UNIVERSITY OF KWAZULU-NATAL

Corporate governance and the firm value proposition: evidence from Nigeria

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DECLARATION

I, Iwora Godfrey Agara, do hereby declare as follows:

(i) This study is the result of my original research work that has not been submitted for any other degree or examination at any other university except the University of KwaZulu-Natal.

(ii) This study does not contain other people's data, pictures, graphs or other information, lifted either from books, articles, monographs, or from other forms of evidence, including the internet, unless specifically acknowledged as being sourced from other people or sources.

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Signatu[redacted] Date: 13th Dec. 2021

DEDICATION

First to God, Almighty Father, His Holiness Olumba Olumba Obu, the King of Kings and Lord of Lords.

Then, I would like to thank my family, especially my dear wife Juliana Nse Agara and my children: Agara V. Agara, Mary-Peace E. Agara, Victoria I. Agara, Emmanuel E. Agara, Favour S. I. Agara, Joy O. Agara and Elizabeth E. Agara, for their invaluable support and patience during the long years of the PhD programme which infringed on their resources and time as well.

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After the creation of man in the Garden of Eden, the Holy Bible (Holy Books (www.holybooks.com), 2004) in Genesis Chapter 2: 18-22, says “the Lord God said, it is not good that the man should be alone; I will make him an help meet for him…”. This statement underscores the importance of having a helping hand and support from others in anything one does. This acknowledgement is the expression of the sincere appreciation of the researcher to God Almighty and to all the people and institutions that have contributed in one way or another to improve the quality of the study and supported it to its successful completion.

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ABSTRACT

This study investigated the relationship between compliance with the corporate governance mechanisms and the financial performance of listed non-financial firms in Nigeria from 2012 to 2019, using the compliance index and the equilibrium variable models. A compliance index was developed using the corporate governance provisions contained in the Nigerian Security and Exchange Commission (SEC) Code of 2011, which was effective from 2011 to 2019, and the Companies and Allied Matters Act (CAMA) of 1990 (as amended to date), which was also effective during the period. The agency theory was the main theoretical framework that underpinned this study.

The study's sample was comprised of 63 listed non-financial firms, leading to 504 firm years using the panel data analysis. The research methodology was a quantitative approach based on the positivist philosophical paradigm. Using the Eviews statistical software for data analysis, the Fixed Effect estimation method was adopted.

Evidence shows that during the period of the study, the compliance rate grew from 70.38% in 2012 to 71.74% in 2019. There was a negative but insignificant relationship between the corporate governance compliance index and the financial performance of the firm. A significant negative relationship existed between the Q ratio and female board membership, ROE and non-duality, and the product market share, NAT and non-duality, female board membership, and board meetings. A significant positive relationship was found between the market share and NAT.

This study made 13 recommendations focusing on the enforcement of corporate governance disclosures, empowerment of the statutory audit committee, representation of the minority shareholders on boards, number of mandated board committees, frequency of meetings, inclusion of females and foreign nationals on boards, relaxing the duality requirement, fixing specific penalties for levels of corporate governance infractions, corporate governance education, and the issuance of official corporate governance ratings and scores. In addition, several policy implications were raised which are aimed at improving the corporate governance practices by listed non-financial firms to enable them to operate competitively and sustainably in the global economic renaissance.

Keywords: agency, corporate governance, stakeholder, Tobin's Q, non-financial, firm value.

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AGM:	Annual General Meeting
AMEX:	American Express Company - a multinational financial services corporation
ATI:	Alternative takeover protection index.
Board:	Board of directors
BOFIA:	Banks & Other Financial Institutions Act
CAC:	Corporate Affairs Commission
CAMA:	Companies and Allied Matters Act (1990 as amended)
CBN:	Central Bank of Nigeria
CEO:	Chief Executive Officer
CGCI:	Corporate Governance compliance index
CONVAR:	Control variables
EM:	Extraordinary meeting.
FE:	Fixed effect estimation method
FRC-N:	Financial Reporting Council of Nigeria
FRC-UK:	Financial Reporting Council of the United Kingdom
GCI:	Global competitive index
ICGN:	International Corporate Governance Network
ICAEW:	Institute of Chartered Accountants of England and Wales
ICAN:	Institute of Chartered Accountants of Nigeria
ICT:	Information and communication technology
IFRS	International Financial Reporting Standards
INS:	Institutional non-promoter shareholders
ISS:	Institutional Shareholder Services
NASDAQ:	National Association of Securities Dealers Automated Quotations
NAT:	Net asset turnover
NCGI:	Nigerian corporate governance index
NEPAD:	New Partnership for Africa's Development
NED:	Non-executive director
NPOs:	Non-profit organisations
NYSE:	New York Stock Exchange
OECD:	Organisation for Economic Co-operation and Development
OLS:	Ordinary Least Squares

PENCOM:	National Pension Commission
POLS:	Pooled Ordinary Least Squares
PFMA	Public Finance Management Act
RE:	Random Effects estimation
RFs:	Retirement funds
RNC:	Royal Niger Company
RO:	Research objectives
ROE:	Return on equity
SA:	South Africa
SGM:	Statutory general meeting
SAC:	Statutory Audit Committee
SAP:	Structural Adjustment Programme
SOEs:	State-owned enterprises
SCR:	Corporate social responsibilities
SME	Small and medium-sized enterprises
Tobin's Q:	The Q ratio, also known as Tobin's Q, equals the market value of a company divided by its assets' replacement cost
UAC:	United Africa Company

CHAPTER ONE

INTRODUCTION

1.1 Introduction of the study

This chapter provides a brief overview of the purpose and the objectives of the study as well as how the study is to be carried out, including the method of data collection and analysis, the research questions that the study will attempt to answer, the hypotheses, and the structure of the thesis.

The main purpose of this study is to advance the international corporate governance research agenda by providing an insight into the relationship between firm performance and corporate governance in Nigeria by using both the compliance index and the equilibrium variables models. Thus, the study seeks to provide insight into whether the improvement in the governance compliance level of sample firms has a statistically positive relationship with the financial performance of the listed non-financial firms, especially in Nigeria, and as espoused in the extant literature (Ekanem, 2008; Arguden, 2010, Beekes *et al*., 2012; International Corporate Governance Network (ICGN), 2014; Olayiwola, 2018; Abosede *et al.*, 2019; Akinleye *et al.*, 2019; Ahmed *et al*., 2020).

Specifically, the study seeks to investigate the extent of the relationship between the internal and external corporate governance mechanisms and the financial performance of the listed non-financial firms in Nigeria where: (1) there is a separation between the ownership and control of the firm and (2) the interests of the owners (principals) and the hired managers (agents) diverge.

The study is based on a sample of 63 listed non-financial firms in Nigeria from 2012 to 2019, when the corporate governance code issued by the Security and Exchange Commission of Nigeria (SEC-N) in 2011, hereinafter the SEC-N 2011 Code, was effective. The establishment of the level of relationship between the corporate governance compliance level and the financial performance of the listed non-financial firms during the period addresses the knowledge gap caused by the introduction of the SEC-N 2011 Code and accentuated by the agency conflict inherent in the board structure of the Nigerian listed non-financial firms.

Corporate governance, as a modern organisational construct, has attracted continued research interest since its emergence over three decades, specifically from the 1970s through to the 1990s, following the publication of the Cadbury Report in 1992 in the United Kingdom (Cheffins, 2012:1; Tricker, 2020). The main motivation for research on corporate governance is that it underpins the operational frameworks of the firm, covering the functions of managerial, compliance, monitoring, oversight, external audit, advisory, and internal audit controls (Saeid & Sakine, 2015; Manuel, 2021:809).

Described simply as "the system by which firms are directed and controlled" (Cadbury, 1992: Section 2.5), modern corporate governance was motivated by several accounting and financial scandals in the United Kingdom (UK), the United States of America (USA) and other developed and developing economies (Mohamad, 2018). These scandals culminated in the collapse of major corporations, including Polly Peck, Bank of Credit and Commerce International (BCCI), Robert Maxwell, Waste Management, WorldCom, Tyco, HIH Insurance, Parmalat, and Vodaphone Mannesmann, among others (Conyon, 1994; Keasey *et al.*, 2005; Knapp, 2011; Ojunwa, 2011; Tricker, 2020). In response to these incidents of corporate failure, nations and economic blocs have issued codes of best practices for firm governance, known as corporate governance codes (Bozec & Dia, 2015).

The earlier forms of formal corporate governance codes include the UK Code of 1992 (Cadbury, 1992) and the South African Code of 1994, referred to as King I (Institute of Directors in Southern Africa (IoDSA), 2016). The Sarbanes-Oxley Act, 2002 (hereafter SOX), followed in the US, while a code of corporate governance for the European Union was introduced in 2004 (OECD Code), amongst others. Nigeria, one of the countries in Sub-Saharan Africa, introduced its maiden ***Code of Corporate Governance in Nigeria*** for listed firms in 2003. The 2003 code was released by SEC-N and applied to all listed firms. The SEC-N 2011 Code was subsequently replaced in 2018 by the ***Nigerian Code of Corporate Governance 2018,*** which was issued by the Financial Reporting Council of Nigeria (FRC-N). The 2018 Code became effective on July 1, 2020.

In addition to the general SEC-N 2011 Code, other industry-specific corporate governance codes have been introduced for the regulated sectors in Nigeria. As of 2020, industry-specific codes have been introduced for the banking, insurance, pension funds, and telecommunications sectors. The Companies and Allied Matters

Act of 1990 (CAMA) (as amended in 2020) also lists corporate governance provisions concerning the audit committee, external auditor, financial and annual reporting, board meetings, and the rights of minority shareholders. Listed firms in Nigeria are required to comply with the corporate governance provisions of the SEC-N 2011 Code and the CAMA 1990 from 2012 to 20219.

A priori, compliance with corporate governance principles improves the financial performance of the firm (Dennis & Ogoun, 2018). Therefore, this study argues that, in the Nigerian market economy, which is characterised by dispersed shareholding, effective corporate governance by listed non-financial firms will curtail agency conflict and improve the financial performance of the sample firms measured in terms of Tobin's Q, return on equity (ROE), and net asset turnover (NAT). Thus, underpinned by the philosophical stance of agency theory, this study aims to contribute to the research agenda on corporate governance in the Nigerian context, with specific reference to the listed non-financial firms.

To facilitate the achievement of the purpose of this study, four major theories that have dominated research on corporate governance (Nicholson & Kiel, 2003) and the corporate governance models are discussed in Chapter Three. The four theories discussed include agency theory (Smith, 1776; Berle & Means, 1932; Jensen & Mackling, 1976; Bendickson *et al.*, 2016; Panda & Leepsa, 2017; Antwi, 2021); stewardship theory (Donaldson, 1990; Donaldson & Davis, 1991); resource dependence theory (Pfeffer & Salancik, 1978); and the institutional theory (Lawrence & Lorsch, 1967; Meyer & Rowan, 1977; Zucker, 1977).

The remainder of the chapter is organised to give the background to the study, briefly discuss the overview of corporate governance development in Nigeria, and state the research problem in sections 1.2 through 1.4. The objectives of the study, research questions, hypotheses and the significance of the study, are discussed in sections 1.5 through 1.8. Section 1.9 discusses the scope and the limitations of the study, while Section 1.10 presents the summary of the research methodology.

The sources of data, the definition of the firm value proxies, the contribution of the study, and the organisation of the study are presented in sections 1.11 through 1.14.

1.2 Background to the study

Listed firms in Nigeria are characterised by dispersed shareholdings where the majority of shareholders own a small fraction of the equity each and are unable to have any significant control of the firm, except for a few block shareholders (Oyejide & Soyibo, 2001; Amao & Amaeshi, 2008; Adenikinju, 2012). In addition, the enormity and complexities of economic transactions undertaken by listed firms in Nigeria have undermined the capacity of the owners to manage them efficiently without professionals. Nevertheless, the engagement of managers to control the firms on behalf of the numerous shareholders effectively separates the control of the firms from ownership.

The separation, which substantially hinders the ability of the shareholders or owners to control their firms, introduces an agency conflict (Ntim, 2017). Agency conflict arises from the existence of information asymmetry, where one party knows more about something than the other does, and such a knowledgeable person has disparate interests or objectives that motivate the agent to behave in an opportunistic manner, particularly if their interest conflicts with the principal (Bendickson *et al.*, 2016). Thus, the desperate interest makes it difficult for hired managers to align their self-interests with those of the firm and the owners. This misalignment affects the performance of the firm adversely and reduces investors' confidence in it (Berle & Means, 1932; Jensen & Meckling, 1976; Farrar, 1999; Gul, Sajid, Razzaq & Afzal, 2012). The need to curb agency conflict and the associated costs (***agency costs***) has made sustained research in corporate governance an imperative.

The research interest in corporate governance is also important and intriguing because of the nexus between effective corporate governance and the performance of the firm (the microeconomic unit) (ICGN, 2014; Okab, Al-Oqool and Bashayreh, 2014; OECD, 2015a, 2015b; Dennis & Ogoun, 2018), which ultimately affects the performance of the macroeconomy of nations (Maher & Andersson, 1999; Larcker & Tayan, 2016). Thus, continuous advancement of corporate governance knowledge is critical for achieving not only the firm's but also the nation's economic and social objectives (Maher & Andersson, 1999; Gregory & Simms, 1999; Javed & Iqbal, 2007; Arguden, 2010; Aggarwal, 2013).

There is also a convergence of empirical literature on the positive relationship between effective corporate governance and the ability of the firm to achieve its strategic objectives through creating value efficiently (OECD, 2004a; 2004b; Aggarwal, 2013; Okike and Okougbo, 2019; Ogunsanwo, 2019; Adegbie *et al*., 2019). This is because effective corporate governance enables the firm to meet both the expectations of the shareholders and the interests of the various stakeholders that guarantee the sustainability of the firm and prevent potential corporate fraud and liabilities against it (Donaldson & Preston, 1995; Freeman *et al*., 2004; Musa *et al*., 2015; Garcia-Torea *et al.*, 2016; Choughri, 2018). Therefore, effective corporate governance means good and sustainable business for the firm (Lipman & Lipman, 2006).

Notwithstanding the importance of corporate governance, most contributions to the body of knowledge on corporate governance, including studies by Carter *et al.* (2003); Erhardt *et al*. (2003); McColgan (2005); Kim *et al*. (2006); Mersland and Strom (2007); Carter *et al.* (2008); Francoeur *et al.* (2008); Bhagat and Black (2009); Guest, 2009; Sakawa *et al*. (2009); Ness *et al*. (2010); Neffati *et al.* (2011); Dagsson and Larsson (2011); Rad *et al*. (2012); Doğan *et al.* (2013); Johl *et al.* (2015); Duru *et al.* (2016); Estélyi and Nisar (2016; Alshetwi (2017); Colin and Swarnodeep (2017; Orozco *et al*.(2018); Bennouri *et al*. (2018); Jenter *et al.* (2019);Tatiana and Alexander (2020); Khidmat *et al.* (2020); Simionescu *et al.* (2021) have focused on advanced and sophisticated market economies with high investors' education and awareness. However, equivalent attention has not been given to in-depth research on corporate governance practices in developing and emerging economies, including Nigeria (Uddin & Choudhury, 2008).

The paucity of knowledge and empirical evidence on the quality of corporate governance practices by Nigerian listed firms is a critical concern, especially when juxtaposed against the dominance of the Nigerian economy, said to have the largest capital market (valued at ₦12.97 trillion in December 2019, about $3.61 billion), in sub-Saharan Africa (Okezie & Amir, 2011; Okike & Adegbite, 2012; Ebegbulem, 2014; Olusola & Ufo, 2016; African Development Bank, 2021).

One of the explanations for the scanty literature on corporate governance in the Nigerian context is the late adoption of a formal corporate governance framework to guide the management and control of firms at a time when the world witnessed a wave of corporate collapses, especially in Europe and America, in the early 1990s.

Thus, in Nigeria, corporate governance is a much more recent development, compared with the South African experience and other developed economies. Thus, whereas the use of a computed corporate governance index in corporate governance research has gained popularity in corporate governance literature in advanced economies, the use of a computed corporate governance index in research is still a recent phenomenon in Nigeria. Specifically, the use of a self-constructed corporate governance index which considers the combined provisions of the 2011 SEC-N Code, the Companies Act, 1990 (CAC, 1990) and empirical evidence is still a novel idea, which justifies the relevance of this study.

1.3 Brief overview of corporate governance development in Nigeria

Corporate governance has been widely discussed in various disciplines of accounting, finance, economics, law, management, and public policy (Rwegasira, 2000; Nicholson & Kiel, 2003). It has gained active academic and policy debate throughout the globe since the beginning of the twenty-first century. As stated earlier, this period was characterised by a plethora of high-profile corporate collapses, financial crises, and accounting frauds, which resulted from corporate governance problems associated with abuse of corporate power and criminal activities of corporate officers (Adeyemi, 2010; Kariyawasam, 2011; Silveira, 2011; Claessens & Yurtoglu, 2012; Abid & Ahmed, 2014; Central Bank of Nigeria, 2014). Major accounting frauds and corporate collapses include Global Crossing, Phia, Tyco, WorldCom, Enron (Special Investigative Committee of the Board of Directors of Enron, 2002; Heath & Norman, 2004; Rayton & Cheng, 2004; Suchan, 2004; Financial Reporting Council Limited of UK, 2006; Li & Broshko, 2006; Knapp, 2011; Ujunwa, 2012).

On the local scene, the Nigerian corporate market was not exempted from similar corporate frauds, especially as they related to the financial sector. The experience of the corporate collapse of the Nigerian financial institutions in the nineteen nineties, such as Abacus Merchant Bank, Royal Merchant Bank, Rims Merchant Bank, Financial Merchant Bank, Progress Merchant Bank, Republic Merchant Bank, and the accounting fraud in the non-banking sectors that occurred in African Petroleum PLC (AP), Lever Brothers (Unilever), and Union Dicon Salt are examples of corporate failures and frauds that arose from corporate governance infractions (Abubakar, 2014; Samuel, 2020). These corporate failures motivated the

introduction of corporate governance codes in Nigeria. Thus, to forestall the imminent and persistent collapse of firms in the banking and other sectors of the Nigerian economy, the Nigerian Security and Exchange Commission (SEC-N) introduced the maiden corporate governance for listed firms in 2003 (Afolabi, 2015; Agrawal & Cooper, 2016). Therefore, comparatively, the practice of corporate governance in Nigeria is a recent development compared to the UK and South Africa's experience, with which Nigeria shares affinity as members of the Commonwealth, maintains economic ties, and shares a similar common law system (Kohnert, 2018). A detailed discussion of corporate governance in Nigeria is contained in Chapter Two.

1.4 Statement of the research problem

Nigeria has been considered as an emerging economic giant in Sub-Saharan Africa (Terwase *et al.,* 2014; Olusola & Ufo, 2016) and as one of the most attractive economic destinations for international business (Terwase *et al*., 2014). These expectations place on Nigeria the onerous responsibility of ensuring that its economic entities operate optimally with effective corporate governance systems. While acknowledging that firms in Nigeria are hindered by a mirage of challenges, both economic and social (Victor *et al.*, 2012; Obisi & Gbadamosi, 2016), one of the major challenges to the performance of Nigerian listed non-financial firms is ineffective corporate governance. The lack of compulsion on the part of the listed non-financial firms to adopt better governance principles as enunciated in the Code accentuates this challenge. For instance, the SEC-N Code of 2011 states that the Nigerian Code "*is not intended as a rigid set of rules"* (SEC-N, 2011: Section 1.3(a)). Therefore, listed non-financial firms in Nigeria can only be motivated to adopt best governance practices if the practices make business sense in the absence of compulsion and sanctions.

Evidence in the literature suggests that firms that adhere to ethical business standards and effective corporate governance perform better financially, in the end; than those without such a commitment (Sullivan, 2009). This is because the adoption of effective corporate governance leads to efficient use of resources, controls agency conflict, enhances corporate accountability, reduces fraudulent activities, and a host of other benefits (Dennis & Ogoun, 2018). This suggests that the economic wellbeing of nations will improve as the financial performances of firms improve through effective corporate governance practice (Aviral, 2010; Tseng & Wu, 2016; Wahyudi & Chairunesia, 2019).

The overarching problem is how to establish compelling empirical evidence on the relationship between compliance with effective corporate governance and firm performance in the face of corporate frauds and scandals that threaten investors' confidence, especially when listed firms are not compelled to adopt effective corporate governance frameworks.

Several studies have been conducted to establish the direction of this relationship. As previously stated, the majority of these studies concentrated on developed and sophisticated market economies, with little focus on emerging economies (Uddin & Choudhury, 2008; Adenikinju, 2012). Yet, emerging economies yearn for effective management of their resources to improve the well-being of their citizens, reduce corporate mortality, provide employment, and reduce social instability. These needs have made the institutionalisation of effective control and direction mechanisms by firms, the hallmark of corporate governance philosophy, inevitable in Nigeria.

The first challenge is that a substantial number of the available studies that examined corporate governance in the Nigerian context focused on the financial sector, while only a few studies focused on the non-financial sectors. Yet, of those that studied the non-financial sectors (Unjunwa, 2011; Abubakar, 2014; Ibrahim & Abdullahi, 2019; Enilolobo *et al*., 2019; Akinleye *et al.*, 2019; Osemwengie *et al.*, 2019), no studies tested the compliance with the principles of corporate governance contained in the Nigerian SEC-N Code of 2011 and the provisions of CAMA 1990, using the compliance index at the scale considered in this study. For instance, Ujunwa (2012) included non-listed firms in his study amidst the poor corporate governance systems of non-listed firms. This means the conclusion by Ujunwa (2012) may not provide an effective basis for inferential statistics on listed firms based on the provisions of the SEC-N 2011 code. On the other hand, Enilolobo *et al*. (2019) focused on the food and petroleum sectors only, out of the ten sectors that comprise the non-financial firms. Ibrahim and Abdullahi (2019) used a sample of 23 listed non-financial companies out of over a hundred listed firms at the time. They considered only the internal board governance mechanisms of board size, board independence, and board gender diversity from 2008 to 2017. This period fell under two corporate governance regimes, the 2003 and 2011 SEC-N Codes. However, the authors did not attempt to compare the effects of each regime on the performance of the firm; nor did they attempt to construct the compliance index of the firms.

Akinleye *et al*. (2019) used four multinational firms, while Osemwengie *et al*. (2019) studied 50 listed financial and non-financial firms. Oladeji and Agbesanya (2019) considered 20 quoted financial and non-financial listed firms. Thus, generally, prior studies have used either mixed samples or small samples. Consequently, existing studies can be said not to have provided enough insight into the level of corporate governance compliance by the listed non-financial firms in Nigeria from 2012 to 2019 and how this affected the financial performance of the firms.

Secondly, generally, the empirical literature on corporate governance, which computes the corporate governance index in the context of developing economies, is still scanty compared to similar attempts in developed economies (Albassam, 2014). From the available literature, the construction of a corporate governance index of Nigerian listed non-financial firms using the combined provisions of the 2011 Code, the Companies and Allied Matters Act (1990 as amended) and empirical evidence from 2012 to 2019 has not been undertaken. Therefore, this study is a novel attempt at the construction of a much more robust Nigerian Corporate Governance Index (CGI). Hence, this study has contributed towards the reduction of the research gap on the use of self-constructed corporate governance indexes in the Nigerian context.

Thirdly, as observed by Stender and Rojahn (2020) and by Isola, Adeleye and Olohunlana (2020), the performance of the firm is influenced not only by internal actors (board and management), but also by external participants such as the customers (market share) and the investors' assessment of the firm as depicted by the market price of the shares of the firm. Nevertheless, prior studies from the Nigerian perspective did not consider the inclusion of the external governance variables in their study concerning the listed non-financial firms as in this study. By incorporating both internal and external mechanisms into the construction of the CGI and in estimating the relationship between corporate governance compliance and firm performance, the study provides a wider perspective on the effect of corporate governance on the performance of the firm.

The effect of the limitations of prior studies is that such studies could not have provided a robust basis to determine the impact of the corporate governance code of 2011 on the financial performance of listed non-financial firms in Nigeria. Consequently, basing corporate decisions on the outcome of the prior empirical literature regarding the listed non-financial firms in Nigeria could be challenging.

To resolve this challenge and provide a more robust conclusion on the impact of effective corporate governance on the performance of listed non-financial firms in Nigeria, this study considers more comprehensive data of listed non-financial firms across the industrial non-financial sectors and adopts the corporate governance provisions of the SEC-N Code that operated from 2011 to 2019 and CAMA 1990. More importantly, by considering both the equilibrium variable and the compliance models coupled with the expansion of the independent variables to include the internal and external governance variables in estimating the relationship between corporate governance and the financial performance of listed non-financial firms, a more holistic view of the relationship is established. Thus, the study helps in addressing the problem of the lack of appropriate empirical evidence that would provide insight into the level of compliance by listed non-financial firms with the corporate governance provisions of the SEC-N 2011 Code and the CAMA 1990 and how the compliance influenced the financial performance of the sample firms from 2012 to 2019. More importantly, the study provides insight into the relationship between the individual internal and external corporate governance variables and the performance of the firm.

1.5 Objectives of the study

While there is arguably a large body of literature on corporate governance, only a small amount of empirical evidence has considered the relationship between corporate governance and firm value for non-financial firms in Nigeria from 2012 to 2019. In line with the research problem, the primary objective of the study, as earlier stated, is to empirically investigate the relationship between corporate governance and the financial performance of listed non-financial firms in Nigeria from 2012 to 2019. To achieve the primary objective, three specific objectives have been identified as follows:

1. Develop a corporate governance compliance index (CGI) of the listed Nigerian non-financial firms, for the period 2012-2019, and to establish the relationship between the compliance index and the financial performance of the firm.
2. Establish the relationship between the internal governance mechanisms of female directors, foreign directors, CEO duality, board size, board independence, board meetings, board committees, independence of the

external auditor and audit committee and the financial performance of the listed non-financial firms in Nigeria from 2012 to 2019.

3. Establish the relationship between the external governance mechanisms of market share and institutional shareholding and the financial performance of the listed non-financial firms in Nigeria from 2012 to 2019.

A review of the local and international empirical and theoretical literature on corporate governance has been undertaken to achieve these objectives. In particular, the study attempts to develop the corporate governance compliance level for listed non-financial firms in Nigeria from 2012 to 2019, based on the provisions of the SEC-N 2011, CAMA 1990, and empirical support with respect to the inclusion of female and foreign directors on the board and the external mechanisms of product market competition and institutional shareholding. More importantly, the literature on agency theory, which is the main underlying theory of this study, and other supporting theories of stewardship, stakeholder, institutional, and resource dependence, were reviewed and presented in Chapter Three. Further, in Chapter Four, the empirical literature, which provides a guide to the hypotheses that have been posed to achieve the objectives and aim of the study, is presented. Finally, the analysis of the data of the 63-sample listed non-financial firms from 2012 to 2019 was carried out to provide empirical evidence and the basis for the conclusions (as presented in Chapters Six through Eight).

1.6 Research questions

This study addressed the three main objectives identified above by answering three research questions as stated below. The research questions have been restricted to the SEC-N 2011 Code and the CAMA 1990, which were operational from 2012 to 2019, because the required annual reports used for the study were only available for the period.

Research question one

The research question (RQ) one is broken into two parts to cater for the construction of the compliance index and the relationship between the compliance index and firm performance.

1(a) What is the corporate governance compliance index for listed non-financial firms in Nigeria from 2012 to 2019, based on the corporate governance provisions of the SEC-N 2011 Code, CAMA 1990 and empirical literature?

1(b) What is the relationship between the corporate governance compliance index and firm financial performance?

Research question two

What is the relationship between the internal corporate governance mechanisms - female directors, foreign directors, CEO duality, board size, board independence, board meetings, board committees, independence of the external auditor and audit committee and firm financial performance?

Research question three

What is the relationship between the external corporate governance mechanisms - institutional shareholding, market share - and firm financial performance?

The research questions were resolved through a combination of hypothesis testing, the use of descriptive statistics, notes, and an analysis of the information available in the annual reports of the sample firms and the construction of a corporate governance index (CGI) for the period 2012 to 2019.

Answering the above research questions and resolving the hypotheses discussed in the next section will allow this study to contribute towards the extant literature on corporate governance and firm performance in the context of Nigeria. The study considers a combination of internal and external corporate governance independent variables and establishes the relationship between firm performance and corporate governance in Nigeria under the compliance index and the equilibrium variable models. The specific contributions that this study makes are discussed in Chapter Eight.

1.7 Hypotheses

Research question 1(a) was answered by constructing the CGI coupled with descriptive statistics and analysis, while questions 1(b), two and three were answered by testing three alternative hypotheses, **H1, H2** and **H3.** To ensure effective understanding, the second hypothesis (**H2)** and the third hypothesis **(H3) were** further broken down into eight and two sub-hypotheses, respectively.

H_1: There is a statistically significant positive relationship between the corporate governance compliance index and firm financial performance.

H_2: There is a statistically significant positive relationship between the internal corporate governance mechanisms and firm financial performance with respect to:

2.1 CEO duality

2.2 Female board membership

2.3 Board size

2.4 Proportion of foreign nationals on the boards of Nigerian listed firms

2.5 Board independence

2.6 Proportion of board meetings

2.7 Board committees

2.8 Independence of the external and audit committee

H_3: There is a statistically significant positive relationship between the external corporate governance mechanisms and firm financial performance with respect to:

3.1 Institutional shareholding

3.2 Market share

The results of the test statistics concerning the hypotheses are discussed in Chapter Seven.

1.8 Significance of the study

The world is quickly becoming a single market economy, with investors increasingly motivated to participate in foreign markets that offer higher returns on investment and in firms that are well-managed (Utrero-González & Callado-Mu noz, 2016; Wahyudi & Chairunesia, 2019). Ofo (2011) considers the 2011 SEC-N Code to be very comprehensive as it contains many far-reaching provisions that, if adopted by firms, would enable listed firms in Nigeria to function efficiently and perform optimally. This confirms the importance of gaining an insight into the impact of the SEC-N 2011 Code on the performance of listed non-financial firms in Nigeria. Therefore, the first motivation for this study is the need to provide empirical evidence on why Nigerian non-financial listed firms that are now, more than ever before, exposed to international competition for markets to sell their products and raise capital should adopt effective corporate governance practices as a survival strategy.

Secondly, there has been an increase in shareholders' and stakeholders' activism for better firm governance, performance, and return on investment. This

activism enables the owners of equity capital to use their shares' voting power to change the behaviour of corporate management (Stout, 2007; Copland *et al*., 2012; Darwish, 2012; Russell Reynolds Associates, 2020). In other words, the right of the shareholders, especially institutional shareholders, to replace management is a potential control mechanism against the self-serving behaviour of hired managers. Thus, this study provides support to shareholder activism by establishing a link between corporate governance and firm performance in Nigeria.

Third, as observed by Adegbite (2015:7), the corporate governance debate in Nigeria will continue to attract research interest "because of the peculiarities of Nigeria's turbulent history of public and corporate corruption". Therefore, this recent study aims to contribute to this debate by providing more robust insight into the level of corporate governance practice in Nigeria and how effective corporate governance can be promoted amidst weak institutional parameters, especially with respect to listed non-financial firms.

Fourth, especially in the context of the developing economies, and Nigeria in particular, the plethora of mixed empirical evidence on the association between corporate governance and firm financial performance (Stender & Rojahn, 2020) justifies sustained research on the subject. However, despite these imperatives, existing Nigerian studies suffer from some limitations, which this study addresses. These include the following:

(i) Corporate governance mechanisms considered

Weir *et al.* (2002) observe that the consideration of both internal and external governance mechanisms in analysing the effect of corporate governance on firm performance reduces the problem of endogeneity that could result from omitted variables (Beiner *et al.*, 2004; Cremers & Nair, 2005; Roberts & Whited, 2012). Many existing studies in Nigeria, however, have focused primarily on the use of internal governance mechanisms, with little attention paid to external governance mechanisms. For instance, Kajola (2008), Ranti (2011), Umoren and Okougbo (2011), Ujunwa (2012), Uadiale (2012), Garba and Abubakar (2014), Adegbie *et al.*, *(*2019), Ogunsanwo (2019), Adejare and Aliu (2020), Wadesango *et al*. (2020), and Ndum and Oranefo (2021) used the internal board governance mechanisms to investigate the relationship between corporate governance and financial performance of the firm.

The non-consideration of the external governance variables by prior studies creates a knowledge gap as the value of the firm is influenced by the internal and external corporate governance mechanisms (Nmehielle & Nwauche, 2004; Cremers & Nair, 2005; Babatunde & Olaniran, 2009; Roodposhti & Chashmi, 2011; Varshney *et al.*, 2012; Chang, 2015; Isola *et al.*, 2020; Phan & Duong, 2021). Therefore, the consideration of the external mechanisms alongside the internal mechanisms, in this study, improves upon the efforts of prior studies by ensuring that a better perspective is provided about the effects of corporate governance on firm performance in Nigeria.

(ii) Adoption of the "equilibrium-variable and compliance model"

The existence of various participants and systems that make up the corporate governance system in the Nigerian context suggests that measuring corporate governance requires a huge amount of information covering both the internal and external environments of the firm. Therefore, an overall CGI that would summarise the different variables in numerical form to help in the assessment of the quality of corporate governance of listed firms on the one hand and relate the firm-level CGI to the performance of the firm on the other hand, is needed. Romano *et al.* (2008) also justify the use of CGI in predicting the performance of a firm because of *"the elegant simplicity of having one summary number for capturing the multiple dimensionality of governance" (2008:1819).*

One of the major advantages of using a combination of the CGI index and the equilibrium variable model in analysing the relationship between the financial performance and corporate governance of a firm is that the approach caters for interdependences among the variables and considers a comprehensive and in-depth approach in gathering and analysing the data (Ntim, 2009).

This advantage notwithstanding, prior studies in Nigeria did not use the combined CGI and the equilibrium analytical approach adopted in this current study. Studies by (Ranti, 2011; Ujunwa, 2012; Olayiwola, 2018; Abosede *et al.*, 2019; Akinleye *et al.*, 2019; Ahmed *et al.*, 2020) adopted only the equilibrium-variable model to gauge the relationship between corporate governance and firm financial performance. The equilibrium method explores the influence of the individual corporate governance mechanisms on the financial performance of the firm.

The use of the equilibrium method alone is considered inferior in analysing the impact of corporate governance and the financial performance of firms because of the

difficulty of the model in addressing the multiple variables that are involved in the measurement process (Varshney et al., 2012; Sarkar, Sarkar & Sen, 2012; Azeem *et al.*, 2013).

Underscoring the importance of the CGI approach, several studies have used CGI to successfully explain the relationship between quality governance and firm performance in both developed and emerging economies (Gompers *et al*., 2003; Alexandre & Lucas, 2007; Bebchuk *et al*., 2009; Varshney *et al*., 2012; Sarkar, Sarkar & Sen, 2012; Azeem *et al.*, 2013).

To address the limitations of using only the equilibrium model, this study follows the approach by Albassam (2014) by using the equilibrium variable model in conjunction with a self-constructed CGI compliance model to examine the relationship between corporate governance and firm financial performance.

(iii) Sample size

A sample, as defined in Chapter Five, is the number of elements with specific characteristics chosen from the study population. Another shortcoming of the existing studies is their use of small sample sizes. For instance, apart from a few studies on listed non-financial firms (Umoren & Okougbo, 2011; Uwuigbea *et al.*, 2014; Dada & Ghazali, 2016; Samuel, 2020) that used large sample sizes, the majority of the studies, including Kajola (2008), Ehikioya (2009), Tanko and Oladele (2010), Okafor and Ibadin (2011), Peters and Bagshaw (2014), Ilaboya and Obaretin (2015), Urhoghide and Korolo (2017), Olayiwola (2018), Akinleye *et al. (*2019), Osemwengie *et al.* (2019), Oladeji and Agbesanya (2019); Enilolobo *et al*. (2019), and Ibrahim and Addullabhi (2019), used small sample sizes. Although overly large samples could result in a waste of time and resources to analyse the sample data, the literature argues in favour of using a large sample size in organisational research because of the accuracy and predictability of the results from large sample sizes (Andrade, 2020).

The small sample sizes used by prior studies tend to reduce their predictive power and increase the margin of error, which can render the studies meaningless and lead to less conclusive results. A small sample size inhibits the identification of outliers that could skew the data and result in less predictive results (Smith, 2017; Zamboni, 2018; Deziel, 2020). Further, when a sample is drawn from the population, there is variability in the parameter estimates (i.e., sample variability) based on the sample size. It is argued that a given p-value in a large sample is said to be stronger

than the same p-value in a small sample size (Royall, 1986). Further, larger sample estimates match the population estimates better, and the most rigorously executed study may fail to answer its research questions if the sample size is too small (Deziel, 2020; Simmons, 2020). In other words, small samples can affect the accuracy of results and their usefulness, while larger sample sizes present more precise information because larger sample sizes have more accurate mean values, identify outliers that could skew the data and provide a smaller margin of error (Smith, 2017; Zamboni, 2018). As a result, the disparity in the conclusions of prior studies (as seen in the empirical literature) on the relationship between the various corporate governance mechanisms and the value of the listed firm may be related to data inadequacy caused by the use of small sample sizes. This study addresses this limitation by using a large sample comprising all the industrial sectors of the non-financial listed firms in Nigeria.

(iv) Use of various industrial-specific codes

During the period covered by this study, non-financial firms were governed majorly by the SEC-N code of 2011 issued by the SEC-N. Financial firms, such as banks and other financial institutions, including insurance and pension funds, and firms in the telecommunications sector, on the other hand, were governed by industry-specific codes. The inclusion of non-financial and financial firms in a single study implies the use of the various industrial-specific codes in a single study. This approach is challenging and may lead to erroneous research conclusions and inferences. For this reason, the SEC-N, 2011 Code, requires that firms with their industrial-specific codes adopt their codes and not the SEC-N Code. Specifically, Sections 1.3 (a, b, and c) of the SEC-N Code of 2011 state that:

> *"a) The Code is not intended as a rigid set of rules… The Code should be seen as a dynamic document defining the minimum standards of corporate governance expected, particularly of public companies with listed securities.*
> *b) Wherever …in breach, the SEC shall notify the company or entity concerned specifying the areas of non-compliance or non-observance and the specific action or actions needed to remedy the non-compliance or non-observance.*
> *c) Where there is a conflict between this Code and the provisions of any other Code concerning a company covered by the two Codes, the Code that makes a stricter provision shall apply"*

One of the shortcomings of prior studies is the use of samples that have their own industrial-specific governance codes. Thus, a sample of firms that are governed

by different corporate governance codes can be referred to as a heterogeneous sample size. A heterogeneous population or sample is one where the members have different values of the reference characteristic that the researcher is interested in (Glen, 2016). In other words, a heterogeneous population or sample contains members with different characteristics and values, which are governed, in the case of prior studies, by different corporate governance codes. For instance, the study by Ujunwa (2012) used both financial and non-financial firms as samples in the same study, when financial and non-financial listed firms are governed by different governance codes in Nigeria.

Thus, a corporate governance study, which considers firms that are governed by different firm-specific codes in a single study, makes it challenging to arrive at reliable and credible conclusions regarding the causal relationships between effective corporate governance and firm financial performance (Davidsson & Delmar, 2009). Therefore, having a study that focuses only on the listed non-financial firms that are governed by a common corporate governance code is critical for the expansion of corporate governance literature in Nigeria. The justification for using a homogeneous sample and a common code, for organisational research, such as corporate governance exploration, is that research results can be tested and validated through replication by other studies (Gillespie & Mileti, 1981). Thus, focusing the study on the non-financial listed firms with regard to compliance with the SEC-N Code of 2011 provides an opportunity for other research results to be validated and replicated by subsequent investigations.

(v) A scarcity of current studies that take into account the provisions of SEC-N 2011 from 2012 to 2019.

Existing studies on non-financial firms, including Kajola (2008), Ehikioya (2009), Tanko and Oladele (2010), Okafor and Ibadin (2011), Ujunwa (2012), Peters and Bagshaw (2014), Ilaboya and Obaretin (2015), Urhoghide and Korolo (2017), Olayiwola (2018), Ibrahim and Addullabhi (2019), Akinleye, Olarewaju and Fajuyagbe (2019), Osemwengie *et al.* (2019), Oladeji and Adesanya (2019), Enilolobo *et al.* (2019) were based on the 2003 code and not on the SEC-N Code of 2011, which was effective from 2011 to 2019. There has not been any extensive study on the relationship between corporate governance and the performance of listed non-

financial firms that considered the comprehensive provisions of the SEC-N Code of 2011.

Specifically, the study by Ujunwa (2012) covered the period from 1991 to 2009. But the first code of corporate governance in Nigeria was introduced in 2003, so firms that operated from 1991 to 2002 might have had no code to gauge their performance. Even the few most recent studies on the subject still suffer from some marked deficiencies compared to this current study. For example, the study by Ishaku *et al*. (2020), although based on the SEC 2011, considered only one sectorial sample of six firms in the conglomerate sector out of the ten non-financial sectors of the listed firms during the period.

Another most recent study that made use of the 2011 Code was undertaken by Samuel (2020). Samuel (2020) investigated the impact of audit committee attributes on real activities manipulation (RAM) among listed companies in Nigeria, which is substantially different from the purpose of this study. Further, Samuel (2020) neither considered the relationship between corporate governance and firm financial performance nor included any external governance variables in his analysis.

Thus, most prior studies did not consider the impact of the extant 2011 code on the financial performance of the firms, especially from 2012 to 2019, at the scale of this study. Therefore, this study provides the most recent and comprehensive insight into the effect of compliance with the SEC-N Code of 2011 on the financial performance of listed non-financial firms during the period.

(v) Observed corporate governance infractions

The fifth reason for the importance of this study is the report of the World Bank (2011) on the observance of standards and codes in Nigeria by listed firms. The World Bank (2011:16, paragraph 48) indicates that most listed firms had corporate governance infractions of various forms and that, generally, Nigerian listed firms showed “non-compliance with important disclosures". This study is a necessary reaction to the World Bank’s report by attempting to establish insight into the level of progress made by Nigerian listed non-financial firms in adopting effective corporate governance by complying with the provisions of the SEC-N Code of 2011 and CAMA 1990.

(vi) Empirical evidence

Sixth, literature has established an adverse relationship between weak corruption and the economic development of nations (Nageri *et al.*, 2013:46; Tseng & Wu, 2016). Effective corporate governance, on the other hand, has been found to curb corruption, which is a motivator of agency conflict (Rasheed & Yazdanifard, 2013; Tseng & Wu, 2016; Simmonds *et al.*, 2016; Agyei-Mensah, 2017; Nguyen *et al.*, 2020). Similarly, in their cross-country analysis, Boateng *et al.* (2021:3863) observed that "weak CG (corporate governance) systems breed corruption, while good governance systems are associated with greater monitoring, accountability, better disclosure, and transparency, which constrain conflicts of interest and reduce the incidence of corruption". With Nigeria's high corruption index, from 86 in 2003 to 74 in 2019 on the African continent (Transparency International, 2020), the need to institutionalise effective corporate governance cannot be overemphasised. This need also adds to the significance of this study.

(vii) First attempt at constructing a CGI of the non-financial listed firms in Nigeria

Seventh, this study is significant because it is the first attempt to construct a CGI of Nigerian non-financial listed firms for the period 2012–2019, taking into account the combined corporate governance provisions of the SEC-N of 2011 (SEC-N, 2011) and CAMA 1990 (CAC, 1990), as well as the use of both internal and external mechanisms. This approach provides a broader understanding of the relationship between corporate governance and firm financial performance in Nigeria at a time when the country experienced a wave of corporate governance reforms.

1.9 Scope of the study

The population and the sample of the study are non-financial listed firms that operated in Nigeria between 2012 and 2019. The companies may be wholly or partially owned. The data for the study is limited to firms whose shares were actively traded between 2012 and 2019. The study does not consider unlisted private firms, financial firms including banks and insurance companies, government-owned companies and agencies, or non-governmental organisations, including all faith-based organisations.

The restriction of the investigation to non-financial listed firms from 2012 to 2019 enables the study to focus on the corporate governance provisions of SEC-N 2011 and the CAMA 1990, which were operational during the period to 2019. As indicated earlier, the SEC-N 2011 Code and CAMA 1990 were replaced in 2020. Therefore, the governance codes and practices that served as the benchmarks for this study include the code of governance for listed firms issued by SEC-N in 2011 and the governance requirements for listed companies contained in the Companies and Allied Matters Act of Nigeria (CAC, 1990). The study does not consider the provisions of the 2003 and 2018 Codes, the provisions of CAMA 2020 (CAC, 2020) and the individual industrial-specific Codes. The use of the 2003 and 2018 Codes and the CAMA 2020 are inappropriate for this study because the 2011 Code replaced the 2003 Code with effect from 2011, while the 2018 Code (FRC-N, 2018) was suspended after its release in 2018 and made effective from the 1st of July 2020. Similarly, the CAMA 2020 was effective from 2020. Therefore, considering the corporate governance provisions of the 2018 Code and CAMA 2020 in the study against the data of the sample firms for the period of 2012 to 2019 is not appropriate.

1.10 Research methodology

The research methodology summarises the approach, design and philosophical basis of the research, including the methods adopted for data collection and testing of hypotheses (Creswell, 2009). The research methodology facilitates the achievement of the purpose and objectives of the study. It also enables appropriate data to be obtained and analysed to provide answers to the research questions posed in Section 1.6. Further, it facilitates the advancement of the international corporate governance research agenda by providing a systematic approach to conducting the research and arriving at the conclusions.

A quantitative research method, along with the positivist research paradigm and the deductive research approach, guided the process of gathering data for this study. Quantitative research makes use of numerical data (counts and measures of things) and large samples to test theories (Sobh and Perry, 2006) and examine the relationship between the dependent and independent variables (Creswell, 2009). The proxies of Tobin's Q, return on equity (ROE) and net asset turnover (NAT), represent firm values, which are the dependent variables. The multivariate regression model and

the panel data analysis are used to establish the relationship between the internal and external governance mechanisms and firm values.

The use of panel data analysis enables this study to 'combine cross-sectional and time series data, resulting in greater variability, more informative data with more degrees of freedom and less collinearity to help detect more effects than a cross-sectional or time series analysis would reveal' (Steyn, 2018:36). Furthermore, panel data analysis is most appropriate for this study because the data sets span over several periods and cover several research units (Sinha, 1998; Frees 2004). The EViews Version 11, Student Lite, software was used as the statistical tool to run the descriptive statistics, the correlation, and the regression results. However, the Microsoft Excel software was equally used in computing and presenting the tables and the charts.

The population is the entire listed of firms that operated from 2012 to 2019, about 165 of them as of December 2019. This time horizon is considered because the basis of the construction of the CGI for this study is the Code of Corporate Governance for listed firms that operated from 2011 to 2019 (SEC-N, 2011). The sample size of 63 firms was arrived at using the purposive sampling technique (Akinkoye & Olasanmi, 2014) to select the sample firms. Thus, only firms with complete annual reports that contained the corporate governance disclosures and financial details from 2012 to 2019 were considered. After adjusting for firms that did not meet the criteria, the final sample of 65 was selected, leading to a 504 firm-year data set of eight years per firm.

The study collects data from the annual reports of listed firms through content analysis. This approach provides the data on each of the independent governance variables used in constructing the CGI. The approach equally facilitated the achievement of the main purpose and objectives of the study, earlier discussed, which is to provide an insight into corporate governance in the Nigerian context by determining the relationship between firm performance and corporate governance of listed non-financial firms from 2012 to 2019, using the compliance index and the equilibrium variable models.

This study adopts the binary approach of Gompers *et al.* (2003) in constructing the CGI. Other studies have replicated the binary approach proposed by Gompers et al. (2003), including Cremers and Nair (2005), Brown and Caylor (2006), Ntim (2009), Varshney et al. (2012), Sarkar et al. (2012), and Albassam, 2014. The

variables considered in building the CGI for the study are dichotomous variables (Field, 2006). Thus, values are either "1" for the presence of a variable of measure or "0" when it is absent. There are no weights attached to the variables. Therefore, the total value calculated represents the CGI of the firm. Similar values have been allocated to the dummies (control variables) used.

The compliance index was constructed using 32 internal and external governance variables, mentioned earlier, and three control variables, totalling 35 variables. The three control variables used are capital structure, size of the firm using market capitalisation as a proxy, and age of the firm. More on the variables is discussed in Chapter Five.

As earlier discussed, three hypotheses have been proposed. The first hypothesis investigates the relationship between self-constructed CGI and firm performance. Hypothesis 2, broken into eight sub-hypotheses, tests the relationship between firm financial performance and the internal governance mechanisms of **CEO duality, female and foreign board membership, board size, board independence, proportion of board meetings, board committees, and independence of the external and audit committee.** The third hypothesis tests the relationship between firm performance and the external governance mechanisms of **the proportion of institutional shareholding and the market share**.

The proxies for firm performance are three. These are the market measure of Tobin's Q and the two accounting measures of return on equity (ROE) and net asset turnover (NAT). The NAT is also the proxy for agency costs. The estimation of these proxies is defined in Section 1.12.

To test the hypotheses, the pooled ordinary least square, fixed-effect, the random-effects estimation models were used. The most appropriate estimation model for the study was the fixed-effect estimation model. The selection of this model over the others was based on the results of the Husman test (Zulfikar, 2018). Chapter Five provides further details on the research methodology adopted for this study.

1.11 Sources of data

The main source of data is the annual reports of firms. Annual reports provide the information on both governance disclosures and the financial performance of firms that is used for the construction of the Corporate Governance Index (CGI) (Owusu, 2012; Botosan, 1997). This accounts for why several studies (Coleman and

Biekpe, 2006; Ranti, 2011; Sarkar *et al.*, 2012; Owusu 2012; Wellalage, 2012; Albassam, 2014) have obtained research data from annual reports of firms.

Therefore, the data used for the study is primarily structured secondary data of the listed companies from 2012 to 2019 in the public domain. The data was extracted from the annual reports using content analysis.

1.12 Firm value (dependent variables) proxies

The three proxies for the firm values used in the study include the following:

(i) Tobin's Q

Tobin's Q measures how effectively the assets of the firm have been deployed to create value for shareholders (Marashdeh, 2014). The model is estimated as:

$$Q = \frac{MVE + PS + DBT}{\text{Total Assets}}$$

(ii) Return on equity (ROE)

Return on Equity (ROE) indicates the return of after-tax profit on the net worth of the firm (Pandey, 2015; Ichsani & Rinta, 2015; Kijewska, 2016). It is estimated as:

$$\frac{\text{Net Profit after tax – Preference Dividend}}{\text{Book Value of Ordinary Equity}}$$

(iii) Net asset turnover/asset utilisation

This study uses asset turnover as a proxy for agency costs. Asset utilisation has been used as the proxy for agency costs in other studies, including McKnight & Weir (2009) and Gul, Sajid, Razzaq & Afzal (2012). It is defined as:

$$\frac{\text{Total Revenue}}{\text{Total Assets}}$$

1.13 Contributions of the study

The study has contributed in several ways to the body of knowledge on international corporate governance in the context of Nigeria as one of the developing economies in the world. These contributions have been discussed in detail in Chapter eight. A summary includes: (i) The construction of the CGI for listed non-financial firms from 2012–2019 based on the combined provisions of the SEC-N Code of 2011 and CAMA of 1990 and, most importantly, the inclusion of external governance variables such as market share and intuitional shareholding. The construction of CGI

for only the listed non-financial firms strengthens the empirical evidence for non-listed firms because the inclusion of banks and other listed non-financial firms would have weakened the predictive capacity of the results since both the financial and non-financial sectors were governed by different corporate governance codes during the period. (ii) The use of the equilibrium variable and the compliance index models to measure the relationship between the financial performance of the firm, the corporate governance compliance index and the individual independent corporate governance variables. (iii) The treatment of outliers in the data set used for the study by winsorization, an approach that has not been considered by most studies in Nigeria despite the importance of this approach. (vi) The study provides the most current empirical insight into the relationship between firm performance and compliance with the 2011 corporate governance Code and CAMA 1990 in Nigeria for non-financial listed firms. (vii) Consideration of net asset turnover (NAT) as a proxy for agency cost and as one of the dependent variables expands the number of dependent variables to be considered in corporate governance research, especially in the context of Nigeria. This will result in the stimulation of further investigation by emerging scholars.

1.14 Organisation of the study

This report is organised into eight chapters. Figure 1.1 presents the structure of the study. Chapter One discusses the background to the study the research motivation, objectives, scope, and limitations of the study. The research questions, the hypotheses, and the relevance of the study are also discussed in Chapter One. Chapter Two discusses the Nigerian context and explores the literature on the evolution of corporate governance in Nigeria. It also reviews the corporate governance models of the UK and South Africa to gain an insight into the corporate governance frameworks of the developed and developing economies. The chapter finally dissects the SEC-N Code of 2011 and its pertinent provisions.

Chapter Three presents the conceptual framework of corporate governance, its components, and the theoretical underpinnings of corporate governance. The study is based on the agency theory, which is the most appropriate theory for Nigeria with dispersed shareholdings. The corporate governance Code of 2011, which is the main basis of the study, supports the agency theory and its fundamental provisions

concerning the corporate governance structures of listed firms. Some of the major provisions include the separation of the position of the board chairman from the CEO, a unitary board, multiple committees, including the statutory audit committee (SAC), board meetings, independent directors, and other corporate governance disclosures. The chapter also discusses the corporate governance models that have been adopted globally.

Chapter Four presents empirical literature that informed the three hypotheses posed in the study. It provides the basis for the design of the corporate governance index (CGI) used in measuring the level of corporate governance compliance by listed non-financial firms in Nigeria during the period. In Chapter Five, the study presents the methodology, which encompasses the research approach, research paradigm, philosophy, and the method of data collection and analysis. The chapter further explains the method of addressing endogeneity in the study and the validity of the instrument.

Chapter Six analyses the data and presents the descriptive statistics. Results are presented both in the form of tables and charts to enhance understanding. Chapter Seven presents the regression results of the governance-performance relationship and discusses the hypotheses.

Finally, Chapter Eight concludes the study and presents the summary of the findings and conclusion. The chapter also reflects on the implications of the study for policy-makers and practitioners. Further, the chapter reflects on the contributions of the study to the body of knowledge in international corporate governance, especially with reference to the non-financial listed firms in Nigeria. The limitations of the study and suggestions for future research were also discussed in the chapter.

In all, the report is organised to cover the review of literature on four spheres: the conceptual framework, the theoretical underpinnings of the study, empirical literature in support of the hypotheses posed, and the identification of the research gaps. This approach provided a guide to the research design and assisted in the interpretation of the research results.

The chapter that follows discusses the Nigerian context, covering the economic and political evolution of Nigeria. Also discussed is how the modern corporate governance framework has evolved in Nigeria.

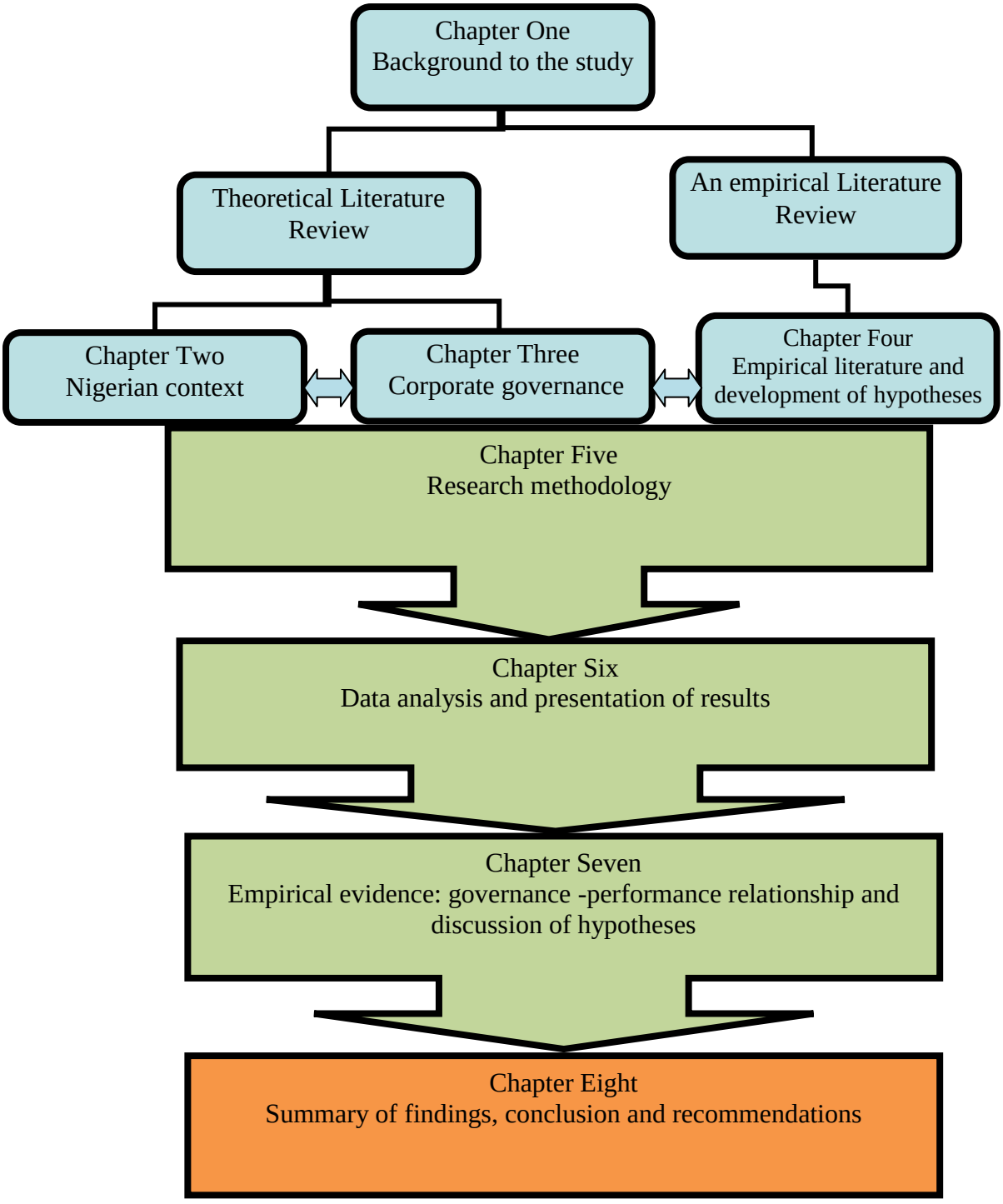


Figure 1.1: Structure of the study

CHAPTER TWO

NIGERIAN CONTEXT

2.1 Introduction

The discussion of the general framework of the study in the previous chapter has created the need to have some brief information on Nigeria as a sovereign state, its business firms' development, and corporate governance efforts. This is necessary since the study focuses on establishing the relationship between corporate governance and firm performance in the Nigerian context. Specifically, the chapter sets out to achieve three main objectives. The first objective is to provide insight into the historical background of Nigeria as a nation, especially in relation to its corporate development efforts, pre and post-independence. The second objective is to discuss how the modern corporate governance system in Nigeria has evolved over time. The third objective is to provide support for the governance mechanisms that have been used in developing the NCGI for this study.

The rest of the chapter discusses the historical background of Nigeria as a sovereign nation in section 2.2. This is followed by the discussion of company regulations in Nigeria the evolution of modern corporate governance practices in Nigeria, and statutory provisions for corporate governance in Nigeria. The discussion of the development of the Nigerian corporate governance codes, the roles and responsibilities of the board, the proliferation of corporate governance codes in Nigeria, the establishment of the Financial Reporting Council of Nigeria (Federal Republic of Nigeria, 2011) and the internal and external corporate governance mechanisms in Nigeria then follows.

2.2 Historical background of Nigeria

2.2.1 Nigeria before independence: 300 BC to pre-1960

Before the balkanisation and colonisation of Africa, Africans were identified by their tribes and administered themselves in well-organised empires, among which were the Oyo, Mali, old Ghana and Songhai empires (Deji, 2013). Literature indicates that the Noks, of the present-day Jos in Nigeria, have been found by archaeological evidence to have inhabited the Jos Plateau between 300 BC and 200 A.D. (Metz, (ed.) (1991). The Noks are still an integral part of present-day Nigeria. Therefore, it can be argued that the existence of Nigeria dates back to 300 B.C. Up until the end of the fourteenth century, about 1500, present-day Nigeria was made up of ethnic states with different political and administrative systems.

Prominent among the early-organised states were the Yoruba kingdom, the Edo kingdom of Benin, the Hausa states, Borno, Nupe, and numerous other small states in the west and south of current Nigeria, including the northern kingdoms of the savannah and the Igbos of current eastern Nigeria (Metz (ed.), 1991). By the fifteenth century, a firm political structure in Nigeria had emerged, although each ethnic group exercised control over its own people (Metz (ed.), 1991). From the 1500s to the 1750s, the kingdoms of the northern states, including the Songhai Empire and the Sayfawa Dynasty of Borno, which flourished, declined owing to foreign invasion from Moroko and drought (Metz (ed.), 1991).

The nineteenth-century witnessed two marked political influences. These were the Islamic holy wars of Usman dan Fodio between 1804 and 1808 that established the Sokoto Caliphate and the British declaration in 1807 that outlawed the transatlantic slave trade (Metz (ed.), 1991). The British colonialists also interfered in the political affairs of the Yoruba kingdom, the Igbo states, and Niger Delta riverine peoples during this period (Metz (ed.), 1991; Falola & Heaton, 2014). The British incursion and determination to take over the reins of Nigeria were manifested in the attack of Lagos in 1851 by the British Navy. As a result, Lagos became a British crown colony in 1861 (Stokke, 1970; Inikori, 2013).

The annexure of Lagos and the fall of the already weak northern states, coupled with the need to exploit the abundant natural resources of Sub-Saharan Africa, provided the impetus for the Berlin Congress of 1884-1885, which was held to

share the continent of Africa among European masters (Stokke, 1970; Deji, 2013). The main aim of the European countries was to boost their economies by taking the resources (raw materials) and converting them into finished goods for sale to the untapped market of Sub-Saharan Africa (Stokke, 1970; Deji, 2013).

The establishment of the Crown Colony of Lagos (the former capital city of Nigeria) in 1861(Stokke, 1970; Utuk, 1975), which brought Lagos under the control of Britain in 1861, can be said to herald the creation of modern Nigeria. However, the formal declaration of the geographical areas called Nigeria as a political entity emerged as a product of the Berlin West African Congress of 1884-85, which wanted to avoid an imminent war among European countries, including Britain, that were already in control of some parts of Africa (Stokke, 1970; Porter, 1985; Deji, 2013). The name "Nigeria" was said to have been formally suggested by Joseph Chamberlain, the then Colonial Secretary in charge of West Africa (Utuk, 1975), and was adopted on April 10, 1899. There is, however, controversy in the historical literature about the actual person that suggested the name "Nigeria". The name of Flora Shaw, Lord Laggard's wife, has also been cited in the literature as the originator of the name "Nigeria" (Stokke, 1970; Utuk, 1975; Deji, 2013).

The Berlin Declaration and British economic interests prompted the establishment of the Protectorates of Northern and Southern Nigeria in 1900, with Lord Lugard appointed to oversee the two protectorates. The Northern and the Southern Protectorates were thereafter united into one administrative entity in 1914, with Lugard as the first Governor-General (Stokke, 1970; Utuk, 1975; Deji, 2013).

Between 1914 and 1960, several administrative models were implemented. These models were facilitated by the various constitutions. These included the Clifford Constitution of 1922, introduced by Sir Hugh Clifford, who took over the governance of Nigeria from Frederick Lugard in 1919. The Clifford Constitution introduced the use of elections and heralded the formation of political parties in Lagos. The Richard Constitution replaced the Clifford Constitution in 1946. Sir Arthur Richard, who took over from Sir Clifford in 1943, introduced the Richard Constitution. The Richard Constitution is known for bringing together the protectorates of Northern and Southern Nigeria and for establishing a central legislative council. The Macpherson Constitution replaced the 1946 Constitution in 1951.

The Macpherson Constitution was introduced under Sir Macpherson, who took over the governance of Nigeria from Richard in 1948. This Constitution is noted for delineating Nigeria into three regions: the Northern Region, the Western Region, and the Eastern Region, and for introducing the federal legislative system with regional representatives. The Lyttleton Constitution of 1954 replaced the Macpherson Constitution. This constitution created a legislative chamber in the Eastern Region, in addition to the two earlier created by the Macpherson Constitution. Other provisions of the Littleton Constitution included the creation of an executive council with three ministers for each region; three officials for each region; and one minister appointed to represent Southern Cameroon; and provided for the division of power between the federal and the regional legislatures (Deji, 2013). The 1954 constitution heralded the Independence Constitution of 1960, and the Independence Act was passed by the British parliament in July 1960. The Independence Constitution of Nigeria was effective from October 1st, October 1960 (Deji, 2013). Before independence, the regulation of the operations of firms was based on the corporate legal framework of the UK.

2.2.2 Nigeria: post-1960 independence governance structure

The Federal Republic of Nigeria is the largest and most populous black nation in the world (Falola & Heaton, 2014; Stokke, 1970). The Federal Republic of Nigeria is located in Sub-Saharan Africa and became an independent African sovereign state on October 1, 1960 (Orukpe & Omoruyi, 2017).

After independence, Nigeria adopted a parliamentary system of democratic governance with three regions: the Northern Region, the Western Region, and the Eastern Region (Stokke, 1970). The first Prime Minister was Abubakar Tafawa Belewa, and the first President was Nnamdi Azikiwe (Library of Congress-Federal Research Division, 2008). The Western Region, inhabited by the Yorubas, hosts Lagos, the economic nerve centre of Nigeria. The Eastern Region is made up predominantly of the Igbos and the Efiks, Ijaws, and the Binis ethnic groups (Stokke, 1970). They occupy the south-south (Niger-Delta) region of Nigeria. In 1979, Nigeria adopted the presidential system of governance (Effoduh, 2015; Ogbeidi, 2012). Between 1960 and May 29, 1999, when Nigeria once again returned to democratic

governance, Nigeria was governed by both military dictatorships and two democratic governance regimes (Stokke, 1970; Ogbeidi, 2012; Deji, 2013; Effoduh, 2015).

Nigeria is currently governed under the 1999 Federal Constitution. It is a federal republic made up of thirty-six federating states and the Federal Capital Territory, Abuja. The official language of Nigeria is English. The country has three major native languages: Hausa, popular in Northern Nigeria; Yoruba, popular in Western Nigeria; and Igbo, popular in Eastern Nigeria and the Niger Delta. The latest official population of Nigeria was 140.43 million by the 2006 census. The population was made up of 51% males (71,345,488) and 49% (69,086,302) females (National Population Commission, 2009). The distribution of the population is shown in Table 2.1.

Table 2.1: State and sex distribution of Nigerian Population in 2006

Age Group	Total	Male	Female
0-14	58,736,297.00	30,462,148.00	28,274,149.00
18-34	50,013,462.00	23,813,725.00	26,199,737.00
35-64	27,145,270.00	14,535,074.00	12,610,196.00
65 and above	4,536,761.00	2,534,541.00	2,002,220.00
TOTAL 2006	**140,431,790.00**	**71,345,488.00**	**69,086,302.00**

Source: National Population Commission (2009)

Using the population increase estimation index of 1.51 for every ten years as suggested by Ottong *et al*. (2010), the expected population of Nigeria in 2019 can be estimated at two hundred and twelve million (212 million) people, made up of one hundred and eight million males and one hundred and four million females. However, the United Nations Population Fund (UNPF, 2021) puts the estimated Nigerian population at 211.4 million (two hundred and eleven million, four hundred thousand) people by 2021, while the World Bank Group puts it at 206.14 million by 2020 (The World Bank Group, 2021). In the context of this study, this population figure creates a ready market for Nigerian listed firms to take advantage of by ensuring that they maintain effective corporate governance practices for optimal performance in earnings and return on investment.

2.2.3 Structure of the Nigerian economy

Like most African economies, the economy of Nigeria pre-independence was dominated by merchants from Britain and Europe, with a focus on exploiting the vast natural resources of Nigeria to develop their own local economies (Effoduh, 2015). Thus, the colonial economic policies in Nigeria "discouraged indigenous industrialisation, but promoted export crops and mineral production to feed the British factories" (Adeyeri & Adejuwon, 2012:1). This led to the establishment of mainly merchandising companies that had interests in products such as palm oil, groundnuts, and other crops to feed their home factories and export finished goods back to Nigeria (Effoduh, 2015).

Nigeria currently operates an open economy dominated by international transactions (Uwakaeme, 2015). However, the structure of the Nigerian economy is characterised by a high level of underdevelopment (Chete *et al.*, 2014). At independence and for much of 1960 and 1970, Chete *et al.* (2014) indicate that the agricultural sector was the mainstay of the Nigerian economy. It provided food, employment, and raw materials for the industrial sector. For instance, in 1980, Effoduh (2015) observed that about 70% of the total Nigerian working population was engaged in agriculture. However, following the discovery of oil in Nigeria in 1956 by Shell-BP at Oloibiri in the Niger Delta area of the present South-South geopolitical area and its exploration and exportation in commercial quantities by 1958, the importance of agriculture gradually diminished while crude oil exportation became the dominant source of revenue in Nigeria (Chete *et al.*, 2015; Effoduh, 2015).

The quest for the industrialisation of Nigeria started with the introduction of development plans (Ibietan & Ekhosuehi, 2013; Chete *et al.*, 2015) aimed at stimulating the indigenous industrialisation of Nigeria and increasing skilled human capacity. In 1986, the country introduced the "structural adjustment programme" (SAP) coordinated by the World Bank/IMF. The SAP was widely acknowledged as a profound economic reform aimed at addressing the inherent weaknesses of the economy (Chete *et al.*, 2014). This period witnessed the introduction of austerity measures to strengthen the dwindling economic fortunes of the country that resulted in the devaluation of the Naira (Dagogo, 2014).

The period from 1990 through 1999 witnessed further shrinkage of the economic space of Nigeria that was affected by the devaluation of the Naira and inflation. For instance, from the parity of one dollar to one naira in early 1986, the

naira crashed to ₦9.50k and ₦43.00 per US dollar in 1992. Ever since then, the Naira has not recovered its value against the dollar (Ibietan & Ekhosuehi, 2013). According to the details published on the official website of the Central Bank of Nigeria (https://www.cbn.gov.ng/rates/exrate.asp?year=2019, accessed on 10/11/2019 at 21.22 pm, the Nigerian Naira exchanged at ₦359 to the US Dollar in August 2019.

The first rolling plan, which was intended to consolidate the gains of the SAP regime, was the 1990-1992 rolling plan (Dagogo, 2014). The plan incorporated the industrial master plan (IMP), which was introduced to tackle the challenges of a shortage of industrial raw materials and inputs, inefficient infrastructure, inadequate linkage among industrial subsectors, and administrative and institutional problems (Dagogo, 2014).

The fallout of the rolling plans was the pursuit of the privatisation of public enterprises, a deliberate policy to grow and support small scale industries as contained in the economic rolling plan, which covers the period 2017-2020, tagged "The Nigerian Economic Recovery and Growth Plan: 2017-2020" (Ministry of Budget and Planning, 2017). The 2017-2020 plan aims to achieve three main objectives. The first is to restore the growth of the economy, which declined during the period 2014-2017 because of the fall in crude oil prices. The second objective is to invest in the human capital development of Nigeria to ensure that the country has the skills to support the envisaged economic growth. The third objective is to build a globally competitive economy.

The expectations of the 2017-2020 plans were not met because of the non-performance of the economy owing to several factors, including the fall in the price of crude oil, which is the main revenue resource of Nigeria (Aminu *et al.*, 2013; Ibrahim *et al*., 2018). Factors that led to the economic recession included corruption, mismanagement of resources, insecurity, oil price shocks, a global health pandemic, and delays in approving the national budget (Aminu *et al*., 2013; Ibrahim *et al*., 2018; Ilori & Efuntade, 2020). Other factors were the unfavourable and inconsistent foreign exchange regime, overreliance on imports, high inflation rate, high unemployment, low domestic production capacity, and depreciation of the Naira that resulted in the high cost of doing business in Nigeria; high-interest rates, poor electricity and other infrastructure (Aminu *et al.,* 2013; Ibrahim *et al*., 2018; Ilori & Efuntade, 2020). Therefore, the growth rates in major sectors of the Nigerian economy either became

stagnant or negative (PricewaterhouseCoopers, 2017; Ibrahim et. *al*., 2018; Marshal & Solomon, 2017; Kemi, 2019).

To corroborate the weak economic position of Nigeria during the period of this study, a review of the global competitive index of the World Economic Forum issued in 2012/2013 and 2018/2019 suggests a poor ranking of Nigeria in terms of global competitiveness with specific reference to major areas as shown in Table 2.2 below.

Table 2.2: Selected Nigerian GCI rankings for 2012 and 2019

S/N	GCI index factor description	GCI ranking 2012/2013	GCI ranking 2018/2019
1	Strength of auditing and reporting standards	113	114
2	Efficacy of corporate boards	89	49
3	Legal/property rights index	119	115
4	Shareholder governance/protection of minority shareholders	91	55
5	Soundness of banks	129	103
6	Female participation in the workforce	80	35.9
7	Favouritism in decisions of government officials	122	34.3
8	Pay and productivity	100	86
9	Co-operation in labour-employer relations	115	110
10	Incidence of corruption	127	121
11	Product market competition	92	97
	Source: World Economic Forum (2012; 2019)		

As Table 2.2 shows, out of a scale of 144 in 2012 and 141 in 2019, Nigeria ranked poorly in almost all areas measured, with the exception of efficacy of boards, shareholders' governance, female employment, and favouritism in decisions of government officials, which had improved rankings.

The Nigerian economy worsened in 2020 and was plunged into a recession because of falling global demand and containment measures to fight COVID 19, the global pandemic that also affected several sectors of the economy, including aviation, tourism, hospitality, restaurants, manufacturing, and trade (African Development Bank, 2021; PricewaterhouseCoopers Limited, 2017).

A further review of the rankings and the cause of the recession suggests that some hinged on effective organisational controls. Examples include mismanagement, low productivity, and overreliance on imports because of poor or high costs of domestic production. The containment of these factors requires effective firm

direction and control, which is the hallmark of corporate governance. It can be said that the effect of a lack of motivation to improve corporate governance compliance level, as would later be seen in Chapter Six, had adversely affected the capacity of the private sector to improve the economy by providing services and goods at competitive prices to reduce overreliance on imports, which also contributed to worsening the economy of Nigeria.

The evidence of the poor ranking underscores the need for this study to provide areas of corporate governance that require attention in order to improve the economic fortunes of Nigeria. The importance of effective corporate governance to the performance of the firm and its relevance to the improvement in the economies of nations was emphasised by the former President of the World Bank, James D. Wolfensohn, who said that, "the governance of the corporation is now as important in the world economy as the government of countries" (Mohamad, 2018:1). This is because, firms, especially multinationals, exert substantial influence on the economic and political policies of nations (Mohamad, 2004; Macher *et al.,* 2011; Kim & Milner, 2019). Thus, the recommendations of this study, contained in Chapter Eight, which are aimed at improving the efficient management of Nigerian listed non-financial firms, will further enhance the content and quality of company regulation in Nigeria, as discussed in Section 2.3.

2.3 Company regulation in Nigeria: pre and post-colonial era

2.3.1 Pre 1960 (before independence)

The Royal Niger Company (RNC) was the first organised business entity to operate in Nigeria (United Africa Company (UAC) Nigeria Plc. 2012). The RNC was chartered between 1672 and 1750 to administer the territory that would later become Nigeria. By 1896, the RNC had become highly involved in trading activities in the propagation of the colonial Nigerian governance agenda.

UAC Nigeria Plc. (2012) explains the exploits of Royal Nigeria Company in Nigeria as follows.

> *"In 1892, the Royal Niger Company brought in Captain Lugard (later to be known as Lord Lugard) to help protect its interest in Nigeria. Lord Lugard would later become the first Governor-General of Nigeria. Following the revocation of the charter, the Royal Niger Company changed its name to The Niger Company Limited in 1900. In 1919, The Niger Company Limited was bought by Lever Brothers Limited. That same year, The Miller Brothers*

Limited and the African Association formed the African & Eastern Trade Corporation. On March 3, 1929, The United Africa Company (UAC) was formed by the joint agreements of The African & Eastern Trade Corporation and the Niger Company (owned by Lever Brothers Limited). UAC was first incorporated in Lagos, Nigeria under the name Nigerian Motors Ltd. on April 22, 1931 as a wholly-owned subsidiary of the United Africa Company Ltd. (a subsidiary of Unilever), which later became UAC International. The company's name was changed to United Africa Company (Nigeria) Ltd on July 23rd, 1943".

