**RELATIONSHIP BETWEEN CORPORATE GOVERNANCE MECHANISMS AND PROFITABILITY OF LISTED NIGERIAN COMPANIES**

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**Relationship between Corporate Governance Mechanism and Profitability of Listed Nigerian Companies**

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**A Thesis Submitted in partial fulfillment of the requirement for the award of Degree of Doctor of Philosophy in Accounting of Jomo Kenyatta University of Agriculture and Technology**

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# DECLARATION

This thesis is my original work and has not been presented for a degree in any other University.

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# DEDICATION

To my Wife and Daughters, Patricia Olufiade Oyerogba,Emmanuella Oyinkansola Oyerogba and Christabel Oyinade Oyerogba

Thanks for your Love, Sacrifice and Support

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# ABBREVIATIONS

BOF Board Oversight Functions

BOFIA Banks and other Financial Institutions Act

CAMA Companies and Allied Matters Act

CBN Central Bank of Nigeria

EPS Earnings per Share

ICAN Institute of Chartered Accountants of Nigeria

OECD Organization for Economic Corporation and Development

RMS Risk Management System

ROCE Return on Capital Employed

SEC Security and Exchange commission

# DEFINITION OF KEY TERMS

**Accounting information**: includes information disseminated to parties that are not part of the enterprise proper which include the stockholders, creditors, customers, suppliers, regulatory commissions, financial analysts, and trade associations—although the information is also of interest to the company's officers and managers. Such information relates to the financial position, liquidity (that is, ability to convert to cash), and profitability of an enterprise (Wang, 1991).

**Board of Directors**: are people that have been chosen by the shareholders of the company through an election to run the company and rebound by certaindutiessuch as the duty to actwithinthescope of their authorityand to exercisedue care in the performance of theircorporatetasks (Mehran, 1995).

**Corporate Governance**: can be defined as a frame work that protect stakeholders rights by illustrating an effective board of directors, efficient internal control and audit in addition to reliable financial reporting and disclosure (Jenkinson&Menyers, 1992).

**Executive Compensation:** refers to the financial payments and non-monetary benefits provided to high level management in exchange for their work on behalf of an organization. The types of employees that are typically paid with executive compensation packages include corporate presidents, chief executive officers, chief financial officers, vice presidents, managing directors and other senior executives (Imam, 2000).

**Large/block Shareholder**: are investors who typically own at least five percent (5%) of the company’s shares. In terms of shares, these owners are often able to influence the company with the voting rights awarded with the holding (Goddard, 2008).

**Oversight Function**: Oversight in corporate organization is equated with supervision in the sense of being a general review of institutional performance with particular attention to failures to carry out mandates, to preserve discipline and to inefficiency and poor productivity. Oversight is performed by bodies, units and processes that provide ‘supervision’ and ‘watchful care’ to an organization (Keong, 2002).

**Ownership Concentration**: refers to the amount of stock owned by individual investors and large block shareholders in relation to the total stock of the company (investors that hold at least 5 per cent of equity ownership within the firm) (David, 2004).

**Profitability:** refers to the business's ability to generate earnings as compared to its expenses and other relevant costs incurred during a specific period of time. In other word, it is the excess of revenue over expenditure within an accounting period (Zingales, 2002)

# ABSTRACT

The main objective of this study was to investigate the relationship between corporate governance mechanisms and profitability of listed companies in Nigeria. The study established the effect of board size, executive compensation, ownership concentration, board oversight functions and risk management system on return on capital employed and earnings per share of listed companies in Nigeria. Survey research was carried out on the opinion of 285 selected staff of the listed Nigeria companies that was obtained with the use of a structured questionnaire using purposive sampling method. Secondary data that was obtained from the audited financial statement of the selected companies and the security and exchange commission fact book was also used as a source of data for the study. The descriptive statistics included the mean, median, mode and standard deviation while inferential statistics included the correlation and multiple regression analysis in which the hypotheses of the study were tested using the t- statistic. The study revealed a significant positive relationship between the board size, board oversight functions, risk management system and return on capital employed. The relationship between executive compensation, ownership concentration and return on capital employed was insignificant. The result also revealed that earnings per share had a significant positive relationship with board size, board oversight function and risk management system. The relationship between executive compensation and earnings per share was significant but negative while the relationship between board oversight functions and earnings per share was insignificant. The study thus recommends that the listed companies should increase the board size to accommodate more experience board members. They also need to shift from family ownership to real public trading as well as adopting the use of performance based incentive for the management while intensifying effort on board oversight functions. It is also expedient for the management to operate within the acceptable risk limit of the company. The major strength of this study was the use of both primary and secondary data which enabled the integration of both historical and current factors and thus increased the robustness of the study.

# CHAPTER ONE

# INTRODUCTION

## 1.1 Background of the study

The main goal or objective of any business organization according to Ighofomily (2013) is to make and maximize profit while other secondary objectives include the going concern, growth, corporate social responsibility, benefits to employees and so on. Though other objectives are also considered very important as listed above, but profit maximization is usually the ultimate because it maximizes the shareholders wealth which is the ultimate aim of investing in a business. Charles, (2012) posits that people will naturally prefer to invest in a highly profitable business and in the long run only the profit maximizers survive in the business environment.

Therefore, based on the believe that investors are more interested in the profitability of the company than any other objectives, managements have been found in many cases of doing their possible best in order to improve the profitability in an organization even when these profits are non-existence (Williamson, (2008); Young, (2000)& Zahra, (1996). This declaration of artificial profit has however led to collapse as well as unfriendly takeover of many companies as observed by Malherbe and Segal (2001); Morgan and Smircich, (1980); Cohen (2002); Creswell and Clark, (2011). This in turn has drawn the attentions of academic scholars, professional organizations as well as regulatory authorities into investigating the causes of several major corporate scandals that rocked international businesses throughout 2001-2003 and were followed by corporate collapses, such as Enron Corporation in the US, Coloroll, Polly Peck, BCCI and later Barings in the UK, Parmalat in Europe and HIH Insurance Ltd in Australia (Mallin, (2011); Mallin (2005); O’Sullivan (2008).

The global research efforts identified the failure of corporate governance as the bedrock of the corporate failure (Morgan & Smircich, (1980); Cohen, (2002); Creswell & Clark, (2011). This led to a debate in Nigeria on the need to improve the good corporate governance principles which aimed at improving the performance of the stock market, as well as protecting shareholders’ rights (Ademulegun, (2003); Babatunde & Salam, (2012). Specifically, academics, practitioners and investors urgently called for the development of, and improvement in, corporate governance standards that will for strengthening the financial market, protecting shareholders’ rights, improving disclosure and transparency, limiting speculation and abuse by the insiders for market stability maintenance and mitigation of sharp inconsistency in share prices (Babatunde& Salam, 2012). In addition, foreign regulatory institutions, such as International Monetary Fund (IMF), World Bank and Organization for Economic Co-operation and Development (OECD) generally encouraged developing countries to make corporate governance a priority, which involves facilitation of the introduction of codes of good corporate governance (Brook, 2009; Chris, 2011; Roggers, 2008).

Hence, corporate governance has become an important factor in managing organizations in the current global and complex environment. Corporate governance can be defined as a frame work that protect stakeholders rights by illustrating an effective board of directors, efficient internal control and audit in addition to reliable financial reporting and disclosure (Hassan, n.d.). Melvin and Hirt (2005) described corporate governance as referring to corporate decision-making and control, particularly the structure of the board and its working procedures.

To Jenkinson and Mayer (1992), corporate governance refers to the processes and structures by which the business and affairs of institutions are directed and managed, in order to improve the long term shareholders value by enhancing corporate performance and accountability, while taking into account the interest of other stakeholders. Corporate governance has also been considered as involving building credibility, ensuring transparency and accountability as well as maintaining an effective channel of information disclosure that will foster good corporate performance (Imam & Malik, 2007).

According to Baxt (2002), corporate governance is a part of economics that enables the investigation of securing or motivating effective management among industries and corporations through the employment of various mechanisms. This may come in the form of contracts, organizational structure and design and legislation. Baxt (2002) further argues that the objective of corporate governance is mainly concentrated on the improvement of a corporation's financial performance. Thomsen (2004) citing research by (Freeman 1984) supports the notion that corporate governance improves the financial performance of a firm by articulating that, at the core of corporate governance is the principle of accountability without relegating the profitability motives of the corporation.

The separation of ownership and control in modern corporations leads to an agency problem where the agent operates the firm in line with their own interests, instead of shareholders (Jensen & Meckling, 1976). The need for corporate governance arises from these potential conflicts of interest among stakeholders such as shareholders, board of directors and managers in the corporate organizations. According to Imam and Malik (2007) these conflicts of interest often arise from two main reasons. First, different participants have different objectives and preferences. Second, the participants have imperfect information as to each other’s actions, knowledge, and preferences. Corporate governance is intended at reducing divergence of interest and monitoring of controlling interests of the firm, the absence of which firm profitability is declined (Nanka-Bruce, 2009).

In Nigeria, before the consolidation exercise that took place in 2006, the banking industry had about 89 active players whose overall performance led to sagging of customers’ confidence (Uwuigbe, 2011). There was lingering distress in the industry, the supervisory structures were inadequate and there were cases of official recklessness amongst the managers and directors, while the industry was notorious for ethical abuses (Akpan, 2007). Poor corporate governance was identified as one of the major factors in virtually all known instances of company distress in the country (Akpan, 2007). 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, 2004). This view was 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 and other financial institutions had recognized codes of corporate governance in place. This may hinder the public trust particularly in the Nigerian financial institutions if proper measures are not put in place by regulatory bodies.

Therefore, the issue of corporate governance is now been giving the front burner status in Nigeria 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. This code of corporate governance was reviewed in 2011 to capture the new developments in corporate governance practices. The new corporate governance therefore addressed the following: composition and structure of the board, responsibilities of the board, governance and remuneration, conflict resolution, shareholders’ protection, ownership structure, relationship with other stakeholders, risk management and audit, disclosure and transparency, whistle blowing, code of ethics and communication policy (SEC, 2011). The details of the code can be found in appendix 7. The Bankers Committee also set up a sub-committee on corporate governance for banks and other financial institutions in Nigeria. This was in recognition of the critical role of corporate governance to the success or failure of companies (Ogbechie, 2006).

However, in Nigeria, only few empirical studies have been conducted to confirm this relationship. Among the few empirically feasible studies on corporate governance in relation to company profitability and financial performance are the studies by Sanda, Mukailu and Garba (2009) and Ogbechie (2006) that studied the relationship between corporate governance mechanisms and firms’ performance of public companies. The results of Sanda, Mukailu and Garba (2009) show a significant negative relationship between return on equity and ownership concentration, board size which is a measure of profitability whereas Ahmadu, Aminu and Tukur (2005), results on the relationship between corporate governance and firm financial performance in Nigeria for a sample of 93 firms listed on the Nigerian Stock Exchange for the year 1996–1999 suggested an increase in board sizetoa minimum of ten and for ownership concentrated rather than diffused equity ownership, the results also recommended the separation of the posts of Chief Executive Officer (CEO) and Chairman. Ademulegun (2009) results on the other hand show no relationship between corporate governance variables and profitability.

In order to address these conflicting and difficult to reconcile results, this study examined the relationship between corporate governance mechanism and firm profitability using data from the Nigeria listed companies during the period 2004-2013. Unlike other prior studies where narrow concept of corporate governance was considered, this study drew largely on the framework of the Organization for Economic Cooperation and Development principles, which is based primarily on shareholder sovereignty. It considered mechanisms such as board size, executive compensation, ownership concentration, board oversight functions, risk management system and disclosure and transparency.

### 1.1.1 Corporate Governance Mechanisms and Profitability: A Global Perspective.

In the light of corporate financial scandals, there is an ever increasing attention on corporate governance issues. This is probably because it was considered as a panacea to firm profitability as observed by Basel committee on banking supervision (2006) and supported by stakeholder’s theory (Bowrin & Navissi, 2013). As investors look for emerging economies to diversify their investment portfolios to maximize returns, they are equally concerned about governance factors to minimize risks in these economies. Also, Clark theory of profitability link company’s profitability to the willingness of the management to work within the limit of their authority as provided by the governance structure (Ohlson, 1995).

The USA introduced the Sarbanes-Oxley Act in 2002 and made major changes to the New York Stock Exchange Listing Rules. In the United Kingdom (UK), the Combined Code underwent a review with the resultant Cadbury Report, Green bury Report, Hampel Report, Higgs Reviews, and the Smith and Turnbull Report being introduced (Chatrudee, 2006). Although, many of the initiatives in the USA and the UK were pushed for by the respective regulators, the initiatives in the Asian region were motivated by the combined efforts of the World Bank and the Organization for Economic Cooperation and Development (OECD). In 1999, The OECD Principles, which have been accepted the world over, identified the following principles as the five key elements of a strong corporate governance framework: the rights of shareholders, the equitable treatment of shareholders, the role of stakeholders in corporate governance, disclosure and transparency, and the responsibilities of the board of directors (Chatrudee, 2006).

The OECD Principles have been a reference for corporate governance initiatives around the world. The new OECD Principles presented in April 2004 included a sixth key area of corporate governance. The Principles according to OECD, (2004) now include: ensuring the basis for an effective corporate governance framework; the rights of shareholders; the equitable treatment of shareholders; the role of stakeholders in corporate governance; disclosure and transparency; and responsibilities of the board of directors especially in reference to the preparation of financial statement of the organizations the represents (Chatrudee, 2006).

In Asia, corporate governance has additionally gained greater distinction since the Asian financial crisis in 1997. Corporate governance is claimed, by a large number of authors who point to serious structural weaknesses in the financial markets and the lack of prudential controls, as having led to the financial crisis (Alba, Clasessens & Djankov, 1998; Keong, 2002; Claessens, Djankov & Lang, 2000). Many authors (Kaplan &Minton, 1994; Limpaphayom & Connelly, 2004; Iskander & Chamlou, 2000; Nam & Lum, 2005; Claessens, Djankov & Lang, 2000) as cited by Yenesew (2012) also claim that better profitability may result from improved internal corporate governance mechanisms and enhanced profitability, information disclosure, and auditing standards. In addition, the results of several studies (Limpaphayom & Connelly, 2004; Nam & Lum, 2005) show that corporate governance benefits companies with respect to increased long-term investment and increased credibility and guaranty a better future for the economy.

According to Hongcharu (2002) prior to 1997, the Stock Exchange of Thailand (SET) had realized the significance of corporate governance in developing its capital markets and commissioned Price Waterhouse Management Consultants Ltd to undertake the first survey of listed companies and others concerned with the capital market. The survey was undertaken in mid-1996. After the sudden flotation of the Thai currency, the baht, in July 1997, the lack of corporate governance was regarded as one of the most significant factors contributing to the collapse of companies and many finance institutions in Thailand (Chatrudee, 2006). Several laws were drafted and corporate governance practices were incorporated. The Thai Securities and Exchange Commission (SEC) and the SET cited four factors as their rationale to promote good corporate governance: fairness; transparency; accountability; responsibility. These four factors have been incorporated in most of the legal instruments supported by the government, the SEC and the SET (Chatrudee, 2006).

### 1.1.2 Corporate Governance Mechanism and Profitability: African Perspective

In African economies, listed companies have also witnessed several cases of collapses, some of which include the Intercontinental Bank Plc, Oceanic Bank Plc, Platimum Habib Bank Plc, Anglo-African textile industry, Steel rolling Nigeria limited, Nigeria wire and cable (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).

According to Abu-Tapanjeh (2006) good corporate governance is a fundamental necessity to keeping on running a firm successfully. It has long been playing a crucial role for enhancing the long-term value of stakeholders in the business environment. Corporate governance provides a structure that works for the benefit of the firm and can help in increasing firm’s performance by reducing agency problem (Khan *et al*., 2011). Lupu and Nichitean (2011) believe that corporate governance of banks in Africa economies is of even greater importance given the dominant position of banks as providers of fund. In developing economies, banks are typically the most important source of finance for the majority of firms.

As it is said by different researchers, profitability of listed companies is affected by good corporate governance practice and policies (Coleman, 2007). It is believed that good governance generates investor goodwill and confidence and a number of recent studies have shown that good corporate governance increases valuations and boosts the bottom line. For instance, a study by Gompers et al. (2003) concluded that companies with strong shareholder rights yielded annual returns that were 8.5 percent greater than those with weak rights and also more democratic firms are seen to enjoy higher valuations, higher profits, higher sales growth, and lower capital expenditures. Poorly governed firms are thus, expected to be less profitable, have greater bankruptcy risk, lower valuations and pay out less to their shareholders, while well-governed firms are expected to have higher profits, be less at risk of bankruptcy, have higher valuations and pay out more cash to their shareholders (Al-Matari, 2012).

Claessens et al. (2003) posits that better corporate frameworks benefit firms through greater access to financing, lower cost of capital, better performance and more favorable treatment of all stakeholders. It has been argued that weak corporate governance does not only lead to poor firm performance and risky financing patterns, but is also conducive for macroeconomic crises like the 1997 East Asia crisis. Other researchers contend that good corporate governance is important for increasing investor confidence and market liquidity. Thus, Simpson (2004) posits that the profitability of corporation is a major yardstick for measuring the effectiveness of corporate governance practices in a market.

### 1.1.3 Corporate Governance Mechanism and Profitability: Nigeria Perspective.

In 2001, it was recorded that corporate governance was at its rudimentary state in Nigeria; as only about 40% of quoted companies including banks seems to have recognized corporate governance codes (Suberu & Aremu, 2010). Similarly, a study conducted by Uwuigbe (2011) on the relationships that exist between governance mechanisms and financial performance in the Nigerian consolidated banks revealed that no significant difference was seen in the profitability of banks with perceived adequate governance and that of banks with inadequate governance. Likewise, the banks do not disclose in general how their debts were performing, by providing a statement that expresses outstanding debts in terms of their ages and due dates.

In Nigeria, another corporate governance aspect that is been advocated by the investors and academic scholar is the risk management system and disclosure and transparency (Omar & Simon, 2011). Risk management according to Stanton (2012) refers to the process by which an organization identifies and analyses threats, examines alternatives, and accepts or mitigates those threats even before they begins to impede the activities of the organization. Similarly, Culp (2008) opined that risk management is viewed today as one of the key characteristics of successful companies which enable firms to view all risks facing them through some form of pre-planned activities. Also, risk management can be perceived as a management process that requires a firm’s management to identify and assess the collective risks that affect firm value and apply an organizational wide strategy to manage those risks in order to attain higher level of profitability (Meulbroek, 2002).

Similarly, the relationship between accounting information disclosure especially voluntary disclosure and firm profitability is generating a wider debate as the study on this crucial aspect are few and inconclusive because divergent results have been posited by scholars across the globe. For instance, Codmiller and Lendoax (2012) reported that voluntary disclosure is associated with reduced information asymmetry and higher profitability. Contrarily, , Sandram and Survein (2006) argued that only a few investors pay attention to the voluntary disclosure as they are more interested in the profitability ratios and therefore, voluntary disclosure cannot be linked to profitability.

The summary that can be drawn from the previous studies is that there is an existence of corporate governance mechanism that is guiding the operation of listed companies in Nigeria but it is found to be at the rudimentary stage (Uwuigbe, 2011). In other word, corporate governance mechanism in Nigeria is different from many developed and developing countries as it became effective in 2011and still going through series of restructuring (SEC, 2012). Also, the few empirical studies on corporate governance mechanism and company’s profitability in Nigeria have reported different results. Specifically, three different results have been reported which include a significant positive relationship between corporate governance mechanism and profitability (Uwuigbe, 2011), a significant negative relationship (Adebowale, 2009) and an insignificant relationship (Gbadamosi, Adenrele&Ojuawo, 2010). In the light of this, this study aims at investigating further the relationship between corporate governance mechanism and profitability of listed companies in Nigeria.

## 1.2 Statement of Problem

The separation of ownership and control in modern corporations leads to an agency problem where the agent operates the firm in line with their own interests, instead of shareholders (Jensen & Meckling, 1976). The need for corporate governance arises from these potential conflicts of interest among stakeholders such as shareholders, board of directors and managers in the corporate organizations. According to Imam and Malik (2007) these conflicts of interest often arise from two main reasons. First, different participants have different objectives and preferences. Second, the participants have imperfect information as to each other’s actions, knowledge, and preferences. Thus, corporate governance is intended at reducing divergence of interest and also ensures monitoring of the management towards the actualization of the profitability objective of the firm (Nanka-Bruce, 2009). For the profitability objectives to be achieved through the corporate governance practices there must be a relationship between the two variables.

Several studies have however been conducted by various scholar using different samples, different industries, different methodologies and different corporate governance mechanisms resulting in conflicting results. For instance, Ahmadu, Aminu and Tukur (2005) investigated the efficacy of corporate governance mechanisms as a means of increasing firm financial performance using pooled ordinary least square regression analysis for a sample of 93 firms quoted on the Nigeria stock exchange for the period between 1996 and 1999. The results made a case for a board size of ten and for ownership concentration against diffused equity ownership which has been the traditional practice

Similarly, Uwuigbe (2011) observed that a negative but significant relationship exists between board size, board composition and the financial performance of listed banks in Nigeria measured by return on assets and return on equity which are also the measures of profitability, while a positive and significant relationship was also noticed between directors’ equity interest, level of governance disclosure and profitability. Furthermore, the t- test result as presented by Uwuigbe, (2011) indicated that while a significant difference was observed in the profitability of the healthy banks and the rescued banks, no difference was seen in the profitability of banks with foreign directors and that of banks without foreign directors.

Ademulegun (2009) results on the other hand show no relationship between corporate governance variables; board size, board composition, executive compensation, disclosure and profitability. Based on the above empirical evidences, it can be inferred that there is no clarity on the nature of relationship that seems to exist between the corporate governance mechanisms and profitability in the listed companies in Nigeria. This could perhaps explain the lingering cases of fraud and collapse of many perceived giant companies in Nigeria. To this end, there is a need for further study on the relationship between corporate governance mechanisms and the firms’ profitability.

## 1.3 Objectives of the study.

The general objective of this study was to establish the relationship between corporate governance mechanisms and the profitability of listed companies in Nigeria.

### 1.3.1 Specific Objectives

(i) To determine the relationship between the board size and profitability of the listed companies in Nigeria.

(ii) To investigate the relationship between executive compensation and profitability of the Nigerian listed companies

(iii) To establish the relationship between ownership concentration and profitability of the Nigerian listed companies

(iv) To ascertain the relationship between board oversights functions and profitability of the Nigerian listed companies.

(v) To determine the relationship between risk management practices and profitability of the Nigeria listed companies.

(vi) To investigate the relationship between information disclosure and profitability of the listed companies in Nigeria

## 1.4 Hypothesis of the study

HO1: The board size has no significant relationship with the firm’s profitability in the listed companies in Nigeria.

HO2: Executive compensation package has no significant relationship with the firm’s profitability in the listed companies in Nigeria

HO3: Ownership concentration has no significant relationship with the firm’s profitability in the listed companies in Nigeria

HO4: Board oversight functions has no significant relationship with the firm’s profitability in the listed companies in Nigeria

HO5: Risk management practices has no significant relationship with the firm’s profitability in the listed companies in Nigeria

HO5: Information Disclosure has no significant relationship with the firm’s profitability in the listed companies in Nigeria

## 1.5 Scope of the study

The scope of this study was limited to only six industries (Banking, Food and Beverages, Health care, Automobile, Industrial/Domestic products and Breweries) out of the twenty four listed industries on the Nigeria stock exchange within the financial year 2004 and 2013, as well as restricted to the targeted population at the head offices of those selected companies in Lagos. The choice of these industries was influence by the fact that they constitute the major employers of labour in Nigeria and they also have the largest stock on the Nigeria stock exchange (Badmus & Oguntuga, 2009). Also, since the data required for the study can only be provided by the top management officers of the companies, it is appropriate to focus on the corporate head offices on the companies. The study was conducted in the year 2014 and 2015.

## 1.6 Justification of the study

The particular attention in the Banking, Food and Beverages, Breweries, Health care, Automobile, Industrial/Domestic products emanates from the conviction that the sector is a potential instrument of modernization, a creator of jobs, and a generator of positive spill-over effects (Tybout, 2000). In 2006, banking industry contributed 33.1% of the total GDP, and 28.7% of total employment in Malaysia. Contrary to this, the reduction of commercial banks from 89 to 25 through merger and acquisition process increased the unemployment rate in Nigeria by 7.9% (Agaka, 2008). This was however blamed on weak governance structure.

Although corporate governance in developing economies has recently received a lot of attention in the literature (Lings (2001); Boswamin (2011); Carterry, Collins & Lorischy (2004); Stakouraus, Maria-Elemim, Aglorakin, Manthosy & Panagliotias (2009); McConnell, Bebchuks, Malherbem & Segalis (2011), Cohenny & Ferella (2008), Oman (2011); yet corporate governance of listed companies in developing economies as it relates to their profitability has almost been ignored by researchers (Caprion & Levinel(2012); Ntimi (2007). Even in developed economies, the corporate governance of financial institutions and their financial performance has only been discussed recently in the literature (Maccey & O‟Haran, 2003).

Furthermore, the few empirical literatures on corporate governance of listed companies in Nigeria 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 was the one by Adams and Mehran (2002) for a sample of 23 listed companies, where they examined the effects of board size and composition on firm’s 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.

Therefore, this study contributed to the existing body of knowledge, as well as make up for the paucity of scholarly literature in Nigeria on the moderating effect of accounting information disclosure on the relationship between corporate governance mechanism and company’s profitability in the listed companies in Nigeria. Also, the regulatory authorities will find the study helpful as it can aid an effective and efficient review of code of corporate governance of the listed companies in Nigeria. The board of directors of listed companies in Nigeria will find the findings of this study useful in the discharge of their oversight functions as well as strategic decision making. The optimal model from this study will assist the management in assigning weights to the variables considered in this study

## 1.7 Limitations of the Study

This study was limited by a number of factors among which was limited research papers on related study in Nigeria and reticence exhibited by some respondents especially when information regarding their internal operation was required. Also, the study excluded the other sectors apart from Banking, Food and Beverages, Breweries, Health care, Automobile, Industrial/Domestic products in the sample selection. Further study can therefore focus on other sectors not included in this study. Nevertheless, the aforementioned limitations did not hinder the study from achieving its objectives as those factors were properly managed. For instance, limited research papers in Nigeria on the subject was overcome by considering articles from other African countries whose corporate governance is similar to that of Nigeria. Secondary data also complements for those informations that the respondents were unwilling to provide.

# CHAPTER TWO

# LITERATURE REVIEW

## 2.1 Introduction

This chapter presents a review of relevant studies that have been carried out by scholars on the concept of corporate governance mechanism and firms’ profitability. The study specifically covers the theoretical discussions, empirical review, conceptual framework and research gap as well as the chapter summary.

## 2.2 Theoretical Framework

Several theories have emerged to explain the relationship between corporate governance mechanisms and the profitability of business organizations. Among these theories includes the legalistic theory of corporate governance, resource dependency theory, stewardship theory, agency theory and signaling theory.

### 2.2.1 Legalistic Theory

Legalistic theory is a corporate governance theory that focuses on the roles of board of directors to mitigate agency problem and monitor the management of an organization. According to Zahra and Pearce (1989), Gopinath (1994) and Jonnegard (1997), this theoretical school recognized three generally accepted categories of the roles of the board of directors in an organization to include the service roles, the control roles and the strategic roles.

Boarden, Crison and Pop (n.d) posits that by having more strategic-orientated boards, one could easily expect to see the management acting with more care and being conscious about their actions and decisions. In this wise, it can be suggested that directors will consider more reasonable alternatives before setting the limits of their strategies and jumping to decisions. Second, directors that involve more on strategic tasks are more likely to collaborate with senior management and this cooperation will lead in the end to better corporate profitability (Judge &Zeithaml, 1992; Ruigroket, 2006). In like manner, Nadler (2004) argues that there might be even more advantages for the managers that decide to engage the boards in strategy as this will result in a better understanding of the company, an increase in satisfaction and a stronger ownership and support.

The control function as perceived by Mintzberg (1983) is carried out by the directors by developing a governance system for the organization which regulates the activities and decision of the management and particularly, the chief executive officer. Gregory, (1995) affirms that legalistic theory possesses the devices to maximize shareholder wealth when authority structures are unified and when boards are composed of experienced executive directors who do not suffer from information asymmetries and unnecessary bureaucratic structures that may paralyze the strategic decision making processes of the corporations.

Furthermore, the service role of the board of directors manifests in the provision of fund for growth and expansion of the organization, establishment of contracts, promotion of the organization image as well as product branding (Kriger, 1988; Boyd, 1990; Boeker& Goodstein, 1991). Krengray (1982) advocated for shifting of organizations from merely producer of commodities into problem solving entities through product branding. This theory is considered relevant to this study in that it explains the role of the board of directors in an organization which is very crucial to the overall profitability of the organization. The theory also made a significant contribution by encouraging the management to focus on problem solving rather than ordinary rendering of service. This will impact the firms’ profitability significantly owing to the proposition of (Adwerney, 1991) that people are willing to pay when their problems are solved.

### 2.2.2 Resources Dependency Theory

Resource dependency theory propounded by Jeff Pfeffer and Gerald Salancik in 1978 is the study of how the external resources of the organizations affect the behavior of the organization. It assumes that corporations depend upon one another for access to valuable resources and therefore they try to establish links among them. According to this theory, two companies can benefit of the interlocking directorship if they are able to develop social relations between them within which one person is a member of the boards of both companies (Hung, 1998).

The theory also defines the role of board of directors in the provision and accessibility to resources needed by the organization (Abdullah & Valentine, 2009). According to resources dependency theory, directors are considered as an important resource of the organizations as well as the provider of key resources of the organization. Therefore, when directors are considered as resource providers, various dimensions of director diversity clearly become important such as gender, experience, qualification and the personal character of the directors.

More importantly, the service roles of the board of directors are specifically recognizes by the resource dependence theory in which corporate boards are requested to perform service functions such as co-opting of external influencers, establishment of contracts and the raising of funds, enhancement of the organization’s reputation and giving of advice to the organization (Salancik, 1978; Freeman & Read, 1983; Kriger, 1988; Boyd, 1990; Boeker& Goodstein, 1991; Wang, 1991)

Furthermore, the goal of resource dependency theory according to Hillman, Withers and Collin (2009) is to determine the best way to utilize organization resources towards actualization of the organizations’ goals and objectives. Hence, managers throughout the organization understand their success is tied to customer demand and that their careers thrive when customer demand expands which will in turn lead to higher profitability provided the cost structure are properly managed (Hayward &Boeker 1998). Thus, customers are to be regarded as the ultimate resources on which the organization success depends.

Similarly, organization success in resource dependency theory is defined as organizations’ maximizing their power (Pfeffer, 1981). Therefore, companies lacking in essential resources will seek to establish relationship with others in order to obtain needed resources. At the same time, organizations attempt to alter their dependence relationships by minimizing their own dependence or by increasing the dependence of other organization on them.

For this study, resource dependency theory is relevant as it provides insight into the most effective and efficient use of organization resources which is perceived crucial to the profitability of the organization. Innes, John, Mitchell and Sinclair (2000) assert that the survival triplet today for any company is how to manage organization resources, cost, quality, and performance. The customers are continuously demanding high quality and better products/services and at the same time, they want the price to be reasonably low. The shareholders are also demanding a required rate of return on their investment from the company. Thus cost has become a residual. The challenge is being able to manufacture products or provide services within the acceptable cost framework without significantly reducing the quality, improve profitability and thus provide return on investment to the investors who have committed their resources to the organization.

### 2.2.3 Stewardship Theory

Regarded as the latest theory that was added to corporate governance research in 1991 by Davis, Schoorman and Donaldson and also known as stakeholder’s theory, the stewardship approach examines situations in which CEOs and other executives as managers are motivated to act in the best interests of their principals (Donaldson & Davis, 1989; 1991; Davis, Schoorman&Donaldson, 1997). The argument of the proponents of this theory was that the model is based on the perspective that a manager whose behavior is pro-organizational and collectivistic has higher performance than individualistic, self-serving behaviors. Thus, even where the interests of the manager and the principal are not aligned, the manager places higher value on co-operation than defection.

Stewardship theory also suggests certain mechanisms that can be employed by the organizations to reduce agency loss. The mechanisms can come in form of tie executive compensation, levels of benefits and also managers’ incentive scheme by rewarding them financially or partial ownership by offering shares that aligns financial interest of executive to motivate them for better performance (Barney &Hersterly, 2008). Haniffa and Cooke, (2002) proposed a review of incentives of corporate managers to include both financial and non-financial incentive and that 20% of firms stock should be owned by the corporate manager as antidote to agency loss.

Similarly, evidence provided by Demsetz and Lehn (1991) revealed that stock ownership by management usually leads to higher productivity, since the more stock management owns the greater their motivation to work to raise the value of the firm’s stock, which aligns with the interests of other shareholders. Thus, as managers’ ownership increase, they are likely to be more motivated to pursue value-creation objectives, such as product and service innovations, that are likely to increase corporate wealth through profitability and the overall well-being of the organization (Morck, 1988).

In contrast, Bamiglas and Dentruis (1998) posits that stewardship theory holds that ownership doesn’t really own a company, its merely holding it in trust and therefore profitability is not linked to benefit or remuneration. They therefore concluded that employees who hold to this view can stick around and work harder to achieve the organization objectives even if compensation is not as much as they can get elsewhere.

As useful as stewardship theory in the present day corporate management and also as relevant as the theory to the present study, the theory is not without a shortcoming. According to David and Miguel (2009), although the theory addresses some of the reductionist assumptions of agency theory, it suffers from being static as it considers the relationship of principal agent at a single point in time and assumes no learning of individuals as a result of their interactions. Also, Ghoshal and Moran (1996) posits that the quadrant where parties position themselves depends on the level of risk that is acceptable to each individual and his willingness to trust the other party.

### 2.2.4 Agency Theory

The intellectual foundation for agency theory can be credited to Coase (1937), however the ideas of this theory was practical only to directors and boards since the 1980’s. With the proposition of agency theory, individuals are perceived to be self-interested and not altruistic; therefore individuals can never be trusted to always act in others best interest. In other word, individuals will always want to maximize their utilities functions, the agency theory therefore considered managers and shareholders relationship as a contract (Adams, 2002). This implies that managers’ actions must be properly monitored to ensure that they always act in shareholders’ best interest.

According to Fama and Jenson (1983), as cited by Yenesew (2012), agency theory offers many useful ways to examine the relationship between business owners and managers and also verify how the final objective of maximizing the returns to the owners is achieved, particularly when the managers do not contribute to the corporation’s resources. The theory is a useful instrument in resolving conflicts that might ensues between different stakeholders having conflicting interest in an organization (Cooper &Gulen, 2009).

Similarly, Eisenhardt (1989) posits that agency theory suggests mechanisms which reduce agency loss which can come in form of incentive schemes for managers which reward them financially for maximizing shareholder interests and appropriate selection of board members. Such schemes typically include plans whereby senior executives obtain shares, perhaps at a reduced price or as a bonus issue, thus aligning financial interests of executives with those of shareholders (Jensen &Meckling, 1976). Demiran and Yuan (n. d) identified two major contracts governing the manager-shareholders’ relationship under agency theory as behavior oriented contract (e.g. salaries) and outcome oriented contract (e.g. ownership, stock option) and argued for outcome oriented contract as the major factor influencing organization performance.

Also, from the point of view of Habbash (2010), agency theory improves corporate profitability by resolving agency problems through monitoring of management activities, controlling self-centered behaviors of management and inspecting the financial reporting process. Therefore, mechanism such as boards of directors and audit committees enables shareholders to closely monitor the activities of managers which will in turn improve organization profitability and increase wealth creation for the principal.

However, agency theory has also been identified by scholars to possess some weaknesses (Donaldson 1990, Hill 1990, Williamson 1985). For instance, Donaldson (1990) criticized the agency theory dominance in terms of methodology individualism, narrow-defined motivation model, regressive simplification, disregarding other research, ideological framework, organizational economics and corporate governance's defensiveness. Similarly, Williamson (1985) identified opportunistic behavior of the minority of individuals, not the majority. He opined that "individual sometimes acts opportunistically and trustworthiness is hardly ex ante transparent. Therefore, emphasis was placed on the need to conduct ex ante screening and develop ex post assurance mechanisms or, in contrary, opportunistic individual will exploit circumstances towards less opportunistic individual. In like manner, the opinion of Tipuric, (2008) was that analyzing phenomena only within agency theory framework may result in disregarding of principal's obligation towards agent, thereby ignoring distrust development and disrespect of agents, neglecting ethical aspects and overlooking of prospective solutions consistent with ethical norms.

### 2.2.5 Signaling Theory of Accounting Information Disclosure

This theory has been considered to be an extension of agency theory (Jensen &Meckling, 1976; Buskirk (2012). It was developed to explain the information asymmetry between managers and shareholders (Morris, 1987; Black, 2006). The theory proposes that corporate insiders (managers and directors) have more information about the firm than outsiders, such as shareholders (Kapopoulos&Lazaretou, 2007), potential investors, government agency and the regulatory authorities (Bebchuk&Weisbach, 2010). Therefore, agents could potentially exploit this information to maximize their personal interests at the expense of their principal and other stakeholders (Jensen &Meckling, 1976).

Arguably, the origin of this information asymmetry problem is weak corporate governance and opportunistic behavior of managers within modern corporations (Kapopoulos&Lazaretou, 2007; Conyon& He, 2011). As a result of the information asymmetry problem, companies signal certain information to investors to show that they are better than other companies in the market for the purpose of attracting investments and enhancing a favorable reputation (Verrecchia, 1983). Voluntary disclosure is one of the signaling means, where companies would disclose more information than the mandatory ones required by laws and regulations in order to signal that they are better (Campbell, 2001).

