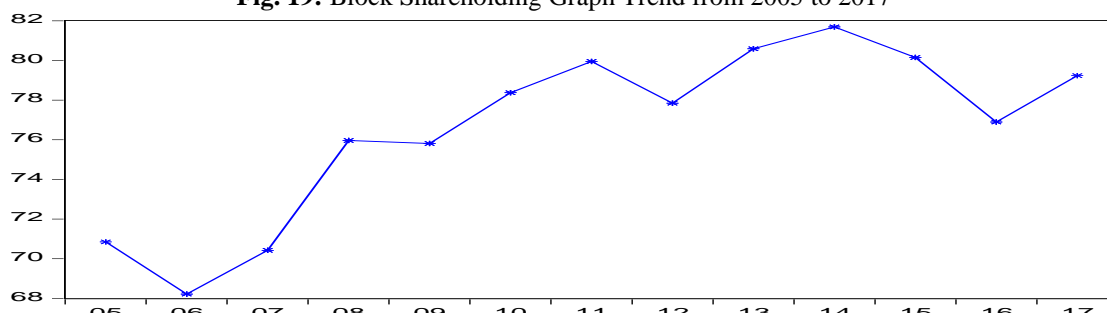


## Block Shareholding

The shareholding of banks have been characterised by block shareholding. Block shareholdings that is, individuals, institutions or corporate entity holding shares of more than 1,000,000 constitutes over 70% of the shareholdings of commercial banks in Nigeria. In 2005, the block shareholding constitutes 70.80% of the total shares issued by the banks. It swelled to 80% in 2011. There was a reduction in block shareholding in 2012 as it dropped to 77.80%. However, it increased to 76.90% and

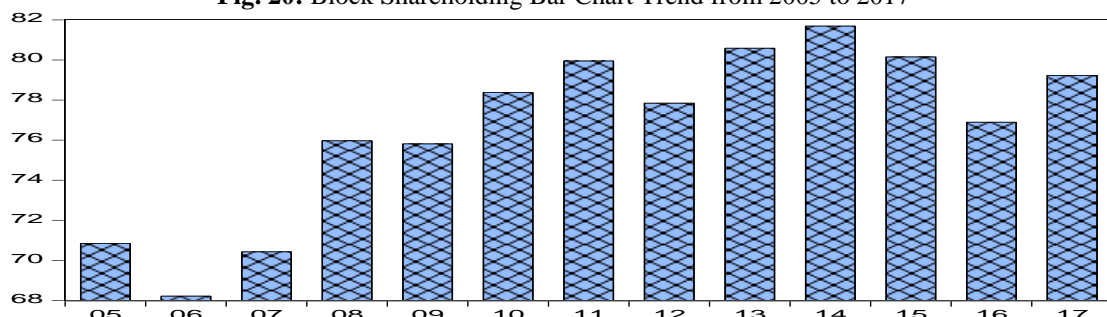
79.20% in 2016 and 2017 respectively. Fig. 19 and 20 give an insight of the trends in block shareholdings from 2005 to 2017.

**Fig. 19: Block Shareholding Graph Trend from 2005 to 2017**



Source: Annual Reports of sampled Deposit Money Banks from 2005 to 2017; and e-views 9.0 output data

**Fig. 20: Block Shareholding Bar Chart Trend from 2005 to 2017**

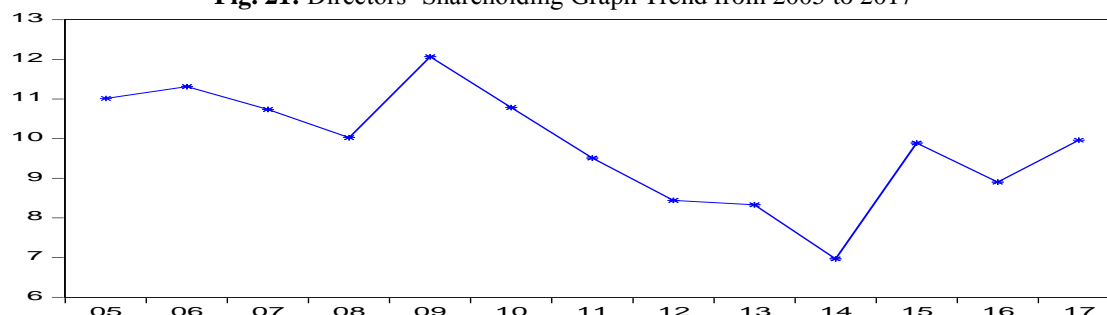


Source: Annual Reports of sampled Deposit Money Banks from 2005 to 2017; and e-views 9.0 output data

### Directors Shareholding

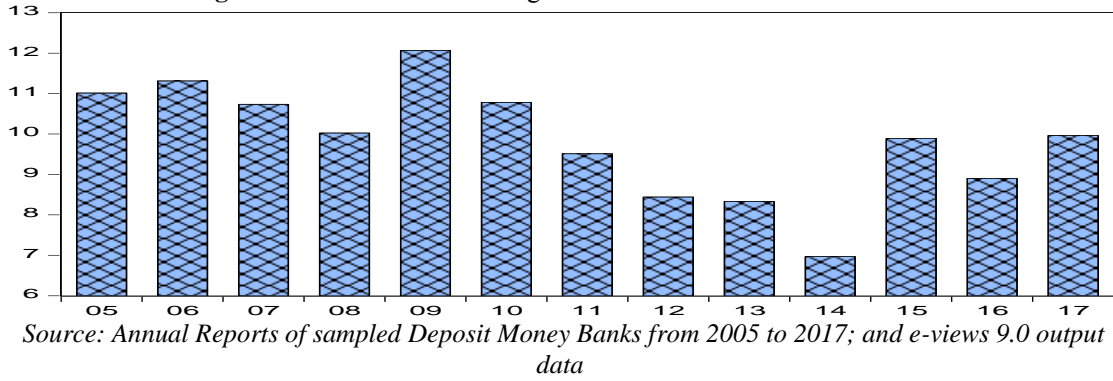
The board ownership structure has revealed that it is only marginal share of the banks that are held by directors, while the bulk shareholding are held by outsiders. In 2005, directors' shareholding was 11.00%. It declined to 10.7% in 2007 but appreciated to 12.10% in 2009. It decreased to 7.00% in 2014 before surging to 10.00% in 2017. Fig. 21 and 22 illustrate the variation in directors' shareholding.

**Fig. 21: Directors' Shareholding Graph Trend from 2005 to 2017**



Source: Annual Reports of sampled Deposit Money Banks from 2005 to 2017; and e-views 9.0 output data

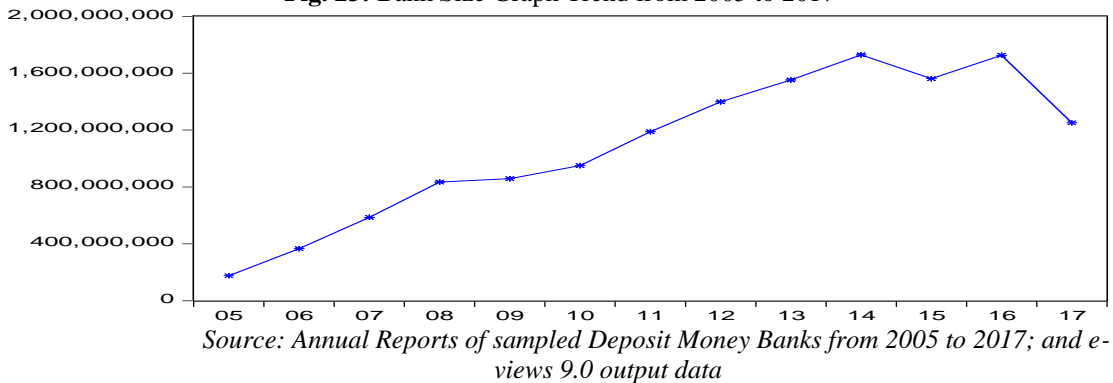
**Fig. 22: Directors' Shareholding Bar Chart Trend from 2005 to 2017**



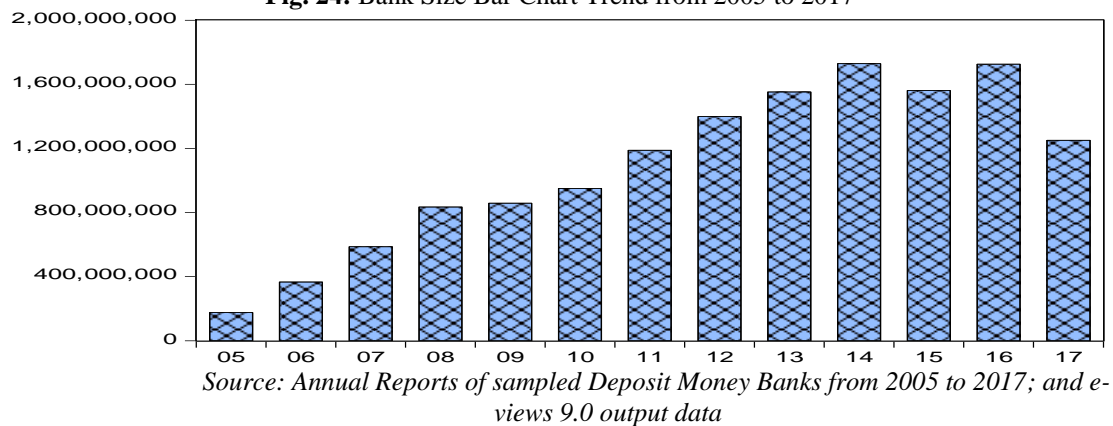
**Bank Size**

The size of the banks expressed via natural logarithm of total assets have been on the rise over the years. There is considerable appreciation in the assets of the Nigerian banking sector. In 2005, the bank size was ₦145,000 million and appreciated by over 100% to ₦1,860,000 million in 2017. Fig. 23 and 24 illustrate the change in total assets of banks from 2005 to 2017.

**Fig. 23: Bank Size Graph Trend from 2005 to 2017**



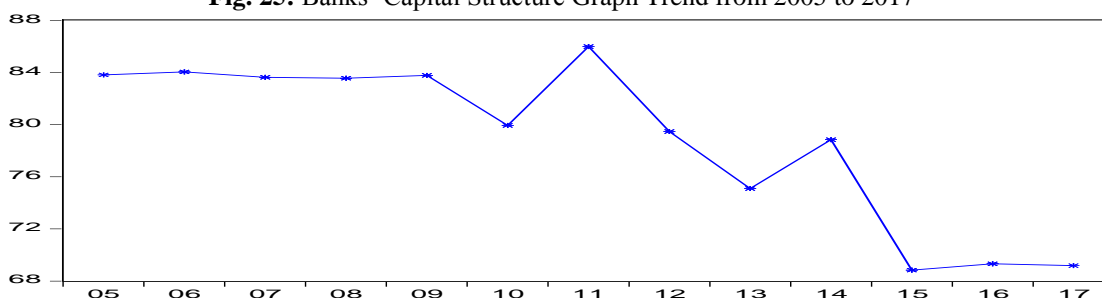
**Fig. 24: Bank Size Bar Chart Trend from 2005 to 2017**



## Capital Structure

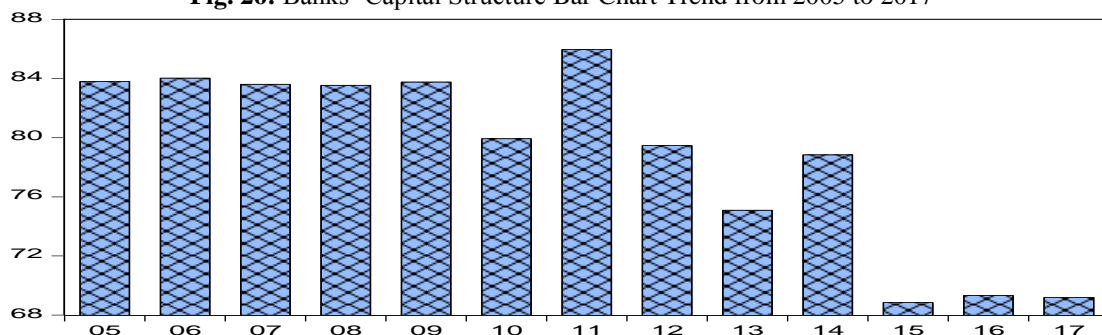
The capital structure of banks have been stable within the period of this study as it is characterised by less fluctuations. The capital structure was 83.80% in 2005 but decreased to 83.60% in 2007. It decreased to 79.90% in 2010 then rose sharply to 86.00% in 2011. The capital structure was worth 96.20% in 2017. Fig. 25 and 26 detail the trend in capital structure of the sampled banks.

**Fig. 25:** Banks' Capital Structure Graph Trend from 2005 to 2017



Source: Annual Reports of sampled Deposit Money Banks from 2005 to 2017; and e-views 9.0 output data

**Fig. 26:** Banks' Capital Structure Bar Chart Trend from 2005 to 2017



Source: Annual Reports of sampled Deposit Money Banks from 2005 to 2017; and e-views 9.0 output data

## 4.2 Descriptive Features of the Data

The descriptive characteristic of the data are summarized in Table 4. The mean, median, maximum, minimum, standard deviation and number of observations were spelt out. The mean of the data are 1.67 for ROA, 8.64 for ROE, 17.22 for NIM, 1.85 for AU, 546.93 for OE, 24.56 for TQ, 14.06 for BS, 42.86 for OBD, 50.16 for IAC, 76.60 for BSH, 9.84 for DSH, 1.09 for BSIZE and 78.82 for CS. The median are 1.76, 10.54, 19.32, 2.29, 222.59, 12.89, 14.00, 46.67, 50.00, 79.22, 5.87, 7.38, 84.74 for ROA, ROE, NIM, AU, OE, TQ, BS, OBD, IAC, BSH, DSH, BSIZE and CS

respectively. The maximum and minimum values are 20.08 and -24.80 for ROA, 40.30 and -162.49 for ROE, 94.63 and -299.18 for NIM, 25.56 and -53.13 for AU, 5591 and -1274.33 for OE, 197.64 and 1.23 for TQ, 22 and 6.0 for BS, 90 and 6.67 for OBD, 60 and 50 for IAC, 95.97 and 0.09 for BSH, 44.15 and 0 for DSH, 4.43 and 1.943 for BSIZE, and 136 and 0.79 for CS. The standard deviation are 3.54, 19.24, 36.27, 6.21, 1012.07, 30.26, 3.06, 20.25, 1.24, 15.45, 11.57, 1.01 and 21.62 for ROA, ROE, NIM, AU, OE, TQ, BS, OBD, IAC, BSH, DSH, BSIZE and CS respectively. OE, TQ, BS, IAC, DSH and BSIZE were positively skewed towards normality. The Kurtosis for the distribution are more than 3.0 except OBD, an indication that all the variables are leptokurtic in nature. From the Jarque-Bera statistic, all the variables follows normal distribution and free from outlier that may likely affect the result of the analysis.

**Table 4: Descriptive Statistics of Data**

	Mean	Median	Maximum	Minimum	Std. Dev.	Skewness	Kurtosis	Jarque-Bera	P-value	Obs
ROA	1.667132	1.760000	20.08000	-24.80000	3.543265	-2.398093	31.90192	4613.493	0.000000	130
ROE	8.639380	10.54000	40.30000	-162.4900	19.24028	-5.783197	50.49762	12845.20	0.000000	130
NIM	17.22132	19.32000	94.63000	-299.1800	36.27230	-5.184662	46.80855	10893.58	0.000000	130
AU	1.845349	2.290000	25.56000	-53.13000	6.214368	-4.927298	51.71673	13278.58	0.000000	130
OE	546.9329	222.5900	5591.530	-1274.330	1012.068	2.947100	13.45160	773.8790	0.000000	130
TQ	24.56419	12.89000	197.6400	1.230000	30.25592	2.918713	13.63843	791.4779	0.000000	130
BS	14.06202	14.00000	22.00000	6.000000	3.063780	0.081932	3.632608	5.295366	0.017371	130
OBD	42.85628	46.67000	90.00000	6.670000	20.25197	-0.161218	2.631457	9.288866	0.024960	130
IAC	50.15504	50.00000	60.00000	50.00000	1.240272	7.843198	62.51575	20361.51	0.000000	130
BSH	76.59581	79.22000	95.97000	0.090000	15.45248	-2.130870	10.49088	399.2319	0.000000	130
DSH	9.843643	5.870000	44.15000	0.000000	11.57410	1.668835	4.700593	75.42231	0.000000	130
BSIZE	1.09E+09	7.38E+08	4.43E+09	19435289	1.01E+09	1.183833	3.846994	33.98742	0.000000	130
CS	78.82581	84.74000	136.5300	0.790000	21.62293	-2.388931	9.740067	366.8785	0.000000	130

*Source: Output data from E-views 9.0*

### 4.3 Panel Unit Root Test

#### 4.3.1 Levin, Lin and Chu (LLC) Test

This study performed the LLC test at level and first difference at individual intercept and individual intercept and trend. The null hypothesis of the LLC test is that the variable is stationary. The null hypothesis of stationarity is accepted only when the p-value is less than 0.05. All the variables are not stationary at level estimation as evidenced by the LLC test result in Tables 5 and 6. This may be attributed to the way the data were generated.