From above, it can be said that prior to the introduction of the first ordinance of 1912, that regulated the operations of firms in Nigeria, there was no formal statutory provision which stipulated how firms should operate in Nigeria. Rather, it was primarily British merchants, led by the Royal Niger Company (RNC) and governed by English commercial and company laws, who engaged in organised trading in Nigeria. RNC later metamorphosed into the present-day UAC Nigeria Plc. The Companies Ordinance of 1912, which was the first legal framework to regulate the formation and operation of companies in Nigeria, was based on the Companies Act 1908 of the UK (Erameh, 2012; Aina, 2013).

The Ordinance of 1917 extended the 1912 Ordinance to the whole of Nigeria after the amalgamation of the Southern and Northern Protectorates of Nigeria into one country in 1914. It underwent several amendments, leading to the issuance of the Company Ordinance of 1922, which was subsequently amended in 1929, 1941, and 1954. The 1922 Ordinance, as amended in 1954, was replaced by the first Companies Act of Nigeria that appeared in Chapter 37 of the 1958 Laws of the Federation (Adun, 2014; Erameh, 2012; Aina, 2013). The 1958 law operated for ten years, until 1968, when the Companies Act, 1968, discussed in section 2.3.2, replaced it.

2.3.2 Post 1960 (after independence to date)

After independence, the Companies Act, 1958 was repealed and replaced with the Companies Act, 1968, which considered in detail the company formation requirements of Nigeria, compared with prior regulations. The 1968 Act made far-reaching provisions and attempted to provide for the corporate governance of firms concerning accounting, responsibilities of directors, and the involvement of shareholders in the management of companies.

The wave of criticisms against the 1968 Companies Act gave rise to the existing Companies Act, 1990, CAMA, 1990 (CAC, 1990; Aden, 2014; Erameh, 2012; Aina, 2013). The CAMA 1990 was effective from 1990 to 2019. It was revised

and replaced by the Companies and Allied Matters Act, 2020 **(**CAMA 2020), which became effective from 2020. The sections that follow discuss the evolution of corporate governance in Nigeria from 1960 (sections 2.4 to 2.5), while the specific corporate governance provisions of CAMA 1990, which pertain to the study, are x-rayed in section 2.6.

2.4 Evolution of modern corporate governance in Nigeria

The emergence of modern corporate governance in Nigeria can be traced to the establishment of the Lagos Stock Exchange on September 15, 1960 as a private limited liability company, limited by guarantee. The Lagos Stock Exchange metamorphosed into the current Nigerian Stock Exchange in 1977.

The main functions of the Nigerian Stock Exchange include providing a platform for the selling and buying of stocks and securities, providing opportunities for raising new capital, protecting investors from shady deals, facilitating dealings in government securities, and encouraging savings and disseminating information to entrepreneurs and industrialists (Osaze, 2007). To regulate the operations of the stock market, the Capital Issues Committee was established in 1962, which later metamorphosed into the Security and Exchange Commission of Nigeria (SEC-N) in 1979. This was followed by the enactment of the Investments and Securities Act (ISA) in 1999 as amended in 2007 (SEC-N, 2007). The ISA empowers the Commission to regulate the capital market to protect investors and develop the capital market to enhance its efficiency and pave the way for a private sector-led economy.

Nigeria has a mix of listed and unlisted firms. Listed firms are categorised into two groups: those listed in the first-tier capital market and those listed in the second-tier capital market. The Nigerian Stock Exchange established the second-tier capital market in 1985 to list the securities of smaller companies that were unable to meet the requirements for listing on the main market (first-tier capital market) of the exchange (Olusoji & Enofe, 2012; Mary *et al*., 2012). As observed by Okike (2007), the activities of these firms affect the Nigerian economy in many ways. Therefore, the government plays a key role in corporate governance. This study considers only firms listed in the first-tier capital market.

In 2021, the Nigerian Stock Exchange evolved into the Nigerian Exchange Group Plc. (Nigerian Exchange Group, 2021) and was re-organised into three companies while the securities were grouped into four categories, called listing boards

(Olabiyi & Ajulo, 2020; Nigerian Exchange Group, 2021). The four listing boards are the Premium Board for the listing of shares of large blue-chip companies; the Main Board for the listing of the shares of other established companies; the Alternative Securities Market (ASeM) for the listing of shares of small to mid-sized companies, and the Growth Board, which was established to encourage growth-oriented firms with good corporate governance standards to list and raise long-term capital and promote liquidity.

Another effort at instituting modern corporate governance practices in Nigeria was the promulgation of the Companies and Allied Matters Act (CAMA, 1990). Several provisions are contained in CAMA 1990 that are aimed at strengthening company governance. For instance, Sections 211-224 provides for corporate meetings. Sections 244 through 284 provide for directors and their responsibilities. Section 331 stipulates the accounting records to be maintained by the companies, while Section 357 provides for the appointment of external auditors. The audit committee, another critical element in corporate governance, which is required to be established by all listed companies in Nigeria, is provided for in section 359. A detailed discussion of the relevant provisions of CAMA 1990 is in section 2.6 of this chapter.

2. 5 Statutory supports for corporate governance in Nigeria

Compared to the South African and UK experiences, the list of statutory provisions and rules stated below indicates that modern corporate governance practice in Nigeria, as a corporate control mechanism, is a much more recent development. The current corporate governance framework in Nigeria is derived from a conglomerate of several statutory provisions and rules. These are:

1) The Companies & Allied Matters Act (CAMA) 1990 (as amended in 2020),
2) The Banks & Other Financial Institutions Act (BOFIA) of 2006,
3) The Investment & Securities Act of 2007, which established the Security and Exchange Commission of Nigeria (SEC-N),
4) The Listing Rules of the Nigeria Stock Exchange,
5) The Pension Reforms Act, 2004,
6) Independent Corrupt Practices and Other Related Activities Commission (ICPC) Act 2000,

7) Economic and Financial Crimes Commission (EFCC) Act, 2004
8) The Financial Reporting Council of Nigeria Act, 2011, and
9) The Nigerian Stock Exchange (NSE) is now the Nigerian Exchange Group from 2021.

Specific indications in the affected laws, standards, and regulations include requirements for board structures in terms of size, board member qualifications, the inclusion of non-executive and independent directors on company boards, the separation of the positions of chairman and CEO of firms, the number of board meetings, provisions on governance committees, and audit and control processes. The purpose of these regulations and codes is to protect investors' funds, curb the abuse of office by directors and executives of firms, and ensure efficient management of the resources of firms and transparency in the conduct of their affairs. However, only the specific corporate governance provisions of the CAMA 1990 and SEC-N 2011 codes are discussed in this study because they contain the relevant corporate governance provisions required for this study.

Corporate governance, as a concept, gained attention in Nigeria after the Asian financial crisis exacerbated corporate collapses of major global conglomerates in the late 1990s and through the early 2000s in the USA, Europe, and Asia. However, the historical antecedents of corporate governance practice in Nigeria have links with corporate governance practice in the UK (Boniface, 2002). The first formal attempt at instituting a corporate governance system in Nigeria commenced with the enactment of the Companies Act of 1968, which was modelled on the UK's Companies Act of 1948 (Dombin, 2014). The CAMA Act of 1990, which superseded the 1968 Act, enacted far-reaching provisions on board and corporation meetings, director duties, minority interest protection, and shareholder rights. The 1990 Act also enshrined the principle of accountability by creating the audit committee to oversee the work of the external auditor and review the financial and audit reports and associated concerns. Therefore, the 1990 Act can be said to be the foundation of the Nigerian modern-day corporate governance framework.

2.6 Pertinent provisions of CAMA 1990 on corporate governance

This section discusses the various provisions in CAMA 1990 that support the effectiveness of the corporate governance system in Nigeria.

2.6.1 Corporate meetings

Part VIII of CAMA 1990 provides for three main meetings: the statutory general meeting (SGM), the annual general meeting (AGM) and the extraordinary meeting (EM). Section 211 of CAMA 1990 provides that every public company shall hold a statutory general meeting of the members of the company within six months from the date of its incorporation. Section 213 of CAMA 1990 requires every company to hold a general meeting as its annual general meeting, in addition to any other meetings in that year. Section 224.1 of CAMA 1990 provides for voting by shareholders. It states that at any general meeting, a resolution put to the vote shall be decided on a show of hands unless a poll is (before or on the declaration of the result of the show of hands) demanded.

2.6.2 Directors' duties and remuneration

Directors, secretaries, and their duties are defined in Part IX of CAMA 1990. Section 244 defines a director of the company as a person duly appointed by the company to direct and manage the business of the company. A director, in terms of CAMA 1990 Section 245, also includes any person on whose instructions and directions the directors are accustomed to act. The Companies Act, 1990, provides that every registered company in Nigeria should have at least two directors. Sections 248 through 250 of CAMA 1990 specify the appointment and removal of directors. The members at the AGM have the power to elect and remove directors. Sections 267 to 273 provide for the remuneration of directors and other officers of the company. The company, in a general meeting, shall, from time to time, determine the remuneration of the directors; and such remuneration shall be deemed to accrue daily. The directors may also be paid for all travel, hotel, and other expenses properly incurred by them in attending and returning from meetings of the directors or any committee of the directors or general meetings of the company or in connection with the business of the company. Where the articles have fixed remuneration, it can be changed only by a special resolution. CAMA 1990 states further that the managing director of a company shall receive such remuneration (whether by way of salary,

commission, or participation in profits, or partly in one way and partly in another) as the directors may determine.

Sections 279 to 283 of CAMA 1990 specify the duties and responsibilities of the directors of a company. Thus, a director of a company: (1) stands in a fiduciary position towards the company and shall observe the utmost good faith towards the company in any transaction with it or on its behalf; (2) owes a fiduciary duty to the company when acting as an agent of a particular shareholder or of other people in dealing with the company's securities; and (3) should act at all times in what he believes to be in the best interest of the company. Other responsibilities of the director according to section 279 include: (1) that a director should act in the best interest of the company in matters relating to employees of the company; (exercising his powers without constituting a breach of duty which would incidentally affect a member adversely; (3) not fettering his discretion to vote in a particular way; and (4) not delegating his powers as a form of abdication of duty.

Section 280 states that a director shall be in breach of conflict of duties and interest if (a) in the course of management of the affairs of the company, or (b) in the utilisation of the company's property makes any secret profit or achieves other unnecessary benefits. On multiple directorships, section 281 states that where a person holds more than one directorship, he or she shall not derogate from his or her fiduciary duties to each company, including the duty not to use the property, opportunities, or information obtained in the course of the management of one company for the benefit of the other company, or to his own or other person's advantage.

Section 282 requires a director of a Nigerian company to exercise the powers and discharge the duties of his office honestly, in good faith and in the best interests of the company, and to exercise that degree of care, diligence, and skill which a reasonably prudent director would exercise in comparable circumstances, failure of which shall be ground for an action for negligence and breach of duty. Section 283 defines the legal position of directors as the trustees of the company's funds, properties, and powers. As such, they must account for all resources over which they have control, refund any sums of money that have been improperly disbursed, and exercise powers honestly in the interests of the company and all shareholders, rather than their own or sectional interests.

2.6.3 Protection of minority interests against Type II Agency problems

Part X of CAMA 1990 provides for the protection of the minority interest against any illegal and oppressive conduct by the majority shareholders. Minority shareholders have voting powers that, per se, may not be able to change any decision of the majority shareholders. Majority shareholders, being rational investors, would always take decisions that would benefit them even if the minority interest would suffer consequences from such a decision. This behaviour is a form of expropriation. Expropriation of minority shareholders (Ishak and Napier 2006:90) "refers to the extraction of private benefits of control by large owners that are not shared by minority shareholders." It is a form of using one's controlling power to maximise their personal benefit to the detriment of the minority shareholders (Mustafa *et al*., 2011). This can equally take the form of diverting business opportunities to other firms for the benefit of controlling shareholders and private benefit, including the engagement of unqualified family members in managerial positions and overpayment of emoluments to connected people (Yeh *et al.*, 2003). Thus, excess voting power is the major motivator for expropriation behaviour (Malan *et al.*, 2015).

CAMA 1990 responded to the possible expropriation of the minority interest in Nigerian companies by making far-reaching provisions to protect the rights of the minority against possible expropriation and oppression by the majority shareholders. The general principle is that any member of the company can seek redress and protection of his or her rights where, in the opinion of such a member:

> *" the affairs of the company are being conducted in a manner that is oppressive or unfairly prejudicial to, or unfairly discriminatory against, a member or members, or in a manner that is in disregard of the interests of a member or the members, as an act or omission or a proposed act or omission, by or on behalf of the company, or a resolution, or a proposed resolution, of a class of members, was or would be oppressive or unfairly prejudicial to, or unfairly discriminatory against, a member or members or was or would be in a manner which is in disregard of the interests of a member or the members as a whole; or…."* (CAMA 1990, section 312).

2.6.4 Accounts and audit

One of the pillars of corporate governance is an effective financial accounting system, audit, and control. Part XI of CAMA 1990 provides for the level of accounting, record keeping, and reports that registered companies in Nigeria are required to maintain.

Section 332.1 states that the accounting records of a company shall be kept at its registered office or such other place in Nigeria as the directors think fit, and shall at all times be open to inspection by the officers of the company. Unless there are other restrictions by the court or other statutory provisions in the case of winding up, accounting records are required by section 332.2 to be preserved for six years from the date on which they were made.

The financial statements of a company are expected to comply with the accounting standards issued from time to time by the Financial Reporting Council or other international accounting standards adopted for Nigerian use. The Federal Government of Nigeria approved the adoption of IFRS by all listed companies by the end of 2012, and other entities, including SMEs, by the end of 2014 (Isa, 2014). However, in practice, some difficulties have been observed in the implementation of the new accounting-reporting framework. These challenges include difficulty in valuing unlisted equities, sophisticated accounting systems and poor record-keeping, deficit in the technical capacity of firms to facilitate the implementation of IFRS, high implementation cost, inertia by managers of firms, tight regulatory timeline, frequent reviews of standards, lack of effective monitoring from the FRC to guide firms and encourage implementation of the standards (Oduware, 2012; Akintola Williams Delliote, 2014; Siyanbola *et al.*, 2014; Abata 2015; Shehu & Masunda 2015; Odo, 2018).

As part of effective control measures and to ensure that, the financial statements of the firms show a true and fair view of their operations for the respective years, CAMA 1990 requires that all listed firms present audited accounts to the public on a yearly basis. Specifically, section 357 of CAMA 1990 requires that at each AGM, an external auditor should be appointed by the members (shareholders) to audit the financial statements of the company, and hold office from the conclusion of that, until the conclusion of the next annual general meeting, when he would retire. However, the appointment of the first auditors may be made by the directors "at any

time before the company is entitled to commence business" (CAMA 1990, Section 357 (5)) and auditors so appointed hold office until the conclusion of the next annual general meeting.

To ensure independence and high quality of audit reporting, section 358 of CAMA 1990 specifies the disqualifications for appointment as auditor of a Nigerian listed firm to include: (a) an officer or servant of the company; (b) a person who is a partner of or in the employment of an officer or servant of the company; (c) a person or firm who or which offers to the company professional advice in a consultancy capacity in respect of secretarial, taxation or financial management, (d) a body corporate, and for this purpose, an auditor of a company shall not be regarded as either an officer or a servant of it. This provision seeks to control the undue influence of the external auditors of firms and regulate their involvement in other relationships outside of strict audit and audit-related services.

The connection between the auditor and the board or executives of the firm and the significant involvement of external auditors in non-audit assignments in firms may undermine the quality of audit work and expose the firm to risk, as in the case of Enron (Knapp, 2011; Currall & Epstein, 2003). Further, close affinity or social ties between the external auditor and the executives, board members, and audit committee members may result in social pressures and compromise audit independence, quality, and facilitate creative accounting and enable management to usurp the responsibilities and duties of the board (Fearnley & Beattie, 2004; ICAEW, 2013; Nasution, 2013; Yadav, 2013; He *et al*., 2016). Another consequence of allowing external auditors to have close ties with the executives and the directors is that independence will be impaired and result in high agency conflict (Currall & Epstein, 2003; Arnold & De Lange, 2004).

Section 359 of CAMA (1990) requires the auditors to report to the members of the company on the accounts examined by the auditors, and on every balance sheet (Statement of Financial Position), and Profit and Loss Account (Statement of Comprehensive Income) and on all group financial statements, copies of which are to be laid before the company in a general meeting during the auditors' tenure. In addition, the auditor is expected to make a report to the audit committee.

2.6.5 The statutory audit committee (SAC) of the board

The boards of listed companies are required by section 359, paragraph 4 of CAMA 1990, to establish an audit committee. This committee is normally referred to as the SAC because it is contained in the Companies Act. It is to consist of an equal number of directors and representatives of the shareholders of the company, subject to a maximum of six members). One of the main duties of the audit committee is to examine the auditor's report and make recommendations thereon to the AGM. In Section 359.5, it states that any member may nominate a shareholder as a member of the audit committee by giving notice in writing of such nomination to the secretary of the company at least 21 days before the AGM. Members of the audit committee are not paid any remuneration in Nigeria other than those who are board members, who are entitled to the normal board sitting allowances. This arrangement is to ensure that the CEO or other directors seeking special favours do not compromise the integrity of the committee.

CAMA (1990) does not compel private companies to establish audit committees, but they are advised to do so to increase their corporate governance mechanisms. The main functions of the audit committee, as outlined in section 359.6, in addition to those that the articles of the company may assign, include: (a) ascertaining whether the accounting and reporting policies of the company are in compliance with the legal requirements and agreed ethical practices; (b) reviewing the scope and planning of audit requirements; (c) reviewing the findings on management matters in conjunction with the external auditor and departmental responses thereon; (d) keeping under review the effectiveness of the company's systems of accounting and internal control; (e) making recommendations to the board regarding the appointment, removal, and remuneration of the external auditor; and (f) authorising the internal auditor to investigate any activities of the company which may be of interest or concern to the committee.

Further, although CAMA (1990) does not expressly specify the quality of members of the audit committee, the enormity of the duties and responsibilities of the audit committee of listed companies calls for a membership that has both financial and analytical skills. This is done so that the committee can advise the board on the company's accounting and internal control systems. This gap is, however, addressed by the complementary provisions in the SEC Code of 2011 that indicate that members

of the audit committee should have basic financial literacy and should be able to read financial statements (SEC-N, 2011: section 30.2). The section adds that at least one member of the audit committee of a listed company should have accounting or financial management knowledge.

The SEC Rules and Regulations 2013 for listed companies in Nigeria also specify in section 42.5 (c and d) that the audit committee of every public company shall review the company's financial statements before approval by the board of the company and present the report at the annual general meeting. In the case of the banking sector, the CBN Code of 2006 (CBN, 2006) requires members of the audit committee to be non-executive directors and ordinary shareholders appointed at the AGM, and some of them should be knowledgeable about internal control processes. One of the appointed ordinary shareholders should serve as the chairman of the committee.

2.6.6 Engagement, duties, powers, and remuneration of the external auditor

The Companies Act 1990 provides for the engagement, duties, powers, and removal of external auditors, and how their remuneration is to be fixed. Section 360 of CAMA (1990) stipulates that:

> "*360 (1) It shall be the duty of the company's auditors, in preparing their report, to carry out such investigations as may enable them to form an opinion as to the following matters whether:*
>
> *(a) proper accounting records have been kept by the company and proper returns adequate for their audit have been received from branches not visited by them;*
>
> *(b) the company's balance sheet (*Statement of Financial Position*) and (if not consolidated) its profit and loss account are in agreement with the accounting records and returns.*
>
> *(2) If the auditor is of the opinion that proper accounting records have not been received from branches not visited by them, or if the balance sheet (Statement* of Financial Position*) is not consolidated and its profit and loss accounts are not in agreement with the accounting records and returns, the auditors shall state that fact in their report.*
>
> *(3) Every auditor of a company shall have a right of access at all times to the company's books, accounts and vouchers, and entitled to require from the company's office such information and explanations as he thinks necessary for the performance of the auditor's duties.'…*
>
> *(5) It shall be the auditor's duty to consider whether the information given in the directors' report for the year for which the accounts are prepared is consistent with those accounts; and if they are of the opinion that it is not, they shall state that fact in their report".*

On the auditor's remuneration, section 361 of CAMA (1990) provides that in the case of an auditor appointed by the directors, the directors may fix the remuneration; otherwise, the company in a general meeting fixes the auditor's remuneration in such manner as the company in a general meeting may determine. Remuneration is considered to include both professional fees and reimbursable expenses.

Section 362 specifies the procedures for the removal of the auditor. A company may, by an ordinary resolution, remove an auditor before the expiration of his or her term of office, notwithstanding anything in any agreement between it and him or her. The resolution to remove the auditor is required to be communicated to the Corporate Affairs Commission (CAC) within fourteen days. Although CAMA (1990) does not specify the maximum length of tenure, an external auditor may be retained continuously, to ensure the integrity of financial statements. SEC-N recommends a maximum of ten years' tenure to retain an external auditor continuously. A disengaged auditor may be re-engaged after seven years of disengagement.

CAMA (1990) empowers the auditors to attend the company's general meeting. Specifically, section 363 requests the auditor to:

> *"attend the company's general meeting and to receive all notices of and other communications relating to any general meeting which a member of the company is entitled to receive and to be heard at any general meeting which they attend on any part of the business of the meeting which concerns them as auditor. An auditor of a company who has been removed shall be entitled to attend:- the general meeting at which his term of office would otherwise have expired; and any general meeting at which it is proposed to fill the vacancy caused by his removal, and to receive all notices of, and other communications relating to, any such meeting which any member of the company is entitled to receive, and to be heard at any meeting which he attends on any part of the business of the meeting which concerns him as former auditor of the company."*

The exhaustive provisions in the Nigerian company regulations and laws concerning the engagement, remuneration, removal, and powers of the auditor are intended to secure the auditor and improve audit independence, which is critical to the effectiveness of corporate governance of any company (ICAEW, 2013; Beattie, Fearnley, & Hines, 2009).

The section that follows discusses the development of corporate governance codes in Nigeria. The section presents the evolution of corporate governance from 2003, when the first attempt at providing a code of corporate governance for listed companies was made by SEC-N, to 2018 when the first combined code of corporate governance for all companies in Nigeria was introduced by the FRC.

2.7 Nigerian corporate governance codes development : 2003-2018

2.7.1 Maiden Code of 2003

The first attempt at developing a code of corporate governance started with the industrial-specific "Code of Corporate Governance for Banks and other Financial Institutions in Nigeria", which was issued by the Bankers' Committee in August 2003 (Demaki, 2011; Momoh & Ukpong, 2013). One of the shortcomings of the Code is that it was not issued by any regulatory authority but by a voluntary association. Consequently, the Code did not have any significant impact on the performance of banks and other listed companies because they were not bound by it (Momoh & Ukpong, 2013).

To address the shortcomings of the Banker's Committee code, SEC-N, being the regulatory agency for all listed companies in Nigeria, introduced another code in October 2003. Thus, the first formal attempt at introducing a corporate governance code that applies to all listed firms across all the industrial sectors in Nigeria was in October 2003. The "Code of Corporate Governance in Nigeria", was published by the SEC-N, about nine years after South Africa's King I Report of 1994. The 2003 Nigerian code resulted from the need to align the control and direction of listed firms in Nigeria with international best practices. The code was the outcome of a collaborative effort between the Securities and Exchange Commission (SEC) and the CAC that led to the inauguration of a seventeen (17)-member Committee on June 15, 2000, headed by Atedo Peterside.

The provisions of the 2003 code were of general application to all listed companies but limited to only three areas: the board of directors, the shareholders, and the audit committee. There are five main characteristics of the SEC-N code of 2003: First, the 2003 Code specified the minimum and maximum board sizes at 5 and 15. Secondly, it did not expressly disallow the duality of the positions of chairman of the

board and CEO. That is, the two positions were allowed by the 2003 Code to be occupied by one person. Thirdly, only the audit committee and the remuneration committee were provided for. Fourthly, no provision was made for independent directors. Lastly, the code was based on the principle of "comply or explain" and was not mandatory. The weaknesses of the 2003 Code are discussed later in the chapter.

2.7.2 The era of the proliferation of corporate governance codes in Nigeria: 2006 - 2016

Apart from the corporate governance code issued by the SEC-N in 2003, which applied to all listed firms, other industry-specific codes emerged after 2003 to provide for corporate governance frameworks that govern the conduct of firms in some other sectors. The first of such industrial-specific codes was the Code of Corporate Governance for the banking sector, issued in 2006 by the Central Bank of Nigeria (Central Bank of Nigeria (CBN), 2006). The CBN Code of 2006 (CBN, 2006) was issued in reaction to the limitations of the SEC-N 2003 code, especially as it pertains to the banking and insurance sectors. Thus, the CBN issued its first industrial-specific code for only the banking sector in April 2006. The CBN code of 2006 considered the requirements of the OECD Code of 2004 and expanded the scope of the SEC-N 2003 code to include the duties and responsibilities of other board committees, including the credit committee, the qualifications of directors, and the maximum board size, which is fixed at 23 for listed banks.

The minimum number of independent directors was fixed at two, and the maximum tenure of directors and auditors was set at ten years. The CBN code restricts the shareholding of listed banks by a shareholder to ten per cent to avoid undue control over the affairs of listed banks. The CBN Code also includes provisions for the performance evaluation of the board, rejects the holding of multiple directorships in other banks, and provides modalities for accountability and transparent reporting, including whistleblowing. In 2014, the CBN's Code of 2006 was replaced with the "*Code of Corporate Governance for Banks and Discount Houses"* issued in 2014, which covers discount houses. The 2014 version improved upon the 2006 Code by increasing the maximum board size to 20, increasing the maximum tenure of non-executive directors to 12 years and that of the external auditors to 12 consecutive years, and requiring boards of banks to have at least two independent directors, among other provisions.

The insurance industry issued its code in 2009 through the National Insurance Commission (NAICOM). The insurance code (NAICOM, 2016) is also derived from the SEC-N (2003) and the OECD (2004) codes. Compared to the SEC-N 2003 code, the insurance code differed in the areas of board composition, percentage of attendance in board meetings, compulsory committees, and the tenure of the external auditor.

The next sectorial code was the National Pension Commission (PENCOM) Code of Corporate Governance Practices for the Insurance Industry in Nigeria, issued in 2009. The PENCOM Code was followed by the Code of Corporate Governance for the Telecommunication Industry, issued by the Nigerian Communication Commission (NCC) in 2014 (revised in 2016). However, in 2011, the 2003 Code was revised by SEC-N and issued with effect from 2011. The revised 2011 Code effectively terminates the tenure of the 2003 Code in 2010.

From 2016 through 2018, the National Code of Corporate Governance for the private sector in Nigeria was developed and released by the Financial Reporting Council of Nigeria (FRC-N) in 2018. The Code applies to all registered private and public firms and regulated private companies. This commencement date was, however, shifted to 1st January 2020 by the Federal Government of Nigeria (FRC-N, 2019). This development terminates the tenure of the SEC-N Code of 2011 in 2019. Greater details of the contents of the 2011 SEC-B Code and the 2018 FRC-N Code are presented later in the chapter.

The common feature of these industrial-specific codes is that they have similar provisions to the SEC-N 2011 Code in almost all critical areas, such as the board structure, audit committee, and shareholders' rights. However, the CBN Code of 2014 added extra provisions on board committees, independent directors, tenure of the external auditor, close directorship, multiple directorships, and the tenor of the CEO. Table 3.2 lists some of the features of the major corporate governance principles found in the various industrial-specific codes compared with the SEC-N 2011 Code. The various codes, however, show some gaps and conflicting provisions on similar subjects. These gaps were said to be addressed by the revised 2018 code issued by the FRC-N.

The absence of a uniform code makes the monitoring and enforcement of compliance difficult, especially where companies have subsidiaries that operate in several industrial sectors with different codes (Idornigie, 2010), and corruption is endemic in society (Isukulm & Chizea, 2015). This possibly explains why the UK and South Africa adopted unified codes for all listed companies to ensure effective monitoring and enforcement. The new code of 2018, which commenced in 2020, was released to address the challenge of multiple codes and ensure effective monitoring.

2.7.3 The publication of the revised SEC-N 2011 code

The SEC-N set up the A. M. Mahmoud Committee in September 2008 to revise the 2003 code in reaction to the emergence of the industrial-specific codes and the global developments in corporate governance theory and practices. The committee was required to identify the weaknesses of the 2003 code, especially when benchmarked against the codes of the UK, South Africa, and the OECD (Aina and Adejugbe, 2015), and then propose an improved version of the code for effective corporate governance in Nigeria. The Mahmoud Committee issued the revised SEC-N code in April 2011. The SEC-N 2011 Code applies to all listed companies in Nigeria.

2.7.4 Pertinent provisions of the SEC-N 2011 Code

The SEC-N Code, 2011, is the basis of this study. Thus, the pertinent provisions of the SEC-N 2011 code are considered in computing the compliance index and not the 2018 Code because the 2018 Code only came into force in 2020. The SEC-N 2011 incorporates the provisions of the OECD code of 2004 (revised in 2015) and those of ICGN 2009 (revised in 2012). Provisions of the 2011 code span across board governance, reporting, accountability, the board's leadership and effectiveness, relations with shareholders, and audit. Some specific provisions relevant to this study are discussed below and summarised in Table 2.3. Details used in Table 2.3 are obtained from the various industrial codes discussed.

Table 2.3: Board governance provisions of Nigerian Corporate Governance Codes 2008-2016

CHARACTERISTICS	PENCON 2008	NAICOM 2016	SEC-N 2011	CBN 2014	NCC 2016
Application	Licensed pension operators	Insurance industry	All listed firms	Banks and discount houses	Telecommunications industry
Specification of duties and responsibilities of boards	YES	YES	YES	YES	YES
Minimum and maximum board membership	No expressed provision	Minimum of 7 and maximum of 15	Minimum of 5, no maximum	Minimum of 5 and maximum of 20	Minimum of 5, no maximum
The majority of board members should be non-executive directors	No. Non-executive members (excluding the chairman) of the Board shall at all times, at the minimum, equate the number of executive members.	YES. Not more than 40% should be executive directors.	YES	YES	YES
Minimum independent directors	1	1	1	2 for banks and 1 for discount houses	1, but 2 for large telecoms companies
Duality of chairman/CEO	Separate positions to avoid over-concentration of powers in one individual.	Separate positions to avoid over-concentration of powers in one individual.	Separate positions to avoid over-concentration of powers in one individual.	Separate positions to avoid over-concentration of powers in one individual.	Separate positions to avoid over-concentration of powers in one individual.
Duties of chairman and CEO specified	No.	Yes.	Yes.	No.	Yes.
An independent director is a director that has less than 0.01% of paid-up capital	No, less than 5% of equity.	No specific definition of an independent director.	Yes.	No specific definition of an independent director.	Yes.
Minimum meetings per year	4	4	4	4	4

Table 2.3: Board governance provisions of Nigerian Corporate Governance Codes 2008-2016 – continued

CHARACTERISTICS	PENCON 2008	NAICOM 2016	SEC-N 2011	CBN 2014	NCC 2016
Multiple directorships	No specific provision.	No specific provision.	No limit on the number of concurrent directorships a director of a company may hold.	Not allowed for banks to avoid undue competition.	No individual shall serve simultaneously as a Director of more than three (3) companies in the communications sector.
Not more than two members of the same family should sit on the board of a public company	No specific provision.	Yes.	Yes.	Yes.	No specific provision.
Tenure of directors	No specific provision.	Maximum of 3 terms of 3 years each.	Directors are re-elected once every three years.	Non-executive directors to serve for a maximum of three (3) terms of four (4) years each.	Maximum of 15 years for Non-executive Directors (NEDs).
Tenure of CEO	No specific tenure.	No specific tenure.	No specific tenure.	Maximum period of ten (10) years.	No specific provision.

Table 2.3: Board governance provisions of Nigerian Corporate Governance Codes 2008-2016 – continued

CHARACTERISTICS	PENCON 2008	NAICOM 2016	SEC-N 2011	CBN 2014	NCC 2016
Minimum board committees.	Audit Committee, Investment Strategy Committee, Risk Management Committee and the Nominating Committee.	Finance and Gen. Purposes Com., Invest. Com., Enter. Risk Management Com., Audit and Compliance Com. (to be headed by an Independent Director), Establishment and Governance Com. (Independent Director to be a member) and the SAC.	Audit, Remunerations. Risk Management and Governance and nomination.	Audit, Remuneration, Risk Management Governance and Nominations and the Bank Audit Committee.	Audit and Risk Management Committee, Governance Committee Nomination and Remunerations Committee.
Board chairman as a member of board committees	The Nomination Committee shall consist of at least three directors, including the chair and an Independent Director.	No specific provision.	No provision.	Not allowed.	Not allowed.
Non-executive directors as Chairmen of board committees.	No clear provision.	No clear provision.	No clear provision.	Non-executive directors only.	Non-executive directors only.

Table 2.3: Board governance provisions of Nigerian Corporate Governance Codes 2008-2016 – continued

CHARACTERISTICS	PENCON 2008	NAICOM 2016	SEC-N 2011	CBN 2014	NCC 2016
The specific requirement of Audit Committee Members.	No specific provisions.	At least two members shall have the requisite knowledge of accounting, financial analysis and financial reporting. At least one member shall have a good understanding of the business of insurance.	Members of the committee should have basic financial literacy and at least one member should have knowledge of accounting or financial management.	Members of the committee should have basic financial literacy and at least one member shall be a qualified accountant or other finance professionals with experience in finance and accounting.	Members of the committee should have basic financial literacy and at least one member should have knowledge of financial management.
Minimum director's attendance at meetings.	No specific provision.	At least 75% of the meetings annually.	At least two-thirds of all Board meetings.	At least two-thirds of all Board meetings.	No specific mention.
Gender diversity requirement	No specific provision.	No specific provision.	Not a requirement, but disclosure required of gender policies is required.	No specific provision.	The board should ensure that it is so composed as to ensure a mix of skills, diversity of experience, and gender.
Age of directors between 18 and 70 years according to section 256 and 267 of CAMA 1990	No specific provision.	No specific provision.	No specific mention, but disclosure is required.	No specific mention.	No specific mention.
Minimum educational qualifications of directors	No specific provision.	No specific provision.	No specific mention.	No specific mention.	No specific mention.

Table 2.3: Board governance provisions of Nigerian Corporate Governance Codes 2008-2016 – continued

CHARACTERISTICS	PENCON 2008	NAICOM 2016	SEC-N 2011	CBN 2014	NCC 2016
Specific qualifications of CEO	No specific provision.	No specific provision.	Qualified persons of proven integrity with industrial experience.	Qualified persons of proven integrity and shall be knowledgeable in business and financial matters, under the extant rules of CBN.	The CEO/MD should be knowledgeable in relevant areas of the licensee's business. He should demonstrate industry, credibility, competencies and integrity; and should at all times win the confidence of the Board and the Management.
Provision for senior director	No specific provision.	Not applicable.	Not applicable.	Not applicable.	Not applicable.
Industrial/board experience	No specific provision.	Work experience and knowledge in the insurance industry.	Work experience and occupation in preceding ten years.	Work experience and occupation in preceding ten years.	Work experience and occupation in preceding ten years.
Foreign nationalities	No specific provision.	No specific provision.	No specific provision.	No specific provision.	No specific provision.
Minorities representation	No specific provision.	Provides for the position of a minority shareholder on the Board.	No provision on the requirements for representation on board.	No provision on the requirements for representation on board.	No specific provision.
Unitary and dual boards	No specific provision.	Unitary.	Unitary.	Unitary.	Unitary.

Table 2.3: Board governance provisions of Nigerian Corporate Governance Codes 2008-2016 – continued

CHARACTERISTICS	PENCON 2008	NAICOM 2016	SEC-N 2011	CBN 2014	NCC 2016
Establishment of internal audit department	No specific provision.	Yes.	Yes.	Yes.	Yes.
Institutional shareholding	No specific provision.	No specific provision.	Play a key role in corporate governance.	No specific provision.	No provision.
Maximum block shareholding	No specific provision.	No specific provision.	No specific provision.	An equity holding of 5% and above by any investor shall be subject to CBN's prior approval. Government(s) direct and indirect equity holding in any bank shall be limited to 10%.	No specific provision.
Employee shareholding including the CEO	No specific provision.	No specific provision.	Allowed.	Allowed.	Allowed.
CEO compensation links to performance	No specific provision.	No specific provision.	YES	Not strictly.	Yes.
Principles of code	Comply or be sanctioned.	Comply or explain.	Comply or explain.	Comply or be sanctioned.	Voluntary and mandatory based on spread, turnover, staff strength and subscriber base.

2.7.4.1 Board of directors (Part B: sections 2 – 20)

Listed firms in Nigeria are required to use a unitary board structure. Other characteristics of the boards of listed Nigerian companies include a minimum board size of five directors, non-executive directors must form the majority of the board with at least one independent director; separation of the positions of chairman of the board and CEO; a shareholding of an independent director of 0.1% maximum; disallowing directors from membership of boards of similar companies to avoid conflict of interest; and not allowing more than two members of the same family to be members of the board of a company.

Compulsory board committees include the SAC, the governance/remuneration committee, and the risk management committee. In the case of the listed banks, two additional committees, the credit committee and the board audit committee, are compulsory. The composition and duties of these compulsory committees are set out in Table 2.4.

Table 2.4: Composition and duties of the compulsory board committees for listed firms in Nigeria

S/N	Name of committee	Composition	Duties
1	SAC	An equal number of directors and representatives of the shareholders of the company (subject to a maximum number of six members) (CAMA 1990, section 359). According to SEC-N (2011), only directors are allowed to be members of board committees.	a) Examine the auditors' report and make recommendations thereon to the AGM as it may think fit; b) Ascertain whether the accounting and reporting policies of the company follow legal requirements and agreed ethical practices; c) Review the scope and planning of audit requirements; d) Review the findings on management matters in conjunction with the external auditor and departmental responses thereon; e) Keep under review the effectiveness of the company's system of accounting and internal control; and f) Make recommendations to the board regarding the appointment, removal and remuneration of the external auditors of the company; and g) Authorise the internal auditor to carry out investigations into any activities of the company, which may be of interest or concern to the committee (CAMA 1990, section 359 (4, 6).

Table 2.4: Composition and duties of the compulsory board committees for listed firms in Nigeria (continued)

S/N	Name of committee	Composition	Duties
2	Governance/remuneration committee	Only non-executive directors	a) Establishment of the criteria for board membership. b) Prepare job specifications for the chairman and assessment of his time commitment. c) Evaluate skills and experience required on the board. d) Recommend who to appoint to the board and its committees. e) Recommend compensations to board members. f) Recommend on the structure of the company, among others.
3	Risk management committee	Only directors are members.	a) Reviews and approve the risk management policy of the company. b) Reviews the effectiveness and adequacy of risk management and control. c) Reviews the company's compliance with regulations and laws that affect the risk profile of the company. d) Recommend new risk policies and procedures from time to time.
4	Finance and general purposes committee	Not stated in the code	Not stated in the code.
5	Investment committee	Not stated in the code	Not stated in the code.

2.7.4.2 Relationship with shareholders (Part C, section 21-27)

Shareholders are to be informed of all shareholders' meetings and are allowed to attend such meetings. The venue of a general meeting should be accessible to shareholders. Shareholders also have the right to appoint and remove directors. Further, Section 21-27 advocates equal treatment of all shareholders. In addition, general meetings should be conducted in an open manner, allowing free discussions on all issues on the agenda. Sufficient time should be allocated to shareholders to participate fully and contribute effectively at the meetings. The chairmen of all board committees and the SAC should be present at general meetings of the company to respond to shareholders' queries and questions.

The Code also provides that the board should ensure that the company promptly renders to shareholders documentary evidence of ownership interest in the company, such as share certificates, dividend warrants, and related instruments. Shareholder representation on a board should be proportionate to the size of their shareholding.

2.7.4.3 Relationship with other stakeholders (Part D, section 28)

Companies are required by the code to pay attention to the interests of their employees, host communities, corporate social responsibilities, and opportunities given to physically challenged and disadvantaged people.

2.7.4.4 Risk management and audit (Part E, section 29-33):

Every company is required by section 359 (3) and (4) of the CAMA, 1990, to establish a SAC. Companies are also required to have an effective and adequately funded internal audit. The internal auditor is required to report directly to the audit committee and to have a line of communication with the CEO. He or she has unrestricted access to the chairman of the audit committee and the chairman of the board.

In addition, the section provides that every company must have a risk management committee responsible for the implementation of the risk management policies of the company and maintain effective whistleblowing policies and procedures that are communicated to all employees, suppliers, customers, and the public. The procedures include the allocation of a dedicated telephone number and email for whistleblowing activities. External auditors are retained for not more than 10 years at a time before replacement.

2.7.4.5 Accounting and reporting (Part F, section 34)

Both the CEO and finance director are required to certify in their report to the board that the financial statements show a true and fair view of the affairs of the company. The annual reports of the company are expected to show information on the capital structure covering the issuance of any share capital during the year, details and reasons for share buy-back during the year, details of directors' and substantial shareholders' interests in the company and subsidiaries or associate companies. The composition and biographies of the directors are required to be disclosed in the annual reports. Other disclosures include the responsibilities of directors concerning the preparation of the financial statements, major accounting policies adopted, a statement that the firm is a going concern, executive directors'

remuneration and share options, non-executive directors' fees and allowances payable, related party transactions, details of directors' interests in contracts, among others. More importantly, the Code requires listed firms to indicate in their annual reports the extent to which they have complied with the Code.

2.7.4.6 Communication (Part G, section 35)

Listed firms are expected to communicate the company's operations and management activities to shareholders, stakeholders and the public in the general official language of Nigeria timeously, accurately and continuously. To ensure effective communication, the Code requires listed firms to establish company websites and investor-relations portals where policies and annual reports of the company are regularly published for the information of investors and other members of the public and government.

2.8 Roles and responsibilities of the board of directors, the chairman, and the CEO of Nigerian listed firms

The two main actors in controlling and directing listed firms in Nigeria are the board of directors (representing the shareholders) headed by the chairman and the professional managers headed by the CEO (agent). The performance of the firm is based on the actions or inactions of these two actors. The Nigerian SEC-C 2011 code makes clear provisions on the roles of the board, its chairman, and the CEO to ensure that they perform in the best interests of shareholders. The roles of the board, its chairman, and the CEO are listed in Part B of the SEC-N 2011 code.

2.8.1 Roles and responsibilities of the board of directors

The board of directors of the company is one of the most critical organs of any company. This is both in terms of its responsibilities, typified by its clearly stated functions, and in terms of the public perception in the event of a corporate failure. Adams *et al,* (2010) contend that the important question is whether corporate boards matter since their day-to-day impact is difficult to observe. However, when things go wrong, the boards become the centre of attention and are blamed for the incident. The collapse of Freddie Mac, Waste Management, WorldCom, Xerox, HealthSouth, Enron, Lehman Brothers, Olympus, Satyam and a host of other corporate collapses was blamed on ineffective boards (Knapp, 2011; Yuquan, 2015). Therefore, boards are expected to control, curb the excesses of hired managers, and motivate them to act in the interests of the shareholders.

Part B, sections 3 of SEC-N 2011 provides that the duties of the board of directors of Nigerian listed firms include:

i. "*formulation of policies and overseeing the Management and conduct of the business;*
ii. *formulation and management of risk management framework;*
iii. *succession planning and the appointment, training, remuneration and replacement of board members and senior management;*
iv. *overseeing the effectiveness and adequacy of internal control systems;*
v. *overseeing the maintenance of the company's communication and information dissemination policy;*
vi. *performance appraisal and compensation of board members and senior executives;*
vii. *ensuring effective communication with shareholders;*
viii. *ensuring that ethical standards are maintained; and*
ix. *ensuring compliance with the laws of Nigeria".*

The responsibilities of the board, as contained in Part B, section 2 of SEC-N 2011, include the following:

i. Definition of the company's strategic goals to ensure that the human and financial resources of the company are effectively deployed towards attaining those goals.
ii. Overseeing the effective performance of the management to protect and enhance the value of the shareholder and meet the company's obligations to its employees and other stakeholders.
iii. Ensuring effective corporate governance in companies and ensure that companies carry out their businesses under their articles and memorandum of association and conform to the laws of the country, observing the highest ethical standards on an environmentally sustainable basis.
iv. Defining the framework for the delegation of its authority or duties to management, specifying matters that may be delegated and those reserved for the board.

A review of the duties and responsibilities of the boards of Nigerian companies indicates the onerous task before the boards and the importance of the board to the survival of the company. For any company to succeed, the board must be effective and be composed of people of integrity with some level of independence that would avoid manipulation by CEOs to be able to perform the level of duties and responsibilities assigned to them by the code (OECD 2004, 2015; Sanda *et al*., 2008; SEC-N, 2011). For instance, to be able to assess the performance of the management, the board must have the skills and discipline to ensure that the management does not overly influence it. The board must also be able to motivate the management to communicate freely with it. To achieve this, the board must be independent of

its members and refrain from acts that would impair its ability to exercise care, diligence and integrity or force it to compromise its duties and responsibilities (SEC-N, 2011).

2.8.2 Roles and responsibilities of the chairman of the board of directors

Other than the board, the chairman of the board is also one of the very critical components in the corporate governance control chain. A summary of the main duties of the chairman of the board is found in section 5.1(d) of SEC-N 2011. These include:

i. *"providing overall leadership and direction for the board and the company;*
ii. *setting the annual board plan;*
iii. *setting the agenda for board meetings in conjunction with the CEO and the Company Secretary;*
iv. *playing a leading role in ensuring that board and its committees are composed of the relevant skills, competencies and desired experience;*
v. *ensuring that Board meetings are properly conducted and the Board is effective and functions in a cohesive manner;*
vi. *ensuring that board members receive accurate and clear information in a timely manner, about the affairs of the company to enable directors take sound decisions;*
vii. *acting as the main link between the board and the CEO as well as advising the CEO in the effective discharge of his duties;*
viii. *ensuring that all directors focus on their key responsibilities and play constructive role in the affairs of the company;*
ix. *ensuring that induction programmes are conducted for new directors and continuing education programmes is in place for all directors;*
x. *ensuring effective communication and relations with company's institutional shareholders and strategic stakeholders;*
xi. *taking a lead role in the assessment, improvement and development of the Board; and*
xii. *presiding over general meetings of shareholders."*

As the above functions show, the chairman of the board is the core position on the board. For this reason, the OECD 2015, ICGN 2014, and the SEC-N 2011 codes recommend the splitting of the position of the chairman of the board and the CEO. This recommendation is intended to avoid undue influence on the performance of the board and the company by the chairman. The exclusion of the chairman of the board from the routine day-to-day running of the company is to ensure the independence of the chairman.

2.8.3 Roles of the Chief Executive Officer (CEO)

The duties of the CEO are listed in section 5.2:12 of Part B of SEC-N 2011 as presented below.

i. *"The Chief Executive Officer (CEO) or Managing Director (MD) is the head of the management team and is answerable to the board.*
ii. *The CEO/MD should demonstrate industry, credibility and integrity and should have the confidence of the Board and management… and be knowledgeable in relevant areas of the company's activities.*
iii. *The CEO/MD and the senior management should establish a culture of integrity and legal compliance which should be imbibed by personnel at all levels of the company.*
iv. *The functions and responsibilities of the CEO/MD … include …:*
    a. *day-to-day running of the company;*
    b. *guiding the development and growth of the company;*
    c. *acting as the company's leading representative in its dealings with its stakeholders".*

Literature indicates that CEOs, generally, have overwhelming powers in organisations and have a significant impact on the selection of board members and the fixing of agendas for discussion at both the board and the general meetings of the company (Weir *et al.*, 2002). Board meetings are effectively arranged and organised by CEOs who act as the links between the organisations and the outside world (Bandiera *et al.*, 2011).

The CEO is also pivotal to the management and control of the resources of the company because he or she is entrusted with the responsibility of monitoring and supervising the company's resources and operations, both material and human (Rouf, Md. Abdur, 2011). Therefore, the integrity and reputation of the CEO can influence the quality of the corporate governance of the firm. Where the reputation of the CEO is not in doubt, the internal control mechanisms of the firm will be effective as well (Karuna, 2009).

From the above, the board, its chairman, and the CEO will need to work harmoniously in the interest of both the company and its stakeholders. For optimal corporate control, the board should act objectively in performing its advisory and oversight functions. To ensure the effective execution of the above critical functions, the board must have integrity and independence. Likewise, the chairman must provide leadership to ensure an effective link between the CEO and the board so that the shareholders and other stakeholders can benefit from the company.

2.9 A comparison of the SEC-N 2011 code with relationship to the OECD Code (2015), King IV (2016)

A critical review of the SEC-N 2011 code reveals several limitations when compared with the South African experience (King IV, 2019) and the principles issued by the OECD (2015). The pertinent areas of concern include the scope, governance model, board structure and committees, auditing and audit committee, CEO duality, and the level of disclosures. A comparison of SEC-N 2011 with King IV and the OECD Code of 2015 (OECD, 2015a), indicating the strengths and weaknesses of SEC-N 2011, is shown in Table 2.5 and provides insight into the motivations for the issuance of FRC-N 2018. As Table 2.5 shows, the SEC-N 2011 Code when compared to King IV and the OECD Code of 2015 has some obvious defects that need to be addressed in subsequent codes.

Table 2.5: Strengths and weaknesses of SEC-N 2011 Code

S/N	Characteristic	Provision of SEC-N 2011	Provision of King IV	Provision of OECD 2015	Remark
1	Scope	All public companies whose securities are listed on a recognised securities exchange in Nigeria; and all other public companies	All public entities listed in Schedules 2 and 3 PFMA.	Applied to listed companies in OECD and non-OECD countries.	The SEC-2011 has a scope similar to the OECD 2004 but did not consider non-listed firms and public utilities and did not address the peculiarities of the financial sector compared to the SA code. Therefore, the scope of the Nigerian code is restricted compared with SA.
2	Governance model	Shareholders-centric model with limited reference to stakeholders. No mention is made of environmental sustainability, as there is no reporting requirement on environmental sustainability.	"Inclusive" stakeholder model focuses on the sustainability of the firms through impacting on the economic life of the community in which the company operated during the year under review.	Combination of shareholders-centric and stakeholder-centric models - no requirement for companies to report on their impact on the economic life of their communities.	Nigerian SEC-N 2011 code did not make sufficient provisions to safeguard the interest of other stakeholders including impacting on the economic life of the community, in which the company operates, compared with the South African code.

Table 2.5: Strengths and weaknesses of SEC-N 2011 Code (continued)

S/N	Characteristic	Provision of SEC-N 2011	Provision of King IV	Provision of OECD 2015	Remark
3	**Board structure**				
	i) Number of members	Minimum of 5, no maximum.	No specific size is recommended - companies are at liberty to determine their board sizes guided by the need to remain effective, need to have sufficient number to serve in board committees and form a quorum. Specifically, Principle 7 of King IV states that the members of the governing body (board) factors such as mix of knowledge, skills and experience, regulatory requirement, and diversity should characterise the board. But "governing body should comprise a majority of non-executive members, most of whom should be Independent".	No specific size is recommended - companies are at liberty to determine their board sizes guided by the need to remain effective, need to have sufficient number to serve in board committees and form a quorum.	The placement of the band concerning the number of directors suggests that the individual idiosyncrasies and nature of companies is not considered. Unlike the SA and the OECD codes, the SEC-N 2011 restricts initiatives in this regard.

Table 2.5: Strengths and weaknesses of SEC-N 2011 Code (continued)

S/N	Characteristic	Provision of SEC-N 2011	Provision of King IV	Provision of OECD 2015	Remark
	iii) Time limitation of non-executive board membership	No time limit is provided for in the Code	No time limit is provided for in the Code	No provision.	The non-provision of directors' tenure in all the codes could lead to entrenchment of the CEOs if not appropriately controlled by the board.
	iv) Shareholding requirement for directors	Directors are not required to hold shares.	No requirement for board members to hold shares.	No requirement for board members to hold shares.	The same provision occurs in all the codes. Therefore, no provision forbids non-shareholders from the directorship of a company.

Table 2.5: Strengths and weaknesses of SEC-N 2011 Code (continued)

S/N	Characteristic	Provision of SEC-N 2011	Provision of King IV	Provision of OECD 2015	Remark
	v) Multiple directorships	No limit on multiple shareholdings.	No express indication for or against multiple directorships. Directors' effectiveness as shown by their records of attendance at board meetings provides evidence of effectiveness.	No express indication for or against multiple directorships. Directors' effectiveness as shown by their records of attendance at board meetings provides evidence of effectiveness. Legitimacy and confidence of shareholders, in particular directors, is the determining factor, rather than multiple directorships.	The omission of express opinion on the issue of multiple directorships is capable of challenging the effectiveness of directors in board participation.
	vi) Type of boards	No provision on board structure exists but a unitary board structure can be inferred from the provisions for the positions of the Chairman and the CEO.	Unitary board structure.	Both unitary and two-tier models are allowed	The challenge of the absence of a specific indication by SEC-N 2011 has been mitigated by the copious reference to the Chairman of the board and not "of the boards".

Table 2.5: Strengths and weaknesses of SEC-N 2011 Code (continued)

S/N	Characteristic	Provision of SEC-N 2011	Provision of King IV	Provision of OECD 2015	Remark
	vii) Minority representation on board	Shareholder representation on a Board should be proportionate to the size of shareholding	No requirement on minority representation on board but states that the board should ensure that shareholders are equitably treated, and that the interests of minority shareholders are adequately protected.	No requirement for representation of minority interest in boards.	The provision of SEC-N 2011 is an encouraging provision towards the empowerment of minority interest in companies.
	viii) Existence of Lead Independent Non-executive Director (LID)	Composed solely of non-executive directors.	Provides for LID is to provide leadership and advice to the board, without detracting from the authority of the chairman, when the chairman has a conflict of interest.	The LID is required "to convene or chair sessions of the outside directors" in the case of CEO duality.	The non-inclusion of LIDs in the composition of the Board can weaken the independence of the Board.
4	Composition of the remuneration committee	The committee is made up wholly of non-executive directors	All members of the committee for remuneration should be non-executive members of the governing body, with the majority being independent non-executive members of the governing body. The committee for remuneration should be chaired by an independent non-executive member.	Membership of committee comprises of either wholly or a majority of independent directors.	The non-inclusion of independent directors in the composition of the remuneration committee can weaken the independence of the Board.

Table 2.5: Strengths and weaknesses of SEC-N 2011 Code (continued)

S/N	Characteristic	Provision of SEC-N 2011	Provision of King IV	Provision of OECD 2015	Remark
5	CEO Duality	Not allowed	Not allowed	COED 2004 is indifferent on duality or separation of the CEO/chairman posts. But adds that separating the posts is good practice to achieve an appropriate balance of power, increase accountability and improve accountability.	The encouragement of OECD 2004 that CEO duality should be discouraged to improve board capacity for board's independent decision making and accountability suggests that CEO duality especially for Nigeria with an underdeveloped market compared to advanced economies could impact negatively on the performance of the company.
6	Role of Internal Audit and to whom responsible.	Provides for the roles of the internal auditor of the company. Does not indicate the reporting and responsibility lines of the internal auditor. The importance of the internal auditor is not given due emphasis.	Provides for clear functions and responsibilities of the internal auditor. Also provides and emphasises the reporting line of the internal auditor and the scope of the internal audit report. The governing body approves the appointment and remuneration of the Internal Auditor and ensures that the person who fills the position has the necessary competence, gravitas and objectivity.	Provide for the roles of the internal auditor and recommend that the internal audit reports directly to the board or to the independent audit committee of the board.	Commendable for making the provision for the functions of the internal audit in corporate governance.

Table 2.5: Strengths and weaknesses of SEC-N 2011 Code (continued)

S/N	Characteristic	Provision of SEC-N 2011	Provision of King IV	Provision of OECD 2015	Remark
7	Audit committee	A total number of not more than 6 members as in the CAMA 1990 to which SEC-N referred.	The minimum number is three. The Committee to have at least three non-executive and independent directors and meet at least twice a year and at least once a year with the external and internal auditors without management being present. Internal audit reports to the audit committee. The appointment or dismissal of the head of the internal audit is with the concurrence of the audit committee. The audit committee considers the appointment of the external auditor.	Number of members of the committee is suggested. However, firms are encouraged to have audit committees that would recommend or appoint external auditors, provide oversight of the internal audit activities and overseeing the entire relationship with the external auditor including the nature and scope of the non-audit services.	No specification of the number of members of the audit committee and the required committee meetings was provided. Although the number of the audit committee is put at six by CAMA 1990, the requirement of equal representation of the number of directors and shareholders representatives may lead to challenges when deciding on critical matters. The number of shareholders' representatives should be more than the directors in the SAC.

2.10 The Nigerian Code of Corporate Governance 2018 and the Financial Reporting Council of Nigeria (FRC-N)

The government established the FRC-N to oversee the quality of financial reports and corporate governance systems of public, private, and NGO organisations. Sections 11c and 51c of the FRC-N's Act of 2011 confer upon FRC-N the powers to ensure good corporate governance practices in the public and private sectors of the Nigerian economy and to issue the code of corporate governance and guidelines.

Before the establishment of the FRC, the issuance of the combined corporate governance codes of 2003 and 2011 was handled by the SEC-N. Ensuring compliance with accounting standards was the responsibility of the defunct Nigerian Accounting Standards Board. With the establishment of FRC-N, the SEC-N no longer issues corporate governance codes in Nigeria. Part VI of the Financial Reporting of Nigeria Establishment Act of 2011 provided for the establishment of the Directorate of Corporate Governance in the Council (Federal Republic of Nigeria, 2011). The functions of the Directorate include:

i. "*assess the need for corporate governance in the public and private sector;*
ii. *organise and promote workshops, seminars and training in corporate governance issues;*
iii. *issue the code of corporate governance and guidelines, and develop a mechanism for periodic assessment of the code and guidelines;*
iv. *provide assistance and guidance in respect of the adoption or institution of the code to fulfil its objectives; and*
v. *establish links with regional and international institutions engaged in promoting corporate governance*" (The Federal Government Printer 2011: Section 51).

The government approved the consolidated governance code of 2018 (2018 Code) in January 2019, issued by the FRC-N (FRC-N, 2018). The 2018 consolidated governance code became effective on July 1, 2020. One of the highlights of the 2018 Code is the expansion of the scope of the entities that will be covered by the framework to:

(a) all public companies (whether a listed company or not);
(b) all private companies that are holding companies of public companies or other regulated entities;
(c) all concessioned or privatised companies; and
(d) all regulated private companies being private companies that file returns to any regulatory authority other than the Federal Inland Revenue Service (FIRS) and the CAC (FRC-N, 2018).

Public interest entities as defined in Section 77 of the Financial Reporting of Nigeria Act, 2011 means: "governments, government organisations, quoted and unquoted companies, and all other organisations which are required by law to file returns with regulatory authorities, and this excludes private companies that routinely file returns only with the Corporate Affairs Commission and the Federal Inland Revenue Service".

The 2018 Code was introduced to bring about a unified corporate governance framework and institutionalise corporate governance best practices in Nigeria. The fundamental characteristic of the 2018 Code is that it is more comprehensive compared to the 2011 Code. The Code consists of seven (7) parts and twenty-eight (28) principles, together with practices recommended by the Code for the implementation of each principle. The principles, covering different aspects of corporate governance are indicated in Table 2.6.

Table 2.6: The 28 Principles of the 2018 Nigerian Code

Principle Number	Focus	Definition of Principle
Principle 1	Aim of the board	A successful company is headed by an effective board that is responsible for providing entrepreneurial and strategic leadership as well as promoting an ethical culture and responsible corporate citizenship. As a link between stakeholders and the company, the board is to exercise oversight and control to ensure that management acts in the best interest of the shareholders and other stakeholders while sustaining the prosperity of the company.
Principle 2	Composition of board committees	The effective discharge of the responsibilities of the board and its committees is assured by an appropriate balance of skills and diversity (including experience and gender) without compromising competence, independence and integrity.
Principle 3	The main function of the chairman	The chairman is responsible for providing overall leadership of the company and the board and eliciting the constructive participation of all directors to facilitate the effective direction of the board.
Principle 4	The main function of the MD/CEO	The MD/CEO is the head of management delegated by the board to run the affairs of the company to achieve its strategic objectives for sustainable corporate performance.
Principle 5	The main function of the executive directors	Executive directors support the MD/CEO in the operations and management of the company.
Principle 6	The main function of the non-executive directors	Non-executive directors bring to bear their knowledge, expertise and independent judgment on issues of strategy and performance on the board.

Table 2.6: The 28 Principles of the 2018 Nigerian Code

Principle Number	Focus	Definition of Principle
Principle 7	Main function of the independent non-executive directors	Independent non-executive directors bring a high degree of objectivity to the board for sustaining stakeholder trust and confidence.
Principle 8	Main function of the company secretary	The company secretary plays an important role in supporting the effectiveness of the board by assisting the board and management to develop good corporate governance practices and culture within the company.
Principle 9	Engagement of external expertise	Directors are sometimes required to make decisions of a technical and complex nature that may require independent external expertise.
Principle 10	Board meetings	Meetings are the principal vehicle for conducting the business of the board and successfully fulfilling the strategic objectives of the company.
Principle 11	Functions of committees	To ensure efficiency and effectiveness, the Board delegates some of its functions, duties and responsibilities to well-structured committees, without abdicating its responsibilities.
Principle 12	Selection of directors	A written, clearly defined, rigorous, formal and transparent procedure serves as a guide for the selection of directors to ensure the appointment of high-quality individuals to the board
Principle 13	formal induction of directors	A formal induction programme on joining the board as well as regular training assist directors to effectively discharge their duties to the company
Principle 14	Annual board evaluation	Annual Board evaluation assesses how each director, the committees of the board and the board are committed to their roles, work together and continue to contribute effectively to the achievement of the corporate objectives.
Principle 15	Evaluating the company's corporate governance practices	Institutionalising a system for evaluating the company's corporate governance practices ensures that its governance standards, practices, and processes are adequate and effective.
Principle 16	Remuneration	The board ensures that the company remunerates fairly, responsibly and transparently to promote the achievement of strategic objectives and positive outcomes in the short, medium and long term.
Principle 17	Internal control	A sound framework for managing risk and ensuring an effective internal control system is essential for achieving the strategic objectives of the company.
Principle 18	Internal audit	An effective internal audit function provides assurance to the board on the effectiveness of the governance, risk management and internal control systems.
Principle 19	Whistle-blowing	An effective whistle-blowing framework for reporting any illegal or unethical behaviour minimises the company's exposure and prevents recurrence.

Table 2.6: The 28 Principles of the 2018 Nigerian Code

Principle Number	Focus	Definition of Principle
Principle 20	External auditor	An external auditor is appointed to provide an independent opinion on the true and fair view of the financial statements of the company to give assurance to stakeholders on the reliability of the financial statements
Principle 21	General meetings of the shareholders	General meetings are important platforms for the board to engage shareholders to facilitate a greater understanding of the company's business, governance and performance. They provide shareholders with an opportunity to exercise their ownership rights and express their views to the board on any areas of interest.
Principle 22	Dialogue with shareholders	The establishment of a system of regular dialogue with shareholders balances their needs, interests and expectations with the objectives of the company.
Principle 23	Shareholder rights	Equitable treatment of shareholders and the protection of their statutory and general rights, particularly the interest of minority shareholders, promote good governance.
Principle 24	Ethical standards	The establishment of professional business and ethical standards underscores the values for the protection and enhancement of the reputation of the company while promoting good conduct and investor confidence.
Principle 25	Insider trading	The establishment of policies and mechanisms for monitoring insider trading, related party transactions, conflict of interest and other corrupt activities, mitigates the adverse effects of these abuses on the company and promotes good ethical conduct and investor confidence.
Principle 26	Sustainability issues	Paying adequate attention to sustainability issues including environmental, social, occupational and community health and safety ensures successful long term business performance and projects the Company as a responsible corporate citizen contributing to economic development.
Principle 27	Interaction with stakeholders	Communicating and interacting with stakeholders keeps them conversant with the activities of the Company and assists them in making informed decisions.
Principle 28	Disclosures	Full and comprehensive disclosure of all matters material to investors and stakeholders, and of matters set out in this Code, ensures proper monitoring of its implementation which engenders good corporate governance practice.

The major improvements of the 2018 Code are: (1) its emphasis on the need for the board and the firm to consider the interests of the stakeholders in the decision process; (2) The introduction of gender diversity in boards by the code, as contained in principle

two, ensures that there will be female representation in the boards of Nigerian listed firms; (3) The 2018 code also requires the board to be responsible for information technology governance, similar to the South African King IV Report; (4) It specifies the main functions of the independent non-executive directors and emphasises sustainability issues and interaction with stakeholders.

The 2018 Code does not specify board size in terms of the minimum or maximum size, but states in section 2.1 that the board should be of sufficient size to effectively undertake and fulfil its business. This provision is inconsistent with the OECD Code of 2015 (OECD, 2015a).

To ensure the quality of financial reports, the 2018 code stipulates, "at least one member of the committee should be an expert in and have current knowledge of accounting and financial management" (FRC-N, 2018: section 11.4.3). The 2018 code also limits the retention of external auditors by a company before replacement to a continuous maximum term of ten years, as in the 2011 SEC-N Code.

Section 20.3 allows the external auditor to provide to the firm only such non-audit services "as are approved by the Board on the recommendation of the committee responsible for audit and such as do not create a self-review threat in line with the provisions of international auditing standards."

As opposed to the requirement of SEC-N (2011: section 22.2) that "minority shareholders are treated fairly at all times and are adequately protected from abusive actions of controlling shareholders," the 2018 code makes far-reaching provisions to protect the minority from expropriation. These provisions in Part F: Section 28-31 cover insider trading, minority interest expropriation, related party transactions, and conflict of interests aimed at ensuring the rights of minority shareholders.

The SEC-N (2011) makes no explicit recommendations for how institutional investors should participate in ensuring the effectiveness of corporate governance. In contrast, sections 22.3.1 and 22.3.1 2 of FRC-N (2018) provide that the board should encourage institutional investors to (i) positively influence the standard of corporate governance and promote value creation in the companies in which they invest, and (ii) monitor conformance with the provisions of this code and raise appropriate concerns.

Another fundamental provision of the 2018 code is the adoption of the principle of "Apply and Explain." The "Apply and Explain" approach assumes that entities will apply all principles and requires entities to explain how the principles have been

applied. In other words, the entities are to demonstrate how the principles contained in the code have been applied during the period. This demonstration is the form of narrative notes included in the annual reports to explain how a particular principle has been implemented. Although the provision has no legal force, it is an improvement on the "comply or explain" principle adopted by the 2011 code. However, the absence of a provision on integrated reporting, which is a requirement in King IV (IoDSA King IV, 2016), is not addressed in the 2018 Code. Another concern with the 2018 Code is that it does not suspend the sectorial codes that are already in existence. Rather, the existing industrial-specific codes, including those for the banking, insurance, pension, and telecommunications sectors, have been declared to serve as guidelines by the regulators (Asapokhai, 2018). This suggests that the problems of multiple codes in Nigeria, such as ineffective compliance enforcement compounded by conflicting codes (Ozili, 2021), may still exist as in the case with the SEC-N 2011 Code. Thus, listed firms in Nigeria are exposed to the risk of functioning with ineffective corporate governance frameworks in the information age amid the global economic environment in which firms in Nigeria are expected to be active players.

The comparison between the SEC-N 2011 and the FRC-N 2018 is presented in Table 2.7 below. As earlier discussed, this study considers the corporate governance provisions of SEC-N 2011 and not the FRC-N 2018 Code because the latter, although released in 2018, became effective in July 2020 and this study covered the period from 2012 to 2019 when the SEC-N 2011 Code was effective. However, the FRC-N Code of 2018 and the areas that may require further consideration in the light of emerging economic realities have been presented in Table 2.7 to provide an insight into the extent to which the SEC-N 2011 Code has been improved upon. In addition, Table 2.7 provides information on the expected corporate governance compliance by listed and other firms with effect from 2020 as provided in the 2018 Code. Only areas relevant to this study have been considered.

Table 2.7: Comparison between the SEC-N 2011 and the FRC-N 2018

S/N	Characteristic	Provision of SEC-N 2011	FRC-N 2018	Remarks
1	Title	Code of Corporate Governance for Public Companies in Nigeria	Nigerian Code of Corporate Governance 2018	The title suggests that the 2018 is not restricted to only public companies but rather for all economic entities in Nigeria.
2	Issuing authority	Security and Exchange Commission of Nigeria (SEC-N)	Financial Reporting Council of Nigeria (FRC-N)	The change in the issuing authority appropriately places the responsibility for the control of the reporting and corporate governance disclosures on the FRC-N as an agency that enforcing financial reporting and disclosure standards for effective corporate accountability.
3	Year of issues and effective year	2011 and effective 2011	2018 and effective July 2020	Compared to the 2011, the 2018 Coe is a more recent development coming after the SA Code, King IV of 2016 but at the same time with the UK Code of 2018. Although, the effective date of the UK Code of 2018 was 2019.
4	Scope and structure	All public companies whose securities are listed on a recognised securities exchange in Nigeria; companies seeking to raise funds from the capital market through the issuance of securities or seeking listing by introduction, and all other public companies. The Code presents its provisions in sections.	All public companies (whether or not listed, private companies that are holding companies of public companies or other regulated entities; concessioned or privatised companies; and all regulated private companies being private companies that file returns to any regulatory authority other than the Federal Inland Revenue Service (FIRS) and the Corporate Affairs Commission (CAC). The Code presents its provisions on the basis of underlying governance principles.	The scope of the 2018 is substantially wider than the 2011 SEC-N 2011 Code. Thus, the adoption of the 2018 would help in enhancing the operational capabilities of all shades of organisation. Linking the provisions to underlying corporate governance principles improves the clarity on the basis for the particular provision.

Table 2.7: Comparison between the SEC-N 2011 and the FRC-N 2018 pertinent provisions (continued)

S/N	Characteristic	Provision of SEC-N 2011	FRC-N 2018	Remarks
5	Application principles	The "Apply or explain" principle is adopted. This philosophy allows the firm to opt select the provision to apply but to explain why the principle is not applied.	The "Apply and explain" principle is adopted. This philosophy requires firms to apply all the principles and to demonstrate how a particular principle has been applied.	The FRC-N, 2018 Code is more stringent as it demands some level of compulsory application and explanation of how a principle has been applied. On the other hand, the 2011 Code gives leverage to companies to opt to comply with a provision by explaining why the firm could not comply with the provision.
6	Environmental sustainability concerns	No mention is made of environmental sustainability, as there is no reporting requirement on environmental sustainability.	Environmental sustainability is considered under Principle 26. This principle states that paying adequate attention to sustainability issues including environment, social, occupational and community health and safety ensures successful long term business performance and projects the Company as a responsible corporate citizen contributing to economic development.	The elaborate provisions on environmental sustainability places the 2018 Code sufficiently better than the 2011 Code with respect to social, ethical, safety, working conditions, health and environmental responsibilities as well as policies addressing corruption.
7	Governance model	Shareholders-centric model with limited reference to stakeholders.	A mixture of shareholder-centric and stakeholder-centric models.	No much difference in terms of the main focus of the Codes as both have made provisions to preserve the interest of the shareholders and well as stakeholders.
8	Structure of the Code	The Code consists of nine (9) parts but no list of principles. However, recommended practices are discussed under each part in the Code for the implementation.	The Code consists of seven (7) parts and twenty-eight (28) principles together with practices recommended by the Code for the implementation of each principle.	The inclusion of the guiding principles behind the recommended practices followed the SA King IV model. This improvement is necessary to quickly link the recommendations to the governance principles canvassed in the recommendations.

Table 2.7: Comparison between the SEC-N 2011 and the FRC-N 2018 pertinent provisions (continued)

S/N	Characteristic	Provision of SEC-N 2011	FRC-N 2018	Remarks
9	**Board structure**			
	i) Type of board	A unitary board structure can be inferred from the provisions for the positions of the Chairman and the CEO. Unitary board structure.	A unitary board structure can be inferred from the provisions for the positions of the Chairman and the CEO. Unitary board structure.	Similar structure.
	ii) Board size	Minimum of 5, no maximum.	No minimum number is set but that "The Board should be of a sufficient size to effectively undertake and fulfil its business."	The non-specification of minimum or maximum board size allows board size to be determined by business imperatives that is canvased in this study.
	iii) Number of board meetings	At least once every quarter, that at least four times per year.	The Board should meet at least once every quarter.	Similar provision
	Directors' attendance at Board meetings	Each director to attend at least two-thirds of all Board meetings.	No minimum attendance is placed but that every director should endeavour to attend all Board meetings.	Improvement on board attendance at meetings.
	iv) Tenure of independent/non-executive directors (INEDs)	To be re-elected every three years.	The tenure for INEDs should not exceed three terms of three years each	The 2018 Code put a cap on the tenure of the INEDs as against the 2011 Code that encourages perpetual duration. Thus, the 2018 Code addresses the concern of board inertia which may be occasioned by allowing board members to serve in board for too long.
	v) Gender consideration	Code did not provide for consideration of gender diversity in board composition.	Principle 2, requires board to consider gender diversity in board composition.	Code 2018 improves upon the provisions of the 2011 Code being
	v) Number of independent directors (IDs)	At least one person.	No number provided	The non-provision for a minimum number of Independent Director in the 2018 Code allows the board the leverage to determine the number of IDs. The importance of the IDs makes the provision for a minimum number of IDs

Table 2.7: Comparison between the SEC-N 2011 and the FRC-N 2018 pertinent provisions (continued)

S/N	Characteristic	Provision of SEC-N 2011	FRC-N 2018	Remarks
				imperative.
	Tenure of CEO	No specific tenure but left to be determined by the Board.	No specific tenure but left to be determined by the Board.	Similar provision
	v) Multiple directorships	No limit on multiple shareholdings but disclosure of concurrent directorships is required.	No limit on multiple shareholdings but disclosure of concurrent directorships is required.	Similar provision
	vi) Minority representation on board	No specific provision to include representation of the minority Shareholding	No specific provision to include representation of the minority Shareholding	There need to provide for the inclusion of a representative of the minority interest shareholder on the board would solidify the protection of minority shareholders.
	vii) CEO Duality	Not allowed	Not allowed	Similar provision.
	viii) Proportion of independent/non-executive directors to the executive directors	Independent/non-executive directors should be more than the executive directors.	Majority of the Board are Non-Executive Directors.	Similar provision.
	ix) Definition of independent director	Fully describes a director including that shareholding is not more than 0.01% of the firm's paid-up capital.	Fully describes a director including that shareholding is not more than 0.01% of the firm's paid-up capital.	Similar provision.
	x) Minimum number of board committees	Three: Audit Committee, Governance/Remuneration Committee and the Risk Management Committee	No minimum provided. Board should determine the number and composition of its committees as well as ensure that each is comprised of Directors with relevant skills and competencies	The leverage for the board to determine the minimum number of committees allows the board committee structure to relay on business imperatives.
	xi) Presence and composition of Audit committee	A total number of not more than 6 consisting of equal number of shareholders representative and directors.	No number of members is stated in the FRN-N 2018 Code. However, A total number of five members comprising of three members	The challenge of the even number of the Audit Committee membership as contained in the CAM 1990 which formed the basis of the SEC-N Code 2011 has been addressed by the odd

Table 2.7: Comparison between the SEC-N 2011 and the FRC-N 2018 pertinent provisions (continued)

S/N	Characteristic	Provision of SEC-N 2011	FRC-N 2018	Remarks
			and two non-executive directors is provided for by Section 404(3) of CAMA 2020.	number of the membership contained in the CAMA 2020.
	xii) At least a member of the Audit Committee must be financial literate.	Provided in the Code	Provided in the Code	Similar provision
	xiii) Composition of the remuneration committee by only non-executive directors	The committee should comprise non-executive directors (NEDs).	The committee should comprise non-executive directors, majority of which should be independent NEDs.	Similar provision
	xiv) Committee membership of board chairman	Chairman of the Board should not serve as chairman or member of any Board committee	Chairman of the Board should not serve as chairman or member of any Board committee.	Similar provision
	xv) Chairman as a non-executive director	The Chairman of the Board should be a NED and not be involved in the day-to-day operations of the Company, which should be the primary responsibility of the MD/CEO and the management team.	The Chairman of the Board should be a NED and not be involved in the day-to-day operations of the Company, which should be the primary responsibility of the MD/CEO and the management team.	Similar provision.
9	Restrictions on family and interlocking directorship	Not more than two members of the same family should sit on the board of a public firm at the same time. Cross-membership of boards of competing firms is discouraged.	No specific provision	The absence of provision on the number of family members in a board could challenge the independence of the board especially for listed firms that provide critical services to the society.
10	Provision for the duties and responsibilities of the Board	Clearly stated in Section 3.	Clearly stated with expanded scope under Principle 1:	Similar provision
11	Minimum educational qualification of the CEO	No specific provision	No specific provision	Similar provision
12	Minimum educational	No specific provision	No specific provision	

Table 2.7: Comparison between the SEC-N 2011 and the FRC-N 2018 pertinent provisions (continued)

S/N	Characteristic	Provision of SEC-N 2011	FRC-N 2018	Remarks
	qualification of the directors			Similar provision.
13	Provision on the duties of the chairman of the board and of the CEO	Duties and responsibilities of the two offices are clearly stated in Section 10.	Duties and responsibilities of the two offices are clearly stated in. Part A, Principles 3 and 4.	Similar provision.
14	Provision for remuneration policy	Provided in Section 14.	Provided in Principle 16.	Similar objectives and scope.
15	Provision for remuneration of Executive Directors and the CEO	Remuneration should include long-term performance related component such as stock options and bonuses as contained in Section 14.	Principle 16.6 states that "The remuneration of the MD/CEO and EDs should be structured to link rewards to corporate and individual performances and include a significant component that is related to long-term corporate performance, such as stock options and bonuses".	Similar provision.
16	Role of Internal Audit	Provides for the roles of the internal auditor of the company in Section 31.	Provides for the roles of the internal auditor of the company in Principle 18.	Similar provision.
17	Appointment of Company Secretary	Appointment of company secretary is provided for in Section 8.	Appointment of company secretary is provided for in Principle 8.	Similar provision.
18	Reporting line of the Company Secretary	Report directly to the CEO/MD but also has a direct channel of communication to the chairman of the board.	The functional responsibility is to the Board through the Chairman, while administratively, he reports to the MD/CEO.	Similar provision.
19	Provision for responsibilities of the Company Secretary	Clearly provided for in Section 8.	Clearly provided for in Principle 8.6.	Similar provision.
20	Reporting and	Reports to the Audit Committee with	Principle 18.5.1 provides that	Similar provision.