Therefore, to reduce information asymmetries and market uncertainty, companies are expected to adopt good corporate governance practices (Jensen &Meckling, 1976). A reduction in information asymmetry could offer equal opportunities to both large and small shareholders in accessing information, which may help in reducing agency problems and the cost of capital (Morris, (1987); Hearn, (2011); Sharma, (2013), attract local and foreign investment and provide higher liquidity (Healy &Palepu,( 2001); Chung & Zhang, (2011), and enhance the market as a corporate control mechanism, and in turn help create a highly efficient stock market (Klein, 2005).

Theoretical studies related to accounting information disclosure suggest full disclosure of information will occur due to investors’ belief that non-disclosing firms have the worst possible information and cannot enjoy maximum patronage (Grossman, 1981). Such studies also assume credible disclosures and zero disclosure costs. However, Verrecchia (1983) suggests that, in the presence of fixed and positive disclosure costs, only firms whose information provides economic benefits above such costs will disclose. In addition, disclosure policies are influenced when disclosures provide information to competitors (Verrecchia, 1983). Thus, theoretical studies in accounting related to disclosure of information are most concerned with what types of disclosures might occur, instead of disclosures that are actually made by firms (Healy &Palepu, 2001).

On the other hand, signaling theory argues that the existence of information asymmetry can also be taken as a reason for good companies to use financial information to send signals to the market (Ross (1977). Information disclosed by managers to the market reduces information asymmetry and is interpreted as a good signal by the market (Morri, 1987). Another potential solution to the information asymmetry problem is issuance of regulation that requires managers to fully disclose their private information as well as the use of information intermediaries, such as financial analysts and rating agencies, who engage in private information production to uncover managers’ superior information (Creps, 1990).

## 2.3 Conceptual Framework

The conceptual framework for this study was formulated from the objectives of the study. Since the main objective of this study is to determine the relationship between corporate governance mechanisms and the firm profitability, corporate governance mechanisms such as Board size, Executive Compensation, Ownership Concentration Board Oversight Functions, Risk Management practices and Accounting Information Disclosure will be considered as independent variables, while the firm profitability (return on capital employed and earnings per share) will be taken as the dependent variable.

**2.3.1 Definition of Corporate Governance**

From the stand point of Cadbury (2002), corporate governance is a unique, complex, multi-faceted and multi dynamic concept that is devoid of a systematic and unified theory, and whose paradigm, diagnosis and solutions lie in multidisciplinary fields such as economics, accountancy, business administration and finance among others. Therefore, corporate governance has been defined and formulated based on the prevailing situations in each countries and field of studies. According to OECD (2004), corporate governance has been defined as a set of relationships between the management of a firm, the board of directors, theshareholders and all other stakeholders. A further explanation by OECD was that corporate governance aims at providing theframework for the setting of the company’s objectives, and also provides the means through which those objectives can be achieved as well as the determination of performance monitoring. Thus, goodcorporate governance should provide proper incentives for the board of directors andmanagement team to pursue objectives that are in the best interests of the company and itsshareholders and should also facilitate effective monitoring (OECD, 2004,).

Another definition of corporate governance provided by Shleifer and Vishny`s (1997), which emanated from the agency perspective, can be summarized to imply a separation of ownership and control. In other word, corporate governance can be seen as regulating the ways and manners in which suppliers of finance to corporations assure themselves of getting a return on their investment. According to (Shleifer and Vishny, 1997), managers have most of the residual control rights, even though there might be limits on this discretion in the terms of their contracts. Therefore, the manager has the opportunity to abscond with financiers funds, or to appropriate them on pet projects. Moreover, the literature has shown that the costs are greater when managers have direct interest in expanding the firm beyond what is rational, reinvesting the free cash and pursuing pet project

A broader definition of corporate governance that was offered by Luigi (1998), simply depicts the concept of corporate governance as a complex set of constraints that shape the ex-post bargaining over the quasi rents generated by a firm. In another words, more than any other things, corporate governance has as its core the decision-making process at the level of the board of directors and top management ( strategic decision) and the mechanisms, both internal and external, that guaranty that decision-process outcomes, are according to the objectives of the firm and its shareholders (Mulbert, 2010). Thus, corporate governance has the potential of managing the agency problems generated by the separation of ownership and control through incorporation of a business.

Academics (Hillary, 2004; Judge &Zeithaml, 1992; Nadler, 2004: Ruigroket, 2006) have defined corporate governance it in thecontext of regulating communications and combating agency costs wherecorporate officers and directors have the power to control the company, but theowners are diverse and largely inactive shareholders. Good corporategovernance, then, allows for a balance between what officers and directors doand what shareholders desire. The term implies that managers have the properincentives to work on behalf of shareholders and that the shareholders are properly informed about the activities of the shareholders through reporting, disclosure and transparency.

From the legal point of view, corporate governance has been defined as a contractual law in which the overall activities of a corporate entity are summarized and directed (Osalmeden, 2014). These overall activities include but not limited to duties of the board, composition of the board, conflict resolution in a company, diffusion and allocation of ownership, reporting procedure, management of risk, assurance of transparency, reward and motivation strategy, accessibility to information, hierarchy and decision making procedure, acceptable ethical standard, employees protection and whistle blowing Osalmeden, 2014).

The ongoing debate on corporate governance was that both narrow and wider definition of corporate governance exists in literature. The definition by Wang et al (1998) that perceived the corporate governance as the mechanism through which shareholders can be assured that managers will act in their best interests was considered to narrow by Arun and Tunner (2002) while the definition by Shleifer and Vishny (1997), corporate governance was considered 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 has been considered as a wider definition in corporate governance literature. Therefore, this study adopts the OECD code of corporate governance which includes the board size, executive compensation, ownership concentration, board oversight functions, risk management practices and information disclosure.

**Independent Variables Dependent Variables**

**Board Size**

-Total number of board members

-Board experience

|  |  |
| --- | --- |
| **Board Oversight Functions**  -membership of audit committee  -membership of risk management committee  -membership of human capital and remuneration committee  **Ownership concentration**  - Amount of share of the largest five shareholders  **Executive Compensation**  - Directors’ Salary  -Directors’ Allowances  -Directors’ Bonuses | **Profitability**  -Return on capital employed  -Earning per share |

**Risk Management System**

- Operation Risk

- Financial Risk

- Market Risk

**M**

**Information Disclosure**

**Figure 2.1: Conceptual Framework**

## 2.4 Empirical Review and Hypothesis Development

This section is devoted to the review of main empirical literature on the corporate governance mechanisms and the relationship with firm profitability. A number of researchers have studied the vital role of corporate governance mechanisms in improving profitability of the organization which serves as a guide and empirical base for this study.

### 2.3.1 Corporate Governance and Firm’s profitability

Hambrick (1996) conducted a study on the relationship between corporate governance practices and the firm profitability with a sample of 192 firms from the New York stock market with the use of quantitative data extracted from the audited financial statement of the sampled companies. Both descriptive and inferential statistics were carried out in the study. The results of the analysis revealed that governance structure such as board diversity have significant impact on the profitability of the selected companies. Gompers, (2003) conducted another study using governance index for 1500 large US firms, and found that the risk-adjusted returns of firms with strong governance were 8.5% higher than firms with poor governance.

Chi (2005) posits that, there are three possible causal relationships between quality of governance and firm performance using profitability and liquidity as measures of performance. Number one is that there is a direct causal relationship with governance enhancing firm liquidity. Secondly, causality runs in both ways and, finally, that governance and profitability are not directly related, but they are spuriously connected through other variables. In like manner, a study by Corley (2013) on the relationship between corporate governance and financial performance of locally listed companies in Namibia revealed that corporate governance variables such as board size had a negativeeffect on return on capital employed while policy and decision making had a significant positive relationship with return on capital employed. There was also a significant positive relationship between board roles and return on capital employed as well as contingency and return on capital employed.

Furthermore, a survey of factors that determines corporate performance in Thailand public companies by Chatrudee (2006) suggests that better corporate governance has resulted into improved internal corporate governance mechanisms and enhanced accounting standards, information disclosure, and auditing standards which in turn has attracted many foreign investments. It was however suggested that Process related activities like monitoring, supervising, enforcing, and higher awareness should be carried out on regular basis by the constituted authorizes. This view was supported by Mulbert (2010) and Shleifer and Vishy(1997) who observer a positive significant relationship between regulatory compliance, risk disclosure and return on equity of public companies in New York.

In a related manner, a study by Maher and Anderson (1999) on the effect of corporate governance on firm performance and economic growth using OECD code of corporate governance revealed a weak positive relationship between corporate governance mechanisms such as board size, company size, risk disclosure, concentrated ownership and financial performance measured by liquidity, profitability and earning capacity. Advancing this debate, Lupu and Nichitean (2011) discovered a strong positive relationship between corporate governance and share prices in Romanian banking system.

Similarly, a study conducted by Daily and Dalton (1992) on the relationship between governance structure and corporate performance in entrepreneurial firms revealed that corporate governance variables namely; board size, had a negative effect on earnings per share while policy and decision making had a significant positive relationship with earnings per share. Corporate governance also had a significant positive relationship with board roles, board roles had a significant positive relationship with board effectiveness, and contingency had a significant positive relationship with board roles and effectiveness. However, Shleifer and Vishny`s (1997) who surveyed corporate governance from the agency perspective found a weak negative relationship between corporate governance and return on investment.

### 2.3.2 The board size and firm’s profitability

Board size plays an important role in affecting the value of a firm. The role of a board of directors is to regulate the CEO and the management of a firm so that the value of a firm can be improved. But, surprisingly, no consistent direction of a relationship between board size and firm profitability were documented in developed countries. A study by Yermack (1996) on a sample of 452 large industrial firms in the US between 1984 and 1991 using return on equity as a measure of profitability revealed a negative relationship between board size and firm value. Eisenberg(1998) criticize Yermack’s use of a sample consisting of only large firms and thereby used a sample of 879 small and medium sized firms from 1992 to 1994 to examine the relationship between board size and firm value. The results shows that ROA is negatively related to board size, which is consistent with Yermack’s result and implies that there is no difference in the result regardless of whether a sample of large or small companies is used to investigate the influence of board size on financial performance.

In addition, Guest (2009) presents evidence from a large sample of 2,746 UK firms from 1981 to 2002 consisting of both descriptive and inferential results with the use of primary and secondary data. The results revealed that board size has a significantly negative impact on profitability, Tobin’s Q and share returns. Another important study by Cheng (2008), who investigated the relationship between board size and firm value using a large sample of 2,980 US firms between 1996 and 2004, reported that firms with larger boards have lower annual profitability measured by accounting returns on assets.

Furthermore, a wider studies by Conyon and Peck (1998) focusing on a sample of five European countries examined the relationship between board size and return on equity (ROE) adopting quantitative research design and inferential statistics. Their finding indicates that larger boards impact negatively on firm growth and profitability as measured by return on equity. These studies showing a negative impact of a large board of directors on profitability implies that smaller boards of directors are more capable of running a firm successfully. A possible explanation for these results could be that interaction among directors in small firms is more cordial than that of a large board of directors (Lipton &Lorsch, (1992); Jensen, (1993); Yawson, (2006).

In contrast to the studies finding a negative relationship, empirical investigation by Haleblian and Finkelstein (1993) on the 47 listed firms on the US stock market revealed that firms with larger boards and management teams performed better than their smaller counterparts and reported higher returns on capital employed. The study focused on 47 US firms that major in gas and computer industries using data from 1978 to 1982. This study can be subjected to a number of criticisms. Apart from the use of a small sample, another key problem with their study is that it is restricted to only two sectors. Thus, the sample is not completely representative of all industries, which can lead to sample selection bias (Eisenberg1998).

Similarly, Kiel and Nicholson (2003) conducted a cross-sectional data analysis from 348 large Australian publicly-owned companies in 1996 with a particular focus on the determination of the impact of board size on the profitability of companies. They find that larger boards are helpful in improving both firm value and profitability, as measured by ROA and Tobin’s Q. In addition, Coles (2008) reported a positive relationship between board size and Tobin’s Q in a sample of 8,165 firms with observations from 1992 to 2001 in the US. In like manner, Wang (2012) uses unbalanced panel data from 1,618 firms from 1992 to 2004 to investigate the impact of board size on financial performance using profitability as a measure of performance. Wang (2012) finds that firms with smaller boards invest more heavily in risky assets which eventually led to loss of assets and reduction in profitability. These results therefore made a case for larger board for the listed companies in order to strengthen their investment decision making and improve the company’s profitability.

Furthermore, Zahra and Pearce (1989), posits from the results of the empirical study conducted on the 236 firms on the New York stock market that larger board has a range of expertise to make better decisions for a firm as the CEO cannot dominate a bigger board because the collective strength of its members is higher and can resist the irrational decisions of a CEO and thereby increase the value of a firm in a positive manner. It was reported also that larger board size will enable the firm to have adequate members of board of directors to serve on the board committees as required by the regulations.

Similar to what is obtainable in the developed economies; the findings from the developing countries suggest a positive, a negative or no significant relationship between the board size and profitability of listed companies. Haniffa and Hudaib (2006) find a positive relationship between board size and return on assets (ROA) from a study of 347 Malaysian listed firms using secondary data for a period of five years and with the use of both descriptive and inferential statistics. Similarly, Jackling and Johl (2009) conducted an empirical investigation on a sample of 188 firms listed on Indian stock market between 2001 and 2005 using both primary and secondary data which provided a result that Indian firms with large boards performed better and recorded higher profitability and growth during the period covered by the study

Contrarily, the results of the study conducted by Mashayekhi and Bazaz (2008) on Iranian firms revealed that larger board size impact negatively on firm value. Specifically, they examine a sample of 240 Iranian firms for 2005 and 2006, and discovered that 195 firms with large boards have lower profitability as measured by return on assets (ROA), earning per share (EPS) and return on equity (ROE). Similarly, Sanda (2010) empirically examined the relationship between board size and firm performance among a sample of 93 listed firms in the Nigerian stock market from 1996 to 1999 and discovered that larger boards impact negatively on firm performance. In like manner, Hui (2012) conducted a study on a sample 318 Chinese listed firms and observed a significantly low profitability attributable to higher agency cost resulting from the board member’s allowance in the firm with large board size. It was further reported that return on equity (ROE) is negatively correlated to board size.

However, Mangena and Chamisa (2008) examine the effect of board size on the profitability of listed firms in South Africa. They use a sample of 81 firms listed between 1999 and 2005, with both secondary and primary data subjected to descriptive and inferential statistics and find that there is no significant relationship between board size and firm profitability as measured by earning per share and return on capital employed. Therefore, it can be inferred that there is no significant relationship between the board size and the profitability of listed companies

### 2.3.3 Executive compensation and firm’s profitability

There have been a number of empirical papers on the relationship between executive remuneration and firm profitability. Thomsen and Pedersen (2000) and Berle and Means (1932) report a positive association between executive remuneration and profitability. Lloyed, (1987) find that the company market value-to-sales ratio is greater for firms with high executive compensation for a study conducted on a sample of 384 firms in Turkish stock market. Furthermore, Thomsen and Pedersen (2000) who took a sample of 435 of the largest European companies reported that, after controlling for other variables, executive compensation has a positive relation with market-to book value of equity as well as the ROA which is a measure of profitability. In addition, it was also reported by Thomsen and Pedersen (2000) that bonus issue of share has a significant influence in aligning the interest of the managers with the interest of the shareholders.

Sigler (2013) examines the relationship of CEO pay and company performance for 280 firms listed on the New York Stock Exchange for a period from 2006 through 2009. The time frame of the study is a period after the adoption of the Sarbanes Oxley Act and after the SEC approval of the corporate governance rules affecting executive pay for New York Stock Exchange companies. With both descriptive and inferential statistic, a positive and significant relationship between total CEO compensation and company performance measured by return on equity was established. It was also discovered that the size of the firm appears to be the most significant factor in determining the level of total CEO compensation, according to the results, the tenure of the chief executive officer is another significant variable that influence return on equity. In this study, the CEO pay was proxy by monthly salary, cash compensation and total compensation. Therefore, since total compensation may include monthly salary and cash compensation, there is possibility of multicolinearity in data which might have affected the result.

John, Robert and David (1999) investigated the relationship between corporate governance practices, chief executive officer compensation, and firm performance on a sample of 495 observations over a three-year period for 205 publicly traded U.S. firms. The sample is composed of large firms operating in a variety of different industries: the median firm in the sample has corporate sales (expressed in 1984 dollars) of $3101 million, and the sample includes 14 different two-digit standard industrial classification (SIC) codes, with some concentration in the food, chemical, and electrical industries. The study finds that measures of board and ownership structure explain a significant amount of cross-sectional variation in CEO compensation, after controlling for standard economic determinants of pay. Moreover, it was also discovered that the predicted component of compensation arising from these characteristics of board and ownership structure has a statistically significant negative relation with subsequent firm operating and stock return performance. Overall, it was reported that firms with weaker governance structures have greater agency problems; that CEOs at firms with greater agency problems receive greater compensation; and that firms with greater agency problems recorded the lowest return on equity

Suherman, Wulan and Agung (2011) conducted a study on the kind of relationship that exists between firm performance, corporate governance, and executive compensation in financial firms in Indonesia. The sample of the study comprises 13 financial companies listed during the period 2007-2009 on Indonesian Stock Exchange. The inferential statistic result reveals thattheprobability for ROA is 0.0001, which implies that a significant positive relationship exists between executive compensation and ROA at 1% level of significance (t-stat=4.37).The argument for this relation is because the bonus given by company to the executive depends on the company profit. The higher the company profit, the higher the bonus that executive will receive. However, the value of probability of total shareholders’ returns (TSR) as reported by the researchers was 0.4351 (t-stat=0.79, insignificant), which means no significant relationship was found between TSR and executive compensation. The major deficiency of this study was the representativeness of the sample. 13 companies out of 73 could not be representative. It would have been expected that they study covers the entire population since a very small population was involved.

Another empirical study was conducted by Yongli and Dave (2012) on the relationship between executive compensation, ownership structure and firm performance in Chinese financial corporation’s during the period 2001-2009. Relying on secondary data, it was reported that executive compensation is negatively related to the largest shareholding (-0.017), but positively related to the proportion of shares held by the five largest shareholders and the ten largest shareholders (0.017 and 0.054 respectively), indicating that private companies tend to pay CEOs higher. Moreover, CEO compensation is negatively associated with return on equity RET (-0.027) and ROA (-0.015), indicating that the higher the CEO compensation in Chinese banks, the lower the firm value or firm profitability. In another words, high CEO compensation deteriorates firm value, which is consistent with relation-based theory. As a result, executive compensation in state-owned banks is maintained at a relatively lower level.

Fernandes (2005) conducts a study using firms listed on the Portuguese Stock Exchange. The study was based mainly on secondary data extracted from the audited annual financial statement of the selected companies which was subjected to both descriptive and inferential statistics. The finding of the study reveals that return on equity does not significantly depend on the executive compensation. Similarly, it was also discovered that there is no relation between the wealth of the stockholders and executive compensation. However, the results also indicate that company size is a major determinant of compensation implying that CEOs in large and profitable organizations receive the highest compensation.

Crumley (2008) conduct a study on the relationship between firm performance measured by profitability and CEO compensation in U.S. commercial banks. The study uses 36 sample banking companies in the U.S. in period 2001-2003. The results show that there is a weak relationship between the percentage change in stock return and CEO compensation. Also, a weak relationship was found between the percentage return on assets and CEO compensation of the selected companies. It can therefore be suggested that a weak relationship exists between the CEO compensation and firms’ profitability.

According to the empirical study conducted by Michael, Huseyin and Raghavendra (2009) on the relationship between CEO incentive compensation and future stock price performance. Three measures of compensation were used which include the total compensation, (TDC1) which was an aggregate of salary, bonus, total value of restricted stock granted, total value of stock options granted (using Black-Scholes), and long term incentive payouts, total cash compensation (TCC) which includes salary and bonus, and the difference between total compensation and total cash compensation (TDC1-TCC) which is meant to capture the options and incentive components of total compensation. They find evidence that industry and size adjusted CEO pay is negatively related to future shareholder wealth changes for periods up to five years after sorting on pay. For example, firms that pay their CEOs in the top ten percent of pay earn negative abnormal returns over the following five years of approximately -13%. The effect was stronger for CEOs who receive higher incentive pay relative to their peers. This implies that executive compensation has significant relationship with the profitability in the listed companies in Nigeria.

### 2.3.4 Ownership Concentration and firm’s profitability

Chandrapala and Guneratne (2012) conducted a study on the impact of ownership concentration on the profitability of listed firms on the Colombo Stock Exchange using both pooled and ordinary least squares regressions method in the analysis of data. The return on assets (ROA) was used as the measure of profitability. The study finding was that ownership concentration within these listed companies does not have a statistically significant positive relationship with the ROA. However, the study observed that other factors such as the firm size, quick ratio and ratio of inventory investment to total assets have positive impacts on the ROA. But the debt ratio was found to be negatively related to the profitability of the selected companies.

Kun and Greg (2009) study focuses on disentangling the relationship between ownership concentration and firm performance measured by profitability and liquidity in emerging markets: a meta-analysis. The study started with the construction of a comprehensive database of 313correlations and their corresponding study characteristics obtained from 27 primary studies, which investigate the relation between ownership concentration and firm performance in emerging markets. The results indicate that study characteristics are sufficient to explain a large portion of the heterogeneity of results in their sample which was similar to the results of Mehran (1995) and Milton (2002).

Kun and Greg (2009) also reported that, the differences within- and between-regions, sample selection, (under)specification of models contribute to the heterogeneity of empirical findings and that using fixed effects model to control for endogeneity generate a stronger relationship between the dependent and independent variables, countering the widely used argument that the relation between ownership structure and firm performance will diminish after controlling for endogeneity. On the other hand, studies using instrumental variable approach to control for endogeneity do not report different results.

Therefore, the need to appropriately tackle model misspecification and endogeneity problems in corporate governance area, and to further explore theoretically and empirically the factors that drive either country divergence or convergence regarding the relation between ownership concentration and firm performance in countries that share similar governance environment was advocated by Forbes and Daniel (1999). The method adopted in the study reveals that the authors have adequate knowledge of econometrics. However, the study did not identify clearly any implications for research, practice and/or society. That is, the manuscript does not bridge the gap between theory and practice.

Similarly, Grosfeld (2006) conducted a study on ownership concentration and firm performance using data from an emerging market. The study explore the determinants of ownership concentration and the relationship between ownership structure and firm value in the context of a transition economy, that is, an economy undergoing important changes in its legal and regulatory framework, in macroeconomic policy and most of all, in its property rights allocation. The focus was on all non-financial companies traded on the Warsaw Stock Exchange since its inception in 1991 up to2003. The ownership structure of these companies becomes more dispersed with the number of years of listing. The results give support to the hypothesis that firms belonging to the sector of high technology have lower ownership concentration than firms in more mature industries. It was reported that the positive impact of ownership concentration on firm value detected in OLS regressions becomes stronger even as they control for the endogeneity of ownership. In this study, the dimension of ownership concentration used was not reported. For individual stockholder, some researcher perceived it to be 5% of the total share of the company while for institutional shareholders; it is usually perceived as 10% of the total shares of the company.

According to a study by Ongore (2011) on the effects of ownership structure on performance of listed companies in Kenya using agency theory as an analytical framework, a negative significant relationship exists between ownership concentration and return on assets. Ownership structure was operationalized in terms of ownership concentration (percentage of shares owned by the top five shareholders) and ownership identity (actual identity of shareholders). Measures of performance used in the study were return on assets, return on equity and dividend yield. Forty two (out of fifty four) listed companies were studied using both primary and secondary data. Reliability of data was tested using Cronbach’s Alpha, while tolerance and variance-inflation factor were used to test multicolinearity. Using Pearson’s product moment correlation and logistic regression, the study found that ownership concentration and government ownership have significant negative relationships with dividend yield. On the other hand, the study reported that foreign ownership, diffuse ownership, corporation ownership, and manager ownership were found to have significant positive relationships with return on equity.

Xiaonian and Yan (1997) investigated the relationship between ownership structure, corporate governance, and firms’ performance using data from the Chinese stock companies. As reported in the study, a typical listed stock company in China has a mixed ownership structure with the state, legal persons (institutions), and domestic individuals as the three predominant groups of shareholders. Each holds about 30 percent of total outstanding shares. Employees and foreign investors together hold less than 10 percent. The ownership concentration is high with the five largest shareholders accounting for 58 percent of the outstanding shares in 1995, compared to 57.8 percent in Czech Republic, 42 percent in Germany and 33 percent in Japan (Mehran, (1995), Klein (1998) & Levine (1997).

Results from the empirical analysis show that ownership structure (both the mix and concentration) indeed has significant effects on the performance of stock companies. First, there was a positive and significant correlation between ownership concentration and profitability. Second, the effect of ownership concentration is stronger for companies dominated by legal person shareholders than for those dominated by the state. Third, firms’ profitability is positively correlated with the fraction of legal person shares, but it is either negatively correlated or uncorrelated with the fraction of state shares and tradable A-shares held mostly by individuals. Last, labor productivity tends to decline as the proportion of state shares increases. These results suggest the importance of large institutional shareholders in corporate governance and profitability, the inefficiency of state ownership, and potential problems in an overly dispersed ownership structure.

Shahab-U-Din and Attiya (2012) conducted a study which evaluates the impact of family ownership concentration on the firm’s performance (evidence from Pakistani capital market) during 2004 and 2009 with a sample of 29 manufacturing firms listed at KSE-100 index in the Pakistani capital market. The dependent variable was performance which was measured by Return on Asset (ROA), Return on Equity (ROE) and Tobin’s Q of the sample firm and the independent variable was family ownership. The study adopted the use of linear regression model for estimation along with correlation analysis. The study reported positive relation between the ownership variable and return on assets. The results indicate negative association between the ownership variable and firm’s dividend payment. The contradicting result in this study is an avenue for further research. A positive relationship was found between ownership concentration and return on assets whereas a negative relationship was found between ownership concentration and dividend payment. Since performance was measured using returns on asset and return on equity and the study has established a positive relationship between ownership variable and performance, it has indirectly been reported that a positive relationship also exist between ownership and dividend payment.This implies that a significant relationship exist between ownership concentration and firm profitability of listed companies in Nigeria.

### 2.3.5 Board Oversight Functions and Firm’s Profitability

Faleye, Hoitash and Hoitash (2009) conducted a study on the effects of the intensity of board monitoring on directors’ effectiveness in performing their monitoring duties. Using data from the selected 10636 firms on the US stock exchange for the year 1998 to 2006, the results shows that monitoring quality improves when a majority of independent directors serve on at least two of the three principal monitoring committees. These firms experience greater sensitivity of CEO turn- over to firm profitability, lower excess executive compensation, and reduced earnings management. According to Faleye et al (2009), the improvement in monitoring quality comes at the significant cost of weaker strategic advising and greater managerial myopia. It was also reported that Firms with boards that monitor intensely exhibit worse acquisition results and diminished corporate innovation. Firm value results suggest that the negative advising effects outweigh the benefits of improved monitoring, especially when acquisitions or corporate innovation are significant value drivers or the firm’s operations are complex (Kashif, 2008; Inan, 2000;&Hempel, 1998).

Yuqing, Gary and Shiguan (2009) examined the relationship between executive compensation, board characteristics and firm performance in China: the impact of compensation committee based on the assumption that the independent directors of a board can impact CEO pay-performance more effectively if a compensation committee provides information and assist them in designing relevant executive pay schemes. On the basis of this idea, they developed and tested the hypotheses that Chinese firms with a compensation committee have a closer CEO pay link with performance when a larger proportion of independent directors serve on the board with primary focus on the effect of a compensation committee on CEO pay-performance relation as a consequence of its help for the board and found that board independence produces a stronger relationship between executive compensation and return on equity in Chinese listed firms. As reported in the study, this association is more evident in those firms which have a compensation committee than those without compensation committee. The findings as reported by Yuqing, Gary and Shiguan (2009) also suggest that the interaction between independent directors on the board and compensation committee has important consequences for CEO incentive systems as well as corporate governance structures in China.

Similarly, the study by Ebrahim, Faudziah and Abdullah (2014) aimed at examining the relationship between audit committee characteristics and firm performance which is considered an oversight function of the board of directors. It also attempts to explore the moderating effect of the board diversity on the association between audit committee characteristics and firm profitability and to fill the gap in the existing literature that examined the relationship between corporate governance and firm performance in the developing countries. The data use for the study was comprised of 162 non-financial companies listed on Muscat Security Market (MSM) through 2011 and 2012. The study used some assumptions in order to test independent variables, moderating variables and dependent variables as reported by the authors. This study revealed a positive association between audit committee size and audit committee meeting to firm profitability but not significant. On the other hand, a negative but insignificant relationship was found between audit committee independence and firm profitability. Moreover, this study revealed that the foreign members of the board have a significant moderating effect on the relationship between audit committee independence and firm profitability. Therefore, there is a significant relationship between board oversight function and firm profitability of listed companies in Nigeria.

### 2.3.6 Risk Management System and Firm’s Profitability

In the aftermath of the financial crisis, there have been series of proposals from policy makers and international organizations regarding corporate governance reforms that need to manage the risks that financial institutions poses for the economy (Alexandra, 2012). These proposals have been addressing either better risk management, by creating a risk management committee at the level of the board of directors, or by narrowing the incentives for compensation, or by altering the rules of limited liability (Mulbert&Citlau, 2011). The ideas that have been promoted regard the expertise in risk management of the board members, the presence in the board meetings of the chief risk officer, or the creation of risk management committees at the level of the board. All the proposals targeted the creation of risk management procedures.

At the international level, the advanced ideas suggested that corporate governance procedures have to be used in improving the risk management and support the financial stability (Walker, 2009). The significance of risk management has been stressed by the Basel Committee on Banking Supervision in 2010 report, ‘an effective internal controls system and a risk management function (including a chief risk officer or equivalent) with sufficient authority, stature, independence, resources and access to the board’ (Basel Committee on Banking Supervision, Principles of Enhancing Corporate Governance, 2010). Similar position had OECD, which emphasized on the risk management at the firm level and on the presence of chief risk officer (OECD Steering Committee on corporate Governance, Corporate Governance and the Financial Crisis, 2010).

The question that is raised when it comes to risk management is how much risk is acceptable? International guidelines provide no practical procedures on the measurement of risk, besides the conceptual long-term value-based approach, which implies a continuous assessment of risky decisions (Dermine, 2011). The 2007-8 financial crises have raised awareness on the need for proper risk management mechanisms as part of the corporate governance. Initially, the literature on risk management was focused on ‘isolated treatment of uncertainties’ (Miller, 1992) while excluding the other interrelated risks. Hence, in the 1990s the focus shifted to an integrated perspective of risk management, which allowed a more comprehensive evaluation of different aggregated risks (Miller, 1992; Sabato, 2010).

The risk identification is a necessary condition for a sound and safe financial environment. However, there has to be stressed on the differences between risk and uncertainty. Dermine (2011) outlines that risk is the situation when ‘the probability distribution of losses can be identified with relevant data’, while in the case of uncertainty ‘the distribution of losses cannot be measured, as the situation being new, no relevant data are available’. Another aspect of the risk management that is gaining the attention of the scholar is the link between risk management and firm performance.

Cheruyot, Muturi, Kwasira, and Odero (2014) conducted a study on the effect of Safari Card system as a revenue risk management practice on financial performance of Kenya wildlife service on a sample of 296 drawn from 1,286 employees in the National Parks where Safari card System is used to collect the Parks entry charges. The study relied on both primary and secondary data which was processed to answer the research objectives using a descriptive survey research design while data analysis was done using descriptive statistics and presented in frequency tables and charts. The relationship between Safari Card as a risk management practice and financial performance was tested using a regression model. The results show that introduction of Safari Card as a transactional risk reduction system by Kenya wildlife system increases its liquidity as a measure of financial performance. The idea of the study was properly conceptualized. However, the major deficiency of the study was that the study was not based on any theoretical framework. Also, the measurement of performance was limited to liquidity and working capital whereas other performance indicators were neglected.

In another development, Hussein and Karl (2013) investigated the impact of risk taking on bank financial performance during 2008 financial crisis. This study uses descriptive and inferential statistics to test the hypotheses over the four years, 2006-2009, that span the financial crisis. The sample consists of 74 bank holding companies (BHCs) in the United States with total assets near $5.8 trillion at the end of 2006. These large BHCs account for a substantial proportion (52%) of the total amount of banking assets in the United States. Each of these BHCs had total assets in excess of $3 billion at the end of 2006. However, the study found a significant relationship between BHCs’ risk taking levels and their financial performance. BHCs with lower risk-taking levels were found to have higher average financial performance than BHCs with higher risk-taking levels from 2006 to 2009. The study’s findings support the claim that risk affected the earnings of the BHCs during the financial crisis. The results suggest that risk taking contributed to the 2007-2008 financial crises, and that aggressive risk taking was an important contributor to the recent financial crisis. In this study, the financial performance of the banks was measured by the return on assets (ROA), calculated as the bank’s total net income divided by its average total assets, and return on equity (ROE), calculated as the bank’s total net income before extraordinary items divided by its average shareholders’ equity but there was no clear documentation of the risk indicators in the study.

Kittipat and Nopadol (2014) conducted a study of the relationship between a successful enterprise risk management system, a performance measurement system and the financial performance of Thai listed companies. The study was done by collecting data from persons directly involved with these two systems with a total of 101 respondents. The results of the study indicate that success of the enterprise risk management system and performance measurement system have a weak positive correlation with the financial performance of an organization as measured by return on assets (ROA), return on equity (ROE) and earnings per share (EPS). It does, however, prove to be essential that managers develop, improve and utilize both systems in order to gain a competitive advantage and sustain the growth of an organization. It was reported that out of 520 copies of questionnaire distributed, only 101 copies were retrieved which formed the basis for the analysis. The narrowness of research sample reduces the robustness of the study and also makes generalization questionable.

Ramazanali, Mohammad and AliAsghar (2014) examines the impact of financial pressures and risk management on financial performance of investment firms and banks using106 firms listed on Tehran Stock Exchange (TSE) for a 5-year period from 2006 to 2011 with both descriptive and inferential statistics. The results of their hypothesis testing showed that there is no significant correlation between risk and financial performance of investment firms. However, a significant correlation was found between financial constraints and financial performance of investment firms and banks. The short coming found in this study was that the study relied mainly on secondary data without considering the opinion of the stakeholders in the study. From the above, the following hypothesis emerges: Risk management systems have significant relationship with the firm financial performance in the Nigerian listed financial institutions.

## 2.3.7 Disclosure of Accounting Information and Firm’s Profitability

Iatridis (2008) examines the disclosure of accounting information in the financial statements of UK firms. The study also examines the financial attributes of firms that disclose key accounting issues such as risk exposure, changes in accounting policies, use of international financial reporting standards and hedging practices. The result reveals that firms that provide informative accounting disclosures appear to display higher size, growth, profitability and leverage measures. Iatridis (2008) findings also reveal that the implementation of international financial reporting standards promotes consistency and reliability of financial reports, enhances the quality and the comparability of financial statements and also facilitates companies raising capital internationally.

In India, Ahmed (2005) investigates the extent of voluntary reporting practices of listed non-financial companies with 12 disclosure items for 100 companies. He also relates the extent of voluntary reporting practices to industry type. An unweighted disclosure index was applied to the corporate annual reports for the year ending between June 30, 2002 and December 31, 2002. He finds that the level of reporting voluntary information items is low and the variability in the level of reporting among the companies is wide. Sector wise comparison of voluntary reporting shows little fluctuations among the sectors that indicate a great deal of similarity among them in respect of reporting voluntary information items. Ahmed (2005) also reported that firms with adequate disclosure performed better during the period of the study.

In Jordan, Naser, (2002) investigate the relationship between corporate disclosure after the implementation of International Accounting Standards (IASs), company's firm characteristics and profitability. Using a disclosure index of 86 unweighted items of information, Naser (2002) showed that the level of compliance with the IASs is related to corporate liquidity ratio, audit firm status, profitability, gearing, and size. Suwaidan, (2004) also evaluated the level of social responsibility disclosure practices of 65 industrial Jordanian firms using 37 items of information. The results of the study identified that social disclosure is associated with corporate size, profitability, and risk. Healy et al. (1999) also used AIMR disclosure rankings and found that the increases in disclosure level are accompanied by increases in firms’ stock returns, institutional ownership, and firm’s liquidity.

Leuz and Verrecchia (2000) studied German firms that have switched from German GAAP to international accounting regime with a greater disclosure requirement (IAS or USGAAP) in consolidated financial statements thereby committing themselves to increased levels of disclosure. Leuz and Verrecchia (2000) showed that firms adopting international reporting (more disclosure) were associated with lower gearing and higher trading volume than the ones keeping to the German reporting regime. Coller and Yohn (1997) used a sample of 278 quarterly earnings forecast to investigate whether the manager’s decision to issue management earnings forecast reduces information asymmetry. They found that forecasting firms have wider bid ask spreads than a matched sample of non-forecasting firms prior to the forecast release.

Similarly, Espinosa (2005) examined the relationship between disclosure and liquidity using a sample of 238 Spanish listed firms for a period between 2000 and 2003 with both descriptive and inferential analysis on the information obtained through the coverage index. They found a positive relationship between disclosure and liquidity using Amihud (2002) liquidity model. Lang and Lundholm (2000) examined corporate disclosure activity around seasoned equity offerings and its relationship to stock prices. They found evidence that firms increase their disclosure activity over an extended period of time (six to nine months) in advance of seasoned equity offerings, consistent with managers using disclosure to decrease information asymmetry and increase offering proceeds.