**Table 5: LLC Test Result at Level: Individual Intercept**

Variables	LLC Test Statistic	Pooled Coefficient	Pooled t-Stat.	Remark
ROA	11.9846 (1.00)	-1.07640	-9.607	Not Stationary
ROE	-2.62804 (0.00)*	-0.99955	-9.535	Stationary
NIM	2.76240 (0.99)	-0.97775	-8.795	Not Stationary
AU	-5.82313 (0.00)*	-0.96998	-10.834	Stationary
OE	-4.16022 (0.00)*	-0.38604	-6.111	Stationary
TQ	-5.74772 (0.00)*	-0.71925	-11.226	Stationary
BS	-0.33634 (0.36)	-0.38814	-4.578	Not Stationary
OBD	-0.53971 (0.29)	-0.51210	-4.940	Not Stationary
IAC	-1.76224 (0.03)**	-1.26190	-2.834	Stationary
BSH	-22.6734 (0.00)*	-0.57762	-22.422	Stationary
DSH	-1.84667 (0.03)**	-0.39807	-5.233	Stationary
BSIZE	0.64434 (0.74)	-0.02301	-0.728	Not Stationary
CS	-3.64488 (0.00)*	-0.74670	-8.010	Stationary

Source: Computer Output using E-view 9.0.

Note: The optimal lag for LLC test is selected based on the Schwarz Info Criteria (SIC), p-values are in parentheses where (\*) and (\*\*) denote significance at 1% and 5% respectively.

**Table 6: LLC Test Result at Level: Individual Intercept and Trend**

Variables	LLC Test Statistic	Pooled Coefficient	Pooled t-Stat.	Remark
ROA	14.3176 (1.00)	-1.16322	-9.979	Not Stationary
ROE	-0.18533 (0.43)	-1.10255	-9.810	Not Stationary
NIM	4.12594 (1.00)	-1.07971	-9.284	Not Stationary
AU	-5.12485 (0.00)*	-1.14374	-12.594	Stationary
OE	-5.45859 (0.00)*	-0.80548	-9.075	Stationary
TQ	-3.00783 (0.00)*	-0.99892	-11.061	Stationary
BS	-2.49438 (0.00)*	-0.83543	-8.825	Stationary
OBD	-3.16078 (0.00)*	-0.91723	-8.401	Stationary
IAC	-3.41067 (0.00)*	-1.11521	-5.618	Stationary
BSH	-20.1275 (0.00)*	-0.73277	-23.655	Stationary
DSH	-2.68139 (0.00)*	-0.83544	-7.400	Stationary
BSIZE	0.44540 (0.67)	-0.67411	-5.558	Not Stationary
CS	-4.97029 (0.00)*	-1.00574	-11.018	Stationary

Source: Computer Output using E-view 9.0.

Note: The optimal lag for LLC test is selected based on the Schwarz Info Criteria (SIC), p-values are in parentheses where (\*) and (\*\*) denote significance at 1% and 5% respectively.

**Table 7: LLC Test Result at First Difference: Individual Intercept**

Variables	LLC Test Statistic	Pooled Coefficient	Pooled t-Stat.	Remark
ROA	-10.7619 (0.00)*	-1.61244	-12.931	Stationary
ROE	-4.90276 (0.00)*	-1.64172	-12.253	Stationary
NIM	-3.72360 (0.03)**	-1.52206	-11.565	Stationary
AU	-5.42498 (0.00)*	-1.48061	-12.539	Stationary
OE	-6.24588 (0.00)*	-1.25260	-10.194	Stationary
TQ	-9.94200 (0.00)*	-1.74694	-15.677	Stationary
BS	-3.04793 (0.00)*	-1.35184	-9.328	Stationary
OBD	-3.45930 (0.00)*	-1.45545	-9.955	Stationary
IAC	-5.22155 (0.00)*	-1.76904	-7.763	Stationary
BSH	-10.8515 (0.00)*	-0.87389	-14.397	Stationary
DSH	-5.40286 (0.00)*	-1.48717	-11.359	Stationary
BSIZE	-2.76406 (0.00)*	-1.24699	-7.791	Stationary
CS	-8.86990 (0.00)*	-1.38951	-13.053	Stationary

Source: Computer Output using E-view 9.0.

Note: The optimal lag for LLC test is selected based on the Schwarz Info Criteria (SIC), p-values are in parentheses where (\*) and (\*\*) denote significance at 1% and 5% respectively.



With the result in Table 7 and 8, the LLC unit root result at individual intercept and individual intercept and trend of first difference signifies that all the variables are stationary at first difference that is, the variable are integrated at order one: 1(1).

**Table 8: LLC Test Result at First Difference: Individual Intercept and Trend**

Variables	LLC Test Statistic	Pooled Coefficient	Pooled t-Stat.	Remark
ROA	-5.29856 (0.00)*	-1.66710	-13.830	Stationary
ROE	-3.24086 (0.00)*	-1.68034	-12.540	Stationary
NIM	-4.75937 (0.00)*	-1.58838	-12.141	Stationary
AU	-2.42961 (0.00)*	-1.58070	-11.800	Stationary
OE	-8.27027 (0.00)*	-1.63342	-14.440	Stationary
TQ	-20.8456 (0.00)*	-2.08731	-27.754	Stationary
BS	-3.43926 (0.00)*	-1.59930	-9.315	Stationary
OBD	-2.49509 (0.00)*	-1.77908	-11.276	Stationary
IAC	-7.94651 (0.00)*	-1.84285	-11.394	Stationary
BSH	-4.68151 (0.00)*	-1.16387	-13.295	Stationary
DSH	-6.20860 (0.00)*	-1.71921	-13.800	Stationary
BSIZE	-3.22976 (0.00)*	-1.45205	-9.432	Stationary
CS	-7.23669 (0.00)*	-1.43620	-13.613	Stationary

Source: Computer Output using E-view 9.0.

Note: The optimal lag for LLC test is selected based on the Schwarz Info Criteria (SIC), p-values are in parentheses where (\*) and (\*\*) denote significance at 1% and 5% respectively.

#### 4.3.2 Breitung Unit Root Test

To further affirm the LLC unit root test, the Breitung stationarity test was also conducted. Breitung stationarity is different from the LLC unit root test in the sense that it is only the autoregressive portion (and not the exogenous components) that is removed when constructing the standardized proxies.

**Table 9: Breitung Unit Root Test at Level: Individual Intercept and Trend**

Variables	Breitung t-Statistic	Pooled Coefficient	Pooled t-Stat.	Remark
ROA	-2.21230 (0.00)*	-0.26835	-2.212	Stationary
ROE	-4.43518 (0.00)*	-0.56582	-4.435	Stationary
NIM	-0.72291 (0.23)	-0.05941	-0.723	Not Stationary
AU	-1.71280 (0.04)**	-0.19988	-1.713	Stationary
OE	0.91505 (0.82)	0.06395	0.915	Not Stationary
TQ	-2.25237 (0.01)*	-0.22915	-2.252	Stationary
BS	0.10350 (0.54)	0.00829	0.103	Not Stationary
OBD	0.42822 (0.67)	0.02776	0.428	Not Stationary
IAC	-4.18907 (0.00)*	-1.09432	-4.189	Stationary
BSH	0.93052 (0.83)	0.07385	0.931	Not Stationary
DSH	0.79681 (0.79)	0.05947	0.797	Not Stationary
BSIZE	0.77615 (0.78)	0.03111	0.776	Not Stationary
CS	-1.83027 (0.03)**	-0.14597	-1.830	Stationary

Source: Computer Output using E-view 9.0.

Note: The optimal lag for LLC test is selected based on the Schwarz Info Criteria (SIC), No spectral estimation method for Breitung unit root test, p-values are in parentheses where (\*) and (\*\*) denote significance at 1% and 5% respectively.

Again, the proxies are transformed and detrended. The null hypothesis of the Breitung unit root test is that the variable is stationary which must be accepted if the p-value is less than a specified level of significance but not more than 10% level of significance. To this effect, the Breitung unit root test was only performed level and first difference at individual intercept and trend only. Table 9 shows that all the variables are not stationary at level but became stationary at first difference as depicted in Table 10.

**Table 10: Breitung Test at First Difference: Individual Intercept and Trend**

Variables	Breitung t-Statistic	Pooled Coefficient	Pooled t-Stat.	Remark
ROA	-2.96231 (0.01)*	-0.46775	-2.962	Stationary
ROE	-3.62545 (0.00)*	-0.63579	-3.625	Stationary
NIM	-4.34132 (0.00)*	-0.68564	-4.341	Stationary
AU	-2.11548 (0.01)*	-0.35905	-2.115	Stationary
OE	-3.87986 (0.00)*	-0.64785	-3.880	Stationary
TQ	-3.04101 (0.00)*	-0.51457	-3.041	Stationary
BS	-3.10285 (0.00)*	-0.16226	-1.103	Stationary
OBD	-3.82863 (0.00)*	-0.14506	-0.829	Stationary
IAC	-2.67763 (0.00)*	-0.77892	-2.678	Stationary
BSH	-2.06699 (0.04)**	-0.10909	-1.067	Stationary
DSH	-3.26735 (0.00)*	-0.46641	-3.267	Stationary
BFSIZE	-3.59304 (0.00)*	-0.07105	-0.593	Stationary
CS	-2.87710 (0.00)*	-0.48494	-2.877	Stationary

Source: Computer Output using E-view 9.0.

Note: The optimal lag for LLC test is selected based on the Schwarz Info Criteria (SIC), No spectral estimation method for Breitung unit root test, p-values are in parentheses where (\*) and (\*\*) denote significance at 1% and 5% respectively.

#### 4.4 Sensitivity Analysis

##### 4.4.1 Breusch-Godfrey Test for First-Order Autocorrelation

To test for the presence of autocorrelation in the models, the pooled panel data estimation was carried out. Any evidence of autocorrelation in a model affects the robustness of the regression output. From the result in Table 11, there is no element of autocorrelation in the panel data employed for all the models owing to the fact that the p-values are insignificant at 5% level of significance.

**Table 11: Serial Correlation LM Test**

Estimated Regression	T-statistic	P-value
ROA → BS+OBD+IAC+BSH+DSH+BFSIZE+CS	0.090049	0.76500
ROE → BS+OBD+IAC+BSH+DSH+BFSIZE+CS	0.030070	0.86300
NIM → BS+OBD+IAC+BSH+DSH+BFSIZE+CS	0.022341	0.88100
AU → BS+OBD+IAC+BSH+DSH+BFSIZE+CS	1.854552	0.17600
OE → BS+OBD+IAC+BSH+DSH+BFSIZE+CS	1.634518	0.05870
TQ → BS+OBD+IAC+BSH+DSH+BFSIZE+CS	1.627387	0.07850

Source: Output data from Gretl

#### 4.4.2 Test of Heteroskedasticity

In an attempt to avoid the occurrence of heteroskedasticity in the regression output, the white test of heteroskedasticity was conducted. The necessity for heteroskedasticity test is on the assumption that there is a relationship between current and recent magnitude of residuals of time series data. From the result in Table 12, there is no heteroskedasticity problem in the models as the p-values of the t-statistics are not statistically significant at 5% level of significance.

**Table 12: White Heteroskedasticity test**

<b>Regression Estimates</b>	<b>T-statistic</b>	<b>P-value</b>
ROA → BS+OBD+IAC+BSH+DSH+BSIZE+CS	29.575610	0.589815
ROE → BS+OBD+IAC+BSH+DSH+BSIZE+CS	39.276674	0.176047
NIM → BS+OBD+IAC+BSH+DSH+BSIZE+CS	39.557080	0.168270
AU → BS+OBD+IAC+BSH+DSH+BSIZE+CS	12.192993	0.094388
OE → BS+OBD+IAC+BSH+DSH+BSIZE+CS	17.297209	0.155770
TQ → BS+OBD+IAC+BSH+DSH+BSIZE+CS	37.874690	0.218896

*Source: Output data from Gretl*

#### 4.4.3 Ramsey RESET Test

The fitness of the variables in the models was assessed with the aid of the Ramsey RESET test. This is on the assumption that if non-linear combinations of the independent variables have any power in explaining the dependent variable, the model is not well specified. As shown in Table 13, the p-values of the f-statistics are insignificant at 5% level of significance which is evidences that the models were well-specified.

**Table 13: Ramsey Reset Specification**

<b>Estimates</b>	<b>T-statistic</b>	<b>P-value</b>
ROA → BS+OBD+IAC+BSH+DSH+BSIZE+CS	1.14795	0.06654
ROE → BS+OBD+IAC+BSH+DSH+BSIZE+CS	1.43464	0.0655
NIM → BS+OBD+IAC+BSH+DSH+BSIZE+CS	0.16731	0.14570
AU → BS+OBD+IAC+BSH+DSH+BSIZE+CS	0.32903	0.56700
OE → BS+OBD+IAC+BSH+DSH+BSIZE+CS	0.49411	0.48300
TQ → BS+OBD+IAC+BSH+DSH+BSIZE+CS	0.01624	0.88900

*Source: Output data from Gretl*

#### 4.4.4 Test for Multicollinearity

To avoid the issue of multi-collinearity between the corporate governance practice measurements/independent variables, the correlation matrix estimation was carried out and presented in Table 14. The highest correlation between the corporate

governance variables is 0.20 which is found between outside board directors and block shareholding. In this regard, there is no problem of multi-collinearity in the models.

**Table 14: Correlation Matrix**

	ROA	ROE	NIM	AU	OE	TQ	BS	OBD	IAC	BSH	DSH	BSIZE	CS
ROA	1.00	0.81	0.80	0.17	-0.02	-0.26	0.12	-0.07	0.02	-0.03	-0.24	0.13	-0.14
ROE	0.81	1.00	0.85	0.10	-0.06	-0.39	0.17	-0.04	0.04	-0.13	-0.22	0.25	0.01
NIM	0.80	0.85	1.00	0.09	-0.09	-0.35	0.13	0.05	0.01	-0.07	-0.35	0.14	-0.33
AU	0.17	0.10	0.09	1.00	0.01	0.06	0.30	0.08	0.01	-0.01	0.09	0.17	-0.22
OE	-0.02	-0.06	-0.09	0.01	1.00	-0.13	-0.15	-0.03	-0.03	0.14	0.39	-0.10	0.04
TQ	-0.26	-0.39	-0.35	0.06	-0.13	1.00	-0.05	0.01	0.02	-0.21	-0.01	-0.19	-0.07
BS	0.12	0.17	0.13	0.30	-0.15	-0.05	1.00	0.04	-0.05	-0.13	-0.12	0.32	-0.11
OBD	-0.07	-0.04	0.05	0.08	-0.03	0.01	0.04	1.00	-0.07	0.20	-0.04	0.11	-0.31
IAC	0.02	0.04	0.01	0.01	-0.03	0.02	-0.05	-0.07	1.00	-0.28	-0.01	-0.02	0.04
BSH	-0.03	-0.13	-0.07	-0.01	0.14	-0.21	-0.13	0.20	-0.28	1.00	0.13	-0.01	-0.12
DSH	-0.24	-0.22	-0.35	0.09	0.39	-0.01	-0.12	-0.04	-0.01	0.13	1.00	-0.18	-0.03
BSIZE	0.14	0.25	0.14	0.17	-0.10	-0.19	0.32	0.11	-0.02	-0.01	-0.18	1.00	0.25
CS	-0.14	0.01	-0.33	-0.22	0.04	-0.07	-0.11	-0.31	0.04	-0.12	-0.03	0.25	1.00

*Source: Output data from E-views 9.0*

## 4.5 Panel Co-integration Relationship

With affirmation that all the variables are stationary and free from stationarity defects that may affect the outcome of the result through the LLC and Breitung unit root test, the co-integration relationship was ascertained using panels data statistical tools of Kao's and Pedroni residual co-integration tests.