Table 2.7: Comparison between the SEC-N 2011 and the FRC-N 2018 pertinent provisions (continued)

S/N	Characteristic	Provision of SEC-N 2011	FRC-N 2018	Remarks
	responsibility lines of the internal auditor	a line of communication with the CEO as in Section 31.4.	the Internal Audit should "Report directly to the committee responsible for audit while having a line of communication with the MD/CEO".	
21	Provision for written procedures for appointment to the Board	Section 13 requires a clear and transparent procedure for appointment to the board including the name, age, qualification, and work experience.	Principle 12 provides for "A written, clearly defined, rigorous, formal and transparent procedure serves as a guide for the selection of Directors to ensure the appointment of high quality individuals to the Board."	Similar provision.
22	Provision for annual evaluation of the Board	Section 15 provides that the board should establish the system of board evaluation by an independent external consultant that includes the criteria and key performance indicators.	Similar provision is made in Principle 14 "Board Evaluation".	Similar provision.
23	Available policy on conflict of interests for the board and individuals	Section 16 provides that to avoid conflict of interest, directors are to promptly disclose their interest in any matters that may come before the Board or its Committees.	A similar provision is made in Principle 25.2 under the subject "Ethical Culture".	Similar provision.
24	Provision on insider trading	Section 17 provides that family members including linked persons in possession of price sensitive information or other confidential information are precluded from dealing on the securities of the firm.	This is covered in Principle 25.1.	Similar provision.
25	Provision on training of directors	Section 18 provides that a regular form of orientation programme	Principle 13 caters for directors training. It provides	Similar provision.

Table 2.7: Comparison between the SEC-N 2011 and the FRC-N 2018 pertinent provisions (continued)

S/N	Characteristic	Provision of SEC-N 2011	FRC-N 2018	Remarks
		should be organised to familiarise new directors with the company's strategic plan, senior management and other confidential information.	for "A formal induction programme on joining the Board as well as regular training assists Directors to effectively discharge their duties to the Company".	
26	Rotation of external auditors	Section 33 requires that companies should rotate both their external audit firms and audit partners.	Similar provision is made for the rotation of external auditors every five years.	Similar provision. However, the 2018 Code specifies the rotation to occur every five years as opposed to the 2011 Code that did not specify the time.
27	Tenure of external auditors	Not more than ten (10) years continuously. External auditors shall only be reappointed seven years after their disengagement (Section 33.2).	Similar provision in Principle 20.2.	Similar provision.
28	Provision on disclosure	Section 34 provides that the annual reports of the firm should include issuance of shares, borrowings and maturity dates, share buybacks, directors interest, composition of the board, roles of the board, board appointment process, directors standing re-election, composition of board committees, number of meetings held, sustainability policies among others.	Principle 28 covers disclosure requirements. However, the 2018 Code also requires disclosure of the plan for achieving gender diversity set by the Board in accordance with its diversity policy.	The specific disclosure requirement on the plan for achieving gender diversity suggests that the code promotes the inclusion of females on boards of listed firms. This is a welcome development, although the empirical evidence, as would be seen later in Chapter Seven, does not support the inclusion of female on the boards of listed non-financial firms.
29	Provision on communication policy	Section 35 provides that listed firms should have communication policy that enables effective communication between the Board and the Management, the shareholders and the public. The 2011 Code emphasises timely, accurate and continuous disclosure of information	Principle 27 makes similar provision.	Similar provision.

Table 2.7: Comparison between the SEC-N 2011 and the FRC-N 2018 pertinent provisions (continued)

S/N	Characteristic	Provision of SEC-N 2011	FRC-N 2018	Remarks
		about the operations and activities of the firm to the shareholders, stakeholders and the general public.		
30	Provision on Code of Ethics	Section 36 requires listed firms to have a Code of Ethics. The board is to ensure that breaches are effectively sanctioned.	Principle 24 makes similar provision under "Business Conduct and Ethics" The Board should be responsible for monitoring adherence to the Code of Business Conduct and Ethics to ensure that breaches are effectively sanctioned.	Similar provision.
31	Critical role of institutional shareholders explained	Sections 26 and 27 require institutional shareholders to influence the practice of corporate governance positively.	Principal 22.3 provides that institutional shareholders and investors should positively influence the standard of corporate governance and promote value creation in the companies in which they invest.	Similar provision.
32	Relationship with stakeholders.	Section 28, provides that listed firms should pay attention to stakeholders such as employees, host community, the consumers and the public.	Principle 27 caters for relationship with the stakeholders and promotes effective communication that would facilitate informed decision.	Similar provision

Having examined the provisions of the SEC- N Code of 2011, *vis a vis* other codes, the next section discusses the internal and external governance mechanisms in the context of Nigeria.

2.11 Internal and external corporate governance mechanisms in Nigeria

There are two classes of corporate governance mechanisms: internal (board governance) and external corporate governance mechanisms. The composition of the mechanisms in the Nigerian context is presented in Figures 2.1 and 2.2. The detailed explanation of the mechanisms is contained in Chapter Three.

2.11.1 Internal corporate governance mechanisms

The internal corporate governance mechanisms are discussed with reference to the activities and responsibilities of the rules and controls that enable the internal control mechanisms to function effectively. Internal mechanisms, as discussed previously refer to the methods, rules, and procedures used by the firms to ensure that the management operates in a manner that would enhance the value of shareholders by minimising or eliminating the managers' discretionary advantage (Sharma, 2017). The pertinent internal mechanisms in the Nigerian context include the following:

1) Board structure: Nigeria adopts a unitary board with the position of the chairman and the CEO separated. The mandatory committees of the board for all listed companies include the SAC, the risk management committee, the nomination committee, and the governance and remuneration committees (SEC-N, 2011: section 9; FRC, 2018). For banks, the CBN Code 2014 requires listed banks have a credit committee of the board as well.
2) Capital structure: CAMA (1990) allows companies in Nigeria to have equity, preference shares, and debt as part of their capital structure.
3) Institutional shareholding: Institutional shareholders are empowered to demand compliance with the corporate governance code by listed companies (SEC-N, 2011; FRC, 2018).
4) The Memorandum and Articles of Association govern company administration in Nigeria. The memorandum stipulates the objects of the company and the business it is established to carry on, while the articles of association contain the internal management and relationships of the owners and meetings.

5) Listed companies are required to have their financial records audited once every year (CAC, 1990; CBN, 2006; SEC- N, 2011; FRC, 2018).
6) Reporting, transparency, and disclosure: Listed firms are required to publish their annual financial reports in the national newspapers (CAC, 1990) and on their websites (FRC-N, 2015).
7) On dividend payout, CAMA (1990) stipulates that dividends can only be paid from surplus income and approved by the shareholders after recommendation by the directors. For financial institutions, dividend payments must, in addition, comply with the directives of the CBN (CBN, 2014) and the tax laws (FGN, 2007).

The pictorial representation of the relationships of the various internal governance mechanisms is presented in Figure 2.1.

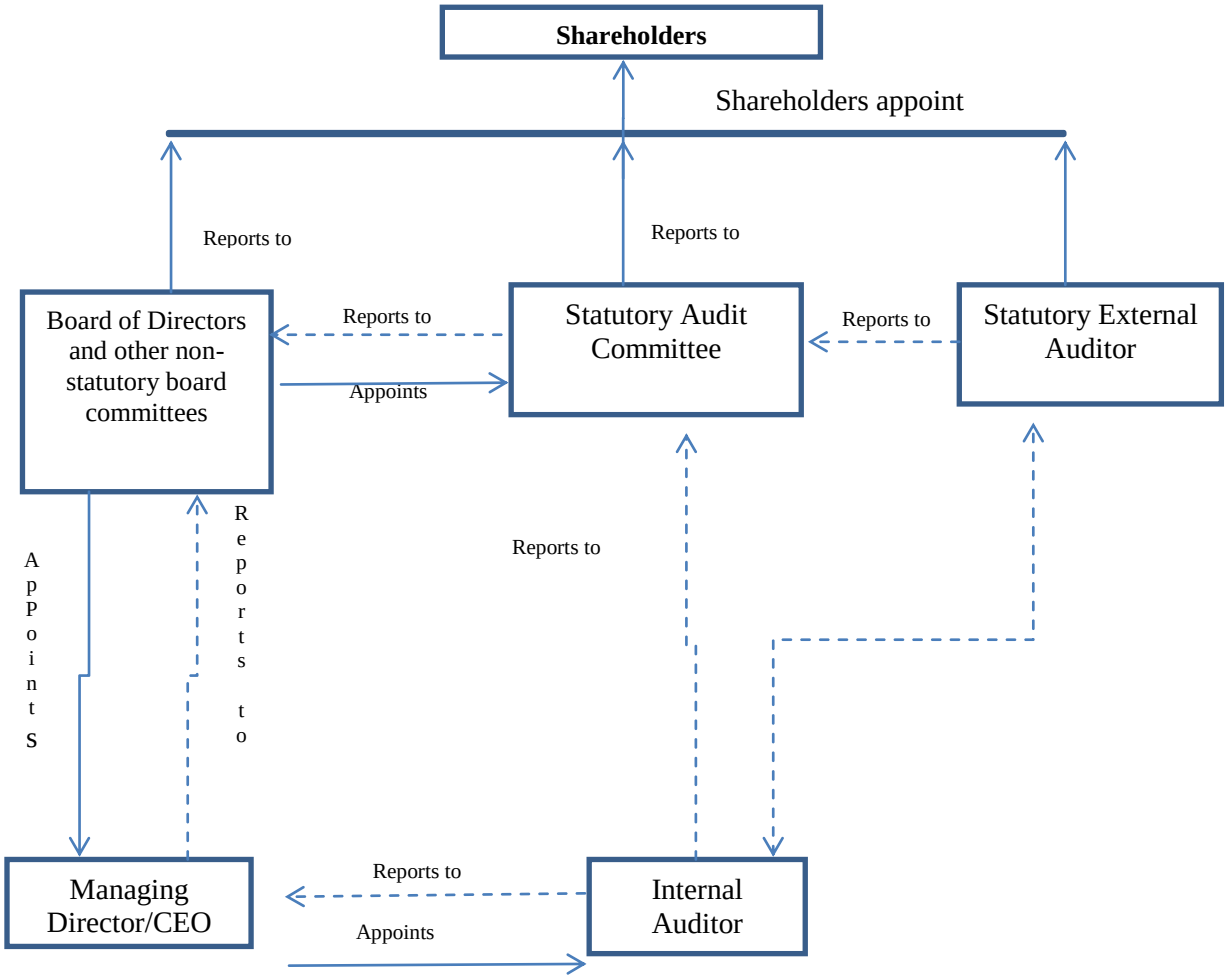


Figure 2.1: Internal corporate governance mechanisms in Nigeria

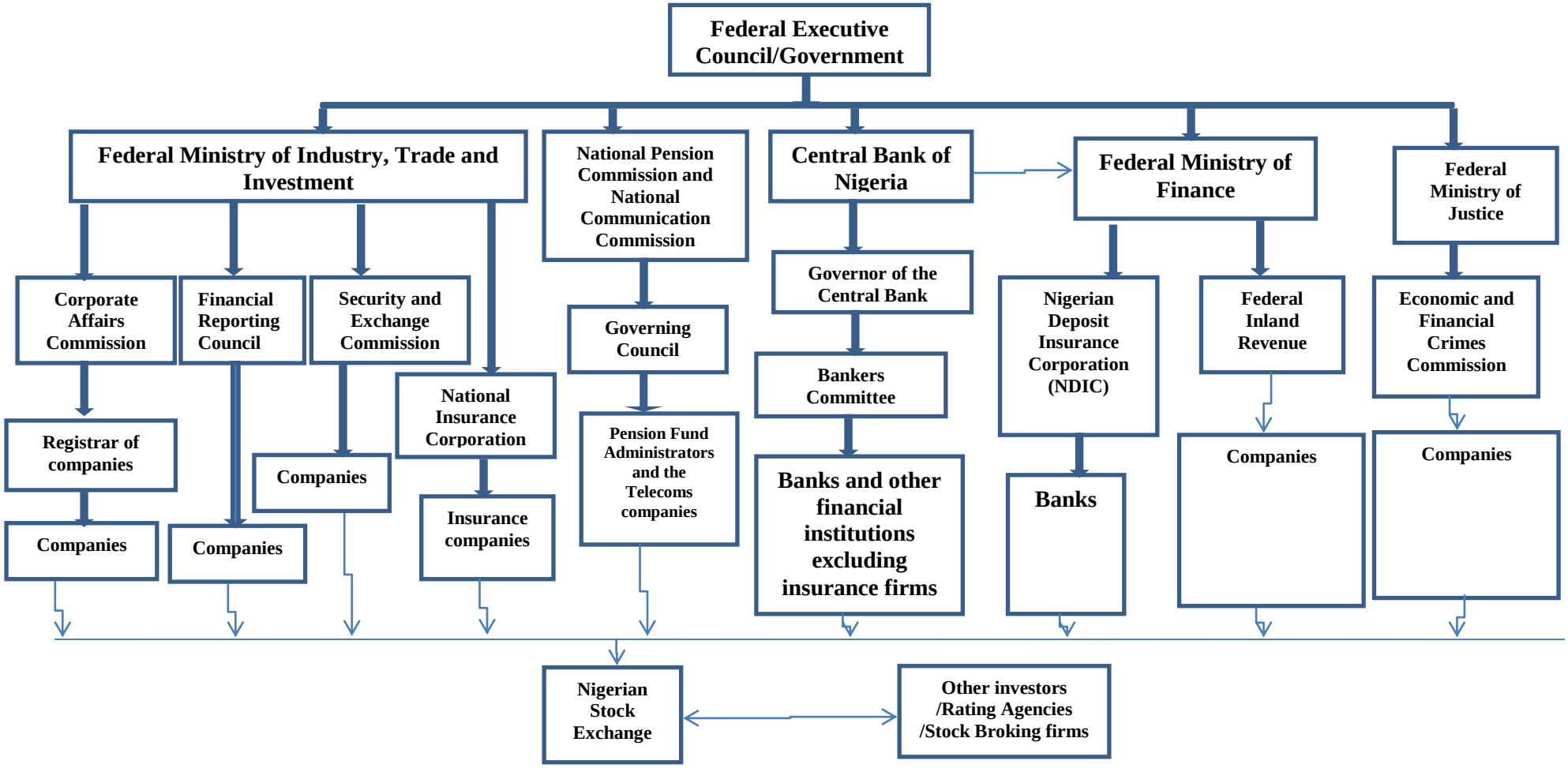


Figure 2.2: External corporate governance mechanisms in Nigeria

2.11.2 External corporate governance mechanisms

Figure 2.2 shows the external governance mechanisms and their relationships in the Nigerian context. External corporate governance mechanisms, as further discussed in Chapter Three, refer to all the systems, regulatory bodies, trade associations, and relationships outside of the firm and its promoters that have some form of direct or indirect control of the activities of managers and the firms, either for fear of losing their positions or losing control of their firms.

The external corporate governance mechanisms are said to complement the internal mechanisms where the internal mechanisms cannot exert effective control over the manager's actions to achieve optimal performance of the firm and reduce agency conflict (Sharma, 2017).

As stated in Chapter Three, external corporate governance mechanisms include: 1) laws and regulations (specific laws and regulations of the Federal and State governments); 2) Markets - including capital markets, the market for corporate control, labour markets, and product markets; 3) providers of capital market information (credit, equity, and governance analysts); 4) accounting, auditing, investment banking advice, financial and legal services from parties external to the firm; and 5) private sources of external oversight, particularly the media, labour unions, trade and professional associations, and external lawsuits (Walsh and Seward, 1990; Weir *et al*., 2002).

2.12 Chapter summary

The synthesis of literature indicates that the corporate governance frameworks examined in this chapter are country-specific and respond to the legal, cultural, economic, technological, and social conditions of nations (Mulili & Wong, 2011). The discussion of the evolution of corporate governance frameworks in Nigeria confirms this argument.

The chapter discussed the evolution of corporate governance in Nigeria and provided insight on how Nigeria has performed in instituting modern corporate governance frameworks from the maiden code of 2003 to the current code of 2018. Compared with the South African and the UK experiences, the Nigerian corporate governance story is a recent development. The various attempts were identified and discussed, beginning with the efforts of various companies' regulations, ordinances, and laws that related to Nigeria pre- and post-independence. Also discussed was the making

of Nigeria and its economy. This was necessary as corporate governance is intricately connected to the economic development of nations. The discussion of the Nigerian state provides an understanding of how the economy of Nigeria was organised, which explains why Nigeria's perspective on corporate governance is not as mature as that of South Africa's, especially as a dominant economic block in Africa.

The chapter also identified the gaps in the SEC-N 2011 Code compared to the South African King IV and the OECD's 2015 principles, which were operational during the period 2012 to 2019. Also, the discussion of the new 2018 Nigerian code, although it did not take effect during the period covered in this study, has provided clarity on the level of corporate governance demands from January 2020.

Especially as it concerns the allowance of the industrial-specific codes to operate alongside the new 2018 code, the chapter identifies some of the challenges that may hinder the effective implementation of the new 2018 Code in the same way the 2011 implementation was affected by the parallel codes.

The internal and external corporate governance mechanisms that relate to Nigeria were equally explained. Briefly, Chapter Two has presented the story of Nigeria's corporate governance development pre and post-independence. The third chapter delves into the international literature on corporate governance, the fundamental principles, and the dominant corporate governance models of shareholder and stakeholder centric models.

CHAPTER THREE

CORPORATE GOVERNANCE

3.1 Introduction

This chapter explores the literature on the theoretical underpinnings of corporate governance, its conceptual definition and fundamental principles, models, and the benefits of effective corporate governance to the firm and other stakeholders. The chapter aims to establish the international literature that guides the design of corporate governance frameworks globally, including Nigeria, and to achieve three objectives. The first objective is to review the literature on corporate governance to provide a clear understanding of what corporate governance is all about. This provides the philosophical justification for the adoption of the corporate governance models that shape the design of corporate governance practices in countries including Nigeria.

The second objective is to provide insight into the principles of effective corporate governance as support for the identification of the relevant variables for the construction of the CGI of the Nigerian non-financial listed firms. This objective is achieved by reviewing the international principles of corporate governance as continued in the guidelines issued by the OECD (2015a) and ICGN (ICGN, 2014). The third objective is to rationalise why this study is situated around the agency theory (Smith, 1776; Berle & Means 1932; Jensen & Meckling 1976).

The remainder of the chapter discusses the definition of corporate governance, the importance of corporate governance, the roles of corporate boards, and the concept of separation of ownership and control as one of the building blocks of the agency theory.

3.2 Definition of corporate governance

Corporate governance is said to date back to the work of Adam Smith's "Wealth of Nation" (Alabdulla *et al*., 2014: 313). However, the term "corporate governance" came into vogue and gained prominence in the 1970s in the USA (Cheffins, 2012), and "first appeared in the Federal Register" in 1976 and as a "well-entrenched … academic and regulatory shorthand" in the 1990s (Cheffins, 2012:1-3). However, L'huillier

(2014:301) observes that the term "corporate governance" gained prominence during the economic and political changes among the OECD countries from the mid-1980s.

Over the years, corporate governance has evolved to address demands on firms to fulfil some corporate social responsibilities (CSR) to society while ensuring that shareholders and stakeholders participate actively in corporate decision-making to improve value for all stakeholders (Claessens & Yurtoglu, 2012). As a result, there has not been a universally accepted definition of corporate governance (Alabdulla *et al.*, 2014), but rather a plethora of definitions have emerged from the corporate governance literature. The various definitions have been motivated by the individual's view of the world (Yusof, 2016) and the idiosyncrasies of firms and countries (Merendino, 2013; Emile *et al.* 2014).

Solomon and Solomon (2004) classify the definitions of corporate governance into "narrow" and "broad" categories. The narrow definitions focus on the affairs of the firm, including its structure, board, and how it perceives its basic orientation and direction, and how major internal governance mechanisms of the firm collaborate to maximise its value, primarily for the benefit of shareholders (Rwegasira, 2000; Ntim, 2017). The broader definitions, on the other hand, consider the accountability of firms to the stakeholders that include shareholders, employees, creditors, suppliers, the local community, and the environment (Rwegasira, 2000; Solomon & Solomon, 2004; Ntim, 2017). In other words, when the definition of corporate governance emphasises the interest and benefit of the investors or shareholders, this definition is "narrow", while if the definition seeks to address the interests of all stakeholders, including the investors, employees, government, society, and the environment in general, the definition is "broad." The philosophical stance of the "narrow" definition is said to be linked to the Anglo-American conception of the main objective of the firm, which is to further the well-being of its owners or shareholders (Solomon & Solomon, 2004).

One of the explanations for the heterogeneous definitions of corporate governance is its multifaceted nature, consequent upon the involvement of various disciplines such as "accounting, economics, ethics, finance, law, management, organisational behaviour, and politics, among others" (Ntim, 2009:30), with their different ideological underpinnings. The involvement of several disciplines in corporate governance became imperative since the behaviour of senior managers "is variously constrained by legal, regulatory, financial, economic, social, psychological, and political mechanisms which are themselves sometimes substitutes and sometimes complements" (Keasey *et al.*,

2005:1). Another reason for the difficulty of imposing a universally accepted definition of corporate governance is the idiosyncrasies in the corporate law systems of nations, which contain legal provisions that have an impact on the structure and governance of firms.

The most well-known definition of corporate governance was given in the "***Report of the Committee on the Financial Aspects of Corporate Governance***, under the chairmanship of Sir Adrian Cadbury "in 1992 in the UK (Solomon & Solomon, 2004). This report is generally referred to as The Cadbury Report. Cadbury (1992: Section 2.5) states, "corporate governance is the system by which firms are directed and controlled." Moreover, Cadbury (1992: *section 2.5*) states that

> *"Boards of directors are responsible for the governance of their firms. The shareholders' role in governance is to appoint the directors and the auditors and to satisfy themselves that an appropriate governance structure is in place. The responsibilities of the board include setting the company's strategic aims, providing the leadership to put them into effect, supervising the management of the business and reporting to shareholders on their stewardship."*

Further, Cadbury (1992: section 3.4) states that:

> *"Boards of directors are accountable to their shareholders and both have to play their part in making that accountability effective. Boards of directors need to do so through the quality of the information, which they provide, to shareholders, and shareholders through their willingness to exercise their responsibilities as owners*."

The thrust of Cadbury's definition is the direction and control of firms in the interest of the shareholders that appointed the board of directors. This suggests that all decisions of the board must focus on satisfying the interests of the shareholders, to whom the directors report on their stewardship.

In the view of the United Nations Global Compact (2009:4), "corporate governance refers to the way that boards oversee the running of a company by its managers, and how board members are held accountable to shareholders and the company." The focus of this definition is on fostering the interests of the shareholders as well, and not on the broad interests of the stakeholders.

The definitions of Cadbury (1992) and the United Nations Global Compact (2009) do not consider corporate governance in the context of the relationship between the firm and society that sustains it. Defining corporate governance in the context of The Cadbury Report (Cadbury, 1992) makes it difficult for firms to pay attention to the yearnings and aspirations of other interest groups. Therefore, Cadbury's definition

narrows the scope of corporate governance to ensure that the firm operates sustainably and takes actions that preserve the existence of the environment and society at large (Farnham, 2021). Thus, Munir *et al*. (2019) argue that effective corporate governance ensures that firms consider the economic, social, and environmental impacts of their policies and undertake only legal and socially acceptable actions that would positively affect the firm's market image.

Another popular definition that has received universal acknowledgement has been given by the OECD (OECD 2004a; 2004b; 2015). The OECD (2004a; 2004b:11; 2015a:9) defines corporate governance as "a set of relationships between a company's management, its board, its shareholders, and other stakeholders…provides the structure through which the objectives of the company are set, and the means of attaining those objectives and monitoring performance are determined." This definition improves on Cadbury's version by incorporating the interests of "other stakeholders" in the direction and controll of the affairs of firms. The expansion of the scope of corporate governance by the OECD (2004a; 2004b) requires corporate boards to decide not only in the parochial interest of the investors (shareholders) but in the general interest of other stakeholders, including employees, customers, suppliers, the government, and the general public. The paradigm shift from focusing on shareholders to focusing on stakeholders acknowledges the pivotal role of the other stakeholders in contributing to the long-term success and performance of the firm (OECD, 2015b).

There are many other attempts to define corporate governance. These include the definitions given by the Global Corporate Governance Forum of the World Bank (2005), Arguden (2010), Duke II and Kankpang (2011), and Beekes *et al*. (2012), to mention but a few. The Global Corporate Governance Forum of the World Bank (2005) submits that corporate governance is concerned with the totality of the rules relating to how power is shared among owners, the board of directors, management, and other stakeholders such as employees, suppliers, customers, and the public. The emphasis on how "power is shared" suggests that various stakeholders participate in the control and allocation of resources to deliver benefits not only to the investors but also to all the stakeholders.

Arguden (2010:3) considers another dimension of corporate governance by viewing corporate governance in the light of:

> "*the quality, transparency, and dependability of the relationships between the shareholders, board of directors, management, and employees that define the authority and responsibility of each in delivering sustainable value to all the stakeholders."*

Arguden (2010) attempts to underscore the importance of the corporate governance framework in ensuring transparency in the corporate affairs of firms, as this is necessary to impact the quality of financial reports issued by them. Arguden (2010) agrees with Hermalin and Weisbach (2007) that one of the main objectives of corporate governance is to increase corporate transparency. Transparency directly affects the equity market's ability to moderate a firm's performance. Since most information concerning a firm's performance is uniquely available from the firm, effective corporate governance frameworks that ensure transparent disclosures cannot be overemphasised in this connection (Gilson, 2000; Fung, 2014). More so, effective corporate governance results in increasing transparency and improving investor relations, which attract investors' patronage of firms (Che Haat *et al*., 2008).

Corporate governance is also considered by Duke II and Kankpang (2011) as the system that ensures that hired managers or organisational stewards act in the best interests of the core stakeholders of the firm, including minority shareholders and other investors. Claessens and Yurtoglu (2012:3) expand this view by observing that governance can be considered in terms of its effectiveness in resolving collective action problems "among dispersed investors and the reconciliation of conflicts of interest between various corporate claimholders."

Iturriaga and Hoffmann (2005) and Beekes et al. (2012) view corporate governance as the internal and external control mechanisms used in monitoring and managing firms, including the control and directing frameworks that moderate the entire corporate behaviour and reduce earnings management. Earnings management refers to the opportunistic behaviour by managers who take advantage of the latitude in accounting rules and choices to record abnormal accruals for their pecuniary interests, especially when they are evaluated and compensated based on profitability (Iturriaga & Hoffmann, 2005; Roodposhti & Chashmi, 2011; Hassan & Ahmed, 2012). Finally, underscoring the importance of corporate governance, Sternberg (2004) considers corporate governance as the various ways of ensuring that the actions of the firm, its agents, and

the use of its assets are directed at achieving the ends set by the shareholders of the firm.

The above definitions of corporate governance suggest that corporate governance comprises the broad spectrum of corporate interactions among the board of directors, management, creditors, and other stakeholders aimed at enabling the organisation to achieve its strategic objectives for the benefit of the owners and other stakeholders (OECD 2015a). It includes the ownership structure of the firm, the structure of the board of directors and its important committees, shareholders' rights, capital structure, product market competition, and the overall legal and institutional framework of the country (Haniffa and Hudaib, 2006; Gillan, 2006; Stiglbauer, 2011; Francis *et al.*, 2012; Sarkar *et al*., 2012; Velnampy & Nimalthasan, 2013; OECD, 2015a). The focus of corporate governance is to ensure that the affairs of the organisation are directed optimally and to curb the possibility of hired agents expropriating the resources of firms for their own pecuniary benefits (Wessels & Wansbeek, 2014). In this regard, corporate governance can be considered as a set of control mechanisms designed and adopted by the board of the firm to control the actions or inactions of the managers, where there is a separation of ownership and control, in the interests of all stakeholders. Control aims at enabling the firm to operate responsibly and satisfy the interests of stakeholders, the environment, and society.

Thus, corporate governance revolves around three central phenomena. The first is that corporate governance is a mechanism for the control and directing of the affairs of firms made imperative by the separation of the ownership and control of firms (Jensen & Meckling, 1976; Berle & Means, 1932; Kräkel, 2004; Tian *et al.*, 2010; Gogineni *et al*., 2013). The second is that corporate governance strives to ensure that the firm operates optimally (Filatotchev & Boyd, 2009). Lastly, the focus of corporate governance is not on the interests of shareholders alone but also on those of stakeholders, including the environment, government, and society (SEC-N, 2011; Argandona, 2011; OECD, 2015a; Brandt & Georgiou, 2016). Therefore, the relationships among the various corporate actors explain the differences in the corporate governance models at the firm level and across the different economic climes, and they underscore the importance of corporate governance, discussed in the section that follows.

3.3 Evolution of modern corporate governance

The history of corporate governance derives from the evolution and management of modern corporations, the evolution of political and economic policies of nations and their corporate legal systems (Farrar, 1999; Morck & Steier, 2005; Dragomir, 2008; Ajao *et al.,* 2013). This is because corporate governance, as the name implies, is all about how firms are organised and controlled (Cadbury, 1992). Dragomir (2008) observes that the evolution of corporate governance can be traced to the emergence of the corporation and organisational theories. Other motivations for the emergence of modern corporate governance include the criticisms by Adam Smith (1776) concerning the tendency of hired managers to expropriate that which is not theirs; and the birth of the agency, stakeholder, institutional, and resource dependence theories (Berle & Means, 1932; Jensen & Meckling, 1976; Freeman, 1984), among others.

Keasey *et al.* (2005) argue that modern corporate governance received universal attention towards the end of the twentieth century, specifically from the 1978s, when America issued its first corporate governance code (Krenn, 2014) through 1992; when the UK issued its first code, the Cadbury Report (1992), following several accounting and financial scandals in Europe, specifically in UK. The Cadbury Report of 1992 is said to be the foundation of modern corporate governance frameworks all over the world (Conyon, 1994). The justification for the popularity of The Cadbury Report is explained by Keasey *et al.* (2005:5) below.

> *"The modern process of corporate governance reform can be said to have started in the UK with the establishment of the Cadbury Committee (on the Financial Aspects of Corporate Governance) in 1991. It was set up in response to three inter-related areas of concern in the existing arrangements: first were anxieties over the use of "creative accounting" devices, which were believed to be obfuscating the calculation of shareholder value. Second were concerns over a string of corporate failures, particularly those associated with high-profile, domineering CEOs who were apparently able to conceal financial weaknesses through the opacity of their control mechanisms. Finally, there was a growing public unease over the rapid growth of executive remuneration, especially an apparent failure to relate increases more strongly to firm performance."*

Thus, the Cadbury Report addressed three main concerns: the use of "creative accounting" devices; a string of corporate failures; and the growth of executive remuneration with no relationship to firm performance. Consequently, the Cadbury Report marked the commencement of a formal attempt to set the parameters for the governance of companies (Abdullah & Page, 2009). Before the publication of The

Cadbury Report in 1992, firms were controlled and directed according to customs and practices, the requirements of the stock exchange, and some basic rules set by the company laws concerning the actions of the boards of directors, financial reporting, and audit (Abdullah & Page, 2009).

Becht, Bolton and Röell (2005:4) identify some reasons for the increase in the universal momentum for corporate governance discourse to include:

> *" i) the worldwide wave of privatization of the past two decades; ii) pension fund reforms and the growth of private savings; iii) the takeover wave of the 1980s; iv) deregulation and the integration of capital markets; v) the 1998 East Asia crisis, which has put the spotlight on corporate governance in emerging markets; and vi) a series of recent US scandals and corporate failures that built up but did not surface during the bull market of the late 1990s*."

Iqbal and Mirakhor (2004) identified other reasons for the increase in corporate governance discourse to include: (1) the growth of institutional investors (i.e. pension funds, insurance companies, mutual funds, and highly leveraged institutions); (2) concerns and criticisms against the system of monitoring and control of publicly held corporations in Anglo-Saxon countries, which were considered to be seriously defective; (3) the shift away from the traditional "shareholder value-centred" view of corporate governance in favour of the "stakeholder value-centred" philosophy, and (4) the impact of increased globalisation of financial markets, the global trend of deregulation of the financial sectors, and the near nebulous boundaries of institutional investors' activities (Iqbal & Mirakhor, 2004).

The combined effect of the above developments is the universal resolve to institutionalise the practice of corporate governance in companies. Consequently, national corporate governance codes evolved, followed by the introduction of the European Union's policy on corporate governance. Next, was the enactment of the Sarbanes-Oxley Act of 2002 by the USA as a result of the collapse of Enron in 2001, and the promotion of true and fair reporting, enunciated in the OECD Principles of Corporate Governance issued in 2004 (revised in 2015) (Dragomir, 2008).

Several country-specific codes have been introduced ever since, some in reaction to similar corporate collapses in the UK and USA, and others to forestall them. The New Partnership for Africa's Development (NEPAD) and the NEPAD Business Foundation and African Corporate Governance Network (NEPAD Business Foundation, 2016: 5) defends the introduction of the country-specific corporate governance approach, saying:

> *"What has become increasingly evident is that no matter the dominant form of company in an economy – private, family-owned, state-owned, etc. – corporate*

governance has been most successful where it has been allowed to evolve gradually according to a country's economic development but notably as part of a wider set of policy improvements and not as an isolated exercise in itself."

The history of corporate governance is, therefore, better discussed on a country-by-country basis and in relation to the development of corporations and organised economic activities in each country. Country-specific codes are inevitable as every country has its own peculiar circumstances and challenges (NEPAD Business Foundation, 2016). Further, "Good corporate governance standards should be a reflection of the national intent to build the integrity of the practices of its private and public sectors" (NEPAD Business Foundation, 2016:7). This approach becomes important because each country has its own unique company administration framework and historical economic antecedents and idiosyncrasies.

Of the country-specific corporate governance models, the UK's corporate governance code is relevant to this study because of its economic past with Nigeria as the latter's colonial masters, as is South Africa's, as it is the second leading economic block in Africa outside Nigeria. These two foreign corporate governance models are discussed because of their relevance to the Nigerian context. More specifically, the discussion of UK corporate governance development is relevant because the UK experience signalled the emergence of "modern corporate governance," which began in the UK in 1991 with the formation of the Cadbury Committee (Keasey *et al*., 2005). In the case of South Africa, the discussion of the South African model is inevitable owing to its pioneering work on corporate governance on the African continent with the introduction of the King 1 Report in 1994 and its integrated approach compared to the shareholder-centric nature of the UK code. Another reason is that Nigeria is an English-speaking country like South Africa, and both countries were colonised by the UK (Ahunwan, 2002; Ocheni & Nwankwo, 2012). Consequently, Nigeria and South Africa operate a common law system like the UK.

3.3.1 United Kingdom corporate governance model

The development of modern corporate governance in the UK started with the introduction of the Cadbury Report in 1992 (Financial Reporting Council Limited of the UK (2006, 2014, and 2018). The Cadbury Report culminated in the issuance of the first corporate governance code in the UK called "UK Corporate Governance Code 1992" by the Financial Reporting Council of the UK. Its classic definition of corporate

governance is still predominant in the literature on corporate governance. The 1992 Code concentrated on the financial governance of corporations listed on the UK Stock Exchange and focused on the composition of corporate boards, service contracts and remuneration of directors, and the quality of company accounts in relation to the powers given to the audit committee to review and express an opinion on the company's accounts.

The 1992 Code was followed by the Greenbury Report of 1995 (you need to add a reference). The "Committee on Directors' Remuneration" issued the Greenbury Report on July 17, 1995, under the leadership of Sir Richard Greenbury. The committee considered the remuneration of directors, including termination packages, which were a thorny issue at the time. The Greenbury Report recommended guidelines for fixing directors' remuneration and stipulated that directors' remuneration should be disclosed in the annual reports of firms.

The Greenbury Report also recommended that listed firms have remuneration committees made up of only non-executive directors (NEDs) to decide on the remuneration of directors, which should include a portion based on performance (O'Connell, 2020; Greenbury Committee, 1995).

The Hampel Committee consolidated the recommendations of both The Cadbury Report (1992) and The Greenbury Report (1995) reports in 1998. The Hampel Committee (1998) was set up to further improve the practice of corporate governance in the UK and focused on establishing a better relationship between shareholders and the directors of companies. The Hampel Report recommends the consolidation of its report and those of the other two committees (i.e. Cadbury and the Greenbury committees) into a single document.

The main difference between the Hampel Report and the others is the approach to corporate governance practice. Whereas the earlier two committees attempted to be more specific, tending towards regulatory requirements and compulsory compliance, Hampel's approach was that of adaptation and explaining non-compliance. Hampel's report also encouraged more direct communication between the shareholders and directors of the firm.

Some of the far-reaching recommendations of the Hampel Report were that directors should report on internal control of their firms, reduce the limit on the proportion of total income that an audit firm may earn from a client. Others were that companies should count all proxy votes and announce the proxy count on each

resolution after it has been dealt with on a show of hands, and cautioned the use of inter-company comparisons and remuneration surveys in setting levels of directors' remuneration. The outcome of the Hampel Report led to the issuance of the 1998 Combined Code of Corporate Governance. The 1998 Combined Code of Corporate Governance, produced by a Committee on Corporate Governance in 1998, was adopted by the London Stock Exchange and included in the UK Listing Rules as an Appendix, but did not form part of the listing rules themselves. The Combined Code of Corporate Governance of 1998 is widely regarded as an international benchmark for good corporate governance practice (Arcot *et al*., 2005).

Subsequent to the 1998 Combined Code of Corporate Governance, the Turnbull Report of 1999 (Institute of Chartered Accountants in England & Wales (ICAEW), 1999) was introduced. The Turnbull Report guided directors on the internal control procedures seen as necessary to manage risk in organisations. According to this report, the board of directors was responsible for the company's system of internal control. The board was to ensure that the system of internal control is effective in managing risks in the manner which it has approved (ICAEW, 1999).

In 2002, the UK introduced the legislative requirement for the preparation of an annual remuneration report, describing the remuneration policy and giving detailed disclosures about the remuneration of each director (Higgs Committee, 2003).

In 2003, the Financial Reporting Council of the UK (FRC-UK) published the Combined Code on Corporate Governance, incorporating the revisions of the Turnbull, Smith, and Higgs reports. Other developments from 1999 to 2003 included the provision of detailed guidance on audit committees, commissioning a report on the recruitment and development of NEDs, explicit recommendation on diversity in board membership, and a review of the role and effectiveness of NEDs following the collapse of WorldCom and Enron in the USA (Rayton & Cheng, 2004; Suchan, 2004).

Some minor reviews were made from 2005 through 2007 (Suchan, 2004). A major review was conducted in 2010 to address the financial crises between 2008 and 2009, which triggered a widespread reappraisal, locally and internationally, of the corporate governance systems that might have alleviated the crises (FRC-UK, 2010). The 2010 Code addressed the new listing regime introduced in April 2010. It also addressed two principal areas: paying attention to following the spirit of the Code as well as its letter, and the enhancement of the impact of shareholders in monitoring the Code by better interaction between the boards of listed firms and their shareholders. The 2012 review

applied to accounting periods beginning on or after 1 October 2012 and related to all companies with a premium listing of equity shares regardless of whether they were incorporated in the UK or elsewhere.

The 2014 version focuses on the provision by companies of information about the risks that affect long-term viability. The main aim was to balance the information needs of investors against setting appropriate reporting requirements. The 2014 Code requires companies to present information to give a clearer and broader view of solvency, liquidity, risk management, and viability. Investors, on their part, needed only to assess financial statements thoroughly and engage both the management and boards of firms accordingly. In addition, the 2014 Code required boards of listed companies to ensure that executive remuneration is aligned with the long-term success of the firm and to demonstrate this more clearly to shareholders (FRC-UK, 2014).

The UK Code of 2014 was replaced by the 2018 Code. The 2018 Code consolidates on the former versions with sustained emphasis on the value of good corporate governance to long-term sustainability. Like the earlier codes, the 2018 Code does not provide for rigid rules; rather it offers flexibility and adopts the principle of "comply or explain". The UK Code applies to all companies with a premium listing, whether incorporated in the UK or elsewhere. The 2018 Code was effective for accounting periods beginning on or after 1 January 2019. The 2018 Code contained 18 principles and 41 provisions covering four main areas of board leadership and company purpose: division of responsibilities, composition, succession and evaluation, audit, risk and internal control, and remuneration. The 2018 Code does not contain specifics on the areas of tenure of CEOs and the chairmanship of the boards, tenure of the auditor, the minimum number of board members, types and number of committees, and many other provisions, which might have required some specificity, as with the Nigerian Code of 2011.

The UK corporate governance framework adopts the shareholders' model and focuses on how listed firms are organised and controlled to deliver desired returns to shareholders. Boards are organised with appropriate committees to mitigate agency conflict while the positions of the chairman of the board and the CEO are separated. The UK corporate governance code adopts the principles of "comply or explain". The discussion of the UK codes is germane to this study because it helps to explain the basis of Nigerian corporate governance development and provides support for the inclusion of some corporate governance mechanisms (variables) in computing the CGI of Nigeria.

3.3.2 South Africa's corporate governance model

South Africa pioneered formal corporate governance systems on the African continent with the issuance of South Africa's King I Report on corporate governance in 1994. The King I Report came barely two years after the issuance of the UK Code in 1992. The re-integration of South Africa into the global economic space after the collapse of Apartheid in 1994 explains the early emergence of a corporate governance framework in South Africa compared to other African nations (Afolabi, 2015).

South Africa's first attempt at instituting a corporate governance framework commenced with the efforts of the Institute of Directors in South Africa, which set up the first committee on corporate governance chaired by a retired Judge of the Supreme Court of South Africa, Judge Mervyn E. King, in 1993. The efforts of the committee resulted in the publication of the King 1 Report in 1994. Some of the major provisions of King 1 include the adoption of the integrated approach to governance in South Africa by focusing the code on principles that would enable the listed firms on the Johannesburg Stock Exchange to operate sustainably. The integrated approach is defined (IoDSA, 2009) as reporting the financial performance of the company in the context of how the company has affected the community in which it operates economically during the year under review. The focus of King 1 was to ensure that the firm, viewed as a juristic person, is motivated to achieve sustainable economic, social, and environmental performance.

In March 2002, a revised report, "King II Report," was published with an expanded scope to include sections on the roles and responsibilities of the board of directors, risk management, sustainability reporting, accountability, and auditing. The King II Report emphasises the principle of "apply or explain" as opposed to "comply or explain" of the King I Report (Afolabi, 2015).

In September 2009, the King III Report was released with an effective date of 1 March 2010. King III was released in response to the new South African Companies Act, No. 71 of 2008 (IoDSA, 2009). The King III Report, in contrast to the King I and II Reports, applies to all organisations irrespective of their form or manner of incorporation. This means that King III applies to the government, NGOs, private limited liability companies, and listed firms. Organisations are encouraged to adopt the principles of the Code to suit their requirements complexities, and sizes. The approach of the Code is also the "apply or explain" principle. The introduction and background

section of King III (King III, 2009: section 3) explains the concept of "apply or explain" more clearly as:

> *"…, the board of directors, in its collective decision-making, could conclude that to follow a recommendation would not, in the particular circumstances, be in the best interests of the company. The board could decide to apply the recommendation differently or apply another practice and still achieve the objective of the overarching corporate governance principles of fairness, accountability, responsibility and transparency. Explaining how the principles and recommendations were applied, or if not applied, the reasons, results in compliance".*

This means that in the opinion of the board, a practice that is in the best interest of the entity can be adopted even if it is different from that which is recommended by King III, but the principle adopted must be explained in terms of both the practice and the reason for adopting it (PricewaterhouseCoopers 2009). In other words, boards are at liberty to apply the recommendations of the Code differently or apply another practice altogether if they consider that other alternative practices would be in the best interest of the entity. However, they must explain the nature of the departure and the reason behind it.

One of the major characteristics of King III is its particular attention to the importance of information technology (IT) governance. The code recommends the establishment of an IT governance committee and a social and ethics committee of the board. Other major provisions of King III include disclosure of all remuneration and allowances paid to directors and prescribed officers; and an audit committee of at least three members unless the company is a subsidiary of another that already has an audit committee.

The corporate governance model of South Africa uses a stakeholder model referred to by the code as a stakeholder inclusive "approach" (IoDSA, 2009). This approach requires directors of companies to "consider the legitimate interests and expectations of stakeholders on the basis that this is in the best interests of the company, and not merely as an instrument to serve the interests of the shareholder" (IoDSA, 2009, King III, section 9).

In November 2016, King III was replaced by King IV. The King IV Report was motivated by the changes in business and society motivated by three major factors. One of these was the financial instability created by the capital crisis in the USA, the sovereign fund crisis in the European Union, and the effect of Brexit, which exacerbated the financial crisis (IoDSA King IV, 2016). The focus of corporate governance,

according to the King IV Report, should be on ethical and effective leadership. Thus, King IV encourages corporate boards to consider both ethical and financial rewards while deciding on the operations of the organisations.

The King IV Report requires companies to be managed in the interests of not only the shareholders or owners but in the interests of all stakeholders and society. This approach introduced three paradigm shifts: from financial capitalism to inclusive capitalism, from short-term capital markets to long-term and sustainable capital markets; and from "siloed" reporting to integrated reporting (IoDSA, King IV, 2016). Inclusive capitalism acknowledges the contributions of all forms of capital, including financial, human, and society, to the success of the company. Therefore, the gains of the company do not belong to the shareholders alone, but to the stakeholders and the environment as well. Six forms of capital were identified as responsible for the growth of the firm, such as financial, manufactured, human, intellectual, natural, social and relationship capital.

Long-term sustainable capitalism refers to the creation of a company's value sustainably by involving the capital market to acknowledge the company's contribution to the development and protection of the environment in which business activities are carried out. Integrating reporting, on the other hand, involves the incorporation of all matters that would affect the company's ability to create value, including the financial and other statutory reports (IoDSA King IV, 2016).

The paradigm shift by King IV from the traditional shareholder-centric corporate governance model to the sustainable approach compels the company to cater for the interests of not only the stakeholders but also the environment and society in which the company operates. Consequently, King IV proposed a landmark definition of corporate governance "as the exercise of ethical and effective leadership by the governing body towards the achievement of the following governance outcomes:

- ethical culture;
- good performance;
- effective control, and
- legitimacy." (IoDSA**,** 2016: 10).

To achieve the above governance outcomes, King IV suggested seventeen governance principles to guide the conduct and operations of firms. These principles are:

"*Principle 1: The governing body should lead ethically and effectively.*

Principle 2: The governing body should govern the ethics of the organisation in a way that supports the establishment of an ethical culture.

Principle 3: The governing body should ensure that the organisation is and is seen to be a responsible corporate citizen.

Principle 4: The governing body should appreciate that the organisation's core purpose, its risks and opportunities, strategies, business models, performance, and sustainable development are all inseparable elements of the value creation process.

Principle 5: The governing body should ensure that reports issued by the organisations enable stakeholders to make informed assessments of the organisation's performance and its short, medium and long-term prospects.

Principle 6: The governing body should serve as the focal point and custodian of corporate governance in the organisation.

Principle 7: The governing body should comprise the appropriate balance of knowledge, skills, experience, diversity and independence for it to discharge its governance role and responsibilities objectively and effectively.

Principle 8: The governing body should ensure that its arrangements for delegation within its structures promote independent judgement and assist with the balance of power and the effective discharge of its duties.

Principle 9: The governing body should ensure that the evaluation of its performance and that of its committees, its chair and its members, support continued improvement in its performance and effectiveness.

Principle 10: The governing body should ensure that the appointment of, and delegation to, management contribute to role clarity and the effective exercise of authority and responsibilities.

Principle 11: The governing body should govern risk in a way that supports the organisation in setting and achieving its strategic objectives.

Principle 12: The governing body should govern technology and information in a way that supports the organisation setting and achieving its strategic objectives.

Principle 13: The governing body should govern compliance with applicable laws and adopted, non-binding rules, codes and standards in a way that supports the organisation being ethical and a good corporate citizen.

Principle 14: The governing body should ensure that the organisation remunerates fairly, responsibly and transparently to promote the achievement of strategic objectives and positive outcomes in the short, medium and long term.

Principle 15: The governing body should ensure that assurance services and functions enable an effective control environment, and that these support the integrity of information for internal decision-making and of the organisation's external reports.

Principle 16: In the execution of its governance role and responsibilities, the governing body should adopt a stakeholder-inclusive approach that balances the needs, interests and expectations of material stakeholders in the best interests of the organisation over time.

Principle 17: The governing body of an institutional investor organisation should ensure that responsible investment is practised by the organisation to promote good governance and the creation of value by the companies in which it invests' (IoDSA, 2016: 40-41)".

The above seventeen principles and the recommended practices to operationalise each principle revolve around good corporate ethics, sustainability, and protection of the interests of not only the shareholders but all stakeholders and the environment. This all-inclusive posture of the principles ensures that the company operates ethically and deploys resources not only to sustain the investors' interests but also the environment. This approach would minimise conflict in companies.

Part five of the code provides for specific areas of corporate governance, which include the following:

i. Application of the code to all organisations, regardless of their form of incorporation.
ii. Adoption of a single-tier board.
iii. Separation of the positions of chairman and CEO.
iv. Diversity of the board in terms of fields of knowledge, skills, and experience, as well as age, culture, race and gender.
v. Integrated reporting approach.
vi. Delegation of the implementation and execution of approved strategy to management via the chief executive officer (CEO) and other competent individual managers rather than the board as in King III.
vii. The establishment of the social and ethics committee, among others. The risk committee now comprises more directors that are non-independent.
viii. Recognition of the importance of information and technology as distinct sources of competitive advantage. This is underscored by recognising that information and technology overlap but are also distinct sources of value creation, which pose individual risks and opportunities.
ix. Basing the remuneration of executives not only on the financial performance of the company but also on how the company fulfils its social responsibility to society and the environment.
x. Ensuring good corporate good citizenship by pursuing a tax policy that is compliant with the applicable laws and congruent with responsible corporate citizenship and that takes account of reputational repercussions.

xi. Adoption of the "apply and explain" as the application approach. All companies are assumed to adopt the principles. Explanations should be given as to how the principles have been complied with. The explanation should address which recommended or other practices have been implemented and how these achieve or give effect to the principle.

The King IV Report applies to all entities in South Africa, including municipalities, SOEs, NPOs, RFs, and SMEs. Entities concerned are expected to disclose in their annual reports how they have applied the principles of King IV, or why they did not apply. The application of the principles of King IV is made dependent on the "size of turnover and workforce, resources, and complexities of strategic objectives and operations" (IoDSA 2016:30).

King IV also extends the scope of the objectives of the company to include providing for environmental sustainability, adoption of inclusive capitalism rather than financial capitalism, a change of focus from the short-term capital market to the long-term sustainable capital market and the adoption of the integrated reporting framework (IoDSA, 2016). Another improvement associated with King IV is the creation of the stakeholder relationship management system, whereby a stakeholder relationship officer is appointed to liaise with stakeholders and inform management "of their legitimate and reasonable needs, interests, and expectations. The officer will also inform stakeholders about what the organisation expects of them" (IoDSA, 2016:5). Therefore, King IV is expected to improve the relationship between the company and other stakeholders and the environment, which will positively affect the profitability of the company.

One of the weaknesses of King IV is that the resources of firms will be overstretched to meet the demands of society that can challenge the ability of firms to make profits. This discourages investment as investors' returns may shrink and consequently encourages capital flight. Another challenge of the new code is its focus on stakeholders. This can exacerbate agency conflict since managers will see themselves as working for themselves as members of society, thereby making decisions that will not be in the interest of the company and which will lead to disagreement between the managers and the shareholders (Dennehy, 2012; Brandt & Georgiou, 2016).

The detailed discussion of the evolution of corporate governance in the Nigerian context is presented in Chapter Three, which follows. The discussion of the UK and the South African experience attempts to give an insight into why the Nigerian corporate governance frameworks have some resemblance to the UK and the South African models.

3.4 Importance of corporate governance

The importance of corporate governance does not relate only to the protection of the interests of investors but also to society, groups, and nations (Hasan, Omar & Handley-Schachler, 2015; Zuberu *et al.,* 2017; Vukčević, 2017). Corporate governance matters because it can shape the distribution of wealth at an organisational level, which can consequently affect society (Dennehy, 2012).

The importance of corporate governance is woven around the causal relationship between effective corporate governance and positive firm financial performance and the corporate attitude of transparency, openness, and societal consciousness (Larcker *et al*., 2005; Sanda *et al.*, 2008; Ekanem, 2008; Babatunde & Akeju, 2016; Al-ahdala *et al.* 2020). This is because corporate governance holds the balance between economic and social goals and between individual and communal goals that would enable the firm to perform optimally in the interest of the stakeholders (Cadbury, 2000).

Corporate governance helps to make effective strategic decisions and establish order between a firm's owners and its top-level managers, whose interests may conflict (Hitt *et al.*, 2002). Thus, corporate governance provides the framework to enable the firm to carry on its operations responsibly and sustainably in the interests of the stakeholders by ensuring that the environment is conducive to investment, competition, innovation, productivity, and the motivation of managers through formal rules to take actions that would increase firm value (Vukčević, 2017). Accordingly, the OECD (2004a:11) argues that good corporate governance provides "proper incentives for the board and management to pursue objectives that are in the interests of the company and its shareholders and should facilitate effective monitoring." The corporate governance framework is, therefore, to encourage the efficient use of resources and promote accountability. The aim is to align the interests of individuals, the firm, and society. Consequently, the World Bank (2005) argues that corporate governance is the only sure mechanism for firms to produce better operational performance through the better

allocation of resources and better management and, in this way, create wealth more generally.

Corporate governance reduces the vulnerability of financial crises, minimises the opportunities for creative accounting and fraud, ensures financial market integrity, reinforces property rights, reduces transaction costs and the cost of capital, leads to economic efficiency, improves goodwill, and improves sales and profitability (OECD, 2004a; 2004b; Javed & Iqbal, 2007; Jones, 2011).

Investors are equally more willing to invest in shares of well-governed firms than those considered poorly governed, even when they record comparable financial performance (McCahery & Vermeulen, 2006). Therefore, good corporate governance increases the opportunity of firms to access outside capital, while poor governance denies the firm this critical resource (Arguden, 2010).

Corporate governance has been associated with building trust and a good reputation among the various stakeholders of the firm, including employees, the owners, debtors, creditors, the government, and the firm's immediate environment (Arguden, 2010; Iwu-Egwuonwu, 2011). Thus, corporate governance helps to moderate all corporate behaviour positively, ensures the efficient functioning of markets and enterprises for the overall benefit of society, and enables regulators to deal effectively with systemic issues and the stakeholders to play their roles within the company.

Ackermann and Eden (2011:1) submit that the most important task in defining the strategy of an organisation is the management of the interface and interests between the numerous demands of the different stakeholders in a "typical widely held organisation in relation to its strategic goals". Therefore, to the extent that corporate governance ensures the optimal deployment of resources, effective performance appraisal, and risk management amidst a plethora of stakeholders, it is germane to the essence of the firm.

Corporate governance helps to protect minority shareholders from expropriation by the managers and controlling or block shareholders and contributes to sustainable economic development that enables the firm to perform optimally (OECD, 2015a; 2015b; ICGN, 2014). Another important benefit of good corporate governance is that it enables the firm to "borrow larger sums on favourable terms than those with poor records or which operate in less transparent markets" (OECD, 2015a: 36).

The OECD (OECD, 2015a:7) emphasises the effectiveness of corporate governance in building "an environment of trust, transparency, and accountability necessary for fostering long-term investment, financial stability, and business integrity, thereby supporting stronger growth and more inclusive societies."

In all, the benefits of good corporate governance cannot be more aptly put than as observed by Thierry Buchs (Head, Private Sector Development Division of Switzerland's State Secretariat for Economic Affairs), quoted in the report on corporate governance issued by the United Nations Global Compact (2009:3).

> *"Good corporate governance is the glue that holds together responsible business practices, which ensure positive workplace management, marketplace responsibility, environmental stewardship, community engagement, and sustained financial performance. This is even truer now as we work worldwide to restore confidence and promote economic growth".*

Responsible business practices have the capacity of attracting investors to participate in the equity of the firm. This will occur because the market forces can predict the favourable or abysmal performance of the firm from the assessment of its corporate governance arrangements (Abdullah & Page, 2009). Therefore, corporate governance is pivotal to the development of economic entities and national economies since the corporate governance framework can impinge upon the development of equity markets and entrepreneurship and affect economic growth (Maher & Andersson, 1999).

The importance of corporate governance can also be viewed in terms of its macro-benefit impacts on the economies of nations (Manna *et al.*, 2016). In this regard, the OECD (2015:10) notes, "the body of corporate governance rules and practices... provides a framework that helps to bridge the gap between household savings and real-economy investment".

Literature also indicates that to enjoy the benefits of corporate governance, the design of the corporate governance mechanisms should be contingent upon local and environmental factors, including the regulatory frameworks and policy approaches that underpin the effectiveness and importance of corporate governance (Filatotchev & Brian, 2009; OECD, 2015b). Therefore, corporate governance frameworks can only benefit the firm as they also seek to sustain the environment where the company operates and derives its resources and legitimacy.

3.5 Principles of best corporate governance practices – international pronouncements

The main corporate governance principles that have attracted universal attention are those contained in the corporate governance codes issued by the OECD (OECD, 2004a; 2004b; Chartered Institute of Management Accountants (CIMA, 2007) and the ICGN (ICGN, 2014). ICGN is an investor-led organisation of governance professionals that issues the "Global Governance Principles", which are intended to be of "general application, irrespective of national legislative frameworks or listing rules" (ICGN, 2014:6). A summary of the principles contained in the OECD (OECD, 2004a; 2004b; 2015a) and ICGN (2014) frameworks is discussed in the sub-paragraphs that follow. The pertinent provisions in the context of the Nigerian Code are discussed in chapter three.

3.5.1 Transparency, fair markets, and the efficient allocation of resources

In designing corporate government frameworks, the OECD (2015a:13) argues that they "should promote transparent and fair markets and the efficient allocation of resources. It should be consistent with the rule of law and support effective supervision and enforcement." It should "clearly articulate the division of responsibilities among different supervisory, regulatory and enforcement authorities" (OECD, 2004a; 2004b: 29). The guiding principle in developing the corporate governance framework is that it should affect overall economic performance, ensure market integrity, create incentives for market participants, and promote transparency in the market system (OECD, 2015a:14).

3.5.2 The rights of shareholders and key ownership functions

The OECD (2015a: 18) argues that the "corporate governance framework should protect and facilitate the exercise of shareholders' rights and ensure the equitable treatment of all shareholders, including minority and foreign shareholders." All shareholders should have the opportunity to obtain effective redress for violation of their rights." Specific provisions of the shareholders' rights include basic shareholders' rights to own shares, transfer shares, obtain information on the company, vote in the general meeting of the shareholders of the company and remove or elect directors. Other shareholders' rights include the right to participate in the profits of the company when declared, the right to decide on strategic corporate changes including disposal of

subsidiaries, an increase of shares, and sale of a part or whole of the company, participation in a decision relating to the engagement of external auditors, the right to vote in absentia via proxy, equal treatment of shares of the same class, and the right to air one's concerns and have them addressed (OECD, 2015a).

Additional shareholders' rights include the right of the investor to "participate in the profits of the firm, with liability limited to the amount of the investment... right to information about the firm; and a right to influence the firm, primarily by participation in general shareholder meetings and by voting" (OECD, (2015a: 18). In this connection, the ICGN (ICGN, 2014: 20) requires that "divergence from a "one-share, one-vote" standard which gives certain shareholders power disproportionate to their economic interests should be disclosed and explained". Another important right of shareholders is the right to protection from abusive or oppressive actions of controlling shareholders and the ability to have an effective means of redress (ICGN, 2014). Further, shareholders' rights include the right to buy and sell shares efficiently and transparently, and the right to argue against anti-take-over devices to shield management and the board from accountability (OECD, 2015a). The ICGN (2014) also requires that shareholders have the right to contribute to the placement of items on the agenda of general meetings and to propose resolutions. The provisions on the rights of shareholders, therefore, provide the investor with a template to gauge the performance and behaviour of not only the hired managers as agents but also of the controlling shareholders and to protect the investor against possible exploitation.

3.5.3 Institutional investors, stock markets, and other intermediaries

In the case of institutional investors, stock markets, and other intermediaries, the OECD (2015: 29) indicates that the "corporate governance framework should provide sound incentives throughout the investment chain and provide for stock markets to function in a way that contributes to good corporate governance." The ICGN (2014:23) additionally requires that "Institutional investors should adopt and disclose clearly stated, understandable, and consistent policies to guide their approaches to stewardship and voting." Further, the ICGN (ICGN, 2014:25) requires that "institutional investors should have robust policies to clarify, minimise, and help manage conflicts of interest to ensure that they maintain focus on advancing beneficiary or client interests." In addition, the OECD (2015a:31) provides that "institutional investors, acting in a fiduciary capacity, should disclose how they manage material conflicts of interest that

may affect the exercise of key ownership rights regarding their investments." These provisions are to ensure that non-institutional investors are abreast of the position of the institutional investors on all matters of the firm.

3.5.4 Role of stakeholders in corporate governance

Based on the stakeholder theory, the OECD (2015a) argues that firms survive because of the support of stakeholders such as customers, employees, the government, suppliers, and investors. The importance of ensuring that corporate governance addresses the interests of stakeholders is based on the notion that firms succeed because of teamwork. Secondly, human and material energies, including capital, emanate from the stakeholders. This suggests that the contributions of stakeholders constitute a valuable resource for building competitive and profitable firms. Thus, the OECD (2015a:34) provides that "corporate governance frameworks should recognise the rights of stakeholders established by law or through mutual agreements and encourage active cooperation between firms and stakeholders in creating wealth, jobs, and the sustainability of financially sound enterprises." It is, therefore, in the long-term interest of firms to "foster wealth-creating cooperation among stakeholders" (OECD, 2004a; 2004b: 46).

3.5.5 Disclosure and transparency

The importance of the disclosure of corporate strategic information and transparency is highlighted by the OECD (OECD, 2015a: 37) that "the corporate governance framework should ensure that timely and accurate disclosure is made of all material matters regarding the corporation, including the financial situation, performance, ownership, and governance of the company." The ICGN (2014:15) supports that "a balanced and understandable assessment of the company's position and prospects' should be disclosed in the annual reports and accounts of firms 'for shareholders to be able to assess the company's performance, business model, strategy, and long-term prospects."

The OECD (2015a:38) expresses the rationale and advantage of corporate disclosure of information to the public to include improving "public understanding of the structure and activities of enterprises, corporate policies, and performance with respect to environmental and ethical standards, and firms" relationships with the communities in which they operate". When the activities of the firm are disclosed, society is well informed of the operations of the firm, its challenges, philosophy, and the

standards that guide its operations. The OECD (2015a) code advises that the "disclosure of corporate strategic information should be timely and accurate and should cover all material matters regarding the corporation, including the financial situation, performance, ownership, and governance of the company". Thus, disclosure helps in reducing misunderstandings between the company and its stakeholders.

3.5.6 The responsibilities of the board

There are two dominant board structures: the single-tier and the double-tier models (Hopt & Leyens, 2004). The single-tier board type is popular with the Anglo-Saxon model that combines the offices of the chairman of the board and the Chief Executive into one person (Hopt & Leyens, 2004). This is different to the UK and other countries that adopt the UK common law system, where a strict separation of the two positions is advocated; the USA allows firms to elect to combine or separate the two positions (Hopt & Leyens, 2004).

Corporate governance literature argues that corporate boards have two main roles: controlling (monitoring of the management, reporting to the shareholders, and ensuring compliance with the law) and directing (strategic guidance of the company) the affairs of the firm to curb agency costs (Sharma, 2011; Carter *et al*., 2008). An active, informed, and independent board monitors and restricts or, at least, discourages managers from enriching themselves at the expense of investors (Fama, 1980; Fama & Jensen, 1983; Jensen, 1993; Baber & Lian, 2008). However, to be effective, both the ICGN (2014) and OECD (2015) made substantial provisions on the responsibilities and composition of corporate boards aimed at ensuring their effectiveness. Table 3.1 presents the main responsibilities of the board as suggested by ICGN (2014) and OECD (2015a).

Table 3.1: Principles of board composition and responsibilities

S/N	Principles	OECD (2015a)	ICGN (2014)
1	General conceptual framework	The board is to ensure effective monitoring of management and accountability to the company and the shareholders and to act in their best interests.	The board is accountable to shareholders and is responsible for protecting and generating sustainable value over the long term.
2	Basis of board's action	In good faith, and the best interest of the company and the shareholders	In good faith and the best interest of the company and the shareholders
3	Objectivity and independent judgement of corporate affairs.	The board should compose of a sufficient number of independent directors, ensure separation of the role of Chief executive and chairman of the board, including more independent non-executive members, ensure non-executive directors head nomination, remuneration, reporting and audit committees. Educational qualifications should be considered for board membership, Directors may own shares in their company and hold membership of other boards or hold other executive positions.	The chairman of the board and the Chief Executive of the company should be separate where possible. The chairman should be independent of the date of appointment. Otherwise, the company should appoint a lead independent director. The chairman should regularly hold meetings with the non-executive directors without executive directors being present. The non-executive directors (led by the lead independent director) should meet at least annually, without the chairman being present. The board should establish a nomination committee comprised of non-executive directors, the majority of whom are independent.

Table 3.1: Principles of board composition and responsibilities

S/N	Principles	OECD (2015a)	ICGN (2014)
4	Functions of the board	Approval of corporate strategy, formulation of risk management policies and procedures, annual budgets and business plans; setting performance objectives and monitoring of corporate performance; approval of major capital expenditures, acquisitions, mergers and divestitures. Engagement and removal of key executives ensure executive and board remuneration is aligned with the long-term interests of the company and its shareholders. Ensures transparency and effective management to reduce conflicts of interest between management, board members and shareholders. Ensure efficient use of corporate assets and curb abuse in related party transactions. Protection of the independence of audit and ensure that appropriate systems of control are in place. In particular, systems for risk management ensure the financial and operational control, and compliance with the law and relevant standards.	Review and approve the corporate strategy including major capital expenditures, acquisitions and divestments; monitoring of the effectiveness of the company's governance practices, environmental practices, and adhere to applicable laws; oversee the implementation of codes of conduct that engender a corporate culture of integrity; oversee the management of potential conflicts of interest, ensure the integrity of the company's accounting and reporting systems, promote the independence of the external audit process; ensure effective risk management, appoint and remove top company executives and the Chief Executive Officer (CEO), ensure that the CEO and senior management remuneration promote the long-term interests of the company and its shareholders; carry out an objective board evaluation regularly.
5	Consideration of the interest of shareholders	Be fair to all shareholders. Thus, where board decisions may affect different shareholder groups differently, the board should treat all shareholders fairly.	Be fair to all shareholders.

Table 3.1: Principles of board composition and responsibilities

S/N	Principles	OECD (2015a)	ICGN (2014)
6	Objectivity and independent judgement of corporate affairs.	The board should be composed of a sufficient number to be independent of management with separation of the role of Chief executive and chairman of the board and more independent non-executive members. Non-executive directors should head nomination, remuneration, reporting and audit committees. Educational qualifications should be considered for board membership. Directors can share ownership in the company and hold membership of other boards and other executive positions.	The chairman of the board and the Chief Executive of the company should be separate where possible. The chairman should be independent of the inception of the appointment. Otherwise, the company should appoint a lead independent director. The chairman should regularly hold meetings with the non-executive directors without executive directors being present. The non-executive directors (led by the lead independent director) should meet at least annually, without the chair present. The board should establish a nomination committee comprised of non-executive directors, the majority of whom are independent.
7	Board effectiveness	Maintain attendance records for individual board members. The board should regularly evaluate board performance and assess whether they possess the right mix of background and competencies. Regular training of board members should be encouraged to improve board practices and the performance of its members that meets the needs of the individual company. Boards should consider assigning a sufficient number of non-executive board members capable of exercising independent judgement to tasks where there is a potential for conflict of interest.	The board should meet regularly and directors should allocate adequate time to board meetings, members should know the business and its operations. Regular induction should be conducted, especially for new directors. Directors should attend regular refresher courses. The culture of openness and constructive debate should guide meetings. A majority of non-executive directors, the majority of whom are independent, should characterise the boards.

Table 3.1: Principles of board composition and responsibilities

S/N	Principles	OECD (2015a)	ICGN (2014)
8	Remuneration	The remuneration package of directors and the Chief Executive should be disclosed in annual reports. Remuneration should be linked to performance. Executive remunerations should be handled by a special committee of the board comprising either wholly or a majority of independent directors and should exclude executives that serve on each other's remuneration committees, which could lead to conflicts of interest.	The remuneration should be designed to align the interests of the CEO and senior management with those of the company and its shareholders. Remuneration should be linked to performance. The board should establish a remuneration committee comprised of non-executive directors, the majority of whom are independent.
9	Audit committee and external auditor	Firms should have an independent audit committee of the board or an equivalent body that is responsible for managing the relationship with the external auditor. External auditors should be recommended by an independent audit committee of the board and should report to the shareholders directly. Audit committees should be able to oversee the effectiveness and integrity of the internal control system and oversee the relationship with the external auditor and act in many cases independently.	The board should establish an audit committee comprised of non-executive directors, the majority of whom are independent. At least one member of the audit committee should have recent and relevant financial experience. The chair of the board should not be the chair of the audit committee, other than in exceptional circumstances, which should be explained, in the annual report. The board should publish the report from the external auditor, which should provide an independent and objective opinion on whether the accounts give a true and fair view of the financial position and performance of the company.

The purpose of discussing the above principles is to identify the variables that form the basis for the design of the Code in Nigeria. Further, the discussion and explanation of the principles enhances understanding of the components of corporate governance principles. It further clarifies the philosophy behind the design of corporate governance models by firms and countries globally.

3.6 Components of corporate governance

The practical importance of corporate governance to how firms are governed has made the discussion of the components of corporate governance or governance mechanisms necessary. Corporate governance components or mechanisms refer to rules, laws, organisational structures, and controls that check the behaviour of the managers of firms to provide assurance that the providers of capital get a return on their investments (Shleifer & Vishny, 1997) and improve voluntary disclosure (Clemente & Labat, 2009; Al-Janadi *et al*., 2013).

Corporate governance mechanisms are classified into internal and external mechanisms (Weir *et al*., 2002; Gillan, 2006). Walsh and Seward (1990) observe that internal and external mechanisms can both help to align the diverse interests of managers and shareholders using their controlling strategies. These controlling strategies are designed to reduce the agency conflict associated with the "divorce" of corporate ownership and control (Weir *et al*., 2002; Solomon & Solomon, 2004). The elements of the internal and external governance mechanisms are discussed below.

3.6.1 Internal governance mechanisms

The benefits of corporate governance depend on the quality and true independence of the internal governance mechanisms, symbolised by the independence of the board and the auditor (Dharmastuti & Wahyudi, 2013). These mechanisms modify the actions of the management in the light of hostile takeover of firms for poor performance and curb agency conflicts associated with firms with dispersed shareholdings (Gillan, 2006; Babatunde & Olaniran, 2009; Varshney, Kumar & Vasal, 2012; Dharmastuti & Wahyudi, 2013; Raithatha & Arunima, 2021). Internal governance mechanisms refer to the "interactions between or among the insiders of the firm, such as between the management and the board" (Baber & Lian, 2008:7).

Internal governance mechanisms include: 1) The board of directors (their roles, structure and incentives), 2) managerial incentives and compensation, 3) capital structure and ownership concentration, 4) by-laws and charter provisions (or anti-takeover measures), 5) internal control and audits, and 6) transparency and disclosure requirements (Walsh & Seward, 1990; Weir *et al*., 2002., Aldrighi, 2003; Sawalqa, 2014; Uwuigbea *et al.,* 2014; Akbar, 2015). Other internal mechanisms include dividend payout, financial leverage, board duality, and board size (Al-Malkawi & Pillai, 2012). Empirical studies have shown various degrees of the effect of internal corporate governance mechanisms on the performance of the firm in terms of financial viability, corporate growth; risk reduction, and corporate effectiveness (Jerab, 2011; Fratini & Tettamanzi, 2015). The internal governance mechanisms used for the study and their effects on the performance of the firm are discussed in Chapter four.

3.6.2 External governance mechanisms

Whereas significant research efforts have focused on establishing the relationship between internal corporate governance mechanisms and firm performance, similar interactions between the performance of the firm and external governance mechanisms have not attracted similar research interest, especially for emerging market economies (Pattanayak, 2010). External governance mechanisms define the interactions between external stakeholders and the managers and directors of the firm and the "relative bargaining power of outside stakeholders as participants in these interactions" (Baber & Lian, 2008:6). External governance mechanisms include:

i. Laws and regulations, specific Federal and State government laws and regulations,
ii. Markets, including capital markets, the market for corporate control, labour markets, and product markets,
iii. Providers of capital market information (credit, equity, and governance analysts),
iv. Accounting, auditing, investment banking advisors, financial and legal services from parties external to the firm, and

v. Private sources of external oversight, particularly the media, labour unions, trade and professional associations, and external lawsuits (Walsh & Seward, 1990; Weir *et al.*, 2002).

External governance revolves around actors that would make possible an external takeover in the event of the poor performance of the firm. This suggests that external governance mechanisms can be as effective as the capital market and the existence of external investors wishing to buy off poor performing firms. The mechanisms help to shape the behaviour and actions of the managers of firms by requesting compliance with some standards of practice to avoid sanctions. Accordingly, Adesoji (2017) submits that the external corporate governance mechanisms focus on value protection and value distribution while the internal governance mechanisms focus on value creation.

In the Nigerian context, some institutions that play regulatory roles include the Central Bank of Nigeria (CBN), which regulates the practices and operations of banks and financial institutions in Nigeria and sanctions them for deviant behaviour (Sanusi, 2003). Sanctions include the removal of the board of banks by the CBN. This is a form of external control that ensures that the banks operate in the interests of the stakeholders. Other major regulators include the Corporate Affairs Commission (CAC), which regulates the performance and behaviour of boards of all registered firms (CAC, 1990); the Nigerian Stock Exchange, which regulates the trading activities of dealers on the stock market, SEC-N, which regulates the listing of stocks on the Nigerian Stock Exchange, the Financial Reporting Council of Nigeria (FRCN), which controls the financial reporting practices and responsible for overseeing the implementation of the new Nigerian corporate governance code with effect from 2020.

The internal and external mechanisms act as substitutes or complements for each other, especially in the absence of regulatory intervention (Baber & Lian, 2008). In other words, if regulatory provisions do not restrict the intervention in the internal decisions of firms by external shareholders and providers of loans, weak internal governance would be substituted by external governance. In this regard, Aldrighi (2003) argues that competition in the product market and shareholders' activism and the activeness of potential investors to take advantage of investment opportunities ensures, in the end, corporate efficiency because firms whose managers are

incompetent or pursue private goals would exit the firm. Therefore, where the internal mechanisms are poor, the market or regulatory action will discipline the poor performing executives (Bechera & Frye, 2008). In contrast, in countries where investors' rights and protection are low, debt and ownership concentration are said to reduce the managers' discretionary behaviour (Iturriaga & Hoffmann, 2005). Consequently, being mindful of these possibilities, managers would be apprehensive about the consequences of their poor performance and hesitant about taking decisions that would influence the performance of their firms negatively.