Another study by Heflin, (2002) obtained the measure of a firm’s disclosure for 1998 from AIMR and measured the stock market liquidity and profitability using two measures of liquidity; bid ask spread and depth while profitability was determine using earning per share. The result revealed that a firm with high quality of accounting disclosure enhanced its market liquidity through reducing information asymmetries across traders and also increases its profitability through higher patronage. In like manner, Zhang and Ding (2006) examined the relationship between increased disclosures and bid-ask spread in the Chinese capital market and found that disclosure level is negatively related to bid-ask spread as a measure of stock market liquidity.

A study by Conyon and Peck (1998) on the relationship between information disclosure and firm performance suggested that by increasing the quality of accounting information, the likelihood of fraud, distortion and other abuses in the financial statements of these kinds of companies is minimized and presentation of acceptable opinion by independent auditors seems reasonable and logical. Audit privacy led to an increase in auditor change among the companies of the study. In addition with the increase in auditor change, qualified opinion in audit reduces and instead, acceptable opinion increases. This suggests that audit privacy, reduces auditor independence and causes the opinion selection phenomenon rise, especially after the organization of the formal accountant's community.

Ghasim, Osmani and Abbasi (2007) studied the relationship between the cost of capital, firm profitability and the level of financial information disclosure of 87 companies listed in Tehran Stock Exchange. The results showed that there is no significant relationship between the level of information disclosure and cost of capital (cost of equity, cost of debt.). However, return on capital employed which is a measure of profitability was found to be negatively correlated with the level of financial information disclosed. Arabmazar and Arzitoon (2008) on the other hand investigated the relationship between financial structure characteristics and corporate performance, and the level of information disclosure in the financial statements of the companies. With a sample of 50 companies listed in Tehran Stock Exchange, they came to the conclusion that there is a significant relationship between financial structure characteristics and adequate disclosure in the financial statements and there is also a significant relationship between corporate performance and adequate disclosure in the financial statements.

The study of Wang et al. (2008) examined empirically the determinants of voluntary disclosure in the annual reports of Chinese listed firms that issue both domestic and foreign shares. The results indicated that the level of voluntary disclosure is positively related to the proportion of state ownership, foreign ownership, firm performance measured by return on equity, and reputation of the engaged auditor. However, there is no substantial evidence that companies benefit from extensive voluntary disclosure by having a lower cost of debt capital in the capital structure.

Haniffa and Cooke (2002) examined the relationships between a number of corporate governance mechanisms, cultural influence, firm-specific characteristics, profitability and the extent of account ting information disclosure in the annual reports of a sample of 127 Malaysian companies. A total of 65 items were selected and an unweighted disclosure index was used in the study. The findings indicated a significant association between corporate governance and the extent of voluntary disclosure. In addition, one cultural factor (proportion of Malay directors on the board), was found to be significantly associated with the extent of voluntary disclosure whereas, no significant relationship was found between profitability and the accounting information disclosed. Therefore, it can be inferred that there is a significant relationship between information disclosure and profitability of listed companies.

## 2.5 Research Gap

Reading through the existing empirical and theoretical literature on the effects of corporate governance mechanisms oncompany’s profitability, it was very possible to identify several areas of divergence and yet to be resolved issues. For instance, Anthony (2007) saw the independence of corporate boards as the major factor responsible for firm profitability whereas, Chatrude (2006), Corlen (2013) and Yenesew, (2012) perceived monitoring of management as the key factor that enhances best corporate profitability. Similarly, Yuqing, Gary and Shiguan (2009); Kun and Greg (2009); and Faleye, Hoitash and Hoitash (2009) discovered a significant positive relationship between executive compensation and return on assets (a measure of profitability) while a negative relationship between executive compensation and return on assets was observed by Ebrahim, Faudziah and Abdullah (2014); Fotios, Sailesh and Constantin (2009) and Michael, Huseyin and Raghavendra (2009).

Furthermore, for an increase in the long-term shareholders’ value, diffuse ownership, and institutional ownership was advocated by Grosfeld (2006) and Ongore (2011)whereas,Xiaonian and Yan (1997); Kun and Greg (2009) perceived a strong positive relationship between the monitoring of the management by the block shareholders of the companies and the profitability measured by earning per share as well as the independence of the board of directors in the discharge of their oversight functions.

Therefore further studies are required in this very important aspect. This study was different from previous studies conducted in Nigeria in a number of ways. First, previous studies used either a quantitative approach (Chatrude (2006), Corlen (2013) &Yenesew, (2012) or a qualitative approach (Yuqing, Gary &Shiguan (2009); Kun & Greg (2009). However, this study employed a combination of both descriptive and quantitative research design and thus potentially providing a more complete understanding of the moderating effects of accounting information disclosure on the relationship between corporate governance mechanisms and profitability. A central criticism of the findings from previous studies using quantitative data is that they do not provide sufficient interpretation of the results due to the excessive reliance on statistical data (Boyd, 2012). Contrarily, in a mixed-methods study, it can be argued that data obtained from interviews can be helpful in explaining and interpreting the statistical findings obtained from the quantitative data (Boyd, 2012 &Johl, 2012).

Second, prior studies that have been carried out on the relationship between corporate governance mechanisms and company’s profitability have generally focused either on a small number of governance provisions (Akpan, 2007) or on one governance aspect. For example, Faleye, Hoitash and Hoitash (2009) focused on executive compensation while Uwuigbe, (2011) focused on the board composition and firm size. In contrast, this study considered five aspect of corporate governance considered to be crucial to firm’s profitability as stated in the security and exchange commission code of corporate governance which include the board size, ownership structure, executive compensation, risk management system and the oversight function of the board of directors.

Finally, previous studies use noticeably smaller sample sizes than this study. This study used a balanced panel data over a longer period of ten years (2004-2013), while previous studies used unbalanced panel data over a relatively short period. In addition to the panel data which is a secondary form of data, this study also relied on the primary data that was collected with the use of a well-structured questionnaire. Thus, this study can also be considered as an extension of previous studies with regard to sample size, research method and the balanced nature of panel data with a longer time horizon. Arguably, this improves the generalization of the findings of this study for the listed companies in Nigeria.

## 2.6 Summary

The review of relevant literature was carried out in this chapter focusing on the dependent and independent variables as identified from the topic. Specifically, three major areas were covered and they are theoretical review, empirical review and conceptual framework. The theories review includes legalistic theory, resources dependence theory, stewardship theory, agency theory and signaling theory. Also, past and relevant research studies which focused on corporate governance and firm profitability, board size and firm profitability, executive compensation and firm profitability, ownership concentration and firm profitability, board oversight functions and firm profitability, risk management system and firm profitability, accounting information disclosure and firm profitability were covered under empirical review. The gaps in the previous literatures were identified. Finally, a conceptual framework was drawn that was used to establish the link between dependent, independent and the moderating variables.

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# CHAPTER THREE

# RESEARCH METHODOLOGY

## 3.1 Introduction

In this chapter, the methodology that was adopted was stated to assist in achieving the objectives of the study. Therefore, this chapter covered the research design, population of the study, sampling frame, sampling technique, sample size, data collection instrument, data collection procedure, pilot test, validity of research instrument, reliability of research instrument, data processing and analysis and measurement of variables.

## 3.2 Research Design

The primary objective of this study is to examine the relationship between corporate governance mechanisms and firm's profitability. To achieve this objective, explanatory type of research design with more of quantitative was employed. An explanatory research design helps to identify and evaluate the causal relationships between two or more variables in a research (Marczyk et al., 2005). It is also able to capitalize the strength of quantitative and qualitative approach and remove any biases that exist in all other research method (Creswell, 2003). Therefore, in this study, explanatory research design was employed to examine the relationship between the corporate governance mechanisms and profitability.

In a similar study by Flannery (2009), where the study focused on identification of key corporate governance factors that affects firm profitability in Australia, explanatory research design was employed with the use of both primary data generated with the use of questionnaire and secondary data extracted from the audited financial statements of all the listed companies over a period of ten years ranging from 1997 to 2006. The study also employed the modified version of the econometric model of Adwally and Sudersene (2005) in determining the relationship between the corporate governance factors and profitability.

Furthermore, in another study by Defond& Hung (2004) which aimed at establishing the relationship between corporate governance variables such as Board structure, executive compensation, board effectiveness, board oversight functions shareholders’ protection and profitability of listed companies. An explanatory research was conducted on the entire listed companies in Thailand. Statistical Package for Social Scientists (SPSS) was used to determine the magnitude of influence of corporate governance variables on profitability based on spearman correlation coefficient and multiple linear regression analysis. In line with the existing literatures, this study therefore employed an explanatory research design to investigate the relationship between the corporate governance mechanisms and profitability of listed companies in Nigeria.

## 3.3 Population of the study

According to Kothari (2004), population of the study refers to all items in any field of inquiry and is also known as the ‘universe. The population for this study consists of the 196 companies listed on the Nigeria stock exchange within the period of 2004 to 2013 financial years. This period was considered appropriate because the period witnessed the recent crises that affected the global economy as well as Nigeria listed companies that led to the constant review of code of corporate governance in Nigeria. As reported by Nwude, (2012) Companies kept the free float of offers which were greatly matched by demand. The capital market thus became the haven for profit taking. From an all-time high of N13.5 trillion market capitalization in March 2008 the stock prices experienced a free-for-all downward movement to generate less than N4.6 trillion market capitalization by the second week of January 2009 and N6.53 trillion as at last trading day of 2011. According to Nwude, (2012) with this downward movement regime, more than 60% of slightly above 300 quoted securities were on constant offer (supply exceeding demand) on a continuous basis. Consequently many of the quoted stocks lack liquidity as their holders are trapped, not being able to convert them to cash to meet their domestic and other investment needs. Fresh investors became cautious of jumping into a vehicle that does not seem to have a brake should they wish to disembark.

## 3.4 Sample Frame

Relying on the opinion of Bruce (2009), a sample frame will be defined as a set of information used to identify a sample population for statistical treatment. Whereas, Burchell, (1981) view sampling frame as the actual set of units from which a sample has been drawn: in the case of a simple random sample, all units from the sampling frame have an equal chance to be drawn and to occur in the sample.Therefore, for the purpose of this study, the sampling frame consisted of the Nigeria stock exchange fact books where the list and the address of the corporate head offices of the listed companies in Nigeria were extracted.

## 3.5 Sampling Technique

Both stratified random sampling and Purposive sampling technique were applied in the selection of the respondents required for this study. According to Patton (1990) purposive sampling also known as **judgmental, selective**or**subjective** sampling relies on the **judgment** of the researcher when it comes to selecting the **units**that are to be studied. Also, Sudarsono (2002) stated that for researchers pursuing **qualitative**or**mixed methods research designs,** purposive sampling enables them to focus on particular characteristics of a population that are of interest, which will best enable them to answer the research questions. Thus, purposive sampling and stratified sampling method were considered suitable for this study because of the technical knowledge of corporate governance mechanisms and profitability required for the study and the other criteria which includes the experience of the respondents, involvement in top management decision making.

Therefore, the population of the study was grouped into five strata as Non-executive directors, Directors of finance, Business managers, Investment managers and Operation managers. Within each of the stratum, purposive sampling technique was used to identify the individual respondent that was issued with a questionnaire. The inclusion of these staffs was to ensure that all the departments who have direct link with the independent variables were represented in the sample so as to avoid the sample bias. Similarly, empirical evidences by Goswani (2001), Flannery (1996), Faleye, Hoitash and Hoitash (2011) also lend credit to the inclusion of relevant departments in the target population.

## 3.6 Sample Size

Kombo and Tromp, (2009) and Kothari and Garg, (2014) describe a sample as a collection of units chosen from the universe to represent the universe in order to carry out a study. Festinger, (2005) and Yang, (2008) also describe a sample as a subset of a population to be studied. The main advantages of sample as enumerated by Yang, (2008) are the cost effectiveness, speed, accuracy and quality of data collection. The sampling process on the other hand, comprises of defining the population of the study, sampling frame, sampling method, sample size and the sample plan (Lavrakas, 2008).

Therefore, a sample size of 71 companies was selected from the population of the study through stratified random sampling and purposive sampling technique from where 355 respondents were chosen. The seventy one (71) companies consists of twenty two listed banks, fourteen listed food and beverages, seven listed breweries, ten listed health care companies, six listed automobile companies and twelve listed industrial/domestic product companies. The 71 companies were chosen based on the fact that they constitutes the major employers of labour in Nigeria and they also have the largest stock on the Nigeria stock exchange and thus an adverse performance of these companies have significant impact on the entire economy (Badmus&Oguntuga, 2009).

The sample was grouped into five strata as director of finance, business manager, investment manager, operation manager and non-executive director. The focus on these categories of staffs was to ensure that all the individuals who have direct link with the corporate governance mechanisms which is the independent variable were considered for the study so as to avoid the sample bias. Similarly, empirical evidences by Goswani (2001), Flannery (1996), Faleye, Hoitash and Hoitash (2011) also lend credit to the inclusion of relevant departments in the study respondents.

**Table 3.1: Sample Size**

|  |  |  |
| --- | --- | --- |
| **Category** | **Sample per company(71 Companies)** | **Respondents** |
|
| Non- Executive Director | 1 | 71 |
| Director of Finance | 1 | 71 |
| Business Manager | 1 | 71 |
| Operation Manager | 1 | 71 |
| Investment Manager | 1 | 71 |
| **Total** | **5** | **355** |

The seventy one (71) companies made up of twenty two listed banks, fourteen listed food and beverages, seven listed breweries, ten listed health care companies, six listed automobile companies and twelve listed industrial/domestic product companies. The 71 companies were chosen based on the fact that they constituted the major employers of labour in Nigeria and they also have the largest stock on the Nigeria stock exchange (Badmus&Oguntuga, 2009).

## 3.7 Data Collection Instruments

The data for this study was obtained through the use of a well-structured questionnaire. The reason for this instrument is because questionnaire is the most widely used instrument for data collection and it is also a quick means of obtaining the view of the respondents on a wide range of subjects. According to Kothari and Garg (2014), the results of the questionnaires can usually be quickly and easily quantified by either a researcher or through the use of a software package and can also be analyzed more 'scientifically' and objectively than other forms of research instruments

In order to collect relevant data, a structured questionnaire that drew largely from the OECD risk management guideline was administered. The questionnaire was structured in such a way that every variable (moderating, independent and dependent) were addressed with specific questions in order to avoid irrelevance in data collection. Both open-ended and close ended questions wereincluded in the questionnaire. The demographic data of the respondents on the other handincluded the respondents’ gender, academic qualification of the respondents, professional qualification of the respondents and the duration of service in order to determine the suitability of the sample for the study.

## 3.8 Data Collection Procedure

Three hundred and fifty five (355) copies of the questionnaire were distributed by the researcher with the help of two (2) research assistants directly to the Non-executive directors, Director of finance, Business managers, Investment managers and Operation managers of the selected companies in Lagos state. The reason for choosing Lagos state was because the corporate head offices of the selected companies are located in Lagos and also to keep the study within a manageable region in order to acquire quick responses.In addition to the primary data, secondary data was also used for the analysis.

The secondary data used for the analysis included the return on capital employed, earnings per share, total remuneration of directors and the amount of equity of the largest shareholder as well as the corporate governance information that was used in computing the information disclosure index. Since the data required for the study are part of the regulatory disclosure, the secondary data were obtained from the audited published financial statements of the selected companies. The information obtained from the audited financial statement of the selected companies was also compared with the documentation of the security and exchange commission fact books and the central bank of Nigeria statistical bulletin to ensure accuracy in data collection.

## 3.9 Pilot Study

In order to test the validity and reliability of the research instrument designed for gathering data that was used for this study; a pilot study was conducted. The purpose of pilot testing according to Kothari and Garg (2014) was to establish the accuracy and appropriateness of the research design and instrumentation. The final draft of the questionnaire was administered to 30 respondents before being used for the real study in order to assess its effectiveness. The choice of 30 respondents was influenced by the trend in literature. For instance, Fyrod and Fathomps (2013) recommended 5% of the study sample as the appropriate sample for pilot study. Augustine and Badmus (2011) on the other hand opine that 7.5% of the study sample is appropriate for piloting. Drawing from the above empirical evidence, a sample of 30 respondents which represent about 10% of the study sample can be considered appropriate for pilot study.

The pilot test enabled the research to ascertain that items in the questionnaire were stated in clear terms, were given the same interpretation by all the respondents, and also gave the researcher an idea of approximately how long it would take to complete the data gathering (Fyrod&Fathomps, 2013). Therefore, in the spirit of Odugboye and Babatunde (2009), the pilot study was undertaken in five micro finance banks in Nigeria. The micro finance banks were not included in the study to avoid contamination of the responses. It therefore gave the results of descriptive statistics, reliability tests and factor analysis. It also brought to the light the weaknesses of the questionnaire which enabled the researcher to make necessary amendment before embarking on the study.

### 3.9.1 Reliability

Reliability has been defined by Miller and Triana (2009) as the consistency of the measurement, or the degree to which an instrument measures the same way each time it is used under the same condition with the same subjects. Towards assuring the reliability of the research instrument, a test and retest method was used. This test was necessary to ascertain whether the instruments are capable of reproducing consistent or similar results after a number of repeated administrations. Reliability test was then carried out using cronbach’s alpha to determine whether measuring instruments are consistent and reproducible. The instrument was considered reliable when the cronbach’s alpha was up to 0.7.The five independent variables, the dependent variable and the moderating variable were subjected to reliability test using SPSS and the results obtained were presented in chapter four.

### 3.9.2 Validity

According to ICAN (2006), validity of research instrument is the extent to which the instrument measures the overall appearance and subject matter in line with the set objective of the study. This was referred to as content validity by Walker, (2009). According to Wang (1991), content validity refers to the appropriateness of the content of a research instrument which can be measured using achievement test. To measure the validity of this research instrument using achievement test, the respondents for the pilot test were asked to indicate where the questionnaire appeared ambiguous to them and those comments were taken care off in the final draft. A copy of the questionnaire was also given to two holders of doctoral degree in accounting whose constructive criticisms were taken into consideration.

## 3.10 Data Processing and Analysis.

According to Zikmund, Babin, Carr and Griffin (2010), data analysis refers to the application of reasoning to understand the data that has been gathered with the aims of determining the consistent pattern and summarizing the relevant details revealed in the investigation. The data collected through the questionnaire was collated using excel spread sheet and subsequently analyzed using both descriptive and inferential statistics with the aid of statistical package for social sciences (SPSS version 19.0). The descriptive statistics included the, simple percentage, mean, median, mode and standard deviation. Since the data was collected for a period of ten years, trend analysis was also done with the use of moving average and presented with tables and graph.

The data was first subjected to diagnostic test such as normality test, linearity test, autocorrelation test, multicolinearity test and heteroscedasticity test. Normality as reported by Kepler and Morgan (2002) involves building a model between the data elements and their associated target is made easier when the set of values to predict is rather compact. So when the distribution of the target variable is skewed, that is there are many lower values and a few higher values, it is preferable to transform the variable to a normal one by computing its logarithm. In this study, one-Sample Kolmogorov-Smirnov Test was done to test the normality of the dependent variable profitability.The choice of this test was based on the fact that in Kolmogorov-Smirnov test, the distribution of the statistic does not depend on the cumulative distribution function being test and the test is exact. The results of normality test as presented in table 4.17 revealed that the data was normal.

In like manner, linearity test was carried out with the use of scatter plot diagram. The test for autocorrelation which is otherwise known as independence test was done with Durbin-Watson statistic. This is because of unique characteristics of Durbin-Watsin statistic which includes the potential to test the null hypothesis over a long range of lag period (Kothari &Garg, 2014). Homoscedasticity on the other hand was tested using Bruisch-Pagan statistic. Unlike Harver-Gofrey test that assumes the effort variation to be an exponential function of one or more variable, Bruisch-Pagan test assume that error variance to be a linear function of one or more variable and since the main objective of this study was to establish where there is a linear relationship between corporate governance and profitability, this test was considered appropriate.

For each hypothesis, both qualitative and quantitative data were collected. For hypothesis one on board size, the total number of the board members formed the quantitative data that was imputed into the regression model. For hypothesis two on executive compensation, the total remuneration of the executive were obtained quantitatively and imputed into the regression model while other data on the basis for determination of executive compensation were used for descriptive analysis. Also, percentage of shares of the top ten shareholders was used to determine the ownership concentration which is the third hypothesis and imputed into the regression analysis. The data for board oversight function included the proportion of executive directors to the non-executive director in the audit committee, risk management committee and remuneration committee with the use of dummy variable. The risk management system was assigned 1 for those who operated within the company’s risk limit and 0 for those who operated outside the risk limit of the company while the data for information disclosure were also obtained with the use of dummy variable by assigning one point for each of the information disclosed in live with coverage index proposed by Chalmers and Godfrey (2004)

Inferential statisticstherefore included the Pearson product moment correlation coefficient and regression analysis. The correlation coefficient was used to establish the type of relationship that existed between dependent variable and the independent variables while the multiple linear regression analysis was used to ascertain the amount of variations in the dependent variable which can be associated with changes in the value of an independent or predictor variable in the absence of other variables with the use of T-statistic. T –statistic refers to the ratio between the model mean square divided by the error mean square. The significance of the model was tested at 95 percent confidence level. The p-value of the F-statistic was used in determining the robustness of the model. In other word, when the p-value was less than 0.05, it was inferred that the model was significant.

## 3.11 Model Specification

To investigate the moderating effect of accounting information disclosure on the relationship between corporate governance mechanisms and profitability of listed companies in Nigeria, the relationship between corporate governance mechanisms and profitability was initially investigated. Corporate governance mechanisms were proxies as board size (BSIZE), executive compensation (EC), ownership concentration (OC), board oversight functions (BOF) and risk management system (RMS) while profitability was proxies as return on capital employed (ROCE) and earnings per share (EPS). The simple regression model defining the linear relationship between corporate governance mechanisms and profitability were stated as follows:

**Model 1: Relationship between Board Size and Return on Capital Employed.**

ROCE = β0+ β1(BSIZEt)+ εt……………………………………………….…………(1a)

EPS = β0+ β1(BSIZEt)+ εt………………………………………………….…………(1b)

Where:

ROCE= returns on capital employed in time t

EPS= earnings per share in time t

BSIZEt= board size in time t

β0 = represents the constant

εt= is the error term assumed to be normally distributed with zero mean and constant variance.

β1 = represents the coefficient of the independent variables

**Model 2: Relationship between Executive Compensation and Return on Capital Employed.**

ROCE = β0+ β1(ECt)+ εt…………………………………………………….…………(2a)

EPS = β0+ β1(ECt)+ εt…………………………………………………….……...……(2b)

Where:

ROCE= returns on capital employed in time t

EPS= earnings per share in time t

ECt= executive compensation in time t

β0 = represents the constant

εt= is the error term assumed to be normally distributed with zero mean and constant variance.

β1 = represents the coefficient of the independent variable

**Model 3: Relationship between Ownership Concentration and Return on Capital Employed.**

ROCE = β0+ β1(OCt)+ εt………………………………………………….…………(3a)

EPS = β0+ β1(OCt)+ εt………………………………………………….……………(3b)

Where:

ROCE= returns on capital employed in time t

EPS= earnings per share in time t

OCt= ownership concentration in time t

β0 = represents the constant

εt= is the error term assumed to be normally distributed with zero mean and constant variance.

β1 = represents the coefficient of the independent variable

**Model 4: Relationship between Board Oversight Functions and Return on Capital Employed.**

ROCE = β0+ β1(BOFt)+ εt………………………………………………….…………(4a)

EPS = β0+ β1(BOFt)+ εt………………………………………………….…..…….…(4b)

Where:

ROCE= returns on capital employed in time t

EPS= earnings per share in time t

BOFt= Board Oversight Function in time t

β0 = represents the constant

εt= is the error term assumed to be normally distributed with zero mean and constant variance.

β1 = represents the coefficient of the independent variable.

**Model 5: Relationship between Risk Management practices and Return on Capital Employed.**

ROCE = β0+ β1(ECt)+ εt…………………………………………………….…………(5a)

EPS = β0+ β1(ECt)+ εt………………...…………………………………….…………(5b)

Where:

ROCE= returns on capital employed in time t

EPS= earnings per share

RMSt= risk management system in time t

β0 = represents the constant

εt= is the error term assumed to be normally distributed with zero mean and constant variance.

β1 = represents the coefficient of the independent variable

**Model 6: Relationship between Information disclosure and Return on Capital Employed.**

ROCE = β0+ β1(IDt)+ εt…………………………………………………….…………(6a)

EPS = β0+ β1(IDt)+ εt………………...…………………………………….…………(6b)

Where:

ROCE= returns on capital employed in time t

EPS= earnings per share

IDt= information disclosure in time t

β0 = represents the constant

εt= is the error term assumed to be normally distributed with zero mean and constant variance.

β1 = represents the coefficient of the independent variable

**Model 7: The general modelsexpressing the relationship between Corporate Governance Mechanisms and Profitability.**

ROCE= β0+ β1(BSIZEt)+ β2(ECt)+ β3(OCt)+β4(BOFt)+β5(RMS)+ εt…………….….(7a)

EPS= β0+ β1(BSIZEt)+ β2(ECt)+ β3(OCt)+β4(BOFt)+β5(RMS)+ εt……………….….(7a)

Where:

β0 = represents the constant

β1-β5 = represents the coefficient of the independent variables

ROCE= returns on capital employed in time t

EPS= earnings per share in time t

BSIZEt= board size in time t

ECt= executive compensation in time t

OCt= ownership concentration in time t

RCt=board Oversight Functions in time t

RMS= risk Management System in time t

εt= is the error term assumed to be normally distributed with zero mean and constant variance.

## 3.12 Measurement of Variables

The dependent variable which is the profitability was measure using two indicators of profitability such as earning per share and return on capital employed. This study adopted two different measures of profitability for two important reasons. First, there appears to be a lack of consensus in the literature about the optimal measurement to profitability (Sweden, 2012). Therefore, ROCE and EPS were focused on since they are more commonly used in corporate governance literatures than the rest of profitability measurements (Love &Klapper, 2004; Hudaib&Haniffa, 2006; Gupta*,* 2009). Thus, adopting these two measurements of profitability will enable comparability of this study with existing literatures (Ademulegun, 2009; Druno&Claessens, 2010; Renders, 2010; Price, 2011; Macauley&Randoy, 2013). Secondly, the use of accounting and market-based measures of profitability will provide a comprehensive check for the results (Hanison&Hudalis, 2012; Ntim, 2012). Therefore, ROCE and EPS as proxies for company’s profitability help in measuring the impact of corporate governance mechanisms on both accounting and market performance

ROCE is used to measure how a firm’s profitability is relative to their capital which is the efficiency of management in utilizing the company’s capital to generate earnings (Hanison&Hudalis, 2006). It is calculated as the earnings before interest and tax divided by total assets less total liabilities (Yermack, 1996; Munisuk&Randoye, 2013). From an agency theory perspective, higher ROCE indicates effective use of company capital in achieving the greatest return for shareholders (Hanison&Hudalis, 2006). Furthermore, the use of ROCE ratio has a number of advantages. According to Lev and Sunder (1979), profitability expressed in the form of ratios act as a control for the systematic effect of size on the variables being examined. Similarly, Mangenos (2010) posits that ROCE is a more powerful operating profitability measure than other accounting measures, such as return on equity (ROE), because ROCE possesses distributional properties. For instance, a firm’s capital employed is strictly positive, but equity can be negative or zero.

In like manner, earnings per share calculated as the total earnings of a company that belong to common shareholders, divided by the number of common shares outstanding was also adopted as a measure of profitability for two principal reasons. First, earnings per share ratio (EPS ratio) measure the amount of a company's net income that is available for payment to the holders of its common stock (Miller &Triana, 2009). A company with high earnings per share ratio is capable of generating a significant dividend for investors which is the ultimate aim of many investors (Mehrani, 1999). Second, earnings per common share are usually the first financial ratio investors look at when analyzing a stock (Ongore, 2011). Despite its simplicity, this metric is extremely powerful and condenses a great deal of crucial information into a single number (Oman, 2001) which allows investors to compare alternative investments, chart the performance of a particular business over time and estimate the growth of her investments in the future (Sanda, Mukaila, &Garba, 2005).

Similarly, six independent variables which include the board size, executive compensation, ownership concentration, board oversight functions, risk management practices and information disclosure were considered in this study. The total number of board members represented the board size while the executive compensation was taken as the sum total of the directors’ annual salary, directors’ allowances and the directors’ bonuses. Ownership concentration was determined by the share of the top ten shareholders while board oversight function was measure by the number of non-executive directors in the audit committee, risk management committee and the human capital and remuneration committee. Where the equal number of executive director and non-executive director serve on each of the committee as required by companies and allied matters act (CAMA, 1990), the board will be considered to have performed their oversight function and a dummy variable of one will be assigned to that company, otherwise, it will be zero point. Also, a company was adjudged to be effective in risk management when they operated within the company’s acceptable risk limit and assigned one point. Furthermore, information disclosure was measure by constructing acoverage indexin line with those of Chalmers and Godfrey (2004). In this case, for each of the information disclosed as require by IAS 1 and IFRS 7, the company was assigned a dummy variable of 1 point. A total of 26 items of disclosure were included in the coverage index. Details can be found in Appendix 8.

# CHAPTER FOUR

# RESULTS AND DISCUSSION

## 4.1 Introduction

This study investigated the relationship between corporate governance mechanisms and profitability. Specifically, the study investigated the effect of board size, executive compensation, ownership concentration, board oversight functions,risk management system and information disclosure on the profitability of listed companies in Nigeria. Two sets of data (primary and secondary) were collected for this analysis. For primary data, return on capital employed was used as a measure of profitability while two measures of profitability such as return on capital employed and earnings per share were used for secondary data. Therefore, the data collected for the study were collated, analyzed, interpreted and presented in this chapter using tables and figures. This includes the response rate, demographic information of the respondents, factor and reliability analysis, descriptive statistics, correlation, and regression analysis.

**4.1.1 Analysis of primary Data**

The primary data was obtained for all the six independent variables and one dependent variable with the use of a structured questionnaire that drew largely from the OECD risk management guideline and supported by evidence in Donald, (2011) and Allesina, (2014).

## 4.2 Response Rate

The targeted population for this study was the companies listed on the Nigeria stock exchange from which a sample of 71 companies was selected and 355 respondents identified. A total of 285 copies of questionnaire were returned out of 355 issued to the respondents representing 80% of the sample as presented in table 4.1. One company declined to participate while some respondents refused to return the questionnaire. Babbie (1990) opined that response rate of 50% is adequate for social science research while an adequate response rate was set at 75% by Bailey (1987). Similarly, adopting Mugenda (2008) opinion, a response rate of 50% is adequate while a response rate of 60% and 70% were perceived to be good and very good respectively. Therefore, putting into consideration the sensitive nature of this study, a response rate of 80% is very adequate. Apart from a study by Adams and Merhan (2003) on the corporate governance of banks where a response rate of 73% was reported, majorities of other related studies reported very low response rate.

For instance, in a study by Adesuwa and Ogunsuyi (2001) on the relationship between governance structure and organization performance, a response rate of 38% was realized. In another study by Ferrari and Wilitotu (1998) on whether the performance of banks in India was influenced by the new code of governance, a response rate of 40.7% was recorded. Only a few study crossed the 50% response rate. For example, a study by Uplomy and swesry (2005) an investigation of role of corporate governance on the performance of financial institution in Johannesburg realized 78% response rate, though this could be attributed to the small size of the sample of 40, out of which 31 responded.

The low response rate recorded by the scholars in the above studies could be attributed to the mailing of questionnaire to the respondents instead of self-administration employed in this study. Research has shown that some people do not read their electronic mails regularly while some could have changed their email addresses before the document was sent. Also, if mailed by post inefficiency of the postal service could result into low response rate. In a nutshell, self-administering of research instrument which requires meeting the respondents face to face who, more often than not, will respect the effort made in reaching them can be considered the most efficient strategy in data collection.

## Table 4.1 Response Rate

|  |
| --- |
| Number of Targeted Number Percent  Respondents of Respondents |
| Finance Director 65 71 91.55  Business Manager 64 71 90.14  Investment Manager 64 71 90.14 |

Operation Manager 49 71 69.01

Non-Executive Director 43 71 60.56

Total 285 355 80.28

|  |
| --- |
|  |

## 4.3 Respondents Demographic Information

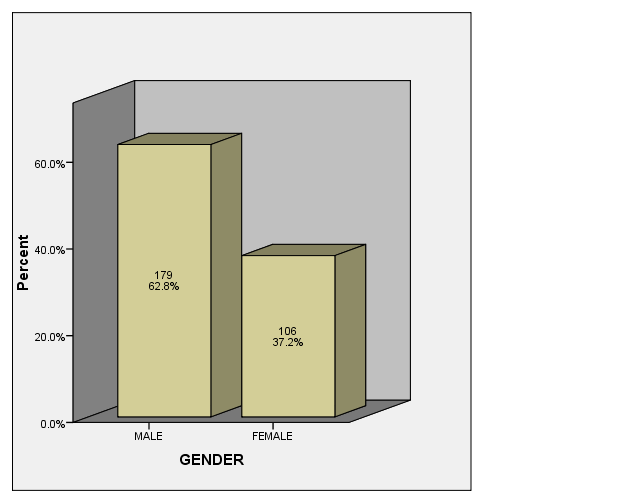
The demographic characteristics of the 355 respondents identified for this study was collated and summarized in this section. The analysis was based on the information provided by the respondent through the returned copies of questionnaire. The gender, educational qualification of the respondents, position in the company as well as the work experience were captured and represented with graphs and tables.

The results of the analysis of the respondents’ gender presented in figure 4.1 revealed that 179 respondents representing 63% of the sample were male while 106 respondents representing 37% of the sample were female. This implies that there were more male staffs than female staffs in the companies sampled. This could be the general trend of the staff proportion in the listed companies in Nigeria. This result is in agreement with the findings of Olasode and Shodende (2007) which reported a staff mix of 62% and 38% male and female respectively for the listed companied in Nigeria.

Similarly, the result on educational qualification of the respondents presented in figure 4.2 shows that 67.7% of the respondents possessed a postgraduate qualification (Master in Business Administration, Master of Science. or Doctor of Philosophy) as their highest qualification. 31.6% percent of the respondents possessed a bachelor degree while only 0.7% of the respondents possessed a diploma certificate as the highest qualification. This result implies that majority of the respondent have adequate educations that can enable them understand the contents of the questionnaire and provide reasonable responses. The result is similar to that of Wainaina (2015) where majority of the respondents, 198 (70.2%) had masters degrees and those with PhD were 80 (28.4%) while only 4 (1.4%) had bachelor’sdegree level of education

Furthermore, the results on work experience of the respondents presented in table 4.2 revealed 3.5% of the respondents had between 1-5 years working experience, 11.9% of the total had working experience of 6-10 years, 22.1% of the respondents had worked for 11-15 years, 20.4% possessed 16-20 years of working experience, while the remaining 42.1% of the total had worked for over 20 years in the field meaning that a group of experienced staffs in the subject investigated were selected for the study. The cumulative frequency shows the addition of the frequency at every stage. It can also be inferred that a staff friendly environment and employee retention strategy has been embarked upon by the listed companies in Nigeria since majority of the respondents have work for a longer period in the industry they belong. The long experience period was also an indication that data was collected from respondents who have a good history of the firms. However, this result was divergent with that of Wainaina (2015) where majority of the respondents have only worked for a period of five years.

From figure 4.3, 22.8% of the respondents were director of finance, 22.5% of the respondents were business managers, 22.5% of the respondents were investment manager, and 17.20% of the respondents were operation manager while the remaining 15.1% of the respondents were non-executive directors. This result indicates that more responses were gotten from the directors of finance while the least came from the non-executive directors. The reason could be attributed to the non-availability of the non-executive directors since they are not involved in the day-to-day running of the organization. Previous studies had similar results (Miller &Triana, (2009) Ibrahim, Rehman, &Raoof (2010) except a study by Muktar and Tukur (2008) where non-executive directors contributed 49% of the responses for the study.



#### Figure 4.1 Gender of the Respondents

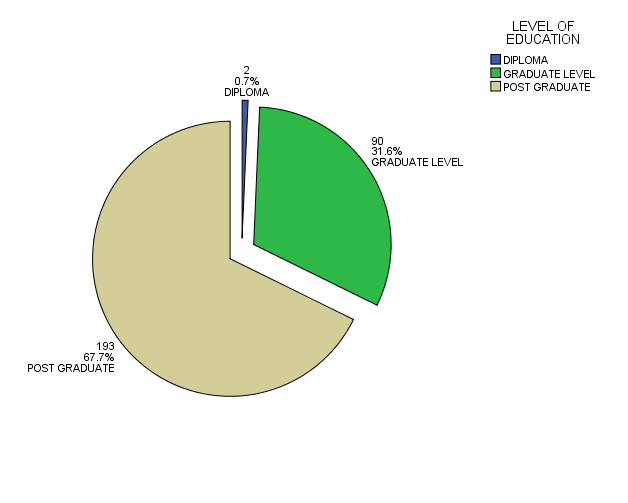


Figure 4.2 Educational Qualifications of the Respondents

|  |  |  |
| --- | --- | --- |
| Table 4.2 Work Experience of the Respondents  |  | | --- | | Frequency Percent Cumulative Frequency |   One to Five Years 10 3.5 3.5  Six to Ten Years 34 11.9 15.4  Eleven to Fifteen Years 63 22.1 37.5  Sixteen to Twenty Years 58 20.4 57.9  Twenty and Above 120 42.1 100.0  Total 285 100.0   |  | | --- | |  | |

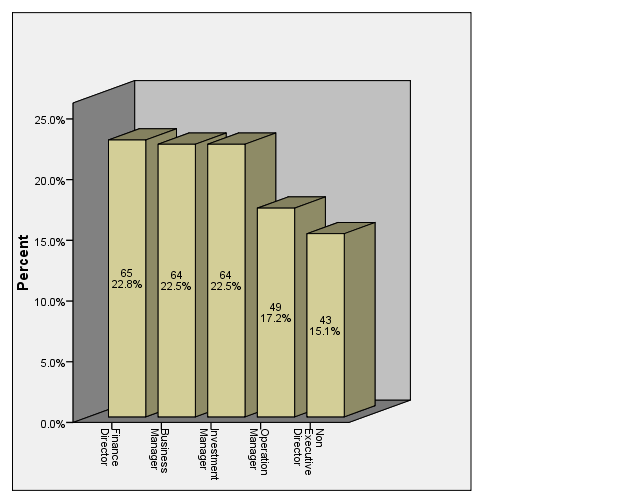


Figure 4.3 Positions of the Respondents

## 4.4 Factor Analysis

Factor analysis was carried out on the primary data to reduce a large number of factors to a smaller number of factors for the purpose of modeling and also for the selection of a subset factor from a largest where original variables that had the largest correlation with the principal components factors were selected. The main reason for conducting a factor analysis as posited by Gorsuch (1990) was to summarize the information contained in a number of original factors into a smaller number of factors without losing the needed information. This implies that the newly created variables should represent the fundamental constructs which underline the original variables.