### 4.5.1 Kao Residual Co-integration Test

In the Kao co-integration relationship, the null hypothesis is that there is co-integration. The Kao co-integration test is structured in two types: Dickey-Fuller types test and Argumented Dickey-Fuller type test. The Kao co-integration test in Table 15 provides evidence that profitability and efficiency of deposit money banks as measured by return on assets, return on equity, net income margin, assets utilization, operational efficiency and Tobin's Q are co-integrated with variables of corporate governance via size of the board, outside board directors, independent audit committee, block shareholdings and directors' shareholdings. In other words, there is a long run relationship between corporate governance mechanism and efficiency and profitability of deposit money banks in Nigeria. This decision was arrived on the

argument that the p-values for all the models estimated are significant at 5% significance level.

**Table 15: Kao Residual Co-integration Test**

Models Estimated	Argumented Dickey-Fuller	
	t-Statistic	Prob.
ROA → BS+OBD+IAC+BSH+DSH+BSIZE+CS	-4.598812	0.0000
ROE → BS+OBD+IAC+BSH+DSH+BSIZE+CS	-4.413193	0.0000
NIM → BS+OBD+IAC+BSH+DSH+BSIZE+CS	-3.268457	0.0005
AU → BS+OBD+IAC+BSH+DSH+BSIZE+CS	-5.409408	0.0000
OE → BS+OBD+IAC+BSH+DSH+BSIZE+CS	-5.117005	0.0000
TQ → BS+OBD+IAC+BSH+DSH+BSIZE+CS	-4.048633	0.0006

Source: Computer output data using E-views 8.0

Notes: The ADF is the residual-based ADF statistic. The null hypothesis is no co-integration. (\*) and (\*\*) indicate that the estimated parameters are significant at the 1% and 5% level respectively.

#### 4.5.2 Pedroni Residual Co-integration

For the fact that the models estimated were in multiple regression arrangement, the Pedroni Residual co-integration was also conducted to determine the long run association between the dependent and independent variables. The null hypothesis of Pedroni's test is no co-integration, and the test allows for unbalanced panels, including heterogeneity in both the long-term co-integration vectors. There are seven panel co-integration statistics, first part is based on the within dimension approach, including the panel  $\nu$  statistic, the panel  $\rho$  Statistic, the panel  $PP$  statistic and the panel  $ADF$  statistic; the second part is based on the between-dimension approach, including the group  $\rho$  statistic, the group  $PP$  statistic and the group  $ADF$  statistic.

**Table 16: Pedroni Co-integration Result for ROA, BS, OBD, IAC, BSH, DSH, BSIZE and CS**

	T-Statistic	Prob.**
<b>Within Group</b>		
Panel $\nu$ -Statistic	-7.157332*	0.0000
Panel $\rho$ -Statistic	-8.796360*	0.0000
Panel $PP$ -Statistic	-3.764528*	0.0001
Panel $ADF$ -Statistic	0.665895	0.7473
<b>Between Group</b>		
Group $\rho$ -Statistic	-2.565101**	0.0412
Group $PP$ -Statistic	-6.000790*	0.0000
Group $ADF$ -Statistic	1.300165	0.9032

Source: Computer output data using E-views 9.0

Note: The variance ratio test is right-sided, while the others are left-sided. (\*) and (\*\*) indicate that the estimated parameters are significant at the 5% and 1% levels respectively.

**Table 17: Pedroni Co-integration Result for ROE, BS, OBD, IAC, BSH, DSH, BSIZE and CS**

	T-Statistic	Prob.**
<b>Within Group</b>		
Panel $v$ -Statistic	-4.954839*	0.0000
Panel $\rho$ -Statistic	1.185354	0.8821
Panel $PP$ -Statistic	-6.756793*	0.0000
Panel $ADF$ -Statistic	0.724784	0.7657
<b>Between Group</b>		
Group $\rho$ -Statistic	1.766566	0.9613
Group $PP$ -Statistic	-7.567148*	0.0000
Group $ADF$ -Statistic	1.745668	0.9596

Source: Computer output data using E-views 9.0

Note: The variance ratio test is right-sided, while the others are left-sided. (\*) and (\*\*) indicate that the estimated parameters are significant at the 5% and 1% levels respectively.

From the results in Tables 16 – 21, there is a clear evidence that corporate governance practice is related with profitability and efficiency of deposit money banks in the long run. This is on the bases that p-values of most of the estimates are significant at 5% level of significance.

**Table 18: Pedroni Co-integration Result for NIM, BS, OBD, IAC, BSH, DSH, BSIZE and CS**

	T-Statistic	Prob.**
<b>Within Group</b>		
Panel $v$ -Statistic	-7.868407*	0.0004
Panel $\rho$ -Statistic	1.468668	0.9290
Panel $PP$ -Statistic	-8.057482*	0.0001
Panel $ADF$ -Statistic	-9.098843*	0.0000
<b>Between Group</b>		
Group $\rho$ -Statistic	1.784892	0.9629
Group $PP$ -Statistic	-7.276339*	0.0009
Group $ADF$ -Statistic	0.820397	0.7940

Source: Computer output data using E-views 9.0

Note: The variance ratio test is right-sided, while the others are left-sided. (\*) and (\*\*) indicate that the estimated parameters are significant at the 5% and 1% levels respectively.

**Table 19: Pedroni Co-integration Result for AU, BS, OBD, IAC, BSH, DSH, BSIZE and CS**

	T-Statistic	Prob.**
<b>Within Group</b>		
Panel $v$ -Statistic	0.201161	0.4203
Panel $\rho$ -Statistic	0.825241	0.7954
Panel $PP$ -Statistic	-3.505696*	0.0002
Panel $ADF$ -Statistic	-5.077376*	0.0000
<b>Between Group</b>		
Group $\rho$ -Statistic	1.361388	0.9133
Group $PP$ -Statistic	-4.577757*	0.0000
Group $ADF$ -Statistic	0.756847	0.7754

Source: Computer output data using E-views 9.0

Note: The variance ratio test is right-sided, while the others are left-sided. (\*) and (\*\*) indicate that the estimated parameters are significant at the 5% and 1% levels respectively.

**Table 20: Pedroni Co-integration Result for OE, BS, OBD, IAC, BSH, DSH, BSIZE and CS**

	T-Statistic	Prob.**
<b>Within Group</b>		
Panel $v$ -Statistic	0.079354	0.4684
Panel $\rho$ -Statistic	0.742784	0.7712
Panel $PP$ -Statistic	-1.997638**	0.0229
Panel $ADF$ -Statistic	-6.371666*	0.0000
<b>Between Group</b>		
Group $\rho$ -Statistic	1.216713	0.8881
Group $PP$ -Statistic	-2.187059**	0.0144
Group $ADF$ -Statistic	-5.329755*	0.0000

Source: Computer output data using E-views 9.0

Note: The variance ratio test is right-sided, while the others are left-sided. (\*) and (\*\*) indicate that the estimated parameters are significant at the 5% and 1% levels respectively.

**Table 21: Pedroni Co-integration Result for TQ, BS, OBD, IAC, BSH, DSH, BSIZE and CS**

	T-Statistic	Prob.**
<b>Within Group</b>		
Panel $v$ -Statistic	-5.224928*	0.0090
Panel $\rho$ -Statistic	1.614749	0.9468
Panel $PP$ -Statistic	-3.508960*	0.0002
Panel $ADF$ -Statistic	-4.281069*	0.0001
<b>Between Group</b>		
Group $\rho$ -Statistic	2.107501	0.9825
Group $PP$ -Statistic	-4.520477*	0.0000
Group $ADF$ -Statistic	-5.244615*	0.0066

Source: Computer output data using E-views 9.0

Note: The variance ratio test is right-sided, while the others are left-sided. (\*) and (\*\*) indicate that the estimated parameters are significant at the 5% and 1% levels respectively.

#### 4.6 Short Run Dynamics

Determining the short run dynamics is ideal where a long run relationship has been affirmed to exist. The short run dynamics or speed of adjustment to equilibrium was perfected with the aid of the vector Error Correctional Model (ECM). On the long run relationship between return on assets and corporate governance, Table 22 depicts that the ECM unveils the supposed negative sign which is statistical significant as revealed by the t-statistic. This result implies that there is a tendency by the model to correct and move towards the equilibrium path following disequilibrium in each period. About 81.46% of error generated in previous period that was corrected in current period. In Table 23, it is reveal that the ECM depicts the expected negative sign and statistically significant at 5% level of significance. This suggests that there is the tendency by the model to correct and move towards the equilibrium path following disequilibrium in each period and by implication error correction is taking place.

About 84.97% of error generated in past years that is addressed in present year. Following the linkage between net income margin and corporate governance, Table 24 discloses that the ECM again showcases the supposed negative sign and statistically significant judging from the t-statistic value of 5.39. This means that there is significant error taking place, and about 57.47% of error generated in past year that is current in present year.

**Table 22: ECM Result: ROA, BS, OBD, IAC, BSH, DSH, BSIZE and CS**

<b>Variables</b>	<b>Coefficient</b>	<b>Standard Error</b>	<b>T-Statistic</b>
C	0.003988	0.23328	0.01710
D(ROA(-1))	-0.056004	0.05466	-1.02468
D(BS(-1))	-0.060510	0.12327	-0.49089
D(OBD(-1))	-0.030474	0.01339	-2.27631
D(IAC(-1))	0.090946	0.05045	1.80251
D(BSH(-1))	0.018185	0.01924	0.94508
D(DSH(-1))	0.050151	0.04420	1.13464
D(BSIZE(-1))	8.46E-10	6.8E-10	1.24622
D(CS(-1))	-0.006175	0.01553	-0.39769
ECM (-1)	-0.814601	0.10348	-7.87224

*Source: Computer analysis using E-views 9.0.*

**Table 23: ECM Result: ROE, BS, OBD, IAC, BSH, DSH, BSIZE and CS**

<b>Variables</b>	<b>Coefficient</b>	<b>Standard Error</b>	<b>T-Statistic</b>
C	-0.501508	1.20475	-0.41627
D(ROE(-1))	-0.062205	0.05233	-1.18882
D(BS(-1))	-0.676595	0.63443	-1.06646
D(OBD(-1))	-0.110131	0.06832	-1.61194
D(IAC(-1))	0.122454	0.24915	0.49149
D(BSH(-1))	0.086435	0.09998	0.86451
D(DSH(-1))	-0.158161	0.22704	-0.69661
D(BSIZE(-1))	5.34E-09	3.5E-09	1.51719
D(CS(-1))	-0.039225	0.08005	-0.48999
ECM (-1)	-0.849749	0.10375	-8.19073

*Source: Computer analysis using E-views 9.0.*

**Table 24: ECM Result: NIM, BS, OBD, IAC, BSH, DSH, BSIZE and CS**

<b>Variables</b>	<b>Coefficient</b>	<b>Standard Error</b>	<b>T-Statistic</b>
C	2.524019	2.31913	1.08835
D(NIM(-1))	-0.039987	0.05897	-0.67812
D(BS(-1))	-0.499248	1.22469	-0.40765
D(OBD(-1))	-0.113121	0.13320	-0.84925
D(IAC(-1))	0.869489	0.53508	1.62496
D(BSH(-1))	0.049479	0.19245	0.25709
D(DSH(-1))	0.506167	0.44106	1.14761
D(BSIZE(-1))	-1.86E-09	6.7E-09	-0.27812
D(CS(-1))	0.200320	0.15233	1.31507
ECM (-1)	-0.574717	0.10664	-5.38938

*Source: Computer analysis using E-views 9.0.*



With regard to the long run association between assets utilization and corporate governance, Table 25 details that the ECM dispels the required negative sign and this is significant at 5% significance level, an expression that there is a tendency by the model to correct and move towards the equilibrium path following disequilibrium in each period. About 58.59% of error generated in previous years that is corrected in current year. For operational efficiency and corporate governance long run relationship, Table 26 dispels that the error correction coefficient depicted the expected negative sign but insignificant which expresses that there is no significant error correction taking place. As can be seen in Table 27 based on the association between Tobin's Q and corporate governance in Nigeria, the ECM unveils the supposed negative sign which creates the impression that 4.9% of error generated in past period is addressed in present year, however, this is not statistically significant at 5% level of significance.

**Table 25: ECM Result: AU, BS, OBD, IAC, BSH, DSH, BSIZE and CS**

<b>Variables</b>	<b>Coefficient</b>	<b>Standard Error</b>	<b>T-Statistic</b>
C	-0.271420	0.74564	-0.36401
D(AU(-1))	-0.093089	0.09971	-0.93356
D(BS(-1))	0.388807	0.39464	0.98521
D(OBD(-1))	-0.005989	0.04212	-0.14218
D(IAC(-1))	0.338348	0.17081	1.98085
D(BSH(-1))	-0.033452	0.06060	-0.55199
D(DSH(-1))	0.097369	0.14039	0.69358
D(BSIZE(-1))	1.46E-09	2.2E-09	0.67775
D(CS(-1))	0.009903	0.04836	0.20477
ECM (-1)	-0.585907	0.12146	-4.82387

*Source: Computer analysis using E-views 9.0.*

**Table 26: ECM Result: OE, BS, OBD, IAC, BSH, DSH, BSIZE and CS**

<b>Variables</b>	<b>Coefficient</b>	<b>Standard Error</b>	<b>T-Statistic</b>
C	48.66797	96.7437	0.50306
D(OE(-1))	-0.167987	0.09323	-1.80179
D(BS(-1))	-78.70730	52.0224	-1.51295
D(OBD(-1))	11.16049	5.62932	1.98256
D(IAC(-1))	9.799050	25.1134	0.39019
D(BSH(-1))	1.361785	7.98537	0.17053
D(DSH(-1))	9.548320	18.7799	0.50843
D(BSIZE(-1))	2.11E-08	2.7E-07	0.07812
D(CS(-1))	1.518482	6.08383	0.24959
ECM (-1)	-0.002391	0.00423	-0.56479

*Source: Computer analysis using E-views 9.0.*

**Table 27: ECM Result: TQ, BS, OBD, IAC, BSH, DSH, BSIZE and CS**

<b>Variables</b>	<b>Coefficient</b>	<b>Standard Error</b>	<b>T-Statistic</b>
C	-3.497847	2.88611	-1.21196
D(TQ(-1))	-0.337690	0.08531	-3.95842
D(BS(-1))	1.100392	1.55420	0.70801
D(OBD(-1))	0.038894	0.16366	0.23765
D(IAC(-1))	-0.915263	0.66864	-1.36885
D(BSH(-1))	-0.029903	0.24182	-0.12366
D(DSH(-1))	0.117545	0.54356	0.21625
D(BSIZE(-1))	4.33E-09	8.0E-09	0.54019
D(CS(-1))	-0.061958	0.17956	-0.34506
ECM (-1)	-0.049080	0.05091	-0.96405

*Source: Computer analysis using E-views 9.0.*

#### **4.7 Panel OLS Regression Analysis**

The estimation of the ordinary relationship between corporate governance and profitability and efficiency of deposit money banks in Nigeria was carried out using the panel Ordinary Least Square (OLS) regression technique. The estimation was done in three sets: pooled, fixed and random effect estimation. The pooled is the traditional estimate but due to the weaknesses associated with pooled effect estimation, it becomes imperative to determine the fixed and random effect estimation. The Hausman test was applied to select between the suitability of either fixed effect or random effect estimation. Tables 28 – 33 summarise the output of the panel OLS estimation.

##### **4.7.1 Return on Assets and Corporate Governance Practice**

The panel regression result in Table 28 reveal the suitability of the random effect estimation which suggests board size, independent audit committee and block shareholding have positive insignificant relationship with return on assets, while outside board directors and directors' shareholding have insignificant negative relationship with return on assets. The capital structure of the banks was found to have significantly and negatively related with return on assets, whereas the size of the banks positively and significantly related with return on assets. The coefficient of the constant 0.693439 illustrates that if corporate governance practice: board size, outside

board directors, independent audit committee, block shareholding and directors' shareholding coupled with control variables size of the banks and capital structure are held constant, return on assets would be valued at 69.34%. A unit rise in board size, independent audit committee and block shareholding lead to 7.3%, 3.0% and 0.26% rise in banks' return on assets, while a corresponding reduction of 0.7% and 1.0% in return on assets on a percentage increase in outside board directors and directors' shareholding.