3.7 The role of the corporate board in corporate governance

The literature (Bhagat & Jefferis, 2002; Adams *et al*., 2010; Cornforth & Chambers, 2010; SEC-N 2011; Amoli & Esmaeili, 2013; ICGN, 2014; FRC-N, 2014; OECD, 2015) is unanimous on the critical role of corporate boards in installing and monitoring effective governance and ensuring that firms perform efficiently. The board is pivotal in sustaining the firm as a going concern because it guides the achievement of corporate strategies, monitors managerial performance, prevents conflicts of interests, assists in balancing competing demands on the firm, and provides effective risk management oversight in firms (OECD, 2015).

The effective performance of corporate boards enhances the quality of corporate governance and disclosures, which in turn are positively related to the performance of the firm and the expansion of the macro-economies of nations (Jensen, 1993; Bhagwat & Jefferis, 2002; Carter *et al*., 2003; Carter, Frank, Simkins & Simpson, 2008; Francoeur *et al.*, 2008). Further, the board of directors provides the required control and monitoring of the management team to ensure that management actions are geared towards the interests of the shareholders (Onetto, 2007). Therefore, as observed by FRC-N (2018:iv) firms with "effective boards and competent management that act with integrity and that are engaged with shareholders and other stakeholders are better placed to achieve their business goals and contribute positively to society."

There is a tendency for corporate management and boards of firms to compromise their positions and produce financial reports that do not reflect the performance realities of their firms, but rather understate or overstate the results of their firms depending on their ulterior objectives (Jiraporn *et al*., 2008; Garcia-Meca & Sanchez-Ballesta, 2009; Cornett, McNutt & Tehranian, 2009). Cornett *et al.*

(2009) indicate that accountants and boards of firms "window dress" their financial statements, especially to increase compensation of managers, ensure job security, avoid violation of lending contracts, and to reduce regulatory costs or increase regulatory benefits. To overcome the challenge of financial misstatements by directors and top executives to satisfy their ulterior motives, boards must be effective in controlling the behaviour of managers and the boards themselves. The OECD (2015:45) expects board members to "act on a fully informed basis, in good faith, with due diligence and care, and in the best interest of the company and the shareholders." The decision of the board affects all shareholders in different ways. Therefore, "the board should treat all shareholders fairly … and apply high ethical standards" that would consider the interests of all stakeholders.

To be effective, the boards must comprise a mix of people with varied experience, skills, and orientations to carry out some key functions that include the following:

1. *"Reviewing and guiding corporate strategy, major plans of action, risk management policies and procedures, annual budgets and business plans; setting performance objectives; monitoring implementation and corporate performance; and overseeing major capital expenditures, acquisitions and divestitures.*
2. *Monitoring the effectiveness of the company's governance practices and making changes as needed.*
3. *Selecting, compensating, monitoring and, when necessary, replacing key executives and overseeing succession planning.*
4. *Aligning key executive and board remuneration with the longer-term interests of the company and its shareholders.*
5. *Ensuring a formal and transparent board nomination and election process.*
6. *Monitoring and managing potential conflicts of interest of management, board members and shareholders, including misuse of corporate assets and abuse in related party transactions.*
7. *Ensuring the integrity of the firm's accounting and financial reporting systems, including the independent audit, and that appropriate systems of control are in place, in particular, systems for risk management, financial and operational control, and compliance with the law and relevant standards.*
8. *Overseeing the process of disclosure and communications" (OECD, 2015:47-50)*

The above eight points emphasise the pivotal role of the board in ensuring the effectiveness of the internal governance mechanisms of the firm. This is because the functions of the broad permeate all critical aspects of corporate affairs, including the modification of executive actions in the interest of the shareholders. Therefore, the

effectiveness of corporate boards in controlling agency conflicts can be influenced by the functions they are expected to perform.

For large firms, decision-making is the function of the board and the executive or top management. The board members are appointed by the shareholders (the owners) to decide on and control the behaviour of management, including appointments, rewards, and performance assessment. For a firm with dispersed shareholders, the power to appoint the board of directors and top executives may be anchored to only a few block holders whose shares may not necessarily, in total, amount to controlling shares (Berle & Means, 1932).

3.8 Concept of separation of corporate ownership and control

The industrial revolution of the nineteenth century, characterised by capital-intensive production systems and mass production, brought about the factory system and the formation of large firms and corporate hierarchies (Berle & Means, 1932; Jensen, 1993; Allen, 2006; Neuss, 2015; Gulzar, 2015). The complexities and demand of the economic activities of large firms, coupled with a large number of shareholders, affect the ability of their owners to control the firm (Bolton, 1995; Fama & Jensen, 1983). This explains the engagement of professional managers to control the firms, leading to the separation of ownership and control.

Large firms are generally characterised by their large size and the separation of ownership (risk-bearing function) and control (decision function) (Means, 1931; Fama, 1980; Fama & Jensen, 1983), since executives could be hired based on their credentials to provide technical support and leadership to manage the affairs of such large firms (Berle & Means, 1932; Cheffins, 2000). The concepts of ownership and control are not easily understood without relating them to the corporate context. Means (1931:70) attempts to clarify the two concepts by stating that:

> *"…ownership means having interests in an enterprise while the essential characteristic of control consists of having powers over the enterprise*".

Fama and Jensen (1976) refer to control as the power to make a decision or the decision-making function of the firm. In a more specialised accounting context, the International Accounting Standards (IAS) 27 (International Accounting Standards Board (IASB), 2008:1447) defines control as "the power to govern the financial and operating policies of an entity so as to obtain benefits from its activities, the power to direct the activities of the company, the power of claim over

the variable returns from its involvement, and the power to govern the financial and operating policies of an entity so as to obtain benefits from its activities."

Concerning corporate governance, however, control refers to the management of the firm by hired managers appointed by the board, acting on behalf of the shareholders, to decide on the operations or activities of the firm (Means, 1931; Berle & Means, 1932; Barry, 2002; Toukan, 2014). The management of the firm by the appointed managers suggests that one can have control over an entity without necessarily owning shares in it. Shared ownership requires pledging resources that may or may not be recouped from the profits or other forms of earnings of the entity. High risk is involved where the control or management of such resources is left entirely in the hands of those who do not share in the residual consequences of their actions.

The central argument for the principle of separation of ownership and control is that as the firm expands, the need to remain competitive and increase return on investment becomes critical, leading to the engagement of skilled managers, at high fees and emoluments, who are charged with responsibilities over the control and management of firms. Ownership and control, therefore, deal with the separation of the powers of decision-making over an enterprise from the major interests that would bear the residual benefits of such a decision. Bolton (1995:2) underscores this reality by observing that:

> *" Even if there are individuals wealthy enough to be owner/managers of large enterprises they would not necessarily have the expertise to run these firms. .. the distribution of managerial talent may not coincide with the distribution of wealth. The more technologically advanced the economy, the more specialisation in management is required and the less likely it is that a wealthy individual could run any large firm which he owns without transferring substantial control to managers with specialised skills"*.

The concept of the separation of control and ownership of firms and the impact of this system of corporate administration on the various corporate stakeholders were given prominence in literature by Means (1931), Berle and Means (1932), and Fama and Jensen (1976). The focus on the effect of ownership and control separation on company performance stems from Adam Smith's (1776) work, which focused on the behaviour of hired managers over the management of entities where such hired managers have no risk-sharing responsibilities. In their seminal work on the "Modern Firm and Private Property", Berle and Means (1932) expressed

dismay over how small entities, hitherto owned and natured by individuals, have blossomed to assume tremendous economic power. Berle and Means (1932) argue that the powers of firms affect significantly the dynamics of both humans and the political powers of the state. Berle and Means (1932) state, further, that as firms expand economic territories, their control becomes surrendered to managers who, most often, do not share equally in the risk associated with the ownership of these entities. Berle and Means (1932:3) add that:

> "*…modern firm, equally revolutionary in its effect, placed the wealth of innumerable individuals under the same central control…The property owner who invests in a modern firm so far surrenders his wealth to those in control of the firm that he exchanges the position of independent owner for one in which he becomes merely a recipient of the wages of capital*".

Berle and Means (1932) and James (1993) express concern that most public firms, especially in advanced economies, are managed by those who have a minority stake. Specifically, James (1993:516) argues that it is

> *"…inevitable that the power to make quick important decisions would have to be lodged in the management or in some unified small group backed by the management, for the shareholders' voting machinery is too cumbersome and the shareholders are too greatly dispersed both geographically and mentally".*

Means (1931) stresses the irony associated with the ownership of wealth without appreciable ownership. This appears to be the logical outcome of contemporary corporate development. Thus, Means (1931:68) concludes that

> "*…the mechanism of the firm, control over industrial wealth can be and is being exercised with a modicum of ownership interest. Conceivably, it can be exercised without any such interest. Ownership of wealth without appreciable control, and control of wealth without appreciable ownership, appear to be the logical outcome of present corporate development".*

Thus, while one may have an interest in an organisation, one may not have powers over its functions, especially where the interest, as in the case of large enterprises, is insufficient to secure equal representation in the firm's top management to be able to decide on the organisation's functionality, frameworks, and strategies.

The separation of ownership and control in the organisational structure of modern firms has both negative and positive consequences. The main negative consequence is agency conflict (Jensen and Mackling, 1976). Berle and Means (1932) posit that the separation of ownership and control produces a situation whereby the interests of the owner and the manager of the firm diverge and many of the checks to limit the use of power disappear. The immense power of managers in

public firms is made possible by the reduction in the power of owners due to the multiple and diverse nature of shareholdings. This has introduced the agency conflict (Berle & Means, 1932).

Agency conflict is propelled by the inherent egoistic and selfish desire of humans to appropriate the resources of others for themselves, earning some perquisites (Fama, 1980; Jensen,1994; Chakraborty, 2010; Lin & Huang, 2011; Boshkoska, 2015). Agency conflict has associated agency costs which are borne to curb or control agency conflicts. Jensen and Meckling (1976:308) define agency cost as "the sum of: (1) the principal's monitoring expenditures, (2) the agent's bonding expenditures, and (3) the residual loss." In the main, agency costs arise as a result of the "divergence between the interests of the manager and those of the outside shareholders, since he will then bear only a fraction of the costs of any non-pecuniary benefits he takes out in maximising his own utility" (Jensen & Meckling (1976:312).

The empirical evidence on agency conflict and the associated cost hypothesis of Berle and Means (1932) is contradictory. Whereas some evidence suggests that separation of ownership and control of listed firms does not increase agency conflict, others identify a positive relationship between separation of ownership and control and agency conflict (Kräkel, 2004; Tian *et al.*, 2010; Gogineni *et al.*, 2013). Agency conflict is primarily influenced by information asymmetry, that is, the lack of accurate information on the actions of the agents (Eisenhardt, 1989), which forces principals to introduce monitoring mechanisms and incentives designed to align management and shareholder interests (Weir *et al.*, 2002).

Gogineni *et al.* (2013) find a positive relationship between agency cost and separation of ownership and control of firms in their study of over 250,000 public and private firms in the UK. Gogineni *et al.* (2013:2) indicate that:

> *"... agency costs among private firms increase as firms move from simple ownership structures, such as being owned by a single individual or a family, to more complicated ownership structures, such as being owned by multiple families or holding firms".*

Warbo (2002), in his study of 173 firms listed on the Stockholm Stock Exchange, found that agency costs are higher when an outsider manages the firm and that they increase with the number of non-manager shareholders. Similarly, Ang *et al*. (2000) noted in their study of 1,708 small firms from the database of the Federal Reserve Board/National Survey of Small Business Finance (FRB/NSSBF) that

agency costs are significantly higher when an outsider rather than an insider manages the firm. Fleming and Heaney (2005) indicate that agency costs are higher among firms that are controlled or managed by hired professional managers and decline as owners are involved in the control and management of firms, including when directors hold shares in their firms (McKnight & Weir, 2009). Consequently, "higher managerial ownership can reduce the agency costs" (Fauzi and Locke (2012:371) since managerial ownership has "an inverse relationship with total monitoring costs as predicted in agency theory" (Mustapha & Ahmad (2011:419). This is because :

> *"As the owner-manager's fraction of the equity falls, his fractional claim on the outcomes falls and this will tend to encourage him to appropriate larger amounts of the corporate resources in the form of perquisites. This also makes it desirable for the minority shareholders to expend more resources in monitoring his behaviour. Thus, the wealth costs to the owner of obtaining additional cash in the equity markets rise as his fractional ownership falls"* (Jensen & Mackling, 1976:313).

On the positive side, Tian, Zhao and Zhu (2010) argue that separation of ownership and control of enterprises is positively related to firm performance. Kräkel (2004) posits that the delegation of management responsibility to professional managers by the owners will engender a more aggressive attitude towards remaining competitive and maintaining industrial leadership because of the market discipline against poor performing management. Therefore, hiring an "empire-building manager will increase the competitive advantages of the firm from a strategic standpoint" that would result in higher benefits to the owners (Kräkel, 2004:14).

Notwithstanding the above empirical evidence, Steyn and Stainbank (2013:326) in their study of 186 listed firms in South Africa found that firms controlled by hired directors do not maximise their remuneration and those controlled by shareholders do not maximise profit attributable to the shareholders. This conclusion suggests that factors, other than the separation between ownership and control of firms, may influence agency costs. In support of this conclusion, Mustapha and Ahmad (2011:1) indicate the "possibility that given the cultural differences, the typical nature of agents in agency theory may not concern non-western countries". As a result, more empirical evidence is needed to identify factors other than the ownership-control dichotomy that drive agency conflict and influence agency cost, as discussed in the corporate governance literature.

This section has presented the fundamental relationship between the separation of ownership and control of firms and the agency theory that is the main theory that guides this study. The next section discusses the theories of corporate governance that have dominated corporate governance research. The section also explains the basis for selecting the agency theory as the theoretical framework that underpins the study.

3.9 Theories of corporate governance

Corporate governance theories are components of organisational theories, especially to the extent to which they focus on the behaviour of organisational actors in the face of conflicting interests (Eisenhardt, 1989). Abdullah and Valentine (2009) indicate that corporate governance theories began with the agency theory and progressed to stewardship theory, stakeholder theory, resource dependency theory, and institutional theory. Others include managerial signalling, legitimacy, political costs, and transaction cost economics theories (Ntim, 2009).

Understanding the theoretical basis of corporate governance provides the opportunity to appreciate the relationship between the financial performance of the firm and its governance model, as well as provide an answer to why governance models are structured the way they are. However, although this study is grounded in agency theory, a discussion of the other four main theories will provide a theoretical explanation of why different governance models are adopted. Especially, as in the case of Nigeria, the need to explain other theoretical underpinnings becomes imperative as the Nigerian corporate governance model considers a combination of multiple theoretical viewpoints as reflected in the SEC-N Code of 2011. For example, the 2011 Code (SEC-N 2011) and the 2018 Code require firms to consider the interests of other stakeholders, such as employees, creditors, consumers, suppliers, trade unions, the host community, government, the general public, and future generations, in the design and implementation of their corporate strategies.

3.9.1 Agency theory

Agency theory is one of the most prominent organisational yet controversial theories that have dominated the thoughts of scholars, especially concerning corporate governance discourse (Eisenhardt, 1989; Adegbite, 2015). The theory is primarily concerned with the relationship between the shareholders, as the principals,

and the hired managers, as the agents (Hill and Jones 1992) of the firms. Maher and Andersson (1999:5) explain that a "principal-agent" relationship "arises when the person who owns a firm is not the same as the person who manages or controls it". This relationship results in the separation of the ownership and control (management) of the firms, earlier discussed in section 2.7.

Agency theory argues that when the investor or owner of a firm (called the principal) hires or delegates someone else (an agent) to perform work, a dilemma arises because the interests of the owner and the hired agent (manager) diverge and do not align due to selfish human nature (Jensen & Meckling, 1976; Vargas-Hernández & Cruz, 2018). The separation between ownership and control also results in information asymmetry that accentuates agency conflicts and makes it difficult for the owners of the firm to have effective control over their estate (Jensen & Meckling, 1976; Ntim, 2017). Hence, members of the same firm become enemies of one another and of the firm they have a fiduciary responsibility to protect (Vargas-Hernández & Cruz, 2018).

Agency theory was popularised by Michael C. Jensen of Harvard Business School and William H. Meckling of the University of Rochester through their seminal paper "Theory of the Firm: Managerial Behaviour, Agency Costs and Ownership Structure" published in 1976. As stated in Chapter One, Jensen and Meckling were motivated by the argument of Adam Smith in 1776. Adam Smith, in his legendary work, The Wealth of the Nation in 1776 (Jensen and Meckling (1976:700), explains why a conflict of interest occurs when control is separated from ownership by stating that

> "… directors of … [joint-stock] companies, … being the managers of other people's money rather than of their own, … cannot well be expected, that they should watch over it with the same anxious vigilance with which the partners in a private copartnery frequently watch over their own. Like the stewards of a rich man, they are apt to consider attention to small matters as not for their master's honour, and very easily give themselves a dispensation from having it. Negligence and profusion, therefore, must always prevail, more or less, in the management of the affairs of such a company".

From the argument of Adam Smith, agency conflict arises because of the misalignment of the interests of the owners and managers of firms, made possible by the information asymmetry, brought about by the phenomenon of the separation of ownership from control of the firm (Jensen, 1994a and b; McKnight & Weir, 2009). Therefore, Smith (1776) (in Jensen and Mackling, 1976:700) argues that

> "… *directors of such [joint-stock] companies, however, being the managers rather of other people's money than of their own, it cannot well be expected, that they should watch over it with the same anxious vigilance with which the partners in a private copartnery frequently watch over their own. Like the stewards of a rich man, they are apt to consider attention to small matters as not for their master's honour, and very easily give themselves a dispensation from having it. Negligence and profusion, therefore, must always prevail, more or less, in the management of the affairs of such a company."*

The agency theory of corporate governance was driven by the desire of Jensen and Meckling (1976) to integrate the elements of the theory of property rights, the theory of finance, and the general theory of agency in explaining the behaviour of the main actors in organisations. The purpose is to resolve the problem of agency conflicts in companies that arises from the nature of man and managerial mischief when the interests of owners (principals) and the hired managers (agents) diverge (Nyberg *et al.,* 2010). Jensen and Meckling (1994) describe the man as creatively responding to opportunities present in the environment and working to loosen environmental constraints that prevent him from doing what he or she wishes.

The interest of man is not only about money, but about almost everything, including respect, honour, power, love, and the welfare of others (Jensen & Meckling, 1994). Therefore, (Jensen and Meckling 1994:4) argues that the "challenge for our society, and for all organisations in it, is to establish rules of the game that tap and direct human energy in ways that increase rather than reduce the effective use of our scarce resources".

Specifically, Eisenhardt (1989:58) identified two problems that are inherent in an agency relationship, saying that the

> *"… first is the agency problem that arises when (a) the desires or goals of the principal and agent conflict and (b) it is difficult or expensive for the principal to verify what the agent is actually doing. The problem here is that the principal cannot verify that the agent has behaved appropriately. The second is the problem of risk sharing that arises when the principal and agent have different attitudes towards risk. The problem here is that the principal and the agent may prefer different actions because of the different risk preferences".*

One other motivation for agency conflict is information asymmetry. Information asymmetry increases as the structure of the firm becomes complex, and as earlier stated, the firm assumes a large size that is highly impossible for the owner to manage without hired professional managers (Gogineni, Linn & Yadav, 2013). In an environment characterised by imperfect information or information asymmetry

between the agent and the principal, the interests of the two would diverge, leading to sub-optimal management decisions and agency conflict (Uwuigbea et al., 2014).

Information asymmetry, or information breakdown or failure, "is a condition wherein one party in a relationship has more or better information than another" (Bergh et al. (2019:1). That is, in a situation where the manager (agent) has some information that is not available to the owner (principal) about an action to be taken, such that the agent exploits the superior information at his/her disposal to take advantage of it to expropriate the resources of the owner to his/her advantage. Information asymmetry and self-interest make it difficult for principals (owners) to trust their agents (managers) and so will

> "…seek to resolve these concerns (i.e. conflicts) by putting in place mechanisms to align the interests of agents with principals and to reduce the scope for information asymmetries and opportunistic behaviour" (Institute of Chartered Accountants in England & Wales-ICAEW, 2005:6).

Ranti (2011) argues that the agency problem is motivated, in the main, by the desire of the principals (shareholders) to maximise their wealth, juxtaposed against the desire of the hired agents to expropriate funds and other resources and reduce the wealth of the owners. Greed, fame and higher social status, stronger remuneration, and prospects for promotion have also been identified as factors that exacerbate agency conflict (Daly, 2015; Shleifer & Vishny, 1997). This is because managers are motivated to earn their benefits without considering risk, even when the outcomes of their actions would reduce the value of the firm. Further, Shleifer and Vishny (1997:740-741) argue that the

> *"… financiers need the manager's specialized human capital to generate returns on their funds. The manager needs the financiers' funds, since he either does not have enough capital of his own to invest or else wants to cash out his holdings. But how can financiers be sure that, once they sink their funds, they get anything but a worthless piece of paper back from the manager? The agency problem in this context refers to the difficulties financiers have in assuring that their funds are not expropriated or wasted on unattractive projects"*

The behaviour of managers equally depends on their social background as well as on "their consciousness or substantive" (Ayogu, 2001:18). What this means is that rules and governance frameworks can be compromised by those in fiduciary positions to satisfy their social or personal needs (reference). Even owner-managers of firms have been found to undermine corporate governance rules to satisfy their

family interests and their social needs, especially when they have a significant shareholding to influence board decisions and control (Sanusi, 2003; Uddin & Choudhury, 2008; Walsh & Seward, 1990). The motivation for this behaviour remains an interesting research agenda, especially against the backdrop of the assumption of agency theory that where managers are part-owners of their firms, their self-interest and deviant behaviour will be minimised (Fama, 1980). This explanation is similar to the inherent opportunistic tendency of humans (Williamson, 1981) in the face of information asymmetry exacerbated by the size of large organisations.

Fama and Jensen (1983), in their study of the dynamics of corporate ownership and control, argue that large organisations, including listed firms, large professional partnerships, financial mutuals, and non-profit organisations, control the agency problems that result from the separation of decision management from residual risk-bearing by separating the management (initiation and implementation) from the control (ratification and monitoring) of decisions. Although the board has the responsibility to lead and control the actions of the hired managers, symbolised by the CEO, who is practically in charge, especially in listed firms (Clarke, 2009). Thus, the agency theory argues against the combination of the positions of the chairman of the board and the CEO in person, as such a combination would result in the abuse of power, be inimical to the performance of the firm, and weaken the independence of the board, which would affect the financial performance of the firm adversely. This is the basis for the separation of the office of the chairman of the board from that of the CEO, as one of the strategies to minimise agency costs. Hence, agency theory predicts that firms that avoid CEO duality perform better than those that encourage it (Shrivastav and Kalsie, 2016). This prediction has remained one of the requirements of agency theory in the design of corporate structures and governance.

Another form of agency cost exists among the shareholders themselves. Noodezh *et al*. (2015) found that in firms where the majority shareholders dominate the control of the firm, especially where the person in charge of the control of the firm holds controlling rights, expropriation of the minority occurs. Saanoun *et al.* (2013) explain further that the majority shareholders would expropriate the wealth of the company to their benefit and to the detriment of the minority where only the majority has access to strategic information about the company.

The expropriation of minority shareholders can take the form of outright oppression of the minority shareholders by the majority shareholders (MacKay, 2012). This type of agency conflict is usually referred to as type two (Type II) agency conflicts. In this case, the majority shareholders take decisions in the interest of themselves, to the detriment of the minority shareholders (MacKay, 2012). Inefficient diversification strategies, related party transactions such as asset acquisitions involving cash payments to majority owners, and awards of pecuniary benefits such as excessive salaries, perks, and larges are examples of minority oppression (Ishak & Napier, 2006; Mustafa, Abdul, & Taliyang, 2011; Saanoun *et al*., 2013). Other forms of majority expropriation of the minority interest include non-pecuniary advantages such as the prestige and social status bestowed on the representatives of the majority shareholders, the ability to employ their family members and to appoint them to the board that may not be in the interest of the minority (Ishak & Napier, 2006; Mustafa *et al.,* 2011; Saanoun *et al.,* 2013).

Another example of conflict of interest or agency conflict is collusion with lenders by majority shareholders to expropriate the wealth of minority shareholders (Aslan & Kumar, 2009). The third conflict is between the company and its external stakeholders, such as creditors, loan providers, and customers that would normally not be part of the internal management and control of the company (Zhang, 2012). The directors would take actions, most of the time, that would be to the advantage of the larger stakeholders (Zhang, 2012).

Where ownership is separate from the management of firms, Donaldson and Davis (1991) argue that the interests of shareholders can only be protected through effective governance and control mechanisms that mitigate agency conflicts. These mechanisms incur costs relating to monitoring and systematic reviews of management perquisites, financial audits, and placing specific limits on management decisions (Bonazzi & Islam, 2007). These actions are costs, which are inevitable if hired agents are to make decisions in the interest of the shareholders and have their behaviour controlled.

Jensen and Meckling (1976:308) further suggest some mitigating strategies by stating that:

> "*If both parties to the relationship are utility maximisers there is good reason to believe that the agent will not always act in the best interests of the principal. The principal can limit divergences from his interest by establishing appropriate incentives for the agent and by incurring monitoring*

costs designed to limit the aberrant activities, of the agent. In addition in some situations it will pay the agent to expend resources (bonding costs) to guarantee that he will not take certain actions which would harm the principal or to ensure that the principal will be compensated if he does take such actions. However, it is generally impossible for the principal or the agent, at zero cost, to ensure that the agent will make optimal decisions from the principal's viewpoint".

Another measure to control agency conflict, as earlier stated, is the separation of the positions of the chairman of the Board and the CEO. The Nigerian corporate governance code (SEC-N 2011:10) disallows the combination of the offices of the chairman of the board and the CEO in one person "to avoid over-concentration of powers in one individual which may rob the Board of the required checks and balances in the discharge of its duties". The importance of separating the positions of the CEO and the chairman, as further underscored by OECD (2015:50), is that "it can help to achieve an appropriate balance of power, increase accountability and improve the board's capacity for decision making independent of management," which has the effect of curbing agency conflict (Kung'u & Munyua, 2016).

Another strategy is the award of stock options, bonuses and perquisites that are directly related to how well the results of management's decisions serve the interests of shareholders (Bonazzi & Islam, 2007). Some covenants with creditors are made to contain restriction clauses, to the effect that the company granted the loan can only take certain strategic actions after clarification and approval by the creditors, who play a prominent role in the governance of the company as a control measure (OECD, 2015b).

To curb agency conflicts, the implementation of a system of control which seeks to moderate the actions of hired managers (as agents) and motivates them towards taking actions and decisions that would be in the interest of the shareholders (Jensen, 1993; Haniffa and Hudaib, 2006; Cheffins, 2012) and other stakeholders (Donaldson and Preston, 1995; Freeman *et al.*, 2004; Ayuso and Argandona, 2007; Carrillo, 2007; Harrison and Wicks, 2013) is inevitable. This is the whole essence of corporate governance: "a system that provides the structure through which the company's objectives are set as well as the means of attaining and monitoring the performance of those objectives" (Society for Corporate Governance Nigeria, 2021:8).

3.9.2 Stewardship theory

Stewardship theory is said to have evolved from psychology and sociology disciplines and developed as a model "where senior executives act as stewards for the organisation and in the best interests of the principals" (Mamun *et al*., 2013:42). Like stakeholder theory, stewardship theory sees managers of firms as trustworthy people who take good care of the firms they manage, not as opportunists who do things that are not in the best interest of the firm's owners (Donaldson & Davis, 1991; Davis *et al*., 1997).

The main thrust of stewardship theory is that performance is motivated and driven not by what the manager would get for him or herself, but by his or her identification with the growth potential, the prestige of working, and the social recognition of leadership in the organisation (Donaldson & Davis, 1991). As such, stewardship theory argues that a higher number of internal directors will improve the fortunes of the firm better than a lower number since inside directors, having spent their time working in the organisation, understand the businesses better than outside directors, and so can make superior decisions that would maximise profit for shareholders (Nicholson & Kiel, 2007).

Keay (2017) argues further that stewardship theory emphasises co-operation and collaboration between the hired managers and the owners of the firm. Therefore, hired managers will not tend to foster their interests since they act as stewards and are willing to act in the best interests of their firms. Thus, stewardship theory suggests that managers, left on their own, will indeed act as responsible stewards of the assets they control and better manage their firms in the interest of the owners. Thus, Cossin *et al*. (2015:4) argue that managers, as stewards, "are not purely self-interested but they identify themselves with the survival of the business and are motivated to maximise organisational performance." Therefore, managers are likely to promote the corporation's objectives, especially if the manager has served and shaped the form and directions of the firm (Donaldson & Davis, 1991). This congruence harmonises individual interests with the objectives of the firm, "thus melding individual self-esteem with corporate prestige" (Donaldson & Davis, 1991:51).

Stewardship theory relaxes the aspect of stiff controls over the decisions of managers and supports the appointment of a single person for the positions of chairman and CEO (Yusoff & Alhaji, 2012). The position of the stewardship theory

in supporting the unification of the positions of the chairman and CEO stems from the assumption that managers are self-motivated to improve the performance of their organisations and would therefore seek to align with the objectives of their principals (Yusoff & Alhaji, 2012; Cossin *et al.*, 2015). Thus, managers are considered pro-organisational rather than self-serving actors, who treat their organisations as extensions of themselves (Madison, 2014).

The principle is that the needs of both the individuals and the organisation will be best satisfied if the hired agent sees himself or herself as a co-owner of the corporation and places the long-term best interests of all stakeholders ahead of self-interest (Podrug, 2008). Davis *et al.* (1997) argue that stewardship theory helps to promote the alignment of the interests of organisations, their principals, and the agents rather than concentrating efforts on solving the dilemma of divergence of interests, which is the focus of agency theory. This paradigm shift, Davis *et al.* (1997) say, would create corporate harmony and eliminate agency conflicts since employees are depicted as collectivists, pro-organisationists, and trustworthy. In other words, stewardship theory involves a stewardship role that promotes "service over self-interest." Therefore, the interests of employees and other stakeholders will be maximised by promoting relationships and behaviours that treat all associated with the firm as co-owners and partners (Podrug, 2008). The operationalisation of the theory is evident in the leverage given to listed firms, especially in the US, to combine the offices of the chairman of the Board and that of the CEO into one person, although in limited instances (Council of Institutional Investors, 2013). In Nigeria, however, the SEC-N (2011) makes it clear that one individual cannot hold these two powerful positions.

3.9.3 Stakeholder theory

Stakeholder theory is said to have been popularised by R. Edward Freeman through his book "*Strategic Management-A Stakeholder Approach"*, written in 1984 (Freeman & McVea, 2001). The theory considers the firm as a "constellation of competitive and co-operative interests" (Donaldson and Preston, 1995:67) and a value symbol supported and developed by a group of people (stakeholders) that willingly come together to create value for the benefit of all (Freeman *et al.*, 2004). Stakeholders can be classified into three groups (Maher & Andersson, 1999; Hitt *et al.*, 2002). These include the market stakeholders (shareholders and the major

suppliers of the firm's capital), the product market stakeholders (customers, suppliers, workers' unions, host community, government, and political actors), and the organisational stakeholders (employees-managers and non-managers) (Vasudev, 2012; Brandt & Georgiou, 2016; Gao *et al.* 2017). Jensen (2002) elongated the stakeholders to include the environment, terrorists, blackmailers, and thieves. Figure 3.1 shows how the different stakeholder groups and the company work together.

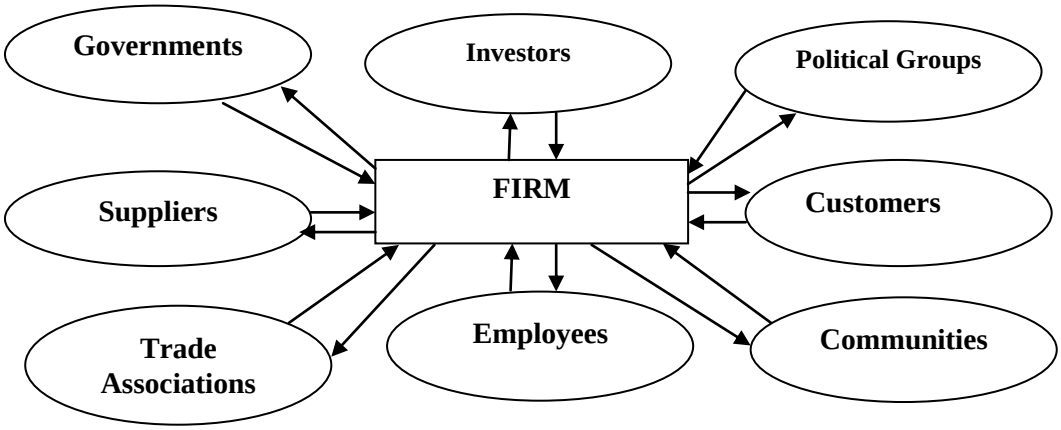


Figure 3.1: Stakeholder perspective of corporate governance

The task of the managers is to manage the firm in such a manner as to satisfy all those groups (stakeholders) who have a stake in the business (Freeman & McVea, 2001). It is in the interest of all stakeholders that the business creates value over time (Harrison & Wicks, 2013). For this purpose, Freeman *et al.* (2004) argue that doing business requires the expression of ethics and values that enable the business to create value not only for its shareholders but also for other stakeholders. Therefore, the emphasis is on the long-term success of the firm through active management of the business environment, relationships, and the promotion of shared interests. Consequently, managers should make decisions that take into account the interests of all stakeholders in a firm and not just the interests of the owners (Jensen, 2002). This approach is different from the agency theory approach we talked about earlier, which focuses on making the residual claimants, or long-term capital providers, as rich as possible.

Stakeholder theory implies that managers are engaged in pursuing corporate objectives that go beyond the interests of shareholders to cater for the interests of other stakeholders (Carrillo, 2007). Therefore, modern companies have a better chance of long-term survival when they pursue the interests of all stakeholders rather than just the owners. Allen *et al*. (2007) say that stakeholder-oriented firms are better

than shareholder-oriented ones, especially in Japan, Germany, France, the US, and the UK.

Stakeholder theory assumes that hired managers are sincere, ethical, and have high integrity. These qualities encourage them to act in the interests of the firms they manage to the benefit of the stakeholders, including shareholders (Freeman *et al.,* 2004). The assumptions are contrary to those of agency theory, which holds that hired managers tend to defraud and misappropriate the resources of their firms to satisfy their inordinate interests (Jensen & Meckling, 1976; Ahmed, 2009; Lan & Heracleous, 2010, Mustapha & Ahmad, 2011; Yusof, 2016).

In designing corporate governance structures underpinned by stakeholder theory, agency costs can be minimal (Gao *et al.,* 2017). More so, the adoption of stakeholder theory has been associated with improved organisational performance and innovation through promoting a secure work environment that is conducive to experimentation and enhancing the satisfaction of various stakeholders (Flammer & Kacperczyk, 2014:1). Therefore, the complex structures required to curb agency conflicts can be avoided. Donaldson and Preston (1995: 69) argue that, "all persons or groups with legitimate interests participating in an enterprise do so to obtain benefits and that there is no prima facie priority of one set of interests and benefits over the other." The logic behind this conclusion is that when the manager is encouraged to decide in the interest of the stakeholders, society will help to provide the required control over the activities of the firm and its managers and will enter into some form of a beneficial relationship or a form of a social contract with it (Carrillo, 2007).

3.9.4 Resource dependence theory

Another major theory that underpins corporate governance is the resource dependence theory. Hillman *et al*. (2009), in their review of literature on resource dependence theory, submit that after agency theory, resource dependence theory is the next most prevalent theory used in research on board governance.

Pfeffer and Salancik (1978) originally postulated the resource dependence theory. The original focus of the theory was on the strategy of merger and acquisition by firms and corporate interdependencies. It was aimed at addressing environmental uncertainty and interdependence to ensure that organisations remained focused on

the achievement of their objectives. The theory's subsequent expansion considers the board structure as a strategy for reducing uncertainty and interdependence within the organisation. Pfeffer and Salancik (1978) argue that organisations tend to be influenced by those who control the resources that they require. Resources come in the form of political connections, money, knowledge, materials, and other things that can be gotten through relationships with other people.

The fundamental assumption of resource dependence theory is that organisational dependence on critical and important resources influences their actions, decisions, or behaviour (Nienhüser, 2008). Thus, the resources they intend to attract to ensure success and survival can explain the pattern of behaviour, relationships, and affiliations of companies. Resource dependence theory is all about how businesses manage uncertainty and dependence to maximise their autonomy and ensure their existence through the engagement of human resources and strategic alliances. Therefore, the theory seeks to explain how organisations manage environmental uncertainty using their internal resources (Pfeffer & Salancik, 1978). The key to the existence and survival of organisations, therefore, cannot be an increase in production alone but is the ability to access and maintain critical resources derived from critical relationships, without which production efforts would be futile. Thus, as Pfeffer and Salancik (1978:47) argue,

> "*Uncertainty or instability with respect to an important resource threatens the continued existence of the organisation because it makes the participation of coalition members more doubtful"*.

Sheppard (1995) explains that the "coalitions" or claimants can both be internal and external. Internal claimants include shareholders, managers, and employees, while external claimants include customers, suppliers, competitors, government agencies, and other international trade relations. Every claimant may have some form of power of control over the organisation for various reasons. The central argument of resource dependence theory is that organisations operate in uncertain environments and therefore require resources to control the failure of the environment to support them and to survive the actions of any of the claimants. Resource dependence theory seeks to provide guidance on how organisations decide on mergers and acquisitions, as well as how they form cooperatives and strategic alliances, in order to reduce uncertainty over the supply and control of their critical resources to ensure survival (Altholz, 2010). This conviction explains why resource

dependence theory canvasses for optimal board size, experience and expertise of board members, reputation, connections, and important networks in the recruitment of board members to attract both funding and business opportunities required for the stability of the firm (Nasieku *et al.,* 2014; Tsuboi, 2014). Another argument in favour of resource dependence theory is the requirement in most corporate governance codes, particularly the OECD (2004, 2015), the ICGN (2014), and the SEC-N (2011), that boards have the size and composition necessary to function effectively, work with committees, avoid groupthink, and bring a diversity of thought to board discussions.

3.9.5 Institutional theory

Although institutional theory can be traced back to the 19th century, Najeeb (2014) states that the theory only gained prominence in the 1980s after the publication of the seminal papers of three USA-based sociologists (Meyer & Rowan, 1977; Zucker, 1977). The institutional theory views the organisation as a composite entity of social and human interactions, which are influenced by environmental dynamics. Further, institutional theory emphasises that organisations are more than a means of producing goods and services.

They are social and cultural systems that operate and function within social and formal organisational rules, norms, and routines that have become established as authoritative guidelines for social behaviour (Scott, 2004; Judge *et al*, 2006). As such, organisations and their actors not only seek to compete for resources, but they ultimately seek legitimacy from society and the institutions therein. Thus, the environment in which such organisations operate (Lawrence & Lorsch, 1967; Yang & Zhao. 2014; Çelik & Doğan, 2011) influences the behaviour and performance of organisations and their managers. Therefore, the organisational response to institutional pressure is crucial for its success and survival (Najeeb, 2014). Extending this viewpoint to corporate governance, the governance systems and management of firms, according to institutional theory, are influenced by the environment and social institutions within which the firm operates. Therefore, any organisation that adapts to its environment has a high survival potential driven by the process of isomorphism (Lin, 2011). Isomorphism is the process whereby organisations are forced to resemble the majority of the population in their environment (Lin, 2011).

Seal (2006) states that institutional theory is all about the analysis of managerial behaviour in large and widely owned companies where managerial actions are influenced by institutionalised practices that affect share valuation, and corporate and internal reporting (management accounting). Accordingly, institutional theory considers that corporate governance mechanisms in firms should be driven not only by the behaviour of people (internal or external to the firms) but by their external institutions, beliefs, cultures, and practices. Thus, these variables characterise the operational environment in which firms function and derive their resources and legitimacy (Judge *et al*., 2006). Therefore, the design of the corporate governance mechanisms and management of firms under an institutional theory framework considers people, their external environmental and institutional dynamics, rules, procedures, informal practices, and cultures.

The above theories indicate different ideological foundations. The design of corporate governance frameworks that lean on each of the theories would reflect the assumptions and ideological stance of each of the theories. The section that follows attempts to explain the major differences between the agency theory and the others. This is to provide the basis for electing the agency theory, as discussed in section 3.11, as the theoretical foundation of the study.

3.10 Agency theory in contrast with other theories

Although the agency theory is the earliest of the corporate governance theories (Abdullah and Valentine, 2009), other contending theories are gaining popularity (Madison, 2014). This section discusses the shortcomings of each of the four theories discussed in contrast with the agency theory as shown in Table 3.2. The characteristics used here are obtained from the synthesis of the literature on the theories.

Table 3.2: Comparison of theoretical characteristics

Serial Number	Characteristic	Agency theory	Stewardship theory	Stakeholder theory	Resource dependency theory	Institutional theory
1	Focus of theory	The interest of the shareholders only.	The interest of the shareholders and employees.	The interest of all stakeholders including shareholders.	The interest of all stakeholders including shareholders.	The interest6 of all stakeholders including shareholders.
2	Corporate culture	Promotes culture of suspicion	Promotes a culture of trust.	Promotes a culture of trust.	Promotes a culture of trust and unity.	Promotes a culture of trust and unity.
3	Basic philosophy	Managers are self-seeking with guile to deceive or mislead others. So they cannot, as agents, be trusted to take actions in the interest of their principals all the time.	Managers are not self-seeking but trustworthy stewards that do not deceive or mislead others. So, as goods stewards, they manage the property of others for the benefit of all.	Companies should be managed in the interest of all stakeholders	Companies derive energy from the environment therefore cordial relationships should be maintained with all stakeholders and strategic partners	Companies derive energy from the environment and institutions. Therefore, corporate structures and actions should focus on compliance with both cultural and institutional demands and practices.
4	Objective	Implement corporate controls and rewards to align the interest of hired managers with their principals.	Drive corporate performance by trusting the actions of hired managers.	Promote corporate growth through the support of all stakeholders.	Promote corporate growth through the support of all stakeholders.	Promote corporate growth through the support of all stakeholders and observe cultural and institutional norms.
5	Applicable entity	Mainly, large firms where ownership is separate from control.	Both large and small firms.	Both large and small firms.	Both large and small firms.	Both large and small firms.

Table 3.2: Comparison of theoretical characteristics - continued

Serial Number	Characteristic	Agency theory	Stewardship theory	Stakeholder theory	Resource dependency theory	Institutional theory
6	Board structure canvassed	Medium-sized boards populated with independent and non-executive directors. Separation of the positions of the CEO and the chairman of the board.	CEO duality with boards populated by executive directors.	Mixed model. CEO may combine with chairman of Board. Characteristically large and diverse boards with representatives of interest groups.	Mix. CEO may combine with chairman of Board. Characteristically large and diverse boards.	Mix. CEO may combine with chairman of Board. Board structure obeys regulatory and cultural requirements.
7	Expected Relationship between shareholders and employees	Principal (master) and agent (servant) relationship.	Equal partners in the quest to achieve corporate objectives.	Equal partners in the quest to achieve corporate objectives.	Equal partners in the quest to achieve corporate objectives.	Corporate growth through environmental support.
8	Focus on the achievement of corporate objective	Managers are less committed to achieving corporate objectives but adopt opportunistic behaviour	Managers are highly dedicated.	Managers are highly dedicated to achieve corporate objectives in the interest of all stakeholders.	Managers are highly dedicated to achieve corporate objectives in the interest of all stakeholders.	Objectives are set and pursued by all stakeholders in the interest of all while ensuring that the norms and demands of society are met.

All the other theories challenge the concentration of the agency theory on the welfare of the shareholders or owners of the firm. Stakeholder theorists, for example, argue that the company exists not only to serve the interests of the owners but also to serve the interests of those of other stakeholders such as employees, creditors, debtors, the government, the immediate and global community as well (Freeman *et al.*, 2004). Iqbal and Mirakhor (2004:46) add that stakeholder theory rejects the arguments of the agency theory since "claimants go beyond shareholders and bondholders to include others with whom the firm has any explicit and implicit contractual interaction". This implies that the success of the firm depends on the management of relationships among the interest groups that interact with it and not singling out any one as a potential threat to the firm.

Another fundamental difference between the focus of other theories and the agency theory is that the focus of the agency theory is on controlling mechanisms aimed at forcing the manager to take actions that will be in the interest of the shareholders since man is considered as self-seeking with guile. Lan and Heracleous (2010) argue further that the assumptions of control and self-interest-oriented associated with agency theory and the argument that shareholders bear the greatest risk are unsuitable to provide a logical understanding of corporate governance systems in real-world organisations. Rather, Ghoshal (2005) posits that since shareholders can sell their stock in a poor performing company more easily than most employees can find another job, employees of a company carry substantial risk also. Thus, the theory does not consider the operational environments and cultural settings of the firm, as the activities of the firm do not happen in a vacuum but are affected by various other institutional factors and local contexts (Yusof, 2016).

The rejection of the duality of the CEO by the agency theory is another area of theoretical disagreement with the other four theories. The mix results in the performance of firms that adopt CEO duality (Ujunwa *et al.*, 2013; Moscu, 2013; Arslan *et al*., 2014), suggest that the combination or separation of the CEO and chairman positions per se does not result in a monotonic negative effect on the performance of the firm in all economic climes, as agency theory suggests. However, the agency theory is arguably the most discussed of the various corporate governance theories to guide the analysis of the performance of firms in a capitalist market economy (Eisenhardt, 1989; Hills & Jones, 1992; Jensen & Meckling, 1994; Arthurs &

Busenitz, 2003; Bonazzi & Islam, 2007; Nyberg *et al.*, 2010; Lan & Heracleous, 2010; Manawaduge, 2012; MacKay, 2012; Yusof, 2016).

3.11 Agency theory as the theoretical foundation of the study

The importance of agency theory in explaining the relationship between the major actors in a capitalist economy continues to resonate in corporate governance discourse. This is because the theory guides the design of corporate governance mechanisms aimed at controlling the actions of hired professional managers, whose engagement is likely to be inevitable as long as economic entities continue to expand their frontiers and ownership remains dispersed. This underscores the reason for situating this study around agency theory. Thus, notwithstanding the criticisms against agency theory, the theory remains one of the dominant organisational theories that continues to enjoy popular consideration in corporate governance research (Manuel, 2021).

The main objective of the corporate governance reforms in Nigeria is to safeguard the interests of shareholders by strengthening the agency relationship between managers and owners of firms (SEC-N, 2011; Sadiq *et al*., 2011). This is the motivation for opting to adopt the agency theory as the principal underlying theory of this study. Another rationale for electing to anchor the study around agency theory, in spite of the criticisms against it discussed earlier, is that agency theory is one of the most important theories in the context of corporate upon which a large volume of studies in the literature are based (Ntim, 2009; Ranti, 2011; Manawaduge, 2012; MacKay, 2012; Owusu, 2012; Zhang, 2012; Albassam, 2014 and other empirical studies discussed in chapter four).

Other reasons for situating this study around agency theory include: (1) The focus of both the companies' law of Nigeria (CAC, 1990) and the code of corporate governance (SEC-N, 2011) on the supremacy of the shareholder; (2) The shareholder-centric model of corporate governance (discussed in the next section) is inherently associated with agency theory because of the expectation that unless motivated to act in the interest of the shareholders, managers will pursue their objectives (Jensen & Meckling 1976); (3) The Nigerian Code, SEC-N 2011, used for the construction of the corporate governance index (CGI) recommends the splitting of the positions of chairman and the CEO as canvassed by agency theory; (4) Agency theory better addresses the natural consequence of human behaviour and actions when the manager

does not bear the major risk of his actions when she/he has personal objectives different from those of the shareholders (Ahmed, 2009).

The next section discusses the main corporate governance models across the world. The explanation of the models is necessary to understand the models adopted in Nigeria.

3.12 Corporate governance models

Corporate governance models are varied across the world. These country-wide differences are explained by the differences in the legal systems, differences in social and cultural values, and differences in the structure of capital markets (Larcker & Tayan, 2008). The control mechanisms are grouped into three major governance models: the shareholder-centric model; the stakeholder-centric model; and the third, the Japanese model, which is a hybrid model with characteristics of both the shareholder-centric and the stakeholder-centric models (Larcker & Tayan, 2008). Larcker and Tayan (2008) indicate that there are other models, such as the Chinese and Korean models. However, only the shareholder-centric and stakeholder-centric models are relevant to this study. These two models are discussed below.

3.12.1 Shareholder-centric model

The main assumption of the shareholder-centric model is that the major objective of the firm is to maximise shareholder wealth through the maximisation of profits (Maher and Andersson, 1999; Chilosi & Damiani, 2007; Pillay, 2013), while the directors are considered as agents of the shareholders and should function principally as the oversight body for the shareholders (Kaufman & Englander, 2005). In addition, the hired managers are expected to have a fiduciary duty to serve and protect the interests of the shareholders only (Iqbal & Mirakhor, 2004). As such, control and the role of the board are focused on ensuring that the manager takes decisions that would maximise the benefits of the shareholders to whom the directors owe fiduciary duties (Maassen, 1999; Joo, 2010). Consequently, control of the company should be the responsibility of the shareholders.

The shareholder-centric model (the Anglo-Saxon model) is predominant in the USA and the UK (Larcker & Tayan, 2008). This is in line with the wide acceptance that the purpose of organisations is to create wealth for shareholders (Dennehy, 2012).

Further, the shareholder-centric model has gained wide recognition because it emphasises that company directors and hired professional managers owe fiduciary duties to shareholders, who are the rightful owners of the firm (Joo, 2010; OECD, 2015a; ICGN, 2014). Thus, the model is characterised by three main interest groups: the shareholders, the directors, and the management. The shareholders oversee the directors (representing the principals), who in turn oversee the management (representing the agents).

There are, however, criticisms against the shareholder-centric model. These criticisms include: 1) the model promotes short-termism as directors are made to think only in the interests of the shareholders and not in the interests of the larger society, which may result in unethical behaviour; 2) it may promote creative accounting by CEOs in their attempt to satisfy the interests of the shareholders; and 3) the model promotes disunity and distrust between the shareholders (principals) and CEOs (representing the management team- agents) (Kaufman & Englander, 2005). Other criticisms are that the shareholder model (4) does not consider the importance of the social, ethical, and moral responsibilities of the firm to the stakeholders; and 5) by focusing on the shareholder mainly, the definition of corporate governance is restricted as corporate governance carters for the interests of a variety of interests, especially in contemporary times (Ntim, 2017).

Further, the concentration of the shareholder model on the interest of the shareholder as the only risk bearer in the firm has been criticised as lacking in logic, since other stakeholders also contribute to the success of the company and do bear risks (Dennehy, 2012). In this regard, Ghoshal (2005:80) argues that although the shareholder rightly provides the capital, he does not bear the entire risk of the company since employees, including managers, contribute their human capital to create value for the firm. Therefore, Ghoshal (2005:80) queries, “If value creation is achieved by combining the resources of both employees and shareholders, why should the value distribution favour only the latter?” This concern is what the stakeholder model, which is discussed next, seeks to address.

3.12.2 The stakeholder-centric model

Freeman (1984:46) defines a stakeholder as "any group or individual who can affect, or is affected by, the achievement of a corporation's purpose". The stakeholders include employees, customers, suppliers, stockholders, banks, environmentalists, the government, and other groups that can help or hurt the firm (Freeman, 1984). The stakeholder-centric model of corporate governance is based on the premise that the firm exists to fulfil the interests of the various groups and people impacted by it, which in turn affects the success of the organisation (Maassen, 2002). This model is popular in Continental European and Asian firms or companies that usually operate in countries like France, Germany, and Japan with civil-law legal systems (Ntim, 2009).

The stakeholder model sees the firm as an entity in which a variety of parties have vested legitimate interests (Maassen, 2002). As such, the interests of all stakeholders, other than shareholders, need to be protected by corporate boards of directors (Maassen, 2002). Such parties include the shareholders, trustees, creditors, distributors, trade unions, employees, customers, depositors, immediate environment, government, regulatory authorities, host community, and society in general with which the organisation interacts for energy and legitimacy (Donaldson & Preston, 1995; SEC-N, 2011).

The basic argument of the stakeholder-centric model is that there are people who significantly contribute to the success of the company whose interests should be catered for by the firm (Merendino, 2013). Thus, Freeman *et al*. (2010) submit that companies are at liberty to pursue their profit maximisation objective. They need customers to sell their products or services, inspired employees to push the company to become better, suppliers to help keep operations on the cutting edge, and supportive communities that allow businesses to flourish. Therefore, Freeman *et al.* (2010:11) conclude that:

> *"Business is about making sure that products and services actually do what you say they are going to do, doing business with suppliers who want to make you better, having employees who are engaged in their work, and being good citizens in the community, all of which may well be in the long-run (or even possibly the short-run) interest of a corporation. Stakeholder management is just good management and will lead to maximising profits".*

Unlike the "shareholding" model, the "stakeholders" model assumes that the purpose of a firm is to maximise the welfare of several stakeholders of the firm, including shareholders, employees, and local communities, amongst others.

The stakeholder-centric model supports the two-tiered board structure that separates oversight from management and a large board structure. A large board provides a capital resource for the firm that will lead to better firm performance (Ayuso & Argandona, 2007). The management board is responsible for day-to-day decision-making on operational matters, while the supervisory board is responsible for appointing members to the management board, the approval of financial statements, and decisions regarding major capital expenditures, mergers and acquisitions, and the payment of dividends (Larcker & Tayan, 2008). Another advantage of the stakeholder-centric model is that the model improves relationships and enables the firm to reduce costs and maximise value, enter easily into new markets, and have a more "comprehensive understanding of corporate risk and opportunity while contributing to a strong reputation over time" (International Finance Corporation, 2009:1). An example of a country that has adopted the stakeholder-centric model of governance is Germany, where employees are represented on the corporate boards of firms (Larcker & Tayan, 2008).

One of the major challenges of the stakeholder–centric model is the problem of identifying the representatives of the multiple stakeholders to represent them on the board, since keeping the board size small promotes the viability of a board (Dennehy, 2012). Another issue is the possibility of the model encouraging incessant disagreement between the shareholders and the other stakeholders. For instance, while it can be argued that cost minimisation is a profit maximisation strategy, a reduction in the wages of employees, which will reduce costs, may not be acceptable to the employees, resulting in conflict (Dennehy, 2012).

The third challenge of the stakeholder-centric model is the difficulty in harmonising the various stakeholders' preferences to determine how those preferences relate to corporate reputation and, ultimately, performance (Cennamo, Berrone & Gomez-Mejia, 2008). The fourth concern is that the stakeholder-centric model is vague and has no clear objective due to not specifically stating how to approach stakeholder relations in the context of their aspirations, leading to the problem of ambiguity of the objective and multi-interest considerations (Brandt & Georgiou, 2016).

Another criticism of the stakeholder-centric model is that by making the managers accountable to more than one actor, "managers are able to destroy shareholders" wealth … able to also use the firms" resources for their "own personal wealth without being held accountable for unnecessary or extraordinary expenditures… leading to enormous agency costs" (Rijsenbilt, 2011:28). To avoid waste and managerial self-dealing, Karpoff (2020) advocates a "guided shareholder model", whereby the manager is allowed to deviate from the shareholders' model when the external impacts on other stakeholders are large.

The importance of gaining knowledge about the philosophical stance of the corporate governance models adopted by countries is explained in the next section.

3.13 Relevance of knowledge about corporate governance models

Countries have adopted governance models that are underpinned by more than one theory in the design of their corporate governance frameworks. For instance, the agency theory supports the corporate governance principle of the separation of the positions of the chairman of the Board and the CEO as a form of controlling agency conflict (Moscu, 2013; Lincol *et al*., 2013). This separation is supported notwithstanding the high costs associated with this separation in some large firms, especially in the USA (Brickley *et al.,* 1997). Further, the composition of the corporate boards is guided by resource dependence (Pfeffer & Salancik, 1978) and stakeholder theories (Freeman & McVea, 2001), as both theories suggest that board composition has some strategic bearing on the affairs of firms.

The pursuit of the objectives, goals, and strategies of the firm has a relationship with both the institutional (Meyer & Rowan, 1977; Scott, 2004) and stewardship (Donaldson & Davis, 1991; Davis, Schoorman & Donaldson, 1997) theories of governance, as these theories define the structure and control systems of the firm.

Just as knowledge of the principles of corporate governance provides the basis for possible benchmarking by nations in designing their corporate governance codes, understanding corporate governance models provides a guide to the development of countrywide corporate governance codes, defining the roles of corporate boards, and determining the interests the codes are aimed at protecting. Understanding the principles of corporate governance will inform society about the type of firm-society relationship expected from the corporate entities in their environment (Gwarzo, 2015).

3.14 Chapter summary

The chapter discussed the concept of corporate governance; governance models; components; and the concept of separation of ownership and control. While noting that there is no universal definition of corporate governance, the chapter provided a working definition of corporate governance. It defines corporate governance as a set of control mechanisms designed and adopted by the boards of firms to enable them to control the actions or inactions of their managers; where there is a separation of ownership and control; in the interest of all stakeholders. This definition attempts to address the concerns about the narrow definition of corporate governance, which focuses on the interests of the shareholders rather than the stakeholders.

The benefits of effective corporate governance for the firm and the stakeholders were highlighted. Among these are that corporate governance reduces the vulnerability of financial crises, ensures financial market integrity, reinforces property rights, reduces transactions and the cost of capital, leads to economic efficiency, and improves goodwill, sales, and profitability of the firm (OECD, 2004a; 2004b; Javed & Iqbal, 2007). Further, investors are equally more willing to invest in shares of a well-governed company than in one considered poorly governed (Chung & Zhang, 2011; Ebaid, 2013). In other words, better-governed firms can access capital easily because of investors' confidence in them and are attracted to investing in them.

The literature identifies the main responsibilities of corporate boards to include effective monitoring and control of management for accountability to the shareholders. The OECD code of 2004 and the ICGN code of 2014 were talked about in terms of the corporate governance principles and other responsibilities of the board. This was done to help people understand the basis of the Nigerian Code of 2011, which was used to make the corporate governance index for this study. To build the theoretical support for the study, the chapter discussed some of the main theoretical foundations of corporate governance. These include agency, stakeholders, stewardship, resource dependence, and institutional theories. These theories have dominated the literature on corporate governance. The agency theory serves as the study's primary theoretical foundation. Other theories, on the other hand, have been discussed as a means of providing theoretical insights into the foundation of corporate governance structures adopted by nations such as Nigeria.

The agency theory, popularised by Jensen and Meckling (1976), argues that hired managers are opportunists who desire to expropriate the resources of the firm to the detriment of the owners if not curbed using effective corporate governance control mechanisms. The fallout of the behaviour of managers is agency conflicts that characterise firms, especially those that are governed and controlled by managers that are not owners. The goal of agency theory, then, is to solve the problem of agency conflicts, which are made worse by managerial mischief when the interests of owners (principals) and hired managers (agents) are different (Nyberg et al., 2010). Two forms of conflict were identified to include the vertical agency conflict (type one) that exists between owners and managers (Jensen and Meckling, 1976), and the horizontal agency conflict (type two) that exists between the controlling shareholders and the minority interest (shareholders) (Ratnawati *et al*., 2016; Gogineni *et al*., 2013). Forms of type-one agency conflict include collusion with lenders; infringement of creditors' rights; the establishment of reward packages that are based on accounting profits and sales instead of on cash flows; and the outright theft of resources of the firm by hired managers. An example of type-two agency conflict is the expropriation of the minority shareholders by the majority shareholders through some form of strategy that provides better for the majority shareholders.

The separation of the positions of the CEO and the chairman of the board, which has attracted significant research interest, is one of the requirements of agency theory to control agency conflict and the associated cost. The theory also argues for a smaller board size and more independent directors.

Stewardship theory argues that managers of firms are trustworthy individuals who provide good stewardship to the firms rather than behaving as opportunists who take actions that are not in the interests of the owners of the firms (Donaldson & Davis, 1991; Davis, Schoorman & Donaldson, 1997). Thus, stewardship theory argues for a higher number of internal directors in corporate boards because large internal directors are said to better facilitate superior decision-making to maximise profit for shareholders (Nicholson & Kiel, 2007).

Another popular corporate governance theory is the stakeholder theory, which considers the firm as a "constellation of competitive and co-operative interests" (Donaldson & Preston, 1995:67), which includes shareholders, suppliers, customers, workers' union, host community, government, political actors and employees (Maher & Andersson, 1999; Hitt *et al.*, 2002; Vasudev, 2012; Brandt & Georgiou, 2016; Gao *et*

al., 2017); stakeholder theory argues for the inclusion of employees and other interests in the board of firms. The thrust of the stakeholder theory is that firms should be governed in the interest of all stakeholders, the environment, and the public and not in the interest of only the shareholders, as suggested by the agency theory.

The main philosophical stance of the resource dependency theory is that firms succeed because of their dependence on energy and resources from their internal and external environments, people, and connections. As Pfeffer and Salancik (1978) argue, firms tend to be influenced by those who control the resources that they require. Resource dependence theory argues for large boards dominated by external and independent directors. Most corporate governance codes, like the OECD (2015), ICGN (2014), South African King IV, and the Nigerian Code (SEC-N, 2011), support this theory by calling for a board with a lot of different types of people, the use of board committees, and a higher percentage of external and independent directors.

Corporate governance models (shareholder and stakeholder models) were discussed to provide an understanding of how corporate governance frameworks are shaped globally. The focus of the shareholder model is the maximisation of the wealth of the shareholders, who are considered the residual claimants. As a result, control and the board's role should be centred on ensuring that the manager makes decisions that maximise the benefits to the shareholders. In other words, the interests of the shareholders should be the main purpose of the firm. In contrast, the stakeholder-centric model argues that the objective of the firm should not be to increase the financial fortunes of the shareholders alone, but also to cater for the welfare of all those affected by the operations of the firm, including the environment. Therefore, firms should be managed in the interests of all stakeholders, including customers, employees, suppliers, the environment, the government, and the public. The problems with each model were pointed out, which shows that no single model is the best for everyone.

Countries have adopted governance models that are underpinned by more than one theory in the design of their corporate governance frameworks. For instance, the agency theory supports the corporate governance principle of the separation of the positions of the chairman of the Board and the CEO as a strategy for controlling agency conflict (Moscu, 2013, Lincol *et al*., 2013). Therefore, the chapter tried to explain the guiding ideas behind the corporate governance models of countries like the UK and South Africa, which share common law practises with Nigeria because they are both members of the Commonwealth.

The discussion of the concept of separation of ownership and control provided the nexus in the literature between separation of ownership and control and the agency theory of corporate governance. Means (1931) attempts to define the two concepts, control and ownership, by stating, "Ownership means having interests in an enterprise while the essential characteristic of control consists of having powers over the enterprise" (Means, 1931:70). Thus, control means being able to choose the top managers of the company, who make decisions about how the company runs or what it does.

The responsibility to appoint managers of the firms, including the CEO, is vested in the board acting on behalf of the shareholders (Means, 1931; Berle & Means, 1932; Barry, 2002; Toukan, 2014). Ownership, on the other hand, refers to the interests (shareholders) that would bear the residual benefits or costs (profits and losses) from the decisions of the appointed managers.

Having laid the theoretical foundation and the framework of the study, coupled with an insight into the evolution of corporate governance globally and in the Nigerian context, the next chapter shall focus on the development of the hypotheses that would test the relationship between firm performance and corporate governance with regard to non-financial listed firms in Nigeria.

CHAPTER FOUR

EMPIRICAL LITERATURE AND DEVELOPMENT OF THE HYPOTHESES

4.1 Introduction

This chapter examines the extant empirical literature on corporate governance. In particular, the chapter seeks to achieve two main objectives. The first is to identify the link between corporate governance and firm financial performance by extensively reviewing empirical literature on the relationship between corporate governance mechanisms and the financial performance of the firm. The second goal is to explain why the self-made CGI can be used to predict the link between corporate governance and the financial performance of the sample firms.

The chapter is organised into various sections. Section 4.2 discusses the development of the hypotheses from the supporting empirical literature. Three hypotheses (broken down into sub-hypotheses) have been proposed and discussed, covering both internal and external corporate governance mechanisms. The summary of the chapter is presented in Section 4.3.

4.2 Development of hypotheses of the study

Literature has linked corporate governance with the value and financial performance of the firm (Carter *et al*., 2003; World Bank, 2005; Uddin & Choudhury, 2008). Empirical studies, as will be seen later in this chapter, have put forward theoretical constructs that have been tested in the context of different economic climes using several combinations of corporate governance mechanisms. Thus, the three propositions put forward in this study have been derived from both theory and empirical evidence. The paragraphs that follow discuss the support in the literature for the hypotheses.

4.2.1 Predicting the financial performance of firms using a corporate governance index (CGI)

The expanded scope of corporate governance and the several variables to consider in establishing the relationship between corporate governance and the performance of the firm explain the popularity of CGI as it summarises the different aspects of governance in an index form (Sarkar *et al*., 2012). Table 4.1 shows a summary of studies that have used CGI to predict the financial performance of the firm. As with other prior studies (Aldrighi, 2003; Iturriaga & Hoffmann, 2005; Bechera & Frye 2008; Baber & Lian 2008; Hu *et al.*, 2010; Jerab 2011; Al-Malkawi & Pillai 2012; Sawalqa, 2014; Uwuigbea *et al*., 2014; Akbar, 2015; Fratini & Tettamanzi, 2015), several governance mechanisms have been used to construct the aggregate CGI for this study. Although most of the studies discussed in the paragraphs that follow have considered internal mechanisms in constructing their CGI, this study, however, uses a combination of both internal and external corporate governance mechanisms to construct the Nigerian CGI.

The use of both mechanisms becomes imperative in this study because both mechanisms moderate the corporate governance of the firm. They are said to be substitutable and have been considered in the literature to be equally effective in shaping how firms are controlled and directed (Weir *et al.,* 2002; Desoky & Mousa, 2012; Sarker *et al*., 2012). The internal, organisation-based mechanisms of corporate control and the external, market-based and regulatory control mechanisms can be employed together to help align the diverse interests of managers and shareholders and reduce agency conflict (Babatunde & Olaniran, 2009; Walsh & Seward, 1990).

Gompers *et al.* (2003) focused on shareholders' rights concerning anti-takeover strategies as provided by the various legal frameworks that guided the operations and financial transactions of 1500 large firms in the 1990s. They focused their study on the balance of power between the shareholders and the managers of the entities and considered only external corporate governance mechanisms. The authors devised their Governance Index ("G-Index") using only the impact of each provision on the balance of power in the firm. Most of the factors used by Gompers et al. (2003) are anti-takeover measures, so their G-Index is more of a measure of protection against takeovers than a broad measure of governance.

Table 4.1: Summary of existing studies on the relationship between corporate governance index and firm performance

Authors	Year	Sample	Governance Measure	Performance Measure(s)	Empirical Findings
Gompers, Ishii and Metrick	2003	1,500 firms listed on the NYSE, AMEX and NASDAQ.	Governance Index ("G-Index").	Tobin's Q, Net profit margin, ROE and Sales growth.	Corporate governance is strongly correlated with stock returns during the 1990s. Firms with stronger shareholder rights had higher firm value measured in terms of Tobin's Q, higher net profits, higher sales growth, lower capital expenditures, and made fewer corporate acquisitions.
Cremers and Nair	2005	The sample includes an average of 1,500 firms per year from September 1990 to December 2001, with 136 monthly time-series data points.	ATI	Tobin's Q and return on equity.	They found that internal and external governance mechanisms are complements in being associated with long-term abnormal returns, and that firms with higher takeover vulnerability are associated with better performance only when internal governance is high.
Brown and Caylor	2006	1868 US firms.	G-Score.	Tobin's Q as a proxy for firm value.	Firm performance is positively related to the summary measure of the corporate governance index.
Javed and Iqbal	2006	Listed firms in the Karachi Stock Exchange (KSE).	CGI	Tobin's Q as a proxy for firm value.	There is a positive and significant relationship between CGI and Tobin's Q.
Core, Guay, and Rusticus	2006	Replicated the sample of Gompers *et al.* (2003) using the results of the 1990–1999 period.	G-Index of Gompers *et al.* (2003).	Return on equity.	Weak corporate governance does not necessarily result in poor stock returns.
Alexandre and Lucas	2007	154 non-financial Brazilian firms listed firms traded on the São Paulo Stock Exchange 154.	Corporate governance index, called IGOV.	Tobin's Q and Price-to-Book value (PBV).	A causal relationship between corporate governance and firm performance, with improvement in corporate governance quality predicting greater market capitalization for the firms.

Table 4.1: Summary of existing studies on the relationship between corporate governance index and firm performance – continued

Authors	Year	Sample	Governance Measure	Performance Measure(s)	Empirical Findings
Sarkar, Sarkar and Sen	2012	500 large listed Indian firms for six years from 2003 to 2008.	Indian CGI.	Return on equity (ROE).	Firms with better corporate governance structures appear to earn substantially higher rates of return in the market. The empirical analysis showed that good governance practices are rewarded by the market.
Azeem, Masoodul and Kouser	2013	50 largest (by market capitalisation) firms listed on Karachi Stock Exchange.	Karachi CGI.	Market to book ratio and earnings per share.	Quality corporate governance was significantly associated with firm performance. The study also revealed that CGI is better associated with profitability than with stock market performance.
Bebchuk, Cohen, and Ferrell	2009	Stock returns during the 1990–1999 period that Gompers *et al.* (2003) studied.	E-Index was constructed from the 24 provisions followed by the Investor Responsibility Research Centre (IRRC) Research Centre (IRRC) and included in the Gompers *et al.* 2003) governance index.	Tobin's Q.	They found that both individually and, in the aggregate, the six provisions are negatively correlated with Tobin's Q. In other words, an increase in the E index is associated with decreases in Tobin's Q.
Azeem, Masoodul and Kouser	2013	50 largest (by market capitalisation) firms listed on Karachi Stock Exchange.	Karachi CGI.	Market to book ratio and earnings per share.	Quality corporate governance was significantly associated with firm performance. The study also revealed that CGI is better associated with profitability than with stock market performance.
Bebchuk, Cohen, and Ferrell	2009	Stock returns during the 1990–1999 period that Gompers *et al.* (2003) studied.	E-Index was constructed from the 24 provisions followed by the Investor Responsibility Research Centre (IRRC) Research Centre (IRRC) and included in the Gompers *et al*. (2003) governance index.	Tobin's Q.	They found that both individually and, in the aggregate, the six provisions are negatively correlated with Tobin's Q. In other words, an increase in the E index is associated with decreases in Tobin's Q.

Table 4.1: Summary of existing studies on the relationship between corporate governance index and firm performance – continued

Authors	Year	Sample	Governance Measure	Performance Measure(s)	Empirical Findings
Varshney, Kaul and Vasal	2012	105 Indian firms.	CGI and firm performance.	Return on Net Worth, Return on Capital employed, Economic Value Added (EVA) and Tobin's Q.	The study indicated a positive relationship between corporate governance based on the CGI and firm performance, when the performance is measured in terms of the value-based performance tool – EVA. The relationship could not be validated for the traditional performance tools – Return on Net Worth (RONW), Return on Capital Employed (ROCE) or Tobin's Q.
Cheung, Connelly Limpaphayom, Zhou	2007	168 listed firms in Hong Kong.	Self-constructed CGI.	Market-to-book ratio.	The study found a positive and statistically significant correlation between good corporate governance practice and the market-to-book ratio.
Clacher, Doriye and Hillier	2008	63 UK firms from 2003 to 2005.	Self-constructed CGI.	Tobin's Q and ROA.	A positive relationship between the level of compliance with corporate governance and Tobin's Q/ROA.
Ntim	2009, 2013	100 listed firms in South Africa, (Ntim (2009) and 169 South African (SA) listed firms between 2002 and 2007.	Self-constructed the South African Corporate Governance Index ("SACGI").	Tobin's Q, and return on assets (ROA).	There was a statistically significant and positive association between the quality of the sampled firms' internal corporate governance structures and their financial performance measured by Tobin's Q, and return on assets (ROA).
Mans-Kemp	2014	227 firms listed on the Johannesburg Stock Exchange from 2002-2010.	CGI referred to as the Corporate Governance Score (CGS).	Return on assets (ROA), return on equity (ROE), earnings per share (EPS), and total share return (TSR).	The finding showed a significant positive relationship between CGS and the accounting-based EPS ratio but negatively associated with TSR. A positive but not significant relationship was also discovered between the CGS and the accounting-based measures of ROA and ROE Positive.

Twenty-four distinct corporate-governance provisions on shareholders' rights were identified from which the G-Index for a sample of 1,500 firms listed on the NYSE, AMEX, and NASDAQ markets per year during the 1990s was constructed. The study divided twenty-four provisions into five groups: Delay (tactics for delaying hostile bidders); voting (voting rights); and protection (director/officer protection). Other provisions considered include takeover defences such as poison pills (a type of defensive tactic used by a corporation's board of directors against a takeover) and state laws. The binary system was used to construct the G-Index.

The G-Index was used as a proxy for the balance of power between managers and shareholders in each firm. They found that corporate governance is strongly correlated with stock returns during the 1990s and that the firms with stronger shareholder rights had higher firm value as measured in terms of Tobin's Q, higher net profits, higher sales growth, lower capital expenditures, and fewer corporate acquisitions. The G-Index has been used as a measure of the quality of corporate governance in accounting and finance literature. However, Brown and Caylor (2006) point out that one of the G-Index's major flaws is that it focuses mostly on anti-takeover protection provisions and not on the broad index of corporate governance.

Cremers and Nair (2005) also formulated a CGI adopting the Gompers *et al*. (2003) model. They named their CGI, the alternative takeover protection index (ATI), which focused on only three key anti-takeover provisions: the presence of staggered boards; the provision of shareholders' rights to buy the shares of a firm being considered for takeover at a discounted price; and restrictions on shareholders' rights to call special meetings or act through written consent. The sample includes an average of 1,500 US-listed firms per year from September 1990 to December 2001, with 136 monthly time-series data points. They used Tobin's Q and accounting measures such as net profit margin, return on assets, and return on equity as proxies for firm value and performance, respectively. They found that internal and external governance mechanisms are complementary and associated with long-term abnormal returns, and that firms with higher takeover vulnerability are associated with better performance only when internal governance is high.

Brown and Caylor (2006) introduced the G-Score (another variant of CGI). They studied 51 firm-specific provisions based on the factors identified by Institutional Shareholder Services (ISS), the largest corporate governance data provider to institutional investors, to create a firm-specific governance index. The 51 ISS

governance factors were grouped into seven governance measures that were considered key drivers of firm performance. These measures include (1) annual selection of board members; (2) absence of firm poison pill or one approved by shareholders; (3) non-occurrence of option re-pricing within the last three years; (4) granting of average options in the past three years as a percentage of basic shares outstanding not exceeding 3%; (5) attendance of all directors of at least 75% of board meetings or having a valid excuse for non-attendance; (6) availability of board guidelines in each proxy statement; and (7) availability of directors' stock ownership guidelines.

Brown and Caylor (2006) also enlarged the variables considered in the construction of their G-Score to address the limitations of the G-Index of Gompers *et al*. (2003) and created a summary of the corporate governance index. They coded each of 51 factors as either 1 or 0, depending on whether or not ISS considers the firm's governance to be minimally acceptable. If the variable identified with a firm is acceptable in line with the ISS standards, it was coded "1" and if not, it was coded "0". They summed the binary variables to create a firm-specific summary measure of the G-Score. They used Tobin's Q as a proxy for firm value and regressed Tobin's Q on the G-Score and three control variables: log of assets, log of firm age, and a dummy variable indicating whether a firm is incorporated in Delaware or not. They found that firm performance is positively related to the summary measure of the corporate governance index.

Javed and Iqbal (2006) also adopted the use of CGI to establish a relationship between the quality of corporate governance and firm performance. Javed and Iqbal (2006) constructed the corporate governance index of listed firms on the Karachi Stock Exchange (KSE) to determine the relationship between corporate governance and firm performance. To construct a corporate governance index for the firms listed on KSE, a broad, multifactor corporate governance rating was constructed based on the data obtained from the annual reports of the firms studied from 2003 to 2005. To construct the index, 22 governance proxies or indicators were selected and were categorised into three main themes. The three categories, or sub-indices, consist of eight factors for the board, seven for ownership and shareholdings; and seven for transparency, disclosure, and audit.

The weighting used in the construction of the index was said to be based on subjective judgments. The assigned priorities amongst and within each category were guided by empirical literature and financial experts. The maximum score was 100. A

score of 100 was assigned if the factor was observed, 80 if was largely observed, 50 if it was partially observed, and 0 if it was not observed. The average was taken out to arrive at the rating of one sub-index. By taking the average of three sub-indices, they obtained the CGI for a particular firm. Tobin's Q was used as a valuation measure. A sample of 50 firms was selected, which were representative of all non-financial sectors, active in their sector and comprised more than 70 per cent of the market capitalisation on the KSE. Evidence showed a positive and significant relationship between CGI and Tobin's Q, supporting the existing hypothesis that corporate governance affects firm value. The findings also suggested that the CGI has the potential to improve the governance and decision-making processes of KSE-listed firms.