The result of factor analysis on profitability items showed that all the items reached the acceptable threshold of 0.4 and accepted for further statistical analysis. This acceptance was based on the proposition of Zinbarg, (2005) that all coefficients higher than 40% indicates that the data gathered had relatively high internal consistency and could be generalized as a reflection of the opinion of all respondents in the target population onthe relationship between corporate governance mechanisms and profitability. For instance, the value of the first question which stated that there is a significant increase in the annual profit of listed companies in the last five years was .910, the value of the second question on whether there is increased number of investors in the last five years was 0.896, while the value of the question that there is a significant increase in the annual return on capital employed of listed companies in the last five years, the reported earnings per share of listed companies has increased significantly in the last five years, there is prompt payment of dividend by the listed companies in the last five years are 0.893, 0.828, 0.747 respectively. This result agreed with that of Zinbarg (2005) where all the items registered a threshold of 70% and above.

The result of factor analysis for the items of board size revealed that all the five items reached the acceptable threshold of 0.4 indicating a relatively high level of internal consistency as presented in table 4.4 and thus accepted for further statistical analysis. Similarly, factor analysis was carried out for items of executive compensation. The result revealed that all the items reached the acceptable threshold of 0.4 as presented in table 4.4 and therefore accepted for further statistical analysis.

In like manner, the factor analysis results for ownership concentration shows that all the items showed a factor loading of above 0.6 and were therefore accepted for further statistical analysis using the rule of thumb which says any item with factor loading of 0.4 can be accepted for statistical analysis. The result of factor analysis for board oversight functions was also accepted for further statistical analysis based on the fact that the entire item exceeded the minimum threshold of 0.4 prescribed by the general rule of thumb.

Furthermore, factor analysis was carried out on all items of risk management system to determine the threshold of each item. All the items registered a threshold that is greater than the minimum acceptable threshold of 0.4 as presented in table 4.4 and therefore accepted for further statistical analysis. However, only four out of the five items of accounting information disclosure registered a threshold that is greater than 0.4 as presented in table 4.4 and therefore accepted for further statistical analysis while the one with a threshold below 0.4 was deleted.

##### Table 4.3 Factor Analysis

|  |  |  |  |
| --- | --- | --- | --- |
|  | **Variables** | **Loadings** | **No. of Comments**  **Items** |
| 1 | Profitability | Above 70% | 5 Accepted |
| 2 | Board size | Above 50% | 5 Accepted |
| 3 | Executive Compensation | Above 60% | 5 Accepted |
| 4 | Ownership Concentration | Above 60% | 5 Accepted |
| 5 | Board Oversight Functions | Above 50% | 5 Accepted |
| 6  7 | Risk Management System  Accounting Information Disclosure | Above 60%  Above 70% | 5 Accepted  4 Accepted |

## 4.5 Descriptive Analysis

The results of the descriptive statistics carried out on all the variables were presented under this section. The descriptive statistics such as mean, median, mode and standard deviation were carried out on primary data and presented in the tables while the descriptive statistics on the secondary data involves the trend analysis with the use of graph. The keys for the descriptive statistics were Strongly Agreed (SA), Agreed (A), Undecided (UND), Disagreed (D), Strongly Disagreed (SD), Mean (MN), Median (MD), Mode (MO) and Standard Deviation (SD).

### 4.5.1 Descriptive Statistics for Dependent variable Profitability

This section investigated the extent to which the profitability of listed companies in Nigeria has improved with reference to the corporate governance mechanism using the secondary data obtained from the top management executive of the listed companies in Nigeria in which respondents were asked to indicate the level of their agreement and otherwise with certain statements concerning the profitability of their companies. Likert scale was used to measure the extent of their agreement with the statements.

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| In response to the question on whether the listed companies have been experiencing growth in profitability in the recent time, 38.6% of the respondents strongly agreed, while 26% agreed, 27.7% were undecided, 4.2% disagreed and 3.5 strongly disagreed. Since over 60% of the respondents were in agreement with the statement, it can be inferred that listed companies in Nigeria have been experiencing growth in profitability in the recent time. The mean value of 4.00 also suggests that majority of the respondents agreed that profitability of the listed companies in Nigeria has improved in the last five years. This finding supports the results of Welter and Ntiyam (2006) which perceived a strong relationship between corporate governance practices and firm profitability using data from the 84 selected companies in India. However, the result disagreed with the findings of Sakla and Temple (2007) where a negative relationship was found between corporate governance practices and profitability.  On whether there is a significant increase in the number of investors of listed companies in Nigeria in the last five years, 36.5% of the respondents strongly agreed that their companies have experienced significant increase in the number of investors in the last five years while 28.8% also agreed, 19.3% were indifferent, 10.2% disagreed and 5.3% strongly disagreed. Taken together the level of agreement and strong agreement, it can be inferred that listed companies have been experiencing increase in profitability in recent time measured by the increase in the number of investors on the Nigeria stock exchange. This findings agreed with the prior empirical studies that indicated a positive relationship between corporate governance practices and foreign direct investment (Eng and Mak, 2003; Alsaeed, 2006; Omar and Simon, 2011; Elzahar and Hussainey 2012). Welber and Achyanga (2005) on the other hand reported an insignificant relationship between corporate governance and profitability and also identified other factors such as political stability, infrastructure and tax incentives as the major factors attracting foreign direct investment.  In like manner, the reported earnings per share of the sampled companies was also found to have improved significantly in the past five financial years as 42.1% of the respondents strongly agreed that reported earnings per share of the company they represents has witnessed an improvement in the last five years. Also, 20.4% of the respondents agreed while 22.1%, 11.9% and 3.5% were undecided, disagreed and strongly disagreed respectively. The mean of 4.00 suggests that majority of the respondents were of the opinion that the recent improvement in the reported earnings per share is an indication that listed companies in Nigeria have been improving in profitability as earning per share is only applicable to profitable companies. The findings agree with that of Ademulegun (2006) who argued that adequate governance structure is primarily a safe guard that guaranties a good return on investment and protection of emerging economy.  Furthermore, the survey results on profitability of listed companies in Nigeria with the use of return on capital employed revealed that profitability has increased in the last few years as 51.6% of the respondents strongly agreed that their companies have recorded significant increase in the annual return on capital employed in the last five years. In like manner, 14% of the respondents also agreed while 6.7%, 24.2% and 3.5% of the respondents were undecided, disagreed and strongly disagreed respectively. The mean value of 4.00 also implies that majority of the respondents were in agreement with the statement. The findings of Gadneny and Milter (2007) that reported a strong relationship between return on capital employed and board size which is a component of corporate governance was upheld by this result.  Also, when asked about the regularity of dividend payment by the listed companies in Nigeria, 32.5% of the respondents strongly agreed that there has been prompt payment of dividend to the shareholders of their companies in the last five years and 66% of the respondents agreed with the statement, while only 1.8% of the respondents strongly disagreed with the statement. Considering the fact that dividend is only paid from the company’s profit, it then means that the companies have been experiencing profitability in the last five years. Nasyta and Duglas (2011) support this result in a study they conducted among listed financial institutions in Thailand where it was discovered that payment of dividend was significantly correlated with governance structure such as block holdings and company size. Contrarily, payment of dividend was insignificantly correlated with corporate governance practices in a study by Adedoyin and Nwosu (2011). Table 4.4Profitability  |  | | --- | | SA A UND D SD MN MD MO SD | | |  | | --- | | There is a significant increase 38.6 26 27.7 4.2 3.5 4 4 5 1  in the annual profit of listed  companies in the last five years  There is a significant increase 36.8 28.8 19.3 10.2 5.3 4 4 5 1  in the number of investors  over the last five years  The reported earnings per share 42.1 20.4 22.1 11.9 3.5 4 4 5 1  of listed companies has increased  significantly in the last five years    There is a significant increase in 51.6 14 6.7 24.2 3.5 4 5 5 1  the annual return on capital  employed in the last five years  There is prompt payment of 32.3 66 - - 1.8 4 5 5 1  dividend by the listed companies  in Nigeria in the last five years | |  | |  |  | | --- | |  |  4.5.2 Board Size This section south to investigate the effects of board size on the profitability of listed companies in Nigeria using the opinion of the selected employees of the listed companies in Nigeria. The responses in table 4.5 revealed that 13.3% of the respondents strongly agreed that Nigerian listed companies have witnessed a significant increase in board size in the last five years. Also, 60% of the respondents agreed with the statement, 22.5% were undecided, 3.2% of the respondents disagreed and 1.1% strongly disagreed with the statement. The finding shows that more than 70% of the respondents were in agreement implying that the size of the board of listed companies in Nigeria has increased in recent time. In addition, the mean score of 4.00 implies that majority of the respondents were in agreement with the statement with a little deviation of 1 from the mean. In other word, the higher the size of the board the higher the profitability. Although, several other empirical studies have produced similar results (Tokula 2009, Alsaeed 2006, Omar and Simon, 2011), this result is in contrast with the postulation of agency theory where cost of board hiring is seen as an additional cost meant to reduce the organization profit ( Welder, Talaulicar and Kolat, 2008). However, the positive contribution of the board through provision of capital for business expansion might outweigh the cost of maintaining a large board which probably led to the above result.  Similarly, the survey results on the extent to which company’s profitability was influenced by the experience of board members revealed that companies with large board size have more experienced board members than those with small board size. This was evident from the response rate in which over 70% of the respondents either strongly agreed or agreed that companies with large board size have more experience members on the board of director whose experience can help in growing the company. This result confirms the findings of Ighifomily (2014) on a study conducted on the performance of financial institutions in Ghana which perceived a strong link between the board experience and company’s performance whereas, Aliyu and Benjamin (2008) reported that board experience has no impact on the performance of listed companies in Nigeria.  Furthermore, the significant positive relationship between board oversight function and board size reported in the previous studies (Solomon 2013, Toledo 2010, Yawson, 2006, Smith and Hesbisius 1986) was justified by this empirical results in which over 70% of the respondents affirmed that companies with large board size were more effective in the discharge of oversight function than those with smaller board size. This implies that management were probably able to operate in the best interest of their principal through monitoring by the board in which only activities that maximizes the shareholders’ wealth were carried out.  On the extent to which listed companies were able to raise capital from the stock market, 15.1% of the respondents strongly agreed that companies with large board have higher penetration to the capital market and 55.1% of the respondents agreed with the statement while 24.9% and 4.9% were undecided and disagreed respectively. The mean value of 4.00 was also an evidence that majority of the respondents were in agreement with the statement that the size of the board significantly influence the company’s ability to raise fund from the capital market. Empirical investigation by Haleblian and Finkelstein (1993) on the stock performance of 47 listed firms on the US stock market which revealed that firms with larger boards have increased stock patronage than those with small board size was justified by this finding. Table 4.5 Descriptive Statistics on Board Size  |  | | --- | | SA A UND D SD MN MD MO SD | | |  | | --- | | The listed companies have witnessed 13.3 60 22.5 3.2 1.1 4 4 4 1  Significant increase in the in board  Size in the last five years    Companies with larger board size have 16.5 52.3 25.3 5.3 0.7 4 4 4 1  more experienced board members than  those with smaller board size  Companies with large board are able to 15.4 57.2 25.6 1.4 0.4 4 4 4 1  perform their oversight function more  effectively  Listed companies with large board size 15.1 55.1 24.9 4.9 - 4 4 4 1  Have better penetration to the capital  Market  The cost of maintaining larger board is 13 58.2 26.3 0.7 1.8 4 4 4 1  An additional cost that has significant  impact on the profitability of listed  companies | |  | |  | | |  | | |  4.5.3 Executive Compensation This section sought to investigate the effect of executive compensation on the profitability of listed companies in Nigeria. Five questionnaire items were put forward to the respondents and their responses were presented in table 4.6. On the basis of determination of directors’ remuneration, 17.5% of the respondents strongly agreed that the chief executive officers of their companies are paid in line with the profitability and 55.8% of the respondent agreed with the statement while 21.1% of the respondents, 1.8% of the respondents and 3.9% of the respondents were undecided, disagreed and strongly disagreed respectively. This implies that majority of the respondents’ beliefs that directors’ salary has a link with the profitability of listed companies in Nigeria. The findings corroborate those of Healyn (1999) who used listed firms in New Jersey and found that increases in directors salary was accompanied by increases in firms’ stock returns, and stock liquidity. Contrarily, the finding of Yongli and Dave (2012) revealed that CEO compensation is negatively associated with return on equity ROE (-0.027) and ROA (-0.015), indicating that the higher the CEO compensation in Chinese banks, the lower the firm value or firm profitability  Similarly, director’s allowance was considered by majority of the respondents as a form of remuneration for the directors of listed companies in Nigeria. This was evident from the empirical result with 16.8% of the respondent, 54% of the respondents, 23.9% of the respondents, 1.1% of the respondents and 4.2% of the respondent strongly agreed, agreed, indifferent, disagreed and strongly agreed respectively that listed companies in Nigeria adopted the use of allowances as a form of remuneration for the directors as shown in table 4.20. The mean value of 4.00 is also an evidence that majority of the respondents were in affirmative with the statement. This finding was in conflict with the result of Fernandes (2005) on a study using firms listed on the Portuguese Stock Exchange. The study was based mainly on secondary data extracted from the audited annual financial statement of the selected companies which was subjected to both descriptive and inferential statistics. The finding of the study reveals that most of the directors were on regular salary including the non-executive directors which resulted into higher cost of production and significant reduction in profitability. Similarly, it was also discovered that there is no relation between the return on asset and executive compensation.  Furthermore, equity based compensation was also found to be a common practice by the listed companies in Nigeria as 19.6% of the respondent strongly agreed that equity based compensation is being used as a form of incentive for the directors of the company they represents. Also, 52.3% of the respondents agreed while only 24.6%, 1.8% and 1.8% of the respondents were undecided, disagreed and strongly disagreed respectively. Taking together both agreed and strongly agreed, it can be said that majority of the respondents supported the statement that equity based compensation has been adopted as a form of remuneration for the directors of listed companies in Nigeria. The results agreed with the findings of Sigler (2013) which examines the relationship of CEO pay and company performance for 280 firms listed on the New York Stock Exchange for a period from 2006 through 2009 where it was reported that companies who practiced equity based compensation have higher profitability with those who practiced only the cash incentives. The agency theory which advocates the alignment of managerial interest with that of owners through the bonus issue of shares also lends support to these findings. This result was supported by the findings of Thomsen and Pedersen (2000) that bonus issue of share has a significant influence in aligning the interest of the managers with the interest of the shareholders and thus leading to efficiency and better performance. The result however disagreed with those of Lang and Dave (2013) where an insignificant relationship was found between equity based compensation and profitability of listed firms. |

On the relationship between the basic salary of directors and profitability of listed companies in Nigeria, 14.7% of the respondents strongly agreed that only the executive directors are remunerated regularly in form of monthly salary and 55.4% of the respondent agreed with the statement, 27% were undecided, 1.8% of the respondents disagreed while only 1.1 strongly disagreed with the statement. The mean value of 4.00 established that majority of the companies in Nigeria have adopted the payment of salary to the executive directors of the listed companies. Thomsen and Pedersen (2000) and Berle and Means (1932) report a positive association between directors’ salary and profitability.

Also, another form of remuneration that affects the profitability of listed companies in Nigeria was the performance based compensation. The survey results presented on table 4.20 revealed that 17.2% of the respondents agreed that their companies adopted the use of performance based compensation for their directors. Also, 54.7% of the respondents agreed with the statement while the remaining 23.5%, 1.8% and 2.8% were undecided, disagreed and strongly disagreed respectively. This implies that majority of the respondents perceived that performance based compensation of the executives is being used as a form of remuneration for the directors of listed companies in Nigeria. This result corroborates the findings of Suherman, Wulan and Agung (2011) that conducted a study on the kind of relationship that exists between firm performance, corporate governance, and performance based compensation of financial institutions in Indonesia. The sample of the study comprises 13 financial companies listed during the period 2007-2009 on Indonesian Stock Exchange. The inferential statistic result reveals that the probability for ROA was 0.0001, which implies that a significant positive relationship exists between performance based compensation and ROA at 1% level of significance (t-stat=4.37).The argument for this relation is because the bonus given by company to the executive depends on the company profit. The higher the company profit, the higher the bonus that will be paid to the executives.

### 

##### Table 4.6 Descriptive Statistics on Executive Compensation

|  |
| --- |
| SA A UND D SD MN MD MO SD |
| |  | | --- | | The chief executive officers of listed 17.5 55.8 21.1 1.8 3.9 4 4 4 1  companies are paid in line with the  company’s profitability | | Listed companies in Nigeria have a 16.8 54 23.9 1.1 4.2 4 4 4 1  have adopted the use of allowances  for the board of directors  Equity based compensation is 19.6 52.3 24.6 1.8 1.8 4 4 4 1  prominent as a form of incentive  for the directors | | Listed companies in Nigeria have 14.7 55.4 27 1.8 1.1 4 4 4 1  adopted the payment of salary as  a form of directors’ compensation | |  | | Performance based compensation 17.2 54.7 23.5 1.8 2.8 4 4 4 1  has been adopted by the listed  companies in Nigeria | |

### 4.5.4 Ownership Concentration

This section sought to investigate the effect of ownership concentration on the profitability of listed companies in Nigeria using the opinion of the selected respondents from the listed companies in Nigeria. Five questionnaire items were put forward to the respondents and their responses were captured in table 4.7. On the ownership structure of listed companies in Nigeria, 16.1% of the respondents strongly agreed that majority of the shares were owned by the few individuals and families, 58.2% of the respondents agreed, 22.5% of the respondents were undecided, 2.1% of the respondents disagreed while 1.1% of the respondents strongly disagreed. This implies that the ownership structure in the listed companies is concentrated into both individual and family owned stocks. A similar study that lends support to this finding was that of Grosfeld (2006) who conducted a study on ownership concentration and firm performance using data from an emerging market. The study explore the determinants of ownership concentration and the relationship between ownership structure and firm value in the context of a transition economy, that is, an economy undergoing important changes in its legal and regulatory framework, in macroeconomic policy and most of all, in its property rights allocation. The focus was on all non-financial companies traded on the Warsaw Stock Exchange since its inception in 1991 up to2003. The ownership structure of these companies becomes more dispersed with the number of years of listing. It was reported that the positive impact of ownership concentration on firm value detected in OLS regressions becomes stronger even as they control for the endogeneity of ownership which increases the control mechanism and performance of those companies. However, Badmus and Almin (2012) reported a significant negative relationship between ownership concentration and return on capital employed of quoted companies in Malaysia.

The relationship between corporate block holdings and profitability was also investigated in this study in which about 70% of the respondents either agreed or strongly agreed that corporate block shareholding has been on the increase in the last five years especially after the introduction of contributory pension scheme while 27% of the respondents were undecided, 1.1% disagreed and 1.8 strongly disagreed. The mean value of 4.00 obtained from this analysis is an indication that majority of the respondents agreed that corporate shareholding has been increasing in the listed companies in Nigeria. This result agreed with those of Xiaonian and Yan (1997) who investigated the relationship between ownership structure, corporate governance, and firms’ performance using data from the Chinese stock companies. As reported in the study, a typical listed stock company in China has a mixed ownership structure with the state, legal persons (institutions or corporation), and domestic individuals as the three predominant groups of shareholders. Each holds about 30 percent of total outstanding shares. Employees and foreign investors together hold less than 10 percent. Results from the empirical analysis show that a corporate holding indeed has significant effects on the performance of stock companies. First, there was a positive and significant correlation between ownership concentration and profitability. Second, the effect of ownership concentration is stronger for companies dominated by legal person shareholders (corporation) than for those dominated by the state. Third, firms’ profitability is positively correlated with the fraction of legal person shares, but it is either negatively correlated or uncorrelated with the fraction of state shares and tradable A-shares held mostly by individuals. Lastly, labor productivity tends to decline as the proportion of state shares increases which in turn had adverse effect on profitability.

Furthermore, protection of minority shareholders that is perceived to be a major problem with ownership concentration was also investigated in this study in which respondents were asked to express their opinion on whether ownership concentration is a tool in addressing the marginalization of minority shareholders in the listed companies in Nigeria. The result reveals that majority of the respondents were in affirmative that marginalization of minority shareholders can be curtailed through ownership concentration as over 70% of the respondents either agreed or strongly agreed that ownership concentration serve as a legal mechanism to protecting the minority shareholders and enables the management to work in the best interest of all the stakeholders and thereby increase the profitability of the company. According to Sunderner, Magloy and Philip (2008) the best was to improve the efficiency of an enterprise is to first provide a platform where all stakeholders are taking into account. By inference, once the stakeholders issue is addressed, the company’s general performance will improve and profitability will also improve.

In response to the question on the nature of shareholdings in listed companies in Nigeria, 14.7% of the respondents strongly agreed that indirect holding is another form of ownership concentration that has been on the increase in the last five years in the listed companies in Nigeria, 57.2% agreed, 24.9% were undecided, 1.1% of the respondents disagreed and 2.1% of the respondents strongly disagreed with the statement. The mean value of 4 suggests that majority of the respondents perceived the indirect holding of share to be on the increase in the last five years. This is in line with the view of John, Kose, Lubomir and Bernerd (2008) that reported an increase in the level of indirect holding for the quoted companies in Malaysia after the introduction of Sarbanes Oxley Act. The study also reported a positive significant relationship between ownership concentration and profitability measured by return on capital employed

## Table 4.7 Descriptive Statistics on Ownership Concentration

|  |
| --- |
| SA A UND D SD MN MD MO SD |
| The ownership structure of listed 16.1 58.2 22.5 2.1 1.1 4 4 4 1  companies is highly concentrated into  family ownership either by direct  or indirect holdings  Corporate block shareholding increases 11.9 58.2 27 1.1 1.8 4 4 4 1  in the listed companies in Nigeria  has increased in the last five years  Ownership concentration serves as a 14 58.6 23.9 1.1 2.5 4 4 4 1  tool for the protection of the minority  shareholders in the listed companies  Indirect shareholdings in the listed 14.7 57.2 24.9 1.1 2.1 4 4 4 1  companies in Nigeria has been on  the increase in the last five years  Concentration of ownership by has been 13.7 57.5 24.2 2.1 2.5 4 4 4 1  on the increase in the last five years |

### 4.5.5 Board Oversight functions

The view of the respondents on the effect of board oversight function on the profitability of listed companies in Nigeria was sought in this section. The code of corporate governance for the listed companies in Nigeria requires the company directors to carry out their oversight functions through membership of certain oversight committees such as audit committee, risk management committee, human capital and remuneration committee. In the light of these, five questionnaire items were put forward to the respondents and their responses were captured in table 4.8.

The survey result on the discharge of oversight function by the board of directors of listed companies in Nigeria revealed that majority of the respondents agreed that board of directors have performed their oversight function as required by companies and allied matter acts. This was supported by over 70% of the respondents indicating that audit committee in their companies have equal numbers of executive and non-executive directors. While less than 30% of the respondents were undecided, disagreed or strongly disagreed. The result also produces a mean value of 4.00 which is an indication that majority of the respondents supported the statement. The results herein, agree with those of Farell and Franco (2003) who suggested that through adequate internal controls by management and audit committee, fraud and other irregularities in American corporate organization can be mitigated and therefore improve the performance.

Similarly, the membership of risk management committee of listed companies in Nigeria was also perceived by the respondents to reflect a discharge of oversight function of the board as indicated by about 70% of the respondents agreeing with the statement that the risk management committee of listed companies in Nigeria have equal proportion of executive and non-executive directors and only about 3% disagreeing with the statement while the remaining 27% were undecided. The mean value of 4.00 is also statistically significant in explaining the level of agreement of the respondents with the statement. This implies that excessive risk taking of the management will be curtailed by the committee and thus only profitable activities will be carried out by the management. OECD (2014) stated that while risk-taking is a fundamental driving force in business and entrepreneurship, the cost of risk management failures is still often underestimated, both externally and internally, including the cost in terms of management time needed to rectify the situation. Corporate governance should therefore ensure that risks are understood, managed, and, when appropriate, communicated. Also, listed company boards need to be provided with incentive structures that appropriately reward business success, as well as awareness and management of risk.

Furthermore, 11.6% of the respondents strongly agreed that the formation of human capital and remuneration committee during the years under consideration represent an equal proportion of executive and non-executive directors. Also, 63.2% of the respondents also agreed with the statement while 21.1% of the respondents and 4.2% were undecided and disagreed respectively. The mean value of 4.00 implies that majority of the respondents were in agreement with the statement with only a deviation of 1.00 from the mean. Thus, it can be concluded that the board of directors performed their oversight functions. Zahra and Pearce, (1989) noted that the two main legal functions performed by the board of directors are control and service. The control function encompasses the duties of selecting and replacing the CEO; monitoring the CEO's performance and evaluating the company's performance to enhance effective management as well as the determination of the payment of the top executive. This role ensures corporate growth and protection of shareholders' interest by ensuring that remuneration does not go beyond the strength of the company

Investigating the availability of performance appraisal system in the listed companies in Nigeria, the result revealed that 60% of the respondents indicated strong agreement that performance appraisal system was designed and reviewed annually by the board of directors of listed companies in Nigeria while about 10% of the respondents agreed with the statement. The remaining 34% were distributed as 29.5% undecided and 4.2% disagreed. The mean values of 4.00 also revealed that majority of the respondents were in agreement with the statement. The annual review of performance appraisal system might not be unconnected with the submission of Allen and Mayfield, (1983) that performance appraisal is one of the most problematic components of human resource management. All involved parties supervisors, employees, and human resource administrators typically are dissatisfied with their organization's performance appraisal system (Smith, 1996) and view the appraisal process as either a futile bureaucratic exercise or worse, a destructive influence on the employee and supervisor relationship (Momeyer, 1986). This is certainly true of most organizations, at least in the USA, wherein surveys typically reveal widespread dissatisfaction with the appraisal process (Huber, 1983; Walsh, 1986).

### 

##### Table 4.8 Descriptive Statistics of Board Oversight Function

|  |
| --- |
| SA A UND D SD MN MD MO SD |
| The membership of audit committee 8.4 63.2 22.5 3.9 2.1 4 4 4 1  in the listed companies have equal  number of executive and non  executive directors  The risk management committee of 5.3 64.6 26.7 2.8 0.7 4 4 4 1  of listed companies have equal number  of executive and non-executive directors  There is equal number of executive and 11.6 63.2 21.1 4.2 - 4 4 4 1  non-executive directors in human capital  and remuneration committee of listed  companies in Nigeria  Performance appraisal system is designed 60 6.3 29.5 4.2 - 4 4 4 1  annually by the committee of the board  of directors  Board of directors performed their 8.1 62.5 23.5 4.9 1.1 4 4 4 1  Oversight function by setting appropriate  Standard and strategy for the company |

|  |
| --- |
|  |

### 4.5.6 Risk Management System

The relationship between the risk management system and profitability of listed companies in Nigeria was investigated in this section. OECD (2014) classified the enterprise risk into five major subheads to include operation risk, liquidity risk, credit risk, strategic risk and market risk. It was against this background that five questionnaire items were put forward to the respondents drawn from the target population for this study to ascertain whether necessary safeguards have been put in place by the board of directors against those aspects of risk and their responses were captured in table 4.9.

This section started with an investigation of the awareness level of the directors about the risk facing their companies. Therefore, in response to the questionnaire item on whether the board of directors have complete understanding of the risk facing their company, 16.5% of the respondents strongly agreed that that the board of directors in Nigeria have complete understanding of the risk facing their companies, 56.5% of the respondents agreed with the statement, 22.1% of the respondents were undecided, 3.2% of the respondents disagreed while only 1.8 of the respondents were in strong disagreement. In summary, over 70% of the respondents were in agreement with the statement which implies that majority of the respondents perceived that the board of director of listed companies in Nigeria has complete understanding of the company’s risk. In support of this, Hussein and Karl (2013) investigated the impact of risk awareness on bank financial performance during 2008 financial crisis. This study uses descriptive and inferential statistics to test the hypotheses over the four years, 2006-2009, that span the financial crisis. The sample consists of 74 bank holding companies (BHCs) in the United States with total assets near $5.8 trillion at the end of 2006. The study found a significant relationship between BHCs’ risk awareness levels and their financial performance. Also, BHCs with lower risk-taking levels were found to have higher average financial performance than BHCs with higher risk-taking levels from 2006 to 2009. The study’s findings support the claim that risk affected the earnings of the BHCs during the financial crisis. According to OECD (2014), although it is generally accepted that boards should be responsible for setting a company’s risk appetite or tolerance, little guidance is available on how boards can go about setting risk targets, considering the various types of risks that modern corporations may be subject to.

Similarly, the extent to which operation risk was prevented was investigated where about 77% of the respondent expressed that adequate operation risk safeguard such asstrong internal control system was put in place by the directors. The remaining 23% were distributed as 21.1% undecided, 1.8% disagreed and 0.4% strongly disagreed. The mean value of 4.00 also implies that majority of the respondents were in affirmative with the statement with a little deviation of 1 from the mean. Benarabes (2003) asserts that the profitability of a company depends on its ability to foresee, avoid and monitor operation risk, possibility of covering losses brought about by risk arisen and which also has the net effect of increasing the ratio of substandard credits in the company’s credit portfolio and decreasing the company’s profitability if not prevented.

In like manner, respondents’ opinion concerning the availability of liquidity risk management of listed companies in Nigeria was also sought. The results revealed that 9.8% of the respondents strongly agreed that liquidity risk safeguard such as budgetary control has been put in place by the directors of the companies they represent. 63.9% of the respondents agreed with the statement while 22.5% and 4.2% of the respondents were undecided and disagreed respectively. The mean value of 4.00 also implies that majority of the respondents were in agreement with the statement. In support of this result, Adefule (2013) asserted that any company that is not able to meet its obligation either in production capacity or other form due to liquidity problem has the potential of losing its major share of the market and continue to experience decrease in turn out.

Also, in an attempt to investigate whether listed companies in Nigeria have witnessed a reduction in the occurrence of fraud in the last five years, respondents were asked whether the risk management system has been effective in preventing fraud and the results as presented in table 4.22 was that 14.7% of the respondents strongly agreed that the companies have witnessed a significant reduction in the amount lost to fraud in the last five years. 60% of the respondents also agreed with the statement while 22.5% were not sure whether their companies have witnessed significant reduction in company’s loss due to fraud in the last five years and 2.8 disagreed. According to KPMG (2014), an effective, business-driven fraud and misconduct risk management approach is one that is focused on three objectives which includes prevention (controls designed to reduce the risk of fraud and misconduct from occurring in the first place), detection (controls designed to discover fraud and misconduct when it occurs) and response (controls designed to take corrective action and remedy the harm caused by fraud or misconduct). Taylor, (2014) stated that fraud takes a toll on your company culture, which is not only a priceless item, but also something that can heavily impact your company’s performance because your company values and culture are what attract employees and customers to your organization from day one. If your company has strong, ethical values, then the employees within your organization will too. Strong values also build loyalty, and eventually weed out the bad apples as well and improve performance at large.

Another aspect of risk management investigated in this study was the market risk in which over 70% of the respondents agreed that market risk such as change in exchange rate, interest rate and foreign currency is a major aspect of risk that needs to be safeguarded by the listed companies in Nigeria while 23.55 of the respondents, 2.8% of the respondents and 0.7% of the respondents were undecided, disagreed and strongly disagreed respectively with the statement. The mean value for the question is 4.00 indicating that majority of the respondents agreed with the statement. Bakaeva and Sun (2009) have also found a positive relationship between credit risk management and profitability of listed companies in Sweden. Ruziqa (2013) has tested the impact of credit risk and liquidity risk on the financial performance of conventional banks in Indonesia. The results illustrated that credit risk was positively related to profitability while liquidity risk demonstrated a negative effect.

##### Table 4.9 Descriptive Statistics of Risk Management System

|  |  |
| --- | --- |
| SA A UND D SD MN MD MO SD | |
| |  | | --- | | The board of directors have complete 16.5 56.5 22.5 3.2 1.8 4 4 4 1  understanding of the risk facing the  listed companies in Nigeria  Operation risk control such as strong 13.3 63.5 21.1 1.8 0.4 4 4 4 1  internal control has been put in place  by the listed companies in Nigeria  Liquidity risk safeguard such as budgetary 9.8 63.9 22.1 4.2 - 4 4 4 1  control has been put in place by the  listed companies in Nigeria  Risk management system in the listed 14.7 60 22.5 2.8 - 4 4 4 1  companies is effective in preventing  company’s loss due to fraud  Market risk such as change in interest 15.8 57.2 23.5 2.8 0.7 4 4 4 1  rate, exchange rate, and foreign  currency is a major risk being  encountered by the listed companies | |  | |  | | |
|  | |

### 4.5.7 Information Disclosure

This section sought to investigate the moderating effect of accounting information disclosure on the relationship between corporate governance mechanisms and profitability of listed companies in Nigeria. In achieving this, five questionnaire items were put forward to the respondent drawn from the listed companies in Nigeria whose opinion were analyzed and presented in table 4.10.

It could be seen that high level of accounting information disclosure was maintained by the listed companies in Nigeria as about 95% of the respondents overwhelmingly agreed that information on equity performance was disclosed in the financial statement of listed companies in Nigeria in the last five financial years while only 1.4% of the respondents were undecided, 2.1% and 0.7% of the respondents disagreed and strongly disagreed respectively. These results corroborate with that of Iatridis (2008) who examines the disclosure of accounting information in the financial statements of UK firms. The study also examines the financial attributes of firms that disclose key accounting issues such as risk exposure, changes in accounting policies, use of international financial reporting standards, disclosure of equity performance and hedging practices. The result reveals that firms that provide informative accounting disclosures appear to display higher size, growth, profitability and leverage measures. On the contrary, Hooks (2012) reported that information gap, also referred to as information asymmetry, will always exist in public companies due to management’s inability to satisfy the stakeholders' expectations towards the firm's disclosure and performance cannot be linked to the volume of information

In like manner, the results on the disclosure of cash flow statement revealed that 21.8% of the respondents strongly agreed that statement of cash flow was disclosed in the financial statements of listed companies in Nigeria in the last five reporting years while 69.8% of the respondents agreed with the statement. Also, 1.4% of the respondents were undecided, 5.6% of the respondents disagreed and 1.4% of the respondents strongly disagreed with the statement. The mean value of 4.00 implies that majority of the respondents were in agreement with the statement. In an investigation carried out in Jordan by Naser, (2002) on the relationship between corporate disclosure after the implementation of International Accounting Standards (IASs), company's firm characteristics, corporate governance practices and profitability using a disclosure index of 86 unweighted items of information, the result showed that the disclosure of cash flow statement is related with corporate liquidity ratio, audit firm status, profitability, gearing, and size.

Similarly, the statement of value added is also accounting information whose frequency of disclosure by the listed companies in Nigeria was investigated in this study and found to be regularly disclosed. This was supported by the 94.4% of the respondents responding in the affirmative that the statement of value added was disclosed in the financial statement in the last five years (i.e. 40.7% strongly agreed and 53.7% agreed) while the remaining 5.6% were distributed as 3.5% undecided, 1.4% disagreed and 0.7% strongly disagreed. In support of this was Leuz and Verrecchia (2000) results who studied German firms that have switched from German GAAP to international accounting regime with a greater disclosure requirement (IAS or USGAAP) in consolidated financial statements thereby committing themselves to increased levels of disclosure which include disclosure of value added statement, corporate governance practices, directors’ equity, statement of accounting policies among others. It was reported that firms adopting international reporting (more disclosure) were associated with lower gearing and higher trading volume than the ones keeping to the German reporting regime.

In response to the question on disclosure of directors’ personal information, 39.3% of the respondents strongly agreed that listed companies in Nigeria disclosed personal information of the directors in the financial statement for the last five years. 58.6% of the respondents agreed with the statement while 1.4% of the respondents and 0.7% of the respondents were undecided and disagreed respectively. The mean value of 4.00 implies that majority of the respondents were in agreed that there was adequate disclosure of directors’ information in the financial statement of listed companies in Nigeria. The study by Wang et al. (2008) examined empirically the determinants of voluntary disclosure in the annual reports of Chinese listed firms that issue both domestic and foreign shares. The results indicated that the level of voluntary disclosure which includes the director’s information is positively related to the proportion of state ownership, foreign ownership, firm performance measured by return on equity, and reputation of the engaged auditor.