**Table 28: Panel OLS Regression Result Return on Assets and Corporate Governance Practice**

Variables	Pooled OLS		Fixed Effect		Random Effect	
	Coefficient	Prob.	Coefficient	Prob.	Coefficient	Prob.
C	1.292490	0.7601	-0.818392	0.8507	0.693439	0.8700
BS	0.070032	0.3121	0.085014	0.2219	0.073821	0.2839
OBD	-0.008259	0.4286	-0.005330	0.6318	-0.007587	0.4714
IAC	0.023786	0.7243	0.045550	0.5127	0.030354	0.6530
BSH	0.000590	0.9659	0.008713	0.5413	0.002639	0.8486
DSH	-0.010405	0.5534	-0.010612	0.5442	-0.010425	0.5495
BSIZE	5.28E-10	0.0178	6.63E-10	0.0087	5.55E-10	0.0148
CS	-0.026217	0.0097	-0.027902	0.0092	-0.026374	0.0097
R-squared	0.137801		0.238673		0.143559	
Adjusted R-squared	0.075096		0.092559		0.081272	
S.E. of regression	2.096020		2.076137		2.062174	
Sum squared resid	483.2628		426.7242		467.7818	
Log likelihood	-252.2392		-244.8360			
F-statistic	2.197595		1.633477		2.304809	
Prob(F-statistic)	0.032869		0.062543		0.025285	
Durbin-Watson stat	1.896021		1.793558		1.868718	
Hausman Specification Test						
	Chi-Sq. Statistic		6.532456			
	P-value		0.587800			

*Source: Computer output data using E-views 9.0*

*Note: Periods included: 12, Cross-sections included: 10, Total Number of Observations: 120*

In terms of the control variables, increasing the size of the bank and capital structure by a unit results in 5.55 factor appreciation and 2.0% depreciation in return on assets respectively. From the adjusted R-square, corporate governance practice controlled by the size of the bank and capital structure account for only 8.13% variation in return on assets which is significant based on the p-value ( $0.02 > 0.05$ ) of the f-statistic. The Durbin Watson value of 1.87 is within the acceptable range of no autocorrelation in the model.

#### 4.7.2 Return on Equity and Corporate Governance Practice

The revelation in Table 29 based on the superiority of the random effect estimation is that outside board directors and block shareholding have negative insignificant relationship with return on equity, whereas board size, independent audit committee and directors shareholding have positive relationship with return on equity. Capital structure has insignificant negative relationship with return on equity but banks' size positively and significantly related with return on equity.

**Table 29: Panel OLS Regression Result Return on Equity and Corporate Governance Practice**

Variables	Pooled OLS		Fixed Effect		Random Effect	
	Coefficient	Prob.	Coefficient	Prob.	Coefficient	Prob.
C	-1.790513	0.9385	-8.286008	0.7294	-2.986288	0.8979
BS	0.739661	0.0535	0.780229	0.0439	0.745088	0.0515
OBD	-0.030496	0.5925	-0.005204	0.9320	-0.026746	0.6416
IAC	0.091345	0.8047	0.138494	0.7179	0.101894	0.7835
BSH	-0.065784	0.3851	-0.034329	0.6624	-0.061043	0.4218
DSH	0.064407	0.5005	0.074408	0.4374	0.066221	0.4875
BSIZE	3.21E-09	0.0095	3.91E-09	0.0052	3.30E-09	0.0088
CS	-0.027528	0.6129	-0.040553	0.4813	-0.028557	0.6016
R-squared	0.164837		0.253217		0.168521	
Adjusted R-squared	0.104097		0.109895		0.108050	
S.E. of regression	11.48672		11.44949		11.38061	
Sum squared resid	14513.93		12978.00		14247.01	
Log likelihood	-454.6762		-448.0210			
F-statistic	2.713843		1.766771		2.786794	
Prob(F-statistic)	0.009116		0.037537		0.007581	
Durbin-Watson stat	1.876258		1.869111		1.872403	
Hausman Specification Test						
	Chi-Sq. Statistic		6.677953			
	P-value		0.571700			

*Source: Computer output data using E-views 9.0*

*Note: Periods included: 12, Cross-sections included: 10, Total Number of Observations: 120*

Return on equity would be down by magnitude of 2.98% assuming corporate governance practices of the banks are kept constant. Return on equity would rise by 74.5%, 10.19% and 6.62% on a unit increase in board size, independent audit committee and directors shareholding, while a depreciation of 2.67% and 6.10% based on a percentage rise in outside board directors and block shareholding. The adjusted R-square shows that 16.85% changes in return on equity was significantly attributed to corporate governance mechanism controlled by banks size and capital

structure. There is no evidence of autocorrelation in the estimated model owing to the Durbin Watson statistic of 1.87.

### 4.7.3 Net Income Margin and Corporate Governance Practice

The random effect output in Table 30 indicates that board size and independent audit committee have insignificant positive relationship with net income margin, while a negative relationship exists between outside board directors, block shareholding and directors' shareholding. Capital structure still maintained its negative correlation with net income margin. The size of the banks relates positively and significantly with net income margin. Corporate governance practice at constant would result in 70.95 factor increase in net income margin of deposit money banks.

**Table 30: Panel OLS Regression Result Net Income Margin and Corporate Governance Practice**

Variables	Pooled OLS		Fixed Effect		Random Effect	
	Coefficient	Prob.	Coefficient	Prob.	Coefficient	Prob.
C	72.51886	0.0617	59.88611	0.1382	70.95205	0.0700
BS	0.391100	0.5324	0.442764	0.4871	0.398129	0.5274
OBD	-0.123011	0.1928	-0.129087	0.2062	-0.123428	0.1970
IAC	0.001547	0.9980	0.126615	0.8429	0.016238	0.9790
BSH	-0.096163	0.4426	-0.057986	0.6584	-0.091316	0.4699
DSH	-0.444947	0.0076	-0.426042	0.0115	-0.442374	0.0083
BSIZE	4.97E-09	0.0145	4.70E-09	0.0403	4.94E-09	0.0168
CS	-0.615332	0.0000	-0.580180	0.0000	-0.610903	0.0000
R-squared	0.402085		0.457437		0.398794	
Adjusted R-squared	0.358600		0.353309		0.355070	
S.E. of regression	18.99975		19.07796		18.88233	
Sum squared resid	39708.97		36032.88		39219.66	
Log likelihood	-514.5611		-508.7810			
F-statistic	9.246571		4.393020		9.120684	
Prob(F-statistic)	0.000000		0.000001		0.000000	
Durbin-Watson stat	1.682478		1.581996		1.670400	
Hausman Specification Test						
	Chi-Sq. Statistic		5.755615			
	P-value		0.674600			

*Source: Computer output data using E-views 9.0*

*Note: Periods included: 12, Cross-sections included: 10, Total Number of Observations: 120*

Net income margin will depreciate by 12.34%, 9.13% and 44.24% following a percentage increase in outside board directors, block shareholding and directors' shareholding. On the other hand, it will appreciate by 39.81% and 1.62% if board size and independent audit committee increase by a unit. Corporate governance practice significantly accounted for 35.51% variation in net income margin. The estimated

model has no autocorrelation problem judging from the Durbin Watson coefficient of 1.67 which is still within the acceptable range of no autocorrelation.

#### 4.7.4 Assets Utilization and Corporate Governance Practice

The fixed effect estimation as supported by the hausman test in Table 31 discloses that board size, outside board directors, independent audit committee, block shareholding and directors' shareholding have positive relationship with assets utilization of the deposit money banks. Board size and directors' shareholding are significant. Assets utilization would down by 439% assume corporate governance practices of deposit money banks when control by capital structure and banks' size are constant.

**Table 31: Panel OLS Regression Result Assets Utilization and Corporate Governance Practice**

Variables	Pooled OLS		Fixed Effect		Random Effect	
	Coefficient	Prob.	Coefficient	Prob.	Coefficient	Prob.
C	-4.398280	0.6948	-11.08419	0.3140	-4.398280	0.6792
BS	0.474091	0.0114	0.598866	0.0011	0.474091	0.0077
OBD	-0.005532	0.8427	0.000229	0.9936	-0.005532	0.8343
IAC	0.074774	0.6756	0.127160	0.4700	0.074774	0.6591
BSH	-0.004975	0.8911	0.027572	0.4451	-0.004975	0.8852
DSH	0.078639	0.0880	0.081754	0.0432	0.078639	0.0723
BSIZE	1.14E-09	0.0527	2.00E-09	0.0026	1.14E-09	0.0413
CS	-0.071038	0.0096	-0.089034	0.0015	-0.071038	0.0064
R-squared	0.168816		0.325997		0.168816	
Adjusted R-squared	0.120731		0.208510		0.120731	
S.E. of regression	5.827173		5.528658		5.827173	
Sum squared resid	4108.669		3331.700		4108.669	
Log likelihood	-406.2803		-392.7600			
F-statistic	3.510778		2.774753		3.510778	
Prob(F-statistic)	0.001828		0.000465		0.001828	
Durbin-Watson stat	1.710488		1.849090		1.710488	
Hausman Specification Test						
	Chi-Sq. Statistic		23.447159			
	P-value		0.001400			

*Source: Computer output data using E-views 9.0*

*Note: Periods included: 12, Cross-sections included: 10, Total Number of Observations: 120*

Assets utilization will appreciate by 47.40%, 7.48% and 7.86% consequent to a percentage rise in board size, independent audit committee and directors' shareholding, whereas a depreciation of 0.55% and 0.49% would be notice in assets utilization if board size and directors' shareholding increase by a unit. Only 12.07% changes in assets utilization was explained by fluctuation in corporate governance

practices. No problem of autocorrelation in the model as provided by the Durbin Watson coefficient of 1.71.

#### 4.7.5 Operational Efficiency and Corporate Governance Practice

The random effect estimation in Table 32 depicts that board size, outside board directors and independent audit committee have negative insignificant relationship with operational efficiency, whereas block shareholding and directors' shareholding have positive relationship, though the relationship between directors' shareholding and operational efficiency is significant.

**Table 32: Panel OLS Regression Result Operational Efficiency and Corporate Governance Practice**

Variables	Pooled OLS		Fixed Effect		Random Effect	
	Coefficient	Prob.	Coefficient	Prob.	Coefficient	Prob.
C	-19.01682	0.9911	-1016.886	0.5578	-40.09328	0.9809
BS	-16.27516	0.5602	-15.24799	0.5825	-16.21963	0.5536
OBD	-1.551691	0.7119	-4.421660	0.3183	-1.600527	0.6978
IAC	-2.454760	0.9282	14.10523	0.6116	-2.128649	0.9365
BSH	5.354058	0.3377	7.215805	0.2064	5.404212	0.3238
DSH	20.66508	0.0055	19.96112	0.0069	20.64076	0.0047
BSIZE	1.33E-08	0.8803	-5.88E-08	0.5533	1.23E-08	0.8874
CS	1.126076	0.7794	4.043896	0.3385	1.171879	0.7663
R-squared	0.391754		0.474472		0.392316	
Adjusted R-squared	0.347517		0.373613		0.348121	
S.E. of regression	846.6651		829.5613		845.4653	
Sum squared resid	78852594		68129028		78629275	
Log likelihood	-966.3897		-957.6922			
F-statistic	8.855970		4.704316		8.876905	
Prob(F-statistic)	0.000000		0.000000		0.000000	
Durbin-Watson stat	1.873705		1.816461		1.872609	
Hausman Specification Test						
	Chi-Sq. Statistic		12.256935			
	P-value		0.4010000			

*Source: Computer output data using E-views 9.0*

*Note: Periods included: 12, Cross-sections included: 10, Total Number of Observations: 120*

The size of the banks and capital structure have insignificant positive relationship with banks' operational efficiency. Assume corporate governance practices of deposit money banks are held constant, operational efficiency would slump by 401%. A unit rise in board size, outside board directors and independent audit committee result in 1622%, 160.05% and 212.86% depreciation in operational efficiency respectively. Conversely, a percentage rise in block shareholding and directors' shareholding increase operational efficiency 540.42% and 2064.07% equivalently. Corporate

governance practices explained about 34.81% variation in deposit money banks' operational efficiency, and this is statistically significant. The model was absolved of any autocorrelation issues as revealed by the Durbin Watson value of 1.87.

#### 4.7.6 Tobin's Q and Corporate Governance Practice

The fixed effect regression output in Table 33 unveils that it is only outside board director as a corporate governance variable that has positive insignificant relationship with Tobin's Q, while other variables: board size, independent audit committee, block shareholding and directors' shareholding have negative relationship with Tobin's Q. The negative relationship existing between Tobin's Q, block shareholding and directors' shareholding is significant.

**Table 33: Panel OLS Regression Result Tobin's Q and Corporate Governance Practice**

Variables	Pooled OLS		Fixed Effect		Random Effect	
	Coefficient	Prob.	Coefficient	Prob.	Coefficient	Prob.
C	98.10649	0.0390	87.08656	0.0388	92.38401	0.0245
BS	-0.501602	0.5154	-0.271652	0.6811	-0.410008	0.5326
OBD	0.058783	0.6107	0.114227	0.2802	0.077601	0.4419
IAC	-0.702029	0.3526	-0.736621	0.2673	-0.697431	0.2826
BSH	-0.390773	0.0130	-0.277354	0.0443	-0.347001	0.0105
DSH	-0.342715	0.0735	-0.336836	0.0398	-0.338998	0.0378
BSIZE	-1.40E-09	0.5701	1.70E-09	0.4673	-3.86E-10	0.8588
CS	-0.109667	0.3208	-0.172322	0.0875	-0.125945	0.1891
R-squared	0.240040		0.507884		0.240024	
Adjusted R-squared	0.184770		0.413438		0.184753	
S.E. of regression	23.31456		19.77625		21.55701	
Sum squared resid	59792.54		38718.93		51117.52	
Log likelihood	-538.9147		-513.0588			
F-statistic	4.343051		5.377485		4.342687	
Prob(F-statistic)	0.000141		0.000000		0.000141	
Durbin-Watson stat	2.086252		1.934209		2.039317	
Hausman Specification Test						
	Chi-Sq. Statistic		28.711984			
	P-value		0.0004000			

*Source: Computer output data using E-views 9.0*

*Note: Periods included: 12, Cross-sections included: 10, Total Number of Observations: 120*

Holding outside board director, board size, independent audit committee, block shareholding and directors' shareholding constant, Tobin's Q would rise by 870.86%. A unit appreciation in outside board director leads to 11.42% increase in Tobin's Q, while a percentage rise in board size, independent audit committee, block shareholding and directors' shareholding result in 27.7%, 73.66%, 27.44% and



33.68% decline in Tobin's Q respectively. From the adjusted R-squared, about 18.47% changes in Tobin's Q is on the account of fluctuation outside board director, board size, independent audit committee, block shareholding and directors' shareholding. Durbin Watson coefficient of 2.0 is the benchmark for affirmation of no autocorrelation in the estimated regression output.

## **4.8 Structural Analysis**

### **4.8.1 Granger Causality Analysis**

The effect of corporate governance practice on profitability and efficiency of deposit money banks was ascertained by the granger causality estimation. This is on the argument that the granger causality analysis clearly show the predicting power of a variable on the other. The granger causality result in Table 34 shows that there is a unidirectional relationship between board size and return on assets of deposit money banks; causality flows from board size to return on assets at 5% level of significance. This implies that board size has significant effect on return on assets of deposit money banks in Nigeria. Other corporate governance variables: outside board directors, independent audit committee, block shareholding and directors' shareholding were found to have no significant effect on return on assets.

From the output in Table 35, there a one way causal relationship between return on equity, board size and block shareholding. Causality flows from board size and block shareholding to return on equity 5% level of significance. This signifies that board size and block shareholding exert significant effect on the wealth of deposit money banks shareholders. There was no evidence that outside board directors, independent audit committee and directors' shareholding exert significant effect on return on equity. In Table 36, a unidirectional causal relationship exists between, net income margin, board size and directors shareholding following the fact that causality runs from board size and directors' shareholding to net income margin.