Core *et al.* (2006) investigated the findings of Gompers *et al.* (2003) that firms with weak shareholder rights exhibit significant stock market underperformance. The study tests for an association between governance and operating performance by examining operating return on assets (ROA). They followed the approach of Gompers *et al*. (2003) in the measurement of governance using their index of shareholder rights, (the "GIM-index") and found that a weak governance index associated with weak shareholder rights resulted in significant operating underperformance. But, unlike the study by Gompers et al. (2006), when accounting return on equity was used as a measure of performance, firms with weak shareholder rights did not show significant under-performance in their operations.

Alexandre and Lucas (2007) investigated the influence of corporate governance quality on market value using 154 Brazilian firms. They formulated a corporate governance index, called IGOV, as a proxy for corporate governance quality. Each positive answer added one point. Firms' scores range from 0 to 20. The index was built taking into account four dimensions considered important by literature to assess corporate governance quality: access to information; information content; board of directors' structure; and ownership and control structure. Both Tobin's Q and Price-to-Book value (PBV) multiples were used as proxies for firm value.

The sample of the study comprised all 154 non-financial listed firms traded on the São Paulo Stock Exchange. The investigation used different econometric approaches, including Ordinary Least Squares (OLS) and simultaneous equations. The results showed a positive and significant relationship between the quality of corporate governance and value variables. Further, the results suggest a causal relationship

between corporate governance and firm performance, with improvement in corporate governance quality predicting greater market capitalization of the firms.

Sarkar *et al*. (2012) also used the CGI to explain the relationship between the quality of corporate governance and firm performance of Indian listed firms. From 2003 to 2008, they built CGI for 500 large listed Indian companies. The selection of the largest 500 firms listed on the Bombay Stock Exchange was based on their market capitalization for the year 2008. The study examined the relationship between the CGI and the market performance of the listed firms using four variables: board, ownership, audit committee, and external auditor.

Sarkar *et al*. (2012) took the attributes within a specified governance mechanism and scored each attribute on a scale of 0 to 5. They then aggregated the scores across all the attributes within the specific governance mechanism, divided by the maximum possible score, and multiplied the result by 100. The study by Sarkar *et al*. (2012) identified a very strong association between CGI and firm performance. Firms with better corporate governance structures were said to earn substantially higher rates of return in the market. The empirical analysis showed that good governance practices are rewarded by the market.

Azeem *et al*. (2013) used a CGI to assess corporate governance quality and to predict the performance of the firm as measured by the market to book ratio and earnings per share. Azeem *et al*. (2013) constructed their corporate governance scores by adopting an index from two sections of the governance mechanisms: structure (ownership concentration and managerial ownership) and independence (board independence and audit committee independence). Data for the CGI was obtained from the annual reports of the respective firms. High scores for the index denote quality corporate governance and vice versa. By using the fixed effects estimation method on panel data of the 50 largest (by market capitalization) firms listed on the Karachi Stock Exchange), they found that good corporate governance was significantly associated with firm performance. The study also revealed that CGI was better associated with profitability than with stock market performance.

Apart from the G-Index of Gompers *et al.* (2003), another popular CGI model among researchers is the entrenchment index (E-Index) of Bebchuk, Cohen, and Ferrell (2009). Bebchuk *et al*. (2009) investigated the relative importance of 24 provisions that moderate shareholders' powers. They put forward an E-Index based on six provisions. The six provisions are staggered boards, limits to shareholder amendments of the

bylaws, supermajority requirements for mergers, and supermajority requirements for charter amendments that limit the extent to which a majority of shareholders can impose their will on management. The other two provisions, called "poison pills" (which were already explained) and "golden-parachute" arrangements, are meant to stop hostile takeover bids. A "golden-parachute" is a large payment or other financial compensation that is guaranteed to a firm's executive if they are fired because of a merger or takeover.

They constructed an index, labelled the entrenchment index (E index), based on the six provisions. Each firm in the Executive Compensation Database, US, (ExecuComp) was given a score, from zero to six, based on the number of provisions that the firm had in a given year. They found that the entrenchment provisions that limit shareholders' rights were correlated with a reduction in firms' stock returns between 1990 and 2003. Bebchuk *et al*. (2009) showed that the E-index could be used to explain the relationship between governance practices and firm value. They found that both individually and in aggregate, the six provisions are negatively correlated with Tobin's Q. In other words, an increase in the E-index is associated with a decrease in Tobin's Q.

Varshney *et al*. (2012) investigated the relationship between corporate governance and firm performance in the Indian context. Varshney *et al.* (2012), constructed a corporate governance index using internal and external corporate governance mechanisms in 105 Indian firms. They used a value-based performance measure – Economic Value Added (EVA), and the traditional measures such as return on net worth, return on capital employed (ROCE), and Tobin's Q in their study.

The internal governance mechanisms considered by Varshney *et al*. (2012) were: (a) board structure and (b) ownership structure. The variables representing board structure are the proportion of outside directors, board size, number of board meetings, and CEO duality. Ownership structure variables are: promoters' equity, corporate holdings above 10%, institutional holdings, American Depository Receipts (ADRs) or Global Depository Receipts (GDRs), and Employee Stock Options. The external governance mechanisms considered were: (a) market for external control and (b) the product market competition.

The market for external control was represented by the shareholding of shareholders that did not subscribe to the original memorandum of the firm, the "non-promoters," while product market competition is represented by the market share of the firm. Each of the above-mentioned variables was scored either as a proportion of the maximum score and hence had values ranging from a minimum of "0" to a maximum of

"1", or as dummy variables and hence had a score of either "0" or "1". The simple aggregate of the scores on each of the parameters constitutes the un-weighted CGI. Using various econometric techniques, the study indicates a positive relationship between corporate governance based on the CGI and firm performance when the performance is measured in terms of the value-based performance tool, EVA. Traditional performance tools, such as return on net worth (RONW), return on capital employed (ROCE), and Tobin's Q, could not confirm the relationship.

Tuteja and Nagpal (2013) also constructed CGI for Indian firms. The benchmark for the index was Clause 49 of the Listing Agreement of the Stock Exchanges in India, while practices that were usually followed by the banks in India were also included in the index. The study considered the corporate governance variables of the board of directors, audit committee, remuneration committee, nomination committee, risk management, related party transactions, and disclosure, and other policies that enhance corporate governance and accountability. The authors delineated the factors further by defining sub-elements under each head. These sub-elements were assigned individual scores of 1 – 5 based on the literature on corporate governance. The study provided evidence of the governance index of Indian banks but did not investigate the extent to which such an index explains the performance of the banks.

Cheung *et al.* (2007) adopted a self-constructed CGI to study the largest 168 listed firms in Hong Kong. A scale of zero to 100, in ascending order of good corporate governance, was used in constructing the CGI. Using the CGI index, the study examined the correlation coefficient between CGI and the market value of Hong Kong firms. The study found a positive and statistically significant correlation between good corporate governance practice and the market-to-book ratio. This confirms that firms with higher corporate governance scores tend to have higher market-to-book ratios or vice versa. The results of the study back up the conclusion that good corporate governance is linked to a higher market value. This is because investors are more likely to invest in companies with better control mechanisms and disclosures for corporate governance.

Clacher *et al.* (2008) used CGI to investigate the relationship between corporate governance and the performance of 63 UK firms between 2003 and 2005. The study finds a positive relationship between the level of compliance with corporate governance and Tobin's Q and ROA. To investigate this relationship, they developed a CGI derived from the main recommendations of the London Stock Exchange based on the 2003 UK

Combined Code. Their finding is consistent with agency theory's prediction that high compliance with corporate governance principles enhances shareholders' wealth. One important result of the study is that board structure, which has been the focus of most research on corporate governance, has no effect on performance, value, investment, or institutional ownership (Clacher *et al.,* 2008).

A substantial existing literature on corporate governance supports that corporate governance (CG) has a significant positive impact on the financial performance of the firm. Ibrahim and Abdullahi (2019), in their study of 23 listed non-financial firms in Nigeria, found that CG has a positive and insignificant impact on the financial performance of the listed firms. In their study of twelve (12) quoted companies in the oil and gas sector, Urhoghide and Korolo (2017) also observe that corporate governance practices have a significant positive impact on financial performance. The study of some quoted financial and non-financial listed firms in Nigeria by Ogunsanwo (2019) confirms the significant effect of corporate governance on the financial performance of the firm measured in terms of the ROE.

Albassam (2014) also identifies a positive relationship between the corporate governance compliance index of 80 Saudi Arabian listed firms and Tobin's Q-ratio, although the relationship was not significant. In their study of 500 large listed firms in the Indian corporate sector from 2003 to 2008, Sarkar and Sarkar (2012) also observed that good governance practices are significantly rewarded by the market. Similarly, Abosede *et al.* (2019) found that corporate governance has a positive and significant effect on the financial performance of eleven listed oil and gas companies on the Nigerian stock exchange from 2007 to 2018.

Peters and Bagshaw (2014), however, confirmed this in their study of some 33 firms in the manufacturing, financial, and oil and gas sectors, which established no significant relationship between corporate governance quotient, and the profitability of the sample firms. In their study of Turkish firms, Coşkun and Sayilir (2012) equally observed that CG did not have a statistically significant relationship with Tobin's Q and ROE. El-Faitouri's (2014) study of 634 UK firms listed on the London Stock Exchange found the same thing about Tobin's Q. There was no significant link between corporate governance and firm performance. As can be seen from the existing studies, the majority of the studies that used CGI focused on the developed economies. There were no Nigerian studies known to the researcher who had adopted the CGI model at the time of this study. However, the studies by Ntim (2009, 2013) and Mans-Kemp (2014) are relevant

to this study as they focused on Africa. Ntim (2009, 2013) adopted the CGI to explain the relationship between the financial performance of South African listed firms and corporate governance. In his study of 100 listed firms in South Africa, Ntim (2009) used fifty internal governance variables and provisions contained in the 2002 King Report on Corporate Governance for South Africa (King II) to construct the South African Corporate Governance Index ("SACGI").

In constructing SACGI, Ntim (2009) adopted the binary system of scoring by assigning a value of "1" if a particular internal corporate governance provision is disclosed in the annual report or "0" otherwise. His report indicated that there was a statistically significant and positive association between the quality of the sampled firms' internal corporate governance structures and their financial performance as measured by Tobin's Q and return on assets (ROA). His second study (Ntim 2013), which used the integrated corporate governance (CG) index of 169 South African (SA) listed firms between 2002 and 2007, also found a statistically significant and positive association between a broad set of CG practices and financial performance proxied by "total share returns (TSR – a market-based measure), return on assets (ROA – an accounting-based proxy) and Tobin's Q (also a market-based measure)" (Ntim 2013: 17).

In his study of 227 selected firms listed on the Johannesburg Stock Exchange from 2002-2010, Mans-Kemp (2014) used the CGI, which he referred to as the Corporate Governance Score (CGS). The CGS was compiled from the annual reports of the firms employing content analysis. The corporate governance compliance level was assigned a scale from 1 to 4. Scale 1 reflects "very low", 2 "low to average", 3 "moderate" and 4 "high". Financial performance variables considered were: return on assets (ROA), return on equity (ROE), earnings per share (EPS), and total share return (TSR). The finding showed a significant positive relationship between CGS and the accounting-based EPS ratio but a negative association with TSR. It was also found that the CGS and the accounting-based measures of ROA and ROE have a positive, but not very strong, relationship.

From the above studies, it can be deduced that the quality of corporate governance, as measured by the CGI, can be used to predict the performance of the firm in terms of Tobin's Q, ROA, ROCE, EVA, ROE, EPS, and the TSR. This study considers three dependent variables. These include the Tobin's Q ratio, notwithstanding the criticisms against it (as discussed in Chapter Five), ROE, and Asset Turnover. Asset

turnover is used as a proxy for efficiency in resource management and as a proxy for agency costs in firms. Therefore, the first hypothesis below is proposed to test the relationship between the aggregate CGI, constructed using both the internal and external corporate governance mechanisms, and the performance of the listed firm in Nigeria using ROE, Assets Turnover, and Tobin's Q as proxies for financial performance. Thus, hypothesis 1, commencing with the alternative form, is proposed as stated below.

H_1: There is a statistically significant positive relationship between the Nigerian corporate governance compliance index and the firm's financial performance using return on equity (ROE), net asset turnover (NAT) and Tobin's Q as the performance measures.

H_0: There is no statistically significant positive relationship between the Nigerian corporate governance compliance index and the firm's financial return on equity (ROE), net asset turnover (NAT) and Tobin's Q as the performance measures.

4.2.2 Internal governance mechanisms (board governance) and firm performance – Equilibrium variables model

Despite the concern by Boyd (1990) about corporate boards that they are mere appendages of the shareholders, with no important role other than to irritate the management of the firm in the name of control, corporate boards have been identified as being very critical to the essence of the firm, especially because of their controlling and monitoring roles (Fama & Jensen, 1983; Kyereboah-Coleman, 2007; Baber & Lian, 2008; Aina, 2013). More importantly, the board is in charge of "approving major strategic and financial decisions, such as mergers and acquisitions (M & A) and capital structure changes, as well as hiring and firing top executives" (Ferreira, 2010:225). Further, internal control mechanisms, symbolised by the board, are designed to bring the interests and objectives of both the managers and the shareholders of firms into congruence (Walsh & Seward, 1990).

The organ of the firm that has the pivotal duty to ensure this congruence is the board of directors, because of its overwhelming powers, including the power to reward and dismiss the management team (Walsh & Seward, 1990). The Business Roundtable (1997:5) adds, "the selection and evaluation of the Chief Executive Officer (CEO) and concurrence with the CEO's selection and evaluation of the firm's top management team is probably the most important function of the board."

Drawing from resource dependence theory (Pfeffer & Salancik, 1978), the importance of corporate boards can be viewed in terms of the resources and capabilities that the board brings to the firm. Drees and Heugens (2013) argue, in this regard, that boards provide firms with the opportunity to gain access to critical resources for greater social cohesion among the key decision-makers in the interest of the firm. Sener (2011) posits that the board can also help in providing a strategy to minimise environmental uncertainty, especially as it has to do with global competition. Still, Gkliatis (2009:2) says that the main job of the board is to

> *"providing legitimacy/bolstering the public image of the firm, providing expertise, administering advice and counsel, linking the firm to important stakeholders or other important entities, facilitating access to resources such as human capital, building external relations, diffusing innovation, and aiding in the formulation of strategy or other important firm decisions"*.

The board also plays a pivotal role in the risk control strategy. While shareholders expect higher returns and the CEO is motivated to increase the rewards and benefits of his or her position, risk must be managed to ensure that the firm is not exposed to high-risk decisions. One of the major challenges that boards face, according to the Committee of Sponsoring Firms (COSO), is ineffective enterprise-wide risk management. This involves taking decisions and control measures in a way that balances managing risks while adding value to the organisation. Specific actions to achieve this include setting the tone and culture towards effective risk management; approval of corporate strategies; formulating high-level objectives; and approving broad-based resource allocations (COSO, 2009). Because the board's decisions and actions can hurt the performance of the company (Walsh & Seward, 1990), it is hard for the company to work well and optimally without the board.

CIMA (2007) argues in support of the importance of corporate boards by stating that enterprise governance encapsulates two dimensions of corporate governance processes, i.e., conformance and performance, which need to be kept in balance. The Board caters for the conformance dimension and addresses such issues as board structures and roles as well as executive remuneration. The performance dimension concentrates on the formulation of corporate strategy and value creation (CIMA, 2007). This ensures that the board makes strategic decisions and understands its appetite for risk and the key drivers of performance.

Guerra *et al.* (2009) argue that corporate boards are important because: 1) they are the cornerstone of corporate governance around which the fate of the firm revolves; 2) they ensure and maintain the integrity of the firm in all matters; 3) they develop corporate strategies that would promote innovation and enable the firm to gain competitive advantage in the modern free enterprise system; 4) they actively participate in the efforts aimed at providing equity and human capacity for the firm; 5) they act as the key decision-making organ on behalf of the shareholders as a repository of the firm‘s highest power; and 6) they promote the effectiveness of the market system, and as a venerable instrument of corporate governance, ensure that the firm operates ethically.

From the above literature, corporate boards are critical in ensuring that the interests of shareholders of firms and other stakeholders are protected to avoid agency conflict (Berle & Means, 1932; Jensen & Meckling, 1976; Davies, 2001; Bhagat & Jefferis, 2002; Onetto, 2007; Adams *et al*., 2010, Cornforth & Chambers, 2010; SEC-N, 2011, Amoli & Esmaeili, 2013; ICGN, 2014, FRC-N, 2018; OECD, 2015a). Therefore, undermining the effectiveness of corporate boards can be detrimental to the optimal performance of the firm and lead to avoidable corporate catastrophe (Mohamad, 2004; Denison & Fisher, 2005; Kostyuk, 2006; Gabrielsson *et al.*, 2007; Sonnenfeld, 2002; Adams *et al*., 2010; Rosa *et al.*, 2014; Cornforth & Chambers, 2010).

The sections that follow, discuss the empirical evidence for each of the board governance variables considered in this study. The discussion of the effect of the individual board governance variables on the performance of the firm is referred to as the equilibrium variable approach.

4.2.2.1 Board structure and diversity

Of the corporate governance mechanisms, corporate boards appear to have attracted the most research attention. The attention is connected to the role of corporate boards as the fulcrum of effective corporate governance of firms. Sanda *et al*. (2008), Sharma (2011), and Manna *et al.* (2016) say that the corporate board is the top of an organization's internal decision-making system.

The role of corporate boards in providing direction and superior control over firm performance and management in the interests of shareholders and other stakeholders (Francis *et al*. 2012, and Adams *et al.* (2010), makes corporate board diversity critical. Fan (2012) argues in this regard that, from the perspective of agency

theory, corporate boards represent the primary internal mechanism for controlling the opportunistic behaviour of managers. So, corporate boards help align the interests of shareholders and managers by using discipline, which Fan (2012:13) defines as "the removal of ineffective managers who fail to create or increase firm value or pursue their own interests at the expense of shareholders."

For effectiveness, a well-constituted board is required to possess some characteristics. The literature identifies these characteristics of an effective board to include separation of the board chairmanship and CEO positions; board size; board diversity (age, gender, qualification, industrial experience, ethnic and foreign representation); board independence; board type (two-tier or unitary boards); board meetings and attendance by board members (Carrasco, 2005; Black *et al*., 2006; Ujunwa, 2012; Guizani, 2013; Garba & Abubakar, 2014).

The 2011 SEC-N code provides direction on the structure of the board in the areas of duality, size, board meetings, minimum committees, and minimum board attendance by directors to justify re-election, among other requirements. The SEC-N 2011 code and the current FRC-N code of 2018 made no indication of employee representation on the boards of Nigerian firms. This is a subtle sign that the boards of Nigerian companies are not in a hurry to think about using the stakeholder approach in their corporate governance structures.

Literature is unanimous that the diversity of boards is positively related to high firm performance, especially when variables such as ages of directors, nationality, ethnicity, qualifications, experience in board matters, gender diversity, and independence of board members are considered (Falk & Lidemar, 2012; Sarhan *et al.,* 2018). Thus, board diversity is the different kinds of people who are on the board, which prevents everyone from having the same opinion (Abad *et al*., 2017). However, as observed by Şener *et al.* (2011), the effect of board composition on organisational performance varies among different environmental conditions. The consequence of this is that the characteristics of the board that motivate a level of firm performance in one region may not similarly motivate performance in another region. Therefore, to be effective, the board structure should be in the context of the environmental exigencies, culture, and other idiosyncrasies of the environment in which the firm operates.

Carter *et al*. (2003) identified five specific benefits of board diversification, including the promotion of a better understanding of the marketplace; an increase in creativity and innovation; effective problem solving; enhancement of the effectiveness

of corporate leadership; and promotion of more effective global relationships. Further, Khan *et al*. (2021) state that board diversity may be a source of a firm's competitive advantage, economic success, and assurance of sustainable corporate performance.

The economic argument is that board diversity makes a business more profitable and improves shareholder value because directors have unique characteristics that create additional value (Carter *et al.*, 2008). Forsythe (2016) adds that well-diversified boards tend to engage in less groupthink, are more risk-averse, have less volatile share prices and returns, and are more likely to pay better dividends. Ajin, Sougne, and Laouiti (2013) found that when there are more people on a board, there is less information asymmetry and more disclosure, which makes the company more open to investors and improves its performance.

The Nigerian SEC-N 2011 Code, FRC-N (2018), ICGN (2014) and the OECD Code of 2015 recommend that firms should have well-diverse corporate boards for effectiveness. Specifically, Part B, Section 4 of SEC-N 2011 states that corporate boards in Nigeria "should be of sufficient size relative to the scale and complexity of the firm'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". This suggests that corporate boards should have people of different educational and industrial experiences while ensuring that board members are people of proven integrity. There is no specific requirement in the Nigerian code for the inclusion of female or foreign board members. Thus, boards in Nigeria are at liberty to nominate their members in the context of the complexity of their firms. Nevertheless, Principle 2 of the FRC-N Code 2018 takes gender into account and says that the boards of publicly traded companies in Nigeria should have "an appropriate balance of skills and diversity (including experience and gender) without compromising competence, independence, and integrity."

According to the OECD (2015), board composition should be determined by the firm's complexity and age, as well as the country's existing laws and stakeholder demands. The boards of firms are expected to comprise more directors that are independent. The main guiding principles of the OECD (2015) recommendations on board diversity are independence and objectivity of the board. No special provisions have been made for board gender diversity. However, corporate boards are expected to have many independent directors with appropriate knowledge, competencies, and expertise to enable the board to carry out its functions effectively (The Business

Roundtable, 1979). In deciding the exclusion or otherwise of a board member based on the criteria of independence, The Business Roundtable (1979) advises that a director with some level of relationship with management or the firm may be included on the board if such inclusion will increase board effectiveness and is in the best interests of the shareholders.

The OECD code (OECD 2015) allows for the possible representation of employees on the boards of firms. This position is possibly taken to accommodate French and German models of corporate governance as members of the European Union, at which the OECD Code is primarily targeted. The ICGN (2014) in Section 3.1 requires that "the board should comprise a majority of non-executive directors, the majority of whom are independent. There should be a sufficient mix of individuals with relevant knowledge, independence, competence, industry experience and diversity of perspectives to generate effective challenge, discussion and objective decision-making". However, there are no specific requirements for the proportion of female and ethnic representation on corporate boards or educational qualifications. This study is limited to the provisions in the 2011 Code on board diversity that can be observed in the published annual reports of listed non-financial firms. Table 4.2 below lists the pertinent board governance variables as provided for in the 2011 Code, some of which form the building blocks of the various hypotheses proposed. The variables are not exhaustive, but only the ones relevant to this study, have been discussed.

Table 4.2: Board structure in the context of SEC-N 2011; OECD 2015 and ICGN 2014

S/N	CHARACTERISTICS	SEC-N 2011	OECD 2015	ICGN 2014
1	Specification of duties and responsibilities of Boards	Yes.	Yes.	Yes.
2	Board size	Minimum of 5, no maximum.	No provision on the number, but that board size depends on the size of the firm and the need to enable the board to exercise objective independent judgement on corporate affairs.	No specific provision.
3	The majority of Board members should be non-executive directors.	Yes.	Yes.	Yes.
4	Minimum independent director.	1	No specific number is mentioned rather than that "a sufficient number of board members will need to be independent of management".	No specific provision on the minimum number other than that the board should comprise a majority of non-executive directors, the majority of whom are independent.

Table 4.2: Board structure in the context of SEC-N 2011; OECD 2015 and ICGN 2014 - continued

S/N	CHARACTERISTICS	SEC-N 2011	OECD 2015	ICGN 2014
5	Duality of chairman/CEO	Separate positions to avoid over-concentration of powers in one individual.	Both duality and separation are acceptable depending on the circumstance and regional demands. However, separation is canvassed and where duality occurs where a single person combines both roles, the rationale for this arrangement should be explained.	The board should have independent leadership to avoid over-concentration of powers in one individual. However, the CEO can become Board Chair after a break in service of two years.
6	Duties of chairman and CEO specified	Yes.	Yes.	No specific provisions are made on the duties of the CEO and chairman.
7	Non-executive directors as Chairmen of board committees	No clear provision.	Yes.	No clear provision.

Table 4.2: Board structure in the context of SEC-N 2011; OECD 2015 and ICGN 2014 - continued

S/N	CHARACTERISTICS	SEC-N 2011	OECD 2015	ICGN 2014
8	The specific requirement of Audit Committee members	Members of the committee should have basic financial literacy and at least one member should have knowledge of accounting or financial management.	No specific provision.	The committee is comprised of non-executive directors, the majority of whom are independent. At least one member of the audit committee should have recent and relevant financial experience. The chairman of the Board may be the chairman of the Audit Committee in exceptional circumstances.
9	Gender diversity requirement	Not a requirement, but disclosure required.	No specific provision.	There should be a sufficient mix of individuals with relevant knowledge, independence, competence, industry experience and diversity of perspectives to generate effective challenge, discussion and objective decision-making.
10	Minimum directors' attendance at meetings	At least two-thirds of all board meetings. Section 12.	No specific provision.	No specific minimum attendance.
11	Age of directors between 18 and 70 years according to Section 256 and 267 of CAMA 1990	No specific mention, but disclosure is required.	No specific provision.	No specific provision.

Table 4.2: Board structure in the context of SEC-N 2011; OECD 2015 and ICGN 2014 - continued

S/N	CHARACTERISTICS	SEC-N 2011	OECD 2015	ICGN 2014
12	Qualifications of CEO	Qualified persons of proven integrity with industrial experience.	No specific provision.	No specific provision.
13	Provision for Senior/Lead Director	Not applicable	Yes.	Yes.
14	Educational qualifications of directors	No specific mention.	No specific provision other than that that board members should acquire appropriate skills upon appointment.	No specific provision other than that that board members should acquire appropriate skills upon appointment.
15	Industrial/board experience	Work experience and occupation in preceding ten years.	Provision requires directors to have board experience but not necessarily sectorial experience.	Board members should know the business, its operations and senior management well enough to contribute effectively to board discussions and decisions.
16	Foreign nationalities as directors	No provision.	No provision.	No provision.
17	Minorities representation	No provision on the requirement for minority representation on board.	No provision on the requirement for minority representation on board.	No provision on the requirement for minority representation on board.

Table 4.2: Board structure in the context of SEC-N 2011; OECD 2015 and ICGN 2014 - continued

S/N	CHARACTERISTICS	SEC-N 2011	OECD 2015	ICGN 2014
18	Unitary and dual boards	Unitary.	Unitary or Dual Boards allowed.	Unitary or Dual Boards allowed.
19	Establishment of Internal Audit Department	Yes.	Yes.	Yes.
20	Role of institutional shareholders	Play a key role in corporate governance.	Play a key role in corporate governance.	Play a key role in corporate governance.
21	Maximum block shareholding	No specification.	No specification.	No specification.
22	Employee shareholding including the CEO	Allowed.	Allowed.	Allowed.
23	CEO compensation links to performance	Yes.	Yes.	Yes.
24	Principles of code	Comply or explain.	Comply or explain.	Comply or explain.

Table 4.2 justifies, in terms of the codes of reference, the inclusion of some of the variables in the construction of CGI. There are certainly other very important codes whose provisions could also have been considered in the table, but the three codes have been considered because they contain a summary of the variables that guide this study and provide critical building blocks for a sound corporate governance framework in the Nigerian context. The paragraphs that follow discuss some of the pertinent internal governance variables as contained in Table 4.2. The subsections that follow examine the empirical evidence on the effect of some corporate governance variables on the performance of the firm.

i. CEO tenure

One of the major concerns about the principles contained in the codes, as indicated in Table 4.2, is the non-specification of the tenure of the CEO. The indication in the study by Tornyeva and Wereko (2012) that firms with longer-serving CEOs perform better than those with short-term service suggests the need for a provision on the tenure of CEOs. In Nigeria, only the CBN (2014) code indicates the maximum tenure of ten years for the CEOs of banks, broken into two terms of five years each (CBN 2014). The SEC-N (2011) does not indicate the tenure of the CEOs. The practice of fixing tenure has become popular both in the governance of nations and in other social systems. Even nature has tenure, so humans die. OECD (2004), SEC-N (2011), and CBN (2014) all agree that it makes sense for companies to set tenures for those who run them. This makes sure that the company gets new ideas and innovations from "new blood" and is not stuck in a rut.

The responsibility of the board to employ and remove CEOs (SEC-N 2011; CBN 2014; OECD, 2015a) at the whims and caprices of the directors has some inherent destabilising tendencies. Extending the principles of contingency theory, CEOs in different economic, technological, and social environments are unlikely to perform at the same level even if the same person is involved (Islam & Hu, 2012). This suggests that CEOs should be given ample time to learn the environmental dynamics of the firm before being removed. However, tact is required to decide on the tenure of CEOs because of the tendency of long-servicing CEOs to transmute to get entrenched in corporate politics and get involved with tweaking of the firm's existing policies and practices for self-advantage (Luo *et al.,* 2013; Ahamed, 2015; Brochet *et al*., 2019).

There is no limit to the tenure of the CEOs of listed firms in Nigeria, other than banks. In this regard, section 12.9 of the FRC- Code of 2018 provides that the "tenure of the MD/CEO and the EDs should be determined by the Board." This encourages the entrenchment of CEOs and results in two basic implications for the firm and the board. On the one hand, the omission can result in the engagement of CEOs that could, over time, become too powerful to be controlled by the board and therefore expose the firm to unreasonable risks (Allgood & Farrell, 2000). Second, entrenched CEOs understand the politics of the firm and can influence the directors to effectively take control of the firm with the associated dire consequences (Allgood & Farrell, 2000; Luo *et al*.,, 2013). The collapse of Enron, WorldCom, HealthSouth, and other corporate giants was facilitated by the actions of their powerful CEOs, some of whom doubled as the chairmen of their boards (Lyke & Jickling, 2002; Wang *et al.,* 2009; Knapp, 2011). On the other hand, if the CEOs are frequently removed, owing to the uncertainty of tenure, the firm may experience instability and become less innovative and inefficient in the long-run (Luo *et al.*, 2013). No hypothesis has been proposed to test the effect of the tenure of CEOs on firm performance because of a lack of adequate information on the tenure of CEOs of a substantial number of the sample firms.

ii. Chairman/CEO duality

Another characteristic of the board structure is the chairman/CEO duality. CEO duality is a situation whereby the CEO of the firm also functions as the chairman of the board of directors (BOD). CEO duality and the separation of the two offices have attracted significant discourse in corporate governance research. There are two schools: one supporting the separation of the two offices and the other supporting the duality. The Nigerian SEC-N 2011, OECD 2015, and ICGN 2014 all provide for the separation of the offices of the chairman of the Board and the CEO for the effectiveness of the board and to avoid undue dominance of one person over the affairs of the firm. In particular, OECD (2015:51) argues that the "separation of the two posts is generally regarded as good practice, as it can help to achieve an appropriate balance of power, increase accountability and improve the board's capacity for decision making independent of management".

SEC-N (2011:10) also supports the separation of the two offices "to avoid over-concentration of powers in one individual, which may rob the Board of the required checks and balances in the discharge of its duties". More specifically, in Nigeria, where CEOs are revered, CEO duality may exert significant influence on the board and reduce

the board's effectiveness in monitoring managers (Adewale, 2013). Therefore, the separation of the two offices (chairman and CEO) will promote the independence of the board (ICGN, 2014). This is because the positions of the chairman of the board and the CEO are very critical to the success of any firm, and the only way to control the hubris and narcissism associated with the duality of the chairman and CEO is to separate them.

The CEO duality is dominant in the USA, while the UK supports separation. Mersland and Strom (2007) in their study of corporate governance in micro-finance institutions (MFIs) in 57 countries indicate that the duality of the CEO and chairman positions negatively affects the performance of firms and results in low returns on assets (ROA) and high-performance costs. Ehikioya (2009) also confirms that the duality of the chairman and CEO positions negatively affects the performance of firms in Nigeria. Kyereboah-Coleman (2007) finds that the combination of the positions of CEO and board chairman in one individual negatively affects the performance of firms in selected African countries: Nigeria, Ghana, South Africa, and Kenya. no matter the ownership structure. Ujunwa *et al.* (2013) argue that there is a negative link between duality and the performance of the firm. Nazar (2016) observed that CEO duality is significantly negatively associated with ROA in listed Sri Lankan firms. Kao *et al.* (2018) identified that Taiwanese listed firms from 1997 to 2015 with no chief executive officer duality performed better than those with duality. Rutledge *et al.* (2016) find a negative relationship between CEO duality and the firm performance of 100 firms in the NASDAQ-100 Index during the five years, from 2010 to 2014. Doğan *et al*. (2013) confirm this position also in their study in 2014 listed firms on the Istanbul Stock Exchange (ISE) between the years 2009-2010. The results show that CEO duality harms the performance of the firm.

Chineme (2019) also identified the negative relationship between board duality and firm performance concerning deposit banks covering 2000 to 2016. This is similar to the results of Erah *et al.* (2012), who found that CEO duality is harmful to the financial performance of listed firms in Nigeria from 2001 to 2010. In Egypt, Atty *et al.* (2018) equally found that CEO duality had a significant negative effect on the Q Ratio of listed firms.

However, Gill and Mathur (2011) idetify a positive relationship between CEO/chairman duality and the performance of Canadian firms. The study by Weir *et al.* (2002), however, shows that the absence of duality does not significantly affect the performance of UK firms. In their study of eleven listed oil and gas firms in Pakistan,

Arslan *et al.* (2014) find no significant relationship between CEO duality and return on equity and profit of the firms. However, Onwuka *et al.* (2019) found that CEO duality did not significantly affect the performance of the Nigerian listed Nigerian Brewery Companies from 2008 to 2017.

Yang and Zhao (2014) discover that duality firms in the USA that are within the Canada-USA Free Trade Agreement in 1989 outperformed non-duality firms by 3-4% when their competitive environments changed and increased. Tobin's Q. Yang and Chen (2021), in their study of listed firms on the Shanghai and Shenzhen stock exchanges, identified a positive relationship between board duality and earnings per share. Peng *et al*. (2007) equally identified a positive relationship between CEO duality and the improvement of ROE of 530 firms listed on the Shanghai and Shenzhen Stock Exchanges at the end of 1996. Other studies that identified a negative relationship between board duality and the financial results of the firm include (Ehikioya, 2009; Erah *et al*., 2012; Ujunwa *et al.,* 2013; Doğan, 2013; Nazar, 2016; Duru *et a*l. 2016; Rutledge *et al*, 2016; Nazar, 2016; Atty *et al.,* 2018; Kao *et al*., 2018; Chineme, 2019). Therefore, the effect of duality on firm performance is not monotonic but may be influenced by some other variables, including cultural and structural variables. Collier and Gregory (1999) also observe that the effectiveness of the Audit Committee in controlling agency costs is reduced when the CEO and chairman positions are combined.

From the above literature, the effect of duality on firm performance is not monotonic as it has both positive and negative effects. Therefore, it can be argued that the effect of board duality on the performance of the firm may be influenced by some other variables, including cultural and structural variables. Hence, even though some pieces of literature may suggest that having two jobs as a CEO is bad, the CEOs in the United States seem to support it. They argue that separating the two offices has no significant advantage (The Business Roundtable, 1979).

While the debate on the benefits or otherwise of CEO duality continues, the pendulum tends to swing in support of the separation of the two main offices. This conclusion derives from the wave of corporate governance codes that recommend the separation of the two positions and the tacit adoption of the separation by the OECD (2004 and 2015) and ICGN (2014). Therefore, the study proposes hypothesis 2.1 as follows:

$H_{2.1}$: There is a statistically significant positive relationship between CEO duality and firm financial performance, as measured by Tobin's Q, ROE, and NAT.

H_0: There is no statistically significant positive relationship between CEO duality and firm financial performance, as measured by Tobin's Q, ROE, and NAT.

4.2.2.2 Gender diversity

Gender diversity focuses on the percentage of female directors on corporate boards (Abubakar 2014). The importance of gender diversity can be appreciated from the statement of Bernardi (2010). Barnett *et al*. (2010:3) argue that gender-diverse boards "show greater evidence of a diversity of thoughts and perspectives and at the same time, greater unity and collegiality… homogeneous boards that think the same have a lower level of unity… achieved from different thoughts and perspectives provided by a diverse, heterogeneous, non-dominant group....". Larking *et al.* (2012) and Erhardt, *et al*. (2003) argue similarly that the presence of women on boards adds value to a firm. The benefits of having women on corporate boards, according to Bell and White (2013:55), are:

- *"access to a significant part of the potential relevant talent pool that can contribute to and lead in a variety of technical and other functional areas;*
- *unique and tangible contributions, resulting from different perspectives,*
- *experience, concerns and sensibilities, in product development, marketing, customer relations, mentoring and employee relations in a world of diverse customers and work forces;*
- *the potential for richer discussion and debate at the executive and board level (and at other levels of management) that may ultimately increase effectiveness in their decision-making and advising;*
- *executive teams and boards with diverse backgrounds increase the likelihood that the perspectives and concerns of often-ignored constituencies are represented in discussions, while at the same time reducing the risk of 'groupthink' and*
- *signalling to various constituencies, including employees at all levels, customers, communities, regulators and other government actors, and the public, about a firm's values".*

Despite the importance of gender diversity to the success and growth of firms, the presence of a woman on corporate boards is very limited when compared to the male proportion globally (Abubakar, 2014). Current evidence, however, indicates a favourable global trend in the past two decades, especially during the global financial crisis (Kamonjoh, 2014; Bell & White, 2013; Wilson, Jr., 2014).

The impact of female directors on the performance of firms has divergent empirical evidence. While some studies show a positive relationship between female directors on corporate boards, others show a negative or no significant relationship (Agyapong & Appiah, 2015). Specifically, Carter *et al*. (2003, 2008), Falk and Lidemar (2012), in their studies of the effects of female directors on boards of firms, find that there exists a significant positive relationship between the proportion of women on corporate boards and firm value. Francoeur *et al.* (2008) confirm that firms with a high proportion of women officers and directors tend to beat their counterpart's performance significantly. Garba and Abubakar (2014) uphold this discovery in their study of 12 insurance firms in Nigeria, where they observed a positive relationship between gender diversity and the financial performance of insurance firms. Similarly, Kılıc and Kuzey (2016) found that the inclusion of female directors on the boards of firms listed on the Borsa Istanbul Exchange is positively related to the financial performance of firms, as measured by the return on assets, the return on equity, and the return on sales for the period of 2008-2012.

Abubakar (2014), in his study of 82 firms listed on the Nigerian Stock Exchange from 2004 to 2009, reveals a positive and significant relationship between gender diversity and the financial performance of the listed firms. Further, Larking *et al.* (2012) in their study of the effect of female directors on the reputation and market value of firms, discover that firms with female representation on their boards exhibit higher positive overall stock prices. In their study of Malaysian listed firms, Taghizadeh and Saremi (2013) also found that a high percentage of female directors on the board of directors increased ROE. Similarly, Kamonjoh (2014:11) states that diverse boards with female members showed "higher shareholder returns and reduced stock price volatility, higher quality decision making, enhanced organisational performance, improved governance and ethical practices..." Further, female directors on key board committees improve the performance of the firm (Green & Homroy 2015).

Further, Barnett *et al*. (2010), in their study of the impact of gender diversity on board effectiveness, noted five major findings. The first is that female directors on corporate boards add more value to the firm through the quality of their decision-making resulting from their effective participation in board meetings, fresh thinking, different styles of contribution, and their inert ability to build unity on boards. Secondly, gender-diverse boards give more respect to their chairpersons and enable them to be confident and lead with integrity and effectiveness. The third factor is that female board

members act with greater integrity, which robs all board members. The fourth factor is that gender-diverse boards are more agile and effective in negotiating the remuneration of executive directors and CEOs because "gender-diverse boards are more critical of the appropriateness of management remuneration and its alignment with performance and are more questioning of the effective use of remuneration to drive firm strategy" (Insync Surveys Pty Ltd, 2010:13). The last factor is that boards with people of different genders need to be clearer about their roles and responsibilities (Insync Surveys Pty Ltd., 2010).

However, Darmadi (2010) discovers from his study of Indonesian firms that there is a significant negative relationship between gender diversity and the financial performance of Indonesian firms. Ujunwa (2012) also upholds this in his evidence from the study of 122 firms in Nigeria that gender diversity is negatively linked with firm performance. Yasser (2015) and Agyapong and Appiah (2015) confirm a negative relationship between the increase in the female directorship of listed firms in Pakistan and Nigeria, respectively, and their firm financial performance. On the other hand, in their study of the effect of gender diversity on the performance of non-listed firms in Ghana, Agyapong and Appiah (2015) found no statistical relationship between gender diversity and firm financial performance, measured by ROA and Tobin's Q.

The mixed evidence notwithstanding, Kamonjoh (2014) argues that many of the studies have shown a positive correlation between more diverse boardrooms and the financial performance of the firms. There is no specific provision either in the Nigerian corporate law, listing laws or in any other rules and corporate governance principles in Nigeria, which reserves a proportion of directors for the female gender. Firms are merely encouraged to reflect gender diversity in their board composition (SEC-N 2011). This implies that female directors, while not precluded by any legislation from being nominated and appointed as board members, are subject to the same criteria for appointment to corporate boards in terms of skills, integrity, knowledge of the industry and other considerations. Another implication of passiveness in stipulating a percentage of female representation is that firms are at liberty to define diversity in a manner that suits them. Therefore, the study hypothesises that:

Hypothesis 2.2

$H_{2.2}$: There is a statistically significant positive relationship between the proportion of female board members, and firm financial performance, as measured by Tobin's Q, ROE, and NAT.

H_0: There is no statistically significant positive relationship between the proportion of female board members, and firm financial performance, as measured by Tobin's Q, ROE, and NAT.

4.2.2.3 Age of directors

Francis *et al*. (2012) observe that age diversity affects firm performance, especially during a crisis. Dagsson and Larsson (2011) add that there is a significant positive relationship between the age diversity of directors and ROA. This indication is also confirmed by Darmadi (2010) and Falk and Lidemar (2012), who find a positive relationship between boards with younger directors and financial performance in Indonesia and Malaysia, respectively. Other than sections 256 and 257 of CAMA (1990) that provide for disclosure of the age of directors above 70 years old, SEC-N 2011 does not have any provision on the age of directors. There was no substantial disclosure of the ages of directors in the annual reports of the sample firms. Therefore, no hypothesis has been proposed based on the age of the firm.

4.2.2.4 Board size

The size of corporate boards is an integral characteristic of resource dependence theory, since board size can determine the opportunities available to the firm to access critical resources, connections, and strategic support (Hillman *et al.,* 2009). Therefore, the size of the board and its composition are not random or independent factors, but rather, they are rational organisational responses to the conditions of the external environment (Pfeffer, 1972) and the size and complexities of the firm (Wang *et al.* 2009). Thus, the structure of the board should be intended to enable the firm to overcome or minimise the adverse impact the challenges and limitations of the external environment would have on its performance.

Extant literature on board size has attempted to provide a theoretical and empirical nexus between the size of corporate boards and the financial performance of firms. However, mixed evidence abounds on the impact of board size on a firm's performance. While studies (Ayogu, 2001; Ranti, 2011; Ujunwa, 2012; Gill *et al*., 2011; Guest, 2009; Sakawa *et al.,* 2009; EL-Maude *et al.*, 2018; Pantame & Ya'u, 2018; Yameen, Farhan & Tabash, 2019) indicate that large boards have negative consequences on the financial performance of the firm, others (Umoren & Okougbo 2011; Ness, Van & Kang, 2010; Kajola, 2008; Johl *et al*., 2015; Darmadi, 2010) reveal a positive relationship between large board size and Tobin's Q.

Agency theory supports the small board size structure because of the cost of maintaining a large board size and the problems of poor communication and decision-making that undermine the effectiveness of large boards (Guest, 2009). This argument is amplified in the evidence collected by a group of governance researchers from GMI Ratings in 2014 for *The Wall Street Journal*, which supports the notion that smaller boards are more effective than larger boards (Price, 2018). The said study defines a small board size as a board membership of about 9.5 directors, while a large board is said to have 14 or more directors (Price, 2018).

Apart from the obvious costs of allowances payable to board members and the cost of putting logistics in place to hold board meetings, the hidden costs of disagreement and longboard hours to reach agreement are inherent and more apparent with large boards than with small boards (Sinha, 1998). Smaller boards save on coordination costs to make outside board members effective and motivate insiders to reveal their private information through some form of incentive (Sinha, 1998; Ting, 2011). Sinha (1998:4) argues that the most effective optimal boards "are the boards of firms with low verification (i.e., monitoring) costs to outside board members and low private benefits to… board members".

Resource dependence theory, on the other hand, supports large boards since boards are considered to be a critical resource to the success of firms (Pfeffer & Salancik 1978). Specifically, Zakaria *et al*. (2014) found in their study of 73 Malaysian listed firms that the firms with larger board sizes performed better than those with smaller board sizes. Tornyeva and Wereko (2012) discover from their study of the insurance industry in Ghana that large board size affects the performance of insurance firms in Ghana positively. This also applies to the finding of Malik *et al.* (2014) that large board size improves the performance of banks in Pakistan. Empirical evidence on the effect of large board sizes on the financial performance of firms is mixed. In Jordan, Qadorah and Bt Fadzi (2018a) also confirm that board size is significantly and positively related to ROA. In Ghana, a developing economy, board size has been observed to be positively related to firm value (Agyemang & Nyarko, 2021). I

In India, it was also found in a study of 147 listed firms that board size has a positive and significant impact on the performance of the firm (Shrivastav & Kalsie, 2016). Further, Sobhan (2021) also finds that the board size of non-banking financial firms in Bangladesh recorded a significant positive relationship between board size and firm performance measured in terms of ROA. Orozco *et al.* (2018), in their study of

listed firms in Columbia from 2008 to 2012, also found that large boards improved performance.

However, in their study of 71 German firms from 1987-2016, Jenter and Urban (2019) find that large boards lead to lower firm financial performance. In Nigeria, Ibrahim and Salihu (2015) found a negative, although insignificant, effect of board size on the market value of equity. Pantamee and Ya'u (2018) upheld this finding in the case of the listed petroleum-marketing firms in Nigeria covering 2004 to 2014 with regard to the return on equity. In addition, Vaidya (2019) observes no significant relationship between board size and the Q ratio and ROE in their study of BSE 100 firms in India. Similarly, Alshetwi (2017) discovered no significant relationship between board size and the financial performance of Saudi Arabian firms for the period 2013 to 2015.

The empirical findings agree with the argument of resource dependence theory that the board provides immense and critical resource energy that enables the firm to perform optimally. Therefore, large boards are considered able to provide more connections and opportunities to firms. However, board size relates to the nature of the firm and the environmental dynamics within which it functions. Therefore, there could not be a single board size that fits all firms. Consequently, corporate governance codes attempt not to recommend a one-size-fits-all board size. The ideal board size may vary with firm characteristics. These characteristics include culture, environment, the trade-off between maximising the benefits to shareholders and the board's ability to control and monitor the actions of the executives; nature of the competitive environment; managerial team; legal or industrial requirements; size of the firm; age of the firm; growth opportunities; and the diversity of the firm (Boone, Field, Karpoff, & Raheja, 2007; Rahejaa, 2005; SEC-N, 2011; Sinha, 1998).

The impact of board size on the financial performance of the listed firms in Nigeria is tested using hypothesis 2.3 as stated below:

Hypothesis 2.3

$H_{2.3}$ There is a statistically significant positive relationship between the proportion of board size, and firm financial performance, as measured by Tobin's Q, ROE, and NAT.

H_0 There is no statistically significant positive relationship between the proportion of board size, and firm financial performance, as measured by Tobin's Q, ROE, and NAT.

4.2.2.5 Educational qualifications

The qualifications and experience of board members are positively related to firm performance (Ujunwa, 2012; Uadiale, 2012; Ness *et al.,* 2010). Boards with members that possess a PhD qualification have been found to impact positively on the performance of listed firms in Nigeria (Ujunwa, 2012). Girbină *et al*. (2012) found a strong link between firm performance and directors with advanced degrees in finance-related fields. In their studies of directors in Indonesia and Malaysia, Darmadi (2010) and Johl *et al*. (2015), also indicate a similar relationship between directors with higher degrees, especially in finance and accounting disciplines, and firm performance. However, Falk and Lidemar (2012) discovered no significant relationship between educational qualifications and firm performance in their study of firms on the Stockholm Exchange.

There was not enough disclosure on the educational qualifications of directors to test the impact of the educational qualifications of directors on the financial performance of listed sample firms in this study. Therefore, no hypothesis has been proposed.

4.2.2.6 Foreign nationalities

In his study on strategies of top management response to environmental uncertainty and competition resulting from the global economic renaissance, Sener (2011) argues that the inclusion of foreign nationals as directors of firms will help to reduce the negative effect of strategic information asymmetry on modern production methods and promote innovation in developing economies. Khidmat *et al.* (2020:25) observe in their study of listed Chinese firms registered in the Shanghai SSE 180 and the Shenzhen 100 from the period 2007 to 2016 that firms with foreign nationals show improved performance in terms of the accounting and market measures of ROA and Tobin's Q. Rahman *et al.* (2018) also observe this positive relationship in their study of Malaysian 350 non-financial listed companies from 2010 to 2014.

Most studies on the impact of foreign directors on the performance of firms in Nigeria (Ranti, 2011; Ujunwa, 2012; Sanda *et al*. 2011) indicate that the inclusion of foreign directors on the boards of firms has a positive relationship with the financial performance of the firms. Ujunwa (2012) and Sanda *et al*. (2011) also indicate significantly better performance by firms with foreign directors as CEOs than those without. This piece of evidence backs up the resource dependency theory because it is

thought that having foreign directors or foreign CEOs on the boards of firms adds to their industrial experience

The above positive sides of foreign directors notwithstanding, studies have equally indicated that foreign directors in firms have no significant improvement in firm performance, while in some cases, negative performance was observed. In the Nigerian context, Aghadike (2021), in the study of 20 listed manufacturing firms in Nigeria, identifies that foreign board membership has a negative but insignificant effect on the performance of manufacturing firms listed on the NSE. Ilaboya and Ashafoke (2017) confirm that board nationality diversity also exhibited a negative relationship with firm performance in their study of the banks quoted on the Nigerian Stock Exchange from 2010-2015. Okere *et al*. (2019), on the other hand, found a positive but not very strong link between the presence of foreign expatriates on the boards and the financial performance of Nigerian deposit money banks from 2008 to 2016.

Ranti (2012) also observes that banks that have foreign board members did not significantly outperform those with all local directors. Falk and Lidemar, (2012) find no significant relationship between the proportion of foreign nationalities on the boards of firms listed on the Stockholm Stock Exchange and firm performance. Further, Zakaria *et al.* (2014) find that the inclusion of foreign board members in the boards of trading and service firms in Malaysia has an insignificant effect on the financial performance of the firms. Black *et al*. (2006) also indicate in their study of Korean firms that the inclusion of foreign directors on the boards of Korean firms negatively affects the value of the firm. The poorer performance associated with a foreign directorship on the boards of firms was also confirmed by Masulis *et al*. (2011) in their study of US firms. The literature appears not to have specific explanations for the performance disparity of foreign directors in firms located in different economic climes. Legal requirements and the associated sanctions, coupled with other environmental dynamics, may account for the mixed results.

Hypothesis 2.4 has been proposed by the study to test the relationship between the presence of foreign nationals on the boards of listed Nigerian firms and their financial performance as follows:

Hypothesis 2.4

$H_{2.4}$: There is a statistically significant positive relationship between the number of foreign nationals on the boards of Nigerian listed firms and the firm financial performance, as measured by Tobin's Q, ROE, and NAT

H_0: There is no statistically significant positive relationship between the proportion of foreign nationals on the boards of Nigerian listed firms and firm financial performance, as measured by Tobin's Q, ROE, and NAT

4.2.2.7 Board independence

Board independence has also attracted significant research focus. Board independence is measured in terms of the proportion of independent and outside directors on boards, interlocking directorships, directors representing minorities and stakeholders, directors' shareholdings, and directors' connections with executives of the firm and business transactions (Bhagat & Black, 2002; Sanda *et al*., 2005; Liu, 2011). To ensure the independence of the board, especially from management, Kaufman and Englander (2005:1) argue that the "board should have a substantial majority of independent, outside directors, who neither have business relationships with the firm nor social relationships with management." Agency theory recommends that, for effective control of the actions and decisions of managers and to minimise agency costs, independent and non-executive directors should be actively involved in the affairs of firms (Kyereboah-Coleman, 2007).

Ordinarily, one would suggest that the presence of independent directors on the boards of firms would always result in better firm performance since highly objective decisions and strategies would be pursued. But empirical results appear to be conflicting. In their respective studies in Tunisia and the UK, Guizani (2013) and Weir *et al*. (2002) found a positive relationship between the presence of independent directors and the financial performance of the firms. The study of 103 listed firms drawn from Ghana, South Africa, Nigeria, and Kenya covering the five years 1997 to 2001, by Kyereboah-Coleman (2007), finds a positive relationship between independent boards and improvement in firm value. Qadorah and Bt Fadzil (2018b) find that board independence is significantly and positively related to ROA in Jordan. Equally, in Nigeria, Sanda *et al*. (2011) find that board independence has a significant positive effect on firm performance. In China, Liu *et al.* (2014) discovered a positive association between board independence and firm performance. In the same way, Altuwaijri and

Kalyanaraman (2016) find that the ratio of independent directors on the board is a good indicator of how well a company does in Saudi Arabia.

On the other hand, Johl *et al*. (2014) find that there is no significant effect on the performance of independent board members on the performance of firms in Malaysia. Javed and Igbal (2007) indicate that the presence of independent directors on the boards of firms in Pakistan negatively affects their performances. Bhagat and Black (2002) find no evidence that the inclusion of independent directors improves firm performance, but rather discover a negative relationship between industrial growth and the increase in board independence.

Sobhan (2021) in the study of 20 financial institutions listed on the Dhaka Stock Exchange (DSE) from 2012 to 2018 identifies a significant negative relationship between independent directors and firm performance. Bird *et al. (*2017) also find that board independence is negatively associated with the variability of firm performance. Further, in Malayasia, Ponnu and Karthigeyan (2010) discovered no improved performance between board independence and firm performance in their study of Malaysian listed firms. The Malaysian evidence of a negative association is also supported by another study by Kweh *et al.* (2019), which shows that independent directors negatively affect firm performance significantly.

The negative relationship between board independence and firm performance provides an interesting area for further investigation against the backdrop of the popular belief that the inclusion of non-executive and independent directors on the boards of firms would result in effective corporate governance and impact favourably on performance (OECD, 2004; SEC-N 2011; ICGN 2009). In Hypothesis 2.5, it has been proposed to test this relationship between board independence and firm performance in Nigeria as follows:

Hypothesis 2.5

$H_{2.5}$: There is a statistically significant positive relationship between board independence and firm financial performance, as measured by Tobin's Q, ROE, and NAT.

H_0: There is no statistically significant relationship between board independence and firm financial performance, as measured by Tobin's Q, ROE, and NAT.

4.2.2.8 Unitary and dual boards

In Nigeria, SEC-N 2011 requires all listed firms to operate unitary boards (i.e., one board comprising both executive and non-executive directors). Some European and Asian countries, including Germany, China, and Japan, to mention but a few, operate dual or two-tier boards. However, the new French system, introduced in 2001 in the Loi Nouvelle Régulations Economique (NRE) adopts the unitary model and allows the roles of chairman and CEO to be separate (Miller, 2006).

Spisto (2005) argues in favour of dual or two-tier boards, saying that unitary or single-tier boards are unable to fulfil the two major roles of the boards as supreme executive body and supervisory body. In his (Spisto, 2005) opinion, combining these two roles into one body exposes the board to abuse of power by the management and reduces the capacity of the board to be accountable. However, Carrasco (2005) argues that dual boards are more expensive in terms of both administrative cost and laxity in setting challenging targets for CEOs and heightened self-dealings. As such, unitary boards appear to be more effective than dual boards. There is no hypothesis proposed for this section because the Nigerian code and the company laws and regulations only recognise unitary boards in Nigeria.

4.2.2.9 Board meetings

A listed firm in Nigeria is expected to hold board meetings at least four times every year (CAC, 1990, SEC-N, 2011 and CBN, 2006). In addition, a board member is expected to attend board meetings 2/3 of the time. Attendance at board meetings is also an assessment criterion for re-election to the board (SEC-N (2011). Ntim and Osei (2011) discover a positive relationship between board attendance and firm performance among listed firms in Africa.

For Nigeria, Azubike *et al*. (2015) also observe a significant positive association between the number of board meetings and the financial performance of the firm measured in terms of earnings per share (EPS). Usman (2018) also confirmed in his study of firms in the industrial goods (building materials) sector of Nigeria as of 2015, that the number of board meetings has a positive but insignificant impact on the financial performance of some quoted firms from 2008 to 2014.

Chou *et al.* (2012) and Lin *et al*. (2014) indicate that regular board attendance positively affects firm performance in Taiwanese. Yakob and Hasan (2021) noted that board meetings demonstrate a positive and significant effect on the performance of

listed Malaysian firms from 2013 to 2017. Francis *et al*. (2012) corroborate the positive relationship by indicating that firms in Finland with poor board attendance at meetings perform significantly worse than those with regular attendance indicate. A similar study by Al-Daoud *et al.* (2016) observed a positive association between the frequency of corporate board meetings and the firm performance of firms listed on the Amman Stock Exchange in the industry and service sectors from 2009 to 2013.

The positive relationship between the frequencies of board meetings was also identified in the case of banks in Nigeria by (Eluyela *et al*., 2018). Agarwal and Singh (2020) and Archana (2020) have discovered similar positive relationships in India, where the increase in the rate of board meetings positively influenced the return on assets and reduced agency costs.

There are, however, empirical indications of a negative relationship between the frequency of board meetings and the financial performance of the firm. In their study of the effect of board meetings on the financial performance of insurance companies in Nigeria, Ebun and Emmanuel (2019) observe a negative relationship with no significant impact between the board meetings, and the performance of insurance firms in Nigeria concerning the ROE, return on assets, and Tobin's Q. Akpan (2015), on the other hand, reveals a significant negative relationship between the frequency of board meetings and the ROE of 79 Nigerian listed firms from 2010 to 2012. Atty *et al.* (2018) support the non-significant relationship between board meetings and firm financial performance (ROA) in their study of listed firms in Egypt as well. The finding by Atty *et al*. (2018) was also replicated by Qadorah and Bt Fadzi (2018) when they identified that the frequency of board meetings did not determine the performance of industrial Jordanian firms measured in terms of ROA. Further, Hanh *et al.* (2018) observe, in their study of listed firms in Vietnam, that the frequency of board meetings exerts a negative effect on the financial performance of listed firms, while Vafeas (1999) finds an inverse relationship between the number of board meetings and the firm value of listed firms in the Forbes compensation survey for 1992.

Other empirical evidence of a negative relationship between the frequency of board meetings and firm performance includes EL-Maude *et al.* (2018), where a negative but insignificant association between board meetings and the value of the firm measured in terms of ROA was discovered for Nigerian listed firms. In the context of South Africa, Ntim (2009) identifies a statistically insignificant and negative relationship between the frequency of board meetings and the ROA, but a statistically

insignificant and positive nexus between the frequency of board meetings and the Q-ratio. The negative relationship between the frequency of board meetings and the financial performance of the firm measured in terms of earnings per share was also found in the case of financial firms from 2006 to 2012 (Modum *et al.*, 2013). Therefore, the study hypothesises that:

Hypothesis 2.6

$H_{2.6}$: There is a statistically significant positive relationship between the number of board meetings, and firm financial performance, as measured by Tobin's Q, ROE, and NAT.

H_0: There is no statistically significant positive relationship between the proportion of board meetings, and firm financial performance, as measured by Tobin's Q, ROE, and NAT.

4.2.2.10 Committees' structure

The Firms and Allied Matters Act (1990) provides for only the SAC of the board. However, the SEC-N (2011), in addition to the Audit Committee, requires the boards of listed firms to determine the extent to which their duties and responsibilities will be undertaken through their committees. The SEC-N (2011) Code requires boards to have at least two additional committees: the Governance/Remuneration Committee, comprising only non-executive directors, and the Risk Management Committee. This suggests that, for effectiveness, listed firms should operate a committee-based board structure (SEC-N 2011; ICGN 2014; OECD 2004 and 2015).

From the empirical evidence juxtaposed against the requirements of the three Codes, it can be posited that there is a relationship between the board structure and the value of the firm. Therefore, hypothesis 2.7 below is proposed to test the effect of the number of board committees on the performance of the firm.

Hypothesis 2.7

$H_{2.7}$: There is a statistically significant positive relationship between the number of board committees, and firm financial performance, as measured by Tobin's Q, ROE, and NAT.

H_0: There is no statistically significant positive relationship between the number of board committees, and firm financial performance, as measured by Tobin's Q, ROE, and NAT.

4.2.2.11 Audit committee and internal control system

The importance of the independence of the audit committee cannot be overemphasised because of the need for listed firms to produce reliable financial statements. Thus, the Audit Committee is an integral part of the corporate governance framework of listed firms in Nigeria (Eyenubo *et al*., 2017). The CAMA 1990 provides in Section 359(4) that 4):

> *"the audit committee shall consist of an equal number of directors and representatives of the shareholders of the company (subject to a maximum number of six members) and shall examine the auditors' report and make recommendations thereon to the annual general meeting as it may think fit."*.

However, the new Act CAMA, 2020 (FRN, 2020: section 404) reduced the maximum number to "five members, comprising of three members and two non-executive directors".

The Audit Committee relates directly to the External Auditor, and the latter is required to render the audit report to the Committee. The membership of the Committee comprises non-executive directors and shareholder representatives only. According to Section 359 of CAMA (1990) and Section 404 of CAMA (2020), the Audit Committee has the following duties:

a) determine whether the accounting and reporting policies of the company comply with the legal requirements and the agreed ethical practices;

(b) review the scope and planning of audit requirements;

(c) review the findings on management matters in conjunction with the external auditor and departmental responses thereon;

(d) keep under review the effectiveness of the company's system of accounting and internal control;

(e) make recommendations to the Board on the appointment, removal and remuneration of the external auditors of the company; and

(f) authorise the internal auditor to carry out investigations into any activities of the company which may be of interest or concern to the committee.

The Committee examines the auditors' report and makes recommendations thereon to the annual general meeting as it may think fit. Specifically, CAMA (1990, 2020) and SEC-N (2011) provide that the audit committee and the external auditors should report to the members and not to the board of directors. This is one of the major provisions that are aimed at ensuring the effectiveness of corporate governance in firms. The Nigerian Code of 2011 (SEC-N, 2011) provides in Section 30.2 that

"Members of the committee should have basic financial literacy and should be able to read financial statements. At least one member should have knowledge of accounting or financial management."

The new CAMA, 2020 (section 404(5)) specifically states that 5) "all members of the audit committee shall be financially literate, and at least one member shall be a member of a professional accounting body in Nigeria established by an Act of the National Assembly." These provisions intend to ensure that the Audit Committee can understand the financial statements and be able to explain technical details in the financial statements to the shareholders when the need arises. In addition to the statutory functions of the Audit Committee, the SEC-C (2011) provides the following additional functions in Section 30.4:

"In addition to its statutory functions, the audit committee should have the following additional responsibilities:
(a) assist in the oversight of the integrity of the company's financial statements, compliance with legal and other regulatory requirements, assessment of qualifications and independence of external auditor; and performance of the company's internal audit function as well as that of external auditors;
(b) establish an internal audit function and ensure there are other means of obtaining sufficient assurance of regular review or appraisal of the system of internal controls in the company;
(c) ensure the development of a comprehensive internal control framework for the company; obtain assurance and report annually in the financial report, on the operating effectiveness of the company's internal control framework;
(d) oversee management's process for the identification of significant fraud risks across the company and ensure that adequate prevention, detection and reporting mechanisms are in place;
(e) at least on an annual basis, obtain and review a report by the internal auditor describing the strength and quality of internal controls including any issues or recommendations for improvement, raised by the most recent internal control review of the company;
(f) discuss the annual audited financial statements and half-yearly unaudited statements with management and external auditors;
(g) discuss policies and strategies with respect to risk assessment and management;
(h) meet separately and periodically with management, internal auditors and external auditors;
(i) review and ensure that adequate whistle-blowing procedures are in place. A summary of issues reported are highlighted to the chairman;
(j) review, with the external auditor, any audit scope limitations or problems encountered and management's responses to same;
(k) review the independence of the external auditors and ensure that where non-audit services are provided by the External Auditors, there is no conflict of interest;
(l) preserve auditor independence, by setting clear hiring policies for employees or former employees of independent auditors;

(m) consider any related party transactions that may arise within the company or group;
(n) invoke its authority to investigate any matter within its terms of reference and the company must make available the resources to the internal auditors with which to carry out this function including access to external advice where necessary; and
(o) report regularly to the Board".

The main objective of the provisions of both the SEC-N (2011) and the Act (CAC, 1990 and 2020) implies that the audit committee and the external auditor should have enough independence to enable the board to exercise the required level of oversight function over the financial processes of the firm. In this regard, the Code 2011 (SEC-C, 2011) provides the following in Section 33:

"In order to safeguard the integrity of the external audit process and guarantee the independence of the external auditors, companies should rotate both the audit firms and audit partners;
Companies should require external audit firms to rotate audit partners assigned to undertake the external audit of the company from time to time to guarantee independence. Audit personnel should be regularly changed without compromising continuity of the external audit process;
External audit firms should be retained for no longer than ten (10) years continuously. External Audit firms disengaged after continuous service to company of ten (10) years may be reappointed after another seven (7) years since their disengagement."

In addition, to ensure integrity and independence of the Audit Committee, although the 2011 Code and CAMA do not provide for the choice of the chairman, empirical evidence suggests that the chairman of the audit committee in most firms is either an independent director or the shareholders' representative.

Deloitte Touche Tohmatsu (2009) observes that a properly constituted audit committee can make an effective and valuable contribution to the process by which the firm is directed and controlled, adding that the Audit Committee should meet at least twice yearly for effectiveness. Other benefits include improving understanding and confidence between directors, management and the internal and external auditors; increasing internal and external auditors' accountability (as their performance will be under greater scrutiny); creating a climate of discipline and control, reducing fraud, promoting cost efficiency and strengthening the integrity of the financial statements (Zheng, 2008; Afza & Nazir, 2014).

Factors that affect audit independence and compromise the quality of audit and audit reports include inadequate skills, inadequate capacity in terms of materials and financial support of the audit personnel, lack of freedom of auditors, the threat of losing

customers, economic independence of the auditor, and lack of professional ethics, (Chouha *et al.*, 2021).

Big auditors are preferred to smaller ones by investors because big audit firms are perceived to most likely adopt a rigorous audit process and quality control procedures that comply with laws, regulations, and applicable international standards (International Auditing and Assurance Standards Board, 2014; Baffa & Yero, 2017). Thus, Ado *et al.* (2020) found a positive relationship between firms that are audited by large auditors in Nigeria and the return on Assets (ROA).

Several studies have been carried out on the importance of the audit committee, and evidence shows the ability of audit committees to improve the integrity of financial reports, minimise agency conflicts, protect shareholders' rights, safeguard stakeholders' interests, and maximise firm value (Zheng, 2008; Afza & Nazir, 2014). Thus, quality audit services enhance the expectation of receiving improved financial reports and lead to an increase in the firm value because of investors' confidence in the control and financial reports of the firms (Amer *et al.,* 2014). Thus, the level of independence of the auditor can affect the quality of the audit report, which may, in turn, affect the premium that investors are prepared to pay for the shares of the firm, since the quality of audit reports affects the value of the firm (Aronmwan *et al.*, 2013; Wijaya (2020).

Zheng (2008), in his study of S & P 500 firms during the period 1997–2005, finds that the calibre of people in the audit committee affects the performance of the audit committee and that the financial expertise of the audit committee is positively associated with a firm's financial reporting quality and, by extension, the value of the firm. Equally, Amer *et al.* (2014) found that the financial expertise of the audit committees and the number of committee meetings are positively and significantly associated with ROE. However, Al-Matari *et al.* (2014a), in their study of Saudi firms listed on the Saudi Stock Exchange (TADAWL) found no significant positive relationship between the characteristics of the audit committee and the performance of the listed firms in 2010.

Although, the importance of the independence of the audit committee appears not to be adequately stressed in literature (Al-Matari *et al.,* 2014a), an effective audit committee, symbolised by the level of independence of the committee members and their accounting and financial skills to be able to analyse financial statements, will result in quality financial reports and corporate efficiency (Islam *et al.,* 2010). Thus, the effectiveness and independence of the audit committee are critical in delivering trust

and confidence in reporting and risk management (Tugman & Leka, 2019). To ensure the effectiveness of the audit committee and improve its independence, Tugman and Leka (2019) identified five factors as follows:

1. Transparency of the committee in terms of disclosure of the work and key areas of its agenda and discussions, including the negotiation of the fees of external auditors.
2. Effective communication between the committee and the management, internal and external audit, the CFO and finance function and the board. This includes formal and informal approaches. This is critical in linking the board and management effectively in ensuring the issuance of quality financial reports by the firm.
3. Effective committee composition to ensure that the committee can achieve its mandates. This will include ensuring that only members with appropriate skills, competencies, and expertise are included in the committee.
4. Adoption of effective strategies in the discharge of its duties and functions. The strategies include:
    (i) Having well-defined terms of reference, setting out a clear scope of responsibilities, which are widely understood by the audit committee members, as well as by others in the organisation, including the board, CFO, and finance function.
    (ii) There should be coordination between the auditor, audit committee, and the internal auditor to prevent duplicated effort, increased cost, and poor effectiveness.
    (iii) Appropriate frequency and efficiency of meetings with focused agendas that allow sufficient time and attention for an in-depth discussion on critical areas, as well as the flexibility to add additional items as they arise.
    (iv) Producing short summaries to circulate to audit committee members in advance of meetings outlining key areas of focus for discussion.
    (v) Holding a call or prep meeting between the audit committee chair and the auditor before each audit committee meeting.
5. Strength of the finance function. It is the finance function that produces the financial reports for the auditor. The Committee is expected to consider the internal processes and systems that culminate in the production of the financial reports for auditing. The committee's consideration would include considering the skill set of the staff of

the finance department, available materials, and other resources. Where necessary, the Committee may be involved in the process of selecting and appointing key finance staff and in succession planning.

The Nigerian Standard on Auditing, issued by the ICAN (ICAN, 2013:14), defines audit independence as

> *"... comprising both independence of mind and independence in appearance. The auditor's independence from the entity safeguards the auditor's ability to form an audit opinion without being affected by influences that might compromise that opinion. Independence enhances the auditor's ability to act with integrity, to be objective and to maintain an attitude of professional scepticism".*

To attain audit quality, auditors need to be independent both in fact and in appearance. Therefore, external auditors are to ensure that they do not accept or undertake some non-audit services, which may compromise their independence. These services include: making management decisions, self-review, advocacy, preparing accounting records and financial statements, design and installation of financial IT systems, valuation services, internal audit, acting for a client in a legal dispute, senior management recruitment (Beattie *et al*., 2009).

Mohamed and Albeksh (2016) also identified factors that affect audit independence to include the size of the audit firm; level of qualification of auditors; tenure of audit services; provision of non-audit services; integrity; and objectivity of the auditor. Other factors include influence on the auditors concerning the relationship between the external auditors and the client, such as the presence of lending or resulting from loan arrangements; fee dependence; family ties; advocacy arrangements, including defending the client in court and also getting involved as an employee of the firm (Mohamed, 2016). Beattie et al. (2009:4) argue that if the independence risk of an activity cannot be reduced to an acceptable level, the auditor should either give up the audit engagement or turn down the non-audit service.

Baffa and Yero (2017) observe that investors are more comfortable investing in firms that are audited by auditors that cannot be easily influenced to embrace creative accounting, which would result in presenting a false picture of their affairs. The preference of investors for firms considered to have quality audit results in the improvement of the market share prices of such firms (Okolie & Izedonmi, 2014). Therefore, it is expected that the independence and effectiveness of the audit committee and the external auditors would enable the firm to present a true reflection of the

financial position, motivate the firm to improve its financial performance and improve the value of the firm.

Eyenubo *et al.* (2017), in their study of quoted firms in Nigeria from 2011 to 2015, discovered a positive and significant relationship between the size of the audit committee and the financial reporting quality. Similarly, Okpala (2012) found there is a significant relationship between audit committee activities and the integrity of financial statements, which enhances the quality of corporate governance and prevents organisational failure. In Jordan, the study by Hamdan *et al*. (2013) find that the effectiveness of the audit committee in terms of meetings, size, and financial skills is positively associated with earnings, while the degree of independence and share ownership is negatively related to earnings.

However, Olayinka (2019) found no significant effect between the audit committee's effectiveness, in terms of committee size, the frequency of the committee's meetings, the members' financial literacy, and the financial performance of the firms. In India, Bansal and Sharma (2016) equally discovered no effect of the Audit Committee's independence and its meeting frequency on the financial performance of Indian firms. Rahimi *et al*. (2015) identified a positive but not significant relationship between firm profitability and the size of the audit. However, Awa and Obinabo (2020) identified a positive and significant relationship between the auditors' independence, the size of the audit firm, and the financial performance of the firm.

Hypothesis 2.8 tests the effect of the independence of the SAC and the external auditor on the value of the firm. The combined provisions of Part E of SEC-N (2011) on the audit committee and the empirical evidence guide hypothesis 2.8 as proposed below.

Hypothesis 2.8

$H_{2.8}$: There is a statistically significant positive relationship between the independence of the External Auditor and Audit Committee, and firm financial performance, as measured by Tobin's Q, ROE, and NAT.

H_0: There is no statistically significant positive relationship between the independence of the External Auditor and Audit Committee, and firm financial performance, as measured by Tobin's Q, ROE, and NAT.

Improvement in the independence of the Audit Committee is expected to be compensated for by better value of the listed firms**.** If there is no significant positive relationship between audit independence and firm value, the null hypothesis will be accepted.

4.2.3 Non-promoter institutional shareholders

The firm's ownership structure refers to the mix of equity shareholdings (Myers, 2001; Chiung-Ju *et al.,* 2011). Manna *et al*. (2016:5) explain that ownership structure implies "the proportion of shares held by different parties in the equity capital of the firm. The principal groups … are promoters, institutional investors, and private corporate bodies". Each of the groups has their own independent motivations and consequent power concerning decision-making, which may affect the performance of the firm (Manna *et al*. (2016). The wave of corporate governance development encourages block or institutional ownership of firms to discipline the management and alleviate agency conflict associated with dispersed ownership (OECD, 2004; Dhillon & Rossetto, 2009; SEC-N, 2011).

Institutional shareholders or investors refer to shareholders that are not individuals but corporate bodies, either private or public limited liability firms, local and international firms, fund managers, pension fund firms, banks, insurance firms, investment firms, trust funds other than the promoters (Chung & Zhang, 2011; Abbaszadeh *et al*., 2013; Dharmastuti & Wahyudi, 2013). They also include entities "that accept funds from third parties for investment, usually in their name, but on such parties' behalf" (OECD, 2011:9). The existence of institutional ownership in the ownership structure of the firm can potentially affect board governance and the architecture of the entire corporate governance system of firms and their performance (Li, 1994; Chiung-Ju *et al.,* 2011).

One proxy for external corporate governance mechanisms is non-promoter institutional shareholders (Weir *et al.,* 2002; Dharmastuti & Wahyudi, 2013; Walsh & Seward, 1990). As observed by Ruder (1998), the chairman of the USA Securities and Exchange Commission, "Today, instead of a faceless group of powerless investors each with only a small interest in a firm, institutional investors, with their significant shareholdings and substantial market presence, are emerging as a new power group" (Ruder 1998:4). Institutional ownership has a very important role in corporate governance, especially regarding the ability of institutional and block ownership to

effectively monitor the activities of firms, control agency conflicts, motivate information disclosure, reduce discretionary accruals, and influence the direction of corporate policies and performance (Iturriaga & Hoffmann, 2005; Dharmastuti & Wahyudi, 2013).

One of the major interests of institutional investors is a sustained or improved return on investment (Wahab *et al.*, 2008). This informs the focus of institutional investors on viable firms with effective corporate governance since the reward of the fund managers is based on the level of returns from investments (Wahab *et al.*, 2008). The focus of institutional investors on profitability provides the required control and monitoring of the performance of firms and their management, since the shares of underperforming firms are disposed of en block in favour of shares of performing firms (Lee, 2015). Large investors have better corporate monitoring capacity to curb opportunistic or self-serving behaviour of managers since poor performing firms can be exposed to forced acquisition (Shleifer & Vishny, 1997; Cornett *et al,.* 2007). Thus, the effective control of agency conflict by the institutional shareholders is made possible.