Concerning the respondents’ perception about dividend information, 37.9% of the respondents strongly agreed that dividend information was disclosed in the audited financial statement of listed companies in Nigeria. 40.4% of the respondents also agreed with the statement, 8.1% of the respondents were undecided, 10.5% of the respondents disagreed and 3.2% of the respondents strongly disagreed with the statement. The mean value of 4.00 implies that majority of the respondents agreed that listed companies in Nigeria have adequate disclosure on dividend information in the last five years. This result is however in disagreement with those of Ghasim, Osmani and Abbasi (2007) who studied the relationship between the cost of capital, firm profitability and the level of financial information disclosure of 87 companies listed in Tehran Stock Exchange. The results showed that there is no significant relationship between the level of information disclosure and cost of capital (cost of equity, cost of debt.). However, return on capital employed which is a measure of profitability was found to be negatively correlated with the level of financial information disclosed.

##### Table 4.10 Descriptive Statistics on Accounting Information Disclosure

|  |
| --- |
| SA A UND D SD MN MD MO SD |
| |  | | --- | | Listed companies disclosed information 27.4 68.4 1.4 2.1 0.7 4 4 4 1  On equity performance in the last five  years  Cash flow information was disclosed 21.8 69.8 1.4 5.6 1.4 4 4 4 1  in the financial statement of the listed  companies in Nigeria  Value added statement was disclosed 40.7 53.7 3.5 1.4 0.7 4 4 4 1  In the financial statement of the listed  companies in Nigeria  Personal information of directors was 39.3 58.6 1.4 0.7 - 4 4 4 1  disclosed in the financial statement  of the listed companies in Nigeria | |  | | Dividend information was disclosed 37.9 40.4 8.1 10.5 3.2 4 4 4 1  in the financial statement of the  listed companies in Nigeria | |

## 4.6 Inferential Analysis

The data for the study were subjected to diagnostic tests before being used for inferential analysis. The inferential analyses for this study were Pearson correlation analysis and regression analysis.

## 4.6.1 Diagnostic Test

The diagnostic tests carried out for the primary data includes the reliability test, normality test, linearity and multicolinearity test. Reliability test was carried out with the use of cronbach’s alpha. Kolmogorov-Smirnov test was used for the normality test while linearity test and multicolinearity test were done with the use of scatter plot and correlation matrix.

# 4.6.2 Reliability Test

Reliability analysis is an indication of the stability and consistency with which the instrument measures a concept and helps to assess the goodness of a measure (Miller and Triana, 2009). Therefore, in this study, Cronbach’s Alpha which is a reliability coefficient was used to indicate how well the items in the set are correlated with one other. According to Sekaran, (2008) the closer a Cronbach’s Alpha is to 1 the higher the reliability and thus, a value of 0.7 was recommended. The reliability analysis was conducted for dependent variable, profitability, the five items of independent variables which includes the board size, executive compensation, ownership concentration, board over sight functions, risk management system and the moderating variable, accounting information disclosure. The findings as presented in table 4.11 indicated that profitability produced a coefficient of 0.901, board size had a coefficient of 0.701, while executive compensation, ownership concentration, board oversight functions, risk management system and accounting information disclosure produce a coefficient of 0.704, 0.793, 0.710, 0.768 and 0.789 respectively. Since, all the items produced a Cronbach’s Alpha greater than the minimum acceptable coefficient, the data collected can be considered reliable and therefore accepted for further statistical analysis.

##### Table 4.11 Reliability Test

|  |  |  |  |
| --- | --- | --- | --- |
|  | **Variables** | **Cronbach’s Alpha** | **No. of Items** |
| 1 | Profitability | 0.901 | 5 |
| 2 | Board size | 0.701 | 5 |
| 3 | Executive Compensation | 0.704 | 5 |
| 4 | Ownership Concentration | 0.793 | 5 |
| 5 | Board Oversight Functions | 0.710 | 5 |
| 6  7 | Risk Management System  Accounting Information Disclosure | 0.768  0.789 | 5  4 |

### 4.6.3 Normality Test

A One-Sample Kolmogorov-Smirnov Test was done to test the normality of the dependent variable profitability. The null and alternative hypotheses were as follows:

H0: The data was normally distributed

H1: The data was not normally distributed

The results obtained in table 4.12 indicate that Kolmogorov-Smirnov Z was 0.852 (p-value = 0.432). Since the p-value is greater than 0.05, the null hypothesis was not rejected and concluded that the data was normally distributed. It was also revealed in the table that the mean was 16.2132 while the standard deviation was 3.1008. The absolute figure of 0.065 was obtained as well as positive and negative value of 0.044 and -0.056 respectively indicating that the data are closely related and can therefore be relied on for statistical analysis.

##### Table 4.12 One-Sample Kolmogorov-Smirnov Test

|  |  | | Profitability |
| --- | --- | --- | --- |
| N | | | 285 |
| Normal Parametersa | | Mean | 16.2132 |
| Std. Deviation | 3.1008 |
| Most Extreme  Differences | | Absolute | .065 |
| Positive | .044 |
| Negative | -.056 |
| Kolmogorov-Smirnov Z | | | .852 |
| Asymp. Sig. (2-tailed) | | | .432 |

### 4.6.4 Scatter Plots

In this section, scatter plot was plotted to determine the kind of relationship that exists between each of the independent variables and dependent variable. According to Gupta, scatter plot can be considered as one of the simplest tools for the determination of the relationship between two variables.

#### 4.6.5.1 Scatter Plot: Return on Capital Employed versus Board Size

To determine the kind of relationship that exists between the independent variable board size and dependent variable return on capital employed, a scatter plot was generated. From the graph, the scatter plot shows an upward sloping relationship. This suggests that there is a positive linear relationship between profitability measured by return on capital employed and the size of the board. Therefore the level of influence of board size on the return on capital employed can be statistically determined with the use of correlation and regression analysis. See appendix 5.

#### 4.6.5.2 Scatter Plot: Executive Compensation and Return on Capital Employed

A scatter plot was generated to show the kind of relationship that existed between the independent variable executive compensation and the dependent variable return on capital employed. The result on scatter plot presented in appendix 5 suggests that there is a moderate negative relationship between executive compensation and return on capital employed. Therefore, the level of influence of executive compensation on the return on capital employed can be statistically determined by carrying out the correlation and regression analysis.

#### 4.6.5.3 Scatter Plot: Ownership Concentration and Return on Capital Employed

To determine the kind of relationship that exists between the independent variable ownership concentration and dependent variable return on capital employed, a scatter plot was generated. From appendix 5 the scatter plot shows an upward sloping relationship. This suggests that there is a strong positive linear relationship between the ownership concentration and return on capital employed. Therefore the level of influence of ownership concentration on the return on capital employed can be statistically determined with the use of correlation and regression analysis.

#### 4.6.5.4 Scatter Plot:Board Oversight Functions and Return on Capital Employed

A scatter plot was generated to show the kind of relationship that existed between the independent variable board oversight functions and the dependent variable return on capital employed. The result on scatter plot presented in appendix 5 suggests that there is a strong positive linear relationship between the board oversight functions and return on capital employed. Therefore, the level of influence of board oversight functions on the profitability can be statistically determined by carrying out the correlation and regression analysis.

#### 4.6.5.5Scatter Plot: Risk Management System and Return on Capital Employed

A scatter plot was generated to show the kind of relationship that existed between the independent variable risk management system and the dependent variable return on capital employed. The result on scatter plot presented in appendix 5 suggests that there is a significant positive relationship between the risk management system and return on capital employed. Therefore, the level of influence of risk management system on the return on capital employed can be statistically determined by carrying out the correlation and regression analysis.

#### 4.6.5.6 Scatter Plot: Information Disclosure and Return on Capital Employed

A scatter plot was generated to show the kind of relationship that existed between the moderating variable accounting information disclosure and the dependent variable return on capital employed. The result on scatter plot presented in appendix 5 suggests that there is a significant positive relationship between accounting information disclosure and return on capital employed. Therefore, the level of influence of accounting information disclosure on the profitability can be statistically determined by carrying out the correlation and regression analysis.

## 4.7 Correlation Analysis

Correlation has been defined by Yang (2008) as a statistical measure that indicates the extent to which two or more variables fluctuate together. A positive correlation indicates the extent to which those variables increase or decrease in parallel while a negative correlation indicates the extent to which one variable increases as the other decreases. Kothari and Garg (2014) stated that Pearson Correlation Coefficient is the most widely used method of measuring the degree of relationship between two variables. It ranges from -1 to +1. A correlation coefficient of -1 indicates a perfect negative correlation, 0 indicates no correlation while +1 indicates a perfect positive correlation. It is a statistical test that informs a researcher the magnitude and direction of the relationship between two variables.

### 4.7.1 Pearson Correlation Analysis for Board Size and Return on Capital Employed

The Pearson correlation of board size and return on capital employed was computed and the result produces a coefficient of 0.672 (p-value =0.000) indicating a strong significant and positive relationship between the two variables. Coles (2008) reported a positive relationship between board size and Tobin’s Q in a sample of 8,165 firms with observations from 1992 to 2001 in the US. In like manner, Wang (2012) uses unbalanced panel data from 1,618 firms from 1992 to 2004 to investigate the impact of board size on financial performance using profitability as a measure of performance. Wang (2012) finds that firms with smaller boards invest more heavily in risky assets which eventually led to loss of assets and reduction in profitability. These results therefore made a case for larger board for the listed companies in order to strengthen their investment decision making and improve the company’s profitability. From table 4.13, it can then be concluded that there is a significant linear relationship between the board size and profitability since the correlation coefficient is ranging between 0.3 and +0.7 in line with Dancey and Reidy's (2004) categorization of strength of correlation coefficient.

### 4.7.2 Pearson Correlation Analysis for Executive Compensation and Return on Capital Employed

The Pearson Correlation Coefficient of executive compensation and return on capital employed was computed and established as -0.604 (p-value= 0.000) indicating a moderate significant relationship between executive compensation and return on capital employed. From table 4.13, it could then be concluded that there is a moderate negative linear relationship between the two variables since the correlation coefficient is between 0.4 and -0.6 in line with Dancey and Reidy's (2004) categorization of correlation coefficient. In a related empirical study conducted by Yongli and Dave (2012) on the relationship between executive compensation, ownership structure and firm performance in Chinese financial corporation’s during the period 2001-2009, executive compensation was negatively associated with return on equity ROE (-0.027) and ROA (-0.015), indicating that the higher the executive compensation in Chinese banks, the lower the firm value or firm profitability.

### 4.7.3 Pearson Correlation Analysis for Ownership Concentration and Return on Capital Employed

The Pearson Correlation Coefficient of ownership concentration and return on capital employed was computed and established as 0.626 (p-value =0.000) indicating a moderate significant and positive relationship between ownership concentration and return on capital employed. From table 4.13, it could then be concluded that there is a moderate positive linear relationship between the two variables since the correlation coefficient is between 0.4 and +0.6 in line with Dancey and Reidy's (2004) categorization of correlation coefficient. A related study by Shahab-U-Din and Attiya (2012) which evaluates the impact of family ownership concentration on the profitability (evidence from Pakistani capital market) during 2004 and 2009 with a sample of 29 manufacturing firms listed at KSE-100 index in the Pakistani capital market reported a positive relation between the ownership variable and return on assets. The dependent variable was performance which was measured by Return on Asset (ROA), Return on Equity (ROE) and Tobin’s Q of the sample firm and the independent variable was family ownership.

### 4.7.4 Pearson Correlation Analysis for Board Oversight Functions and Return on Capital Employed

The Pearson Correlation Coefficient for board oversight functions and profitability was computed and established as 0.697 (p-value =0.000) indicating a strong significant and positive relationship between board oversight functions and return on capital employed. From table 4.13, it could then be concluded that there is a significant positive linear relationship between the two variables since the correlation coefficient is between 0.3 and +0.7 in line with Dancey and Reidy's (2004) categorization of correlation coefficient. This result confirm the findings of Herbert and Morris (2013) on the influence of oversight board on the performance of management of listed companies in Taiwan stock exchange where a significant positive relationship between the market value of stock and board oversight function was reported.

### 4.7.5 Pearson Correlation Analysis for Risk Management System and Return on Capital Employed

The Pearson Correlation Coefficient of risk management system and return on capital employed was computed and established as 0.234 (p-value =0.000) indicating a weak significant and positive relationship between the risk management system and return on capital employed. From table 4.13, it could then be concluded that there is a significant positive linear relationship between the two variables since the correlation coefficient is between 0.2 and +0.8 in line with Bernard (2001) categorization of correlation coefficient. Kittipat and Nopadol (2014) conducted a study of the relationship between a successful enterprise risk management system, a performance measurement system and the financial performance of Thai listed companies. The study was done by collecting data from persons directly involved with these two systems with a total of 101 respondents. The results of the study indicate that success of the enterprise risk management system and performance measurement system have a weak positive correlation with the financial performance of an organization as measured by return on assets (ROA), return on equity (ROE) and earnings per share (EPS).

### 4.7.6 Pearson Correlation Analysis for Information Disclosure and Return on Capital Employed

The Pearson Correlation Coefficient of information disclosure and profitability was computed and established as 0.660 (p-value =0.000) indicating a moderate significant and positive relationship between information disclosure and profitability. From table 4.13, it could then be concluded that there is a significant positive linear relationship between the two variables since the correlation coefficient is between 0.3 and +0.7 in line with Dancey and Reidy’s (2004) categorization of correlation coefficient. Suwaidan, (2004) evaluated the level of accounting information disclosure practices of 65 industrial Jordanian firms using 37 items of information. The results of the study identified that information disclosure is associated with corporate size, profitability, and risk. Healy et al. (1999) also used AIMR disclosure rankings and found that the increases in disclosure level are accompanied by increases in firms’ stock returns, institutional ownership, and firm’s liquidity.

### 4.7.7 Overall Pearson Correlation Matrix for Dependent and Independent Variables

Correlation matrix is used to determine the extent to which changes in the value of an attribute is associated with changes in another attribute. The correlation coefficient according to Kothari and Garg (2014) can range from -1 to +1, with -1 indicating a perfect negative correlation, +1 indicating a perfect positive correlation, and 0 indicating no correlation at all. Table 4.13 revealed that there was a significant positive correlation between profitability and board size at 0.672, there was also a strong positive correlation between the profitability and ownership concentration at 0.626. Similarly, there existed a significant positive correlation between profitability and board oversight functions at 697 as well as profitability and accounting information disclosure at 0.660. The relationship between profitability and executive compensation on the hand was found to negatively significant at -0.604. Finally, the correlation between profitability and risk management system was at .234

From table 4.13, all the independent variables were found to have a positive correlation with one another except the executive compensation that was found to be negatively correlated with the other independent variables as well as the dependent variable. The highest correlation was found between the board size and ownership concentration at 0.661, followed by the correlation between ownership concentration and board oversight functions at 0.656 and accounting information disclosure and board oversight functions at 0.557. The relationship between the ownership concentration and accounting information was moderate at 0.416. The lowest correlation existed between the risk management system and other independent variables as well as the moderating variable.

According to Wong and Hiew (2005), the correlation coefficient value (r) ranging from 0.10 to 0.29 can be considered weak. Also, the correlation coefficient from 0.30 to 0.49 can be considered moderate while the correlation from 0.50 to 1.0 can be considered strong. In like manner, Field (2005) stated that correlation coefficient should not go beyond 0.8 to avoid multicolinearity. Thus, it can be concluded that there was no multicolinearity problem in this research since the highest correlation coefficient was 0.661existing between the board size and ownership concentration.

##### Table 4.13 Pearson Correlation Matrix for Independent and Dependent Variables

|  |
| --- |
| PROF BS OC EC BOF RMS AID |

PROF. Pearson Correlation 1

Sig. (2-tailed)

N 285

BS Pearson Correlation .672\*\* 1

Sig. (2-tailed) .000

N 285 285

OC Pearson Correlation .626\*\* .661\*\* 1

Sig. (2-tailed) .000 .000

N 285 285 285

EC Pearson Correlation -.604\*\*  -.613\*  -.629\*\* 1

Sig. (2-tailed) .000 .000 .000

N 285 285 285 285

BOF Pearson Correlation .697\*\* .649\*\*  .656\*\*  -.619\*\* 1

Sig. (2-tailed) .000 .000 .000 .000

N 285 285 285 285 285

RMS Pearson Correlation .234\*\*. 263\*\*  .160\*\* -.277\*\* .222\*\*  1

Sig. (2-tailed) .000 .000 .007 .000 .000

N 285 285 285 285 285 285

AID Pearson Correlation .660\*\* .508\*\* .416\*\* -.393\*\* .557\*\* .154\*\*  1

Sig. (2-tailed) .000 .000 .000 .000 .000 .009

N 285 285 285 285 285 285 285

|  |
| --- |
| \*\*Correlation is significant at the 0.01 level of significance (2-tailed). |

## \* PROF- Profitability, BS- Board Size, OW- Ownership Concentration, EC- Executive Compensation, BOF- Board Oversight Functions, RMS- Risk Management System, AID- Accounting Information Disclosure

## 4.8 Regression Analysis

In this section, regression analysis was done on all the independent variables and the dependent variable in order to statistically determine the relationship between each independent variable and the dependent variable.

### 4. 8.1 The Relationship between Board Size and Firm’s Profitability

In order to establish the statistical significance of the independent variable (board size) on the dependent variable (return on capital employed), regression analysis was carried out. The result of the regression analysis as presented in table 4.14 revealed that R=0.672 and R2=0.452. This implies that 45% of the variation in profitability can be explained by a unit change in board size. The remaining 55% of the variation can be explained by other variables such as executive compensation, ownership concentration, board oversight functions, and risk management system.

##### Table 4.14 Model Summary for Board Size and ROCE

|  |  |
| --- | --- |
| R | R Square |
| .672a | .452 |

a. Predictors: (Constant), Board Size

Furthermore, F-test was carried out to test the null hypothesis that there is no significant relationship between the board size and return on capital employed. The analysis of variance test in Table 4.15 shows that the significance of the F-statistic0.000 is less than the table value of 0.05 meaning that null hypothesis is rejected and can be concluded that there is a significant relationship between the board size and company’s return on capital employed. It can also be concluded that the model Y=3.055+1.986X1 is significantly fit.

##### Table 4.15 ANOVA Results for Board Size versus ROCE

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
|  | | Sum of Squares | Df | Mean Square | F | Sig. |
|  | Regression | 1584.576 | 1 | 1584.576 | 233.437 | .000b |
| Residual | 1921.124 | 283 | 6.788 |  |  |
| Total | 3505.700 | 284 |  |  |  |
| a. Dependent Variable: Return on Capital Employed | | | | | | |
| b. Predictors: (Constant), Board Size | | | | | | |

To test the significance of regression relationship between the board size and return on capital employed, the regression coefficient (β) and the intercept (α), in the model were subjected to the t-test to test the null hypothesis that the beta is zero. The null hypothesis state that, β (beta) = 0, meaning there is no significant relationship between the board size and profitability as the slope β (beta) = 0 (no relationship between the two variables). The results on the beta coefficient of the resulting model in table 4.16 revealed that the constant α = 3.055 which is significantly different from 0, while the p- value = 0.000 which is less than 0.05. The coefficient *β* = 1.986 is also significantly different from 0 with a p-value=0.000 which is also less than 0.05 indicating that profitability of listed companies in Nigeria was significantly influenced by the size of the board.

This implies that the null hypothesis *β*1=0 is rejected and the alternative hypothesis *β*1≠0is taken to hold implying that the model Y=3.055+1.986 (Board Size) is significantly fit. The model Profitability = α + *β* (Board Size) holds as suggested by the above test. This confirms that there is a significant positive linear relationship between the board size and company’s return on capital employed.

##### Table 4.16 Coefficient for Board Size and ROCE

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
|  | | Unstandardized Coefficients | | Standardized Coefficients | T | Sig. |
| B | Std. Error | Beta |
|  | (Constant) | 3.055 | .676 |  | 4.521 | .000 |
| Board Size | 1.968 | .096 | .672 | 20.449 | .000 |
| a. Dependent Variable: ROCE | | | | | | |

The results confirm those of Haleblian and Finkelstein (1993) on the 47 listed firms on the US stock market which revealed that firms with larger boards and management teams performed better than their smaller counterparts and reported higher returns on capital employed. The study focused on 47 US firms that major in gas and computer industries using data from 1978 to 1982. This implies that the larger the size of the board the higher the profitability. This might not be unrelated with the provision of expert advice by the board to the management and access to critical information and resources (Fama and Jensen, 1983). Another advantage of larger board size is the greater collective information that the board subsequently possesses and hence larger boards will lead to higher performance (Dalton et al., 1999, 2005). Although empirical results on the relationship between profitability and board size is mixed, this findings corroborates those of Coles et al. (2008) who concluded that the impact of board size on firm value is positive for large firms, and hence large board size may be an optimal value maximizing outcome for such firms and disagreed with those of Bramer and Pavellin, (2008); Campbell, (2004) that reported a negative association between the two variables.

### 4. 8.2 The Relationship between Executive Compensation and Firm’s Profitability

Regression analysis was carried out to establish the statistical significance of the independent variable (executive compensation) on the dependent variable (return on capital employed). The result of the regression analysis as presented in table 4.17revealed that R=0.604 and R2=0.365. This implies that 37% of the variation in return on capital employed can be attributed to a unit change in executive compensation. The remaining 63% of the variation can be explained by other variables such as board size, ownership concentration, board oversight functions, and risk management system.

##### Table 4.17 Model Summary for Executive Compensation and ROCE

|  |  |
| --- | --- |
| R | R Square |
| .604a | .365 |

a. Predictors: (Constant), Executive Compensation

For further confirmation, F-test was carried out to test the null hypothesis that there is no relationship between executive compensation and return on capital employed. Analysis of variance (ANOVA) was used to determine whether there is a regression relationship between executive compensation and return on capital employed. The ANOVA test in Table 4.18 revealed that the significance of the F-statistic0.000 is less than 0.05 meaning that null hypothesis is rejected and conclude that there is a significant relationship between executive compensation and company’s return on capital employed.

##### Table 4.18 ANOVA for Executive Compensation and ROCE

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
|  | | Sum of Squares | Df | Mean Square | F | Sig. |
|  | Regression | 1279.134 | 1 | 1279.134 | 162.580 | .000b |
| Residual | 2226.566 | 283 | 7.868 |  |  |
| Total | 3505.700 | 284 |  |  |  |
| a. Dependent Variable: return on capital employed | | | | | | |
| b. Predictors: (Constant), Executive Compensation | | | | | | |

To establish the significance of regression relationship between executive compensation and return on capital employed, the regression coefficient (β) and the intercept (α) in the model were subjected to the t-test in order to test the null hypothesis that the beta is zero. The null hypothesis state that, β (beta) = 0, meaning there is no significant relationship between the executive compensation and return on capital employed as the slope β (beta) = 0 (no relationship between the two variables). The results on the beta coefficient of the resulting model in table 4.19 revealed that the constant α = 0.025 which is statistically significantly different from 0, while the p- value = 0.000 which is less than 0.05. The coefficient *β* = -3.843 is also significantly different from 0 with a p-value=0.000 which is also less than 0.05.

This implies that the null hypothesis *β*1=0 is rejected and the alternative hypothesis *β*1≠0is accepted which implies that the model Y=0.025-3.843 (executive compensation) is significantly fit. Thus, the model return on capital employed = α -*β* (executive compensation) holds as suggested by the regression analysis. This confirms that there is a significant negative linear relationship between executive compensation and company’s return on capital employed. In other words, an increase in executive compensation causes a reduction in return on capital employed. Thus, higher return on capital employed is associated with lower executive compensation and vice versa. In line with agency theory, higher executive compensation was meant to enable the company hire exception-ally talented, highly experienced executives whose experience and exceptional talents will translate into higher productivity (Gray & Larker (2001) but empirical results were different from this theoretical point of view. In like manner, the view of optimal contracting approach was that boards are assumed to design compensation schemes to provide managers with efficient incentives to maximize shareholder value (Murray, 2009). However, financial economists have documented that executive compensation is not a potential instrument for addressing the agency problem but also a part of the agency problem itself. A number of researchers have recognized that some features of executive compensation seem to reflect managerial rent-seeking rather than the provision of efficient incentives (Blandchard, Lopez and Shleifier, 1994; Yermacky, 1997; &Bertranm and Mulainathan, 2001).

##### 

##### Table 4.19 Coefficient for Executive Compensation and ROCE

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
|  | | Unstandardized Coefficients | | Standardized Coefficients | T | Sig. |
| B | Std. Error | Beta |
|  | (Constant) | .025 | .838 |  | .030 | .000 |
| Executive Compensation | -3.843 | .301 | -.604 | -12.751 | .000 |
| a. Dependent Variable: return on capital employed | | | | | | |

This result is in agreement with that of John, Robert and David (1999) that investigated the relationship between corporate governance practices, chief executive officer compensation, and firm performance on a sample of 495 observations over a three-year period for 205 publicly traded U.S. firms. The sample was composed of large firms operating in a variety of different industries: the median firm in the sample has corporate sales (expressed in 1984 dollars) of $3101 million, and the sample includes 14 different two-digit standard industrial classification (SIC) codes, with some concentration in the food, chemical, and electrical industries. The results show that the predicted component of compensation has a statistically significant negative relation with subsequent firm operating profit and stock return performance. Thus, whenever the compensation of the executive is increase, it will have adverse effect on the profitability.

### 4. 8.3 The Relationship between Ownership Concentration on Firm’s Profitability

Regression analysis was carried out to establish the statistical significance of the independent variable (Ownership Concentration) on the dependent variable (return on capital employed). The result of the regression analysis as presented in table 4.20 revealed that R=0.626 and R2=0.392. This implies that 39% of the variation in return on capital employed can be attributed to a unit change in ownership concentration. The remaining 61% of the variation can be explained by other variables such as board size, executive compensation, board oversight functions, and risk management system.

##### Table 4.20 Model Summary for Ownership Concentration and ROCE

|  |  |
| --- | --- |
| R | R Square |
| .626a | .392 |

a. Predictors: (Constant), Ownership Concentration

To further confirm the relationship, F-test was carried out to test the null hypothesis that there is no relationship between ownership concentration and return on capital employed. Analysis of variance (ANOVA) was used to determine whether there is a regression relationship, between ownership concentration and return on capital employed. The analysis of variance (ANOVA) test in Table 4.21 revealed that the significance of the F-statistic0.000 is less than 0.05 meaning that null hypothesis is rejected and can be concluded that there is a significant relationship between ownership concentration and company’s return on capital employed.

##### Table 4.21 ANOVA for Ownership Concentration and ROCE

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
|  | | Sum of Squares | Df | Mean Square | F | Sig. |
|  | Regression | 1373.322 | 1 | 1373.322 | 182.261 | .000b |
| Residual | 2132.378 | 283 | 7.535 |  |  |
| Total | 3505.700 | 284 |  |  |  |
| a. Dependent Variable: return on capital employed return on capital employed | | | | | | |
| b. Predictors: (Constant), Ownership Concentration | | | | | | |

To establish the significance of regression relationship between the ownership concentration and return on capital employed, the regression coefficients (β) and the intercept (α) in the model were subjected to the t-test in order to test the null hypothesis that the beta is zero. The null hypothesis state that, β (beta) = 0, meaning there is no significant relationship between the executive compensation and return on capital employed as the slope β (beta) = 0 (no relationship between the two variables). The results on the beta coefficient of the resulting model in table 4.22 revealed that the constant α = -0.030 which is statistically significantly different from 0, while the p- value = 0.000 which is less than 0.05. The coefficient *β* = 2.692 is also significantly different from 0 with a p-value=0.000 which is also less than 0.05.

This implies that the null hypothesis *β*1=0 cannot be accepted and the alternative hypothesis *β*1≠0cannot be rejected which implies that the model Y=-0.030+2.692 (ownership concentration) is significantly fit. Thus, the model return on capital employed = α +*β* (ownership concentration) holds as suggested by the result of the regression analysis. This confirms that there is a significant positive linear relationship between the ownership concentration and company’s profitability. The result suggests the possibility of higher return on capital employed in a company where ownership is concentrated than those with dispersed ownership. The possible explanation for this result was that there might be an intensive monitoring of the management which restricts them into making decisions in the best interest of their principals.

##### Table 4.22 Coefficient for Ownership Concentration and ROCE

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
|  | | Unstandardized Coefficients | | Standardized Coefficients | T | Sig. |
| B | Std. Error | Beta |
|  | (Constant) | -.030 | .796 |  | -.038 | .000 |
| Ownership Concentration | 2.692 | .199 | .626 | 13.500 | .000 |
| a. Dependent Variable: ROCE | | | | | | |

The result was supported by those of Shahab-U-Din and Attiya (2012) that conducted a study on the impact of family ownership concentration on the firm’s profitability (evidence from Pakistani capital market) during 2004 and 2009 with a sample of 29 manufacturing firms listed at KSE-100 index in the Pakistani capital market. The dependent variable was profitability which was measured by Return on Asset (ROA), Return on Equity (ROE) and Tobin’s Q of the sample firm and the independent variable was family ownership concentration. The study adopted the use of linear regression model for estimation along with correlation analysis. The study reported positive relation between the ownership concentration and return on an asset which is a measure of performance and profitability. This implies that profitable companies maintained higher concentration of ownership. This might be a confirmation of the opinion that when ownership is concentrated, the large shareholders exercise control over the management which make the management to act in the best interest of the principals (Jettson&Duglass, 2004). However, the result disagreed with those of Hanifa and Cooker (2002) who provide evidence of negative association between ownership concentration and profitability.

### 4. 8.4 The Relationship between Board Oversight Functions on Firm’s Profitability

Regression analysis was carried out to determine the statistical significance of the independent variable (board oversight functions) on the dependent variable (return on capital employed). The result of the regression analysis as presented in table 4.23 revealed that R was 0.697 and R2=0.0.486. This implies that 49% of the variation in return on capital employed can be attributed to a unit change in ownership concentration. The remaining 52% of the variation can be attributed to the other variables such as board size, executive compensation, ownership concentration, and risk management system.

##### Table 4.23 Model Summary for Board Oversight Functions and ROCE

|  |  |
| --- | --- |
| R | R Square |
| .697a | .486 |

##### a. Predictors: (Constant), Board Oversight Functions

To further confirm the relationship between the two variables, F-test was carried out to test the null hypothesis that there is no significant relationship between the board oversight functions and return on capital employed. Analysis of variance (ANOVA) was used to determine whether there is a regression relationship between the board oversight functions and return on capital employed. The ANOVA test in table 4.24 revealed that the significance of the F-statistic = 0.000 which is less than 0.05 meaning that null hypothesis is rejected and can be concluded that there is a significant positive relationship between the board oversight functions and company’s return on capital employed.

##### Table 4.24 ANOVA for Board Oversight Functions and ROCE

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
|  | | Sum of Squares | Df | Mean Square | F | Sig. |
|  | Regression | 1703.770 | 1 | 1703.770 | 267.594 | .000b |
| Residual | 1801.930 | 283 | 6.367 |  |  |
| Total | 3505.700 | 284 |  |  |  |
| a. Dependent Variable: ROCE | | | | | | |
| b. Predictors: (Constant), Board Oversight Functions | | | | | | |

To establish the significance of regression relationship between the board oversight functions and return on capital employed, the regression coefficients(β), the intercept (α) in the model were subjected to the t-test in order to test the null hypothesis that the beta is zero. The null hypothesis state that, β (beta) = 0, meaning there is no significant relationship between the board oversight functions and return on capital employed as the slope β (beta) = 0 (no significant relationship between the two variables). The results on the beta coefficient of the resulting model in table 4.25 revealed that the constant α = -3.305 which is statistically significantly different from 0, while the p- value = 0.000 which is less than 0.05. The coefficient *β* = 4.179 is also significantly different from 0 with a p-value=0.000 which is also less than 0.05.

This implies that the null hypothesis *β*1=0 cannot be accepted and the alternative hypothesis *β*1≠0cannot be rejected which implies that the model Y= -3.305+ 4.179 (board oversight functions) is significantly fit. Thus, the model return on capital employed = α +*β* (board oversight functions) holds as suggested by the result of the regression analysis. This confirms that there is a significant positive linear relationship between the board oversight functions and company’s profitability. Therefore, companies with adequate oversight functions are prone to higher profitability. This result can be interpreted in the context of the legalistic theory, as an increasing board activity, represented by committee membership, influences the board's ability to act as an effective monitoring mechanism in mitigating agency conflicts (Xie*et al*., 2003). Increased monitoring is expected to result in reduction of information asymmetry and reduction in agency costs, thereby causing an increase in market share and profitability (Nelson *et al*., 2010). In addition, an active board that meets more often is able to devote more time to strategic issues and future growth plan of the company.

##### Table 4.25 Coefficient for Board Oversight Functions and ROCE

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
|  | | Unstandardized Coefficients | | Standardized Coefficients | T | Sig. |
| B | Std. Error | Beta |
|  | (Constant) | -3.305 | .635 |  | -5.208 | .000 |
| Oversight Functions | 4.179 | .188 | .697 | 22.189 | .000 |
| a. Dependent Variable: ROCE | | | | | | |

The results corroborate those of Kirnelly and Barrelly (2009) who reported a strong correlation between the board function and stock prices of publicly traded companies in Australia. Also, financial expertise of directors is another important factor that could affect firm profitability as suggested by previous studies. Financial experts can provide a better understanding of financial information (Kirkpatrick, 2009), provide valuable financial advice to management (Francis et al., 2009), and to some extent help firms access external funds (Guner et al., 2008). Fernandes and Fich (2009) were unable to confirm a significant relationship of board oversight function with profitability.

### 4. 8.5 The Relationship between Risk Management Practices on Firm’s Profitability

In order to establish the statistical significance of the independent variable (risk management system) on the dependent variable (return on capital employed) regression analysis was carried out. The result of the regression analysis as presented in table 4.26 revealed that R=0.234 and R2=0.055. This implies that 5% of the variation in return on capital employed can be explained by a unit change in the risk management system. The remaining 95% of the variation can be explained by other variables such as board size, executive compensation, ownership concentration and board oversight functions.

##### Table 4.26 Model Summary for Risk Management System and ROCE

|  |  |
| --- | --- |
| R | R Square |
| .234a | .055 |

a. Predictors: (Constant), Risk Management System

To further confirm the relationship, F-test was carried out to test the null hypothesis that there is no relationship between the risk management system and return on capital employed. Analysis of variance (ANOVA) was used to determine whether there is a regression relationship between the risk management system and return on capital employed. The ANOVA test in Table 4.27 revealed that the significance of the F-statistic = 0.000 which is less than 0.05 meaning that null hypothesis is rejected and can be concluded that there is a significant relationship between the risk management system and company’s return on capital employed.

##### Table 4.27 ANOVA for Risk Management System and ROCE

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
|  | | Sum of Squares | Df | Mean Square | F | Sig. |
|  | Regression | 191.218 | 1 | 191.218 | 16.327 | .000b |
| Residual | 3314.482 | 283 | 11.712 |  |  |
| Total | 3505.700 | 284 |  |  |  |
| a. Dependent Variable: ROCE | | | | | | |
| b. Predictors: (Constant), Risk Management System | | | | | | |

In order to establish the significance of regression relationship between the risk management system and return on capital employed, the regression coefficients (β) and the intercept (α) in the model were subjected to the t-test to test the null hypothesis that the beta is zero. The null hypothesis state that, β (beta) = 0, indicating that there is no significant relationship between the risk management system and return on capital employed as the slope β (beta) = 0 (no significant relationship between the two variables). The results on the beta coefficient of the resulting model in table 4.28 revealed that the constant α = 6.220 which is statistically significantly different from 0, while the p- value = 0.000 which is less than 0.05. The coefficient *β* = 1.046 is also significantly different from 0 with a p-value=0.000 which is also less than 0.05.

This implies that the null hypothesis *β*1=0 cannot be accepted and the alternative hypothesis *β*1≠0cannot be rejected which implies that the model Y= -3.305+ 4.179 (risk management system) is significantly fit. Thus, the model return on capital employed = α +*β* (risk management system) holds as suggested by the result of the regression analysis. This confirms that there is a significant positive linear relationship between the risk management system and company’s profitability. In other words, effective risk management leads to higher profitability in the listed companies in Nigeria. This result was in the expected direction as OECD (2014) posited that firm difficulties arise when they undertake ambitious strategies and businesses without clearly identifying, assessing, evaluating or duly reporting on the related risks. Therefore, concluded that effective risk management requires the establishment of sound internal risk management systems to identify, manage, control and report on risks.

##### Table 4.28 Coefficient for Risk Management System and ROCE

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
|  | | Unstandardized Coefficients | | Standardized Coefficients | T | Sig. |
| B | Std. Error | Beta |
|  | (Constant) | 6.220 | 1.077 |  | 5.774 | .000 |
| Risk Management System | 1.046 | .259 | .234 | 4.041 | .000 |
| a. Dependent Variable:return on capital employed | | | | | | |

The results is similar to that of Pattillo and Soderbom (2000) who use data from the Ghana Manufacturing Enterprise Survey (GMES) 1994-95, and a specialized component designed to measure managers’ risk attitudes using an experimental gambling approach with real monetary payoffs as well as joint estimation of profit and profit variance functions which control for unobserved heterogeneity support model predictions. Their result shows that firms with more risk averter managers who face high risks have lower profit rate variability and lower mean profit rates. These mean and variance differences are economically important and statistically significant. Similarly, Izah and Ahmad (2011) whose study was to estimate the relationship between the enterprise risk management and firm value in the Malaysian public listed companies using Tobin’s Q as a measure the firm value reported that the regression model is significant at the 1 percent level with the adjusted R-squared of 0.654. Empirical results report suggests that enterprise risk management is positively related to firm value.

### 4. 8.6 The Relationship between Information Disclosure and Firm’s Profitability

Regression analysis was carried out to establish the statistical significance of the independent variable (Information Disclosure) on the dependent variable (return on capital employed). The result of the regression analysis as presented in table 4.29 revealed that R=0.660 and R2=0.436. This implies that 44% of the variation in return on capital employed can be attributed to a unit change in ownership concentration. The remaining 56% of the variation can be explained by other variables such as board size, executive compensation, ownership concentration, board oversight functions, and risk management system.