**Table 34: Granger Causality Test for Return on Assets and Corporate Governance Practice**

<b>Null Hypothesis:</b>	<b>Obs</b>	<b>F-Statistic</b>	<b>Prob.</b>	<b>Remarks</b>
BS does not Granger Cause ROA	120	5.60890	0.0195	Causality
ROA does not Granger Cause BS		0.19566	0.6591	No Causality
OBD does not Granger Cause ROA	120	0.20398	0.6524	No Causality
ROA does not Granger Cause OBD		0.43582	0.5104	No Causality
IAC does not Granger Cause ROA	120	0.09304	0.7609	No Causality
ROA does not Granger Cause IAC		0.01271	0.9104	No Causality
BSH does not Granger Cause ROA	120	1.44194	0.2323	No Causality
ROA does not Granger Cause BSH		0.12961	0.7195	No Causality
DSH does not Granger Cause ROA	120	1.06041	0.3502	No Causality
ROA does not Granger Cause DSH		0.12961	0.5602	No Causality
BSIZE does not Granger Cause ROA	120	3.45251	0.0657	No Causality
ROA does not Granger Cause BSIZE		0.27982	0.5978	No Causality
CS does not Granger Cause ROA	120	0.07036	0.7913	No Causality
ROA does not Granger Cause CS		0.16070	0.6892	No Causality

*Source: Computer analysis using E-views 9.0.*

**Table 35: Granger Causality Test for Return on Equity and Corporate Governance Practice**

<b>Null Hypothesis:</b>	<b>Obs</b>	<b>F-Statistic</b>	<b>Prob.</b>	<b>Remarks</b>
BS does not Granger Cause ROE	120	7.37863	0.0076	Causality
ROE does not Granger Cause BS		0.46153	0.4983	No Causality
OBD does not Granger Cause ROE	120	0.41480	0.5208	No Causality
ROE does not Granger Cause OBD		0.08778	0.7675	No Causality
IAC does not Granger Cause ROE	120	0.00594	0.9387	No Causality
ROE does not Granger Cause IAC		0.01283	0.9100	No Causality
BSH does not Granger Cause ROE	120	5.52932	0.0204	Causality
ROE does not Granger Cause BSH		0.16913	0.6816	No Causality
DSH does not Granger Cause ROE	120	0.03915	0.8435	No Causality
ROE does not Granger Cause DSH		1.55561	0.2148	No Causality
BSIZE does not Granger Cause ROE	120	5.72289	0.0184	No Causality
ROE does not Granger Cause BSIZE		0.41683	0.5198	No Causality
CS does not Granger Cause ROE	120	3.00348	0.0857	No Causality
ROE does not Granger Cause CS		0.18615	0.6669	No Causality

*Source: Computer analysis using E-views 9.0.*

**Table 36: Granger Causality Test for Net Income Margin and Corporate Governance Practice**

<b>Null Hypothesis:</b>	<b>Obs</b>	<b>F-Statistic</b>	<b>Prob.</b>	<b>Remarks</b>
BS does not Granger Cause NIM	120	5.34833	0.0225	Causality
NIM does not Granger Cause BS		0.03864	0.8445	No Causality
OBD does not Granger Cause NIM	120	1.36931	0.2443	No Causality
NIM does not Granger Cause OBD		1.72130	0.1924	No Causality
IAC does not Granger Cause NIM	120	0.16255	0.6876	No Causality
NIM does not Granger Cause IAC		0.01050	0.9186	No Causality
BSH does not Granger Cause NIM	120	1.91827	0.1687	No Causality
NIM does not Granger Cause BSH		0.03239	0.8575	No Causality
DSH does not Granger Cause NIM	120	5.54668	0.0421	Causality
NIM does not Granger Cause DSH		0.79392	0.3747	No Causality
BSIZE does not Granger Cause NIM	120	1.04702	0.3083	No Causality
NIM does not Granger Cause BSIZE		0.05065	0.8223	No Causality
CS does not Granger Cause NIM	120	5.24450	0.0238	Causality
NIM does not Granger Cause CS		0.01432	0.9050	No Causality

*Source: Computer analysis using E-views 9.0.*

The implication is that board size and directors shareholding have significant effect on net income margin. Capital structure, a control variable has significant effect on net income margin as evidence by the one way relationship between net income margin

and capital structure decisions. It is clear from Table 37 that there is no one-way or two-way causal relationship between assets utilization outside board directors, independent audit committee, block shareholding and directors' shareholding. Nonetheless, there is a one-way causal relationship running from size of the board to assets utilization, an indication that board size has significant effect on assets utilization of deposit money banks in Nigeria. With regard to Table 38, a unidirectional causal relationship is observe between block shareholding, directors shareholding and operational efficiency. At 5% significance level, causality flows from block shareholding and directors' shareholding to operational efficiency. This suggests that block shareholding and directors' shareholding have significant effect on operational efficiency of banks.

**Table 37: Granger Causality Test for Assets Utilization and Corporate Governance Practice**

<b>Null Hypothesis:</b>	<b>Obs</b>	<b>F-Statistic</b>	<b>Prob.</b>	<b>Remarks</b>
BS does not Granger Cause AU	120	7.41967	0.0074	Causality
AU does not Granger Cause BS		0.03864	0.4967	No Causality
OBD does not Granger Cause AU	120	0.09236	0.7613	No Causality
AU does not Granger Cause OBD		0.57090	0.4514	No Causality
IAC does not Granger Cause AU	120	0.01466	0.9038	No Causality
AU does not Granger Cause IAC		0.00013	0.9911	No Causality
BSH does not Granger Cause AU	120	0.85104	0.9582	No Causality
AU does not Granger Cause BSH		0.00034	0.9854	No Causality
DSH does not Granger Cause AU	120	0.06183	0.8041	No Causality
AU does not Granger Cause DSH		0.09358	0.7602	No Causality
BSIZE does not Granger Cause AU	120	3.74428	0.0554	No Causality
AU does not Granger Cause BSIZE		0.43236	0.5121	No Causality
CS does not Granger Cause AU	120	0.00156	0.9686	No Causality
AU does not Granger Cause CS		0.81347	0.3689	No Causality

*Source: Computer analysis using E-views 9.0.*

Table 39 depicts no causal relationship between corporate governance practice indices: board size, outside board directors, independent audit committee, block shareholding and directors' shareholding because causality does not from either direction at 5% level of significance. This unveils that corporate governance practice has no significant effect on Tobin's Q measure of profitability of deposit money banks in Nigeria.

**Table 38: Granger Causality Test for Operational Efficiency and Corporate Governance Practice**

<b>Null Hypothesis:</b>	<b>Obs</b>	<b>F-Statistic</b>	<b>Prob.</b>	<b>Remarks</b>
BS does not Granger Cause OE	120	1.01150	0.3166	No Causality
OE does not Granger Cause BS		0.19889	0.6564	No Causality
OBD does not Granger Cause OE	120	0.83124	0.3638	No Causality
OE does not Granger Cause OBD		0.49506	0.4831	No Causality
IAC does not Granger Cause OE	120	0.12573	0.7235	No Causality
OE does not Granger Cause IAC		0.00159	0.9683	No Causality
BSH does not Granger Cause OE	120	3.96792	0.0487	Causality
OE does not Granger Cause BSH		0.11611	0.7339	No Causality
DSH does not Granger Cause OE	120	5.10455	0.0257	Causality
OE does not Granger Cause DSH		0.43091	0.5128	No Causality
BSIZE does not Granger Cause OE	120	0.11556	0.7345	No Causality
OE does not Granger Cause BSIZE		0.19254	0.6616	No Causality
CS does not Granger Cause OE	120	0.20259	0.6535	No Causality
OE does not Granger Cause CS		0.51920	0.4726	No Causality

*Source: Computer analysis using E-views 9.0.*

**Table 39: Granger Causality Test for Tobin's Q and Corporate Governance Practice**

<b>Null Hypothesis:</b>	<b>Obs</b>	<b>F-Statistic</b>	<b>Prob.</b>	<b>Remarks</b>
BS does not Granger Cause TQ	120	0.42736	0.5146	No Causality
TQ does not Granger Cause BS		0.10222	0.7498	No Causality
OBD does not Granger Cause TQ	120	1.65911	0.2003	No Causality
TQ does not Granger Cause OBD		0.26182	0.6098	No Causality
IAC does not Granger Cause TQ	120	0.02557	0.8732	No Causality
TQ does not Granger Cause IAC		2.94637	0.0887	No Causality
BSH does not Granger Cause TQ	120	2.20436	0.1403	No Causality
TQ does not Granger Cause BSH		0.30434	0.5822	No Causality
DSH does not Granger Cause TQ	120	3.61466	0.0597	No Causality
TQ does not Granger Cause DSH		0.14504	0.7040	No Causality
BSIZE does not Granger Cause TQ	120	0.07292	0.7876	No Causality
TQ does not Granger Cause BSIZE		0.92424	0.3384	No Causality
CS does not Granger Cause TQ	120	2.13966	0.1462	No Causality
TQ does not Granger Cause CS		0.31002	0.5787	No Causality

*Source: Computer analysis using E-views 9.0.*

#### 4.8.2 Variance Decomposition

The variance decomposition was conducted to ascertain which of the corporate governance variables that greater influence of deposit money banks' profitability and efficiency. As can be seen in Table 40, independent audit committee greatly influence return on assets compared to other corporate governance practice index. In the second place is block shareholding, while in third, fourth and fifth places are outside board directors, board size and directors' shareholding. The variation in return on assets was more influenced by changes in return on assets itself. Size of the bank was the control variable that influenced return on assets most relative to capital structure of the banks. In Table 41, return on equity was influenced most by block shareholding, followed by

board size and outside board directors. Independent audit committee and directors' shareholding were the least in influencing return on equity. However, return on equity was the greatest in explaining the fluctuation in return on equity. With regard to control variables, size of the bank was greater in explaining changes in return on equity compared to capital structure of the bank.

**Table 40: Variance Decomposition of ROA**

Period	S.E.	ROA	BS	OBD	IAC	BSH	DSH	BSIZE	CS
1	2.135018	100.0000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
2	2.250641	93.50196	0.013101	0.413397	3.293054	0.169438	0.748407	1.496316	0.364329
3	2.366358	85.80185	0.622513	1.482678	8.355374	1.196675	0.751392	1.455517	0.333998
4	2.457571	80.39855	0.738882	1.602901	11.72072	1.876013	0.731411	2.525775	0.405756
5	2.547873	75.19626	0.993616	1.915875	15.12475	2.478337	0.683766	3.224755	0.382646
6	2.639511	70.46736	1.166557	2.234863	18.00899	3.062929	0.641238	4.027957	0.390106
7	2.725522	66.43009	1.322528	2.444888	20.52405	3.537345	0.606997	4.763774	0.370336
8	2.810522	62.78901	1.466546	2.681035	22.76798	3.974407	0.574703	5.387609	0.358715
9	2.892491	59.58123	1.588692	2.866708	24.74445	4.356449	0.546842	5.968071	0.347553
10	2.972355	56.70385	1.701050	3.041371	26.51961	4.699278	0.521696	6.476228	0.336918

*Source: Computer analysis using E-views 9.0*

**Table 41: Variance Decomposition of ROE**

Period	S.E.	ROE	BS	OBD	IAC	BSH	DSH	BSIZE	CS
1	10.98618	100.0000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
2	11.56575	91.94800	0.091869	0.046349	0.298976	0.895173	0.047887	6.576368	0.095382
3	12.03732	86.00825	1.737053	0.626714	0.495488	3.772035	0.090170	6.746506	0.523781
4	12.34631	81.94534	2.950108	0.894167	0.500613	6.128722	0.107577	6.577106	0.896363
5	12.68945	77.71646	4.267381	1.276888	0.559764	8.450893	0.141974	6.364756	1.221887
6	13.01333	73.99536	5.416441	1.606411	0.576191	10.54141	0.171853	6.141034	1.551295
7	13.33267	70.58360	6.486742	1.908803	0.604624	12.44899	0.199390	5.938231	1.829619
8	13.64444	67.47882	7.453777	2.188895	0.623783	14.18565	0.225236	5.748907	2.094932
9	13.94905	64.64353	8.341027	2.441803	0.643862	15.77295	0.248457	5.576724	2.331650
10	14.24742	62.04063	9.153826	2.675822	0.661181	17.22903	0.270024	5.418067	2.551427

*Source: Computer analysis using E-views 9.0*

**Table 42: Variance Decomposition of NIM**

Period	S.E.	NIM	BS	OBD	IAC	BSH	DSH	BSIZE	CS
1	21.24893	100.0000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
2	24.12591	94.13409	0.126356	0.377678	4.017726	0.279560	0.121028	0.505513	0.438049
3	26.80577	85.22429	0.105610	0.316929	9.091615	0.426633	0.310043	3.046749	1.478132
4	29.27201	78.54764	0.117310	0.266107	12.35146	0.499181	0.292233	6.356720	1.569351
5	31.59306	73.50518	0.109490	0.228444	14.64138	0.543595	0.303684	8.762665	1.905558
6	33.73475	69.67637	0.106820	0.200857	16.47260	0.582506	0.307120	10.61096	2.042760
7	35.76144	66.68962	0.104610	0.178753	17.83941	0.609239	0.310234	12.08303	2.185098
8	37.67417	64.28999	0.102484	0.161237	18.96332	0.632222	0.312844	13.24768	2.290224
9	39.49613	62.32429	0.101005	0.146780	19.87417	0.650483	0.314909	14.21075	2.377616
10	41.23726	60.68299	0.099640	0.134741	20.63782	0.665901	0.316649	15.01133	2.450932

*Source: Computer analysis using E-views 9.0*

**Table 43: Variance Decomposition of AU**

Period	S.E.	AU	BS	OBD	IAC	BSH	DSH	BSIZE	CS
1	6.787359	100.0000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
2	7.636606	94.32964	1.425679	0.008120	2.858645	0.000846	0.392918	0.516981	0.467172
3	8.384680	89.38515	1.223863	0.007168	7.533335	0.350568	0.333484	0.633113	0.533324
4	8.976073	85.63891	1.094560	0.006996	10.64005	0.647120	0.428311	1.003829	0.540228
5	9.552474	82.92019	0.987724	0.008313	12.88080	0.875585	0.438773	1.303132	0.585486
6	10.09826	80.91520	0.902798	0.008985	14.56051	1.042028	0.467251	1.512010	0.591215
7	10.61446	79.29131	0.838593	0.009273	15.92163	1.173411	0.483217	1.669178	0.613386
8	11.10859	77.95484	0.783565	0.009700	17.05058	1.282374	0.497648	1.797961	0.623329
9	11.58034	76.82448	0.738244	0.009912	18.00108	1.374080	0.509825	1.907160	0.635216
10	12.03418	75.86235	0.699194	0.010180	18.81173	1.452381	0.519947	2.000228	0.643997

Source: Computer analysis using E-views 9.0

**Table 44: Variance Decomposition of OE**

Period	S.E.	OE	BS	OBD	IAC	BSH	DSH	BSIZE	CS
1	891.9195	100.0000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
2	1174.436	96.42557	1.141977	2.220680	0.034645	0.005393	0.128748	0.029528	0.013460
3	1406.965	96.14762	1.420199	2.031849	0.189429	0.016185	0.134871	0.021211	0.038631
4	1605.002	95.72032	1.619642	2.171845	0.258975	0.027156	0.146124	0.018599	0.037335
5	1782.130	95.48948	1.756299	2.199079	0.304765	0.033795	0.154510	0.017741	0.044331
6	1942.622	95.32718	1.844918	2.231359	0.336165	0.038442	0.159440	0.017107	0.045386
7	2091.101	95.20966	1.910423	2.252017	0.358606	0.041748	0.163313	0.016648	0.047580
8	2229.597	95.12070	1.959993	2.268072	0.375766	0.044292	0.166178	0.016310	0.048688
9	2360.026	95.05070	1.998845	2.280730	0.389223	0.046272	0.168436	0.016034	0.049755
10	2483.598	94.99435	2.030230	2.290856	0.400063	0.047876	0.170260	0.015819	0.050548

Source: Computer analysis using E-views 9.0

**Table 45: Variance Decomposition of TQ**

Period	S.E.	TQ	BS	OBD	IAC	BSH	DSH	BSIZE	CS
1	26.41372	100.0000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
2	31.01239	99.11193	0.327510	0.064630	0.089798	0.111865	0.016397	0.243501	0.034371
3	36.13001	98.74997	0.308281	0.064409	0.403186	0.223375	0.012378	0.208349	0.030047
4	40.44237	98.24257	0.527162	0.063952	0.404717	0.393652	0.010082	0.325465	0.032399
5	44.25579	97.93749	0.606297	0.066269	0.493978	0.495198	0.009269	0.364243	0.027255
6	47.83367	97.68796	0.691049	0.065064	0.534380	0.579820	0.008562	0.408067	0.025097
7	51.12481	97.49819	0.750660	0.065654	0.572593	0.642626	0.008154	0.439243	0.022875
8	54.23177	97.35069	0.797655	0.065362	0.601612	0.691992	0.007811	0.463615	0.021263
9	57.16490	97.23099	0.835968	0.065422	0.624726	0.731734	0.007553	0.483626	0.019978
10	59.95602	97.13361	0.866915	0.065365	0.643944	0.764171	0.007337	0.499752	0.018906

Source: Computer analysis using E-views 9.0

On net income margin, Table 42 discloses that independent audit committee influenced net income margin most. This is flowed by other corporate governance practice indices: block shareholding, directors' shareholding, outside board directors and board size sequentially. The size of the banks explained net income margin most relative to capital structure. As evidence from Table 43, assets utilization is most influenced by independent audit committee. The effect of board size, outside board directors, block shareholding and directors' shareholding are negligible. The size of

the banks is still stronger as a control variable in explaining assets utilization compared to capital structure. With Table 44, operational efficiency is more explained by outside board directors, though negligible relative to board size, independent audit committee, block shareholding and directors' shareholding. Capital structure maintained the least in influencing operational efficiency relative to bank size. In Tobin's Q, Table 45 reveals that the influence of corporate governance practice indices amidst control variables: board size, outside board directors, independent audit committee, block shareholding, directors' shareholding, size of the bank and capital structure are negligible. That notwithstanding, block shareholding is greater in explaining variation in Tobin's Q when compared to other measurement of corporate governance practices controlled by size of the banks and their capital structure.