Institutional investors effectively exercise their ownership functions and rights in their investee firms. These rights and functions include the appointment and removal of directors and the initiation of taking over actions, directly or through third parties (Shleifer & Vishny, 1997; CAC, 1990), which has the effect of checking agency conflict. Therefore, institutional or large investors have a more legitimate monitoring role and influence over top-management decisions to impact positively on the financial performance of the firm (Charfeddine & Elmarzougui, 2011; Dhillon & Rossetto, 2009).

The ICGN (2014) also advises that institutional investors should take stakes in firms to provide effective board control and advance beneficiary or client interests as their primary obligation. Moreso, as they have the potential to act as responsible owners, and by virtue of their significant holdings, they possess incentives to monitor managers, check managerial deviant behaviour, and ensure that firm value is maximised (Rock, 2015). Accordingly, Ntim (2012:183) observes that institutional shareholders have "relative financial cloud, reputation, knowledge, and information advantages that can impact positively on internal corporate governance structures and the financial performance of firms by exerting their influence on board structures, composition, and functioning." Consequently, institutional block shareholders are said to be able to monitor management "either through informal negotiations with management or

through the market for corporate control by facilitating the takeover of a firm whose management is underperforming" (Sinha, 1998:95). Thus, the OECD (2015) requires that institutional or block shareholders should contribute to the effectiveness of corporate governance by supporting and disclosing their corporate governance policies in relation to their investment. This provision places institutional investors in a fiduciary capacity to protect the interests of all stakeholders.

El Ghoul *et al*. (2007) argue that although institutional or corporate shareholders can curb agency costs, another strand of literature submits that this category of shareholders can create another agency problem (Type II) where the controlling shareholders divert corporate resources at the expense of minority investors (Gedajlovic *et al*. 2001; Boroujeni *et al*., 2013). As a result, other individual potential investors would offer lower prices for firms controlled by dominant shareholders for fear of this tunnelling practice (El Ghoul *et al.,* 2007). Therefore, the impact of the ownership structure on the value of the firm depends on the level of separation of control from management as well as on the effectiveness of legal rules and enforcement to protect the interests of the minority. In addition, OCED (2004a; 2004b) suggests that the effectiveness and credibility of the entire corporate governance system and firm oversight depends largely on the ability of institutional investors.

Although Downes *et al*. (1999) observed that the advocacy for the involvement of institutional investors in the boards of their investee firms has no compelling empirical evidence, this view has been challenged by the results of the scores of empirical studies that exist. Li, (1994) in his study of 390 listed firms based in 10 industrial countries in Japan, Western Europe, and the USA in 1987, discovered that the change in the ownership structure that introduces block or institutional shareholding enhances effective monitoring and influence over the management of the firm and the structure of the board. Weir *et al.* (2002), in their study of the impact of internal and external governance mechanisms on the performance of UK public firms, also indicate that the market for corporate control acts as an effective disciplinary measure against deviant behaviour of managers and as an effective mechanism in controlling agency conflict and poor performance of the firm. Further, Kyereboah-Coleman (2007) finds that the presence of institutional ownership enhances the market valuation of firms in some African countries.

Srivastava (2011), however, found in his study of listed firms on the Bombay Stock Exchange that ownership concentration has an insignificant impact on stock market performance measures, but suggests that the result might imply that stock market performance was mainly affected by economic and market conditions rather than ownership concentration. Gul *et al.* (2012 found that institutional ownership reduces the level of agency cost of 50 firms listed on the Karachi Stock Exchange, whereas in Indonesia institutional ownership had a significant positive impact on both profitability and corporate dividend (Dharmastuti & Wahyudi, 2013). Similarly, Hutchinson *et al.* (2013) identified a positive relationship between institutional shareholding and firm governance ratings, risk, and profitability of Australian firms from 2006 to 2008.

In the case of developing economies, Tornyeva and Wereko (2012) found that foreign and institutional ownership of insurance firms in Ghana positively influenced the performance of Ghanian firms. Gugong *et al.* (2014) identified a similar positive relationship between ownership structure and the value of listed insurance firms in Nigeria. Afza and Nazir, (2015) confirm the positive relationship between institutional shareholding and firm performance in their study of 200 non-financial Pakistani firms listed on the Karachi Stock Exchange (KSE) from 2005 to 2011. Zhang (2016), in his comparative study of listed firms in South Africa and China, observes a significant positive relationship between intuitional shareholding and the financial performance and earnings management of listed firms in both countries. The positive relationship between institutional investors' participation in firms and optimal investment decisions was also discovered by Ward *et al*. (2018). Further, Mizuno and Shimizu (2015) found that firms listed on the First Section of the Tokyo Stock Exchange between 2005 and 2010 with the highest institutional investors showed better performance than other groups. Several other studies have found a positive relationship between firm performance and the involvement of institutional investors (Stinglitz, 1984; Cornett *et al.,* 2007; Reddy & Bather, 2013; Rock, 2015; Borochin & Jie, 2016; Ivanova, 2017).

In their study on institutional shareholders' engagement in Nigeria using a sample of 20 listed firms from 2011-2013, Aanu *et al.* (2016) found that institutional ownership had a positive but insignificant impact on the firm's Tobin's Q and a negative and equally insignificant relationship with ROE. In India, Kapil and Mishra (2019), in their study of the impact of institutional ownership of 422 listed firms from 2013-2018, similarly found a positive and significant impact on the Q's ratio but no

significant impact on ROA and ROE. In the case of America, the study of the US real estate sector by Nico *et al*. (2013) from 1998 to 2010 found a significant and positive impact of increases in institutional ownership on alpha returns. An increase in institutional ownership also yielded larger values for Tobin's Q.

In Istanbul, Dogan (2020) identified a positive relationship between institutional shareholding and firm value in a study of 104 firms listed in the BIST (i.e., Borsa Istanbul) industrial index between 2006 and 2018. In Japan, institutional shareholders have been found to enhance sustainable firm performance that influences the profitability of the firm positively (Sakawa & Watanabel, 2020). Eluyela *et al.* (2020) also found a positive relationship between institutional shareholding and the performance of banks in Nigeria for the period 2011-2018. This position was also supported in India for a sample of 393 firms listed in the CNX 500 from 2003 to 2015, which showed a significantly positive earnings quality and a negative relationship with earnings management for larger and matured firms. Further, in the USA, Gill and Obradovich (2013) found that corporate governance and institutional ownership influence the potential growth of US firms.

Li *et al* (2006) found no significant relationship between institutional ownership and firm financial performance and profitability in their study of 433 listed firms from 1996 to 1998 in the Hong Kong Stock Exchange. In Pakistan, Ahmad *et al*. (2019) found a negative significant relationship between institutional ownership and the performance of the firms from 2007 to 2011. In Nigeria, Gabriel and Osazuwa (2020) find that institutional ownership concentration has a significant but negative effect (direct and inverse) on the performance indicators (ROA, Tobin's Q). Still, on the negative side, Sani and Alifiah (2021), in their study of 56 Nigerian non-financial listed companies for seven years (2012-2018), identified that a higher proportion of institutional shareholding results in higher debt. In other words, institutional shareholding negatively affects the performance of the firm. AL-Najjar (2015) found no significant relationship between institutional shareholding and firm performance in Jordan from 2005-2013.

The empirical and theoretical literature broadly confirms the positive relationship between institutional shareholding and firm performance because institutional investors effectively control the potential excesses of hired managers. The possible acquisition or merger of firms, motivated by the sale of block-shares owned by institutional investors, is one of the major strategies that have helped to check the

behaviour of managers in the interest of shareholders (Hsieh & Wang, 2008; Bena & Kai, 2013; Brooks *et al*., 2016; Yang, 2016).

However, the action of substantial shareholders in facilitating outright acquisition or merger of firms is under check in Nigeria. For instance, takeover bids are regulated in Nigeria to curb anti-competitive tendencies by firms (Investment & Security Act, 2007; Bucknor, 2015). Thus, significant shareholders with a 30% or more equity holding in the firms are expected to notify the public and make offers to other existing shareholders about their intentions to acquire additional shares to control the firm (SEC-N, 2007). In addition, the intention of merger or acquisition is expected to be disclosed, while approvals for mergers and acquisitions can only be given by the SEC-N if such mergers or acquisitions would cause an industrial monopoly or a substantial restraint of competition (SEC-N, 2007).

The expectation is that a higher CGI of institutional or block outside shareholding will be positively associated with better firm control for better firm financial performance because agency costs will be reduced. Hypothesis 3.1 tests the effect of institutional shareholding on the performance of listed firms in Nigeria and effectively considers the provisions of Section 27 of SEC-N, 2011 alongside the empirical evidence stated above. The provision of the code suggests that the presence of institutional block shareholders will result in the effective corporate governance systems of firms and improve their performance. A priori, firms with a higher proportion of institutional shareholding perform better than those with a lower proportion. Thus, Hypothesis 3.1 is proposed as follows:

Hypothesis 3.1

$H_{2.9}$: There is a statistically significant positive relationship between the proportion of institutional shareholding and firm financial performance, as measured by Tobin's Q, ROE, and NAT.

H_0: There is no statistically significant positive relationship between the proportion of institutional shareholding and firm financial performance, as measured by Tobin's Q, ROE, and NAT.

4.2.4 Market share (product market competition)

A market share is also referred to as a product market share. Market share is the proportion of the industrial sales that accrue to each of the listed firms in the industry. Product market competition exists where products or services have very close substitutes, entry into the market by new players is easy, and the cost of entry is not prohibitive (Raith, 2003). Raith (2003) also observes that the common belief of most economists is that there exists a positive relationship between product market competition and the efficiency of the firm and managerial incentives, because product market competition forces managers to work harder, demand higher pay, and typically leads to a reduction in agency costs. This relationship can, however, happen in an efficient market where the prices of stocks and goods or services of firms fully reflect available information about the performance of the firm and there is no information asymmetry in the market (Fama, 1970 & 1991).

The improved performance of firms, in a competitive environment, results from internal inefficiency, the optimal allocation of resources, and a reduction in managerial slack, leading to improved productivity (Horn *et al*., 1991; Nickell, 1996). The corporate governance literature argues that firms that are well managed would gain more product market share among competitors since poor corporate governance is associated with low firm performance (Gempesaw, 2020). Symbiotically, an increase in competition mitigates agency costs and serves as a substitute for traditional corporate governance mechanisms (Gempesaw, 2020). Thus, efficient product market competition effectively curbs agency problems by forcing managers of firms to take actions to better the fortunes of their firms since failure to do so would result in poor financial performance, liquidation of the firm and job loss (Chou *et al.,* 2011). Therefore, when the product market is efficient, a weak internal corporate governance system would have no significant impact on the performance of the firm because the external product market would effectively discipline a poor performing firm (Januszewski *et al.,* 2002; Tian & Twite, 2011). In this sense, market competition is said to effectively mitigate agency problems and constrain management opportunism in reporting profit figures since competition reduces opportunities for resource diversion by managers for personal benefits, and in turn, decreases management risk aversion (Yang, 2015:4; Omidfar *et al*., 2017).

However, Selarka (2014) argues that the effectiveness of product market competition to discipline inefficient firms, whether manager controlled or family-controlled, depends on the effectiveness of the internal governance mechanisms. In other words, product competition also requires the effectiveness of the internal governance frameworks to curb agency conflicts. Thus, firms are poised to pursue effective corporate governance practices to minimise their exposure to liquidation and resultant disengagement of the management team because competition would discipline poorly managed firms (Januszewski *et al.,* 2002; Pant & Pattanayak, 2008; Giroud & Mueller, 2011; Tian & Twite, 2011; Ammann *et al*., 2013).

Further, product market competition has been found to mitigate agency costs and act as a substitute for corporate governance because competition affects intra-firm supervision, and control, which is an internal governance objective (Huang & Peyer, 2012; Omidfar *et al.*, 2017; Gempesaw, 2020). Therefore, shareholders can strategically structure the corporate governance system, including the manager's stock ownership and controlling power, to maximise the firm's benefits in product market competition (Dongchuhl & Park, 2016:1282).

The empirical literature has provided evidence on the test of the product market hypothesis (Fama, 1970 and 1991), which proposes that product market competition acts as a substitute for corporate governance by exerting pressure on managers and disciplining them to maximise firm value. This is because, in an active market where the participants (investors) are well informed, the stock prices of the firms will reflect all available information about their financial performance of the firm and its management effectiveness (Nwaolisa & Kasie, 2012; Kofarbai & Zubairu, 2016). Consequently, when product market competition is weak, managers are not motivated to improve their corporate governance structures since their underperformance cannot effectively be checked by the market. This will negatively affect the financial fortunes of the firm (Giroud & Mueller, 2011). Thus, corporate governance structures are weak in firms that operate in competitive industries with low product market power (Chou *et al.,* 2011). In contrast, firms that operate in intense product market competition, experience higher productivity and effective corporate governance, resulting in better financial and corporate performance (Nickel, 1996; Januszewski *et al.,* 2002; Mohebbi & Kamyabi, 2014).

Additionally, Januszewski *et al.* (2002) found that product market competition of listed firms in Germany from 1986 to 1994 had a positive impact on productivity growth. Wang *et al*. (2014) on their part, in their study of all listed firms in the US, the UK, Germany and France from the Standard & Poor's Compustat, indicate a relatively significant positive relationship between industry competition and firm performance. Omidfar *et al.* (2017) in their study of listed Iranian firms, observed a positive and significant relationship between product market competition using the index of market size and firm performance (ROE and ROA). In Vietnam, Le Thi Kim *et al*. (2021) found that market share (growth in sales) significantly influences the financial performance of the food and beverages manufacturing listed firms measured in terms of return on equity (ROE) or return on sales (ROS).

The positive impact of effective product market competition on corporate governance is motivated by the improvement in shareholder rights, increased dividends, the effectiveness of the board of directors, and corporate transparency brought about by effective product market competition (Byun *et al*., 2011). Although, in the case of family-owned firms, better financial results do not necessarily result in higher dividends to shareholders (Ullah *et al.*, 2016).

Also, Ko *et al.* (2016) found in their study of some East Asian firms in China, Hong Kong, Singapore, and Taiwan from 2001 to 2012 that product market competition leads to a strong pay-performance sensitivity for widely held firms but not for family- or state-controlled firms and they concluded that competition acts as a disciplinary mechanism to managers of firms and constrained from expropriating the resources of the firm or taking actions that would diminish the value of the firm.

In contrast, Beiner *et al. (*2008), in their study of 200 Swiss firms from 2002 to 2005, found that a more intensive product market competition is associated with stronger incentive schemes for managers and a lower firm value. Fazlzadeh and Sabbaghi (2010) also find a significant relationship between the market share and the profitability of companies in Iran. In South Africa, the study by Magoro (2009) suggests that there is no relationship between market share and profitability for the eight Companies listed in the Main Board of the Johannesburg Securities Exchange (JSE) during the 5 years from 2004 to 2008.

Using the proportion of market share as a proxy for the reward for better corporate governance by the product market competition, Hypothesis 3.2 below tests the effect of market share on the value of the firm.

Hypothesis 3.2

$H_{2.10}$: There is a statistically significant positive relationship between the market share and the firm's financial performance, as measured by Tobin's Q, ROE, and NAT.

H_0: There is no statistically significant positive relationship between the market share and the firm's financial performance, as measured by Tobin's Q, ROE, and NAT.

The expectation is that there is a positive relationship between improved market share and the value of the firm. Therefore, if the relationship between the market share index and the firm value measured in terms of Tobin's Q, ROE, and NAT is not significant, the null hypothesis is accepted and the alternative hypothesis is rejected.

4.3 Chapter summary

The chapter reviewed the extant empirical literature on the relationship between corporate governance and the financial performance of the firm. The two main objectives have been achieved. The first objective was to show how the CGI was built by previous studies and how it could be used. This was done by looking at both empirical and theoretical literature on how the compliance index and equilibrium models can be used to predict the relationship between a company's financial performance and the quality of its corporate governance.

The second objective of providing support for the hypotheses was achieved by extensively reviewing the empirical literature on the relationship between both internal and external corporate governance mechanisms and the financial performance of the firm. The theoretical and empirical literature were discussed to support each hypothesis. The main dependent variables of the hypothesis are Tobin's Q value, ROE, and net assets turnover (NAT). The internal and external corporate governance mechanisms are used as the independent variables. Internal independent variables include board governance, audit committee, and external audit independence. The external governance mechanisms discussed include non-promoter intuitional shareholding and market share.

The major assumption of the equilibrium model is that firms have optimal corporate governance choices beyond which the firm would cease to be influenced by those choices. This is the point where the marginal cost and marginal benefits of introducing a governance mechanism are equal – the equilibrium point (Agrawal &

Knoeber, 1996). Thus, the hypotheses examine the relationship between the individual governance mechanisms and firm value. The compliance-index model, in contrast, examines the relationship between the aggregate corporate governance index and the performance of the firm, using the composite corporate governance index to predict the relationship. The model assumes that a combination of the various governance mechanisms affects the performance of the firm since each variable depends on the other to create the necessary impact.

The synthesis of empirical and theoretical literature indicates mixed results as to the direction of the effect of some of the corporate governance mechanisms on the financial performance of the firm. However, in terms of the density of mixed evidence, studies based on the equilibrium-variable model indicate more obvious results than those based on the compliance index model. Also, most studies that focused on Nigeria and other emerging economies have adopted only the equilibrium-variable model and considered the individual board governance variables in establishing the relationship between corporate governance and firm financial performance. Thus, this study has helped to improve the literature on corporate governance, especially in the context of emerging economies, by looking at both internal and external board governance mechanisms and using both models.

The development of the hypotheses discussed in this chapter has provided an insight into the form and level of influence exerted by the independent variables on firm performance as discovered by prior studies. The Nigerian experience, with respect to the non-listed firms, is presented in Chapter Seven. The next chapter, "Chapter Five," discusses the research design, methodology, and approach used in this study to find and analyse the relationship between the internal and external mechanisms we talked about earlier and firm performance in Nigeria.

CHAPTER FIVE

RESEARCH DESIGN AND METHODOLOGY

5.1 Introduction

This chapter describes the research design and methodology adopted to achieve the main research objectives of the study. There are three main objectives that the chapter seeks to achieve. First, the chapter provides a detailed description of the data used. The essence is to ensure that, as a scientific enquiry, the study is replicable either by the same author or by other researchers and to instil confidence in the reader that the results were not forged but have emanated from a systematic research approach (Greener, 2008; Ntim, 2009; Saunders *et al*., 2009). Second, the chapter presents the procedures adopted for data collection, analysis, and sample selection and the rationale for adopting the procedures. The third objective is to explain the various research philosophies, their weaknesses, and why the positivist philosophy has been adopted.

The relevant variables considered in the construction of the corporate governance index, which include the internal governance mechanisms, external governance mechanisms, and the control variables, are discussed in the chapter. A variable refers to a characteristic or attribute of an entity, and in this case, the sample organisation that is measurable (typically on instruments), observable, and varies among the sample organisations being studied (Creswell, 2009).

In the context of this study, variables refer to the corporate governance variables discussed in chapter four. These include the independent variables (IV) such as board characteristics, audit committee, and external audit, ownership structure, and concentration, the market for corporate control, and product market competition. The three dependent variables (DV) are Tobin's Q, return on equity (ROE), and net asset turnover/asset utilisation (NAT). In addition, the chapter discusses the control or moderator variables, which include capital structure, the size of the firm, and the age of the firm. These variables are used in computing the corporate governance index to gauge the level of corporate governance practices by listed firms in Nigeria.

The relationship between the research questions and the research objectives and the data analysis method that guided the study are presented in Table 5.1.

Table 5.1: Association of research methods with research objectives and research questions

Research questions	Research objectives	Methods of data analysis
As indicated in Chapter One, the study attempts to resolve three main research questions as follows: **Research question one** Research question (RQ) one is broken into two parts to cater for the construction of the compliance index and the relationship between the compliance index and firm performance. 1(a) What is the corporate governance compliance index for listed non-financial firms in Nigeria from 2012 to 2019, based on the corporate governance provisions of the SEC-N 2011 Code, CAMA 1990, and empirical literature? 1(b) What is the relationship between the corporate governance compliance index and firm financial performance? **Research question two** What is the relationship between the internal corporate governance mechanisms - female directors, foreign directors, CEO duality, board size, board independence, board meetings, board committees, independence of the external auditor and audit committee – and firm financial performance? **Research question three** What is the relationship between the external corporate governance mechanisms - institutional shareholding, market share - and firm financial performance?	The purpose of this study, as earlier stated in Chapter One, is to advance the international corporate governance research agenda by providing an insight into the relationship between firm performance and corporate governance using both the compliance index and the equilibrium variables models. In particular, the assessment is undertaken within the context of the 2011 SEC-N Code and the CAMA 1990 provisions, using agency theory as the theoretical foundation for the study. Thus, the study will achieve three main objectives as follows: 1. Develop a corporate governance compliance index (CGI) of the listed Nigerian non-financial firms, for the period 2012-2019, and to establish the relationship between the compliance index and the financial performance of the firm. 2. Establishing the relationship between the internal governance mechanisms of female directors, foreign directors, CEO duality, board size, board independence, board meetings, board committees, independence of the external auditor and audit committee and the financial performance of the listed non-financial firms in Nigeria from 2012 to 2019. 3. Establishing the relationship between the external governance mechanisms of market share and institutional shareholding and the financial performance of the listed non-financial firms in Nigeria from 2012 to 2019.	Content analysis of the annual reports of the sample firms to manually extract the required data for computation of the CGI. This approach provides answers to research questions, resolves the hypotheses, and achieve the research objectives. Further, panel data analysis using a multi-regression model to establish the extent of the relationship between CGI and firm performance.

The rest of the chapter discusses the research objectives, design, approach, paradigm, validity and reliability of the research instrument, data definition and sources of data, construction of CGI, population and sample size, data analysis, specification of models, and the problem of endogeneity. The chapter concludes with a summary.

5.2 Research problem and objectives

As earlier discussed in Chapter One, existing studies in the Nigerian context (Sanda *et al.,* 2008; Babatunde & Olaniran, 2009; Ehikioya, 2009; Ranti, 2011; Duke II & Kankpang, 2011; Umoren & Okougbo, 2011; Momoh & Ukpong, 2013; Garba & Abubakar, 2014; Uwuigbea *et al*., 2014; Bilkisu, 2014) have considered some board characteristics in measuring the extent to which firms are rewarded for quality corporate governance practices. So far, no study in Nigeria has either considered the construction of a CGI for Nigerian listed firms based on the SEC-N code of 2011 and CAMA 1990 or used the computed index to measure the relationship between corporate governance and firm financial performance of listed non-financial firms from 2012 to 2019. Further, prior studies, based on both developed and developing economies, have used the dependent variables of Tobin's Q, ROI, ROCE, and ROE (Albassam, 2014; Agrawal & Knoeber, 1996; Beiner *et al.* 2005; Haniffa & Hudaib, 2006; Klapper & Love, 2004; Marashdeh, 2014; Ntim, 2009; Otman, 2014; Renders & Gaeremynck, 2006; Wellalage, 2012; Wernerfelt & Montgomery, 1988). The use of net asset turnover (NAT), also an agency cost proxy, has not enjoyed similar research consideration as a performance measure in the literature. Thus, its use in this study expands knowledge of the impact of corporate governance on multiple performance measures of firms. As observed by Al-Matari *et al.* (2014b), the use of multiple performance measures of both the internal accounting-based financial performance measures of ROI, ROCE, NAT and the market measure of Tobin's Q provides a multi-dimensional view of the performance of the firm. This approach shows how the governance mechanisms and the aggregate index affect the variables that are being studied.

The need to have an insight into the multi-dimensional impact of corporate governance on the performance of the listed non-financial firms in Nigeria, between 2012 and 2019, has motivated this study to achieve the objectives earlier stated in Chapter One. Further, the study analyses both internal and external governance mechanisms and the financial data of the sample firms from 2012 to 2019. The inclusion of external mechanisms of market share and the proportion of institutional

shareholders expands the range of dependent variables outside of the traditional board governance variables that characterised prior Nigerian studies. This approach tests more robustly the general theory of the relationship between corporate governance and the financial performance of the firm in the Nigerian context.

5.3 Research design and methodology

Creswell (2009) describes research design as a plan, procedure, or proposal for research, including the philosophical assumptions, strategies of enquiry, and the method of data collection and analysis. The research design is simply the plan for gathering, analysing, organizing, and presenting data in order to achieve the research objective(s), answer the research questions, and obtain valid conclusions that can be generalised to the population (Pandey & Pandey, 2015). The plan involves a combination of research philosophy, strategies, and specific methods of enquiry. Research design enables the relevant data to be collected to answer the research questions as clearly and easily as possible (Kumar, 2011). It entails deciding on ‘‘what, where, when, how much, and by what means concerning an inquiry or a research study’’ (Kothari, 2004:31). The research design also describes the research instruments that are used to elicit data for analysis. Research design can be simply defined as the complete plan of how the research is to be conducted and concluded; how the research variables are to be defined; how the hypotheses are to be tested; and the data analysis methods.

Guba and Lincoln (1994) and Saunders *et al.* (2009), on the other hand, refer to methodology as the methods or strategies of finding out what the researcher believes can be known. It focuses on how the researcher goes about obtaining the desired knowledge and understanding of the phenomenon of enquiry. It is a systematic approach adopted to solve the research problem. Research methodology discusses the research methods, procedures, steps, philosophies, and justifications for selecting them, including the research instruments used in carrying out research scientifically (Kothari, 2004). Thus, the methodology adopted in carrying out this research includes the assumptions, research methods, philosophical stance, models, instruments, and justifications contained in this chapter.

Research design and methodology, therefore, encompass the research plan from commencement to the conclusion of the research. It involves making choices about the research philosophies, approaches, strategies, methods, time horizon, techniques, and procedures to be adopted in carrying out the study (Creswell, 2009; Kothari, 2004; Kumar, 2011; Saunders *et al.*, 2009).

5.3.1 Purpose of research design and methodology

Yin (2011) explains that research design seeks to strengthen the validity of research studies by ensuring that only pertinent data that addresses the research topic in focus is collected. The research design is a logical blueprint and plan that provides "the links among the research questions, the data to be collected, and the strategies for analysing the data so that the findings of the study will address the intended research questions" (Yin, 2011:76). Thus, research design helps in improving the accuracy and reliability of the results of the study and facilitates the achievement of the main objectives of the study within record time. In other words, research design facilitates the achievement of the objectives of the research project by providing answers to the research questions validly, objectively, accurately, and economically with minimum errors and frustration (Jongbo, 2014).

5.3.2 Benefits of research design

The type of research design adopted by the researcher is said to be based on "the nature of the research problem or issue being addressed, the researchers' personal experiences, and the audiences for the study" (Creswell, 2009: 3). The research design enables the researcher to justify the subject under investigation, sample size, the variables selected, the research questions, research objectives, and the research philosophy and scope. Research design minimises the cost of research by ensuring that the research is focused on the objectives of the study (Pandey & Pandey, 2015). Research design enables the researcher to obtain quality data, contains minimal errors, and provides an accurate measure of the phenomenon of investigation (Bettis, Gambardella, Alfonso, Constance, & Mitchell, 2014). Therefore, research design fulfils two main objectives: 1) it clearly states the plan and procedures to complete the study; and 2) it ensures the adequacy of the procedures to obtain valid, objective, and accurate answers to the research questions (Kumar, 2011). By helping to show how the components of the research project work together, research design enables the

establishment of an objective causal relationship between the variables and avoids invalid conclusions (Creswell, 2009; Jongbo, 2014; Peniel, 2015).

Saunders et al. (2009) list some more parts of research design, which are shown in the shape of an onion in Figure 5.1 below, to include:

i. Philosophies: positivism, realism, interpretivism and pragmatism.
ii. Approaches: The research approaches include deductive and inductive approaches.
iii. Strategies: experiment, survey, case study, grounded theory, ethnography, active research, and action research.
iv. Choices: mixed methods, mono-method, and multi-methods.
v. Time horizons: cross-sectional, and longitudinal.
vi. Techniques and procedures: data collection and data analysis.

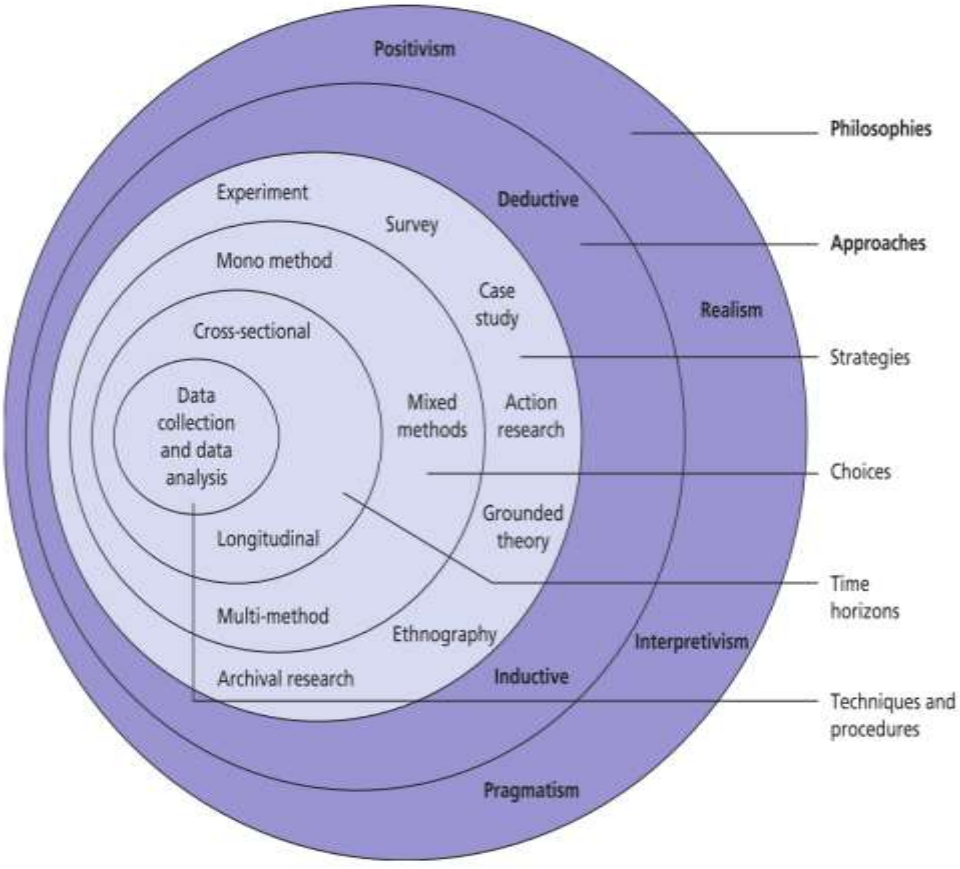


Figure 5.1: Research Onion
Source: Saunders *et al.*, (2009:108)

Earlier in Chapter One and in the previous sections of this chapter, the strategy (systematic sampling), choice of research method (mono-method-quantitative), time horizon (longitudinal or panel data), and techniques and procedures (content analysis of the annual reports) have been discussed. However, a detailed discussion of the research philosophies (positivism, realism, interpretivism, and pragmatism) and approaches (deductive and inductive) is presented in section 5.4 that follows.

5.4 Research philosophies and paradigms

Underlying philosophical foundations, moderate research studies. Research philosophy, or paradigm, refers to the assumptions and beliefs that underpin the study (Sobh & Perry, 2006). Guba and Lincoln (1994) and Pathirage *et al*. (2008) specify some basic beliefs that define enquiry paradigms to include ontology, epistemology, axiology, and methodology. "These beliefs make it easier to choose the right research approach and methods for a study" (Pathirage *et al.*, 2008: 5).

5. 4.1 Research paradigm

Several meanings have been suggested for the paradigm. The term "paradigm" is frequently used in social science and tends to be confusing because of its multiplicity of meanings. A paradigm, "is a way of examining social phenomena from which particular understandings of these phenomena can be gained and explanations attempted" (Saunders *et al.*, 2009:118). A paradigm is also considered as a cluster of beliefs that guide the form the research is to take, its scope, and how the results are to be interpreted (Morgan, 2007; Greener, 2008). Guba and Lincoln (1994:105) define a paradigm as "the basic belief system or world view that guides the investigation, not only in choices of methods but in ontologically and epistemologically fundamental ways". The beliefs are basic "in the sense that they must be accepted simply on faith… there is no way to establish their ultimate truthfulness" (Guba & Lincoln, 1994:107).

Collis and Hussey (2009:120) define a paradigm as "a framework that guides how research is conducted, based on individual philosophies, perceptions, attitudes, and assumptions about the world and the nature of knowledge". Faye (2014: 92), on the other hand, adds that such rules are based on "assumptions about the world and the nature of knowledge". In a nutshell, a research paradigm can be said to be the basic philosophical assumptions, beliefs, perceptions, and awareness of different theories and

practices that underlie the research and which guide how to execute the research project, including how data is to be collected and analysed and the process of arriving at conclusions (Guba & Lincoln, 1994; Saunders *et al.*, 2009; Collis & Hussey, 2009). Thus, a research paradigm is simply the philosophical assumptions that guide the conduct of research in arriving at its conclusion. These philosophical assumptions can be made based on existing theories, beliefs, and perceptions of the world view.

5.4.2 Purpose of the research paradigm

A research paradigm sets the tone and philosophy of the study. It also explains what is to be studied, why we have to study the phenomenon, and what methods need to be adopted to study the phenomenon to give objective and valid conclusions (Johnson & Onwuegbuzie, 2004; Porta & Keating, 2008). The paradigm also enables the researcher to establish the nature and existence of reality (ontology) relating to the phenomena being investigated and the nature of knowledge about reality (epistemology), thus understanding the phenomena, scope, and validity of conclusions (Faye, 2014). The paradigm enables the researcher to understand how to apply technical instruments to acquire knowledge and arrive at valid conclusions (Porta & Keating, 2008). This means that the research paradigm clarifies the standards, rules, and principles to be adopted in the development of hypotheses and methods of data collection, analysis, and interpretation of research results.

The acknowledgement of the research paradigm is the core issue for researchers and not the choice of methodologies (Sobh & Perry, 2006), because a "methodology is only one of the three elements of a paradigm that researchers either explicitly or implicitly work within – a paradigm includes the other elements of ontology and epistemology" (Sobh & Perry, 2006:1194). In summary, the paradigm defines the dimensions of enquiry: what the enquiry is about and the scope or limits of the legitimate enquiry, based on shared assumptions, values, principles, concepts, traditions, and practices. It helps to ensure that the research is carried out and concluded within time and budget constraints and that the salient objectives of the research are achieved.

5.4.3 Types of philosophical paradigms

Two types of research paradigms that are mostly used in management research are the positivist and interpretivist paradigms (Albassam, 2014; Henn *et al*., 2006). However, Saunders *et al.* (2009) identified four research paradigms: positivism, realism, interpretivism, and pragmatism. The explanation of the predominant paradigms is presented in the subsections that follow.

5. 4.3.1 Positivist paradigm

Carlo and Gelo (2012) indicate that the positivist paradigm emerged from the scientific revolution of the 17th and 18th centuries in reaction to the unquestioned acceptance of religious authority as the source of all knowledge and truth in the medieval era. The philosophical belief of the positivists is that "the world is real and exists independently of us, driven by immutable natural laws and mechanisms' (Carlo & Gelo, 2012:117). Thus, the positivists' philosophical belief is to consider that the social world exists and its characteristics can be measured objectively using structured or quantitative data sets and a nomothetic approach without the influence of the observer, who must be independent of what is being observed (Perry *et al*., 1999; Wright & Crip, 2000; Sale *et al.,* 2002; Johnson & Onwuegbuzie, 2004; Pathirage *et al.,* 2008; Anderson, 2010; Carlo, Omar & Gelo, 2012; Denzin & Lincom, 2018).

The positivist approach also seeks to provide explanations and predict the occurrence of phenomena and the causal relationship between the constituent parts (Burrell & Morgan, 1994). Therefore, positivism promotes deductive reasoning, which describes the causal relationship between or among variables and provides the basis for the generalisation of conclusions (Marashdeh, 2014).

There are two main aims of positivism. One aim of positivism is to test theories or descriptions of experience using observation and measurement to predict and control forces and phenomena that exist in the environment (Mackenzie & Knipe, 2006; Saunders *et al.,* 2009). The second aim of the positivist paradigm is to develop theories to explain phenomena based on the analysis of existing quantitative evidence and observation rather than subjective and intuitive interpretations. Thus, causal relationships that exist between variables can facilitate the confirmation of theories from evidence and enable phenomena to be measured and interpreted using quantitative methods of analysis (Albassam, 2014).

One major reason for adopting the use of the positivist paradigm in this current study is that it favours the use of content analysis to elicit information that would form the input data for analysis (Otman, 2014). In the context of this study, the positivist paradigm ensures that the hypotheses are focused on providing the link between corporate governance and the performance of the firm (Marashdeh, 2014). Therefore, the added advantage of the adoption of the positivist paradigm for this study is that the approach eliminates the personal biases and emotions of the researcher. The detachment of the researcher from the organisations being studied enables the test of hypotheses to be carried out using unbiased data. This is the basis for the wide acceptance of the positivist paradigm, especially in business research (Sobh & Perry, 2006). Although this study has adopted the positivist paradigm, the other paradigms are discussed next for completeness.

5. 4.3.2 Realism paradigm

The realism philosophical paradigm highlights the independence of reality from the mind (Peter, 1992). It argues that what the senses show as reality is actually the truth, since objects have an existence independent of the idiosyncrasies of the human mind (Guba & Lincoln, 1994; Perry *et al*., 1999; Sobh & Perry, 2006). Realism is opposed to idealism, the theory that suggests that only the mind and its contents exist (Krauss, 2005). However, like positivism, the realism paradigm assumes a scientific approach to the development of knowledge. This assumption is said to underpin the collection and understanding of research data (Saunders *et al.*, 2009).

Guba and Lincoln (1994) contend that reality may exist but can only be imperfectly apprehended by humans because of the limitations of human intelligence and the fundamentally intractable nature of phenomena. In other words, reality may not just be sensations but may exist, but knowledge limitations may account for the divergence in the interpretation given to it. Similarly, Krauss (2005) argues that perceptions are different and varied as no two individuals can have the same perception of the same phenomenon because there is certain plasticity in perception and that differences exist between reality and people’s perceptions of it. Therefore, critical realism agrees that a person's knowledge of reality comes from social conditioning, and that it "cannot be understood independently of the social actors involved in the process of knowledge derivation" (Krauss, 2005:761).

There are two types of realism: direct realism and critical realism. Direct realism posits that "what you see is what you get: what we experience through our senses portrays the world accurately" (Saunders *et al.,* 2009:114). In other words, direct realism has a subjective meaning based on our interpretation of phenomena.

Critical realists, in contrast, argue that what a person experiences are sensations, or images of things in the real world, not the things themselves. Thus, critical realism suggests that claims about reality must be "subjected to the widest possible critical examination to facilitate apprehending reality as closely as possible" (Guba & Lincoln, 1994:110). The argument of Neergaard and Ulhøi (2007:55) that "critical realism acknowledges that social phenomena are intrinsically meaningful, and hence that meaning is not only externally descriptive of them but constitutive of them" supports the position of Given (2008) that knowledge exists independently of humans and is subject to the interpretational consciousness of the human mind.

Research, such as this study, cannot be based on the realism philosophy because the data set to be used has intrinsic interpretational understanding. A profit of N100, for instance, is unlikely to be interpreted as a loss and believed by most people. Since realism allows for a range of opinions about the values that should be given to observed variables, it fits well with a qualitative research method.

5. 4.3.3 Interpretivist paradigm

The interpretivist paradigm, also referred to as interpretive, hermeneutic, qualitative, phenomenological, reflective, and inductive research. Veal (2005) argues that human behaviour cannot be studied and analysed as a non-human phenomenon. Interpretation of social phenomena under the interpretivist paradigm is highly subjective and heavily influenced by the perceptions and beliefs of individuals, including the researcher (Albassam, 2014). Therefore, the researcher is part of the research process and relies on the opinions of the people being studied to explain the situation or behaviour (Otman, 2014). Questionnaires and interviews are the main data collection instruments under the interpretivist approach. The interpretivist paradigm cannot be used to guide a quantitative research study because the researcher does not gather data through interviews and questionnaires, but rather by analysing data that is already in the public domain.

5.4.3.4 Pragmatism

The fourth philosophical stance of a research design is pragmatism. The Stanford Encyclopaedia of Philosophy (2013) traces the origin of pragmatism to the USA in 1870, although Nash (1947) indicates that pragmatism was made popular in America by William James in 1907. It can be argued that pragmatism gained literary attention from the late nineteenth century to the early twentieth century. Kloppenberg (1996:102) observes that the "early pragmatists' conceptions of testing the truth of ideas in experience ignited a firestorm of controversy that continues to rage". Creswell (2009:10) observes that pragmatism as a philosophical underpinning "arises out of actions, situations, and consequences rather than antecedent conditions". The focus of pragmatism is on finding solutions to problems using the best possible methods, not necessarily adopting rehearsed methods (Morgan, 2007). This suggests that an experimental approach is adopted whereby the researcher studies the behaviour of phenomena and suggests solutions to problems based on his or her experience rather than on existing theories or philosophies.

Pragmatism is also "concerned with action and change and the interplay between knowledge and action" (Goldkuhl, 2012:2). This knowledge and action bear on our self-conviction and are based on our empirical evidence and beliefs (Nash, 1947). Therefore, the focus should be on deploying practical and feasible methodologies to address societal problems rather than trying to adopt existing philosophies and methodologies for convenience as opposed to their effectiveness. Simply put, the pragmatism philosophy focuses on understanding the problem under study and then using a multifaceted approach to derive knowledge about the problem with the intention of proposing possible solutions to the problem. Pragmatism does not adopt any research method but embraces mixed methods research whereby "inquirers draw liberally from both quantitative and qualitative assumptions when they engage in their research" (Creswell, 2009:10) and places the research problem as the central focus to be resolved (Mackenzie & Knipe, 2006). Thus, all approaches to understanding and resolving the problem can be used. Multiple research methods, different worldviews, different assumptions, and different forms of data collection and methods of analysis characterise pragmatism (Pansiri, 2005).

The mixed research approach is justified by the argument of pragmatism that research questions are the most critical factor in undertaking the research, and as such, "it is perfectly possible to work with variations in methods and assumptions" (Saunders *et al*., 2009:109) to answer the research questions. Thus, the research approach, methodology, data collection, and methods of analysis chosen under pragmatism are those that would most likely provide insights into the research questions without attempting to be loyal to any philosophical paradigm. This, Saunders *et al.* (2009) rationalise as the intuitive appeal of pragmatism, since researchers should study what is of interest and value to them using what they deem appropriate. Therefore, pragmatism is a philosophical basis for mixed research studies, but it might not be right for a quantitatively biased study in which the researcher has no control over the variables being studied.

A comparison of the four main paradigms is presented in Table 5.2. The data used in the study is obtained from the published annual reports of the listed firms and is clearly structured and observable. In addition, the data is independent of the thoughts and influences of the researcher. More importantly, the results of the study are expected to be generalised to the entire population. These characteristics of the data justify the adoption of the positivism philosophy for the study, as earlier discussed in section 5.4.3.4.

Table 5.2: Comparison of four research philosophies

	Positivism	**Realism**	**Interpretivism**	**Pragmatism**
Ontology: the researcher's view of the nature of reality or being	External, objective and independent of social actors.	Is objective. Exists independently of human thoughts and beliefs or knowledge of their existence (realist), but is interpreted through social conditioning (critical realist).	Socially constructed, subjective, may change, multiple.	External, multiple, view chosen to best enable answering of the research question.
Epistemology: the researcher's view regarding what constitutes acceptable knowledge	Only observable phenomena can provide credible data, facts. Focus on causality and law-like generalisations, reducing phenomena to simplest elements.	Observable phenomena provide credible data, acts. Insufficient data means inaccuracies in sensations (direct realism). Alternatively, phenomena create sensations that are open to misinterpretation (critical realism). Focus on explaining within a context or contexts.	Subjective meanings and social phenomena. Focus upon the details of the situation, a reality behind these details, subjective meanings motivating actions	Either or both observable phenomena and subjective meanings can provide acceptable knowledge dependent upon the research question. Focus on practical applied research, integrating different perspectives to help interpret the data.
Axiology: the researcher's view of the role of values in research	Research is undertaken in a value-free way, the researcher is independent of the data and maintains an objective stance.	Research is value-laden; the researcher is biased by world views, cultural experiences and upbringing. These will affect the research.	Research is value bound, the researcher is part of what is being researched, cannot be separated and so will be subjective.	Values play a large role in interpreting results, the researcher adopting both objective and subjective points of view.
Data collection techniques most often used	Highly structured, large samples, measurement, quantitative, but can use qualitative.	Methods chosen must fit the subject matter, quantitative or qualitative.	Small samples, in-depth investigations, qualitative.	Mixed or multiple method designs, quantitative and qualitative.

Source: Saunders *et al*. (2009:119).

5.4.4 Adoption of a positivist paradigm for this study

Guba and Lincoln (1994) argue that the adoption of any given paradigm is based on the personal conviction of the researcher that such a paradigm would best express the research philosophy and effectively achieve the objective of the research, especially in the quest to contribute to knowledge. Since the research design of this study is not influenced by personal judgement but based on facts available to the researcher, the positivist paradigm is adopted for this study. As Guba and Lincoln (1994:108) argue, "no construction is or can be incontrovertibly right … advocates of any particular construction must rely on persuasiveness and utility rather than proof in arguing their position". Therefore, situating this study around the positivist paradigm is purely influenced by the persuasion and belief of the researcher in its utility and does not, in any way, suggest that other paradigms are not valuable philosophical bases for any research, be it qualitative or quantitative.

5.4.5 Other philosophical beliefs

5.4.5.1 Ontology

Guba and Lincoln (1994) and Saunders *et al*., (2009) explain that ontology defines the form and nature of reality and what exists that can be unveiled. Reality is defined in the broadest sense of its being, unity, and plurality as conceived by the human mind (Coffey, 1918), but it is still waiting to be discovered (Neuman, 2014). Thus, ontology is concerned with understanding whether a phenomenon exists or not, its structure, and the possibility of knowing it, including the assumptions we make about things that exist in society and their relationships (Aliyu *et al*., 2015; Al-Saadi, 2014). In short, ontology aims at finding out what exists in reality independent of human conceptions and interpretation, which can objectively be discovered and understood through research (Aliyu *et al.*, 2015; Ritchie & Lewis, 2003). Therefore, ontological questions, therefore, seek to explain what reality is, and its forms (Al-Saadi, 2014).

There are two aspects of ontology. The first is objectivism, and the second is subjectivism. Objectivism considers that social entities exist in reality external to social actors (Saunders *et al.*, 2009). Therefore, phenomena are not influenced by the actions of actors and their consideration and interpretation because the real world exists with its intrinsic value only waiting to be discovered by research (Scotland, 2012). Thus, under objectivism, the study of the functions of managers would be considered per se and not

linked with the functions of organisations and their internal control dynamics. Subjectivism, on the other hand, sees social phenomena as resulting from the perceptions and consequent actions of social actors (Saunders *et al.*, 2009). This study is anchored on an objective ontological philosophy since the corporate governance characteristics of firms are believed to exist in reality and their impact on the performance of the firm is also considered to be real and can be unveiled objectively.

5.4.5.2 Epistemology

Epistemology is said to be a branch of philosophy that addresses the question of the "nature, sources, and limits of knowledge and our ability to give reasons for concluding on the characteristics of a phenomenon and can potentially convince others" (Porta & Keating, 2008:22). Saunders *et al.* (2009) consider epistemology as the acceptable knowledge in a particular field of study. It deals with the means of producing knowledge. It relates to "how we know what we know to exist and the relationship between the knower and the known" (Maxwell, 2011:10). Therefore, epistemology can be said to consider the extent to which the validity of a phenomenon can be confirmed and as to whether we have some basis to believe what is known to be true. It describes the nature of knowledge, how the researcher knows about reality, and how knowledge can be discovered objectively and communicated to others (Pathirage *et al.*, 2008; Ritchie & Lewis, 2003; Scotland, 2012). Simply put, epistemology is concerned with the nature of knowledge and how a researcher can go about acquiring it. The importance of the epistemological approach is that it helps the researcher decide on the type of research design to adopt. Consideration is given to what needs to be known, whether it can be objectively known or whether the knowledge is subject to the personal biases of the researcher, which determines how the research will be conducted (Al-Saadi, 2014).

Positivism is the main philosophical stance of epistemology that argues that it is possible to carry out an enquiry about phenomena objectively and obtain value-free conclusions (Saunders *et al.*, 2009; Scotland, 2012; Pathirage *et al*., 2008; Ritchie & Lewis 2003). For this study, epistemology helps explain why the positivism approach was chosen, since the data came from the annual reports issued by firms without intervention by the researcher.

5.4.5.3 Axiology

Axiology reveals the assumptions about the value system and value judgement of the research being carried out (Guba & Lincoln, 1994; Saunders *et al*., 2009). As a philosophical stance, axiology is concerned with how values, personal biases, ethical issues, and influences are considered in research vis-a-vis the aim of the research and the conclusions we reach from our research results (Saunders *et al.,* 2009). Hence, value placement guides our actions and how we carry on research and interpret or communicate research evidence (Aliyu *et al.,* 2015). Researchers exhibit "axiological skill by being able to articulate their values as a basis for making judgements about what research they are conducting and how they go about doing it" (Saunders *et al*., 2009:116). The positivists believe that research must be free of personal values and sentiments to be carried out objectively and result in valid conclusions (Krauss, 2005). On the other hand, interpretivists believe that research is conducted by men and, as such, cannot be completely free of personal values, as research is always biased towards the values of the researcher.

The debate on the extent to which research, especially business research such as this, can be completely free from societal considerations when the purpose of the research per se is to provide knowledge that is useful to society remains a matter of further investigation. In designing the conduct of this project, the consideration of the value of the research to society provided insight into the method of data gathering and analysis, including the use of hypotheses that informed the use of the quantitative rather than qualitative research approach. In addition, using the financial data of firms that are already in the public domain relieves the researcher from ethical challenges and influences and enables conclusions to be reached objectively.

5.4.5.4 Normativism

The normativism philosophy derives from the concept of norms. It is concerned with the view that phenomena can be either morally right or wrong. In research, normativism research philosophy emphasises that human thinking reflects a normative system against which it should be measured and judged. In the case of this study, data for the study is obtained from the published accounts. This does not give rise to some form of normative consideration about which data variable to consider and which not to consider. Thus, normative philosophy will be inadequate for this study.

The discussion of the philosophical beliefs that guide research and those that underpin this study has provided foundational explanations for the research design and methodology adopted in this study. The next section will discuss the research approach, which details the type of reasoning that guides the actual conduct of the research to confirm or reject empirical or theoretical claims.

5.5 Research approach

Research is critical reasoning that will explain a phenomenon either to agree with or challenge an existing theory about the phenomenon (Creswell, 2009; Saunders *et al.*, 2009). Creswell (2009:7) defines research as "the process of making claims and then refining or abandoning some of them for other claims more strongly warranted." Claims characterise research, and the claims have to be proven through some form of organised investigation, collection of data, and appropriate analysis of data based on ideological underpinnings to explain a phenomenon (Williams, 2007). The type of reasoning that guides the research methods and philosophy to confirm or reject claims is referred to as the research approach. The research approach is linked to research philosophy and originates from the natural sciences (Saunders *et al.*, 2009). There are two research approaches: the deductive and the inductive.

5.5.1 Deductive approach

A pictorial presentation of the deductive approach is shown in Figure 5.2.

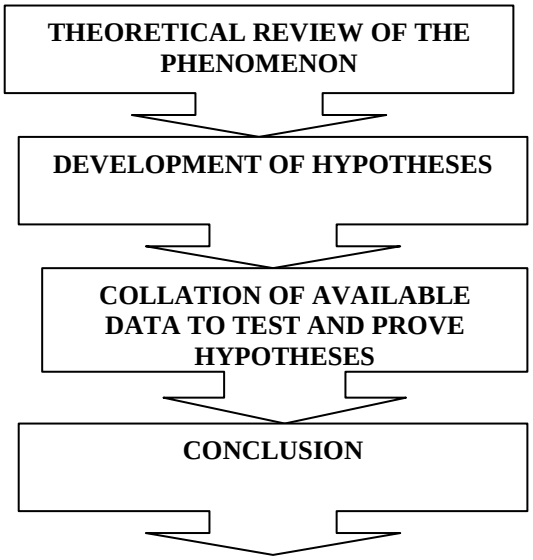


Figure 5.2: Deductive research approach

The deductive research approach derives from deductive reasoning and is a process where the researcher starts with a general viewpoint and moves to a particular point. That is, thinking about the general phenomenon and ending with the specific phenomenon (Woiceshyn & Daellenbach, 2018). This is a kind of top-to-bottom research approach (Burney, 2008). Saunders *et al.* (2009) explain further that the deductive approach involves the development of a theory and hypothesis (or hypotheses) followed by a research strategy to test the hypothesis (or hypotheses). In other words, the deductive research approach starts from understanding an existing theory, deriving hypotheses from it, testing those theories and laws to determine the validity of the theories, and revising or confirming the theory based on the result of the test (Locke, 2007; Burney, 2008; Saunders *et al*., 2009; Woiceshyn & Daellenbach, 2018). Thus, Park *et al*. (2020:5) consider that deductive reasoning should generally have the following characteristics:

> "1) *Based on existing knowledge (e.g. from the literature review), a hypothetical theory or model is built, which is then related to research directions*
> *2) The hypothetical theory or model is verified iteratively, with many, quantifiable data points*
> *3) If the outcomes of the validation are satisfactory, the theory of model can be considered as law-like. In contrast, if the outcomes of the validation are not satisfactory, the overall research can be deemed as new knowledge that can be used as a reference for further research".*

The arguments under the deductive approach are based on laws, rules, or other widely accepted principles (Soiferman, 2010). The aim is to agree or reject the theory in the context of the data definition. Therefore, the deductive approach makes it impossible to accept the premises or steps adopted to arrive at a conclusion but reject the conclusion (Zalaghi & Khazaei, 2016). This is because conclusions follow logically from the building of the theory; deducing hypotheses from the theory; and then using observations or data to confirm the hypothesis and draw a conclusion (David, 2016). This approach to research is said to be typically suitable for research under positivism (Park *et al*., 2020).

One major criticism of the deductive approach is that it leans heavily on the use of structured quantitative data and adopts a rigid methodology without consideration of human behaviour and sentiments (Saunders *et al.*, 2009). This makes the use of the deductive approach inappropriate in researching human attitudes and behaviour. To resolve this constraint, the inductive approach was introduced to cater for the needs of the social sciences.

A further criticism is that the deductive approach is more time-consuming and complex. This is due to the deductive approach's reliance on data that has been compressed and derived under certain assumptions, such as accounting data, which is used as a dependent variable in measuring the effect of corporate governance on the firm's financial performance. Some critics have also argued that the approach does not encourage divergent thinking but limits creativity since it tends to adopt a defined and replicable approach to conclude (David, 2016; Gratton & Jones, 2009; Soiferman, 2010; Zalaghi & Khazaei, 2016). The third criticism of deductive reasoning is that it is primarily on quantitative research to produce numerical evidence, which may be difficult to apply (Park, Bahrudin & Han, 2020).

5.5.2 Inductive approach

In contrast to the deductive approach, the inductive research approach considers first the specific phenomenon, observes the phenomenon of interest, and generates concepts and theories based on the understanding of the behaviour of the phenomenon (Burney, 2008; Saunders *et al*., 2009; Soiferman, 2010; Woiceshyn & Daellenbach, 2018). This is a kind of bottom-up research approach (Burney 2008) and is focused on generating theories rather than testing or confirming theories.

In the inductive approach, the researcher collects a large amount of raw and unprocessed data that is interpreted to derive concepts, themes, and models (Jebreen, 2012). Saunders *et al.* (2009) explain that the inductive approach involves the collection and analysis of data, resulting in a theory that is based on the interpretation of the results of the data analysis. In other words, with the inductive method, the researcher first looks at the patterns in the data and then makes a theory based on the relationships he or she sees.

Therefore, under the inductive approach, a theory is developed from a non-existing theoretical basis but originates from the data patterns and observed relationships. That is, under the inductive approach, a theory is generated based on the experience and patterns revealed by the data observed, without applying any structured methodology to the gathering of the data (Jebreen, 2012). The main aim of the inductive approach is to explore a new theory by generating explanations from the data collected (Gratton & Jones, 2009; David 2016). Inductive reasoning is relatively more appropriate for qualitative research studies that involve mainly qualitative information using

interviews, questionnaires, and descriptive notes to generate the data for analysis (Park *et al*., 2020).

Explaining the inductive research approach further, Park *et al*. (2020:6) add that research using inductive reasoning would commonly have the following characteristics:

> "1) *Obtaining knowledge (e.g. from the literature review) related to research directions*
> *2) Understanding phenomena by carrying out qualitative data collection and analysis considering the research as well as the attained knowledge*
> *3) Developing a new theory or model as new knowledge, based on the new understanding".*

The main limitation of the inductive research approach, which mainly involves qualitative research, "is that the validity of the research is arguable" (Park *et al*., 2020:6). From the discussion of the two research approaches, the approach that is appropriate to this current research can be said to be the deductive approach. The rationale for selecting the deductive approach is discussed in the next section.

5.5.3 Rationale for selecting the deductive approach for this study

The deductive approach emphasises the movement from theory to data, focuses on the explanation of causal relationships between variables using quantitative data, ensures the researcher's independence from the subject of study, and derives conclusions for generalisation based on sufficient samples (Saunders *et al.,* 2009). Thus, deductive reasoning is used when the researcher seeks to test a hypothesis derived from theoretical foundations using quantitative data to confirm or reject a theory. The nature of the data coupled with the method of data collection and analysis makes the use of the deductive approach necessary for this study.

A further reason for the use of the deductive approach in this study is that the deductive approach facilitates the validity of theory through the examination of literature, the development and testing of hypotheses using empirical data, and the use of quantitative methodology in the collection of objective data (Heenetigala, 2011). The testing of hypotheses concerning the existing theoretical constructs of corporate governance provides a further justification for electing to use the deductive approach. Thus, the use of deductive reasoning enables this current study to test the relationship between effective corporate governance and firm performance against the theoretical stance that good corporate governance leads to better firm performance. A further reason for electing to use the deductive approach is that the study involves the rigorous measurement of quantitative variables obtained from the annual reports of the sample

firms. Having opted for the deductive research approach because of the use of quantitative data sets in this study, the research method of obtaining the data for analysis is discussed in the next section.

5.6 Research methods

Three methods of research design are discussed generally in the literature: quantitative, qualitative, and mixed-methods research. This quantitative research design is associated with the positivist philosophy and the deductive approach. Qualitative design is associated with the interpretivist philosophy and the inductive approach, while mixed design is associated with the pragmatic philosophy. Table 5.3 shows the focus of the three design methods.

Table 5.3: Comparison of qualitative, quantitative and mixed-methods research methods

Tend to:	Qualitative	Quantitative	Mixed-methods
Use these practices of research as the researcher.	Positions him- or herself (i.e., plays a dominant role). Collects participant meanings. Focuses on a single concept or phenomenon. Brings personal values into the study. Studies the context or set of participants. Validates the accuracy of the findings. Makes interpretations of the data. Creates an agenda for change or reform. Collaborates with the participants.	Tests or verifies theories or explanations. Identifies variables to study. Relates variables in questions or hypotheses. Uses standards of validity and reliability. Observes and measure information numerically. Uses unbiased approaches. Employs statistical procedures.	Collects both quantitative and qualitative data. Develops a rationale for mixing. Integrates the data at different stages of inquiry. Presents visual pictures of the procedures in the study. Employs the practices of both qualitative and quantitative research.
Use these philosophical assumptions	Constructivist /transformative knowledge claims.	Post-positivist knowledge claims.	Pragmatic knowledge claims.
Employ these strategies of inquiry	Phenomenology, grounded theory ethnography, case study, and narrative.	Surveys and experiments.	Sequential, concurrent, and transformative.
Employ these methods	Open-ended questions, emerging approaches, text or image data.	Closed-ended questions, predetermined approaches, numeric data.	Both open- and closed-ended questions, both emerging and predetermined approaches, and both quantitative and qualitative data and analysis.

Source: Creswell (2009)

5.6.1 Quantitative approach

Albassam (2014) observes that the quantitative approach is the most popular in corporate governance research. Quantitative research, as the concept implies, uses numbers (that is, counts and measures of things) and large samples to test theories (Berg, 2001; Sobh & Perry, 2006) by examining the relationship among variables using the results of numerical data (Creswell, 2009). The researcher uses statistical models to test theories for which hypotheses have been proposed (Creswell, 2009; Kenny, 1987). The evidence from the analysis of the data provides the basis to either support or refute the hypotheses (Soiferman, 2010).

5.6.2 Qualitative approach

Flick (2009) indicates that qualitative research was the oldest research approach and was adopted in psychology and social sciences dating back to the early twentieth century. Yilmaz (2013:312) argued that qualitative research has been given several misleading definitions. He proposes that qualitative research is "an emergent, inductive, interpretive, and naturalistic approach to the study of people, cases, phenomena, social situations, and processes in their natural settings in order to reveal in descriptive terms the meanings that people attach to their experiences of the world." Thus, the qualitative approach involves the study of objects in their very natural state through, for instance, the case study approach and the collection of data by way of field notes, interviews, conversations, photographs, recordings, and memos (Riche & Lewis, 2003; Yin, 2011). This suggests that in the qualitative approach, the researcher adopts a constructivist or interpretivist view that seeks to establish the meaning of phenomena from his or her observations. The conclusions arrived at in qualitative research are not based on any form of "statistical procedures or other means of quantification" (Strauss & Corbin, 1998:11) but are based on the researcher's understanding of the information collected and the influence of the researcher (Riche & Lewis, 2003).

Qualitative research seeks to establish a theory from observations of raw data or the behaviour of phenomena (Horsburgh, 2003; Riche & Lewis, 2003; Anderson, 2010). The major data collection method is the observatory method, or participatory method, whereby the researcher gets involved in determining the data patterns required to build a theory (Riche & Lewis, 2003). However, all humans are unlikely to see, feel, and interpret phenomena in the same way. This is one of the banes of qualitative research method because it relies heavily on the subjective position of the researcher (Horsburgh,

2003). Thus, the qualitative research method is not appropriate for this study because it uses published financial and corporate governance data that is already in the public domain without the researcher's input.

5.6.3 Mixed methods

Johnson and Onwuegbuzie (2004) define mixed research as a form of research where the researcher adopts a combination of both quantitative and qualitative research techniques in arriving at conclusions. Thus, the mixed research method adopts a pragmatic worldview to collect both quantitative and qualitative data systematically. Collins *et al*. (2006) and Onwuegbuzie and Collins (2007) argue that collecting different kinds of data is the best way to understand a research problem.

The mixed-methods study adopts a two-stage approach. First, the study begins with a broad survey aimed at generalising results to a population, and then, in a second phase, the study "focuses on qualitative, open-ended interviews to collect detailed views from participants" (Creswell, 2009:18). This method is not suitable for the current study because the data that needs to be collected are numbers that can be interpreted objectively with statistical models.

5.6.4 Adoption of the quantitative research method

Quantitative research "involves the utilisation and analysis of numerical data using specific statistical techniques to answer questions" (Apuke, 2017:46). The adoption of rigorous statistical analysis techniques to confirm the validity of propositions (hypotheses) and to answer research questions is the rationale for the use of a quantitative research method in the study. Thus, the volume of data and the complexity of data analysis to arrive at the conclusions in this study make the adoption of the quantitative research method appropriate for this study. Specifically, this study adopts the quantitative research approach because of the following:

(a) The study uses numbers and works with numeric data,
(b) Theories for which hypotheses are proposed will be tested using data, and
(c) The researcher has no control over the data and cannot influence the data values as they are obtained from the published annual report (Creswell, 2009; Kenny, 1987).

The previous sections have discussed the research methods and approaches that were adopted in carrying out this study. The sections that follow will discuss the population of the study, the sample and the sample selection, and the appropriateness of using the panel data analysis method for this study. The dependent and independent variables are equally defined and explained in the accompanying sections.

5.7 Population and sample size

This section discusses the population and the sample of the study. In the context of the aim and objectives of the study, the section explains the characteristics of the elements that constitute the population and the necessary steps taken to arrive at the final sample for the study and the justification for the sample chosen.

5.7.1 Population of the study

A population is defined as the target universe, group of people, entities, and objects with special or common characteristics defined by the sampling criteria established by the researcher, which the researcher intends to study or treat, and to which the researcher wishes to generalise the findings of the study (Banerjee & Chaudhury, 2010; Majid, 2018). In this study, the population comprised 165 listed firms, made up of eleven industrial sectors in Nigeria as of December 2019. The total market capitalisation in December 2019 was ₦12.97 trillion. The industrial distribution of the listed companies is shown in Table 5.4a.

Table 5.4a: Industrial distribution of listed firms in Nigeria as of December 2019

S/N	Panel A: Industrial composition of listed firms at December 31, 2019	No. in each industry
1	Agriculture	5
2	Conglomerates	6
3	Construction/Real Estate	8
4	Consumer Goods	20
5	Financial Services	53
6	Healthcare	10
7	ICT	9
8	Industrial Goods	13
9	Natural Resources	4
10	Oil and Gas	12
11	Services	25
	TOTAL	**165**

Source: Nigerian Stock Exchange (2020) (official market information obtained via email of Wednesday, Dec 30, 2020 at 12:37 PM from Rosemary Ugwuogo (rugwuogo@nse.com.ng) of the Nigerian Stock Exchange (www.nse.com.ng).

5.7.2 Sample size and sampling technique of the study

The sample of a study is the number of elements with specific characteristics chosen from the study population. A sample is any part of the total defined population that is statistically representative of the population of interest, which is studied to enable the researcher to express an opinion on the entire population (Banerjee & Chaudhury, 2010; Majid, 2018). The sample size of this study is 63 as presented in Table 5.4b.

Table 5.4b: Industrial distribution of sample listed non-financial firms in Nigeria as of 31st December 2019

S/N	Industrial composition of listed firms at December 31, 2019	No. in each industry	Percentage
1	Agriculture	4	6%
2	Conglomerates	4	6%
3	Construction/Real Estate	3	5%
4	Consumer Goods	14	22%
5	Healthcare	6	10%
6	ICT	3	5%
7	Industrial Goods	9	14%
8	Natural Resources	2	3%
9	Oil and Gas	7	11%
10	Services	11	17%
	TOTAL	**63**	**100%**

Following the approach of Akinkoye and Olasanmi (2014), the study adopted a purposive sampling technique to select the firms that made up the sample. The Nigerian Stock Exchange, in its official website (http://www.nse.com.ng/issuers/listed-securities), that there were 165 active listed firms in December 2019.

First, out of the 165 firms, 53 firms that comprised the financial services sector (banks, insurance companies, and pension funds) with a market capitlaisation of ₦3.42 trillion were excluded from the sample because the financial services sector is specially regulated and governed by separate codes of corporate governance. In addition, shares of 12 companies that were not traded often from 2012 to 2019 were taken out of the population.

Second, to be included in the final sample, a firm must have complete annual reports for the eight years from 2012 to 2019 inclusive. A report is complete when it contains both financial and corporate governance information. The firms that do not have complete annual reports were excluded as well. For instance, important variables such as size of the board, committees, and attendance at meetings, gender diversity, disclosure of remuneration of directors, and other important variables were not available in the excluded firms. In addition, market capitalisation and the availability of the firm's stock market information for the same period were also considered in selecting the final sample.

After these adjustments, only 63 firms had enough financial information and details to enable the CGI to be constructed. This approach ensured that the study had a balanced data panel suitable for panel data analysis (Henry, 2008; Ntim *et al*., 2012a).

5.7.3 Reasons for selecting the sample period of 2012 to 2019

The consideration of a broad cross-section of listed firms in Nigeria from 2012 to 2019 allowed a study of the dynamic as well as cross-sectional aspects of the relationship between corporate governance practice and firm performance in the Nigerian context. During this period, the world witnessed the consolidation of the wave of corporate governance frameworks. Most country-specific corporate governance codes emerged or were revised during the period. Examples of these codes include the revised UK codes of 2014 and 2016; the Nigerian code of 2011 (replaced in 2020 by the 2018 code); and the ICGN code of 2014. Specifically, the year 2012 represents one year after the introduction of the revised SEC-N Code of 2011 and the emergence of the first wave of corporate governance development in Nigeria from 2003 to 2011. Thus, the period provides a chronology of the improvement in corporate governance practices among listed firms in Nigeria as significant reforms in corporate governance took place both in Nigeria and globally during the period. Also, this period fell within the mandatory period for the adoption of the IFRS reporting framework in Nigeria by all listed firms (Nigerian Accounting Standard Board, 2010), which enabled Nigerian listed firms to adopt better and more robust accounting and control systems.

Further, the period provided a trend of how the market rewarded improved corporate governance practices by listed firms in Nigeria and showed the sensitivity of Nigerian firms to global demand for good corporate governance by showing the extent

to which Nigerian listed firms voluntarily applied the principles in the corporate governance code of 2011.

Finally, the eight-year period would provide sufficient data to allow a robust statistical analysis to be carried out and to resolve the challenges of endogeneity inherent in quantitative research of this kind. The next paragraph discusses the panel data.

5.8 Panel data structure and extraction

The study uses the panel data structure. Panel data, also referred to as longitudinal time series, is a pooled data set in which the characteristics of a given sample of individual entities, which are the listed firms in this study, are observed over several periods (Greene, 2003; Hsiao, 2003; Baltagi, 2005; Torres-Reyna, 2007). In a panel data analysis, the various independent variables of interest are observed both across firms and over several periods (Sinha, 1998; Frees, 2004; Brüderl, 2015). This method of data analysis is most suitable for data sets that span over periods and cover several research units, such as the financial and other data units disclosed in the published annual reports of the listed firms (Frees 2004; Sinha, 1998). Thus, panel data provides multiple observations on everyone in the sample.

The study used content analysis to extract data from the annual reports of the sample firms for analysis. The corporate governance disclosures contained in the published annual financial reports of the sampled listed firms were manually extracted from the individual annual reports of the firms covering 2012 to 2019. This approach aimed to obtain the relevant data on corporate governance compliance by each firm on a yearly basis across the sample firms. This approach has been adopted by several studies on corporate governance, including Ranti (2011), in her study of corporate governance in 21 listed banks in Nigeria; Albassam (2014), in his study of corporate governance disclosures and firm performance of listed firms in Saudi Arabia; and Otman (2014), in his study of corporate governance and firm performance in listed companies in the United Arab Emirates. Others include Sinha (1998) in his study of the corporate governance of quoted firms in the UK and Owusu (2012) in his investigation of the relationship between corporate governance and firm performance in Ghana. The data of the individual firms was extracted across each of the years, from 2012 to 2019, with each variable considered across the sampled companies because the study combined a time series and cross-sectional data format (Ranti, 2011).

5.8.1 Objectives of panel data analysis

McManus (2011) identified three objectives of panel data analysis. These include:

i. To describe the change of a phenomenon over time, such as a change in the quality of governance of firms over time.
ii. To provide a basis for superior estimates of trends in social phenomena, such as estimating the value of the firm based on the quality of its corporate governance. A better estimate of the firm's value can be made over time based on the multiple observations that come with the governance mechanisms.
iii. Panel data analysis makes it easier to estimate a cause-and-effect relationship between the variables that are being studied and the variables that are not being studied.

The above three objectives are, however, not all-inclusive. However, the above objectives underscore the reason for the popularity of the use of panel data, especially in quantitative research studies. In spite of the popularity of the panel and the associated advantages, panel data also has some limitations. The advantages and limitations of panel data are discussed in sections 5.8.2 and 5.8.3.

5.8.2 Advantages of panel data analysis

There are many advantages to using the panel data analysis method. First, multiple observations are made possible, which improves the efficiency of the estimator because of the large sample size estimated; that is, the number of firms observed multiplied by the number of years observed (Owusu, 2012). Second, panel data minimises the problem of multicollinearity where two or more independent variables are highly correlated with each other (Sinha, 1998). Third, the method allows for several regression analyses in both spatial (units) and temporal (time) dimensions (Ranti, 2011). Hsiao (2003, 2006), Baltagi (2005), Kyereboah-Coleman (2007), Ranti (2011), and Brüderl (2015) all point out other benefits of panel data analysis, such as:

i. It makes it easier for researchers to answer many important economic questions that are hard to answer with time-series data sets.
ii. Panel data provides the possibility of generating more accurate predictions for individual outcomes than time-series data alone, especially with its ability to control for omitted variables. This is because panel data gives more informative

data, leading to more variability, less collinearity among the variables, and efficiency in providing data for the prediction of relationships among several variables.

iii. It provides an understanding of the time-ordering of events that enables the researcher to investigate how an event changes the outcome. Panel data also makes the study of individual trajectories easier, which are the various corporate governance mechanisms in the context of this study.

iv. The model helps to control for individual heterogeneity of study samples since it allows for individual assessment of variables of firms across countries, periods, cultures, management and board endowments. Not controlling for individual heterogeneity could lead to biased results and faulty conclusions.

v. It reduces measurement errors and bias that might result from the aggregation of individual units into broad aggregates because data is made available for several units in a panel data set. Thus, panel data is considered a better mechanism for identifying and measuring effects that are otherwise not detectable in pure time-series data.

vi. Panel data enables the researcher to generate more accurate predictions for individual outcomes, facilitates the analysis of non-stationary time series, and provides the opportunity to easily resolve the complexity of the research problem through the pooling of data rather than using individual data variables.

Albassam (2014) further observes that the use of a balanced panel is beneficial in that (i) it enables the researcher to have both cross-sectional and time-series observations; (ii) it improves the degree of freedom; and (iii) it helps in ascertaining whether cross-sectional associations among corporate governance practices and firm value hold over time. The fourth benefit is that a balanced panel helps to minimise the inherent statistical problems of endogeneity that may arise from potential unobserved firm-level heterogeneity (Ntim, 2012). These advantages informed the use of panel data analysis in this study, especially as the data under consideration runs across several years and relates to several heterogonous companies. However, panel data analysis does have some limitations, which could lead to difficulties in using panel data analysis. The limitations are discussed in section 5.8.3.

5.8.3 Limitations of panel data analysis

Notwithstanding the popularity of the panel data method of analysis, some limitations and challenges have been associated with the method. Hsiao (2006) and Baltagi (2005) list some of the problems with panel data analysis, such as the following:

i. A huge amount of time is required to collect large amounts of data for analysis, since panel analysis is characterised by large data sets.
ii. The inherent risk of gathering unreliable and incomplete data results in measurement error because of unclear questions, especially in the case of qualitative research where interviews and questionnaires may be used.
iii. The high cost of processing large data.
iv. A selectivity problem whereby some important variables may be omitted, giving rise to endogeneity.
v. The absence of data to obtain a balanced data panel, caused by the refusal of respondents to provide an appropriate response to the request for data.
vi. Attrition occurs when a respondent dies, relocates, or in the case of firms, when there is a merger.
vii. Short time-series dimension. Panel data normally has a short time dimension because of the cost of processing many years. As such, inferences based on short-time data may not be reliable.
viii. The difficulty of analysing panel data leads to the use of complex statistical methods.

The main data sets that would be used for analysis are numeric data sets made up of both financial and corporate governance disclosures. The definition and composition of the data variables and how the data is accessed are discussed in section 5.9 that follows.

5.9 Sources of data

The study uses two main categories of data: the financial data from the financial statements and the corporate governance data from the corporate governance disclosure report. The sources of the data and the definition of the variables are also explained in the section. The major source of data for this study was the primarily structured secondary data from the published annual reports of the listed companies from 2012 to 2019. The annual reports used were either those published on their corporate websites or hard copies. The annual reports provided information on both governance structures

and the financial performance of the firms. The use of annual reports as the main source of data supports the view of Owusu (2012) that the traditional source of data for research on corporate governance and computation of a CGI is the published annual accounts of listed firms. Botosan (1997) adds that the benefit of using annual reports of firms is that these reports reflect comprehensive facts on corporate governance, financials, and other operational activities of companies. Moreover, annual reports are considered as the common communication instrument employed by firms to disclose relevant information regarding corporate governance practices and the financial performance of the firm (Botosan, 1997).