##### Table 4.29 Model Summary for Information Disclosure and ROCE

|  |  |
| --- | --- |
| R | R Square |
| .660a | .436 |

a. Predictors: (Constant), Information Disclosure

To further confirm the relationship, F-test was carried out to test the null hypothesis that there is no relationship between information disclosure and return on capital employed. Analysis of variance (ANOVA) was used to determine whether there is a regression relationship, between ownership concentration and return on capital employed. The analysis of variance (ANOVA) test in table 4.30 revealed that the significance of the F-statistic0.000 is less than 0.05 meaning that null hypothesis is rejected and can be concluded that there is a significant relationship between information disclosure and company’s return on capital employed.

##### Table 4.30 ANOVA for Information Disclosure and ROCE

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
|  | | Sum of Squares | Df | Mean Square | F | Sig. |
|  | Regression | 1373.322 | 1 | 1373.322 | 182.261 | .000b |
| Residual | 2132.378 | 283 | 7.535 |  |  |
| Total | 3505.700 | 284 |  |  |  |
| a. Dependent Variable: return on capital employed return on capital employed | | | | | | |
| b. Predictors: (Constant), Information Disclosure | | | | | | |

To establish the significance of regression relationship between the information disclosure and return on capital employed, the regression coefficients (β) and the intercept (α) in the model were subjected to the t-test in order to test the null hypothesis that the beta is zero. The null hypothesis state that, β (beta) = 0, meaning there is no significant relationship between the executive compensation and return on capital employed as the slope β (beta) = 0 (no relationship between the two variables). The results on the beta coefficient of the resulting model in table 4.31 revealed that the constant α = -0.031 which is statistically significantly different from 0, while the p- value = 0.000 which is less than 0.05. The coefficient *β* = 2.682 is also significantly different from 0 with a p-value=0.000 which is also less than 0.05.

This implies that the null hypothesis *β*1=0 cannot be accepted and the alternative hypothesis *β*1≠0cannot be rejected which implies that the model Y=-0.031+2.682 (information disclosure) is significantly fit. Thus, the model return on capital employed = α +*β* (information disclosure) holds as suggested by the result of the regression analysis. This confirms that there is a significant positive linear relationship between the information disclosure and company’s profitability. The result suggests the possibility of higher return on capital employed in a company where adequate information disclosure is practiced than those with inadequate information disclosure. The possible explanation for this result can be that firms with adequate information attracts more investors that those with inadequate information.

##### Table 4.31 Coefficient for Information Disclosure and ROCE

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
|  | | Unstandardized Coefficients | | Standardized Coefficients | T | Sig. |
| B | Std. Error | Beta |
|  | (Constant) | -.031 | .796 |  | -.038 | .000 |
| Ownership Concentration | 2.692 | .199 | .626 | 13.500 | .000 |
| a. Dependent Variable: ROCE | | | | | | |

The result was supported by those of Shahab-U-Din and Attiya (2012) that conducted a study on the impact accounting information disclosure on the firm’s profitability (evidence from Pakistani capital market) during 2004 and 2009 with a sample of 29 manufacturing firms listed at KSE-100 index in the Pakistani capital market. The dependent variable was profitability which was measured by Return on Asset (ROA), Return on Equity (ROE) and Tobin’s Q of the sample firm and the independent variable was accounting information disclosure. The study adopted the use of linear regression model for estimation along with correlation analysis. The study reported positive relation between accounting information disclosure and return on an asset which is a measure of performance and profitability. This implies that profitable companies disclose more information that those struggling with profitability.

### 4.8.7 Multiple Linear Regression Analysis for the Board Size, Executive Compensation, Ownership Concentration, Board Oversight Functions, Risk management Practices and Information Disclosure against Return on Capital Employed

To statistically determine the relationship between the independent variables and the dependent variable, a multiple linear regression analysis was carried out.

Hypothesis for the multiple linear regression models was as follows:

H0: *β*1= *β*2= *β*3= *β*4= *β*5= *β*6=0

H1: at least one of *β*1, *β*2, *β*3, *β*4, *β*5,*β*6 is not equal to 0.

From table 4.32, the regression results show that R=0.931 and R-Square =0.867.The R-Square indicates that the explanatory power of the independent variables was 0.867. This implies that the combined effects of board size, executive compensation, ownership concentration, board oversight functions information disclosure and risk management system explains 87% of the variations in the return on capital employed of listed companies in Nigeria while the remaining 13% can be attributed to the other factors not captured in this study.

##### Table 4.32 Model Summary for Independent Variables and Dependent Variable

|  |  |
| --- | --- |
| R | R Square |
| .931a | .867 |

a. Predictors: (Constant), Board Size, Executive Compensation, Ownership Concentration, Board Oversight Functions, Risk Management System, Information Disclosure

The analysis of variance (ANOVA) test in Table 4.33 shows that the significance of the F-statistic was 0.000 which was less than 0.05 meaning that null hypothesis is rejected and conclude that there is a relationship between all independent variables jointly (board size, executive compensation, ownership concentration, board oversight functions information disclosure and risk management system) and return on capital employed.

##### 

##### Table 4.33 ANOVA for Independent Variables and Dependent Variable

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
|  | | Sum of Squares | Df | Mean Square | F | Sig. |
|  | Regression | 30255.981 | 5 | 6051.196 | 365.339 | .000b |
| Residual | 4637.702 | 280 | 16.563 |  |  |
| Total | 34893.683 | 285 |  |  |  |
| a. Dependent Variable: ROCE | | | | | | |
| b. Predictors: Board Size, Executive Compensation, Ownership Concentration, Board Oversight Functions, Risk Management System, Information Disclosure | | | | | | |

A further test on the beta coefficients of the resulting model was carried out to determine the significance of each independent variable. Board size was found to be positively correlated with the return on capital employed with beta coefficient of 0.248 and p value of 0.029 which was less than the value of 0.05. This implies that profitable listed companies in Nigeria maintained a larger board size. This result supports the findings of Wadley and Kuisi (1998) which suggests a positive relationship between the board size and profitability.

Similarly, the relationship between the board oversight functions and return on capital employed was positive and significant. The beta coefficient was 0.314 while the p-value was 0.009 which was the less that the value at 0.05. This implies that a unit increase in the independent variable board oversight functions causes 38% increase in the profitability of listed companies in Nigeria. This result was in agreement with the postulation of Bnaduri, (2003) who argued that profitability can be increased through board monitoring efforts.

Furthermore, Consistent with the findings of Tounphy (2009) on a sample of 198 listed companies in Malaysia which perceived a significant positive relationship between enterprise risk management and profitability, a positive and significant relationship was found between the risk management system and return on capital employed. The beta coefficient was 0.135 while the p-vale was 0.044 as against the value at 0.05 indicating that profitable listed companies in Nigeria maintains an adequate risk management system and thus avoided excessive risk taking during the years under consideration.

Next, it was discovered that information disclosure was perceived a significant factor for profitability in the listed companies in Nigeria. This assertion was based on the regression result where the beta coefficient was 0.479 and t- statistics was 3.976. This result was significant at 5% level of significance indicating that adequate information disclosure is required for improvement in profitability. The findings of Heflin, (2002) that obtained the measure of a firm’s disclosure for 1998 firms from AIMR and measured the stock market liquidity and profitability using two measures of liquidity; bid ask spread and depth while profitability was determine using earning per share where the result revealed that a firm with high quality of accounting information disclosure enhanced its market liquidity through reducing information asymmetries across traders and also increases its profitability through higher patronage was confirmed by this study.

Although, a positive correlation was also found between ownership concentration and return on capital employed, the relationship were insignificant. Also, a negative and insignificant relationship was found between executive compensation and return on capital employed. The coefficient for executive compensation and ownership concentration were -0.089 and 0.069 while the p-value were 0.367 and 0.473 respectively which were greater than the value at 0.05 as shown in table 4.34 thus, prompting their exclusion from the model.

In summary, the regression results based on primary data suggests that a significant relationship exists between the corporate governance mechanisms and profitability of the listed companies in Nigeria. This result was further confirmed with the use of secondary data on the same set of variables.

##### 

##### Table 4.34: Overall Regression Model Coefficients

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
|  | | Unstandardized Coefficients | | Standardized Coefficients | T | Sig. |
| B | Std. Error | Beta |
|  | Board Size | .248 | .113 | .287 | 2.196 | .029 |
| Executive Compensation | -.089 | .099 | -.093 | -0.903 | .367 |
| Ownership Concentration | .069 | .096 | .075 | 0.719 | .473 |
| Board Oversight Functions | .314 | .119 | .336 | 2.644 | .009 |
| Risk Management System  Information Disclosure | .135  .479 | .066  .122 | .155  .326 | 2.026  3.926 | .044  .000 |
| a. Dependent Variable: ROCE | | | | | | |

### 4.8.8 Optimal Model

To determine the optimal model for the relationship between the dependent variable and independent variables, the insignificant executive compensation and ownership concentration were removed from the overall model. R remained the same at 0.931 while R- Square slightly decreased to 0.866 from 0.867as shown in table 4.35.

##### Table 4.35 Model Summary for Independent Variables and Dependent Variable

|  |  |
| --- | --- |
| R | R Square |
| .931a | .866 |

a. Predictors: Board Size, Board Oversight Functions, Risk Management System, Information Disclosure

The result of analysis of variance (ANOVA) test on Table 4.36 shows that the significance of the F-statistic was 0.000 which was less than 0.05 meaning that null hypothesis is rejected and can be concluded that there is a significant relationship between all the four independent variables (excluding executive compensation and ownership concentration) jointly and return on capital employed of listed companies in Nigeria.

##### Table 4.36 ANOVA Results for Optimal Model

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
|  | | Sum of Squares | Df | Mean Square | F | Sig. |
|  | Regression | 30230.406 | 3 | 10076.802 | 609.369 | .000b |
| Residual | 4663.227 | 282 | 16.536 |  |  |
| Total | 34893.683 | 285 |  |  |  |
| a. Dependent Variable: ROCE | | | | | | |
| b. Predictors: (Constant), Board Size, Board Oversight Functions, Risk Management System | | | | | | |

After removing two of the independent variables (executive compensation and ownership concentration) from the overall model, further test on the beta coefficients of the resulting model revealed that board size, board oversight functions, risk management practices and information disclosure have a significant positive effect on the return on capital employed of listed companies in Nigeria with coefficients of 0.309, 0.383, 0.155 and 0.277 respectively.

The proposed model shows that board oversight functions (Beta = 0.383, p-value=0.000) were the most important in influencing company’s return on capital employed. This was followed by the board size (Beta=0.309, p-value=0.02) while the risk management system (Beta=0.155, p-value=0.016) was found to have the weakest influence on the return on capital employed. This implies that if weight is assigned by the management to the variables in that order, optimal profitability can be achieved by the company.

##### Table 4.37: Overall Regression Model Coefficients for Optimal Model

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| Model | | Unstandardized Coefficients | | Standardized Coefficients | T | Sig. |
| B | Std. Error | Beta |
|  | Board Size | .309 | .101 | .357 | 3.064 | .002 |
| Board Oversight Functions | .383 | .105 | .409 | 3.649 | .000 |
| Risk Management Practice  Information Disclosure | .155  .277 | .064  .094 | .175  .328 | 2.429  2.947 | .016  .001 |
| a. Dependent Variable: ROCE | | | | | | |

## 4.9 Analysis of Secondary Data

The secondary data for this analysis were extracted from the audited financial statement of the selected companies for a period of ten years. Both descriptive and inferential statistics were used in analyzing the secondary data. The results were presented in tables and figures.

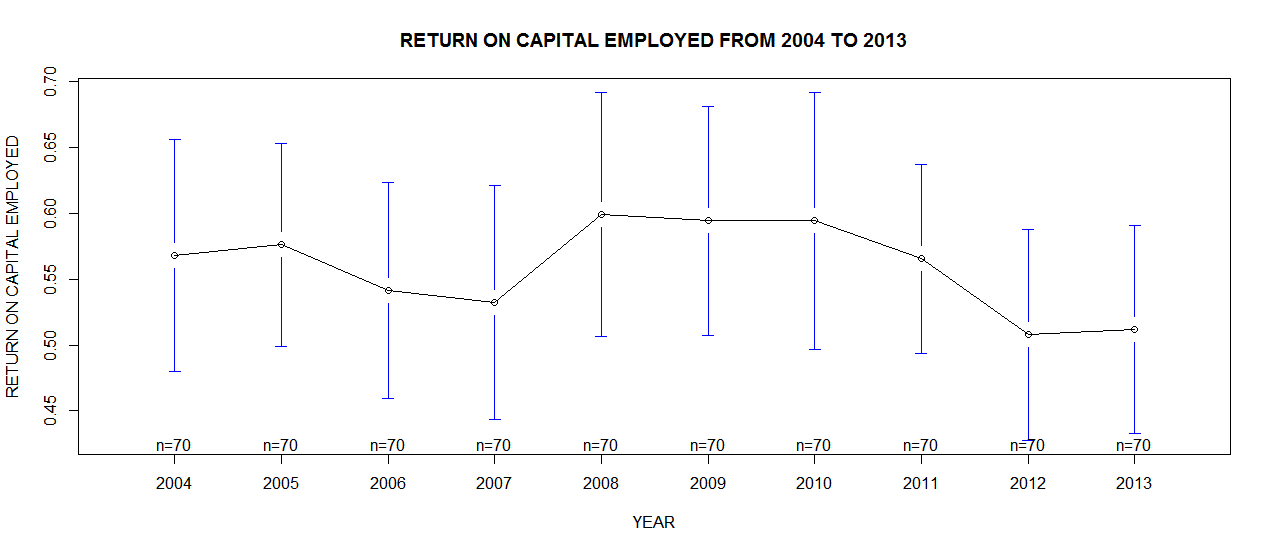
### 4.9.1 Descriptive Analysis for Secondary Data

Descriptive statistics was carried out on all the independent variables (board size, executive compensation, ownership concentration, board oversight function, risk management practices and information disclosure) and dependent variables (return on capital employed and earnings per share) using the mean of all the selected companies. The trend analysis was done for the entire company. The full data was also separated into the six sectors considered in this study. The six sectors are Banking, Food and Beverages, Healthcare, Breweries, Industrial and Domestic goods and transportation. The sectors were coded 1, 2, 3, 4, 5 and 6 respectively for the purpose of this analysis.

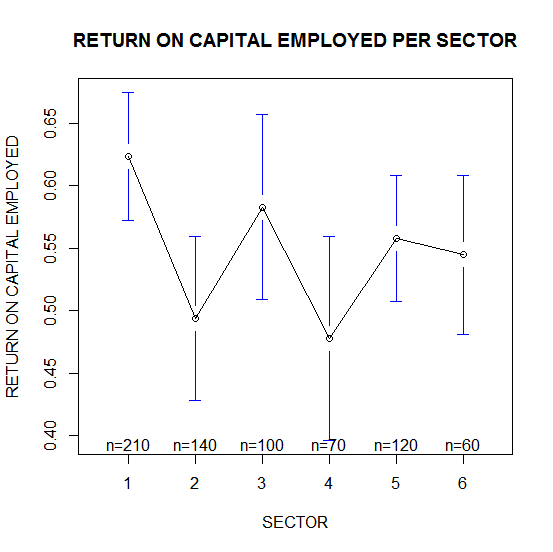
### 4.9.2 Trend Analysis for Return on Capital Employed

The results of the trend analysis for the return on capital employed on yearly basis revealed that there was a slight increase between 2004 and 2005 and a significant fall occurred from 2005 to 2007. There was another sharp rise between 2007 and 2008 and that level was maintained between 2008 and 2010 while a significant fall was also experienced between 2010 and 2012 as presented in figure 4.4. The trend however recorded a slight increase in 2013. The fall in earning per share between 2005 and 2007 can be attributed to the global financial crises which occurred within that period as well as the financial market reform that took place in Nigeria within that period. However, the positive macroeconomic policies put in place by the government might be responsible for the rise in those years following the fall.

In like manner, the trend analysis for return on capital employed for all the six sectors considered in this study was presented in figure 4.5. It can be observed from the results that the banking sector had the highest performance in terms of return on capital employed during the period under consideration while the transportation companies recorded the lowest return on capital employed. Also, it was observed that none of the sector had return on capital employed below 0.5 indicating that the companies have been performing reasonable well. Zinglermy, (2012) fixed the acceptable return on capital employed of listed companies in Taiwan at 0.4 for financial institutions, 0.3 for manufacturing companies and 0.25 for conglomerate.



#### Figure 4.4 Trend Analysis for Return on Capital Employed

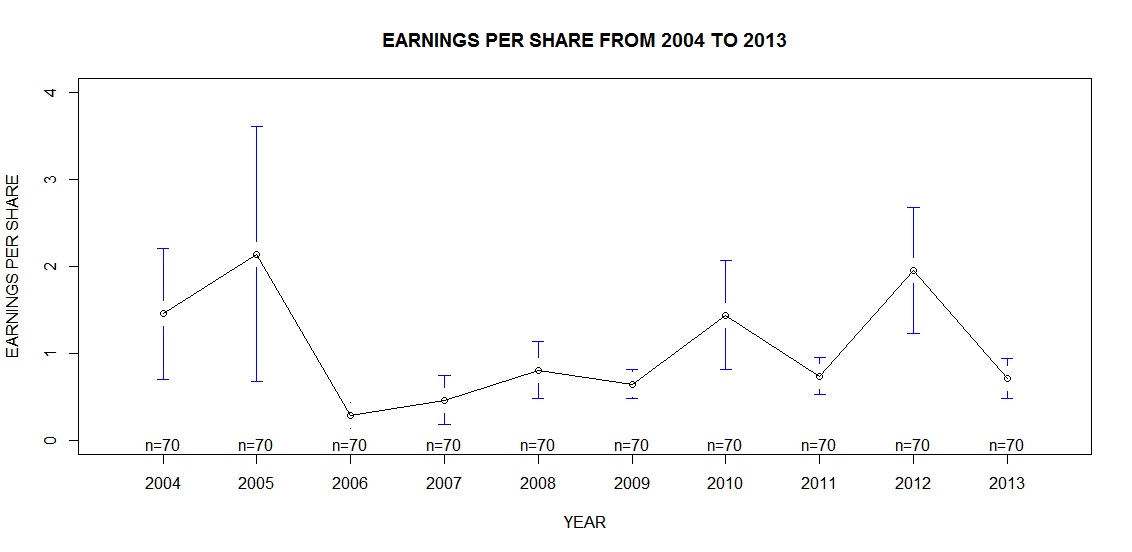


#### Figure 4.5 Sectorial Trend Analysis for Return on Capital Employed

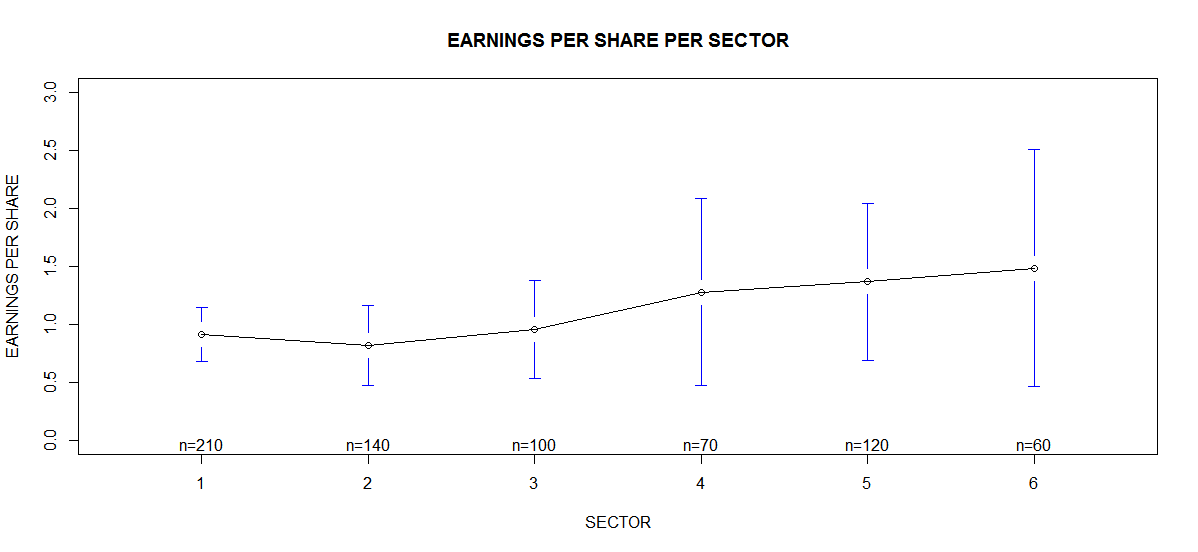
### 4.9.3 Trend Analysis for Earning per Share

The result of trend analysis on earning per share for the listed companies in Nigeria for the ten years under consideration revealed serious fluctuations. The best performance occurred in 2005 when earnings per share were slightly above #2 per share while the lowest earnings per share were paid in 2006 which was below #1 per share. Also, there was increase in earnings per share in the year 2007, 2008, 2010, and 2012. The decrease in 2006 is attributable to the merger and acquisition that took place in 2006 while the increase in the succeeding year can be attributed to the increase in the capital base of the companies after the merger and acquisition which might have led to an increase in the operation of those companies and thus, increases in their profitability.

Similarly, the trend analysis results for earnings per share in figure 4.7 for the six sectors considered in this study revealed a considerable increase in profitability as measured by earnings per share. The highest profitability during the period was recorded by the transportation companies in Nigeria, followed by the industrial and domestic products companies, breweries, health care sector and the banking sector. The lowest profitability was recorded by the food and beverages companies. It can also be observed that earnings per share of the companies range between #0.9 and #1.5 which can be considered an acceptable performance as suggested by Leundoax (2013)



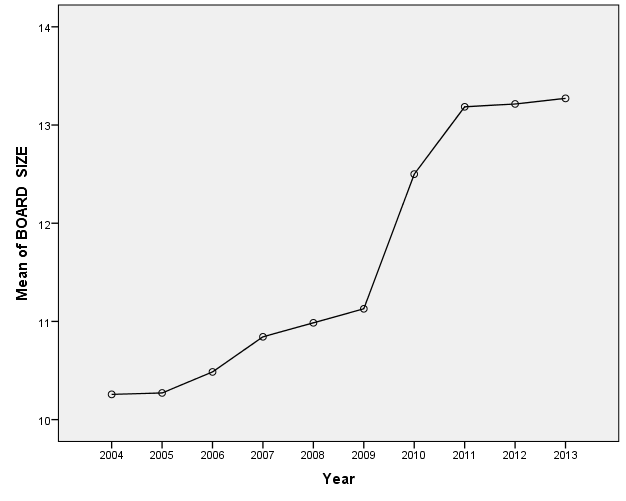
#### Figure 4.6 Trend Analysis for Earnings per Share

**Figure 4.7 Sectorial Trend Analyses for Earnings per Share**

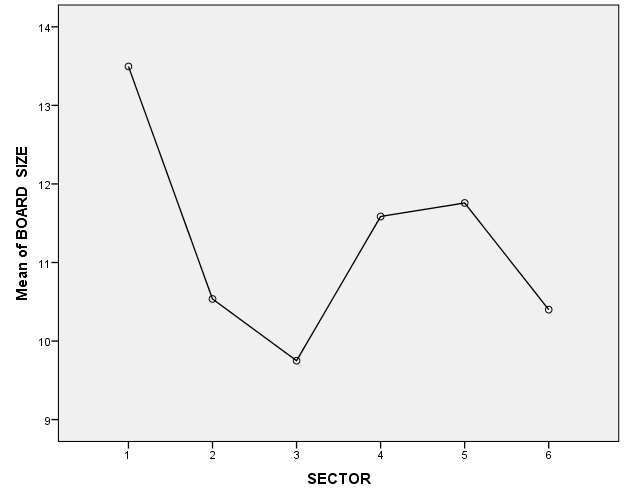
### 4.9.4 Trend Analysis for Board Size

The trend analysis for the board size shows a gradual increase in the board size of listed companies in Nigeria. The average size of the board of the listed companies between 2004 and 2008 was between 10 and 11. The size increased to 11.5 between 2008 and 2010 while the average board size rose to 13.5 2011 and that figure was maintained till 2013. This increase may be associated with OECD (2014) recommendations which advocated for larger board for effective discharge of directors’ duties. The result was presented in figure 4.8.

Also, the result of the trend analysis on board size for the six sectors considered in this study as presented in figure 4.9 revealed that listed banks have the largest number of board members than the other sectors of the economy. This can be considered reasonable considering the size of those listed banks, their capital base, staff strength and their impact on the general economy. According to Gbadamosi, Adenrele&Ojuawo, (2010), the banking sector in Nigeria serves as the major employer of labour and also contributed 33% of the total GDP in 2007. The smallest board members were found in the health sector company which is also attributable to the size of those companies.



#### Figure 4.8 Trend Analysis for Board Size

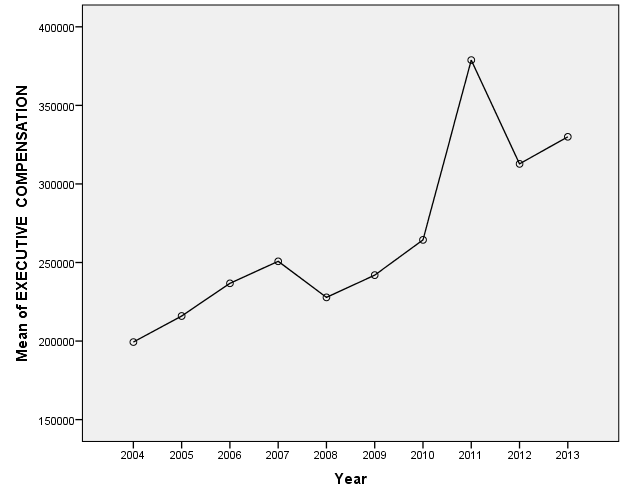


#### Figure 4.9 Sectorial Trend Analysis for Board Size

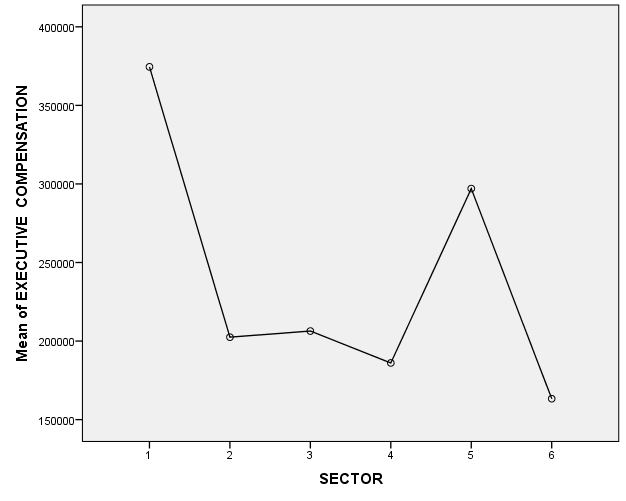
### 4.9.5 Trend Analysis for Executive Compensation

From figure 4.10, the trend analyses on executive compensation revealed that remuneration of the directors have been increasing significantly between 2004 and 2013 except in 2008 and 2012. The mean of the executive remuneration in 2004 was about 200,000,000 naira while the mean was about 400,000,000 in 2013 indicating that the remuneration of the directors has almost double within a period of nine years. It can also be observed that even the period when the companies experienced a fall in profitability there were increase in executive remuneration suggestion that executive compensation in the listed companies in Nigeria was not a function of profitability. Therefore, these results undermine the concept of agency theory which stated that directors’ interest can be aligned with that of shareholders with the use of performance based incentives (Coleman, 2007).

Furthermore, the trend analysis result on executive compensation for the six sectors considered in this study revealed that highest remuneration was paid to the directors of the listed banks in Nigeria while the directors of the transportation companies received the lowest remuneration during the period under consideration. If this to the results is related to the trend analysis result on the board size where it was revealed that banking sector have the largest board size, the results can be considered acceptable. Similarly, industrial and domestic product companies also reported higher remuneration for the executive which was consistent with their results on board size as the sector also reported an increase in board size.



#### Figure 4.10 Trend Analysis for Executive Compensation

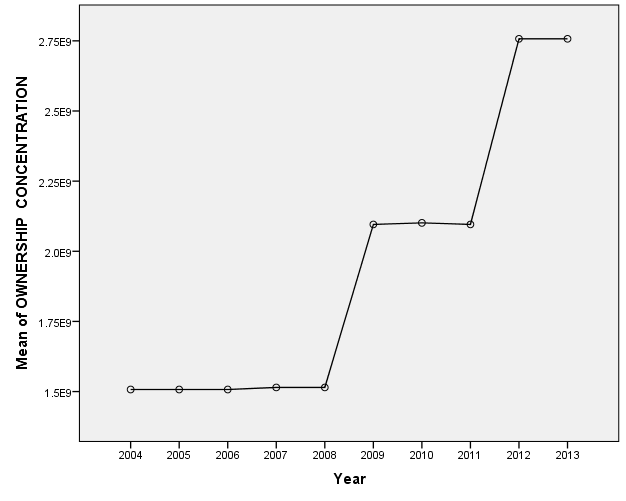


#### Figure 4.11 Sectorial Trend Analysis for Executive Compensation

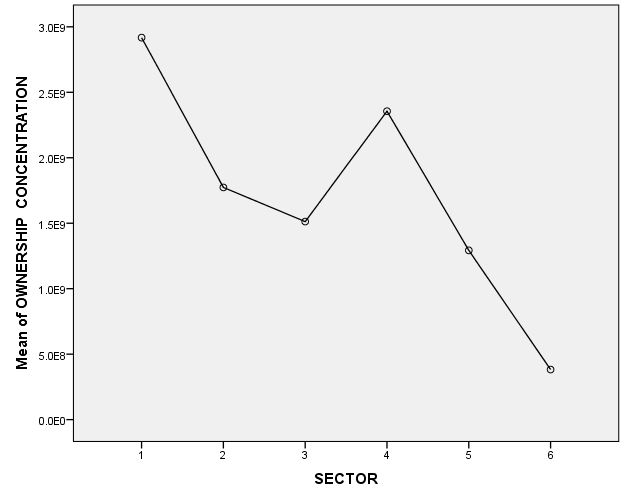
### 4.9.6 Trend Analysis for Ownership Concentration

The trend analysis result on ownership concentration for the period under consideration revealed that about 1.5% of the shares of the listed companies were owned by the largest shareholders between2004 and 2008. Between 2009 and 2011, about 2.15% of the shares of the companies under consideration were owned by the largest shareholders while about 2.75% of the shares were owned by the largest shareholders during the year 2012 and 2013. This result indicates a relative existence of ownership concentration in the ownership structure of the listed companies in Nigeria. According to Caprio and Levine (2002), ownership concentration can be established where 1% of the total stock of a company is owned by an individual or a single family, where 5% of the total stock of the company is owned by the top ten shareholders and where 10% of the total stock of a company is owned by an institution. This, in turn, implies that the family form of ownership concentration existed in the listed companies in Nigeria.

Also, the results of trend analysis on ownership concentration for the six sectors considered in this study revealed that ownership concentration was more prominent in the listed companies in Nigeria than all other sectors of the economy, followed by the listed breweries. This is evident from the trend analysis results which show that about 3% of the shares of the listed banks were owned by the largest shareholder during the years under consideration while about 2.5% of the total stocks of the listed breweries were owned by the largest shareholder of those companies. The lowest form of ownership concentration was demonstrated by the listed transportation companies in Nigeria during the years under consideration.



#### Figure 4.12 Trend Analysis for Ownership Concentration



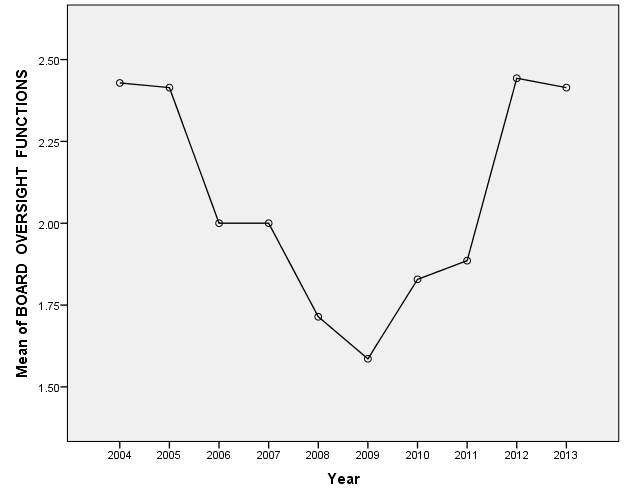
#### Figure 4.13 Sectorial Trend Analysis for Ownership Concentration

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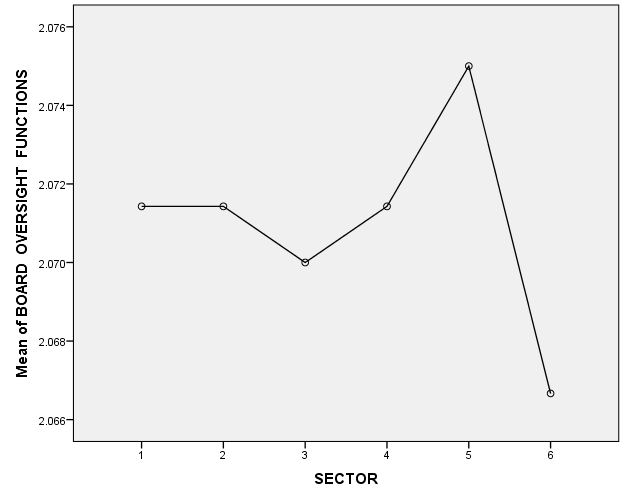
### 4.9.7 Trend Analysis for Board Oversight Functions

The board oversight function was measured using three major oversight functions of the directors which included membership of audit committee, membership of risk management committee, remuneration and human capital development committee with the use of dummy variable. For each of the committee where equal number of executive and non-executive were represented, a dummy variable of 1 was assigned to the company. The result of the trend analysis revealed that the highest mean of about 2.5 were recorded in 2004, 2005, 2012, and 2013 indicating that the board of directors serve on all the three committees during those years. Similarly, the mean for the year 2006, 2007 and 2011 was about 2.0 indicating that the board of directors was represented in two out of the three oversight committees during those years. The least mean was recorded in the year 2009 which was above 1.5 suggesting that more than half of the selected companies have their oversight functions carried out in at least two committees while very few companies probably have their oversight functions carried out in only one committee.

Similarly, the result of the trend analysis for all the six sectors considered in this study for the years under consideration revealed that the mean of all the companies’ ranges between 2.0 and 2.1 indicating that majority of the companies have their board served in at least two oversight committees. Although the law requires that they serve in three committees, but it can be inferred that board of directors of the listed companies in Nigeria performed their oversight functions during the years under consideration since majority of the companies scored far above the average.



#### Figure 4.14 Trend Analysis for Board Oversight Functions

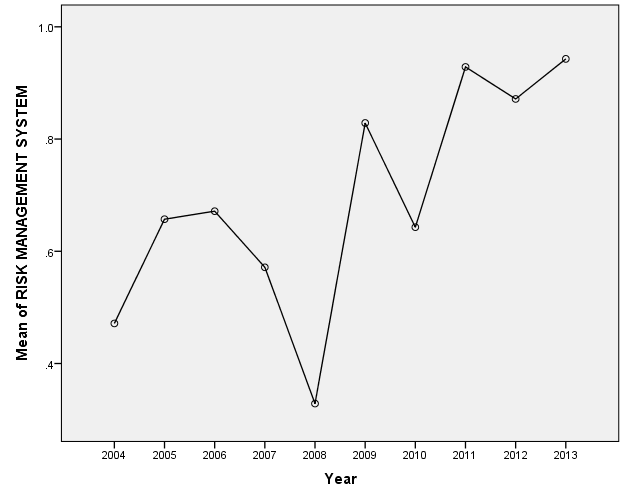


#### Figure 4.15 Sectorial Trend Analysis for Board Oversight Functions

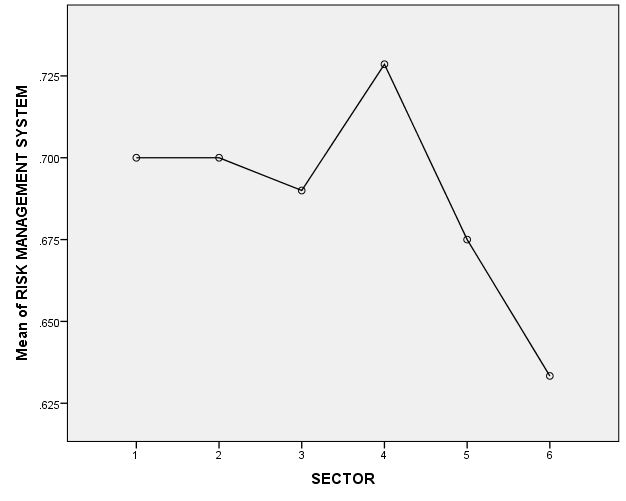
#### 4.9.8 Trend Analysis for Risk Management Practices

The risk management analysis of the listed companies in Nigeria was measured with the use of dummy variable where companies who operated within the companies risk limit during the period were assigned 1 point while those who operated outside the risk limit were given 0 point. The result as presented in figure 4.16 revealed that majority of the companies considered for this analysis operated within the companies’ risk limit in the years 2009, 2011, 2012 and 2013 as those years produced a mean of about1.0 while other years were below 1.0 suggesting that the listed companies in Nigeria operated outside their risk limit during those years. This result was in line with that of Alonge (2011) who attributed the failure of listed financial institutions in Nigeria during 2005-2009 to excessive risk taking.