#### **4.8.3 Impulse Response Function**

To understand how changes in corporate governance practice affects profitability and efficiency of deposit money banks in both short and long run, the impulse response function was performed. From the result in Table 46, return on assets responds negatively to changes in independent audit committee and block shareholding both in short and long run, while it responds positively to board size, outside board directors and directors' shareholding in short and long run. In Table 47, return on equity responds negatively to changes in independent audit committee and block shareholding both in short and long run but positively in short and long run to board size, outside board directors and directors' shareholding. In Table 48, net income margin responds positively in short and long run only to any change in outside board directors but positively to board size, independent audit committee, block shareholding and directors' shareholding.

**Table 46: Impulse Response of ROA**

Period	ROA	BS	OBD	IAC	BSH	DSH	BSIZE	CS
1	2.135018	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
2	0.421819	0.025760	-0.144707	-0.408419	-0.092643	0.194704	0.275307	-0.135848
3	0.261473	0.184919	0.249168	-0.548695	-0.241717	-0.064541	-0.075562	-0.015750
4	0.226263	0.098830	0.117410	-0.489918	-0.215163	0.045819	-0.266541	0.076181
5	0.160272	0.140983	0.166019	-0.523408	-0.218129	0.014596	-0.238310	-0.018270
6	0.167307	0.129507	0.177006	-0.522344	-0.229150	0.016955	-0.266999	0.048360
7	0.158945	0.130267	0.160980	-0.519551	-0.222206	0.020381	-0.270642	0.018207
8	0.158068	0.132662	0.173661	-0.523285	-0.226206	0.017475	-0.267756	0.028719
9	0.158565	0.130672	0.167533	-0.521341	-0.224817	0.018857	-0.271570	0.027258
10	0.157660	0.131788	0.169878	-0.522239	-0.225152	0.018432	-0.269905	0.026236

*Source: Computer analysis using E-views 9.0***Table 47: Impulse Response of ROE**

Period	ROE	BS	OBD	IAC	BSH	DSH	BSIZE	CS
1	10.98618	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
2	1.516460	0.350556	-0.248996	-0.632400	-1.094277	-0.253095	2.965971	0.357196
3	1.275826	1.547272	0.919833	-0.563930	-2.065944	0.258063	0.989195	0.794578
4	0.535592	1.407106	0.674462	-0.212469	-1.968888	0.182557	0.500074	0.779355
5	0.479995	1.540955	0.832516	-0.371825	-2.065362	0.254221	0.472337	0.775352
6	0.409950	1.516951	0.815067	-0.272794	-2.060034	0.249837	0.388558	0.812133
7	0.400891	1.535666	0.820173	-0.314674	-2.068282	0.251810	0.395172	0.790737
8	0.395484	1.531640	0.825830	-0.294145	-2.068866	0.254730	0.383385	0.804873
9	0.393536	1.533907	0.822238	-0.302487	-2.069013	0.253209	0.384932	0.797921
10	0.393485	1.533499	0.824901	-0.298871	-2.069457	0.254325	0.383552	0.801426

*Source: Computer analysis using E-views 9.0***Table 48: Impulse Response of NIM**

Period	NIM	BS	OBD	IAC	BSH	DSH	BSIZE	CS
1	21.24893	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
2	9.818327	-0.857593	-1.482669	-4.835862	-1.275619	0.839318	-1.715338	-1.596780
3	8.028830	0.152945	0.281034	-6.476278	-1.199319	-1.234243	-4.353161	-2.841021
4	7.788288	-0.496296	-0.053426	-6.364417	-1.100756	-0.525535	-5.707470	-1.681038
5	7.786837	-0.296103	0.002381	-6.348635	-1.071684	-0.726043	-5.744077	-2.360675
6	7.698657	-0.350427	0.075277	-6.428448	-1.096986	-0.681166	-5.770117	-2.056089
7	7.742137	-0.349560	0.015078	-6.378176	-1.078109	-0.687312	-5.811311	-2.167375
8	7.721070	-0.341704	0.049674	-6.403890	-1.087182	-0.687609	-5.788128	-2.135732
9	7.728406	-0.347873	0.034386	-6.393067	-1.083408	-0.687081	-5.800835	-2.140872
10	7.726396	-0.344643	0.039940	-6.397085	-1.084688	-0.687201	-5.795660	-2.142171

*Source: Computer analysis using E-views 9.0***Table 49: Impulse Response of AU**

Period	AU	BS	OBD	IAC	BSH	DSH	BSIZE	CS
1	6.787359	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
2	2.990434	0.911824	-0.068814	-1.291161	0.022216	0.478687	0.549083	-0.521962
3	2.798103	0.170255	0.017441	-1.905007	0.495949	0.072855	-0.378952	-0.320152
4	2.481704	0.146545	0.024441	-1.810117	0.524333	0.332628	-0.603065	-0.245599
5	2.581725	0.139318	0.044147	-1.783543	0.526864	0.235137	-0.616702	-0.314633
6	2.617011	0.139041	0.039701	-1.759082	0.513457	0.275862	-0.593941	-0.261986
7	2.611858	0.155527	0.035851	-1.757933	0.509350	0.260664	-0.582012	-0.296971
8	2.619510	0.148688	0.039013	-1.761290	0.510308	0.263963	-0.581453	-0.279482
9	2.613065	0.151960	0.036373	-1.760593	0.510138	0.263810	-0.582140	-0.287505
10	2.615347	0.150221	0.038083	-1.761590	0.510548	0.263245	-0.582388	-0.284243

*Source: Computer analysis using E-views 9.0*



**Table 50: Impulse Response of OE**

Period	OE	BS	OBD	IAC	BSH	DSH	BSIZE	CS
1	891.9195	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
2	731.0801	-125.5042	175.0139	-21.86008	8.624987	42.14053	20.18106	13.62534
3	757.1610	-111.1857	97.93686	-57.20127	15.68464	29.90015	-3.550150	24.06405
4	749.9959	-116.6573	125.4030	-54.05018	19.47175	33.08089	-7.696722	14.03726
5	752.9600	-118.5637	117.8774	-54.84558	19.33335	33.80870	-9.183883	21.12313
6	751.4684	-117.6577	119.8504	-54.83447	19.42694	33.31204	-9.060908	17.45899
7	752.1945	-117.9575	119.4463	-54.72322	19.35986	33.53043	-9.078564	19.17713
8	751.8723	-117.8820	119.4745	-54.76275	19.39783	33.46170	-9.099909	18.43277
9	752.0065	-117.8848	119.5081	-54.76269	19.37512	33.47456	-9.071185	18.73232
10	751.9540	-117.8970	119.4803	-54.75634	19.38848	33.47625	-9.092429	18.61985

Source: Computer analysis using E-views 9.0

**Table 51: Impulse Response of TQ**

Period	TQ	BS	OBD	IAC	BSH	DSH	BSIZE	CS
1	26.41372	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
2	15.98571	1.774793	0.788410	-0.929328	-1.037248	0.397118	1.530331	-0.574953
3	18.32574	0.935065	0.468175	2.097486	-1.356469	-0.062282	0.614677	0.248316
4	17.82642	2.144284	0.453011	1.164643	-1.876866	-0.057568	1.613541	-0.371053
5	17.64478	1.803492	0.501923	1.747984	-1.805630	-0.129046	1.345629	-0.062403
6	17.80392	1.984147	0.436784	1.597499	-1.888868	-0.119850	1.484199	-0.201073
7	17.69735	1.951595	0.476794	1.655047	-1.878823	-0.131238	1.464196	-0.153802
8	17.74292	1.959434	0.454234	1.651605	-1.885593	-0.128817	1.467867	-0.165767
9	17.72494	1.964247	0.464248	1.649556	-1.886722	-0.130727	1.472660	-0.165807
10	17.72981	1.960923	0.460219	1.653198	-1.886283	-0.130156	1.469921	-0.163569

Source: Computer analysis using E-views 9.0

With respect to assets utilization, any change in board size, outside board directors, block shareholding and directors' shareholding will positively affect assets utilization in both short and long run. However, assets utilization will be negatively affected by any change in independent audit committee both in short and long run. For operational efficiency, any change in board size and independent audit committee will have negative effect on operational efficiency, while positively in short and long run to outside board directors, block shareholding and directors' shareholding. Any change in block shareholding and directors' shareholding negatively affect Tobin's Q in both short and long run, whereas positively to board size, outside board directors and independent audit committee.

#### 4.9 Test of Hypotheses

**Hypothesis Decision Criteria:** If the p-value of F-statistic in granger causality test is less than 0.05, the null hypothesis is rejected. On the other hand, if the p-value of F-statistic in granger causality test is greater than 0.05, the null hypothesis is accepted.

##### Restatement of Hypotheses

##### Hypothesis One

H<sub>0</sub>: Corporate governance has no significant effect on return on assets of deposit money banks.

H<sub>1</sub>: Corporate governance has significant effect on return on assets of deposit money banks.

**Table 52: Test of Hypothesis One**

Variables	Obs.	f-statistic	P-value	Decision
BS does not Granger Cause ROA	120	5.60890	0.0195	
ROA does not Granger Cause BS		0.19566	0.6591	Reject H <sub>0</sub>

*Source: Granger Causality Analysis in Table 34*

The result in Table 52 shows that board size has significant effect on return on assets of deposit money banks as the p-value (0.0195) is significant at 5% level of significance. Consequently, the null hypothesis that corporate governance has no significant effect on return on assets of deposit money banks is rejected, while the alternate hypothesis accepted.

##### Hypothesis Two

H<sub>0</sub>: Corporate governance has no significant effect on return on equity of deposit money banks.

H<sub>1</sub>: Corporate governance has significant effect on return on equity of deposit money banks.

**Table 53: Test of Hypothesis Two**

Variables	Obs.	f-statistic	P-value	Decision
BSH does not Granger Cause ROE	120	5.52932	0.0204	
ROE does not Granger Cause BSH		0.16913	0.6816	Reject H <sub>0</sub>

*Source: Granger Causality Analysis in Table 35*

With inferences from Table 53, the p-value (0.0204) is significant at 5% significance level; an indication that block shareholding has significant effect on return on equity of deposit money banks. As a result, the null hypothesis that corporate governance has no significant effect on return on assets of deposit money banks is rejected, whereas the alternate hypothesis is accepted.

### Hypothesis Three

H<sub>0</sub>: Corporate governance has no significant effect on net income margin of deposit money banks.

H<sub>1</sub>: Corporate governance has significant effect on net income margin of deposit money banks.

**Table 54: Test of Hypothesis Three**

Variables	Obs.	f-statistic	P-value	Decision
DSH does not Granger Cause NIM	120	5.54668	0.0421	
NIM does not Granger Cause DSH		0.79392	0.3747	Reject H <sub>0</sub>

*Source: Granger Causality Analysis in Table 36*

As can be seen in Table 54, p-value (0.0421) is significant at 5% level of significance thus directors' shareholding has significant effect on net income margin of deposit money banks. To this effect, the null hypothesis that corporate governance has no significant effect on net income margin of deposit money banks is rejected, while the alternate hypothesis is accepted.

### Hypothesis Four

H<sub>0</sub>: Corporate governance has no significant effect on assets utilization of deposit money banks.

H<sub>1</sub>: Corporate governance has significant effect on assets utilization of deposit money banks.

**Table 55: Test of Hypothesis Four**

Variables	Obs.	f-statistic	P-value	Decision
OBD does not Granger Cause AU	120	0.09236	0.7613	
AU does not Granger Cause OBD		0.57090	0.4514	Accept H <sub>0</sub>

*Source: Granger Causality Analysis in Table 37*

Table 55 shows that outside board directors has no significant effect on assets utilization of deposit money banks owing to the insignificant p-value ( $0.09236 > 0.05$ ). In this regard, the null hypothesis that corporate governance has no significant effect on assets utilization of deposit money banks is accepted, whereas the alternate hypothesis is rejected.

### Hypothesis Five

$H_0$ : Corporate governance has no significant effect on operational efficiency of deposit money banks.

$H_1$ : Corporate governance has significant effect on operational efficiency of deposit money banks.

**Table 56: Test of Hypothesis Five**

Variables	Obs.	f-statistic	P-value	Decision
IAC does not Granger Cause OE	120	0.12573	0.7235	
OE does not Granger Cause IAC		0.00159	0.9683	Accept $H_0$

*Source: Granger Causality Analysis in Table 38*

As can be seen in Table 56, the p-value ( $0.7235 > 0.05$ ) is insignificant at 5% level of significance. This implies that independent audit committee has no significant effect on operational efficiency of deposit money banks. Hence, the null hypothesis that corporate governance has no significant effect on operational efficiency of deposit money banks is accepted, while the alternate hypothesis is rejected.

### Hypothesis Six

$H_0$ : Corporate governance has no significant effect on Tobin's Q of deposit money banks.

$H_1$ : Corporate governance has significant effect on Tobin's Q of deposit money banks.

**Table 57: Test of Hypothesis Six**

Variables	Obs.	f-statistic	P-value	Decision
BS does not Granger Cause TQ	120	0.42736	0.5146	
TQ does not Granger Cause BS		0.10222	0.7498	Accept $H_0$

*Source: Granger Causality Analysis in Table 39*

The p-value (0.5146) is greater than 0.05 which suggests that board size has no significant effect on Tobin's Q of deposit money banks. As a result, the null hypothesis that corporate governance has no significant effect on Tobin's Q of deposit money banks is accepted, whereas the alternate hypothesis is rejected.

#### **4.10 Discussion of Findings**

From the regression result in Table 28, board size has insignificant positive relationship with return on assets. This implies that an increase in board size would increase bank performance measured by return on assets. This corroborated with the findings Sanda, Mikailu and Garba (2005), Olowookere (2008), Sheikh, Wang and Khan (2013), Nidhi and Anil (2016)) who also found positive relationship between board size and return on assets. It indicates that as each of the listed variables increase in value or number bank performance measured by return on asset increase and refutes the Sanda et al (2005) and Olowookere (2008). Regression result in Table 29 indicated that square of board size, independent audit committee and directors' shareholding have positive linkage with return on equity, whereas outside board director sand block holding have negative correlation with performance which is in accordance with the works of Kiel (2006), Olowookere (2008) and Riman, et al (2012).

From Table 30, directors' shareholding has significant positive relation with net income margin. This indicates that directors' shareholding increases the bank performance measured by net income margin. This agrees with the study of Olowookere (2008) However, outside board directors has insignificant negative association with net income margin. This connotes that as the outside board directors number increases performance decline. This negates the study of Olowookere, (2008) who found no significant relationship between outside board directors and bank performance.

With regards to assets utilization, Table 31 shows that board size and directors' shareholding as corporate governance practice indices have significant positive relationship with assets utilization. This indicates that as the board size and directors' shareholding increases, bank performance measured by assets utilization, though up to certain threshold after which the performance begins to decline because the relationship between outside members of directors is non-linear but quadratic. The works of Sanda, Mikailu and Garba (2005), Olowookere (2008), Almatari (2014), Al-Matar, Al-Swidi and Btfadzil (2014) corroborate this finding, while the study of Guest (2009) and Kumar and Singh (2013) observe a negative correlation board size, directors' shareholding and assets utilization. Board size having a positive relationship with asset utilization contradict the work of Bruno (2013) who established a negative association between board size and asset utilization.