In the Nigerian context, section 34.4 of SEC-N (2011) specifically requires companies to disclose, in their annual reports, information on their corporate governance structures, including the composition of the board of directors and their names; board meetings and attendance of the individual directors; accounting and risk management issues; executive directors' remuneration and share options; non-executive directors' fees; and the chairman's statement, among others. Further, the CAMA 1990 and SEC-N Code (SEC-N 2011), which moderate the operational structures of listed firms in Nigeria, require that listed firms make their annual reports public in the interest of both investors and other stakeholders. The purpose of this disclosure requirement is to indicate to the stakeholders the relevant information on the strength of the corporate governance frameworks of the companies, their policies, and practices (SEC-N, 2011).

Related studies on corporate governance and the performance of listed firms that have used published annual financial reports as the main data source include Coleman and Biekpe (2006), Okafor and Ibadin (2011), Ranti (2011), Sarkar *et al*. (2012), Albassam (2014), Owusu (2012), Wellalage (2012), Akinkoye and Olasanmi (2014), Adegbite, E. (2015), Babatunde and Akeju (2016), Eyenubo *et al.* (2017), Yinusa *et al.* (2019), Adegbie *et al*. (2019), Eluyela *et al*., (2018, 2020). Therefore, the annual reports provide the main source of variables used in this study.

The data extracted from the annual financial reports has been used in estimating the dependent firm value proxies of Tobin's Q, ROE, and NAT. The corporate governance independent variables were extracted from the corporate governance section of the annual report as well. The definitions of these two classes of variables are given in section 5.9.2.

5.10 Definition of variables (Tobin's Q, ROE and NAT)

This section identifies the three firm financial performance proxies and how they are defined in the study. The three firm financial performance (dependent) variables of Tobin's Q, ROE, and NAT are discussed in 5.10.1, while section 5.10.2. discusses the internal and external corporate governance (independent) variables.

5.10.1 Dependent variables (financial performance proxies)

The dependent variables are on the left-hand side of the equations, while the independent variables are stated on the right-hand side. The dependent variables include Tobin's Q, return on equity (ROE), and net asset turnover (NAT). They are regressed against the corporate governance independent variables. The dependent variables of each of the models above are defined below. The study also uses descriptive statistics to estimate the mean, median, maximum, and minimum values to evaluate the selected variables. Standard deviation and variance are two other ways to measure how different these estimates are from each other.

(a) Tobin's Q

Tobin's Q ratio measures the effectiveness with which the management of the firm uses its assets to create value for shareholders (Marashdeh, 2014). Notwithstanding the criticism of Tobin's Q by Dybvig and Warachka (2015) that it does not effectively measure firm performance, especially with respect to investment decisions, Tobin's Q is still popular as a proxy for the value of the firm (Weir *et al.*, 2002; Beiner & Schmid, 2005; Wellalage, 2012; Ntim, 2009). Therefore, Tobin's Q is used in this study as a proxy for firm value. This is because Tobin's Q is considered better than accounting measures as a measure of the performance of the firm. Wernerfelt and Montgomery (1988) say that the accounting measures are flawed because they do not take into consideration differences in systematic risk and temporary disequilibrium effects.

A Tobin's Q of more than 1 suggests greater effectiveness of a firm's internal corporate governance structures and reflects a positive market perception of the performance of the firm in terms of profitability, while a lower ratio of between 0 and 1 indicates that the market undervalues the stock of the firm (Agrawal & Knoeber, 1996; Weir *et al.*, 2002; Beiner & Schmid, 2005; Wellalage, 2012; Ntim, 2009).

Therefore, Tobin's Q ratio as a proxy for the efficiency of the firm is said to be a more appealing performance measurement model that has attracted significant usage in empirical corporate governance research because its validity is said to be grounded in a rigorously established empirical literature (Ntim, 2009). The simple approximation of Tobin's Q value used in this study is the model suggested by Chung and Pruitt (1994) as:

$$\textbf{Approximate q} = \frac{\textbf{MVE + PS + DBT}}{\textbf{TOTAL ASSETS}}$$

Where:

MVE = product of firm's share price and the number of ordinary shares outstanding as indicated in both the annual reports of the firm and the data obtained from the Nigerian Stock Exchange.

PS = market or liquidating value of the firm's outstanding preference shares.

DBT = value of the firm's short-term liabilities + the value of the long term debts less current assets.

Total assets = Total assets is the book value of the assets as per the balance sheet.

The valuation of the q as estimated above is consistent with the approach adopted by Simpson (2016), Alajlani and Posecion (2018), Alokla and AL Masri (2020), among others.

(b) Return on equity (ROE)

Return on equity (ROE) also defines the return of after-tax profit on the net worth of the firm. For this study, ROE is defined as profit after taxes divided by the book value of equity at the end of each financial year (Van Horne, 2002; Du Toit & De Wet, 2007; Pandey, 2015; Ichsani & Rinta, 2015; Kijewska, 2016):

$$\frac{\textbf{Net Profit after tax – Preference Dividend}}{\textbf{Book Value of Ordinary Equity or Net Worth}}$$

It is expected that firms that have effective corporate governance will have better ROE than those without, since ROE is a reflection of profitability that depends on the ability of the managers to efficiently control the operations of the firm. Effective control is a function of effective corporate governance.

(c) Net Assets or Asset Turnover/Asset Utilisation

The asset turnover ratio indicates the effectiveness with which the manager allocates assets to generate sales revenue (Moez, 2018). The use of the asset utilisation ratio, normally referred to as the asset turnover ratio, as a performance measurement and as a proxy for the measurement of the agency cost has been adopted by various studies (Ang *et al.*, 2000; Gul *et al.*, 2012; Sarwar & Khan, 2015; Moez, 2018; Hussainet *et al*., 2019). Various definitions have been suggested for the ratio, such as net income divided by total assets; sales divided by the average total assets; total sales divided by the total assets; total revenue divided by total net assets; total sales divided by total assets, among others (Gul *et al.*, 2012; Sarwar & Khan, 2015; Moez, 2018; Hussain *et al*., 2019; Nurlaela *et al.*, 2019). This study adopts the estimation of the ratio as suggested by Gul *et al.* (2012) and Nurlaela *et al.* (2019) as:

$$\frac{\text{Total Revenue}}{\text{Total Assets}}$$

The ratio measures the effectiveness with which management utilises assets to earn revenue. A high ratio suggests that management makes efficient and effective investment decisions and cost control that improve the value of the firm. A low ratio shows that investment decisions by the management and cost control efforts were poor. The main argument is that with effective corporate governance, asset utilisation and cost control would be optimised, as the management would be motivated to make the best decisions in the interest of the stakeholders (Ang *et al.*, 2000; Gul *et al*., 2012; Mohammed, 2013; Sarwar & Khan, 2015; Moez, 2018; Hussain *et al.*, 2019).

Corporate governance typically examines both accounting and market-related data and performance measures. This is why Renders & Gaeremynck (2006) used the accounting and market measures of Tobin's Q (TNQ), return on equity (ROE), and net asset turnover (NAT) as independent variables.

The choice of the above measurement parameters was made based on the approach of the available literature and especially as there appears to be no consensus in the literature on the optimal predictor parameter for firm performance (Albassam, 2014). Therefore, the adoption of multiple measurement models would provide a robust picture of the extent to which effective corporate governance rewards firms. Further, the support for the use of the above parameters is that, collectively or individually, they are widely used in studies on corporate governance. As a performance measure, the return on equity is unstable because accounting returns are based on the unique accounting

policies of each company, even if they are in the same industry (Klapper & Love, 2004).

5.10.2 Independent variables - Internal corporate governance mechanisms

The internal corporate governance mechanisms used for the study are defined as:

i. Board Independence (BODIND)
ii. Board Duality (BODLTY)
iii. Board Meetings (BODMTG)
iv. Board Size (BODSIZ)
v. Gender diversity (GENDIV)
vi. Foreign board membership (FORMEM)
vii. Board committees (BODCOM)
viii. The independence of the Audit Committee and the external auditor – EXACOM.
ix. Other disclosure (OTHDIS)

These categories of mechanisms serve as the proxies for the independent variables. The elements of the categories are contained in Appendix 2.

5.10.3 Independent variables - External governance mechanisms

The study defines external corporate governance mechanisms as:

(a) Proportion of shareholding by non-promoter or institutional shareholders – NPISHR.
(b) Market share of the firm, using the proportional share of the total industrial revenue as a proxy – MKTSHR.

The review of literature on the effect of the internal and external governance mechanisms on the performance of the firm was discussed in Chapter Four. Furthermore, section 5.13 specifies the model that expresses the relationship between the mechanisms and the performance of the firm measured in terms of Tobin's Q, ROE, and NAT. The external governance mechanisms are also independent variables.

The procedure adopted in constructing the Nigeria CGI using the data (i.e the dependent and the independent variables) contained in the annual reports of the sample firms, from 2012 to 2019, are described in section 5.11 that follows.

5.10.4 Independent variables - Control variables

The focus of the study is to establish the relationship between corporate governance and firm financial performance of listed non-financial firms in Nigeria from 2012 to 2019. To establish the relationship, dependent and independent variables are used. However, other variables (outside of the identified dependent and independent variables) may be responsible for the existence of such a relationship. These unidentified factors are potential determinants of the quality of corporate governance and firm performance. To resolve and mitigate the effects of such unidentified variables and improve the predictive ability of the identified independent variables, it is necessary to introduce control variables. The introduction of control variables in empirical studies, which has been adopted by prior studies, helps to mitigate the biases inherent with omitted variables and improve the validity of research results (Sinha, 1998; Ntim, 2009; Manawaduge, 2012; Owusu, 2012; Albassam, 2014; Marashdeh, 2014; Farhat, 2014; Bozec & Dia, 2015; Buallay *et al*., 2017; Yameen *et al.*, 2019; Aliyu, 2019; Ndum & Oranefo, 2021; Ozili, 2021).

Adopting the method of Adewuyi and Olowookere (2008), this study takes into account the following control variables:

(a) Capital structure (Debt and equity proportions) – CAPSTR.
(b) Size of the firm using market capitalisation as a proxy– FIRMSI.
(c) Age of the firms (percentage of the age of the firm from 1990 when the Companies Act was introduced to 2019) – FIRAGE.

The subsections that follow discuss the support in the literature for the incorporation of control variables in the studies on corporate government and the value of the firm.

5.10.4.1 Capital structure and corporate governance

The capital structure, which simply refers to the proportion of debt to equity, is said to influence the design of the corporate governance structures of firms, the cost of capital, firm value, and shareholders' wealth (Jensen, 1986; Abeywardhana, 2017). This is because debt covenants constrain the behaviour of agents and are capable of reducing agency conflicts between management and shareholders (Jensen, 1986). Jensen (1986) refers to the debt control effects as the "control hypothesis" for debt creation. Kumar (2015), in his study of Indian listed firms from 1994 to 2000, observed that debt structure is non-linearly linked to corporate governance. In other words, firms with

weaker corporate governance mechanisms coupled with dispersed shareholding patterns tend to have a higher debt level as a control mechanism. Further, Morellec *et al.* (2010) observed that the heterogeneity in the capital structure has a relationship with the corporate governance mechanisms adopted by the firms.

There is, however, mixed evidence about the relationship between the high debt-equity ratio and firm performance. Ahmadpour *et al. (*2012), Liao *et al*. (2013) and Morellec *et al.* (2010) confirm various degrees of the positive relationship between the debt-equity ratio and the corporate governance structure of the firm. Specifically, Arikekpar (2020) reveals that the capital structure has a positive significant effect on the financial performance of selected firms in the manufacturing sector of Nigeria from 2014 to 2018. Awunyo-Vitor and Badu (2012), however, found a negative relationship between the high debt-equity (leverage) ratio and the performance of listed banks in Ghana.

5.10.4.2 Size of the firm

The size of the firm can be measured in terms of the market size, market value of equity, or the asset base of the firm (Swastika, 2013; Ettredge, 2011). Some strands of literature suggest that the size of the firm is positively associated with superior governance, resulting in better firm value (Doğan, 2013; Ghafoorifard *et al.,* 2014; Putri & Hidayati, 2021). When firms are large, they face severe agency costs and so require strict and elaborate corporate governance systems to control the inherent agency costs (Beiner *et al.,* 2004). On the other hand, smaller businesses will need fewer corporate governance systems, especially if they are closely held and run by their owners.

The elaborate corporate governance systems of large firms, made possible by the ability of large firms to maintain large boards and control systems, will lead to better performance of the firm, higher returns to shareholders, and less need for earnings management (Suntraruk, 2013; Swastika, 2013; Mirza & Javed, 2013; Ghafoorifard *et al.,* 2014; Putri & Hidayati, 2021). Thus, empirical literature supports that a relationship exists between the quality of corporate governance and firm size. The rationale for this relationship is that investors would prefer a larger firm to a smaller firm because large firms are perceived to have corporate governance structures that can effectively mitigate agency costs. The expectation in this study, therefore, is that there is a positive relationship between good corporate governance and firm size, as firm size is positively related to the improved disclosure that characterises well-run firms (Ettredge, 2011).

5.10.4.3 Age of the firm

The age of a firm is one variable used to gauge the survival and success of firms (Bell *et al.,* 2014). The logic behind using the age of the firm to gauge the quality and performance of the firm is that firms that have weathered the economic storm over many years have acquired some level of experience and expertise, including managerial skills and competencies. However, Loderer and Waelchli (2010) observe that as organisations age, they embrace rigid systems and do not respond quickly to emerging ideologies and technologies, leading to high costs, a slow pace of growth, the use of obsolete assets, a decline in research, and the advancement of rent-seeking behaviour inside the firm.

Further, the study of firms listed on the CRSP, COMPUSTAT, and COMPUSTAT Industry Segment between 1978 and 2004 by Loderer and Waelchli (2010) shows that increasing age impedes organisational dynamism and impacts adversely on the performance of organisations. This implies that as organisations age, their performance deteriorates because they are hampered by rigid customs from responding to changes in the emerging economic environment. On the other hand, young firms react quickly to a changing economic environment, taking advantage of emerging economic opportunities that enable them to grow and succeed (Yasser, 2011). The empirical evidence implies that firms must continue to reform in line with emerging environmental demands, technology, systems, and changes in customers' desires to remain relevant and competitive. The expectation is that older firms are less efficient in carrying out their operations and, as such, will record a lower proportion of asset turnover.

The ages of the sample firms in Nigeria for the period studied are calculated from the date of incorporation to 2019. The oldest firm in the sample is 96 years old, while the youngest firm is 14 years old. To calculate the index of the ages of the firm, the natural log of the age of Nigeria (105 years) from 1914, when the Southern and the Northern Protectorates were amalgamated to form Nigeria (Mohammed, 2013; Eric, 2016; Campbell, 2018) was calculated to be 2.20. The logs of the ages of the sample firms, from the date of incorporation to 2019, were then expressed as a proportion of 105. This proportion was used as the firm age index.

5.11 Construction of the Nigeria CGI

This section discusses the variables and the procedure adopted for the construction of the CGI of the study. Corporate governance covers a large number of facets and variables that need to be considered for a better understanding of the overall governance of the firm (Sarkar *et al.*, 2012). This means that much information needs to be processed to achieve this understanding. Thus, the use of a CGI that presents a summary of the different aspects of corporate governance with only a few numbers is necessary.

5.11.1 Corporate governance variables considered

The study considered both internal and external mechanisms in the construction of the CGI for listed firms in Nigeria. Specifically, the internal mechanisms considered, as earlier defined in Chapter Three, include the structure and diversity of corporate boards, the audit committee, external auditor, ownership structure, and compensation, while the external mechanisms considered are the non-promoter institutional shareholders and product market competition.

The CGI is computed using 32 corporate governance variables. The variables were identified using the Nigerian Code (SEC-N 2011), the CAMA 1990, and extant literature. The variables are indicated in Table 5.5 below (See Appendix 2 for details of the variables). In addition, the control index has been constructed for the three control variables of capital structure, size of the firm, and age of the firm.

Table 5.5: Corporate governance mechanisms and variables for construction of the CGI

Mechanism	Variables	Number of variables
Internal Governance mechanisms	Board of structure, diversity and independence	23
	Audit and audit committee	7
External Governance Mechanisms	Market for corporate control	1
	Product market competition	1
	TOTAL	**32**

Further composition of the scores in Table 5.5 above are contained in Tables 5.6(a) and 5.6(b) while other details are presented in Appendix 2.

5.11.2 Allocation of CGI values

The corporate governance variables considered in this study are dichotomous variables that cannot have multiple characteristics (Field, 2006). Thus, when a firm had a variable, it was allocated "1" and "0" when it did not. There are no weights attached to the variables while the total value earned is considered the CGI of the firm. Similar values have been allocated to the dummies (control variables) used. However, following the approach by Ararat *et al*. (2017), some variables take fractional values ranging from 0 to 1. For instance, the proportion of female and foreign directors on the boards, the proportion of audit committee members with accounting skills, and the debt-equity ratio were coded as continuous variables with values ranging from 0 to 1. The age of the firms was, however, calculated by using the natural log of the number of years of the firm from when the firm was incorporated in Nigeria to 2019. The highest is the natural log of the 105 years from 1914, when the country called Nigeria was formed from the amalgamation of the Northern and Southern Protectorates by Lord Lugard (Deji, 2013) to 2019. Every firm's age is then expressed as a percentage of the natural log of $Log_{10}105$, which is 2.02.

The use of dichotomous and binary variables in constructing CGI has been adopted by other studies, including those by Gillan (2006), Alexandre and Lucas (2007), Kumar and Upadhyaya (2011), Varshney *et al.* (2012), Owusu (2012), Gompers *et al.* (2012), Azeem *et al.* (2013), Abassam (2014), Akinkoye and Olasanmi (2014), and Ararat *et al.* (2017).

The average of the total scores of all firms was then calculated and multiplied by 100 to obtain the aggregate percentage of the quality of corporate governance of the firms. This approach is consistent with the procedure used by Sarkar *et al.* (2012) and ensures that the aggregate corporate governance of the listed firms is not higher than that of any of the individual firms. The individual values of CGI were aggregated using descriptive statistics to obtain the means, standard deviations, and other descriptive statical measures of the components of CGI and the value of the firm. The aggregate CGI of each firm per year was calculated by Peters and Bagshaw (2014) as:

$$CGI = \frac{\text{Total score of the individual firm}}{\text{Expected score for all the variables}}$$

The result of the above computation was then expressed as an index.

The yearly components of the CGI were then regressed against the various yearly proxies of the value of the firm. Thus, CGI was calculated as:

> CGI = Average score of Board of structure in terms of Board Independence (BODIND), Board Duality (BODLTY), Board Meetings (BODMTG), Board Size (BODSIZ), Gender diversity (GENDIV), Foreign board members (FORMEM), Board committees (BODCOM), Independence of the Audit Committee and the External Auditor (EXACOM), External Governance (non-promoter or institutional shareholders (NPISHR), Market share of the firm using the proportional share of the total industrial revenue as proxy (MKTSHR), three Control Variables (Capital structure (Debt and equity proportions) (CAPSTR), Size of the firm using market capitalisation as a proxy (FIRMSI) and Age of the firms (percentage of the age of the firm from 1990 when the Companies Act was introduced to 2019 (FIRAGE).

Despite the popularity of the use of binaries to construct the compliance level, some concerns have been identified with the method. Specifically, Romano *et al.* (2008:1808) in their review of the use of CGI to predict the performance of firms, expressed some concerns that

> *"establishing a relation between governance and performance is technically difficult. The two variables, governance and performance, are plausibly endogenous, meaning that their relationship is bidirectional rather than unidirectional. And using existing indices can magnify that problem because their construction is based on two factually incorrect assumptions: one, that good governance components do not vary across firms; and, two, that such components are always complements and never substitutes".*

The concerns of Remona *et al.* (2008) derive from the fact that the construction of CGI is subjective and several models have been used to formulate the index according to the disposition of the researcher. Despite the concern, Remona *et al.* (2008) still find CGI relevant in establishing the relationship between corporate governance and the performance of the firm, stating that

> "*the more compelling reason for the success of indices is the elegant simplicity of having one summary number for capturing the multiple dimensionality of governance" (2008:1819).*

The maximum score of each firm is 12, which is considered 100 per cent, as shown in Table 5.6 (a).

Table 5.6(a): Maximum yearly CGI per firm

Variables	Max Value
Board duality (BODLTY)	1
Proportion of female directors (GENDIV)	1
Board size (BODSIZ)	1
Proportion of foreign directors (FORMEN)	1
Skills - boards with a mix of various professional skills	1
Board independence (BODIND)	4
Board of directors' meetings and attendance (BODCOM)	2
Number of committees (BODCOM)	4
Total of other disclosures requirements (OTHDIS)	9
Audit committee and external audit independence (EXACOM)	7
Proportion of equity holding by institutional shareholders (NPISHR)	1
Proportionate share of the total industrial revenue (MKTSHR)	1
Control variables Capital structure (CAPSTR) Size of the firm (FIRMSI) and Age of the firms FIRAGE)	3
TOTAL	**35**

The composition of the variables listed in Table 5.6a above are presented in Table 5.6b to provide connection between the two tables and explain on how the values of the variables were arrived at.

Table 5.6(b): Composition of the independent variables

(i) Internal mechanisms

S/N	Variables	Composition	Total highest score
1	Board Independence (BODIND)	Independent director with not more than 0.01 shareholding, majority of directors are independent, chairperson in non-executive director, proportion of non-executive directors.	4
2	Board Duality (BODLTY)	Position of the chairman and CEO are separated	1
3	Board Meetings (BODMTG)	Board of directors' meetings are held at least 4 times, directors attend board meetings at least 2/3 times	2
4	Board Size (BODSIZ)	Board size is not less than 4	1

Table 5.6b: Composition of the independent variables (continued)

(i) Internal mechanisms

S/N	Variables	Composition	Total highest score
5	Gender diversity (GENDIV)	Female on board	1
6	Foreign board members (FORMEM)	Foreign national on board	1
7	Board committees (BODCOM)	Presence of audit committee, governance and remuneration committee, risk management committee, other committees.	4
8	Other disclosures (OTHDIS)	Process of board appointments is disclosed in the annual report, chairman's report, level of compliance with the Code, role of the board, disclosure on code of ethics and conduct, disclosure on skills and experience of directors.	9
9	Independence of the Audit Committee and the External Auditor (EXACOM	Audit committee is composed of 2-6 members, all members of the audit committee are nonexecutive independent directors, chairman of committee is non-executive director, proportion of committee members with financial or accounting knowledge, of meetings held is 4, external auditor does not handle other consulting for the firm, external auditors is either of PWC, KPMG, Deloitte, Ernst and Young.	7
		Sub-total	**30**

(ii) External mechanisms

10	Non-promoter or institutional shareholders (NPISHR)	Proportion of equity holding by institutional shareholders	1
11	Market share (MKTSHR)	Proportionate share of the total industrial revenue (calculated)	1
		Sub-total	**2**
		Total internal and external mechanisms	**32**

Table 5.6b: Composition of the independent variables (continued)

Control variables

S/N	Variables	Composition	Total highest score
12	Capital structure (Debt and equity proportions) (CAPSTR)	Debt and equity proportions(calculated)	1
13	Size of the firm using market capitalisation as a proxy (FIRMSI)	Proportionate size of the firm using market capitalisation as proxy.	1
14	Age of the firms (percentage of the age of the firm from 1990 when the Companies Act was incorporated to 2019 (FIRAGE).	Age of the firms (Log of age of the firm from incorporation date to 2019)	1
		Sub-total of control variables	**3**
		Total variables	**35**

5.12 Establishing the relationship between firm performance and corporate governance

All the theoretical perspectives of the major theories of corporate governance such as agency (Bendickson *et al*., 2016; Panda & Leepsa, 2017; Antwi, 2021), stewardship (Yusoff & Alhaji, 2012 ; Mamun *et al.*, 2013; Madison, 2014; Cossin *et al.*, 2015; Keay, 2017), stakeholder (Maassen, 2002; Larcker & Tayan, 2008; Freeman *et al*., 2010; Dennehy, 2012; Merendino, 2013; Brandt & Georgiou, 2016), resource dependence (Nienhüser, 2008; Hillman *et al*., 2009; Altholz, 2010; Nasieku *et al.*, 2014; Tsuboi, 2014), institutional theory (Scott, 2004; Judge *et al.*, 2006; Çelik & Doğan, 2011; Lin, 2011; Yang & Zhao. 2014) agree that the performance of the firm is affected by the corporate governance mechanisms that guide its operations and decision models. Therefore, the internal or board governance system and the effectiveness of the market system can serve as moderators that reward performance and enable investors and other stakeholders to benefit from the operations of the firm under effective governance rules (Shleifer & Vishny, 1997).

Unlike prior studies that focused on either the CGI or the individual governance mechanisms to establish the relationship between firm value and corporate governance, this study uses both the CGI and the individual mechanisms in determining the relationship. This approach provides insight into the combined and individual effects of

the corporate governance mechanisms on the performance of the firm. It also clarifies the level of impact of the individual mechanisms on the financial performance or value of the firm. Multiple governance data and performance relationships are shown in Figure 5.3:

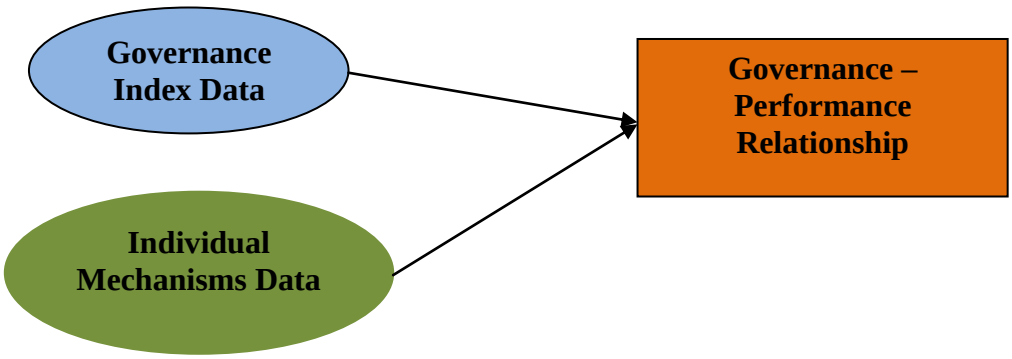


Figure 5.3: Simultaneous data-governance relationships
Adapted from Owusu (2012:141)

5.12.1 The equilibrium-variable model and the compliance-index model

The consequence of agency conflict, accentuated by the separation of ownership from the control of large companies, has resulted in a large body of empirical literature aimed at establishing the association between both internal and external corporate governance structures and the financial performance of the firm. Two main competing models, the equilibrium-variable model and the compliance-index model, have been used in prior studies to establish the relationship between corporate governance and firm performance (Ntim, 2009; Varshney *et al*., 2012; Sarkar *et al*., 2012; Azeem, *et al*., 2013; Albassam, 2014).

5.12.1. 1 Equilibrium-variable model

One strand of literature has identified a positive relationship between corporate governance measures and the financial performance of the firm at the point where the firm is said to be out of equilibrium (Chidambaran *et al.*, 2006). A firm is out of equilibrium when a change in governance mechanism causes changes in its performance (Agrawal & Knoeber, 1996; Black *et al.*, 2006; Chidambaran *et al*., 2006). In contrast, the equilibrium model assumes that the financial performance of the firm would cease to be influenced by corporate governance choices at the point where the marginal cost and marginal benefits of introducing a governance mechanism are equal – the

equilibrium point (Agrawal & Knoeber, 1996). Thus, under the equilibrium variable model, the individual independent governance variables are regressed against each of the dependent performance variables.

The main argument of the equilibrium model is that the optimum governance structure is firm-specific, and firms optimise their corporate governance choices to the point where the observed relationship between corporate governance arrangements and firm performance is non-existent or insignificant (Wessels & Wansbeek, 2014). Thus, at equilibrium, firms should not improve performance through changes in their corporate governance arrangements (Wessels & Wansbeek, 2014). In other words, at equilibrium, firms would not be motivated to make corporate governance changes because such changes would not improve their current situation. As such, firms should be at liberty to choose the governance structures that fit them without necessarily being constrained to adopt a particular model (Ntim, 2009; Wessels & Wansbeek, 2014).

Arcot and Brunoy (2007) found in their study of 245 non-financial companies that did not comply with the UK corporate governance codes performed exceptionally well and out-performed those that fully complied with the codes. Therefore, compliance with the mandatory codes does not necessarily result in better firm performance. Arcot and Brunoy (2007) thus argue that companies should have their governance models according to their heterogeneous forms rather than being forced to adopt any fixed model since one size does not fit all (Arcot & Brunoy, 2007). This explains the framing of some codes under the "apply or explain" philosophy, a form of voluntary compliance and principles-based governance codes such as the OECD 2004 code and most other codes, including the Nigerian and South African codes. On the other hand, the "apply or else" mode, a form of compulsory or rules-based governance code, requires mandatory compliance by firms. For instance, section 8.1.3 of the Nigerian Banking Code (CBN, 2014) provides that "Failure to comply with the code will attract appropriate sanctions in accordance with section 60 of BOFIA 1991 as amended or as may be specified in any applicable legislation or regulation". This could be considered a form of compulsion to apply the principles of the code.

Adopting the equilibrium model, the study seeks to test whether Nigerian listed firms are at their equilibrium state where there would be an insignificant relationship between changes in governance mechanisms and firm performance. The relationship between corporate governance and firm performance is estimated by considering a combination of some internal and external governance mechanisms and establishing

their relationship with two accounting-based measures of ROE and asset turnover (NAT) and one market-based measure of Tobin's Q. The regression of independent variables against the dependent variables derives from the argument of Agrawal and Knoeber (1996) that the effect of corporate governance on firm performance can only be effectively determined using a combination of mechanisms and not only one at a time since mechanisms are complementary.

5.12.1.2 Compliance-index model

The compliance-index model examines the relationship between corporate governance and firm performance using a composite CGI (Abassam, 2014). The use of CGI to establish the relationship between corporate governance and the financial performance of firms appears to be rapidly dominating literature in recent times (Sarkar *et al*., 2012; Azeem *et al*., 2013; Akinkoye & Olasanmi, 2014; Udo, 2019; Aluchna & Kuszewski, 2020; Abiola & Oyeleye, 2021). It was made popular by the diffusion of corporate governance codes around the world in the early 2000s (Ntim, 2009).

5.12.2 Choice of model: equilibrium or compliance model?

Studies have adopted a combination of the two methods in establishing the relationship between corporate governance and firm performance (Ntim, 2009; Abassam, 2014). This study also follows this approach and adopts a combination of the two methods. First, the self-constructed aggregate CGI is used as the independent variable and regressed against each of the financial performance-dependent variables. Then, the alternative equilibrium-variable model is used, in which each of the proxies for financial performance is regressed against each of the individual mechanisms.

5.13 Definition and specification of models and relationships

Several models, such as multivariate regression, performance–attribution time-series regression, and ANOVA, have been applied in analysing panel data to establish the relationship between the level of corporate governance and the value of the firm (Carter *et al.*, 2008; Umoren & Okugbo, 2011; Mans-Kemp, 2014; Ahmed & Hamdan, 2015; Steyn, 2018; Ogunsanwo, 2019; Aluchna & Kuszewski, 2020), but the most popular model is the multivariate regression model.

5.13.1 Multivariate-regression model

Adopting the approach of Ntim (2009), Owusu (2012), Mans-Kemp (2014), Ahmed and Hamdan (2015), Steyn (2018), and Ogunsanwo (2019), this study adopts the multivariate regression model. This is because many independent variables have been identified to be regressed against one dependent variable for several periods in this study. Also, the model, when applied to the CGI of Nigeria (NCGI) and the control variables, will help to ascertain the key determinants of the NCGI. Further, the model allows the researcher to make stronger causal inferences from observed associations between two or more variables over multiple times (Abdel-Salam, 2008; Hidalgo & Goodman, 2013).

This study suggests the existence of more than one independent predictor variable. The model is appropriate for explaining the relationship between the dependent variables and multiple independent predictors (Praveen *et al.*, 2012). One other reason for the popularity of multiple regression model analysis is that it allows the addition of any number of independent variables that can take both continuous and discrete values (Kall & Beltrame, 2016). Further, the model can accommodate many explanatory variables that may be correlated, and enable inference of causality in cases where simple regression analysis would be misleading (Wooldridge, 2013). As argued by Steyn (2018), a multiple linear regression model is suitable because it is effective in assessing the relationship between two or more variables acting together to affect a dependent variable.

The regression model seeks to provide direction on the relationship between the independent variables and the value of the firm, indicated by Tobin's Q, return on equity (ROE), and net assets turnover (NAT). The measures of Tobin's Q and ROE have been used in prior studies, including Ntim 2009, Abassam 2014, Otman 2014, Steyn (2018), Ogunsanwo (2019), and Aluchna and Kuszewski (2020). The use of multiple performance measurements is viewed as appropriate to assess the impact of corporate governance on the firm (Abdullah & Page, 2009).

Further, the use of multiple financial performance measures is to provide the various classes of stakeholders, including investors, evidence on the relationship between corporate governance and the firm value since the various stakeholders would value corporate governance differently (Ntim, 2009). For instance, while the impact of corporate governance on Tobin's Q will be of great interest to investors generally because of its market orientation, the employees and internal management and

shareholders will consider the impact of corporate governance on ROE and net asset turnover, which reflects the wealth effect of effective corporate governance (Abdullah & Page, 2009; Ntim, 2009; Albassam, 2014; Otman, 2014).

Secondly, each measure does have some peculiarities, strengths, and shortcomings (Haniffa & Hudaib, 2006; Ntim, 2009). As a result, considering more than one dependent firm value would provide a better view of the effect of corporate governance on the firm's value and financial performance, especially given that the literature does not select one particular measure as the best and most superior (Haniffa & Hudaib, 2006; Ntim, 2009).

The multivariate-regression model used in this study is of the form:

$$\mathbf{Y_i = \alpha+\beta_1X_{1i}+\beta_2X_{2i}+...+\beta_nX_{ni} + \sum_{i=1}^{n} \beta_1} \text{ Controls } + \mathbf{e_t}$$

Where:

Yi = Value of the firm financial performance (dependent variable) measured in terms of return on equity (ROA), as an accounting-based measure, Tobin's Q (TNQ-ratio) as a market-based measure, and Assets Turnover as a proxy for agency cost.

α = the constant term or the intercept and is the expected value of Y_i when X_1, X_2,...,X_n are all equal to zero. This constant term also represents the amount of adjustment that the dependent variable must be adjusted upward or downward given knowledge of the values of the explanatory variables. Thus, α represents the "ignorant factor about" all other variables or "systematic factors" that predict the dependent variable (Clark & Linzer, 2015:400).

β1…βn = This represents the coefficient of the explanatory variables. It indicates the value of the coefficient of Yi as a result of an increase or decrease in X (independent variable) for the terms 1 to 'n'.

i and n = Number of cases and the periods considered.

X = Board Independence (BODIND), Board Duality (BODLTY), Board Meetings (BODMTG), Board Size (BODSIZ), Gender diversity (GENDIV), Foreign board members (FORMEM), Board committees (BODCOM), Independence of the Audit Committee and the External Auditor (EXACOM), Other disclosures (OTHDIS), External Governance (non-promoter or

institutional shareholders(NPISHR), Market share of the firm using the proportional share of the total industrial revenue as a proxy (MKTSHR), three Control Variables of Capital structure (Debt and equity proportions) (CAPSTR); Size of the firm using market capitalisation as a proxy(FIRMSI); Age of the firms (percentage of the age of the firm from 1990 when the Companies Act was incorporated to 2019(FIRAGE).

ε_t, = Error term which accounts for other possible factors that could influence X and possibly Y_i, but which are not in the model (Ranti, 2011).

Owusu (2012) further decomposes the error term into two components: the firm-specific error "vi" and an idiosyncratic error "εi_t". Thus:

$$\varepsilon_t, = vi + \varepsilon i_t \ldots\ldots\ldots\ldots\ldots\ldots\ldots (2)$$

Where "vi" is the between-firm error and "εi_t" is a within-firm error. The "vi" is assumed to be random variables and that Cov (Xit, vi) = 0.

Adapting the general multi-regression model to this study, the different values of the firm have the following relationships:

Model 1: The Nigerian Corporate Governance Index (NCGI)

Following the approach of Abassam (2014), this model tests the extent to which variation in the financial performance of the firm is explained or predicted by the changes in the **NCGI** as follows.

Tobin's Q, ROE, NAT = $\alpha + \beta NCGI + \beta CONTROLS + e_t$ ..Equation 1

Model 2

Tobin's Q = $\alpha+\beta_1 BODIND+\beta_2 BODLTY+\beta_3 BODMTG+\beta_4 BODSIZ+ \beta_5 BODDIV+\beta_6 BODCOM+\beta_7 EXACOM+B_8 NPISHR+ \beta_9 MKTSHR+\beta_{10}\sum_{i=1}^{n} CONTROLS_n + e_t$ …Equation 2

Model 3

ROE = $\alpha+\beta_1 BODIND+\beta_2 BODLTY+\beta_3 BODMTG+\beta_4 BODSIZ+ \beta_5 BODDIV+\beta_6 BODCOM+\beta_7 EXACOM+B_8 NPISHR+ B_9 MKTSHR+\beta_{10}\sum_{i=1}^{n} CONTROLS_n+e_t$ .Equation 3

Model 4

$$NAT = \alpha+\beta_1 BODIND+\beta_2 BODLTY+\beta_3 BODMTG+\beta_4 BODSIZ+\beta_5 BODDIV+\beta_6 BODCOM+\beta_7 EXACOM+B_8 NPISHR+\beta_9 MKTSHR+B_9\sum_{i=1}^{n} CONTROLS_n+e_t \quad \text{.Equation 4}$$

The regression model is such that **BODIND, BODLTY, BODMTG, BODSIZ, BODDIV, BODCOM, EXACOM, EXACOM, EXTCOM, $CONTROLS_n$** > 0. This implies that all the explanatory variables are expected to have positive values. A priori, corporate governance would lead to improved financial performance (SEC-N, 2011). Therefore, an improved NCGI level would relate positively to improved financial performance (Ranti, 2011). Thus, a positive trend in the NCGI index is expected to be positively correlated with the performance and value of the firm.

The above models address the research questions by showing the relationship between corporate governance and the firm financial performance measures of ROE, NAT, and Tobin's Q.

5.13.2 Estimation methods

Empirical research in social and management sciences often makes use of panel data sets. The challenge researchers often have is to establish which regression model to use in running their estimation equation that would cater for possible endogeneity and provide a better model fit. The three main dominant models to address this challenge are pooled ordinary least square (POLS), random-effects (RE) and fixed-effect (FE). However, most authors argue that the last two, i.e., random-effects and fixed-effect models, are the most prominent (Clark & Linzer, 2015). This study uses the EViews 11 software to estimate the three regressions. The Hausman test is used to choose the right estimation model.

5.13.2.1 Pooled ordinary least squares

In pooled ordinary least square (POLS), the heterogeneity of the firms studied is not considered, but companies are assumed to be the same. Thus, the non-consideration of companies' heterogeneity is one of the major criticisms of the pooled ordinary least squares since sampled firms are different (Ntim, 2009; Owusu, 2012). For example, not all companies will have the same asset base, leverage, management culture, clientele,

and other characteristics, even if corporate governance structures appear to be the same. Even then, the differences among individual board members would make the effectiveness of one board different from another, even if they have similar latent characteristics. This major limitation makes this model inappropriate for the estimation of the regression equation for this study. However, in the case of this study, the fixed-effect likelihood ratio embedded in the software is estimated to determine whether to accept the fixed effect or the POLS. If the cross-sectional F statistics probability is significant, the fixed-effect estimation model outperforms the POLS; otherwise, the POLS is appropriate.

5.13.2.2 Fixed-effect model

The fixed-effect model is adopted to analyse panel data where the individual heterogeneity of the sample is not acknowledged and the sample characteristics are similar to the population. In other words, the population is almost similar to the sample under study (Nikolakopoulou *et al*., 2014). The main assumption is that "there is one true effect size (hence the term fixed-effect and not the plural "effects" as in the case of random-effects discussed next), which underlies all the studies in the analysis, and that all differences in observed effects are due to sampling error" (Borenstein *et al*., 2009:61). With the consideration that all studies exhibit the same true effect, it can be argued that the observed effect size varies from one study to the next only because of the random error inherent in each study (Borenstein *et al.*, 2009:64).

The term "fixed" arises from the fact that the study has its own specific intercept; the intercept does not change according to time. It is time-invariant since the studies possess similar characteristics. Thus, under the fixed-effect or common-effect model, the major assumption is that only one true effect size underlies all the studies in the analysis. That is, the strength of the relationship between two variables is the same for all studies, and that all differences in observed effects are due to sampling error (Borenstein *et al.*, 2010).

As it relates to this study, the fixed effects can only be appropriate if the sample is made up of firms with common characteristics such that the regression results of the sample satisfy the effect size of the population and are specific to it. That is, if it can be confirmed that the impact of corporate governance choices on the financial performance of all listed non-financial firms is the same, then the right model would be the fixed effect model. However, Borenstein *et al.* (2009) argue that where there are different

effects of the corporate governance choices on the financial performance of the firms, the fixed-effect model will not be appropriate. Therefore, if it were established that the relationship between corporate governance and firm performance is the same for all firms, then the fixed effect would be appropriate. However, for this to occur, the firms must be substantially homogenous, with the members of the study having common characteristics, and the study should relate to a sample that is equal to the population.

The challenge of researchers using incorrect estimation models stems from the literature's confusion, which provides contradictory grounds for adopting the fixed or random model (Clark & Linzer, 2015:72). To resolve this confusion, Borenstein *et al.* (2009) suggest two considerations to guide the use of the fixed-effect model. The first consideration is that all the studies included in the analysis are "functionally identical." The second is that the goal of the study is to compute the common effect size for the identified population and not to generalise to other populations. This strand of argument explains further why the fixed effects model may not be appropriate for estimating the relationships between corporate governance practices and the financial performance of a firm that belongs to several industrial sectors, as in this study. First, no two firms are functionally identical, so using an estimation model that does not consider the heterogeneity of the sample would be inappropriate. Secondly, at the heart of accounting research is to generalise the outcome to other populations and not to determine the common effect size for the identified population. Therefore, the use of the fixed-effect model would not be appropriate for studies that are intended to provide a basis for inference and generalisation of the research results universe of listed non-financial firms and for the growth and progress of society (Islam & Samsudin, 2020; Spineli & Pandis, 2020). The final choice of which model to select between fixed-effect and random-effect is determined by the Hausman test discussed in section 5.13.5.

5.13.2.3 Random-effects model

The random effect model is applicable where studies exhibit variability in the effect size and the effect size is not the same in all the studies (Borenstein *et al.,* 2009; Nikolakopoulou *et al.,* 2014). The focus of the random effects model is to use the outcome of the studies to estimate the overall characteristics of the population (Borenstein *et al.,* 2009). In other words, where the members of the sample in the study do not have similar characteristics, the estimation model should be the random effects model, which caters for the heterogeneity of the sample characteristics. Thus, under the

random-effects model, the goal is to estimate the mean of a distribution of effects that are represented in the summary estimate.

Further, in the case of the random effect model, the variation across the entities being studied is assumed to be random and uncorrelated with the predictor or independent variables included in the model (Nwakuya & Ijomah, 2017). The model assumes that there are no unobserved or omitted variables, and even if there are, such variables are uncorrelated with the observed variables (Bell *et al*., 2017). Thus, under the random-effects model, the true effect could vary from study to study (Borenstein *et al.* 2009:61). This suggests that endogeneity will not result from omitted variables.

Another most important consideration for the use of the random effects model is that where the objective of the study includes the generalisation of the research results to other scenarios to draw some form of inference by extrapolation, then the random-effects model has been considered to be appropriate as the utility of the research results will be higher (Borenstein *et al.,* 2009).

This study assumes that omitted variables exist in the model as it will be difficult to capture all conceivable independent variables. As such, there will be the problem of endogeneity. Secondly, the studies or sample firms are different from each other and not substantially identical. Thirdly, generalisation of the research results in the context of the performance of listed non-financial firms in Nigeria is one of the main purposes of the study. This is because, in this study, the researcher is not interested in the 63 sample firms themselves but in the use of the results of the study to draw conclusions about the extent of corporate governance practice by listed non-financial firms in Nigeria and to what extent the level of corporate governance practice affects the financial performance of listed non-financial firms.

5.14 Hasman test for model selection

One of the typical statistical tests to guide the selection of the estimator models is the Hausman Test, first proposed in 1978 (Hausman, 1978). Although Borenstein *et al.* (2009) have argued that the selection of the estimation model should not be based on the statistical results of another model, but rather that the choice must reflect the goals of the study, the type or characteristics of the population or sample of the study, the understanding of the sampling frame and how samples are selected, and whether the study results are to be generalised or not. Further, Clark and Linzer (2015) appear to support the main argument of Borenstein *et al*. (2009) against selecting either of the

models based on the results of the test statistics by observing that the Hausman test. They propose that the Hausman test is neither a necessary nor a sufficient basis for selecting either of the models since "in most applications, the true correlation between the covariates and unit effects is not exactly zero" to enable the researcher to opt for RE rather than FE.

In spite of the argument of Borenstein *et al.* (2009), several studies have based the selection of the FE or the RE models on the results of the Hausman Test, a test that has gained prominence in empirical social research and a variety of econometric domains because of its simplicity and generality (Amini *et al.*, 2015). Therefore, it can be argued that the consensus in the literature supports the selection of the estimation model based not only on the conviction of the researcher concerning the goals and characteristics of the studies but also on some statistical tests. The Hausman Test of endogeneity and the correct specification of econometric models is now available in various statistical software packages (including the "EViews 11" Student Lite version, used in this study) and is widely employed in empirical work (Kramer & Sonnberger, 1986). The null hypothesis of the Hausman Test is that there is no endogeneity or relationship between the explanatory variables (i.e., the error term, $\mathbf{e_t}$ as in the study, and the other regressors) in the regression equation, against the alternative hypothesis that endogeneity is present. Thus, the null and alternative hypotheses are defined as:

H0: The appropriate model is random-effects where there is no correlation between the error term and the independent variables in the panel data model. Thus, $\boldsymbol{Cov\ \alpha i, xit = 0.}$

H1: The appropriate model is fixed-effect where the correlation between the error term and the independent variables in the panel data model is statistically significant. $\boldsymbol{Cov\ \alpha i, xit \neq 0}$

The null hypothesis is rejected if the probability value of the Hausman test is less than 0.05 in favour of the FE as the estimation model; otherwise, choose the RE. In other words, if the probability value is less than 0.05, reject the null hypothesis and adopt the fixed-effect model to estimate the regression equation. However, if the probability value of the Hausman Test is greater than 0.05, then the RE model is appropriate. Thus:

H0: if p> 0.05 select RE, H1: if p <0.05 select FE

To select the regression model for the analysis of the panel data results, the corporate governance data was first arranged into three files: corporate governance independent variables, the dependent financial variables, and the calculated corporate governance index variables. The Hausman test module in the EViews was activated to estimate the probability of the correlation between the error term and the independent variables. Concisely, if the p-value from the Hausman test is below 0.05, reject the null hypothesis, which is the random-effect model, and accept the alternative hypothesis, that is, the fixed–effect (FE) model.

5.15 Endogeneity and test of the robustness of the model

Robert and Whited (2012) and Beiner *et al. (*2004) argue that one of the headaches of empirical researchers, especially finance and accounting researchers who focus on corporate governance, is the problem of endogeneity. Endogeneity is brought about by the presence of endogenous variables in the model. Endogenous variables are those variables that affect both the performance and the corporate governance mechanisms of the firms but which are not observed in the regression model (Farhat, 2014).

Econometric models, including the regression model adopted for this study, divide variables into two classes: endogenous variables and exogenous variables (Castineira & Nunes, 1999). A variable is endogenous "if it is determined within the context of the model, while an exogenous variable is a variable that affects the values of endogenous variables but whose values are determined outside the model" (Chenhall & Moers, 2007:177). For instance, in the equation below, the variable '**FIRMVAL-TNQ'** is the endogenous variable because it is explained in the model.

$$\textbf{FIRMVAL-TNQ} = \alpha + \beta_1\,\textbf{BODSTR} + \beta_3\,\textbf{EXACOM} + \beta_4\textbf{OWNSTR} + \beta_n X_{ni} + e_t$$

The above model is of the general form earlier stated as:

$$Y_i = \alpha + \beta_1 X_{1i} + \beta_2 X_{2i} + \ldots + \beta_n X_{ni} + e_t$$

Y (i.e FIRMVAL-TNQ) is the explained variable, while BODSTR, EXACOM, OWNSTR and X_{1i} are the explanatory variables. The coefficient $\beta_{1\text{-}n}$ represents the sign and magnitude of the impact of $X_{1i\,-\,ni}$ on Y. The error term e_t represents the residual that contains all factors affecting Y other than $X_{1i\,-\,ni}$ which is not explicitly stated in the model. The α is the intercept that signifies the value of Y when $X_{1i\,-\,ni}$ is 0.

As with all mathematical or statistical estimation models, the identification of all conceivable explanatory variables that influence the causal relationship between the dependent (response) variable and the independent (explanatory) variable is extremely difficult. The concern is that accounting empirical research is mostly quantitative (Chenhall & Moers, 2007) and uses abstract models that have firm roots in other fields of study such as economics, behavioural and organisational sciences, and information sciences (Chenhall & Moers, 2007). Abstract models are some mathematical representations of the theory that show the relationship between a set of defined variables (Chenhall & Moers, 2007). Nevertheless, the models provide some foundations for explaining some corporate behaviour amidst the inability to identify all the variables that need to be considered in testing organisational theories, including the various corporate governance theories (Wooldridge, 2002; Chenhall & Moers, 2007; Sorensen, 2012).

To cater for all the unidentified explanatory variables, researchers represent those other variables with an error term in regression models, usually used in estimating relationships between the independent and dependent variables (Sorensen, 2012). The unidentified variables (error term) represent the unknown variables that also influence the independent variables (Chenhall & Moers, 2007; Sorensen, 2012). This relationship between the error term and the independent variables introduces the concept of endogeneity. Technically, endogeneity refers simply to a correlation between the explanatory variables (independent variables) and the error term in a regression equation (Ntim, 2009; Owusu, 2012; Robert & Whited, 2012; Sorensen, 2012; Albassam, 2014). Thus, the explanatory variable X, in a regression equation, is said to be endogenous if it is correlated with the error term $\mathbf{e_t}$ (Wooldridge, 2002). For instance, in the regression equation (see below) used for this study, if any of the variables X_{1i} … X_{ni} correlates with the error term e_t, then endogeneity exists.

$$\mathbf{Y_i = \alpha + \beta_1 X_{1i} + \beta_2 X_{2i} + ... + \beta_n X_{ni} + e_t}$$

Explaining further, Chenhall and Moers (2007:177) state that,

> *"$\boldsymbol{X_{1i}}$ is endogenous in the above equation if it is correlated with the structural error term ($\boldsymbol{e_t}$), that is, Cov($\boldsymbol{X_{1i}}$, $\boldsymbol{e_t}$) ≠ 0. If $\boldsymbol{X_{1i}}$ is correlated with the structural error term, then $\boldsymbol{X_{1i}}$ is determined inside the model (equation)… That is, some of the factors that affect $\boldsymbol{X_{1i}}$ also affect Y… If $\boldsymbol{X_{1i}}$ is not correlated with the structural error term of the equation, then $\boldsymbol{X_{1i}}$ is thus determined outside the model and not endogenous*"

but is said to be "exogenous" in the above equation (Wooldridge, 2002). Generally, the error term is assumed to be normally distributed with a zero mean and constant variance. Thus:

Mean- E ($\mathbf{e_t}$) = O; and

Cov (X1i … Xni, $\mathbf{e_t}$) = O (Caliendo, 2013; Wooldridge, 2002).

The question is whether good corporate governance causes higher firm valuations or vice versa. In other words, do firms with higher market values simply choose better governance structures, or does better governance result in higher market values (Beiner *et al*., 2004)? Research shows varied outcomes, which, like Schultz et al. (2010:145) argue, result from the inability "of researchers to control all forms of endogeneity which lead to spurious results".

But if firms make their governance choices based on only internal idiosyncrasies and philosophical stances (Williamson, 2002; Leiblein, 2003; Eton *et al.*, 2021; Phan & Duong, 2021; Ahmad, Sadiqa & Khan, 2021), does it mean that the managers of firms will make optimal decisions at all times and therefore require no force and motivation to adopt some forms of controls? The collapse of giant corporations, before and post-Enron incident, and the concomitant evolution and revolution in corporate governance approaches, coupled with government intervention in almost all climes, appear to answer the question of whether the adoption of corporate governance models is influenced wholly by internal considerations (Apadore & Zainol, 2014; Scholtz & Smit, 2015; Ahmad *et al.*, 2021). For instance, in Nigeria, some portions of corporate governance provisions, such as the composition of the audit committee and protection of the minority interest, are strict legal requirements. In contrast, the Nigerian code (SEC-N, 2011) that applies to all listed companies has some provisions that contain mere guidelines and not legal requirements. One example is the number of directors. The SEC-N (2011) has no specified maximum board size for listed firms in Nigeria. This means that board size is not an exogenous variable as it may be influenced by other independent variables in the regression model. To this end, the consideration of the endogeneity issue is imperative, even though the simple assumption would be to overlook the existence of endogeneity by arguing that internal governance mechanisms are wholly exogenous (Weir *et al.*, 2002).

5.15.1 Motivation for discussing endogeneity

Robert and Whited (2012), Caliendo (2013) and Chenhall and Moers (2007:174) argue that endogeneity leads to biased and inconsistent parameter estimates that make reliable inference virtually impossible and "reduce the confidence we have in drawing conclusions from research." Endogeneity is said to be present in every piece of business-related research, making it imperative for the researcher to explain how to resolve endogeneity concerns (Robert & Whited, 2012). Owusu (2012:166) observes that endogeneity makes the coefficient of the explanatory variables "inefficient and unreliable in affecting the robustness of the governance performance relationship". Thus, the presence of endogeneity affects the estimation capability of regression models (Van Lent, 2007) when such variables have not been effectively fully controlled (Schultz *et al*., 2010). This shows that the results of research studies could be wrong if researchers don't deal with the problem of endogeneity.

Ntim (2009) identified some motivations for discussing the problem of endogeneity. The first is to address the potential problems caused by endogeneity that include omitted variables, simultaneity or reverse causation, measurement errors, equilibrium conditions, and sample selection. These causes are discussed below. The second is the need to respond to the general call for positive accounting researchers to explicitly address potential problems that may be posed by endogeneity (Börsch-Supan & Köke, 2002; Chenhall & Moers, 2007). The third is to contribute to the literature in corporate governance, especially about resolving the problem of diverse conclusions by researchers over the impact of corporate governance variables on the performance of the firm.

Prior studies in the context of Nigeria have neither considered the problem of endogeneity nor provided support for the validity or robustness of their instruments. Two main reasons for the seemingly passive interest in discussing the problem of endogeneity in accounting research are identified. One is the difficulty in finding instrumental variables that are correlated with the endogenous regressor but uncorrelated with the error term in the structural equation (Larcker & Rusticus, 2010). The other is that discussion of the consideration of endogeneity in accounting research is a new development compared to studies in economics (Chenhall & Moers, 2007). Thus, by discussing the subject of endogeneity, this study also seeks to contribute to the expansion of the scope of corporate governance research in the Nigerian context.

5.15.2 Causes of endogeneity

Five causes of endogeneity have been popularly discussed in the literature on corporate governance. Caliendo (2013) and Wooldridge (2002) identify three causes of endogeneity: omitted variables, simultaneity or reverse causation, and measurement error. A fourth cause, sample selection, is identified by Caliendo (2013), while Ntim (2009), Owusu (2012) and Chenhall and Moers (2007) add a fifth as an equilibrium condition.

5.15.2.1 Omitted variables

Omitted variables endogeneity arises when, for lack of data availability, the researcher is unable to control for some variables that are not obvious at the time of conducting the research. Therefore, the researcher is unable to include them in a regression model (Wooldridge, 2002; Ntim, 2009). The main problem arises when the omitted variables severely affect the predictability of the model. If the omitted variables had little impact on the predictability of the model, its consequences would be less severe. Accordingly, Chenhall and Moers (2007) argue that only variables that highly correlate with both the explained and explanatory variables should be of concern. Therefore, "one should identify those variables that are likely to have a major impact on both the explained and explanatory variables and are thus most likely to potentially affect the results if excluded from the analysis" (Chenhall & Moers, 2007:182). Examples of the impact of omitted variables as given by Chenhall and Moers (2007:181) include the omitted variable of "process controls" in the relationship between non-financial performance measures and performance, the role of a "successful CEO" in the relationship between board size and performance, and the omission of decentralised structures as a variable in determining both the size and usefulness of balanced scorecards. Another example would be the omission of board size in testing the effect of board characteristics on the performance of the firm. The omission of important variables that could potentially affect the predictive ability of the model would result in an endogeneity problem.

5.15.2.2 Simultaneity or reverse causation

Simultaneity arises when one or more of the explanatory variables are jointly determined with the explained variable (Caliendo, 2013; Chenhall & Moers, 2007). Ntim (2009) explains that simultaneity, or reverse causation, arises when at least one of

the independent variables is also simultaneously determined by the dependent variable. For example, corporate governance evidence has linked the engagement of directors with financial skills to improved firm performance and the effectiveness of the board (Johl & Salami, 2014; Johl *et al.*, 2015; Herbert & Agwor, 2021). In this case, financial skills are said to be an exogenous variable not being itself influenced by another factor, including the explained variable. Where the engagement of directors with financial skills is influenced by the performance of the company, then a simultaneous or reverse causation will occur. Another example provided by Ntim (2009) is that theory suggests that good internal corporate governance structures give rise to higher market valuations of firms, but firms with higher market values are most likely to choose better internal corporate governance structures because they have better investment opportunities and rely more on external financing. Because of this, endogeneity would happen when firms with higher values choose to have better governance instead of better governance leading to higher firm value.

5.15.2.3 Measurement error

Endogenous explanatory variables can also occur "when one or more variables in a model contain measurement error" (Wooldridge, 2002:70). The measurement error of the population is defined as “the difference between the observed value Y* and the actual value Y” as follows:

Measurement Error (Eo) = Y* - Y (Wooldridge, 2002:71)

The measurement error is similar to the omitted variable but conceptually different. In the case of measurement error endogeneity, this occurs when a key independent variable is imperfectly measured or when the dependent variable is imperfectly explained.

An example of measurement error as suggested by Ntim (2009) and Owusu (2012) is the incorrect measurement of the CGI, which is meant to capture the quality of firms’ internal corporate governance structures but is inaccurately measured because of a bias in the methodology used to obtain data for this study. Nevertheless, Antonakis *et al.* (2014:21) note that many “constructs of interest in the social sciences cannot be perfectly observed; consequently, measurement of these constructs includes some degree of measurement error.”

With regard to the link between omitted variables and measurement error, Owusu (2012) explains that if the measurement error is in the dependent variable (firm performance), then the statistical implications are similar to the omitted variable endogeneity. But if the measurement error is in the independent variable, then the variable that is designed to measure the firm-level quality of corporate governance is wrongly measured and would, therefore, produce endogeneity and result in inconsistent coefficients even when it is uncorrelated with other independent variables.

5.15.2.4 Sample selection

Sample selection "refers to a situation in which a sample can be considered non-random due to some underlying sampling process" (Caliendo, 2013:5). Where this happens, a sample may be omitted from being included in a study that may lead to sample selection endogeneity. Antonakis *et al.* (2014) advise researchers to be cautious in the selection of their samples for study, as non-representative or censored samples will result in inconsistent estimates. One of the causes of sample selection bias is the failure of respondents to provide answers to certain questions or, as in the case of annual reports, the absence of financial data that leads to missing data for the dependent or independent variables (Wooldridge, 2013). The consequence is that this may lead to bias in the estimators. Renders and Gaeremynck (2006) also agree that the lack of consensus by prior studies on the effect of corporate governance mechanisms on firm performance arises from not effectively controlling for endogeneity, which is related to poor sample selection.

5.15.2.5 Equilibrium condition

The consideration of endogeneity helps to focus research attention on the impact of corporate governance on the performance of the firm when considered in the light of the assumption that firms operate in equilibrium conditions (Chenhall & Moers, 2007). The central argument is that, if equilibrium conditions are assumed for firms, then all firms are performing optimally at their equilibrium state, attained through their choices of corporate governance structures. Therefore, it would be inappropriate to examine organisational performance using the level of corporate governance in relation to financial performance since firms are said to make optimal choices (Chenhall & Moers, 2007). Thus, equilibrium condition endogeneity raises concern as to whether the financial performance of the firm can be influenced by corporate governance choices

since the equilibrium condition assumes that all firms attempt to operate at levels whereby corporate governance choices would not have any significant impact on their performance (Ntim, 2009; Owusu, 2012; McKnight & Weir, 2009). If the equilibrium condition is assumed, any empirical relationship between organisational performance and corporate governance "must be due to model misspecification (endogeneity), as such a relationship does not exist in equilibrium" (Chenhall & Moers, 2007:183). Therefore, since studies have continued to reveal some level of relationship between corporate governance choices and firm performance, there may be some model misspecification (endogeneity) that makes firms unable to attain their equilibrium state, leading to equilibrium condition endogeneity.

5.15.3 Controlling for endogeneity

One of the methods adopted to test the robustness of the regression models used in the analysis of panel data is to check the robustness of the results against endogeneity (Ntim, 2009; Owusu, 2012). A robustness or endogeneity test is important in that it is expected to help address the problem of the lack of a strong relationship between governance variables and firm performance measures (Owusu, 2012). Different methods, both econometric and non-econometric, have been employed to address the presence of the endogeneity problem. Although the use of econometric models such as instrumental variables (IV) to address the corporate governance endogeneity problem is fast becoming popular because quantitative research on corporate governance is mostly rooted in micro econometrics (Marek, 2010), this study only considers non-econometric models for controlling endogeneity. The reason for this is that the argument as to whether econometric models have addressed the challenge of endogeneity is still not settled in the literature.

The overarching reason for this decision is that it has been suggested that the problem of endogeneity can be set aside in research because of the problem of actually identifying a qualifying instrument, especially in accounting research (Van Lent, 2007; Chenhall & Moers, 2007; Swamya *et al.*, 2014). As Larcker and Rusticus (2010:1) observe, "the appropriateness of IV methods in typical accounting research settings is not obvious." One of the reasons is that it is difficult to resolve endogeneity concerns in the practical business environment in which accounting and management research are focused (Chenhall & Moers, 2007). Therefore, Chenhall and Moers (2007:175) argue further that the use of technical models, such as the statistical models earlier mentioned,

"often merely gives the researcher an unjustified feeling of assurance that a technical treatment can fully resolve endogeneity concerns."

Specifically, Van Lent (2007:197) argues, "given the plenitude of issues competing for the researcher's attention, endogeneity might just well be a low-ranking priority". For two reasons, Van Lent (2007) advises researchers to be bold and ignore the problem of endogeneity, particularly when addressing important research questions, First, little can be done about endogeneity because the textbook solutions typically recommend the use of instruments that depend on proxy variables that are imperfect, and additional data that meets the requirements of the panel data technique is often hard to obtain in management accounting settings. Second, endogeneity is rooted in theories that accounting research is yet to be firmly rooted because of diverse research findings (Van Lent, 2007).

5.15.3.1 Use of the non-economic approach

Literature suggests that, currently, the field of accounting research lacks a unifying or dominant theoretical perspective or method of analysing accounting problems that is widely accepted by researchers and free of competition, particularly between accounting researchers and practitioners (Grosu *et al.*, 2015). This may not be unconnected with the divergence of interest between the practice and theory of accounting. While researchers focus on developing theories and models that are of less practical relevance rather than having their papers published in certain journals to meet the requirements of the academic evaluation system, practitioners focus on finding solutions to their immediate industrial accounting challenges (Grosu *et al.*, 2015).

Another reason for the lack of congruence between theory and practice is that the accounting discipline is handicapped in developing and providing pragmatic and innovative knowledge that emanates from critical research for long-term social well-being because of the stringent rules and dogmatism that characterise accounting practice (Argilés & Garcia-Blandon, 2011). This disconnect informs the argument by Srinidhi (2013) that accounting research should be socially responsive, more conceptual and use models relevant to addressing contemporary business challenges rather than focusing on the use of complex econometric models to explain accounting phenomena. Thus, a non-econometric approach has been adopted to address endogeneity in this research. This approach is to ensure simplicity, clarity, and avoid the use of abstract models to explain or resolve practical accounting research challenges that are intended to improve

accounting and managerial policies and practices in firms (Srinidhi, 2013). More so, Amore (2012) argues that the attempt to analyse the relationship between governance characteristics and firm performance using an econometric model has proven to be extremely challenging.

The non-econometric models considered in the literature to address the problem of endogeneity include balanced panel data analysis, a theoretical literature review, the use of control variables, properly defined sampling parameters, the construction and use of CGI, and the splitting of study periods (Ntim, 2009; Owusu 2012; Albassam 2014). These methods are discussed in the paragraphs that follow.

5.15.3.2 Use of balanced panel data

One of the non-econometric methods for addressing the problem of the possible presence of endogeneity in the study is the adoption of panel data. The panel data model (earlier discussed) has been identified to reduce the problem of endogeneity (Ntim, 2009; Albassam 2014). So, the use of the eight-year data from 2012 to 2019 in the panel data model helped to deal with the problem of endogeneity.

5.15.3.3 Proper theoretical review

Another non-econometric approach is to adopt a rigorous review of literature on corporate governance and other organisational theories and logic that would help to specify endogenous and exogenous variables in the structural equation. In keeping with this approach, section 5.8 talks about how to choose the different governance variables.

5.15.3.4 Use of control variables

Black *et al*. (2006) suggest that control variables can be used to mitigate against possible omitted variable endogeneity problems. This approach has been adopted by prior studies (Ntim 2009, Owusu 2012; Albassam 2014). Therefore, the inclusion of the three control variables of capital structure, size of the firm, and age of the firm is intended to address the omitted variable endogeneity problem.

5.15.3.5 Sampling parameters

Further, in the selection of the sample firms, parameters were established. Only firms that meet the parameters, such as those with a complete data set and those that had their shares actively traded during the period, are considered. Thus, all companies with complete data are selected, irrespective of their sizes and other idiosyncratic characteristics. This method mitigates the impact of a potential endogeneity issue, which can be attributed to poor sample selection and missing variable(s).

5.15.3.6 Construction of a corporate governance index

Albassam (2014) observes that the use of a CGI model can mitigate the potential problem of measurement errors. Thus, in constructing the CGI, two procedures were adopted. First, the CGI was constructed from 32 internal and external corporate governance mechanisms obtained from the provisions of the Nigerian and other international codes (ICGN, 2014; SEC-N, 2011; OECD, 2004) and literature on corporate governance. Second, the self-constructed CGI model, rather than the analysts' ratings, was used to predict the relationship between corporate governance and the financial performance of the firm. This approach enabled the CGI of Nigerian firms to be appropriately determined.

5.16 Validity and reliability of the research instrument

Research is all about establishing the existence of phenomena or finding things in a systematic way to increase knowledge and draw conclusions on the findings of the relationships between the variables that influence the phenomena (Saunders *et al.,* 2009). To reach a valid conclusion, procedures are adopted that involve the formulation of research questions, the formulation of hypotheses, and the collection and analysis of data to answer the research questions and confirm or reject the hypotheses (Zohrabi, 2013). The conclusion arrived at would be valid, appropriate and accurate to the extent that the research procedures and instruments used in collecting and analysing data are reliable. The reliability of a research instrument refers to the ability of the instrument to measure and obtain similar results consistently (Abassam, 2014).

Saunders *et al.* (2009:156) define reliability as "the extent to which your data collection techniques or analysis procedures will yield consistent findings". Thus, an instrument is reliable if it can yield the same result on other occasions, provide similar

observations and conclusions by other observers, and if there is "transparency in how sense was made from the raw data" (Saunders *et al.,* 2009:156).

Validity refers to the research process adopted in the establishment of the appropriateness, quality, and accuracy of the procedures adopted in reaching the conclusion (Kumar, 2011). Validity "is concerned with whether the findings are really about what they appear to be about" (Saunders *et al.*, 2009:156). It is the degree to which a study measures what it is set out to measure (Kumar, 2011).

To test the validity of a research instrument, Kumar (2011) identifies two methods. One method is to follow some laid-down principles and logic in constructing the research tool for measuring the phenomenon. The other method is to gather statistical evidence obtained through the use of the research instrument, which involves establishing the coefficient of correlations between the research questions and the outcome variables (Kumar, 2011). This study used the logical approach, whereby the CGI is constructed using the binary approach to establish the aggregate CGI of a sample of non-financial listed Nigerian firms using the individual elements of the internal and external corporate governance mechanisms.

Kumar (2011) also identified three types of validity in quantitative research: 1) face and content validity, 2) concurrent and predictive validity, and 3) construct validity. Face validity is the establishment of the link between the objective of the study and the variables considered on the research instrument. The research instruments for this study include the CGI, the financial summaries, and the calculated financial performance summaries (See Appendices 14 to 16). Using face validity, the internal and external corporate governance variables were structured to provide answers to all the research questions.

Content validity is the extent to which the items in the instrument and the questions cover the full range of the phenomena being studied. The variables and the methodology adopted in constructing the CGI address the question of the quality of corporate governance in Nigeria. It also determines the compliance of firms with existing codes and the extent to which good corporate governance is rewarded by the market. Therefore, the use of CGI to gauge the relationship between firm performance and the quality of corporate governance is considered appropriate to check endogeneity.

The use of a CGI to predict the quality of governance is consistent with prior studies, (Gompers *et al.*, 2003; Brown & Caylor, 2006; Core *et al.*, 2006; Javed & Iqbal, 2006; Alexandre & Lucas, 2007; Bebchuk, Cohen & Ferrell, 2009; Azeem *et al.*, 2013;

Tuteja & Nagpal 2013). Therefore, the construction of a CGI is a valid model that can be used to predict the quality of corporate governance at both the firm level and the industrial level. In the case of developing economies, the studies by Ntim (2009), Owusu (2012), Abassam (2014), and Otman (2014) have also adopted a self-constructed CGI in measuring the relationship between corporate governance and firm performance and firm value. These studies used self-constructed indices based on national and other international codes in the absence of an official corporate governance index. Accordingly, the combined provisions of the Nigerian code (SEC-N, 2011) and the Nigerian company law (CAC, 1990) coupled with empirical evidence in literature have been used to construct a CGI for listed firms in Nigeria (NCGI) in this study.

Abassam (2014) notes, however, that although the literature has supported the use of self-constructed CGIs to estimate the relationship between corporate governance and the value or performance of the firm, official corporate governance ratings are superior. The advantages of using official ratings are stated by Abassam (2014) to include: (1) well-designed ratings by professionals and experts, (2) analysts' ratings are constructed based on a wide range of disclosure sources which may not be available to individual researchers, and (3) use of the analysts' rating index facilitates comparison of results with existing studies. Notwithstanding, notwithstanding the above advantages, this study uses a self-constructed index for several reasons. The first is the non-availability of any official ratings in Nigeria during the period covered by this report. Second, the variables considered have support from both empirical and regulatory standpoints. Third, although the analysts' or official ratings may be considered superior to self-constructed indices, the official ratings may also contain personal selection biases since they are affected by human judgement. Fourth, the use of analyst ratings, especially those from international rating agencies, may not consider the peculiarities of individual countries and their corporate laws and practices.

To ensure the validity of the use of a CGI to measure the relationship between firm value and corporate governance practices, the methodology adopted by the study has been subjected to discussion and constructive criticism by senior PhD scholars, leading academics, and experienced researchers at several doctoral colloquiums. The first was the submission of the research proposal for review and critique at the doctoral colloquium held by the International Association for Accounting Education and Research in collaboration with ACCA Global from the 13th to the 15th of November, 2014 in Florence, Italy. Secondly, the research proposal was again submitted for review

and approval for the award of a research grant by ICAN in April 2016. Thirdly, the progress of the work was presented for comments at the 1st Virtual African Accounting and Finance Association (AAFA), PhD and Emerging Scholars Colloquium of the African Accounting and Finance Association held on the 1st and 2nd of September 2020. Finally, the progress report was presented at the 3rd Annual International Academic Conference on Taxation, organised by the Chartered Institute of Taxation of Nigeria and Igbinedion University, Okada, Nigeria, and held from October 25th to October 27th, 2020. After each of these presentations, valuable comments were received, which have been incorporated to improve the quality of the study. This approach, as Ntim (2012) observes, improves the reliability and validity of the measurement instrument for reliable and valid conclusions.

5.17 Ethical clearance

Research can be described as the process of gaining knowledge through scientific investigation into the existence of phenomena based on data collected directly from people or public data domains. Research is the pursuit of a new and useful knowledge about a phenomenon or on a particular topic (Rajasekar *et al.,* 2006). To obtain knowledge, research involves the review of data, some classified and others in the public domain, about the phenomenon being investigated. Consequently, some ethical issues are involved in the research. These concerns suggest the necessity of obtaining ethical clearance before conducting research. To overcome ethical issues, the researcher is required to adopt certain procedures and to obtain the consent of the respondent or entity owning the data; ensure beneficence (that the research will result in public good), and respect for anonymity, confidentiality, and privacy of the respondents or entities (Fouka & Mantzorou, 2011). Other concerns include the protection of vulnerable groups of people to avoid exploitation and determining the skills of the researcher to carry out the research and the nature of the study (Fouka & Mantzorou, 2011).

Some benefits of ethical clearance before undertaking research include: ensuring that the aim of the study is achieved; promotion of collaboration among the parties involved in the research (student and supervisor); ensuring that the researcher is accountable to the public; enlisting public support; and upholding important moral and social values (Resnik, 2015). Observance of ethical concerns is also intended to assist in protecting research participants from harm, facilitating, and supporting research in the

interest of society, and especially in economic development (Okab *et al*., 2014). To comply with the research ethics requirements of the University of KwaZulu-Natal, ethical clearance to carry out this study was obtained (EC:0013447). The clearance confirms that the research does not cover research on children or vulnerable people, does not relate to gaining access to confidential information without the consent of the participants, does not require the use of questionnaires and surveys, nor does it require the procurement of some legal protection to obtain information for the research. Rather, the data used for the study is available in the public domain since it is contained in the annual reports that are required to be published for public consumption by listed firms in Nigeria.

To ensure that the market data used in this study is official, the market values of shares and other company-specific details were provided by the Nigerian Stock Exchange after being informed that the details were for research purposes only. Further, the annual reports of the firms were obtained from the individual company websites, which are open to the public. Finally, the Nigerian companies' law (CAC, 1990) requires that the annual reports of listed companies be publicised for public consumption. Since the datasets are in the public domain, there is no ethical risk in using them for this study.

5.18 Chapter summary

The chapter examined the research design and methodology of carrying out the study and explained the various concepts of research. The first objective of the chapter is to provide a description of the data and the data collection and analysis method. This objective has been achieved. The chapter also explained the various research paradigms and philosophies that guided the research and attempted to explain the data, the sources of data, and the sample selection procedure. Thus, the second objective of explaining the various research philosophies of the study has also been met. The chapter explained the research design, which Saunders *et al*. (2009) identified as including research philosophies, approaches, strategies, choices, time horizon, and techniques and procedures. The study adopts the positivist philosophy, uses the deductive research approach and adopts quantitative research methods.

The main source of data for information on the two types of corporate governance mechanisms, internal and external, is the annual reports of the firms. The rationale for using the annual reports of firms was explained in the chapter. The chapter

also indicated that the details on the prices of shares and their equity book values were obtained from the Nigerian Stock Exchange.

In December 2019, only 165 firms, belonging to eleven industrial sectors, including the financial services sector, were listed and had their shares actively traded on the Nigerian Stock Exchange. However, the firms that belonged to the financial services sector, made up of banks and insurance companies, were excluded from the sample because this group of firms has their own specific corporate governance codes and legal requirements.

Also excluded were firms whose shares were not effectively traded during the 8 years. This led to the adjusted population of 100, from which the sample firms of 63 with complete annual reports containing both the financial data and details on the corporate governance practices were selected. Thus, 63 firms, representing 63% of the adjusted population, formed the sample firms for this study. Appendix 1 contains the sample-listed firms in Nigeria as of December 2019.

The two contending models: "*the equilibrium variable and the governance index models"* (Ntim, 2009) that have been used in estimating the relationship between corporate governance and firm financial performance were discussed. The governance index has been self-constructed from both internal and external governance mechanisms. Unlike other Nigerian studies that have used only the equilibrium model, following the approach of Ntim (2009), the use of both models in this study provides a broader perspective on the validity of the theoretical and empirical standpoints.

The chapter further explained endogeneity as one of the challenges of undertaking accounting research that touches on the real business environment. The five main types of endogeneity: omitted variables, simultaneity or reverse causation, measurement error, sample selection, and equilibrium conditions were discussed, including the reasons for the use of non-econometric methods of controlling for endogeneity in the study.