Also, the trend analysis results for all the six sectors considered in this study revealed that the highest mean was found in the listed breweries suggesting that the listed breweries have put in place an adequate risk management system and also operated within the companies’ risk limit during the year under consideration. It was also observed that the transportation companies in Nigeria reported the lowest mean for risk management system indicating that transportation companies were involved in excessive risk taking during the years under consideration. The risk management system of the listed banks, food and beverages and health care sector can be considered satisfactory with a mean of close to 1 point meaning that they also maintained a low appetite for risk taking during the period studied.



#### Figure 4.16 Trend Analysis on Risk Management System

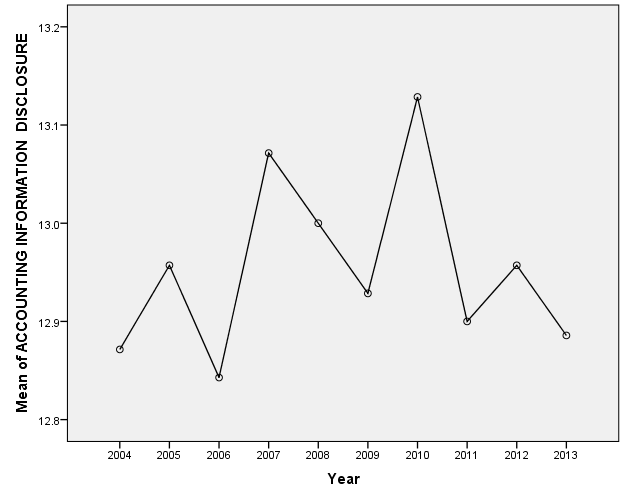


#### Figure 4.17 Sectorial Trend Analysis for Risk Management System.

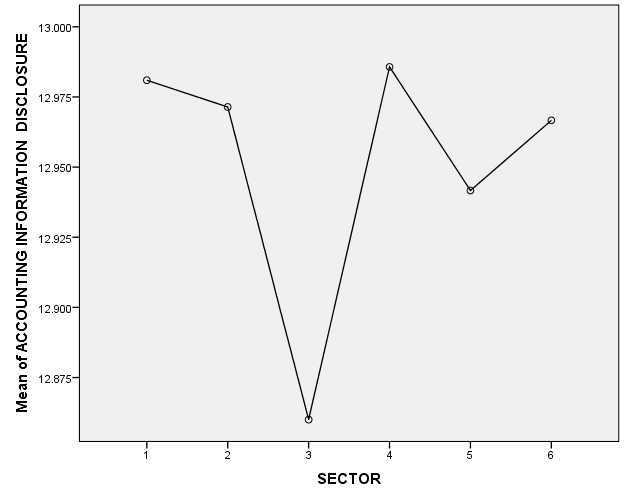
### 4.9.9 Trend Analysis for Information Disclosure

Trend analysis was carried out for ten years using the mean of the 70 companies considered in this study to determine the volume of information disclosed on yearly basis by the listed companies in Nigeria. The result presented in figure 4.18 revealed that the highest disclosure of information occurred in the year 2011. This is attributable to the adoption of international financial reporting standard by the listed companies in Nigeria which took effect in december 2011.

Furthermore, trend analysis was also carried out using the six sectors considered for this study to determine the volume of information disclosed by each of the sector during the years under consideration. The results as presented in figure 4.19 shows that the brewery sector disclosed the highest volume of information compare to the other sectors. The lowest volume of information was disclosed by the healthcare sector in comparison to the other sectors investigated in this study.



#### Figure 4.18 Trend Analyses for Accounting Information Disclosure per Year



#### Figure 4.19 Trend Analysis for Accounting Information Disclosure per Sector

## 4.10 Test of Assumption

The secondary data were subjected to three ordinary least square assumptions to determine the suitability of the data before accepting it for data analysis. These assumptions are autocorrelation, homoscedasticity and multicolinearity. Durbin-Watson statistic was used to test for autocorrelation. The test for homoscedasticity was done with the use of Bruish-Pagan test while multicolinearity assumption was tested with the correlation matrix. The justification for the choice of those test were already done in chapter three.

### 4.10.1 Test for Autocorrelation-Durbin Watson Statistic for Return on Capital Employed

Durbin Watson Statistic was conducted to test for autocorrelation in the secondary data before accepting it for regression analysis. According to Kothari and Garg, (2014), Autocorrelation occurs when the residuals are not independent from each other. In other words, when the value of y(x+1) is not independent from the value of y(x). Therefore, the null hypothesis that there was no autocorrelation in the data collected for this study was tested with use of Durbin Watson Statistics. The results as presented in table 4.38 revealed that the Durbin Watson Statistics for lag 1 was 1.835524 with a p-value of 0.245 while the Durbin Watson Statistics for lag 2 and 3 were 1.883643 and 1.843001 with a p-value of 0.386 and 0.130 respectively. Since the p-value was greater than 0.05, the null hypothesis which stated that there was no autocorrelation in the data was not rejected.

This implies that the residuals were independent from each other. Similarly, the result satisfied the rule of thumb which states that values of 1.5 < d < 2.5 show that there is no auto-correlation in the data (Barley, 2009). It can therefore be said that the return on capital employed for year 2005 was not a function of return on capital employed for the year 2004. Return on capital employed for 2006 was also not a function of return on capital employed for 2005 and soon.

##### Table 4.38 Durbin Watson Statistics for Autocorrelation

Lag D.W Statistics P-Value

# 1 1.835524 0.245

2 1.896343 0.386

3 1.843001 0.130

### 4.10.2 Test for Autocorrelation-Durbin Watson Statistic for Earnings per Share

To test for autocorrelation in the data collected for earnings per share, Durbin Watson Statistic was conducted. According to Kothari and Garg, (2014), Autocorrelation occurs when the residuals are not independent from each other. In other words, when the value of y(x+1) is not independent from the value of y(x). Therefore, the null hypothesis that there was no autocorrelation in the data collected for this study was tested with use of Durbin Watson Statistics. The results as presented in table 4.39 revealed that Durbin Watson Statistics for lag 1 was 2.201917 with a p-value of 0.062 while the Durbin Watson Statistics for lag 2 and 3 were 2.141619 and 1.987443 with a p-value of 0.132 and 0.946 respectively. Since the p-value was greater than 0.05, the null hypothesis which stated that there was no autocorrelation in the data was taken to hold.

The result implies that the residuals were independent from each other. Similarly, the rule of thumb which states that values of 1.5 < d < 2.5 show that there is no auto-correlation in the data was satisfied by this result (Barley, 2009). It can therefore be said that earnings per share for year 2005 was totally independent from earnings per share for the year 2004. Earnings per share for 2006 was also totally independent from earnings per share for 2005 and soon.

##### Table 4.39 Durbin Watson Statistics for Autocorrelation

Lag D.W Statistics P-Value

# 1 2.201917 0.062

2 2.141619 0.132

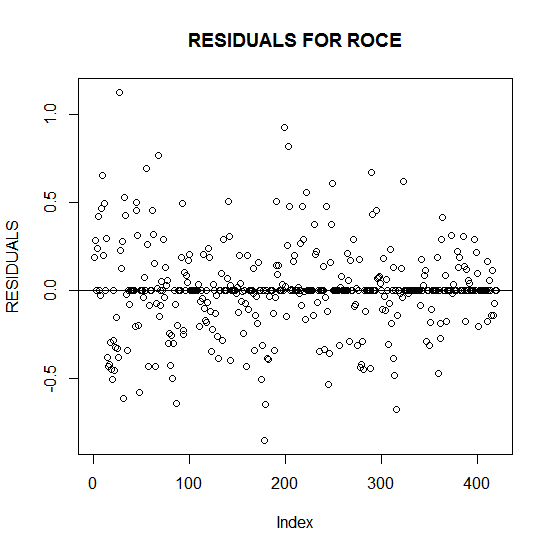
3 1.987443 0.946

### 4.10.3 Test for Homoscedasticity- Bruisch Pagan Statistics for Return on Capital employed

One of the assumptions of linear regression analysis tested in this study was homoscedasticity which implies that the error terms along the regression line were equal. According to Barley (2009), the violation of homoscedasticity which is otherwise known as heteroscedasticity make it difficult to gauge the true standard deviation of the forecast errors, usually resulting in confidence intervals that are too wide or too narrow. Particularly, if there is increase in the variance of the error term over time, confidence intervals for out-of-sample predictions will tend to be unrealistically narrow. In that case, heteroscedasticity may also have the effect of giving too much weight to a small subset of the data (namely the subset where the error variance was largest) when estimating coefficients. Thus, to prevent such scenario when conducting a research, it is expedient to test for homoscedasticity before carrying out a regression analysis. Therefore, this study tested the null hypothesis that the data collected was homoscedastic in variance using Bruisch pagan test. The result of the test presented in table 4.40 and figure 4.20 revealed that the test statistics was 205.9717 while the p-value was 1 indicating that the data collected was not heteroscedastic in variance and thus necessitating the acceptance of null hypothesis that the data collected was homoscedastic in variance and can be relied on for regression analysis.

##### Table 4.40 Bruisch Pagan Test for Homoscedasticity

| Test Statistics Degree of Freedom | P-Value |
| --- | --- |
| 205.9717 5 | 1.000 |



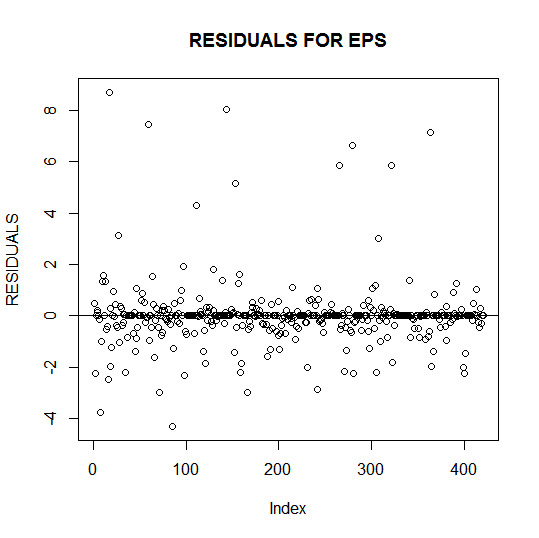
#### Figure 4.20 Residual Plot for Return on Capital Employed

### 4.10.4 Test for Homoscedasticity- Bruisch Pagan Statistics for Earnings per Share

One of the assumptions of linear regression analysis tested in this study was homoscedasticity which implies that the error terms along the regression line were equal. According to Barley (2009), the violation of homoscedasticity which is otherwise known as heteroscedasticity make it difficult to gauge the true standard deviation of the forecast errors, usually resulting in confidence intervals that are too wide or too narrow. Particularly, if there is increase in the variance of the error term over time, confidence intervals for out-of-sample predictions will tend to be unrealistically narrow. In that case, heteroscedasticity may also have the effect of giving too much weight to a small subset of the data (namely the subset where the error variance was largest) when estimating coefficients. Thus, to prevent such scenario when conducting a research, it is expedient to test for homoscedasticity before carrying out a regression analysis. Therefore, this study tested the null hypothesis that the data collected was homoscedastic in variance using Bruisch pagan test. The result of the test presented in table 4.41 and figure 4.21 revealed that the test statistics was 162.6865 while the p-value was 0.98 indicating that the data collected was not heteroscedastic in variance and thus necessitating the acceptance of null hypothesis that the data collected was homoscedastic in variance and can be relied on for regression analysis.

##### Table 4.41 Bruisch Pagan Test for Homoscedasticity

| Test Statistics Degree of Freedom | P-Value |
| --- | --- |
| 162.6865 5 | 0.98 |



#### Figure 4.21 Residual Plots for Earnings per Share

### 4.10.5 Test for Multicolinearity- Correlation Matrix for Return on capital Employed

Correlation matrix is used to determine the extent to which changes in the value of an attribute is associated with changes in another attribute. The correlation coefficient according to Kothari and Garg (2014) can range from -1 to +1, with -1 indicating a perfect negative correlation, +1 indicating a perfect positive correlation, and 0 indicating no correlation at all. As shown in table 4.42, there was a significant positive correlation between return on capital employed and board size at 0.552, there was also a strong positive correlation between return on capital employed and ownership concentration at 0.503. Similarly, there existed a significant positive correlation between return on capital employed and board oversight functions at 0.494 as well as return on capital employed and accounting information disclosure at 0.544. The relationship between return on capital employed and executive compensation on the hand was found to be negatively significant at -0.563. Finally, the correlation between return on capital employed and risk management practices was moderate at 0.404

Also from table 4.42, all the independent variables were found to have a positive correlation with one another except executive compensation that was found to be negatively correlated with the other independent variables as well as the dependent variable. The highest correlation was found between the board size and ownership concentration at 0.561, followed by the correlation between ownership concentration and board oversight functions at 0.549 and accounting information disclosure and board oversight functions at 0.528. The relationship between the ownership concentration and accounting information was moderate at 0.432. The lowest correlation existed between the risk management system and other independent variables.

According to Wong and Hiew (2005), the correlation coefficient value (r) ranging from 0.10 to 0.29 can be considered weak. Also, the correlation coefficient from 0.30 to 0.49 can be considered moderate while the correlation from 0.50 to 1.0 can be considered strong. In like manner, Field (2005) stated that correlation coefficient should not go beyond 0.8 to avoid multicolinearity. Thus, it can be concluded that there was no multicolinearityproblem in this study since the highest correlation coefficient was 0.561existing between the board size and ownership concentration.

### Table 4.42 Pearson Correlation Matrix

|  |
| --- |
| ROCE BS OC EC BOF RMS ID |

ROCE. Pearson Correlation 1

Sig. (2-tailed)

N 700

BS Pearson Correlation .552\*\* 1

Sig. (2-tailed) .000

N 700 700

OC Pearson Correlation .503\*\* .561\*\* 1

Sig. (2-tailed) .000 .000

N 700 700 700

EC Pearson Correlation -.563\*\*  -.367\*  -.509\*\* 1

Sig. (2-tailed) .000 .000 .000

N 700 700 700 700

BOF Pearson Correlation .522\*\* .549\*\*  .426\*\*  -.477\*\* 1

Sig. (2-tailed) .000 .000 .000 .000

N 700 700 700 700 700

RMP Pearson Correlation .404\*\*. 215\*\*  .208\*\* -.111\*\* .216\*\*  1

Sig. (2-tailed) .000 .000 .007 .000 .000

N 700 700 700 700 700 700

ID Pearson Correlation .544\*\* .466\*\* .432\*\* -.473\*\* .528\*\* .487\*\*  1

Sig. (2-tailed) .000 .000 .000 .000 .000 .009

N 700 700 700 700 700 700 700

|  |
| --- |
| \*\*Correlation is significant at the 0.01 level of significance (2-tailed). |

## \* ROCE- Return on Capital Employed, BS- Board Size, OW- Ownership Concentration, EC- Executive Compensation, BOF- Board Oversight Functions, RMS- Risk Management Practices, ID- Information Disclosure

# 4.10.6 Test for Multicolinearity- Correlation Matrix for Earnings per Share

This result and discussion of the correlation analysis between corporate governance mechanisms and earnings per share was presented in this section. To identify the relationship among the variables of corporate governance mechanisms and earnings per share Pearson correlation coefficients were used. The correlation coefficients show the extent and direction of the linear relationship between corporate governance variables and earnings per share of listed companies in Nigeria. The correlation analysis has two sub-sections. The first sub-section shows the relationship between earnings per share and corporate governance mechanisms. The second sub-section shows the relationship among corporate governance mechanisms.

Below in table 4.43, there was a significant positive correlation between earnings per share and board size at 0.681, there was also a strong positive correlation between earnings per share and ownership concentration at 0.611. Similarly, there existed a significant positive correlation between earnings per share and board oversight functions at 0.539 as well as earnings per share and accounting information disclosure at 0.517. The relationship between earnings per share and executive compensation on the hand was found to be negatively significant at -0.592. Finally, the correlation between earnings per share and risk management practices was moderate at 0.451

Similarly, in table 4.43, all the independent variables were found to have a positive correlation with one another except executive compensation that was found to be negatively correlated with the other independent variables as well as the dependent variable. The highest correlation was found between the board oversight functions and information disclosure at 0.695, followed by the correlation between ownership concentration and board oversight functions at 0.567 and information disclosure and board size at 0.533. The relationship between the board size and ownership concentration was moderate at 0.421. The lowest correlation existed between the risk management system and other independent variables.

As suggested by Wong and Hiew (2005), the correlation coefficient value (r) ranging from 0.10 to 0.29 can be considered weak. Also, the correlation coefficient from 0.30 to 0.49 can be considered moderate while the correlation from 0.50 to 1.0 can be considered strong. In like manner, Field (2005) stated that correlation coefficient should not go beyond 0.8 to avoid multicolinearity. Thus, it can be concluded that there was no multicolinearityproblem in this study since the highest correlation coefficient was 0.695 existing between the board oversight functions and information disclosure.

## Table 4.43 Pearson Correlation Matrix

|  |
| --- |
| EPS BS OC EC BOF RMS ID |

EPS. Pearson Correlation 1

Sig. (2-tailed)

N 700

BS Pearson Correlation .681\*\* 1

Sig. (2-tailed) .000

N 700 700

OC Pearson Correlation .611\*\* .421\*\* 1

Sig. (2-tailed) .000 .000

N 700 700 700

EC Pearson Correlation -.592\*\*  -.468\*  -.510\*\* 1

Sig. (2-tailed) .000 .000 .000

N 700 700 700 700

BOF Pearson Correlation .539\*\* .341\*\*  .567\*\*  -.428\*\* 1

Sig. (2-tailed) .000 .000 .000 .000

N 700 700 700 700 700

RMP Pearson Correlation .517\*\*.318\*\*  .266\*\* -.209\*\* .275\*\*  1

Sig. (2-tailed) .000 .000 .007 .000 .000

N 700 700 700 700 700 700

ID Pearson Correlation .451\*\* .533\*\* .502\*\* -.413\*\* .695\*\* .459\*\*  1

Sig. (2-tailed) .000 .000 .000 .000 .000 .009

N 700 700 700 700 700 700 700

|  |
| --- |
| \*\*Correlation is significant at the 0.01 level of significance (2-tailed). |

## \* ROCE- Return on Capital Employed, BS- Board Size, OW- Ownership Concentration, EC- Executive Compensation, BOF- Board Oversight Functions, RMS- Risk Management Practices, ID- Information Disclosure

### 4.11.1 Multiple Linear Regression Analysis for Return on Capital Employed and Corporate Governance Mechanisms

For further explanation of the relationship between the dependent variable and independent variables, regression analysis was carried out. The results of regression analyses presented in table 4.44 revealed a significant association between the indicators of profitability (Return on Capital Employed) adopted in this study and most corporate governance mechanisms. Specifically, four corporate governance mechanisms were found to be statistically significant with profitability of listed companies in Nigeria. R Squared of the regression model was 0.679 indicating that 68% of the changes in profitability were explained by the changes in board size, executive compensation, ownership concentration, board oversight functions, risk management practices and information disclosure while the remaining 32% of the variations were caused by other variables not captured in this study. The value of R Squared is considered acceptable in comparison to the findings of previous corporate governance literatures. For example, the reported R Squared is comparable to that of Halme and Huse (1997) as 21.2%, Peters and Romi (2011) as 25% and Post (2011) as 24%.

##### Table 4.44 Model Summary on Return on Capital Employed and Corporate Governance Mechanisms

|  |  |
| --- | --- |
| R | R Square |
| .824a | .679 |

1. Predictors: (Constant), Board Size, Executive Compensation, Ownership Concentration, Board Oversight Functions, Risk Management System, information disclosure.

The result of analysis of variance (ANOVA) test on Table 4.45 revealed that the significance of the F-statistic was 0.000 which was less than 0.05 meaning that null hypothesis is rejected and can be concluded that there is a significant relationship between all the independent variables jointly and profitability (return on capital employed) of listed companies in Nigeria.

##### Table 4.45 ANOVA for Independent Variables and Return on Capital Employed

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
|  | | Sum of Squares | Df | Mean Square | F | Sig. |
|  | Regression | 127.053 | 5 | 25.411 | 175.939 | .000b |
| Residual | 59.938 | 695 | .144 |  |  |
| Total | 186.991 | 700 |  |  |  |
| a. Dependent Variable: ROCE | | | | | | |
| b. Predictors: Board Size, Executive Compensation, Ownership Concentration, Board Oversight Functions, Risk Management System, Information Disclosure | | | | | | |

Further test on the beta coefficients of the resulting model revealed that board size was positively correlated with return on capital employed of listed companies in Nigeria indicating that the higher the size of the board the higher the profitability. The beta coefficient was 0.031while the t-statistic and p-value were 7.424 and 0.000 respectively suggesting that the relationship was significant at 1% level of significance. While this result is contrary to expectation, it suggests that where companies practice larger board, they mitigate the agency problems associated with management undertaking activities that maximize their interest at the expense of shareholders and there was efficient utilization of shareholders fund through monitoring exercise by the board. Another possible explanation for this finding may be the availability of competent skill and resources needed for the company’s expansion associated with large board size. Similarly, evidence of a positive association between board size and profitability was also documented by Cormier, (2011).

Board oversight functions have a significant positive association with profitability at 1% level of significant revealed by the beta coefficient of 0.056, t-statistics = 2.468 and p-value of 0.014. This result can be interpreted in the context of the security and exchange commission code of corporate governance framework which states that where board perform an oversight functions through membership of company’s oversight committees such as audit committee, risk management committee, human capital and remuneration committee, the company is properly managed which leads to effective deployment of company’s resources into activities that maximizes the shareholders value. This view was shared by Xie (2003) who posited that an increasing board activity, represented by committee membership influences the board's ability to act as an effective monitoring mechanism in mitigating agency conflicts. Increased monitoring is expected to result in reduced information asymmetry and lower agency costs, thereby increasing profitability (Nelson, 2010).

The regression results also reveal a significant positive relationship between the risk management system and return on capital employed. The result was supported by the beta coefficient of 0.1002 and t-statistics of 2.386 with p-value of 0.007. The positive relationship was in the expected direction, suggesting that companies who operated within their risk limit as put in place by the board have the potential to earn higher returns on capital employed than those with aggressive appetite for risk taking. According to Brammer and Pavelin (2006), businesses face many risks; therefore risk management should be a central part of any business' strategic management. The Organization for Economic Cooperation and Development (OECD) has also pointed failures in risk management as the most important cause of the financial crisis for many public companies and noted that this failure was attributed to weaknesses in corporate governance more than to defaulting risk assessment or risk models. This result was consistent with the findings of Brammer and Pavelin (2006) and Cormier (2005), which provide evidence of significant association of risk management system with profitability of quoted companies.

With regard to the disclosure of information, consistent with the results of primary data, it was discovered that higher profitability is associated with adequate disclosure of information.The estimated coefficient for this variable was 0.344 and is significant at 5% level of significance. The estimated coefficient indicates that the return on capital employed for firms who disclosed adequate information are, on average, about 34% higher than those with inadequate information disclosure. The interpretation of this result is from signaling theory that argues that the existence of information asymmetry can also be taken as a reason for good companies to use financial information to send signals to the market and thus attract investment for expansion and better performance (Ross, 1977). The result supports that of Morris, (1987) who reported that information disclosed by managers to the market reduces information asymmetry and is interpreted as a good signal by the market and therefore, higher profitability is expected.

However, for the other corporate governance mechanisms considered in this study such as executive compensation and ownership concentration, no significant relationship was found in relation to the returned on capital employed. Nevertheless, the insignificant relationship of return on capital employed with executive compensation was reported by most of the existing literatures on corporate governance (Hackston& Milne, 1992; Adams, 1998; Peters and Romi, 2011). The results on ownership concentration and return on capital employed was also in conformity with previous studies (Brammer&Pavelin, 2006; Cormier, 2011; Cormier, 2005; Deegan& Gordon, 1996).

##### Table 4.46 Coefficient for Independent Variables and Return on Capital Employed

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
|  | | | | | | |
|  | | Unstandardized Coefficients | | Standardized Coefficients | T | Sig. |
| B | Std. Error | Beta |
|  | Board Size | .031 | .004 | .589 | 7.424 | .000 |
| Executive Compensation | -3.885 | .000 | -.035 | -1.074 | .283 |
| Ownership Concentration | .2.191 | .000 | .013 | 0.388 | .698 |
| Board Oversight Functions | .056 | .023 | .176 | 2.468 | .014 |
| Risk Management Practice  Information Disclosure | .1002  .344 | .042  .118 | .185  .457 | 2.386  2.891 | .007  .000 |
| a. Dependent Variable: Return on Capital Employed | | | | | | |

### 4.11.2 Multiple Linear Regression Analysis for Earnings per Share and Independent Variables

To further assess the relationship between corporate governance mechanisms and profitability, regression analysis was carried out using another profitability indicator, earnings per share. The results of regression analyses presented in table 4.47 revealed a significant relationship between the indicators of profitability (Earnings per Share) adopted in this study and most corporate governance mechanisms. Specifically, five corporate governance mechanisms were found to be statistically significant with earnings per share of listed companies in Nigeria four of which were in positive direction while the fourth variable has a negative relationship with the profitability indicator. R Squared of the regression model was 0.861 indicating that 86% of the changes in profitability were explained by the changes in board size, executive compensation, ownership concentration, board oversight functions, risk management practices and information disclosure while the remaining 14% of the variations were caused by other variables not captured in this study. The value of R Squared was considered acceptable in comparison to the findings of previous corporate governance literatures which includes Halme and Huse (1997) as 21.2%, Peters and Romi (2011) as 25% and Post (2011) as 24%.

### Table 4.47 Model Summary on Earnings per Share and Independent Variables

|  |  |
| --- | --- |
| R | R Square |
| .928a | .861 |

a. Predictors: Board Size, Executive Compensation, Ownership Concentration, Board Oversight Functions, Risk Management System, Information Disclosure

The result of analysis of variance (ANOVA) test on Table 4.48 revealed that the significance of the F-statistic was 0.000 which was less than 0.05 meaning that null hypothesis is rejected and can be concluded that there is a significant relationship between all the independent variables jointly and profitability (earnings per share) of listed companies in Nigeria.

## Table 4.48 ANOVA for Independent Variables and Earnings per Share

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
|  | | Sum of Squares | Df | Mean Square | F | Sig. |
|  | Regression | 440.812 | 5 | 88.162 | 24.155 | .000b |
| Residual | 1514.718 | 695 | 3.650 |  |  |
| Total | 1955.530 | 700 |  |  |  |
| a. Dependent Variable: Earnings per Share | | | | | | |
| b. Predictors: Board Size, Executive Compensation, Ownership Concentration, Board Oversight Functions, Risk Management System, Information Disclosure | | | | | | |

From the results ofbeta coefficients, board size was positively correlated with earnings per share. The coefficient was 0.335 while the t-statistics and p-value were 15.509 and 0.000 respectively. This implies that an increase in board size by one unit leads to an increase in the profitability (earnings per share) of listed companies in Nigeria by 34%. The findings agreed with that of Ahmadu, Aminu and Tukur (2005), results on corporate governance mechanism and firm financial performance in Nigeria for a sample of 93 firms quoted on the Nigerian Stock Exchange for the period 1996–1999 which made a case for an expansion of board size to a minimum of ten.

Similarly, the beta coefficient on board oversight functions was positive and significant at 1% level of significance. The coefficient was 0.162 while the t-statistics and p-value were 12.462 and 0.000 respectively. Thus, adequate board oversight functions were associated with an increase in profitability (earnings per share) of the listed companies in Nigeria by 16%. This results was in line with Claessens et al. (2003) that posits that effective board oversight functions benefit firms through greater access to financing, lower cost of capital, better profitability and more favorable treatment of all stakeholders.

In like manner, the results of beta coefficient on risk management system also revealed that a significant relationship existed between profitability (earnings per share) and risk management system of listed companies in Nigeria. For instance, the beta coefficient was 0.079 indicating the 7% of the variation in the profitability can be attributed to the company’s management of various aspect of risk confronting the business. The t-statistic was 4.638 and p-value was 0.000 which was less that the acceptable value of 0.05. This result was in affirmative with the postulation of Hackston& Milne, (1992) that as investors look for emerging economies to diversify their investment portfolios to maximize returns, they are equally concerned about governance factors to minimize risks in these economies. Also, Clark theory of profitability link company’s profitability to the willingness of the management to work within the limit of their authority and risk appetite as provided by the governance structure (Ohlson, 1995).

Accordingly, the result of beta coefficient for the relationship between information disclosure and profitability (earnings per share) was 0.301and significant at 5% level of significance. The economic magnitude is slightly lower that what was obtained for the return on capital employed but still meaningful. In essence, this result also support the conjecture that by the signaling theory that having adequate information in the financial statement contributed to the profitability of the firm. The results also provides an evidence that a reduction in information asymmetry could offer equal opportunities to both large and small shareholders in accessing information, which may help in reducing agency problems, the cost of capital and agency cost (Morris, (1987); Hearn, (2011); Sharma, (2013).

In addition, a significant negation relationship was found between earnings per share and executive compensation of listed companies in Nigeria as beta coefficient was -0.094 and t- statistic was 2.611 indicating that as executive compensation increases, profitability also decreases. This result was not unimaginable because executive remuneration is an expense which is meant to increase the overall cost of the company and adversely reduce the profitability, thus the submission of Ayinde (2006) that profit can be improved by cost reduction can be upheld. Sunny and Ridges (1999) presented similar results in a study of relationship between executive directors remuneration and firm value where the performance based compensation was recommended.

Ownership concentration revealed no significant relationship with profitability. This result can be interpreted in the context of agency theory which identified the overbearing controlling effect of the major shareholder on the management as the major peril of ownership concentration. Demsetz and Lehn (1985) also found no relationship between ownership concentration and firm performance while, a weak positive relationship was found between corporate governance practices and profitability by Al-Razeen and Karbhari (2004), Haniffa and Hudaib (2007) in a study conducted on a sample of Saudi Arabia listed companies.

## Table 4.49 Coefficient for Earnings per Shares and Corporate Governance Variables

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
|  | | | | | | |
| Model | | Unstandardized Coefficients | | Standardized Coefficients | T | Sig. |
| B | Std. Error | Beta |
|  | Board Size | .335 | .012 | .269 | 27.917 | .000 |
| Executive Compensation | -.094 | .036 | -.461 | -2.611 | .000 |
| Ownership Concentration | 8.503 | .000 | .016 | 0.310 | .757 |
| Board Oversight Functions | .162 | .013 | .797 | 12.462 | .000 |
| Risk Management Practice  Information Disclosure | .079  .301 | .017  .122 | .185  .217 | 4.638  2.467 | .000  .001 |
| a. Dependent Variable: Earnings per Share | | | | | | |

## 4.12 Comparison of Primary Data Result with Secondary Data Result

In this study, two sets of data were collected. The primary data which was collected with the use of questionnaire and secondary data that were extracted from the audited financial statements of the selected companies were both used for the analysis. The results obtained from the descriptive and inferential analysis for both primary and secondary data for each variable were compared to show whether there is agreement or divergence between the two results.

### 4.12.1 Comparison of Descriptive Results

The descriptive statistic results on profitability for the primary data confirmed that profitability of listed companies in Nigeria has witnessed an increase in the last five years. The descriptive results for secondary data revealed that the two measures of profitability (return on capital employed and earnings per share) witnessed a relative increase during the period under consideration. However, an insignificant fall in return on capital employed was experience in 2012 while a slight fall in earnings per share was also experience by the companies in 2013. Thus, it can be concluded that the descriptive result on profitability for primary and secondary data were in agreement.

The descriptive statistics for board size shows a considerable level of agreement for both primary and secondary data. This conclusion was drawn from the results of primary data which revealed that more than 70% of the respondents agreed that the size of the board of listed companies in Nigeria has increased in recent time as well as the trend analysis result for the secondary data which shows that the size of the board members of an average company in Nigeria rose from eight members in 2004 to thirteen members in 2013. While this can be considered an improvement of on board practices by the listed company in Nigeria, it can also signal danger to the company because it is generally believed that a board composed of more than 12 directors is too large to have an effective decision-making and to encourage personal involvement in monitoring (Yermack, 1996).

Furthermore, the descriptive statistics for executive compensation produced divergent results between the primary and secondary data. From the primary data, majority of the respondents agreed that performance based compensation of the executives is being used as a form of remuneration for the directors of listed companies in Nigeria whereas the descriptive analysis of the secondary data revealed an upward movement of executive compensation for a period of ten years including those years a significant fall was witnessed in profitability. If executive compensation was based on performance, a reduction should have also occurred in those years when the companies experience a reduction in profitability.

It was affirmed from the descriptive results for primary data that the buck of the shares of the listed companies in Nigeria were owned by the few individual or families which was in agreement with the secondary data results which shows that the family form of ownership concentration was prominent in the listed companies in Nigeria for the period under consideration. Although, a significant reduction in the magnitude of concentration between 2011 and 2013, the results still suggest a weakness in this aspect of corporate governance as it being practiced presently in the Nigerian listed companies

In like manner, a consistent result was obtained for the board oversight functions. The result of primary data produces a mean value of 4.00 which is an indication that majority of the respondents agreed that the board of directors were effective in the discharge of their oversight function. Similarly, the secondary data results revealed that the majority of the board members served in at least two oversight committees during the period of the data used for this study. However, the provision of SEC code of corporate governance which required the directors of listed companies in Nigeria to serve in three oversight committees is yet to be met by majority of the listed companies in Nigeria.

Pertaining to risk management system, the primary data results revealed that majority of the respondents were in agreement that operation risk safeguard, credit risk safeguard and liquidity risk safeguard of the companies were efficient in managing the risk facing the companies. They also agreed that annual review of risk management policy of the company was carried out by the director. The result of the secondary data revealed that majority of the sampled companies operated within the risk limit of the companies during the period of the data collected. Thus, the two results were not in disagreement.

On the disclosure on accounting information by the listed companies in Nigeria, about 95% of the respondents overwhelmingly agreed that information on equity performance was disclosed in the financial statement of listed companies in Nigeria in the last five financial years, disclosure of cash flow statement had about 91% agreement while the disclosure of value added statement had 94%. Similarly, the secondary data results on the disclosure of accounting information revealed that an average company in Nigeria disclosed at least 19out of the 26 aspect of accounting information considered for this study implying that the two results were in agreement.

### 4.12.2 Comparison of Inferential Results.

The Regression results for corporate governance mechanisms and profitability using primary data produced an R-square of 0.867. The R-square for corporate governance mechanisms and return on capital employed was 0.679 while the R-square for corporate governance mechanisms and earnings per share was 0.861. The result shows a high level of consistence as the value of R-square for the three aspects were significant, positive and very close to each other.

Similarly, the coefficient results revealed that four variables produced positive and significant results for both primary and secondary data. From the secondary data, the beta coefficient of 0.248, 0.314, 0.135 and 0.479 were obtained for board size, board oversight functions, risk management practices and information disclosure respectively. For the return on capital employed, the beta coefficients were 0.031, 0.056, 0.1002 and 0.344 for board size, board oversight functions, risk management practices and information disclosure respectively. Also, for earnings per share, the beta coefficients were 0.335, 0.162, 0.079 and 0.301 for board size, board oversight functions, risk management practices and information disclosure respectively. The relationship was significant for all the four variables. However, the strongest relationship was found between information disclosure and profitability.

Furthermore, an insignificant relationship was found between ownership concentration and profitability for both primary and secondary data. But, divergent results were found for the relationship between executive compensation and profitability. An insignificant relationship was found between executive compensation and profitability with the use of primary data. An insignificant relationship was also found between executive compensation and return on capital employed. The result of primary data was in agreement with the result of return on capital employed. In contrast, although still in a negative direction, the relationship between executive compensation and earnings per share was significant.

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# CHAPTER FIVE

# SUMMARY, CONCLUSION AND RECOMMENDATION

## 5.1 Introduction

The general objective of this study was to investigate the relationship between corporate governance mechanisms and profitability of listed companies in Nigeria with a particular attention on six sectors which includes the banking sector, food and beverages, health care sector, breweries, industrial/ domestic products and transportation companies. Specifically, the study considered the board size, executive compensation, ownership concentration, board oversight functions, risk management practices and information disclosure as corporate governance mechanisms while return on capital employed and earnings per share were taken as profitability indicators. This chapter presents the summary of the research findings which include the response rate, background information and the statistical analysis. Summary of discussions of specific objectives and research hypothesis has also been done including the interpretation of the results. The conclusions and recommendations were drawn from the research findings in relation to the specific research objectives.

## 5.2 Summary of Findings

First and foremost, the study established that a significant positive relationship exists between the board size and profitability. The study confirmed that 25% of the variation in profitability was caused by the board size for primary data, 3% for return on capital employed and 34% for earnings per share. Therefore, on the basis of the above results, the null hypothesis can be rejected and thus conclude that there is a significant relationship between board size and profitability. Comparing the six sectors used for the study, banking sector was found to have higher return on capital employed than the other sectors indicating that listed banking sectors have higher profitability than all other sectors for the period considered for this study whereas, on the basis of earnings per share, it can be concluded that transportation companies have better profitability than the other companies.

This result can be interpreted in the light of resource dependent theory. The theory defines the role of board of directors in the provision and accessibility to resources needed by the organization. According to resources dependency theory, directors are considered as an important resource of the organizations as well as the provider of key resources of the organization. Therefore, when directors are considered as resource providers, the size becomes an advantage. Another simple explanation for this result is that a bigger board has more professionals from who company benefits from (Samson, 2014). Whereas this can be true, it is also true that bigger board is associated with waste of time, indecisiveness, ineffectiveness, and more expensive (Adams &Mehran, 2008).