As can be seen in Table 32 directors shareholding has significant positive relationship with operating efficiency. This indicates that if the percentage of share held by directors' increase, bank performance measured by operating efficiency improves accordingly. This study is consistent with the work of Olowookere (2008) who also observes a positive correlation between d directors' shareholding and operating efficiency. Similarly, block holding shows a significant positive association with bank performance gauged by operating efficiency. This indicates that as the number or quantum of institutional shareholders enlarges the better is the banks' performance measured by operating efficiency. This finding is inconsistent with the study of Xu and Wang, (1999) and Olowookere (2008) that find significant negative and insignificant association between block shareholding and operating efficiency.

From the regression result Table 33, board size has a negative insignificant association on bank performance: Tobin's Q. This simply show that a number of board size increase after a certain point, the bank performance measure by Tobin's Q would start to decline. This findings is supported by Xu and Wang (1991) who found a negative relationship between board size and Tobin's Q. Outside board members exhibit a positive relationship with Tobin's Q. this suggest that outside directors in the board will increase transparency which will in turn improve performance of bank. Directors' shareholder has a positive significant association on bank performance measure by Tobin's Q implying that increase in director's shareholder, decrease bank performance which is in tandem with Olowrokere (2008).

The observed signs of the corporate governance variables were interpreted based on the supposed relationship of these variables and profitability and efficiency of deposit money banks in accordance with the agency cost theory. The observed signs of the explanatory variables are presented in Tables Table 28 – 38.

**Table 58: Return on Assets**

<b>Independent Variables</b>	<b>Supposed Signs</b>	<b>Observed Signs</b>	<b>Remarks</b>
BS	-	+	Rejected
OBD	+	-	Rejected
IAC	+	+	Accepted
BSH	+	+	Accepted
DSH	+	+	Accepted
BSIZE	+	+	Accepted
CS	-	-	Accepted

*Source: Panel OLS Regression Result in Table 28*

**Table 59: Return on Equity**

<b>Independent Variables</b>	<b>Supposed Signs</b>	<b>Observed Signs</b>	<b>Remarks</b>
BS	-	+	Rejected
OBD	+	-	Rejected
IAC	+	+	Accepted
BSH	+	-	Rejected
DSH	+	+	Accepted
BSIZE	+	+	Accepted
CS	-	-	Accepted

*Source: Panel OLS Regression Result in Table 29*

**Table 60: Net Income Margin**

<b>Independent Variables</b>	<b>Supposed Signs</b>	<b>Observed Signs</b>	<b>Remarks</b>
BS	-	+	Rejected
OBD	+	-	Rejected
IAC	+	+	Accepted
BSH	+	-	Rejected
DSH	+	-	Rejected
BSIZE	+	+	Accepted
CS	-	-	Accepted

*Source: Panel OLS Regression Result in Table 30*

**Table 61: Assets Utilization**

<b>Independent Variables</b>	<b>Supposed Signs</b>	<b>Observed Signs</b>	<b>Remarks</b>
BS	-	-	Rejected
OBD	+	+	Accepted
IAC	+	+	Accepted
BSH	+	+	Accepted
DSH	+	+	Accepted
BSIZE	+	+	Accepted
CS	-	+	Rejected

*Source: Panel OLS Regression Result in Table 31*

**Table 62: Operational Efficiency**

<b>Independent Variables</b>	<b>Supposed Signs</b>	<b>Observed Signs</b>	<b>Remarks</b>
BS	-	-	Accepted
OBD	+	-	Rejected
IAC	+	-	Rejected
BSH	+	+	Accepted
DSH	+	+	Accepted
BSIZE	+	+	Accepted
CS	-	+	Rejected

*Source: Panel OLS Regression Result in Table 32*

**Table 63: Tobin's Q**

<b>Independent Variables</b>	<b>Supposed Signs</b>	<b>Observed Signs</b>	<b>Remarks</b>
BS	-	-	Accepted
OBD	+	+	Rejected
IAC	+	-	Accepted
BSH	+	-	Rejected
DSH	+	-	Rejected
BSIZE	+	-	Rejected
CS	-	-	Accepted

*Source: Panel OLS Regression Result in Table 33*



## CHAPTER FIVE

### SUMMARY OF FINDINGS, CONCLUSION AND RECOMMENDATIONS

#### 5.1 Summary of Findings

The study examined the effect of corporate governance practices on profitability and efficiency of deposit money banks in Nigeria from 2005 and 2017. The findings reveals the following:

1. Board size, independent audit committee and block shareholding have positive relationship with return on assets. Board size has significant effect of return on assets of deposit money banks.
2. Board size, independent audit committee and directors' shareholding have positive relationship with return on equity. Block shareholding has significant effect on return on equity.
3. Board size and independent audit committee have positive relationship with net income margin. Directors' shareholding has significant effect on net income margin.
4. Board size, outside board directors, independent audit committee, directors' shareholding and block shareholding have positive relationship with asset utilization. Board size has significant effect on asset utilization.
5. Directors' shareholding and block shareholding have positive relationship with operational efficiency. Block shareholding has significant effect on operational efficiency.
6. Outside board directors has positive relationship with Tobin's Q, while none of the corporate governance practice index affects Tobin's Q.

#### 5.2 Conclusion

It is concluded that multidimensional changes in governance practices by banks may suggest substitutability among mechanisms; it is therefore necessary for regulatory

bodies, firms and researchers to incorporate this into their regulations and analysis, respectively. For regulatory bodies, the same policy prescription on corporate governance may not be optimal, as optimum regulations may depend on banks characteristics and the degree of substitutability among mechanisms. Firms need to incorporate value-enhancing governance practices as well as harmonizing mechanisms to forestall the simultaneous experience of good and bad changes in governance practices. Researchers should note the above, and in addition more evidence is required on the nature and degree of substitution among governance practices, especially in emerging economies including Nigeria. The level of corporate governance affects the level of performances of listed banks in Nigeria; however, as firms are in equilibrium with respect to their governance structure, it would be difficult to ex-ante predict the performance effect of changes in governance measures. Another major conclusion from the dissertation is that measuring firm performance using operating efficiency yield better result than other measures in this study.

### **5.3 Recommendations**

The empirical study established the relevance of corporate governance variables on firm performance, the study recommended the following:

1. Board size should be increased by Nigerian listed firms but not beyond ten that is the average number of directors revealed by this study. This is to prevent communication gap and reduce cost in terms of remuneration to the directors.
2. Block holder or/and institutional shareholder should be encouraged by Nigerian listed firms as it serves as external monitoring mechanisms by checkmating the management from taking risky projects at the expense of resources providers.
3. Number of outside directors should be reduce to correspond to the bank performance, even though they help in reducing the risk of the banks and at the same time should not be more than the board members

4. Bank interest rate in the financial market must be market driven to allow for efficient process. The study further recommends that researchers should begin to develop a new framework for financial market stability as opposed to banking interest rate policy
5. Auditors are the engine of any organization and at such should be careful when appointing the personal for that post, they must be intelligent and know in and out of the accounting process with a lot of experience including modern techniques
6. Financial institutions must continue to deal with the issues of high levels of operating costs and the diseconomies of scale in their operations. Enhancing operational efficiencies to exploit scale and scope economies must become urgent priority of financial institutions.

#### **5.4 Contribution to Knowledge**

This study contributes to the scarce literature on corporate governance practices and banks performance in developing countries. To the researcher's knowledge, it can be regarded as one of the few studies to effectively use assets utilization as a measure of performance for the listed Nigerian banks. Also most of the previous studies in Nigeria have either examined the effect of corporate governance on non-financial firms however this study go strictly on financial firms. Moreover it is one of the few studies conducted in a developing country with a unique banking environment. This research provides shareholders and other stakeholders with insight into how corporate governance indicators influence firm performance. In general, this study provides practitioners with a clear view about the relationship between corporate governance principles, corporate governance practices and banks performance in Nigeria. Finally the findings of this study will be beneficial to other West African countries and their policymakers with similar social, political and economic environment.

## **5.5 Suggestion for Further Study**

Variables that do not have significant relationship with banks performance measured by accounting based, market based and productivity based should be substituted. Specifically future studies can investigate the effect of more indicators of corporate governance such as: board meeting, board committee; board composition, CEO performance; tenure of the CEO; executive remuneration and incentives for management; staff tenure and staff qualifications. Finally, this study focused on listed banks in Nigeria, but it is also important to understand the current corporate governance practice of non-financial institutions in Nigeria. Therefore, another focus for future researchers could be a comparison of the corporate governance practices of listed and non-listed companies in Nigeria.

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## APPENDIX

**Return on Assets (ROA), Return on Equity (ROE), Net Income Margin (NIM), Assets Utilization (AU), Operating Efficiency (OE) and Tobin Q (TQ) of selected Banks from 2005 to 2017**

### Access Bank

Year	ROA (%)	ROE (%)	NIM (%)	AU (%)	OE (%)	TQ (%)
2005	0.75	3.56	6.69	1.12	897.94	32.36
2006	0.36	2.62	5.57	0.64	1093.48	49.73
2007	1.49	21.43	21.82	2.45	246.65	43.64
2008	1.34	9.39	27.92	1.85	202.63	9.89
2009	1.96	15.87	21.90	4.16	201.16	15.72
2010	0.78	6.41	12.34	2.43	347.49	21.03
2011	4.20	2.81	5.38	1.69	500.83	5.18
2012	2.63	15.07	20.74	2.39	376.34	11.72
2013	2.33	10.70	14.32	1.84	483.09	12.89
2014	2.01	14.57	18.02	2.33	380.28	7.62
2015	2.73	18.28	21.81	2.70	363.44	5.82
2016	2.10	15.18	19.34	2.60	310.78	5.39
2017	1.52	11.34	13.37	1.92	493.89	8.65

*Source: Access Bank Annual Report and Account 2005-2017*

### Diamond Bank

Year	ROA (%)	ROE (%)	NIM (%)	AU (%)	OE (%)	TQ (%)
2005	2.02	12.20	20.79	2.82	223.61	25.14
2006	2.22	2.61	23.59	0.51	1448.66	21.78
2007	1.96	2.27	26.74	2.82	212.28	45.56
2008	1.07	1.24	10.41	2.50	163.16	12.64
2009	0.81	0.87	-12.15	-1.50	-124.97	16.85
2010	1.19	5.58	9.47	1.73	455.38	18.79
2011	-3.20	3.63	-22.53	-3.80	-477.22	3.64
2012	2.78	21.50	17.59	2.68	362.42	6.41
2013	2.20	21.51	17.71	2.45	405.30	7.46
2014	1.26	10.73	11.55	1.39	682.18	4.88
2015	2.73	1.84	2.40	0.33	3706.70	3.41
2016	2.06	0.93	1.74	0.20	5591.53	1.23
2017	1.52	0.93	1.74	0.20	5591.53	2.09

*Source: Diamond Bank Annual Report and Account 2005-2017*

### Fidelity Bank

Year	ROA (%)	ROE (%)	NIM (%)	AU (%)	OE (%)	TQ (%)
2005	20.08	12.72	20.08	4.48	293.68	71.67
2006	2.64	27.32	27.33	2.99	222.59	29.50
2007	1.92	17.61	32.09	2.03	436.62	157.79
2008	0.46	1.78	4.51	2.96	156.23	25.48
2009	0.32	1.09	6.66	0.43	841.54	16.01
2010	1.17	3.89	14.06	1.74	351.17	16.30
2011	0.53	2.59	12.82	0.20	2466.78	5.73
2012	1.96	11.08	48.69	2.33	2423.90	7.06
2013	0.71	4.72	25.06	0.83	703.34	7.18
2014	1.16	7.97	28.26	1.31	413.88	3.95
2015	1.12	20.52	22.84	1.14	478.41	3.53
2016	0.75	5.25	15.72	0.85	690.37	1.87
2017	1.37	9.27	26.39	1.47	348.28	5.17

*Source: Fidelity Bank Annual Report and Account 2005-2017*

**First Bank**

<b>Year</b>	<b>ROA (%)</b>	<b>ROE (%)</b>	<b>NIM (%)</b>	<b>AU (%)</b>	<b>OE (%)</b>	<b>TQ (%)</b>
2005	3.22	24.63	24.62	3.00	209.25	71.77
2006	2.97	26.33	26.21	2.90	59.90	52.51
2007	2.47	23.73	23.15	3.26	64.44	49.61
2008	2.62	8.97	23.33	2.77	94.53	36.40
2009	2.10	10.00	16.77	0.43	910.87	18.58
2010	1.58	7.73	15.36	1.65	20.56	19.99
2011	0.93	6.11	9.17	1.61	17.96	10.77
2012	2.57	19.12	22.70	3.00	65.53	18.88
2013	1.83	16.93	17.50	22.65	40.60	17.45
2014	2.23	18.76	19.32	1.97	88.84	83.72
2015	0.77	0.79	32.09	0.77	27.14	63.99
2016	2.81	2.89	59.04	2.85	2.29	42.52
2017	2.81	2.89	59.04	2.85	2.29	118.35

*Source: First Bank Annual Report and Account 2005-2017*

**First City Monument Bank**

<b>Year</b>	<b>ROA (%)</b>	<b>ROE (%)</b>	<b>NIM (%)</b>	<b>AU (%)</b>	<b>OE (%)</b>	<b>TQ (%)</b>
2005	1.55	11.06	46.07	2.13	460.00	26.39
2006	2.21	4.77	2.21	3.41	197.35	15.11
2007	9.49	10.38	27.40	2.81	233.93	28.55
2008	0.68	2.72	4.88	3.95	171.65	8.79
2009	0.15	0.52	2.00	0.16	4507.78	10.59
2010	1.38	5.44	12.66	1.43	664.53	9.87
2011	-1.74	-7.65	-15.05	-2.25	-612.76	4.79
2012	1.51	11.39	12.37	1.39	775.55	3.75
2013	4.11	4.11	94.63	4.63	4.63	27.79
2014	4.10	4.13	80.88	4.14	22.42	18.74
2015	1.95	1.97	60.10	1.97	64.85	12.70
2016	2.84	2.87	80.15	2.85	24.12	8.29
2017	1.16	1.18	60.29	1.17	64.22	11.06

*Source: First City Monument Bank Annual Report and Account 2005-2017*

**Guaranty Trust Bank**

<b>Year</b>	<b>ROA (%)</b>	<b>ROE (%)</b>	<b>NIM (%)</b>	<b>AU (%)</b>	<b>OE (%)</b>	<b>TQ (%)</b>
2005	3.18	15.93	22.37	3.89	265.13	76.86
2006	3.39	22.01	40.79	3.29	218.91	61.91
2007	5.32	29.74	50.88	3.21	205.25	102.10
2008	4.49	25.95	49.62	3.74	176.12	13.37
2009	4.39	25.28	49.23	3.50	134.62	17.91
2010	2.89	21.44	36.17	4.20	119.64	37.20
2011	2.72	27.44	38.55	4.25	93.75	26.40
2012	3.55	17.75	38.41	6.18	67.25	41.78
2013	3.05	15.64	37.73	5.28	41.76	42.08
2014	2.34	12.65	20.93	5.19	41.76	33.33
2015	4.14	23.25	45.67	4.96	41.43	22.47
2016	4.85	26.60	55.98	5.89	36.85	27.77
2017	5.71	27.60	57.31	6.59	33.58	42.45

*Source: Guaranty Trust Bank Annual Report and Account 2005-2017*

**Sterling Bank**

<b>Year</b>	<b>ROA (%)</b>	<b>ROE (%)</b>	<b>NIM (%)</b>	<b>AU (%)</b>	<b>OE (%)</b>	<b>TQ (%)</b>
2005	-24.80	-162.49	-299.18	25.56	408.35	197.64
2006	0.88	3.65	7.73	11.35	2798.43	38.50
2007	0.43	2.32	2.95	0.41	3378.94	52.63
2008	0.28	21.57	19.90	3.29	323.00	12.86
2009	-0.32	-30.01	-15.32	-4.41	120.87	7.51
2010	1.61	15.88	13.75	1.42	723.89	11.13
2011	1.37	16.83	15.12	1.12	746.42	2.41
2012	1.28	15.97	10.82	1.29	818.13	4.60
2013	1.17	13.04	9.02	1.32	885.42	5.59
2014	1.10	10.63	8.67	1.30	864.62	8.87
2015	1.29	10.77	9.34	1.38	900.31	6.59
2016	0.62	6.05	4.66	0.72	1748.42	2.63
2017	0.79	8.22	6.36	0.80	1457.63	2.91