The relationship between executive compensation and profitability was first confirmed. The finding was that a negative and significant relationship exists between executive compensation and earnings per share whereas a negative and insignificant was reported for executive compensation and primary data as well as return on capital employed. This implies that, based on the results of earnings per share, the null hypothesis should be rejected. It can therefore be concluded that there is a significant relationship between executive compensation and profitability of listed companies in Nigeria. Furthermore, if the decision is based on the results of primary data and return on capital employed, the null hypothesis should be accepted and conclude that there is no significant relationship between executive compensation and profitability of listed companies in Nigeria.

Agency theory offers useful ways to explain this result. Agency theory suggests mechanisms which reduce agency loss which can come in form of incentive schemes for managers which reward them financially for maximizing shareholder interests and appropriate selection of board members. Such schemes typically include plans whereby senior executives obtain shares, perhaps at a reduced price or as a bonus issue, thus aligning financial interests of executives with those of shareholders. The results of earnings per share seems inconsistent with Baxt (2002) and Yermack (2006), who argue that remuneration is the best incentive to motivate the managers for effectiveness and can increase firm performance. However, it is consistent with more recent studies such as Bonnel et al. (2008), Lancky et al. (2009), and Moles et al. (2009), which show no correlation between executive compensation and firm performance.

In this third objective, the study investigated whether there is a significant relationship between ownership concentration and profitability of listed companies in Nigeria. The relationship between ownership concentration and profitability was insignificant for the three regressions. Therefore, the null hypothesis will not be rejected. It can therefore be concluded that there is no significant relationship between ownership concentration and profitability of listed companies in Nigeria. This result is somewhat worrisome. A popular view in corporate governance literature is that ownership concentration positively influences firm performance and profitability (Caprio, Laeven, & Levine, 2007; Charles, 1998; Coleman, 2008, Oyerogba, 2014). This view derives from the presumption that ownership concentration is a mechanism for monitoring (Sudarat, 2006). This study therefore develops new evidence on the linkage between ownership concentration and profitability. It shows that the effect of ownership concentration on profitability is more complicated than commonly assumed and that its direction is sometimes contrary to what is conventionally supposed.

The study sought to investigate the relationship between board oversight functions and profitability. Prior studies find that board oversight functions are beneficial to shareholders. For example, Conger et al. (1998) suggest that audit committee is an important mechanism in improving the effectiveness of management. Vafeas (1999) find that operating performance improves for firms with two oversight committee (audit committee and risk management committee) following years of abnormal board activity and suggests that board oversight function is an important instrument for firm growth. Thus, we expect that board oversight committee is an important channel through which directors can monitor management, and determine strategic responses to different events. Our results indicate that the relationship between the board oversight functions and profitability is significant for all the three regression. Highest beta coefficient was found between board oversight function and return on capital employed. Economically, one additional board oversight function increases profitability by 0.314

Again, a positive relationship was found for risk management practices and profitability for all the three regression. The null hypothesis was therefore rejected. The positive relationship between the risk management practices and profitability suggest that listed companies in Nigeria have put necessary safeguard in place to prevent excess risk taking by the management which positively impacted the profitability. It also implies that adequate financial performance in the listed companies in Nigeria is associated with the management’s ability to adhere to the company’s acceptable risk limit. The results supports those of Ferguson et al (2013) who argued that the failure of corporate organizations were caused by the excessive risk taking of the management without reference to the organization policy and culture on risk taking.

To more precisely capture the disclosure and transparency aspect of the corporate governance mechanism in Nigeria listed companies, a disclosure index was computed from the publicly disclosed information in the audited financial statement of the selected companies. The disclosure index captures 26 informations. The results reveal that information disclosure has a significant positive correlation with profitability for all the three regression. The result is in line with those of Latridis(2008) which posited that firms that provide informative accounting disclosures appear to display higher size, growth, profitability and leverage measures.

## 5.3 Conclusion

The aim of this study was to determine the relationship between corporate governance mechanisms and profitability of listed companies in Nigeria. Both primary and secondary data were used for the study. A variety of statistical test and analysis including factors and reliability analysis, descriptive statistics, correlation analysis and regression analysis were carried out and conclusion drawn in relation to the objectives of the study and the theoretical framework for the study.

Findings from descriptive statistics indicated that the listed companies in Nigeria have recorded a significant increase in profitability in the last five years whereas there has not been significant increase in return on capital employed and earnings per share indicating the relative existence of liquidity problem. Similarly, there was an increasing trend in the board size, executive compensation, ownership concentration, board oversight functions and risk management practices. Although, there was also a significant increase in the volume of accounting information disclosure, there was low level of disclosure of the personal information of the directors, indicating the relative existence of an information gap or information asymmetry problem.

Inferential statistics also revealed a significant relationship between most of corporate governance mechanisms and profitability indicators. Specifically, higher return on capital employed was associated with increase in board size. Although, most recent studies emphasizes the cost of maintaining the large board as the peril of having larger board but that does not undermine the role of larger board towards the growth of any organization. Companies with large board benefits from the professional experience of the board members and enjoy higher accessibility to capital. It can therefore be concluded that board size have significant impact on the profitability of listed companies in Nigeria.

Pertaining to executive compensation, the study concludes that it is not a good motivation for higher performance in the listed companies in Nigeria. This conclusion arises from two important aspect of this study. First, the regression results which shows a significant negative correlation between executive compensation and earnings per share indicating that as executive compensation increases, profitability decrease. Second, the descriptive statistic which revealed a relative increase in the last five years implying that even when there was a fall in profitability there was still an increase in executive compensation.

For the board oversight function, the conclusion was that, it is a significant factor for the growth in profitability of listed companies in Nigeria. It was established that listed companies have intensify effort towards the discharge of board oversight function in the recent time as about 70% of the companies have their directors serving in at least two oversight committees. Thus, the increase in profitability could be attributed to the discharge of oversight function by the board since the regression results revealed a significant relationship between the board oversight function and return on capital employed.

Concerning the risk management, the regression result suggests an existence of positive relationship between the risk management system and return on capital employed. The positive correlation between the risk management system and return on capital employed suggest an appropriate management of risk in the listed companies in Nigeria which implies that the management operated with the risk limit as set up by the board. Thus, OECD (2014) regulation that attributed the management of enterprise risk to both the board of director and the management was justified.

In conclusion, the overall regression result revealed a significant relationship between return on capital employed and four independent variables which include the board size, board oversight functions, risk management practices and information disclosure. Also, a significant relationship was found between earnings per share and board size, board oversight functions, risk management practices and information disclosure. There was no significant relation between the independent variables executive compensation ownership concentration and return on capital employed. The relationship between earning per share was also insignificant for ownership concentration while a negative relationship was found between executive compensation and earnings per share.

## 5.4 Recommendations

Following the findings of this study, the following recommendations were made to both management and regulatory authorizes connected with the listed companies in Nigeria:

### 5.4.1 Managerial Recommendations

The companies should increase the size of the board. The Board should be of a sufficient size relative to the scale and complexity of the company’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 should comprise a mix of executive and non-executive directors. Majority of the board should be non-executive directors who will be remunerated in form of allowance to reduce the overhead cost.

The board of directors of listed companies in Nigeria should develop a comprehensive policy on remuneration of the top management. Levels of remuneration should be sufficient to attract, motivate and retain skilled and qualified persons needed to run the company successfully. However, this should be based on the company’s profitability. In other word, the performance based incentive advocated by the agency theory can be adopted to align the interest of the management with those of the company’s shareholders.

The listed companies should also embrace the diffused ownership structure to safeguard the minority shareholders and reduce the overbearing power of the majority shareholders as it was discovered that concentrated ownership has no significant relationship with the profitability of the listed companies in Nigeria. Government also need to put stricter regulation on share acquisition of the listed companies as it was discovered that family ownership was higher in most of the companies sampled for the study.

Board of directors should intensify effort on the oversight function to the companies through membership of oversight committees. The oversight committee of the listed companies in Nigeria which include the audit committee, risk management committee, human capital and remuneration committee should be constituted in compliance with the security and exchange commission code of corporate governance which requires that only directors should be members of those committees to enhance the independence of those committees.

An adequate risk management system should be put in place by the board of directors which should include the establishment of company’s annual risk limit, risk appetite and risk strategy to curtail the excessive risk taking of the management. This system should be reviewed regularly to determine its adequacy, effectiveness and compliance level of the management with this risk management system that has been put in place by the board which has been discovered in this study as a panacea to the profitability of listed companies in Nigeria.

Emphasis should be place on adequate disclosure in the financial statement of the listed companies in Nigeria. Most especially the personal information of the director which falls under the voluntary disclosure should be disclosed in details in order to attract more investors into the company which will lead to increase in operation and profitability.

### 5.4.2 Policy Recommendations

Results of the study generally showed that most of the corporate governance mechanisms investigated appear to have a greater and stronger influence on the profitability indicators. Such finding has important implications for different policy makers. It helps to inform standard-setters and regulatory authorities about the importance of sound corporate governance mechanisms in improving the profitability of listed companies in Nigeria and establish value-creating relationships with various stakeholders.

Currently, there is much emphasis on increasing the size of the board without much consideration as to the quality of the board. Guideline should therefore be formulated by the regulatory authorities on the criteria for the selection of board members of listed companies in Nigeria. Policy should also be put in place by the regulatory authorities to ensure compliance with the prescribed guideline on the selection and size of the board.

Companies should be guided by the regulatory authorities on the determination of the payment of the top executive officers of the listed companies in Nigeria in accordance with the international best practices. In particular, the remuneration package should be performance oriented as this was found to be unpopular among the listed companies in Nigeria.

Regulations should also be put in place by the Nigeria stock exchange on reduction of ownership concentration as individual and family form of ownership concentration majorly practiced by the listed companies in Nigeria was found to have adverse effect on the profitability.

## 5.5 Areas for Future Research.

This study focused on six sectors of the listed companies in Nigeria. This result can be considered to represent the general trend in the listed companies in Nigeria. However, similar study can be carried out on other sectors not included in this study to further authenticate the findings of this study. It can also be extended to non-listed companies, specifically limited liability companies, microfinance banks, small and medium scale enterprise as the corporate governance issue and profitability cut across every sectors of the economy.

The corporate governance variable such as board independence, role duality, board meeting, company size and leverage were not incorporated into this study. Future studies can focus on those variables. Other addition to the literature will be to study the relationship between corporate governance mechanisms and other aspect of performance different from profitability investigated in this study.

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# APPENDICES

#### Appendix I: Letter of introduction

Date………………………….

Chief Executive Officer

………………………….

………………………….

Nigeria.

Dear Sir,

**RE: ACCADEMIC RESEARCH PROJECT**

I am Oyerogba Ezekiel Oluwagbemiga, a Phd student at the Jomo Kenyatta University of Agriculture and Technology. I am conducting an academic research on the title **moderating effect of accounting information disclosure on relationship betweencorporate governance mechanisms and company’s profitability**with a particular reference to the listed companies in Nigeria. A questionnaire has been drafted to seek the opinion of company’s top executives on the above subject matter. The purpose of writing this to you is to kindly seek for permission to gather relevant information from members of staffs of your organization.

Please note that the personal information of the respondent will not be required and the information collected will be used for the purpose stated above only.

Thanks for your anticipated cooperation.

Yours faithfully,

**OYEROGBA, Ezekiel O.**

+2348066308115, +254718236515

Appendix II**:** Questionnaire

This questionnaire has statement regarding corporate governance mechanisms and company’s profitability of listed companies in Nigeria. Kindly take few minutes to complete the questionnaire knowing that your sincere and objective response will be appreciated. Please be informed that your responses will be treated with ultimate confidentiality.

Thank you for agreeing to participate in this academic study.

**SECTION A: GENERAL/ DEMOGRAPHIC DATA**

1. Kindly indicate your gender
2. Male
3. Female
4. Please indicate the highest level of education attained
5. Secondary level
6. Diploma/ NCE
7. University Level
8. Post Graduate level
9. How long have you been working in the bank
10. 0 – 2 years
11. 3 – 5 years
12. 5 – 10 years
13. 11 years and above
14. Kindly indicate your position in the bank
15. Finance director
16. Business Manager
17. Investment Manager
18. Operation Manager
19. Non-Executive Director

**Section B: Company’s Profitability**

This section aims at investigating the respondents view on the profitability of listed companies in Nigeria. Please tick against each of the statements as considered appropriate.

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| NO | Statements | Strongly Agreed | Agreed | Indifferent | Disagreed | Strongly Disagreed |
| 1 | There is a significant increase in the annual profit of listed companies in the last  five years |  |  |  |  |  |
| 2 | There is a significant increase in the number of investors in the listed companies  over the last five years |  |  |  |  |  |
| 3 | There is a significant increase in the annual return on capital employed of listed  companies in the last five years |  |  |  |  |  |
| 4 | The reported earnings per share of listed companies has increased significantly  in the last five years |  |  |  |  |  |
| 5 | There is prompt payment of dividend by the listed companies in Nigeria in the last five years |  |  |  |  |  |

**Section C: Board size and company’s profitability**

This section aims at investigating the effect of board size on the profitability of listed companies in Nigeria. Please tick against each statement as considered appropriate.

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| NO | Statements | Strongly Agreed | Agreed | Indifferent | Disagreed | Strongly Disagreed |
| 1 | The cost of maintaining larger board is perceived as an additional cost  to the listed companies |  |  |  |  |  |
| 2 | Listed companies have witnessed significant increase in the number of board members in the last five years |  |  |  |  |  |
| 3 | Companies with larger board size have more experienced board members  than those with smaller board size |  |  |  |  |  |
| 4 | Companies with large board are able to perform their oversight function  more effectively |  |  |  |  |  |
| 5 | The companies with large board members have better penetration in to the capital market than those with smaller board size. |  |  |  |  |  |

**Section D: Executive compensation and company’s profitability.**

This section aims at investigating the effect of executive compensation on the profitability of listed companies in Nigeria. Please tick against each statement as considered appropriate

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| NO | Statements | Strongly Agreed | Agreed | Indifferent | Disagreed | Strongly Disagreed |
| 1 | The chief executive officers of listed companies in Nigeria are paid in line with the profitability of the companies |  |  |  |  |  |
| 2 | Listed companies in Nigeria have adopted the use of allowances for the company directors |  |  |  |  |  |
| 3 | Equity based compensation of directors is prominent in the Nigeria  listed companies |  |  |  |  |  |
| 4 | Listed companies in Nigeria have adopted the payment of salary  as a form of compensation for the company directors |  |  |  |  |  |
| 5 | Performance based compensation is used as an incentive by the listed companies in Nigeria |  |  |  |  |  |

**Section E: Ownership concentration and company’s profitability**

This section aims at investigating the effect of ownership concentration on the profitability of listed companies in Nigeria. Please tick against each statement as considered appropriate.

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| NO | Statements | Strongly Agreed | Agreed | Indifferent | Disagreed | Strongly Disagreed |
| 1 | The ownership structure of listed companies is highly concentrated into  family ownership either by direct or indirect holdings |  |  |  |  |  |
| 2 | Concentration of ownership by individual has been on the increase in the  last five years |  |  |  |  |  |
| 3 | Ownership concentration serves as a tool for the protection of the  minority shareholders in the listed companies |  |  |  |  |  |
| 4 | Corporate / Institutional block shareholding in the listed companies  in Nigeria has increased in the last five years |  |  |  |  |  |
| 5 | Indirect shareholding in the listed companies in Nigeria has been on the increase in the last five years |  |  |  |  |  |

**Section F: Board oversight functions and company’s profitability**

This section aims at investigating the effect of board oversight functions on the profitability of listed companies in Nigeria. Please tick against each statement as considered appropriate.

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| NO | Statements | Strongly Agreed | Agreed | Indifferent | Disagreed | Strongly Disagreed |
| 1 | The membership of human capital and remuneration committee have  equal number of executive directors and non executive directors |  |  |  |  |  |
| 2 | The risk management committee of listed companies in Nigeria have equal number of executive and non executive directors |  |  |  |  |  |
| 3 | Boards of directors perform their oversight to the company by setting  appropriate standard and strategy for the company |  |  |  |  |  |
| 4 | The audit committee of listed companies in Nigeria have equal number of  executive directors and non executive directors |  |  |  |  |  |
| 5 | Performance appraisal system is designed annually by the committee of the board of directors |  |  |  |  |  |

**Section G: Risk Management System and Company’s profitability**

This section aims at investigating the effect of risk management system on the profitability of listed companies in Nigeria. Kindly tick against each statement as considered appropriate.

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| NO | Statements | Strongly Agreed | Agreed | Indifferent | Disagreed | Strongly Disagreed |
| 1 | Operation risk prevention such as internal control has been put  in place by the listed companies in Nigeria |  |  |  |  |  |
| 2 | Liquidity risk safeguard such as budget control has been put in  Place by the listed companies in Nigeria |  |  |  |  |  |
| 3 | The board of directors of listed companies in Nigeria have complete  understanding of the risk facing the listed companies |  |  |  |  |  |
| 4 | Risk management system in the listed companies in Nigeria is effective in preventing company’s loss due to fraud |  |  |  |  |  |
| 5 | Market risk such as change in interest rate, exchange rate, and foreign currency is a major risk being encountered by the listed companies in  Nigeria |  |  |  |  |  |

**Section H: Accounting Information disclosure and profitability**

This section aims at investigating the effect of accounting information disclosure on the profitability of limited companies in Nigeria. Please tick against each statement as considered appropriate.

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| NO | Statements | Strongly Agreed | Agreed | Indifferent | Disagreed | Strongly Disagreed |
| 1 | Personal information of directors was disclosed by the listed  companies in Nigeria |  |  |  |  |  |
| 2 | Value added statement was disclosed in the financial statement  of the listed companies in Nigeria |  |  |  |  |  |
| 3 | Dividend information was disclosed in the financial statement of  the listed companies in Nigeria |  |  |  |  |  |
| 4 | The listed companies in Nigeria disclosed information on equity  performance in the last five years |  |  |  |  |  |
| 5 | Cash flow information was disclosed in the financial statement of  the listed companies in Nigeria |  |  |  |  |  |

#### Appendix III: Secondary Data Collection Sheet

This section collects data/ information from the audited financial statements of the listed companies for the period ranging 2004 - 2013

Name of Company .

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | **Amount in ₦’m** | | | | | | | | | | | | | | | |
| **Years**  **Variables** | **20**  **04** | **20**  **05** | | **20**  **06** | | **20**  **07** | | | **20**  **08** | | **20**  **09** | | **20**  **10** | **20**  **11** | **20**  **12** | **20**  **13** |
| **Measures of Profitability** | | | | | | | | | | | | | | | | |
| Equity capital |  |  | |  | |  | | |  | |  | |  |  |  |  |
| Total capital |  |  | |  | |  | | |  | |  | |  |  |  |  |
| Total revenue |  |  | |  | |  | | |  | |  | |  |  |  |  |
| Profit after tax |  |  | |  | |  | | |  | |  | |  |  |  |  |
| Current Assets |  |  | |  | |  | | |  | |  | |  |  |  |  |
| Current liabilities |  |  | |  | |  | | |  | |  | |  |  |  |  |
| Earnings per share |  |  | |  | |  | | |  | |  | |  |  |  |  |
| **Measures of Corporate Governance** | | | | | | | | | | | | | | | | |
| Directors salary | | |  | |  | |  |  | |  | |  |  |  |  |  |
| Directors allowances | | |  | |  | |  |  | |  | |  |  |  |  |  |
| Directors bonuses | | |  | |  | |  |  | |  | |  |  |  |  |  |
| Percentage of shareholding of largest shareholder- Individual | | |  | |  | |  |  | |  | |  |  |  |  |  |
| Percentage of Shareholding of largest shareholder- Corporation | | |  | |  | |  |  | |  | |  |  |  |  |  |
| Total number of executive directors in the audit committee | | |  | |  | |  |  | |  | |  |  |  |  |  |
| Total number of executive directors in the risk management committee | | |  | |  | |  |  | |  | |  |  |  |  |  |
| Total number of executive directors in the human capital development and remuneration committee | | |  | |  | |  |  | |  | |  |  |  |  |  |

#### 

#### Appendix IV: List of Companies selected for the study

|  |  |
| --- | --- |
| **Listed banks in Nigeria (Deposit Money Banks)** | |
| 1 | Access Bank Plc |
| 2 | Citibank Nig. Ltd. |
| 3 | Diamond Bank Plc |
| 4 | Ecobank. Nig Plc. |
| 5 | Enterprise Bank |
| 6 | Fidelity Bank Plc |
| 7 | First Bank of Nigeria Plc. |
| 8 | First City Monument Bank Plc |
| 9 | Guaranty Trust Bank |
| 10 | Heritage Banking Company Limited |
| 11 | Keystone Bank Ltd |
| 12 | Main Street Bank |
| 13 | Merchant Bank |
| 14 | Skye Bank Plc |
| 15 | Stambic IBTC Bank Ltd. |
| 16 | Standard Chartered Bank Nig Ltd. |
| 17 | Sterling Bank Plc |
| 18 | Union Bank of Nigeria Plc |
| 19 | United Bank for Africa Plc |
| 20 | Unity Bank Plc |
| 21 | Wema Bank Plc |
| 22 | Zenith Bank Plc |
| **Listed companies in food and beverages sector** | |
| 1 | Cadbury Nigeria Plc |
| 2 | Dangote Flour Mills plc |
| 3 | Dangote Sugar Refinery Plc |
| 4 | Flour Mill Nigeria Plc |
| 5 | Honeywell Flour Mills Plc |
| 6 | Multi-Trex Integrated Foods Plc |
| 7 | National Salt Company of Nigeria (NASCON) Plc |
| 8 | Nestle Nigeria Plc |
| 9 | Norton Nigeria Flour Mills |
| 10 | PZ Cussons Nigeria Plc |
| 11 | TantilizersPlc |
| 12 | UAC of Nigeria Plc |
| 13 | Unilever Nigeria Plc |
| 14 | Union Dicon Salt Plc |
| **Listed companies in the healthcare sector** | |
| 1 | Afrik Pharmaceutical Plc |
| 2 | Evans Medical Plc |
| 3 | Fidson Healthcare Plc |
| 4 | Glaxo Smith Kline Consumer Nigeria Plc |
| 5 | Juli Pharmacy Plc |
| 6 | May and Bakers Nigeria Plc |
| 7 | Morrison Industries Plc |
| 8 | Neimeth International Pharmacy Plc |
| 9 | Pharma-DekoPlc |
| 10 | Union Diagonistic and Clinical services Plc |
| **Listed Breweries in Nigeria** | |
| 1 | Champion Breweries Plc |
| 2 | Guinness Nigeria Plc |
| 3 | International Breweries Plc |
| 4 | JOS International Breweries Plc |
| 5 | Nigeria Breweries Plc |
| 6 | Nigeria Yeast and Alcoholic Manufacturers Plc |
| 7 | Premier Breweries Plc |
| Listed industrial and domestic products companies | |
| 1 | Aluminum Products Plc |
| 2 | Footwear and Accessories Manufacturer Plc |
| 3 | Livestock Feeds Plc |
| 4 | Nigeria Bag Manufacturing Company Plc (BAGCO) |
| 5 | Okitipupa Oil Palm Plc |
| 6 | Okomu Oil Palm Plc |
| 7 | Poly Products Nigeria Plc |
| 8 | Products (CAP) Plc |
| 9 | UTC Nigeria Plc |
| 10 | Vitafoam Nigeria Plc |
| 11 | Vono Products Plc |
| 12 | West African Glass Industries (WAGI) Plc |
| **Listed Automobile companies in Nigeria** | |
| 1 | Associated Bus Company (ABC) Plc |
| 2 | Austin Laz and Company Plc |
| 3 | DN Tyre and Rubber Plc |
| 4 | Intra Motors Plc |
| 5 | Nigerian Aviation handling Company (NAHCO) Plc |
| 6 | Omatek Ventures Plc |

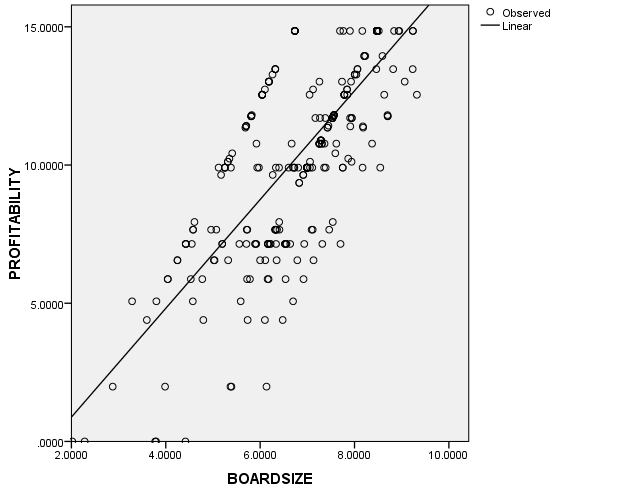
**Source: Nigeria Security and Exchange Commission Factbook, 2013**

# 

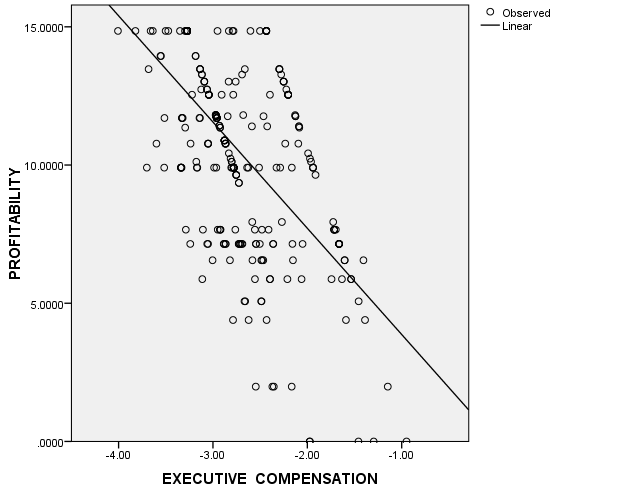
#### 

#### **Appendix V**: Scatter Plot for Linearity Test

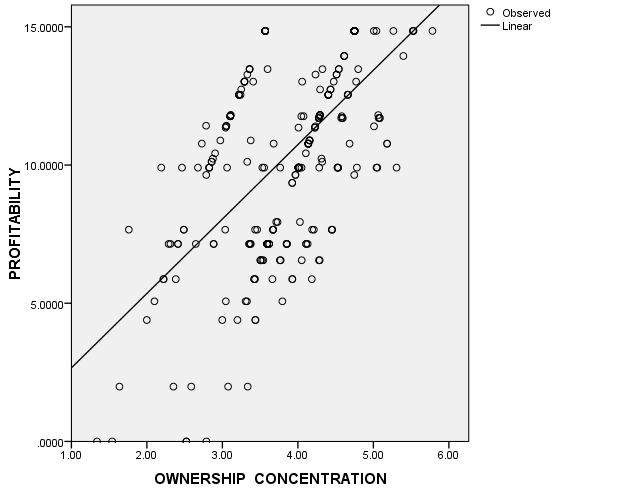
Scatter Plot

****

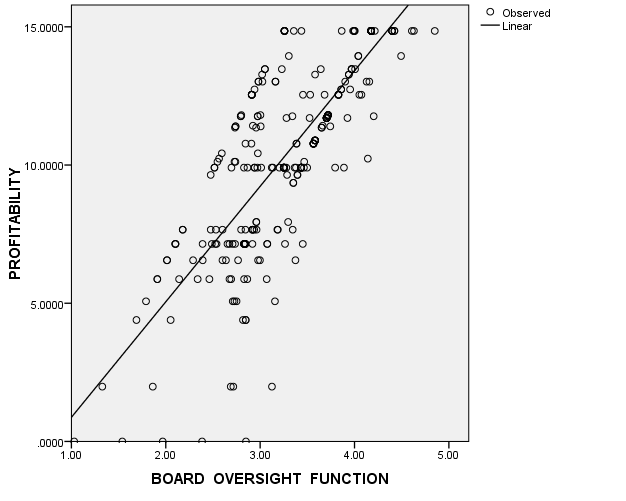
**(B)**

****

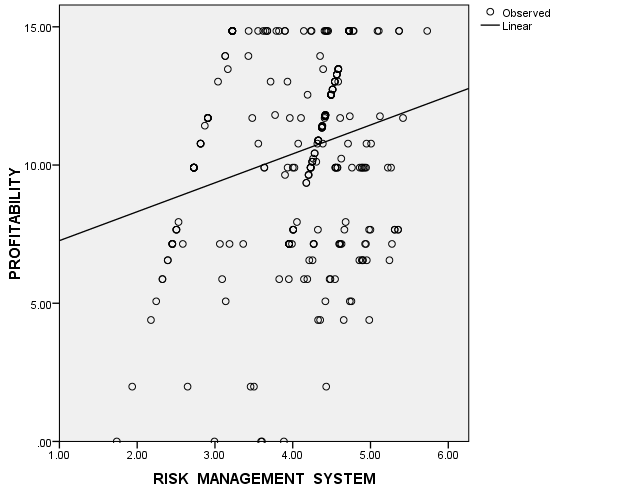
**(C)**

****

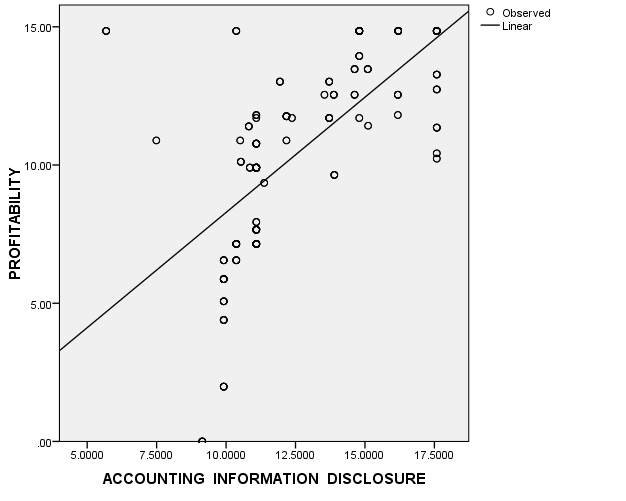
**(D)**

****

**(E)**

****

**(F)**

****

#### **Appendix VI**: **Factor Loading**

**Threshold for the Dependent Variable Profitability**

|  |
| --- |
|  |

Profitability Indicators Factor Loading

|  |
| --- |
|  |

There is a significant increase in the annual profit of listed

companies in the last five years .910

There is a significant increase in the number of investors in

the listed companies over the last five years .896

There is a significant increase in the annual return on capital

employed of listed companies in the last five years .893

The reported earnings per share of listed companies has increased

Significantly in the last five years .828

There is prompt payment of dividend by the listed companies

in Nigeria in the last five years .747

|  |  |  |  |
| --- | --- | --- | --- |
| **Reliability Statistics for Profitability** | | | |
| Cronbach's Alpha | Number of Items |
| .901 | 5 |

**Threshold for the Independent Variable Board Size**

|  |
| --- |
|  |

Board size Indicators Factor Loading

|  |
| --- |
|  |

The cost of maintaining larger board is perceived as an additional cost

to the listed companies .747

Listed companies have witnessed significant increase in the number of

board members in the last five years .719

Companies with larger board size have more experienced board members

than those with smaller board size .707

Companies with large board are able to perform their oversight function

more effectively .595

The companies with large board members have better penetration in to the

capital market than those with smaller board size. .581

|  |
| --- |
|  |

**Reliability Statistics for Board Size**

| Cronbach's Alpha | Number of Items |
| --- | --- |
| .701 | 5 |

**Threshold for the Independent Variable Executive Compensation**

|  |
| --- |
|  |

Executive Compensations Indicators Factor Loading

|  |
| --- |
|  |
| The chief executive officers of listed companies in Nigeria are paid  In line with the profitability of the companies .716 |
| Listed companies in Nigeria have adopted the use of allowances for  the company directors . 689 |
| Equity based compensation of directors is prominent in the Nigeria  listed companies .632 |
| Listed companies in Nigeria have adopted the payment of salary  as a form of compensation for the company directors .606 |
| Performance based compensation is used as an incentive by the  listed companies in Nigeria .604 |

**Threshold for the Independent Variable Ownership Concentration**

|  |
| --- |
|  |

Ownership Concentration Indicators Factor Loading

|  |
| --- |
|  |

The ownership structure of listed companies is highly concentrated into

family ownership either by direct or indirect holdings .811

Concentration of ownership by individual has been on the increase in the

last five years .759

Ownership concentration serves as a tool for the protection of the

minority shareholders in the listed companies .743

Corporate / Institutional block shareholding in the listed companies

in Nigeria has increased in the last five years .740

Indirect shareholding in the listed companies in Nigeria has been on

the increase in the last five years .637

**Reliability Statistics for Ownership Concentration**

| Cronbach's Alpha | Number of Items |
| --- | --- |
| .793 | 5 |

**Threshold for the Independent Variable Board Oversight Functions**

|  |
| --- |
|  |

Board Oversight Functions Indicators Factor Loading

|  |
| --- |
|  |

The membership of human capital and remuneration committee have

equal number of executive directors and non-executive directors .723

The risk management committee of listed companies in Nigeria have

equal number of executive and non-executive directors .676

Boards of directors perform their oversight to the company by setting

appropriate standard and strategy for the company .626

The audit committee of listed companies in Nigeria have equal number of

executive directors and non-executive directors .598

Performance appraisal system is designed annually by the committee of

the board of directors .506

**Reliability Statistics for Board Oversight Functions**

| Cronbach's Alpha | Number of Items |
| --- | --- |
| .710 | 5 |

**Threshold for the Independent Variable Risk Management System**

|  |
| --- |
|  |

Risk Management System Indicators Factor Loading

|  |
| --- |
|  |
| Operation risk prevention such as internal control has been put  in place by the listed companies in Nigeria .776 |
| Liquidity risk safeguard such as budget control has been put in  Placeby the listed companies in Nigeria .742 |
| The board of directors of listed companies in Nigeria have complete  understanding of the risk facing the listed companies .732 |
| Risk management system in the listed companies in Nigeria is effective  in preventing company’s loss due to fraud .690 |
| Market risk such as change in interest rate, exchange rate, and foreign  currency is a major risk being encountered by the listed companies in  Nigeria .679 |

**Reliability Statistics for Risk Management System**

| Cronbach's Alpha | Number of Items |
| --- | --- |
| .768 | 5 |

**Threshold for the Moderating Variable Accounting Information Disclosure**

|  |
| --- |
|  |

Accounting Information Disclosure Indicators Factor Loading

|  |
| --- |
|  |
| Personal information of directors was disclosed by the listed  companies in Nigeria .887 |
| Value added statement was disclosed in the financial statement  of the listed companies in Nigeria .839 |
| Dividend information was disclosed in the financial statement of  the listed companies in Nigeria .703 |
| The listed companies in Nigeria disclosed information on equity  performance in the last five years .701 |
| \*Cash flow information was disclosed in the financial statement of  the listed companies in Nigeria .225 |

|  |  |
| --- | --- |
| **Reliability Statistics for the Moderating Variable Accounting Information Disclosure**   |  | | --- | | Cronbach’s’ Alpha Number of Items |   Reliability before Removing \*0.7475 5  Reliability after Removing \*0.7894 4 |

**Appendix 7: Information Disclosure Index**

**Are the following informations disclosed by listed firms in Nigeria in the financial statement?**

a Details of issuance of share capital during the year 1 if a = 1; 0 otherwise 1.00

b Details of borrowings and maturity dates 1 if b = 1; 0 otherwise 1.00

c Details and reasons for share buybacks during the year 1 if c = 1; 0 otherwise 1.00

d Details of directors’ and substantial shareholders’ interests in the company 1 if d = 1; 0 otherwise 1.00

e Details of subsidiaries or associated companies. 1 if e = 1; 0 otherwise 1.00

f Detail information on composition of board of directors 1 if f = 1; 0 otherwise 1.00

g Total number of executive directors 1 if g = 1; 0 otherwise 1.00

h Total number of non-executive directors 1 if h = 1; 0 otherwise 1.00

i Total number of independent directors 1 if i = 1; 0 otherwise 1.00

j The roles and responsibilities of the board setting out matters which 1 if j = 1; 0 otherwise 1.00

are reserved for the board and those delegated to management

k Board appointment process including induction & training of board members 1 if k = 1; 0 otherwise 1.00

l Evaluation process and summary of evaluation results for the board as whole 1 if l = 1; 0 otherwise 1.00

m Disclosure of code of business conduct and ethics for directors and employees 1 if m = 1; 0 otherwise 1.00

n Human resource policies and internal management structure 1 if n = 1; 0 otherwise 1.00

o Details information on Share- ownership structure 1 if o = 1; 0 otherwise 1.00

pStatement of the director’s responsibilities in connection with the preparation 1 if p = 1; 0 otherwise 1.00

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q Accounting policies utilized and reasons for changes in accounting policies 1 if q = 1; 0 otherwise 1.00

r A statement from the directors that the business is a going concern, with 1 if r = 1; 0 otherwise 1.00

supportingassumptions or qualifications where necessary

s Executive directors’ remuneration and share options 1 if s = 1; 0 otherwise 1.00

t Non-executive directors’ fees and allowances and share options 1 if t = 1; 0 otherwise 1.00

u Risk management indicating the board’s responsibilityfor the total process 1 if u = 1; 0 otherwise 1.00

of risk management as well as information on the effectiveness of theprocess

v Details information on related party transaction 1 if v = 1; 0 otherwise 1.00

w Detail information on corporate firm structure 1 if w = 1; 0 otherwise 1.00

x Detail information about directors interest in contract 1 if x = 1; 0 otherwise 1.00

y Joint ventures in which the firm is a partner 1 if y = 1; 0 otherwise 1.00

z Information on firm’s application of SEC code of corporate governance 1 if z = 1; 0 otherwise 1.00