*Source: Sterling Bank Annual Report and Account 2005-2017*

**United Bank for Africa Bank**

<b>Year</b>	<b>ROA (%)</b>	<b>ROE (%)</b>	<b>NIM (%)</b>	<b>AU (%)</b>	<b>OE (%)</b>	<b>TQ (%)</b>
2005	2.00	17.48	17.91	2.51	308.82	5.96
2006	1.35	24.08	13.32	1.47	587.86	11.20
2007	1.76	11.76	19.17	2.45	274.63	22.55
2008	2.63	21.26	25.90	3.59	106.79	6.94
2009	6.89	27.07	5.85	1.64	485.68	10.14
2010	0.12	0.96	1.46	-0.57	-1274.33	12.05
2011	-0.23	-2.06	-4.41	-1.59	-385.29	4.69
2012	2.63	23.11	40.94	2.39	163.26	7.27
2013	2.19	18.73	37.15	2.34	165.74	12.79
2014	1.66	13.79	26.88	1.81	234.15	6.09
2015	2.15	14.09	30.25	2.29	203.51	5.35
2016	1.87	12.16	24.99	2.27	185.71	6.43
2017	1.45	10.54	20.28	1.84	232.20	12.41

*Source: United Bank for Africa Annual Report and Account 2005-2017*

**Wema Bank**

<b>Year</b>	<b>ROA (%)</b>	<b>ROE (%)</b>	<b>NIM (%)</b>	<b>AU (%)</b>	<b>OE (%)</b>	<b>TQ (%)</b>
2005	0.86	3.48	5.52	1.02	1426.31	34.01
2006	-5.49	-32.46	-45.42	-5.99	-324.73	25.86
2007	1.54	10.14	9.66	4.22	586.28	91.50
2008	-10.51	-51.34	-90.18	-53.13	-24.52	111.63
2009	-1.47	-8.75	-12.87	-17.51	-74.48	8.44
2010	8.15	40.30	81.48	6.38	140.43	6.69
2011	-1.91	-10.91	-18.57	-1.70	-704.08	3.12
2012	-2.05	-12.25	-16.41	-2.01	-721.51	2.57
2013	0.48	3.86	7.62	0.59	1799.11	7.62
2014	0.62	5.42	9.42	0.81	1263.53	9.68
2015	0.57	2.89	4.96	0.75	1433.35	9.72
2016	0.62	2.96	4.81	0.78	1543.11	4.95
2017	0.60	4.63	3.67	0.79	1951.76	5.00

*Source: Wema Bank Annual Report and Account 2005-2017*



**Zenith Bank**

Year	ROA (%)	ROE (%)	NIM (%)	AU (%)	OE (%)	TQ (%)
2005	2.17	18.94	20.50	2.75	198.08	20.91
2006	1.88	11.44	19.73	2.48	206.53	19.23
2007	1.98	15.52	19.63	2.63	194.89	69.84
2008	2.77	13.75	24.47	2.91	173.88	17.61
2009	1.18	5.59	7.23	2.02	325.67	17.31
2010	1.86	9.51	19.68	2.40	207.36	26.20
2011	1.90	11.10	19.21	2.37	212.06	17.63
2012	3.93	21.87	34.33	3.86	118.71	25.12
2013	2.90	17.65	26.80	3.27	147.48	29.74
2014	2.70	18.04	24.86	3.15	141.25	16.88
2015	1.35	9.28	23.77	3.07	134.88	11.80
2016	0.93	6.49	20.83	3.27	111.97	10.63
2017	1.50	10.66	19.31	1.80	140.01	18.17

*Source: Zenith Bank Annual Report and Account 2005-2017*

**Board Size (BS), Outside Board Directors (OBD), Independent Audit Committee (IAC), Block Shareholding (BSH), Directors' Shareholding (DSH), Bank Size (BSIZE) and Capital Structure (CS) of selected Banks from 2005 to 2017**

**Access Bank**

Year	BS	OBD (%)	IAC (%)	BSH (%)	DSH (%)	BSIZE (₦'000)	CS (%)
2005	8	40.00	50.00	72.00	10.87	66,918,315	78.97
2006	12	16.67	60.00	0.16	11.96	174,553,866	83.45
2007	12	16.67	60.00	0.09	18.29	382,615,194	91.36
2008	14	21.43	50.00	51.31	12.56	1,031,842,021	83.33
2009	14	21.43	50.00	57.81	9.17	647,574,719	73.26
2010	14	14.29	50.00	62.22	10.98	726,960,580	74.60
2011	14	14.29	50.00	64.20	9.01	949,382,097	80.30
2012	15	6.67	50.00	66.26	8.58	1,515,754,463	84.32
2013	14	14.23	50.00	68.16	4.26	1,704,094,012	85.61
2014	16	12.50	50.00	69.77	7.02	1,981,955,730	86.18
2015	14	43.75	50.00	88.00	10.12	2,411,944,061	85.06
2016	15	46.67	50.00	88.70	9.76	3,094,960,515	86.38
2017	17	47.06	50.00	88.97	9.80	3,499,683,979	86.58

*Source: Access Bank Annual Report and Account 2005-2017*

**Diamond Bank**

Year	BS	OBD (%)	IAC (%)	BSH (%)	DSH (%)	BSIZE (₦'000)	CS (%)
2005	10	50.00	50.00	84.15	15.27	124,994,957	83.43
2006	14	14.29	50.00	84.20	20.82	218,866,192	85.93
2007	14	14.29	50.00	84.31	9.42	312,249,721	82.74
2008	16	12.50	50.00	84.27	11.30	603,326,540	80.61
2009	14	14.29	50.00	85.90	38.09	650,891,836	82.09
2010	16	12.50	50.00	88.04	23.76	542,098,489	79.48
2011	16	12.50	50.00	88.65	24.66	714,063,960	88.22
2012	15	13.33	50.00	87.54	24.37	1,059,137,257	89.87
2013	16	12.50	50.00	88.61	20.66	1,354,930,871	89.80
2014	13	15.39	50.00	93.67	13.60	1,750,270,423	88.25
2015	12	58.33	50.00	94.25	30.99	1,555,183,067	86.62
2016	11	56.25	50.00	92.94	31.09	1,662,508,825	87.29
2017	11	56.25	50.00	92.94	31.09	1,662,508,825	87.29

*Source: Diamond Bank Annual Report and Account 2005-2017*

**Fidelity Bank**

Year	BS	OBD (%)	IAC (%)	BSH (%)	DSH (%)	BSIZE (₦'000)	CS (%)
2005	14	7.14	50.00	84.98	5.87	34,953,351	72.18
2006	14	7.14	50.00	84.98	5.87	119,985,801	78.67
2007	13	7.69	50.00	80.34	7.32	217,144,465	86.30
2008	13	7.69	50.00	78.24	5.76	533,122,233	74.52
2009	13	7.69	50.00	70.87	4.76	434,053,000	70.20
2010	14	7.69	50.00	71.20	4.60	497,453,000	70.49
2011	17	11.77	50.00	74.83	4.73	737,732,000	82.45
2012	17	11.77	50.00	64.55	4.60	914,360,000	82.34
2013	17	11.77	50.00	64.74	4.43	1,081,217,000	84.88
2014	15	6.67	50.00	64.72	4.31	1,258,886,170	86.29
2015	15	40.00	50.00	77.59	4.31	1,231,722,000	85.10
2016	18	50.00	50.00	77.57	1.78	1,298,141,000	85.72
2017	15	41.67	50.00	77.84	1.52	1,379,214,000	85.26

*Source: Fidelity Bank Annual Report and Account 2005-2017*

**First Bank**

Year	BS	OBD (%)	IAC (%)	BSH (%)	DSH (%)	BSIZE (₦'000)	CS (%)
2005	14	35.71	50.00	43.55	4.82	377,496,000	88.17
2006	15	46.67	50.00	84.98	5.87	540,129,000	88.71
2007	15	46.67	50.00	80.34	7.32	762,881,000	89.86
2008	15	46.67	50.00	78.24	5.76	1,165,461,000	70.84
2009	14	46.67	50.00	70.87	4.76	1,667,422,000	78.95
2010	15	42.86	50.00	71.20	4.60	2,037,209,000	79.60
2011	16	46.67	50.00	74.83	4.73	2,471,438,000	84.74
2012	19	62.50	50.00	64.55	4.60	2,770,674,000	86.57
2013	19	57.90	50.00	64.74	4.43	3,246,579,000	89.20
2014	19	86.00	50.00	64.72	4.31	3,490,871,000	87.88
2015	20	57.90	50.00	60.61	2.32	282,831,000	2.03
2016	22	90.00	50.00	60.24	2.29	266,903,000	2.70
2017	21	90.00	50.00	60.24	2.30	266,903,000	2.70

*Source: First Bank Annual Report and Account 2005-2017*

**First City Monument Bank**

Year	BS	OBD (%)	IAC (%)	BSH (%)	DSH (%)	BSIZE (₦'000)	CS (%)
2005	10	70.00	50.00	89.15	6.46	51,318,268	85.94
2006	13	53.45	50.00	89.15	6.46	106,611,289	88.22
2007	12	38.33	50.00	89.15	5.12	262,805,890	75.24
2008	12	66.67	50.00	93.96	3.01	514,409,614	75.22
2009	13	15.39	50.00	86.00	8.49	460,081,094	72.15
2010	15	66.67	50.00	88.95	2.96	529,839,021	74.71
2011	15	66.67	50.00	89.93	0.97	593,114,362	80.27
2012	15	66.67	50.00	85.79	0.96	890,313,606	85.30
2013	13	15.39	50.00	90.25	1.05	131,482,189	12.20
2014	13	15.39	50.00	90.57	1.06	131,570,290	60.24
2015	10	90.00	50.00	90.24	1.07	129,378,261	0.79
2016	10	80.00	50.00	89.49	1.12	131,366,185	0.96
2017	12	83.33	50.00	89.25	2.10	131,636,805	1.52

*Source: First City Monument Bank Annual Report and Account 2005-2017*

**Guaranty Bank**

Year	BS	OBD (%)	IAC (%)	BSH (%)	DSH (%)	BSIZE (N'000)	CS (%)
2005	14	50.00	50.00	54.46	12.21	185,151,243	81.65
2006	14	50.00	50.00	58.49	7.50	478,363,061	90.08
2007	12	41.67	50.00	61.67	7.23	714,345,349	77.45
2008	14	57.14	50.00	68.32	5.24	918,278,756	80.45
2009	14	50.00	50.00	71.28	4.40	1,019,911,536	81.52
2010	14	78.57	50.00	77.63	0.28	1,083,304,116	80.02
2011	14	50.00	50.00	77.63	0.28	1,523,527,545	84.82
2012	14	50.00	50.00	78.51	0.28	1,620,317,223	82.32
2013	14	50.00	50.00	79.87	0.25	1,904,365,795	82.69
2014	14	50.00	50.00	81.32	0.25	2,126,608,312	82.62
2015	16	50.00	50.00	81.80	0.26	2,277,629,224	82.19
2016	16	50.00	50.00	50.27	0.22	2,613,340,074	81.75
2017	14	50.00	50.00	73.51	0.16	2,824,928,985	78.82

*Source: Guaranty Trust Bank Annual Report and Account 2005-2017*

**Sterling Bank**

Year	BS	OBD (%)	IAC (%)	BSH (%)	DSH (%)	BSIZE (N'000)	CS (%)
2005	14	50.00	50.00	83.66	40.83	19,435,289	84.74
2006	14	50.00	50.00	83.66	40.83	120,574,714	63.78
2007	14	50.00	50.00	83.66	40.83	304,394,000	76.21
2008	14	50.00	50.00	87.81	43.34	345,206,000	77.81
2009	11	54.55	50.00	90.38	34.40	331,000,000	77.23
2010	12	58.33	50.00	90.73	42.91	372,612,000	79.19
2011	12	58.33	50.00	92.83	44.15	542,272,000	86.30
2012	11	54.55	50.00	92.80	39.54	72,508,000	13.86
2013	10	50.00	50.00	94.71	37.75	75,401,000	47.15
2014	13	61.54	50.00	95.97	28.16	75,671,000	35.43
2015	15	53.33	50.00	51.08	33.73	799,451,000	88.05
2016	15	53.33	50.00	51.89	22.50	830,302,000	89.69
2017	15	53.33	50.00	51.40	31.43	1,068,797,000	90.35

*Source: Sterling Bank Annual Report and Account 2005-2017*

**United Bank for Africa**

Year	BS	OBD (%)	IAC (%)	BSH (%)	DSH (%)	BSIZE (N'000)	CS (%)
2005	14	28.57	50.00	46.99	7.83	168,056,000	99.28
2006	14	28.57	50.00	46.99	7.83	851,241,000	94.41
2007	20	50.00	50.00	72.20	6.56	1,102,348,000	85.05
2008	20	50.00	50.00	72.20	6.56	1,520,091,000	87.62
2009	20	50.00	50.00	79.70	6.57	1,400,879,000	86.60
2010	21	57.14	50.00	81.56	6.40	1,440,724,000	87.00
2011	19	36.84	50.00	82.54	6.08	1,666,053,000	89.06
2012	21	47.62	50.00	82.35	1.02	1,933,065,000	88.60
2013	19	42.11	50.00	83.26	0.98	2,217,417,000	88.30
2014	16	43.75	50.00	83.85	1.43	2,338,858,000	87.95
2015	16	50.00	50.00	85.16	6.52	2,216,337,000	84.74
2016	19	52.63	50.00	85.14	6.21	2,539,585,000	84.61
2017	19	52.63	50.00	85.35	7.16	2,931,826,000	86.27

*Source: United Bank for Africa Annual Report and Account 2005-2017*

**Wema Bank**

Year	BS	OBD (%)	IAC (%)	BSH (%)	DSH (%)	BSIZE (₦'000)	CS (%)
2005	8	45.45	50.00	79.28	3.66	97,909,060	75.2
2006	8	50.00	50.00	79.28	3.66	120,109,667	83.58
2007	7	42.86	50.00	80.24	2.90	165,081,532	84.75
2008	6	33.33	50.00	71.82	0.05	128,906,532	125.30
2009	6	33.33	50.00	71.82	0.05	142,785,723	136.53
2010	7	42.86	50.00	78.08	0.03	199,348,267	92.72
2011	10	60.00	50.00	78.08	0.03	221,157,042	95.96
2012	12	58.33	50.00	78.64	0.10	245,704,597	99.48
2013	13	61.54	50.00	93.10	0.00	330,872,475	87.49
2014	12	41.67	50.00	93.10	0.00	382,562,312	88.56
2015	16	58.33	50.00	93.57	0.02	385,388,304	88.39
2016	12	64.29	50.00	93.64	4.54	421,221,036	88.49
2017	12	58.33	50.00	93.67	4.54	396,743,314	87.11

*Source: Wema Bank Annual Report and Account 2005-2017*

**Zenith Bank**

Year	BS	OBD (%)	IAC (%)	BSH (%)	DSH (%)	BSIZE (₦'000)	CS (%)
2005	12	41.67	50.00	70.28	2.31	327,717,000	88.54
2006	12	41.67	50.00	70.28	2.31	610,769,000	83.56
2007	14	35.71	50.00	72.25	2.36	883,941,000	87.24
2008	14	42.86	50.00	73.49	6.67	1,680,032,000	79.85
2009	15	46.67	50.00	73.49	9.96	1,573,196,000	79.13
2010	13	46.67	50.00	74.14	11.32	1,768,853,000	81.51
2011	12	46.15	50.00	75.99	0.48	2,049,624,000	87.68
2012	14	41.67	50.00	77.48	0.36	2,436,886,000	82.03
2013	11	42.86	50.00	78.44	9.50	2,878,693,000	83.58
2014	12	54.55	50.00	79.22	9.52	3,423,819,000	85.03
2015	12	58.33	50.00	79.19	9.53	3,750,327,000	85.42
2016	13	53.85	50.00	79.10	9.52	4,283,736,000	85.61
2017	12	45.45	50.00	79.18	9.53	4,429,208,000	85.92

*Source: Zenith Bank Annual Report and Account 2005-2017*