The importance of the panel data analysis model was articulated in the context of providing an opportunity to easily capture and analyse a large volume of data spanning over several hundred firm years. The advantages and limitations of the panel data model have been highlighted. The regression estimation models, such as the pooled ordinary least squares (POLS), fixed-effect (FE) and random-effects (RE) models, were discussed. Also, the Hausman test that provides insight into the selection of the estimation model was explained as well.

The chapter further discussed the need to subject the study to a validity test. The various types of actions that have been taken to ensure that the conclusions of the study are valid were discussed. The actions include the formal approval by the University to conduct the study; the presentation of my proposal at the Doctoral Colloquium in Florence, Italy, organised by the International Association for Accounting Education and Research in collaboration with ACCA Global in 2014, review of the proposal by the Institute of Chartered Accountants of Nigeria, for which a study grant was given in April 2016. Further, the progress work was presented for comments at the 1st Virtual African Accounting and Finance Association (AAFA), PhD and Emerging Scholars Colloquium of the African Accounting and Finance Association held on the 1st and 2nd of September 2020.

The progress work was also presented at the 3rd Annual International Academic Conference on Taxation, organised by the Chartered Institute of Taxation of Nigeria and Igbinedion University, Okada, Nigeria, held from the 25th to the 27th of October, 2020. On each of these occasions, valuable suggestions and comments that have improved this study tremendously were received.

Although this study is social research, ethical concerns cannot be overlooked. Therefore, ethical clearance was obtained to carry on the research. One of the signs that the ethical issues have been dealt with is that the Institute of Chartered Accountants of Nigeria helped fund this study by giving it a research grant.

The various analytical models, which provide the foundation for the analysis of data, have been articulated in the chapter. The next chapter, Chapter Six, analyses the data and presents the descriptive statistical results.

CHAPTER SIX

EMPIRICAL ANALYSIS: DESCRIPTIVE STATISTICS

6.1 Introduction

This chapter presents the descriptive statistics of the evidence on the level of compliance of listed firms with the Nigerian Code of the corporate governance framework and the financial data. The compliance level was computed using three guidelines. First, is the revised corporate governance code issued in 2011 by SEC-N that was effective during the period 2011 to 2019. The second set of guidelines relates to the provisions for the composition of the SAC as contained in section 359 of the Companies and Allied Matters Act (CAC, 1990). The third point of reference was the extant imperial literature, which motivated the inclusion of female and foreign board membership and large audit engagement as internal board governance variables; the non-promoter institutional investors and market share as external governance variables; and the three control variables. These variables were exhaustively discussed in Chapter Five. The sample firms considered are those whose shares were actively traded on the Nigerian Stock Exchange for eight years from 2012 to 2019. Through content analysis, information was gathered from 63 firms over the course of eight years, giving a total of 504 firm years.

The chapter aims to achieve four main objectives. The first is to present the characteristics of the sample firms in terms of their asset base, market share, profitability, market capitalisation, revenue, and capital structure. Second, the chapter presents the descriptive statistics of the corporate governance compliance level on an aggregate and sectorial basis. This will provide evidence on the extent of compliance of the listed firms with the corporate governance provisions in the SEC-N Code of 2011, in CAMA 1990 and in the relevant empirical literature. The aim is to compute the corporate governance index of listed non-financial firms in Nigeria (NCGI) for the relevant period. To achieve this, the dichotomous approach and fractions have been used to compile the index from details disclosed in the annual reports of the sample firms. Two main categories of data are considered: financial data and corporate governance-related data. The third objective of the chapter is to establish the extent of

variability in the compliance level by firms to provide insight into the form of relationship that exists between the level of corporate governance compliance and the financial performance of the firm measured in terms of the three dependent variables of Tobin's Q, ROE, and NAT as defined in chapter five. Finally, the chapter seeks to resolve the research questions by testing the hypotheses posed in Chapter Four.

The rest of the chapter discusses the following: data extraction, checking, and summarisation of data. Aggregate sample characteristics are discussed in section 6.3. The descriptive statistics are presented in section 6.4, while section 6.5 discusses the degree of compliance with the corporate governance provisions by the sample firms and the building of corporate governance indexes. Data analysis and the presentation of empirical results is contained in section 6.6. The summary and conclusion of the chapter are presented in section 6.7.

6.2 Data extraction, checking and summarisation

The main source of data is the annual reports of the listed firms. There are two main sections in the annual report of a listed firm in Nigeria. One portion is concerned with the corporate governance disclosures and the other contains the financial data. The corporate governance disclosures cover the board composition, specifying the status of each director as to whether he or she is an executive, independent, or non-executive director; board committees, including the SAC; and the attendance of directors at board and board committee meetings. Other corporate governance disclosures in the Annual Reports include biographies of the directors and top management, including the Internal Auditor; roles of the board; chairman's statement or report; Chief Executive's Report and the compliance statement, to mention but a few. The financial data is contained in two main statements. The first is the Statement of the Financial Position of the firm at the end of the relevant financial years from 2012 to 2019. The second statement is the Statement of Profit or Loss and Other Comprehensive Income. The External Auditors' report and the Statutory Audit Committee's report come next.

The data is extracted using the content analysis approach. Corporate governance variables are either 0 for the absence of a variable and 1 or a percentage or proportion, which should be between 0 and 1, for the presence of a variable. The identified variables are as defined in Appendix 2, while the financial data and the firm financial performance proxies of the sample firms are shown in Appendices 6 and 7. In the case of the financial data, the values of independent variables of revenue, the book value of

assets, and liabilities are as stated in the financial statements. These values are used in estimating the dependent variables of Tobin's Q, return on equity (ROE) and net asset turnover (NAT).

6.3 Population characteristics

6.3.1 Industrial distribution of listed Nigerian listed firms in 2019.

In December 2019, 165 Nigerian firms had their shares actively traded on the Nigerian Stock Exchange market. The industrial sectorial distribution of listed firms in Nigeria as of December 2019 is presented in Table 6.1a below.

Table 6.1a: Industrial sectorial distribution of listed firms in Nigeria as of December 2019

S/N	Industrial Sectors	No. in each industry	Percentage
1	Agriculture	5	3%
2	Conglomerates	6	4%
3	Construction/Real Estate	8	5%
4	Consumer Goods	20	12%
5	Financial Services	53	32%
6	Healthcare	10	6%
7	ICT	9	5%
8	Industrial Goods	13	8%
9	Natural Resources	4	2%
10	Oil and Gas	12	7%
11	Non-financial Services	25	15%
	TOTAL	**165**	**100%**

Source: Details are self-compiled from the official market information obtained from the Nigerian Stock Exchange via email of Wednesday, Dec 30, 2020 at 12:37 PM from Rosemary Ugwuogo (rugwuogo@nse.com.ng) of the Nigerian Stock Exchange(www.nse.com.ng).

The financial services sector had more listed firms than any other industrial sector and accounted for 32% of the total listed firms during the period. The other remaining ten sectors accounted for 68%, with the agricultural industrial sector accounting for the least number of listed firms of five firms, representing 3%. This suggests the dominance of the financial services sector in the Nigerian economy. The associated equity investment of the listed firms, on an industrial basis as of December 2019, is presented in Table 6.1b.

Table 6.1b: Industrial distribution of listed equity investments in Nigeria as of December 2019

S/N	Sectorial composition of listed firms at December 31, 2019	No. in each industry	Total equity (₦' Million)	Percentage
1	Agriculture	5	4,576.95	0.40%
2	Conglomerates	6	23,969.24	2.20%
3	Construction/Real Estate	8	30,876.15	2.80%
4	Consumer Goods	20	38,275.72	3.50%
5	Financial Services	53	918,098.63	82.80%
6	Healthcare	10	6,525.24	0.60%
7	ICT	9	11,544.98	1.00%
8	Industrial Goods	13	26,862.57	2.40%
9	Natural Resources	4	2,559.07	0.20%
10	Oil and Gas	12	13,292.77	1.20%
11	Services	25	31,830.69	2.90%
	TOTAL	**165**	**1,108,412.02**	100%

Source: Details are self-compiled from the official market information obtained from the Nigerian Stock Exchange via email of Wednesday, Dec 30, 2020 at 12:37 PM from Rosemary Ugwuogo (rugwuogo@nse.com.ng) of the Nigerian Stock Exchange(www.nse.com.ng).

The total equity investment of the listed Nigerian firms in December 2019 was ₦1.11 billion. The total equity investment of the listed Nigerian firms in December 2019 was N1.11 billion. Except for one listed firm in the construction/real estate industrial sector, whose 20,000,000 shares were each worth N100 (for a total of N20 billion), all other firms' shares were worth N0.50.

The financial services sector also had the largest equity investment in December 2019, with about ₦912.1 billion, accounting for about 82.80% of the total equity investment of the listed firms in Nigeria. This again supports the dominance of the financial sector. The agricultural sub-sector recorded 0.40% of the aggregate total equity investment during the period. Considering the importance of the agricultural sector to the economy of Nigeria, the abysmal investment in the sector calls for immediate government action to stimulate the sector.

6.3.2 Market capitalisation

The sectorial distribution of the market capitalisation of the listed 165 Nigerian firms as of December 2019 is presented in Table 6.2a below.

Table 6.2a: Industrial distribution of the market capitalisation of listed Nigerian firms as of December 2019

S/N	Panel A: Industrial composition of listed firms as of December 31 2019	No. in each industry	Total market capitalisation (₦' Million)	Percentage
1	Agriculture	5	110,977.40	0.90%
2	Conglomerates	6	70,608.32	0.50%
3	Construction/Real Estate	8	52,791.63	0.40%
4	Consumer Goods	20	2,260,597.79	17.40%
5	Financial Services	53	3,420,281.57	26.40%
6	Healthcare	10	22,913.18	0.20%
7	ICT	9	3,282,550.74	25.30%
8	Industrial Goods	13	3,058,707.50	23.60%
9	Natural Resources	4	5,006.98	0.00%
10	Oil and Gas	12	575,883.44	4.40%
11	Non-financial Services	25	108,267.87	0.80%
	TOTAL	**165**	**12,968,586.41**	100%

Source: Details are self-compiled from the official market information obtained from the Nigerian Stock Exchange via email of Wednesday, Dec 30, 2020 at 12:37 PM from Rosemary Ugwuogo (rugwuogo@nse.com.ng) of the Nigerian Stock Exchange(www.nse.com.ng).

The total market capitalisation of the listed 165 firms in December 2019 was N12.97 trillion Naira. The range of the share price was between N0.20 and N1, 469.90. The firm in the consumer goods industrial sector had the highest market price per share, while many firms in the industrial sectors, including some financial institutions, had the lowest, at N0.20 per share.

A review of the market capitalisation indicates that the banking sub-sectors still led with a percentage of 26.40%, closely followed by the ICT sub-sector of 25.30%, industrial goods by 23.60% and the consumer goods sub-sector by 17.40%. Further, the agricultural sub-sector improved marginally while the natural resources sub-sector recorded below 0.10% proportion of the market capitalisation. This shows that investors were not as interested in the shares of companies in the natural resources subsector as they were in shares of companies in other subsectors.

After adjusting for firms in financial services and firms whose shares were not actively traded from 2012 through 2019, the adjusted population was 100 listed non-financial services firms, as shown in Table 6.2.b and percentages in Figure 6.1 below.

Table 6.2b Adjusted population of listed firms from 2012-2021

S/N	Industrial composition of listed firms at December 31, 2019	No. in each industry	Percentage
1	Agriculture	5	5%
2	Conglomerates	6	6%
3	Construction/Real Estate	7	7%
4	Consumer Goods	20	20%
5	Healthcare	10	10%
6	ICT	6	6%
7	Industrial Goods	12	12%
8	Natural Resources	4	4%
9	Oil and Gas	11	11%
10	Non-financial Services	19	19%
	TOTAL	**100**	**100%**

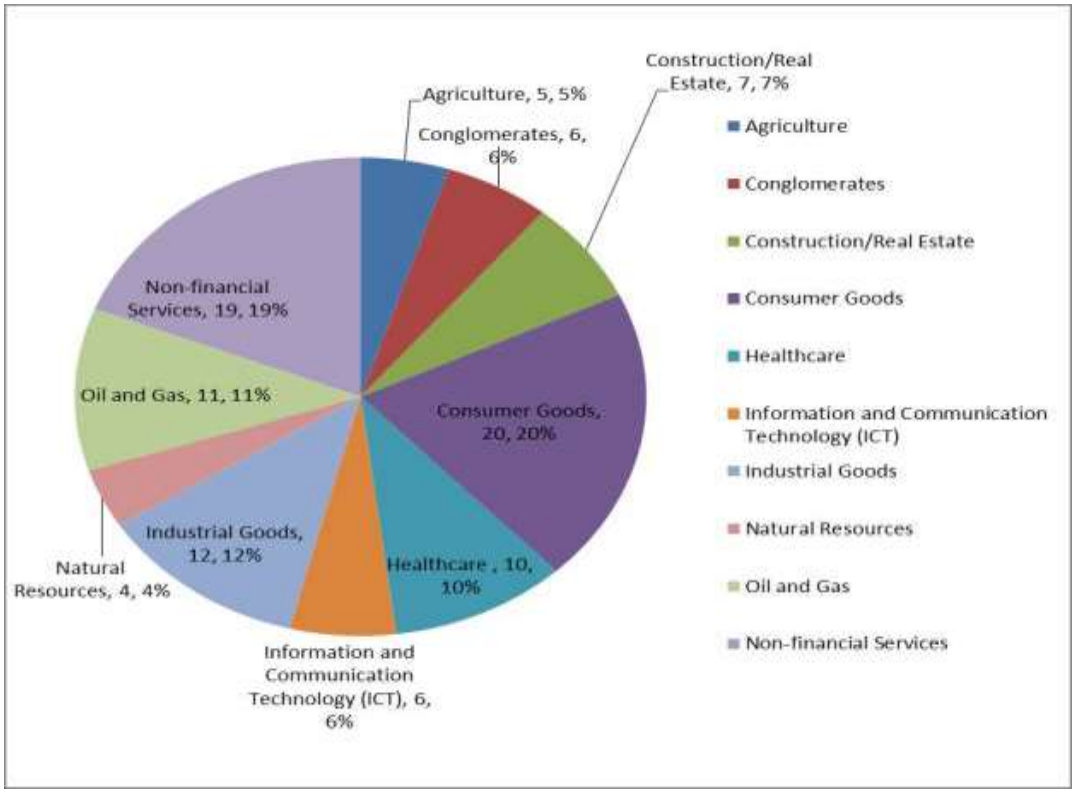


Figure 6.1: Number of active firms from 2012-2021

6.4 Sample characteristics using non-winsorised data sets

Out of the adjusted 100 listed firms, a sample of 63 listed firms with completed annual reports, adequate financial data, and information on corporate governance was selected for the study. The industrial distribution of the sample firms is presented in Table 6.3 and Figure 6.2 below.

Table 6.3: Industrial distribution of sample firms as of December 2019

S/N	Industrial composition of listed firms at December 31, 2019	No. in each industry	Percentage
1	Agriculture	4	6%
2	Conglomerates	4	6%
3	Construction/Real Estate	3	5%
4	Consumer Goods	14	22%
5	Healthcare	6	10%
6	ICT	3	5%
7	Industrial Goods	9	14%
8	Natural Resources	2	3%
9	Oil and Gas	7	11%
10	Services	11	17%
	TOTAL	**63**	**100%**

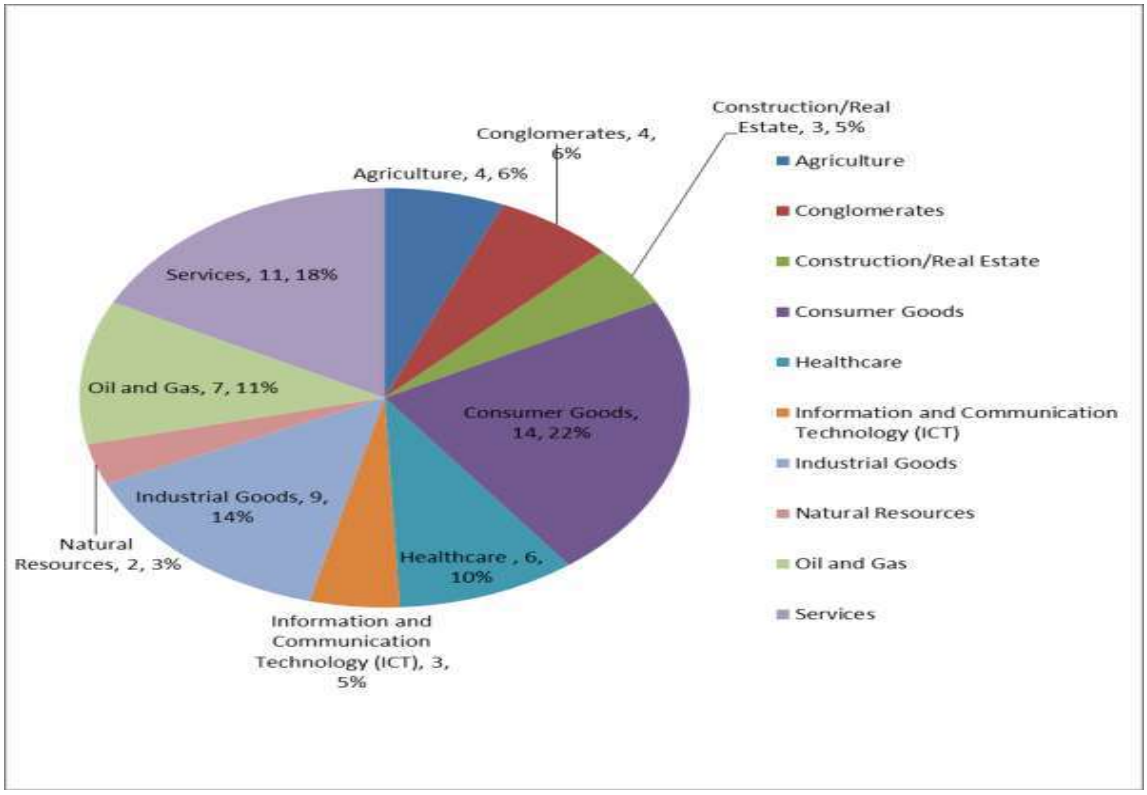


Figure 6.2: Industrial distribution of sample listed firms in Nigeria as at December 2019

The financial statistical demography of the 63 sample firms is presented below in terms of the following:

(i) Equity investment,

(ii) Market capitalisation, and

(iii) Total assets investment,

(iv) Turnover, and

(v) Profit trend.

6.4.1 Equity investment

The industrial distribution of the accumulated equity or net assets of the 63 sample firms that comprised the 10 non-financial sub-sectors, as in December 2019, is presented in Table 6.4a below. The value of the net assets is estimated as total assets less total liabilities.

Table 6.4a: Industrial distribution of average equity of the sample firms in Nigeria for period 2012-2019

S/N	Sector	Number of firms	Equity investment (₦' Billion)	Percentage
1	Agriculture	4	377.98	2%
2	Conglomerates	4	1241.81	7%
3	Construction/Real Estate	3	438.98	3%
4	Consumer Goods	14	4991.26	29%
5	Healthcare	6	232.11	1%
6	ICT	3	68.37	0%
7	Industrial Goods	9	7,158.10	41%
8	Natural Resources	2	47.95	0%
9	Oil and Gas	7	2375.86	14%
10	Services	11	416.11	2%
	TOTAL	**63.00**	**17,348.53**	**100%**

The total equity investment of the sample firms in December, 2019 was ₦17,348.53 billion. The highest sectorial investment was recorded by listed firms in the industrial goods sub-sector, which accounted for 41% of the total investment during the period with an equity investment of ₦7,158.10 billion. The second highest investment, of ₦4,991.26 billion, which represented 29% of the total investment, was related to the consumer goods sector. This was followed by the third-highest investment of ₦2,375.86 billion, which represented 14% of the oil and gas sector. The remaining seven sectors

accounted for 16%, or N2823.31 billion, of the total investment by sample firms in December 2019. Figure 6.3 shows a picture of how equity investments by sample firms are spread out by sector in December 2019.

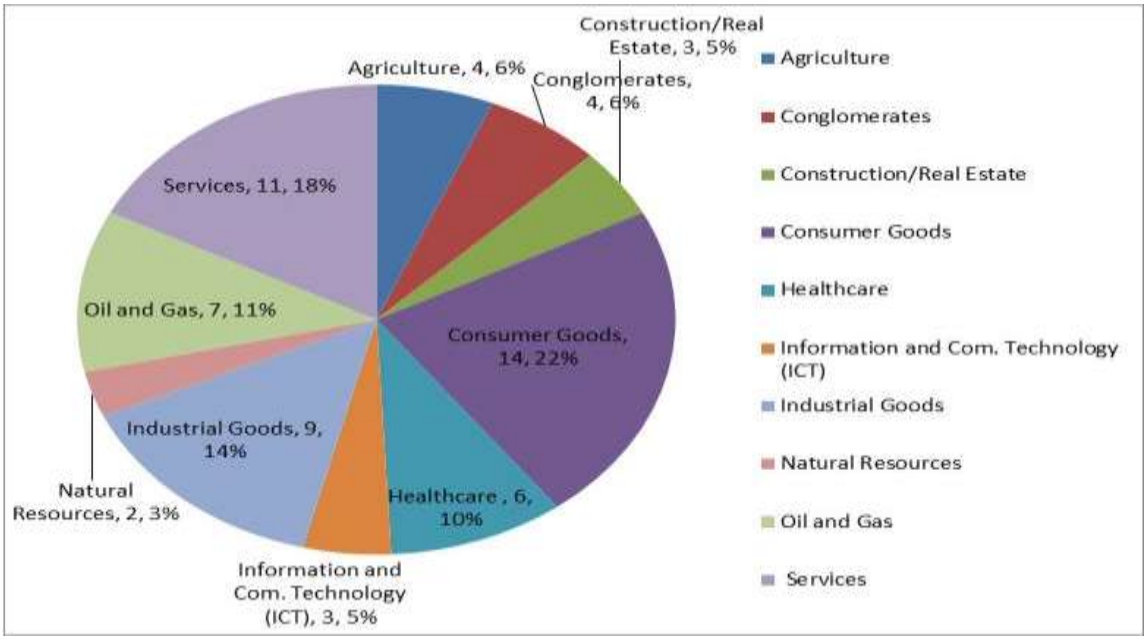


Figure 6.3: Industrial distribution of the equity investment by sample firms

Average sectorial equity

For the eight years from 2012 to 2019, the yearly average was ₦304.42, with a sectorial distribution shown in Table 6.4b.

Table 6.4b: Sectorial distribution of average equity of the sample firms in Nigeria for period 2012-2019

S/N	Sector	Number of firms	Average Equity (₦' Billion)	Percentage
1	Agriculture	4	11.81	3.9%
2	Conglomerates	4	30.01	9.9%
3	Construction/Real Estate	3	18.29	6.0%
4	Consumer Goods	14	44.56	14.6%
5	Healthcare	6	4.84	1.6%
6	ICT	3	68.37	22.5%
7	Industrial Goods	9	99.42	32.7%
8	Natural Resources	2	3.00	1.0%
9	Oil and Gas	7	19.39	6.4%
10	Services	11	4.73	1.6%
	TOTAL	**63**	**304.42**	**100%**

During the period, industrial goods recorded the highest average equity of ₦99.42 billion, representing 32.7% of the total sample equity. ICT recorded the second-largest average equity investment of ₦68.37, representing 22.5% of the total sample equity. The third-largest average equity investment was in the consumer goods sector, with ₦44.56 billion, representing 14.6% of the total sample equity. The least average equity investment was made in the natural resources sector, with ₦3 billion, representing 1% of the total sample equity investment.

6.4.2 Market capitalisation

The sectorial distribution of the market capitalisation of the sample firms, as of December 2019, is presented in Table 6.5 and Figure 6.4 below.

Table 6.5: Industrial distribution of market capitalisation by sample listed firms in Nigeria as in December 2019

S/N	Sector	No. in each industry	Capitalisation (₦' Billion)	Percentage
1	Agriculture	4	102.48	1.89%
2	Conglomerates	4	67.25	1.24%
3	Construction/Real Estate	3	29.39	0.54%
4	Consumer Goods	14	2,253.82	41.64%
5	Healthcare	6	16.54	0.31%
6	ICT	3	13.33	0.25%
7	Industrial Goods	9	2,716.64	50.19%
8	Natural Resources	2	2.37	0.04%
9	Oil and Gas	7	186.36	3.44%
10	Services	11	24.86	0.46%
	TOTAL	**63**	**5,413.04**	**100%**

From Table 6.5 above, the sector with the highest market capitalisation in 2019 was also the industrial goods sector, with about ₦2,716.64 billion in capitalisation, representing 50.19%. This was followed by consumer goods with about ₦2,253.82 billion, representing 41.64%. The Oil and Gas sector still maintained its third place with about ₦186.36 billion in capitalisation, representing about 3.44%. The other sectors accounted for less than 5.26%. The statistics of the market capitalisation are presented in Figure 6.4.

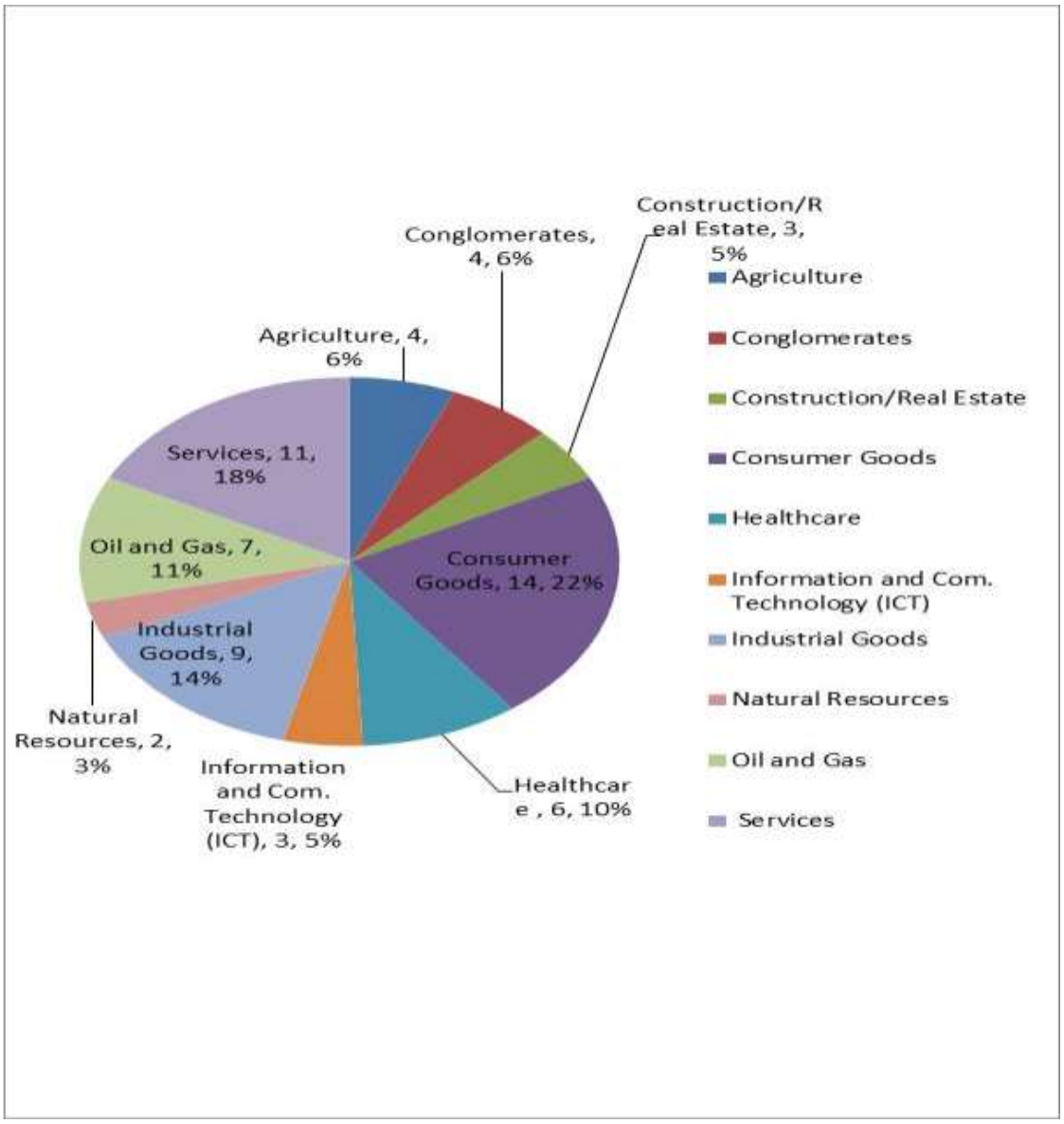


Figure 6.4: Industrial distribution of market capitalisation by sample listed firms in Nigeria as of December 2019

6.4.3 Total assets investment

The total assets invested by the sample firms stood at about ₦7,014.88 billion as of December 31, 2019, as shown in Table 6.6. The investment in total assets also followed the trend as in other outcomes, with the highest investment of ₦2,311.04 billion, representing 32.94%, recorded by the industrial sector, followed by the consumer goods sector of ₦2,126.44, representing 30.31%, and the oil and gas sector of ₦1,443.91, representing 20.58%. The pictorial representation is shown in Figure 6.5 below.

Table 6.6: Industrial distribution of total assets of sample listed firms in Nigeria as of December 2019

S/N	Sector	No. in each industry	Equity investment (₦' Billion)	Percentage
1	Agriculture	4	123.55	1.76%
2	Conglomerates	4	443.70	6.33%
3	Construction/Real Estate	3	349.60	4.98%
4	Consumer Goods	14	2,126.44	30.31%
5	Healthcare	6	49.11	0.70%
6	ICT	3	19.82	0.28%
7	Industrial Goods	9	2,311.04	32.94%
8	Natural Resources	2	5.45	0.08%
9	Oil and Gas	7	1,443.92	20.58%
10	Services	11	142.25	2.03%
	TOTAL	**63**	**7,014.88**	**100%**

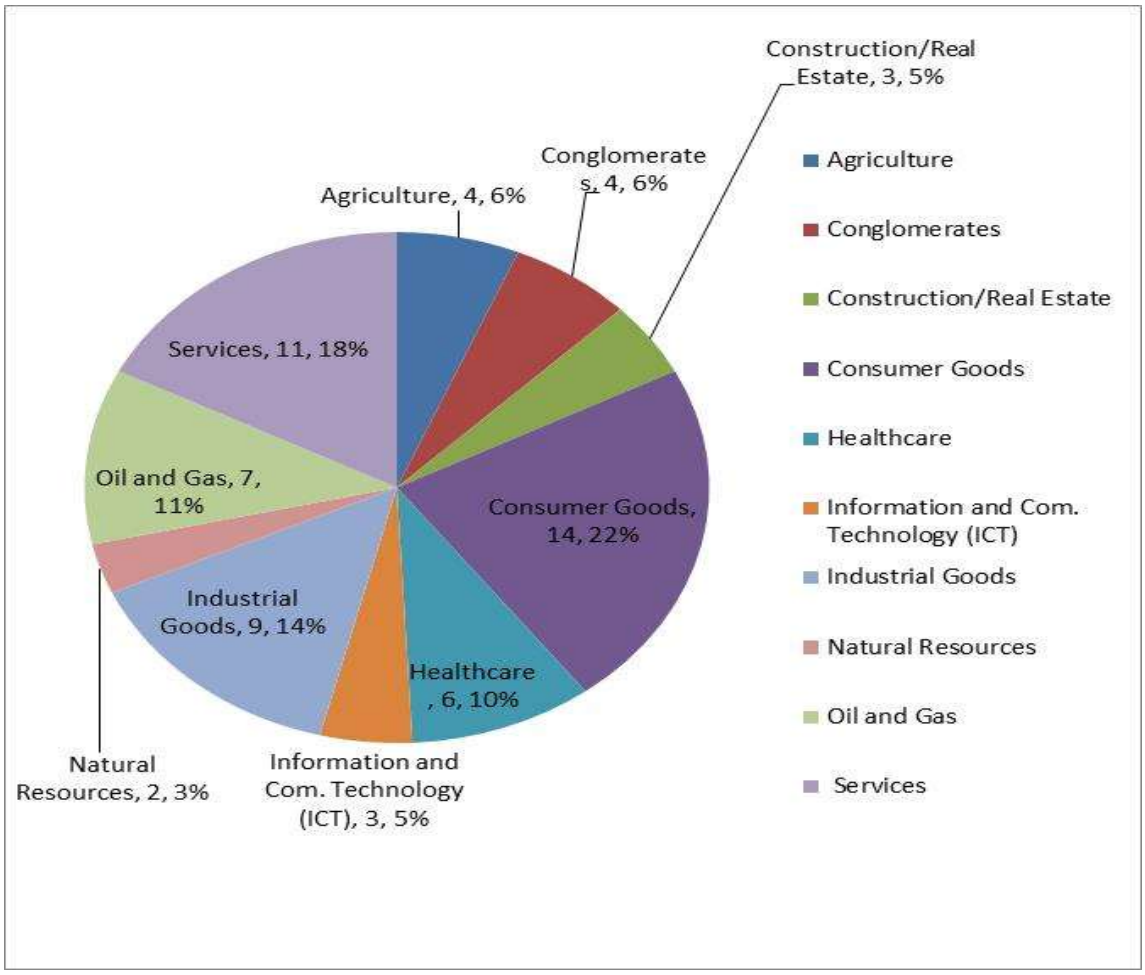


Figure 6.5: Industrial distribution of total assets of sample listed firms in Nigeria as of December 2019

6.4.4 Total turnover

The details of the total turnover of the firms for the eight years from 2012 to 2019 are presented in Table 6.7 and Figures 6.6a and 6.6b. As the figures indicate, for the eight years, consumer goods recorded the highest turnover of ₦11,632.94 billion, representing 34%, followed by the oil and gas sector with ₦10,790.41 representing 32%, while the third-largest sector in terms of turnover was industrial goods, which recorded ₦7,565.84 billion, representing 22%. Thus, the three sectors accounted for 89% of the total turnover for the eight years, while the other seven sectors accounted for only 11% of the sales of the sample firms.

Table 6.7: Yearly turnover of sample firms 2012-2019

Sector	2012	2013	2014	2015	2016	2017	2018	2019	TOTAL	%age
	(₦ Billion)	(₦ Billion)	(₦ Billion)	(₦ Billion)	(₦ Billion)	(₦ Billion)	(₦ Billion)	(₦ Billion)	(N Billion)	
Agriculture	27.11	23.94	25.93	29.40	37.32	46.86	53.06	51.73	295.34	1%
Conglomerates	105.59	123.55	156.72	114.46	122.67	184.05	193.76	168.48	1,169.28	3%
Construction/ Real Estate	215.30	226.65	211.42	144.01	148.71	150.77	201.07	274.66	1,572.59	5%
Consumer Goods	1,105.08	1,190.99	1,205.19	1,242.51	1,391.44	1,782.61	1,920.58	1,794.55	11,632.94	34%
Healthcare	37.15	42.61	44.65	27.94	26.83	34.98	39.40	32.29	285.85	1%
ICT	7.00	9.43	11.74	11.75	13.20	14.75	23.36	30.48	121.71	0%
Industrial Goods	1,204.23	504.29	617.73	790.47	870.09	1,146.14	1,277.34	1,155.57	7,565.84	22%
Natural Resources	2.42	2.18	2.28	3.05	2.40	2.60	2.95	3.13	21.02	0%
Oil and Gas	1,382.06	1,261.94	1,218.15	862.75	1,285.97	1,392.60	1,748.86	1,638.09	10,790.41	32%
Services	63.56	63.67	55.26	56.50	57.10	59.85	70.47	77.06	503.46	1%
TOTAL	**4,149.50**	**3,449.25**	**3,549.06**	**3,282.82**	**3,955.74**	**4,815.21**	**5,530.84**	**5,226.02**	**33,958.44**	100%

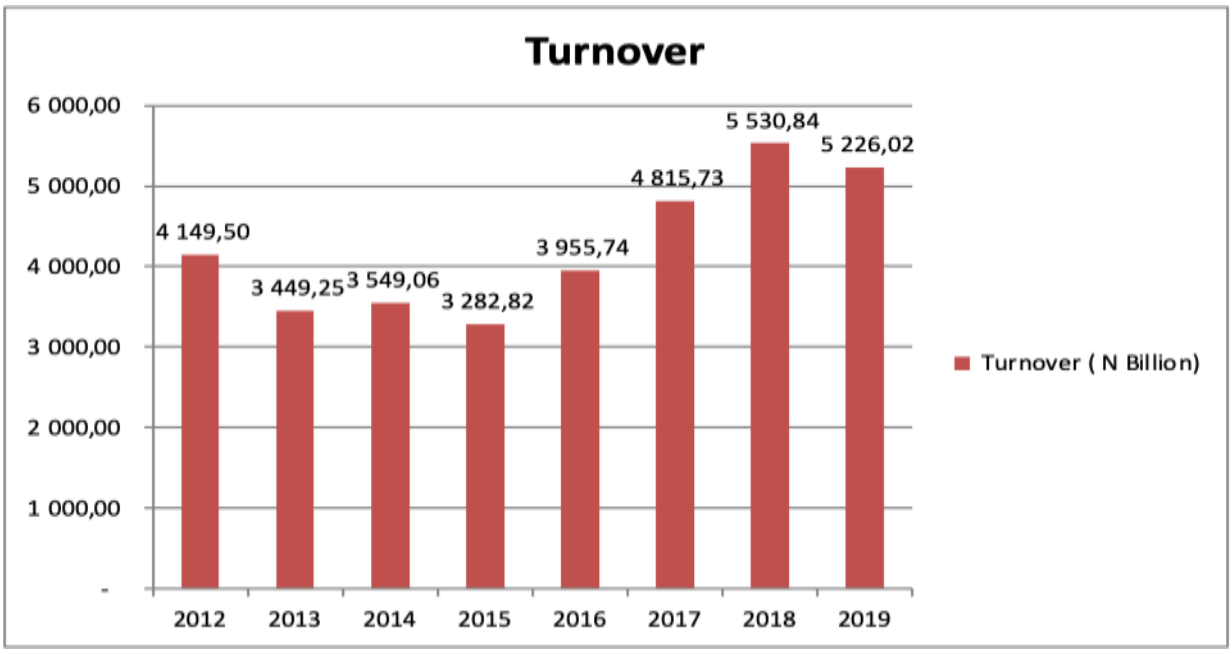


Figure 6.6a: Bar chart of yearly turnover of sample firms 2012-2019

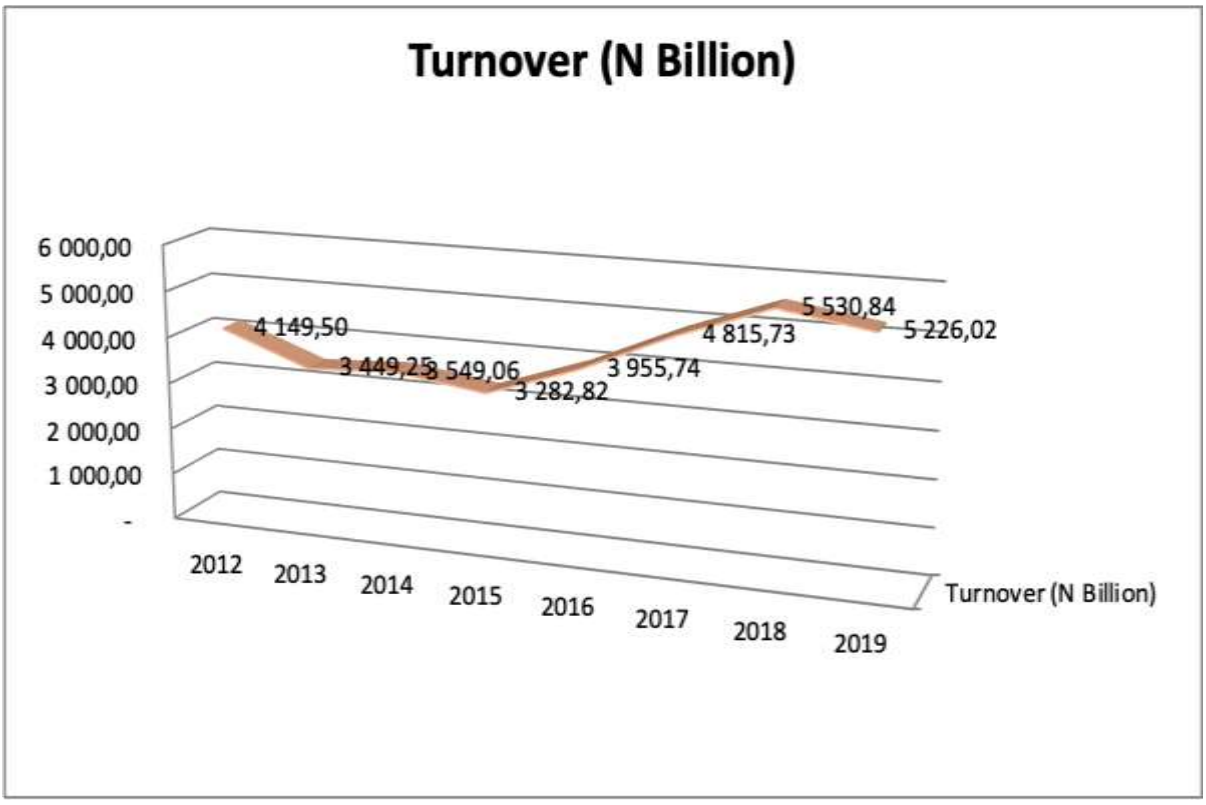


Figure 6.6b: Trend of yearly turnover of sample firms 2012-2019

Figure 6.6b shows a reducing trend of turnover from 2012 to 2014. The turnover trend was revised positively from 2015 to 2018 and decreased in 2019.

6.4.5 Profit trend 2012-2019

The details of the PAT of the sample firms for the eight years from 2012 to 2019 are presented in Table 6.8a. The total net profit after tax (PAT) for the eight years covered by the study was ₦3,093.83 billion. The highest total yearly profit of ₦615.82 billion, representing 19.90% of the total profit, was recorded in 2018, followed by ₦471.60, representing 15.24%, in 2019 and ₦459.43, representing 14.85%, in 2017. The worst year was 2014, when they made ₦398.47 billion, which was 5.66% of the total profit for the period.

Table 6.8a: Yearly profits of sample firms 2012-2019

Sector	2012	2013	2014	2015	2016	2017	2018	2019	TOTAL	%age
	(₦ Billion)	(₦ Billion)	(₦ Billion)	(₦ Billion)	(₦ Billion)	(₦ Billion)	(₦ Billion)	(₦ Billion)	(N Billion)	
Agriculture	12.24	1.68	3.84	5.05	12.32	13.53	11.61	10.13	70.39	2.28%
Conglomerates	10.03	13.3	17.93	7.41	10.01	11.73	12.03	-8.09	74.35	2.40%
Construction/ Real Estate	10.27	11.8	11.6	2.41	1.37	1.91	20.99	-7.8	52.55	1.70%
Consumer Goods	110.64	114.51	110.05	109.69	88.06	200.41	123.07	119.21	975.65	31.54%
Healthcare	3.28	1.34	1.41	5.3	1.99	-0.35	2.12	0.39	15.47	0.50%
ICT	0.4	0.75	-0.06	-2.76	-0.53	-1.02	-2.11	0.63	-4.68	-0.15%
Industrial Goods	168.89	233.19	194.17	203.56	204.86	176.6	389.66	323.03	1,893.96	61.22%
Natural Resources	0.27	0.27	0.24	0.14	0.83	0.28	0.26	-0.35	1.93	0.06%
Oil and Gas	21.85	20.77	-165.09	-31.3	35.53	53.66	56.23	32.96	24.61	0.80%
Services	-0.74	0.86	1.11	-10.46	-7.31	2.68	1.97	1.5	-10.4	-0.34%
TOTAL	**337.13**	**398.47**	**175.2**	**289.05**	**347.14**	**459.43**	**615.82**	**471.6**	**3,093.83**	**100%**

The sectorial distribution of the profit margin, calculated as the percentage of profit after tax on the turnover, is presented in Table 6.8b. The highest average margin of 26.86% for the period was recorded by the industrial sector, followed by the agricultural sector with 23.44% and natural resources with 10.16%. These three sectors made up more than 60.46 percent of the sample firms, while the other seven sectors made up 39.54 percent of the margin.

Table 6.8b: Sectorial distribution of profit margin

Sector	2012	2013	2014	2015	2016	2017	2018	2019	Average
	%	%	%	%	%	%	%	%	%
Agriculture	45%	7%	15%	17%	33%	29%	22%	20%	23.44%
Conglomerates	10%	11%	11%	6%	8%	6%	6%	-5%	6.76%
Construction/Real Estate	5%	5%	5%	2%	1%	1%	10%	-3%	3.37%
Consumer Goods	10%	10%	9%	9%	6%	11%	6%	7%	8.53%
Healthcare	9%	3%	3%	19%	7%	-1%	5%	1%	5.89%
ICT	6%	8%	-1%	-23%	-4%	-7%	-9%	2%	-3.51%
Industrial Goods	14%	46%	31%	26%	24%	15%	31%	28%	26.86%
Natural Resources	11%	12%	11%	5%	34%	11%	9%	-11%	10.16%
Oil and Gas	2%	2%	-14%	-4%	3%	4%	3%	2%	-0.26%
Services	-1%	1%	2%	-19%	-13%	4%	3%	2%	-2.49%
TOTAL	**10.97%**	**10.52%**	**7.41%**	**3.78%**	**9.97%**	**7.43%**	**8.66%**	**4.26%**	**7.87%**

The average yearly trend of the margin for the period is presented in Figure 6.7.

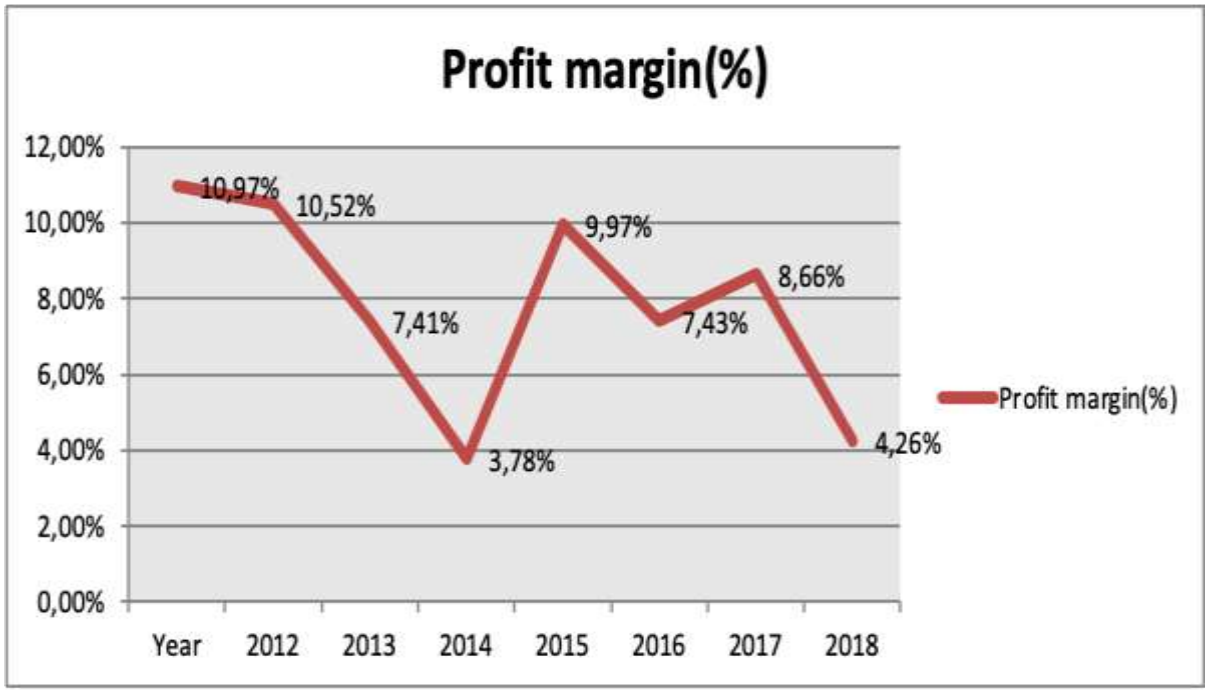


Figure 6.7: Average yearly margin

Evidence shows that during the period the margin indicated a continuous decline from 10.97% in 2012 to 3.78% in 2014. It, however, progressed to 9.9% in 2015 before continuing the declining trend from 9.97% in 2015 to 4.26% in 2019. Thus, in contrast with the turnover, the margin was more volatile as it decreased constantly from 2015 through 2019, whereas the turnover showed a sustained increase from 2015 through

2018 and only dropped in 2019. This shows that during the period from 2015 to 2019, firms were exposed to high operational costs. This was a result of the economic recession and the high cost of doing business in Nigeria at the time (Marshal & Solomon, 2017; Ibrahim *et al.*, 2018; Kemi, 2019; Ilori & Efuntade, 2020).

Profit margin indicates the level of profit a firm earns as a percentage of revenue. In this study, the profit margin is calculated as net profit after tax divided by the revenue (Mulyadi & Obsatar, 2020). A profit margin is an expression of how efficiently the firm deploys and manages its resources to generate revenue during the period. Prior studies have established a positive nexus between effective corporate governance and better profit margin (Nwonyuku, 2016; Ararat *et al.*, 2017; Ahmed *et al*., 2020; Mulyadi & Obsatar, 2020). A greater profit margin indicates a better-managed firm, and confirms that effective corporate governance improves firm financial performance (Ahmed & Hamdan, 2015), sustains "business growth and survival, as well as protects and enhances stakeholders' interests" (Nwonyuku, 2016:1).

6.5 Further analysis of the financial indicators of the sample firms

All the financial data are the monetary values disclosed in the annual reports of the sample firms. The market value of shares is the market value of each share multiplied by the number of shares traded as of December 2019. The total assets are the combination of the current and non-current assets. The value of the net worth, or equity, is derived by subtracting the total debt from the total assets for the period. The total debts are the combination of the current and non-current liabilities during the period. Table 6.9 contains the average annual financial data of the sample firm from 2012 to 2019, indicating a percentage increase or decrease. Figure 6.8 shows a graph of how the financial indicators changed over the period.

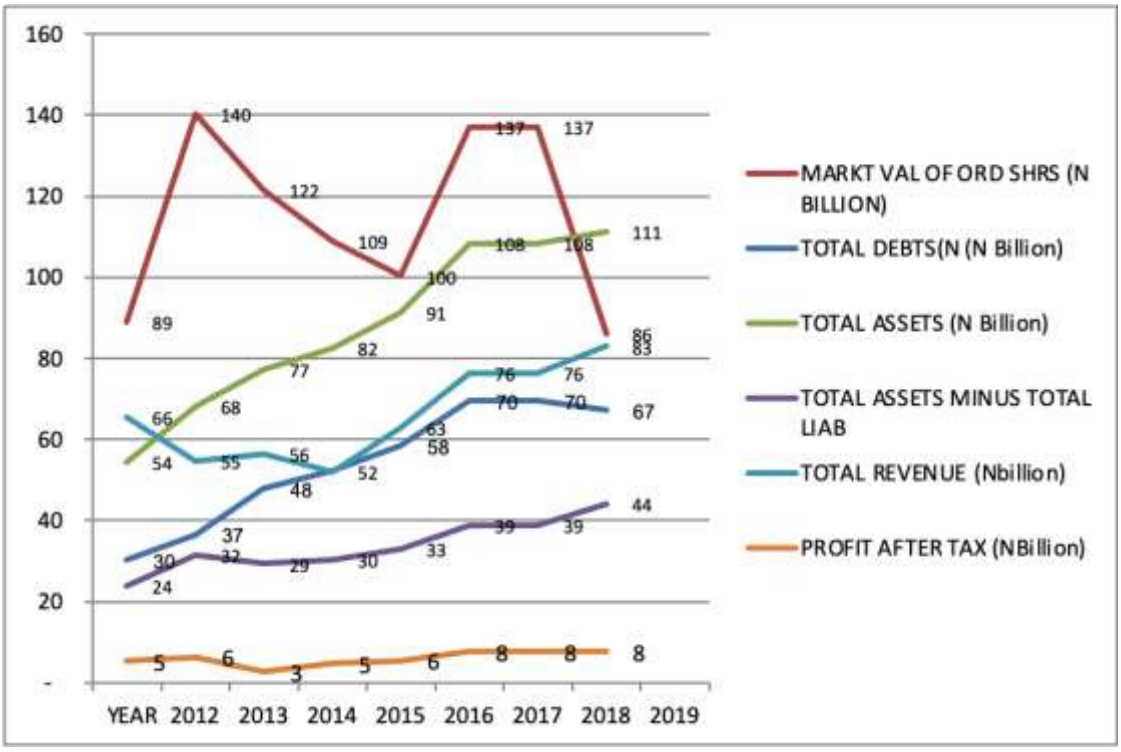


Figure 6.8: Financial trends 2012-2019

Table 6.9: Yearly financial details 2012-2019

Year	Market Val. of Ord. Shares (₦ Billion)	Total Debts (₦ Billion)	Total Assets (₦ Billion)	Equity (₦ Billion)	Total Revenue (₦ Billion)	Profit After Tax (₦ Billion)
2012	89.01	30.35	54.32	23.97	65.50	5.35
2013	142.56	37.19	69.24	32.05	55.60	6.46
2014	121.57	47.88	77.20	29.32	56.33	2.78
2015	108.84	52.21	82.47	30.26	52.10	4.69
2016	100.26	58.41	91.30	32.89	62.79	5.55
2017	137.01	69.56	108.39	38.83	76.37	7.71
2018	109.88	67.52	111.69	44.17	87.46	9.78
2019	85.92	67.23	111.35	44.12	82.96	7.61
Average	111.88	53.79	88.24	34.45	67.39	6.24
%age increase (decrease) 2012-2019	-3%	122%	105%	84%	27%	42%

The total market value of the sample firms fell by 3% from ₦89.01 in 2012 to ₦85.92 in 2019 in spite of the increase in profit by 42% from ₦5.35 billion in 2012 to ₦7.61 billion in 2019, although there was no indication of the use of debenture stock by any of the sample firms. The average debt increased substantially by 122%, from ₦30.32 in 2012 to ₦67.23 in 2019. There was, however, an impressive increase in the value of the total assets by about 105%, from ₦54.39 billion in 2012 to ₦111.35 billion, which was justified by the increase in profit even though the return on equity plummeted by 23%, from 22% in 2012 to 18% in 2019. The trend graph of the above financial results is presented in Figure 6.7 below. As the graph shows, the market values of shares show an overall decreasing trend, falling from an all-time high level of ₦140 billion in 2013 to ₦86 billion in 2019.

The decrease may not be unconnected with the economic recession in Nigeria, from 2015 to 2019, caused by falling oil prices, devaluation of the Naira, and mismanagement, to mention a few (Marshal & Solomon, 2017; Ibrahim *et al.*, 2018; Kemi, 2019; Ilori and Efuntade, 2020). The yearly outcomes of the financial proxies are presented in Table 6.10.

Table 6.10: Yearly financial performance proxies 2012-2019

Year	Tobin's Q	ROE	NAT
2012	2.2	22%	1.21
2013	2.6	20%	0.8
2014	2.19	9%	0.73
2015	1.95	16%	0.63
2016	1.74	17%	0.69
2017	1.91	20%	0.7
2018	1.59	22%	0.78
2019	1.38	17%	0.75
Average	1.94	18%	0.79
Percentage increase(decrease) 2012-2019	-37%	-23%	-38%

As presented in Table 6.10, the ROE declined steadily from 22% in 2012 to 17% in 2019. The steady decline may also be responsible for the steady fall in the price of shares, despite the favourable trend in the general financial performance of the sample firms during the period. This is because investors desire financially strong firms that can guarantee regular payment of dividends, growth of their investments, and a lot more factors that are materially determined by the profitability of the firm (Barber *et al.*,

2003; Al-Qaisi, 2011; Bashir, 2013; Jagongo & Mutswenje, 2014; Aroni *et al.*, 2014; Tamrin *et al.*, 2017; Gill et al., 2018).

The average financial values of the sample firms in terms of Tobin's Q, ROE, and NAT were not impressive from the results of the financial data as each of the three measures fell by 37%, 23%, and 38%, respectively, when the 2012 results are compared with 2019.

A further review shows that for the period under review, the average ROE of the sample Nigerian listed firms was 18%. However, compared to the Indian experience, with a calculated average ROE of 21.36% for listed firms as of 2013 (Aggarwal, 2013), Turkey with ROE of 16.50% in 2013 (Cengiz, 2016), Indian IT firms with ROE of 5.70% in 2017 (Prusty & Al-ahdal, 2018), Jordan with ROE of 1.75% in 2014 (2016) and Nigeria (insurance companies) with ROE of 13.89% (Hameed and Tsoho, 2020), the performance of the non-financial listed firms for the period can be considered to be within an acceptable range.

6.6 Descriptive statistics of firm financial performance

Descriptive statistics are considered a critical part of the data analysis process and provide the foundation for comparing variables with inferential statistical tests (Kaur, Stoltzfus & Yellapu, 2018). Descriptive statistics enable the reader to understand the statistical characteristics of the data set used for the study. The general interpretation of the statistics is presented in Table 6.11.

Table 6.11: General interpretation of the statistics

Description	Interpretation	References
Mean	Mean is the average value of the observed variable of the sample firm. The mean is simply the average of sample data of the variable studied. It is the mathematical average of the data set.	Winkler, 2009; Marshall & Jonker, 2010; Sutanapong & Louangrath, 2015
Sample variance	The variance shows how a measure of the degree to which the numbers in a list are spread out with relation to the mean. If the individual data sets are close to the mean, the variance will be small. If they are far away, the variance will be large.	
Mode	The most occurring or the most recorded total value of the variable in the sample is the mode. The mode is not a measure of centrality in distribution but the location of the value on the horizontal scale of the highest density or the most occurring data value in a given data series.	

Table 6.11: General interpretation of the statistics (continued)		
Description	**Interpretation**	**References**
Median	The median is the middle value of the variables in order of magnitude. The Median is the numeric value of "the statistical-counting-unit in the centre," of the distribution of the rank-ordered data, from smallest to largest. It is usually below the arithmetic mean in a typically right-skewed frequency distribution of socio-economic data. It is simply the midpoint of a distribution.	Winkler, 2009; Marshall & Jonker, 2010; Sutanapong & Louangrath, 2015.
Standard deviation	The standard deviation provides a measure of how closely or how far a distribution or observation is from the mean. It shows how far the values are spread above and below the mean. It expresses the variability of the data set from the mean. A high value of standard deviation indicates that the values of the data set are generally far from the mean. A low standard deviation, on the other hand, indicates a clustering data set around the mean. If the value of standard deviation is high, it indicates that the distribution is skewed.	Winkler, 2009; Marshall & Jonker, 2010; Sutanapong & Louangrath, 2015.
Skewness	The skewness measures the degree of asymmetry of the data set. The normally distributed data set will have a skewness of 0. A positive skewness value indicates that the data contains higher values than the sample mean and a long right-tail. A negative skewness implies that the distribution has a left long-tail and that the data distribution contains more data with values below the sample mean.	Winkler, 2009; Marshall & Jonker, 2010; Sutanapong & Louangrath, 2015.
Kurtosis	This shows the flatness or the peakedness of the distribution of the data. In other words, kurtosis shows the measure of the steepness of the distribution of the data set. It shows whether data is normal, heavy-tailed, or light-tailed relative to a normal distribution. High kurtosis or heavy-tailed data are likely to contain outliers. Thus, the normal kurtosis value is 3 and is referred to as a mesokurtic distribution. A picked-curve distribution has higher values and is called a positive kurtosis or leptokurtic. On the other hand, a platykurtic distribution, or negative kurtosis, is flatter-curved and is characterised by a data set with lower values.	Winkler, 2009; Marshall & Jonker, 2010; Sutanapong & Louangrath, 2015.

The sections that follow discuss the descriptive statistics of the sub-sectors of the total sample listed firms concerning both independent and dependent variables.

6.6.1 Descriptive statistics of the combined average financials 2012-2019

The financial summary is presented in Table 6.11 below, followed by an explanation of the results. The summary statistics in Table 6.12, using the actual (not winsorised), show that the total average market value of shares of the sample firms is ₦111.60 billion, compared to the highest and lowest values of ₦3.92 trillion and ₦0.051 billion, respectively. This shows that the data set from 2012 to 2019 has an abnormal distribution with a high range of ₦3.91 trillion and a kurtosis value of 47.24.

Table 6.12: Descriptive statistics of the combined average financials 2012-2019

	Markt Val. (N Billion)	Assets (N Billion)	Equity (N Billion)	Debts (N Billion)	Revenue (Nbillion)	Profit After Tax (Nbillion)	Debt/Equity Ratio
Mean	111.60	88.11	34.39	53.70	67.28	6.23	0.35
Median	6.13	14.03	5.90	9.60	9.18	0.53	0.20
Max.	3919.32	1741.00	987.00	895.50	901.00	390.00	21.71
Min.	0.05	0.17	-10.20	0.11	0.02	-183.00	-0.61
Std Dev.	425.98	210.54	95.87	129.50	131.20	30.08	1.03
Skw	6.36	4.69	6.16	4.41	3.34	6.67	17.88
Kurtosis	47.24	29.02	48.51	24.69	16.60	73.99	367.52
Jq-Bera	44506.84	16076.84	46673.47	11513.55	4817.17	109572.10	2817240.00
Prob	0.00	0.00	0.00	0.00	0.00	0.00	0.00

The total mean asset value was ₦88.11 billion, while the maximum and lowest total asset values were ₦1.74 trillion and ₦0.17 billion, respectively. The mean debt/equity ratio, or capital structure index, was 0.35, while the least was -0.61. The average equity value is N34.39 billion, with capital values ranging from N987 billion to -₦10.20 billion (completely eroded equity value). The total mean debt is ₦53.72 billion, while the maximum and minimum values are ₦895.5 billion and ₦0.11 billion, respectively. The average total revenue was ₦67.28 billion. The maximum and minimum revenue values were ₦901 billion and ₦0.02 billion, respectively. The average profit figure was ₦6.23 billion. The maximum and minimum profit figures were ₦390 billion and -₦183 billion, respectively. The figures exhibit a non-normal distribution across all the data sets. The skewness values of all the variables confirm this, as all the values are above 3 and leptokurtic. The values of the Jarque-Bera statistics have a probability value of below 0.05, which indicates that the distributions of the data sets are not normal. The standard deviations of all the financial results are above the mean. The values also indicate that the data sets are highly dispersed from

their means. In addition, the values of the standard deviation indicate that the various statistics contain substantial outliers in the data.

6.6.2 Sectorial financial performance of sample firms

Table 6.13 shows the sectorial financial statistics for the period. This subsection presents the total sectorial financial performance of the sample industrial sectors and their sectorial ranking for the period. The performance of nine major financial variables is discussed. These include:

(i) Market value of shares (i.e., market capitalisation),
(ii) Total debt,
(iii) Total assets,
(iv) Equity,
(v) Total revenue,
(vi) Profit after tax, and
(vii) Debt-Equity Ratio /Capital structure.

i. Market Capitalisation trend 2012-2019

The total market valuation of the shares of the sample companies, as shown in Table 6.13, fell by 3%, from ₦5.61 trillion to ₦5.41. The trend did not reflect the improvement in the corporate governance compliance rate from 72% in 2012 to 74% in 2019. The overall best performing sector in terms of improvement in the market share value is the agricultural sector, which improved about 156% from the market value of ₦40.10 billion in 2012 to about ₦102.48 billion in 2019. The next two sectors that improved their market share prices are the oil and gas sector and the industrial sector.

The worst performing three sectors, in terms of market capitalisation for the period, were healthcare, construction and real estate, and the service sectors. These sectors declined by 66%, 50%, and 37%, respectively. Apart from the three sectors - agriculture, oil and gas, and industrial goods that recorded a positive increase in their market capitalisation, the other seven sectors recorded a reduction in their share prices during the period.

Table 6.13: Sectorial yearly summary of Market Val. of Ord. Shares (₦ Billion) 2012-2019

Sector	2012	2013	2014	2015	2016	2017	2018	2019	%age increase	Ranking
Agriculture	40.10	90.17	54.34	65.66	81.20	136.66	138.60	102.48	156%	1
Oil and Gas	139.62	438.37	541.75	640.89	409.69	311.04	265.45	186.36	33%	2
Industrial Goods	2385.60	4125.10	3695.98	3397.36	3231.16	4225.80	3407.19	2716.64	14%	3
Natural Resources	2.75	2.96	2.44	1.72	1.58	2.02	1.80	2.37	-14%	4
Consumer Goods	2773.29	3643.21	2965.17	2487.64	2389.01	3727.09	2917.51	2253.82	-19%	5
Conglomerates	99.79	300.57	194.39	101.66	70.38	94.23	84.15	67.25	-33%	6
ICT	19.96	15.48	18.36	16.89	25.12	25.12	18.24	13.33	-33%	7
Services	39.34	37.70	31.93	29.97	27.71	29.79	29.68	24.86	-37%	8
Construction/ Real Estate	58.83	113.62	97.19	66.66	56.14	44.92	32.21	29.39	-50%	9
Healthcare	48.58	73.14	57.18	48.57	24.39	35.06	27.87	16.54	-66%	10
Total	**5607.86**	**8840.34**	**7658.73**	**6857.01**	**6316.39**	**8631.73**	**6922.69**	**5413.04**	-3%	

The annual trend of the market capitalisation for the period is presented in Figure 6.9. As Figure 6.9 shows, all the market capitalisation of the sectors experienced a constant fall after 2018.

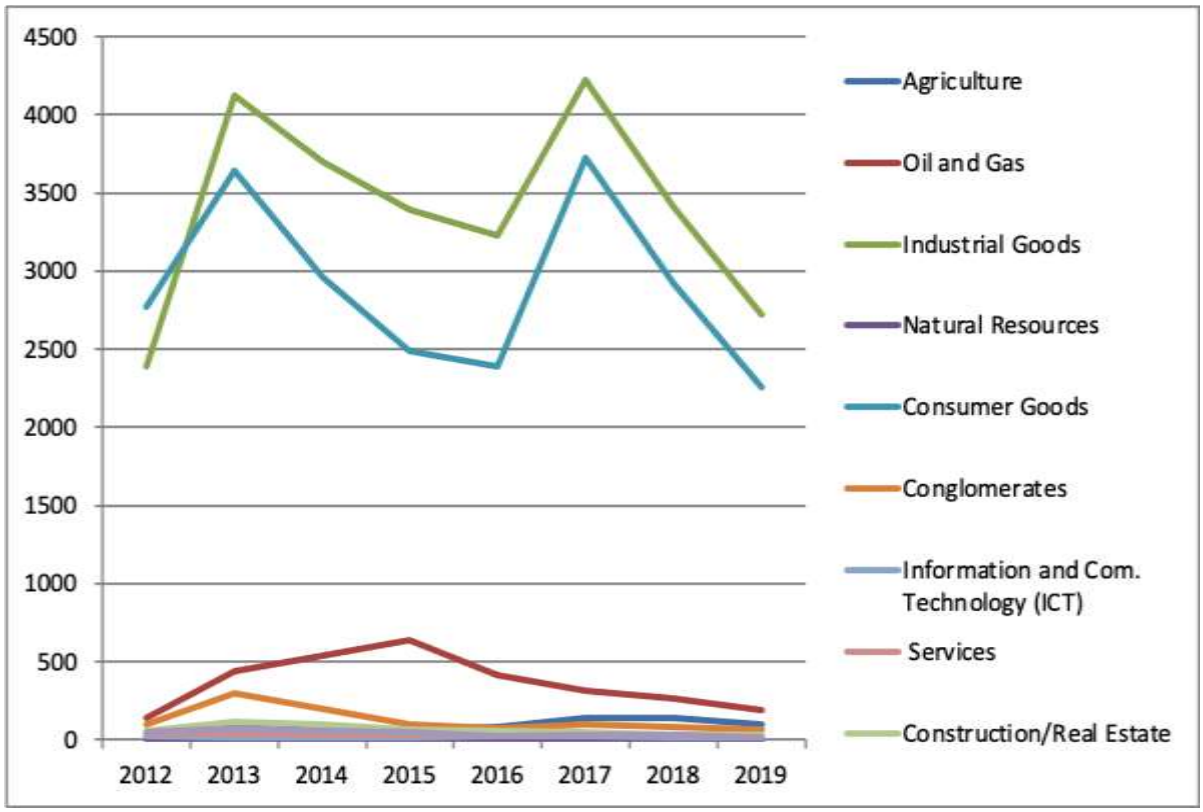


Figure 6.9: Sectorial market capitalisation 2012-2019 in (N Billion)

ii. Total debt

There was an increase in the total debt profile of the sample firms during the period, as shown in Table 6.14 and Figure 6.10.

Table 6.14: Summary of total sectorial debts (N Billion) 2012-2019

Sectors	2012	2013	2014	2015	2016	2017	2018	2019	%age increase	Ranking
Agriculture	20.76	27.27	31.65	39.15	33.10	39.79	51.24	65.34	215%	**1**
Consumer Goods	459.95	674.16	750.22	812.11	950.53	1,214.21	1,219.53	1,348.71	193%	**2**
Industrial Goods	353.69	427.03	530.65	758.71	1,003.48	1,326.09	1,138.28	1,024.54	190%	**3**
Natural Resources	1.28	1.60	2.10	1.79	2.12	2.53	2.54	3.09	141%	**4**
Conglomerates	117.15	135.35	156.88	116.21	120.16	264.02	263.26	271.00	131%	**5**
Services	55.97	58.28	63.72	74.41	85.00	92.55	100.71	115.56	106%	**6**
ICT	6.40	8.46	9.35	8.83	8.40	7.98	10.72	11.08	73%	**7**
Oil and Gas	665.43	704.02	1,175.21	1,193.00	1,181.07	1,130.84	1,157.59	1,063.67	60%	**8**
Construction/ Real Estate	206.80	241.55	265.69	261.48	274.64	281.64	289.72	308.76	49%	**9**
Healthcare	24.34	28.44	30.84	23.59	21.57	22.63	20.34	23.53	-3%	**10**
Total	**1,911.77**	**2,306.15**	**3,016.31**	**3,289.29**	**3,680.06**	**4,382.27**	**4,253.93**	**4,235.27**	122%	

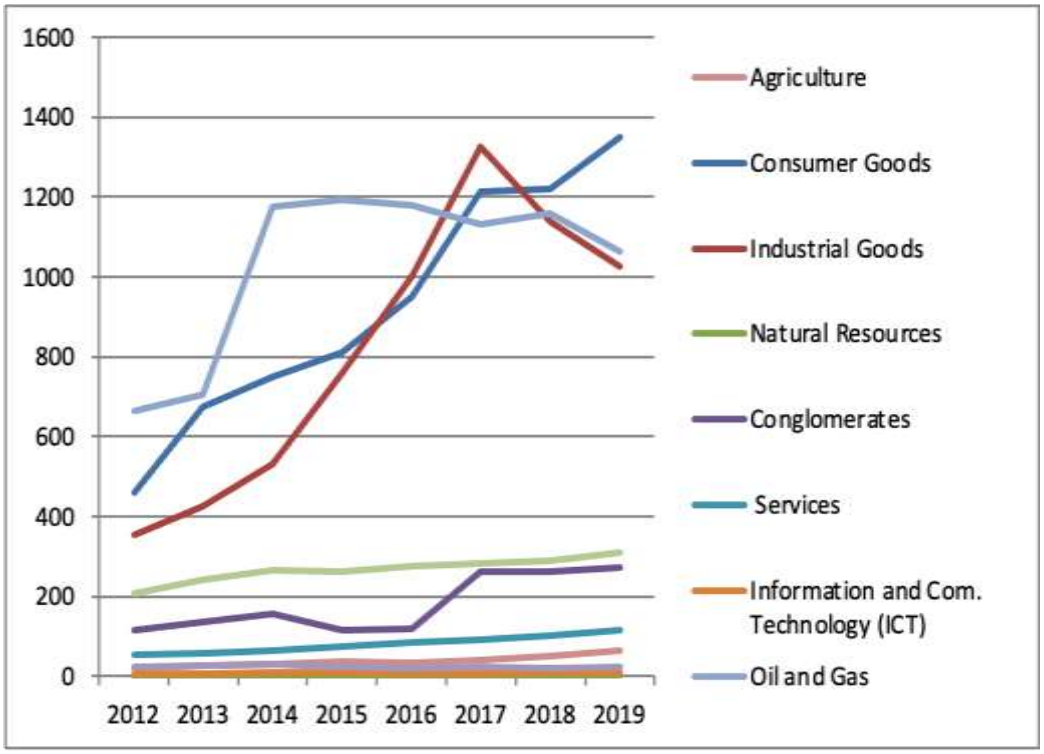


Figure 6.10: Sectorial trend of debts 2012-2019

The total debt rose from ₦1.91 trillion in 2012 to ₦4.24 trillion in 2019, representing an increase of 122%. However, the debt holders appear not to exert effective control over the firms that accounted for a marginal increase in the compliance rate of 2% as against the increase in debt of 122%. Arguably, the debt burden of the firms affected the market value, as investors would shy away from investing in the shares of firms that have a high debt burden for fear of taking over.

Thus, the inherent control of firms by creditors and loan providers implies that debt affects the ability of the firm to create value, even though literature has identified mixed effects, both negative and positive possibilities (Harris & Chaplinsky, 2008; Feng-Li Lin & Tsangyao, 2011; Akhtar *et al.*, 2016; Aziz & Abbas, 2019; Orji *et al.*, 2021). However, there have been arguments that, in reality, the capital structure does affect the value of the firm since capital markets are in practice never perfect as the controlled environment, which forms the basic assumption of the capital structure theory, is difficult to find (Tudor *et al.*, 2014; Ahmeti & Prenaj, 2015; Aggarwal & Padhan, 2017). The debt-equity ratio, which is the proxy for the capital structure, is shown in Figure 6.11. The ratio reached its all-time high in 2016. This spike was caused, mainly, by the increase in the debt value of the consumer and industrial goods sectors.

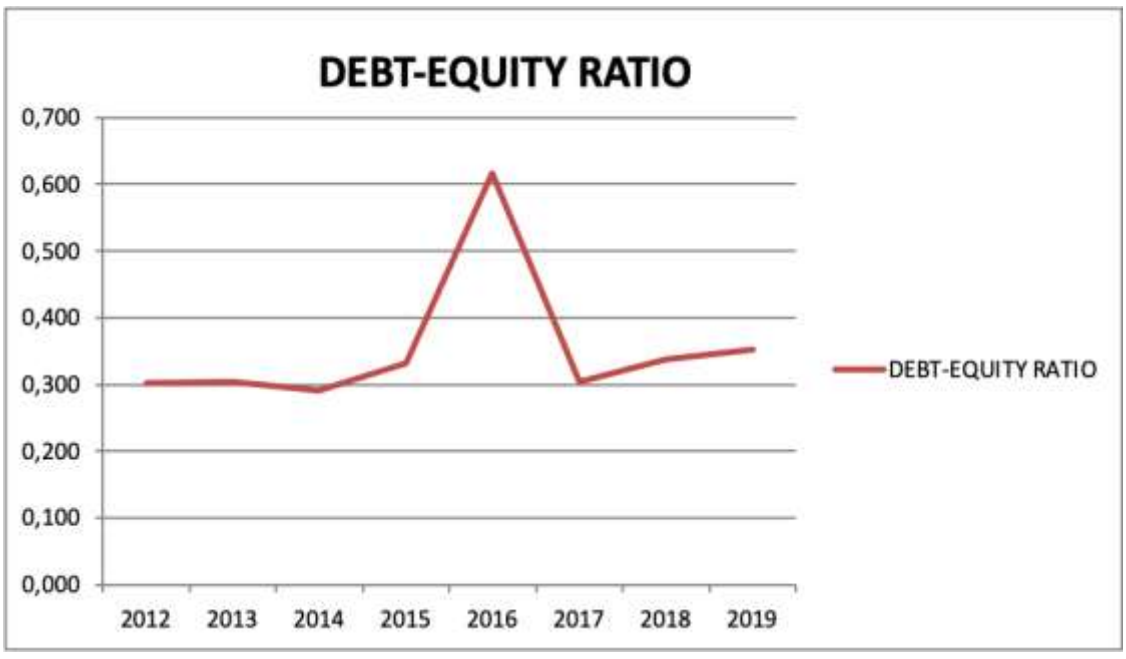


Figure 6.11: Capital structure 2012-2019

As shown in figure 6.12, as market capitalisation decreases, debt increases. The negative relationship between the increase in debt and the market value of the sample firms suggests that there is a trade-off between the increase in debt and the value of the firm. Therefore, an optimal debt-equity ratio is desirable for the improvement of the value of the firm. The current finding goes against the argument of the Modigliani and Miller (1958) hypothesis, which says that in an efficient and frictionless capital market, the value of a firm does not depend on its capital structure.

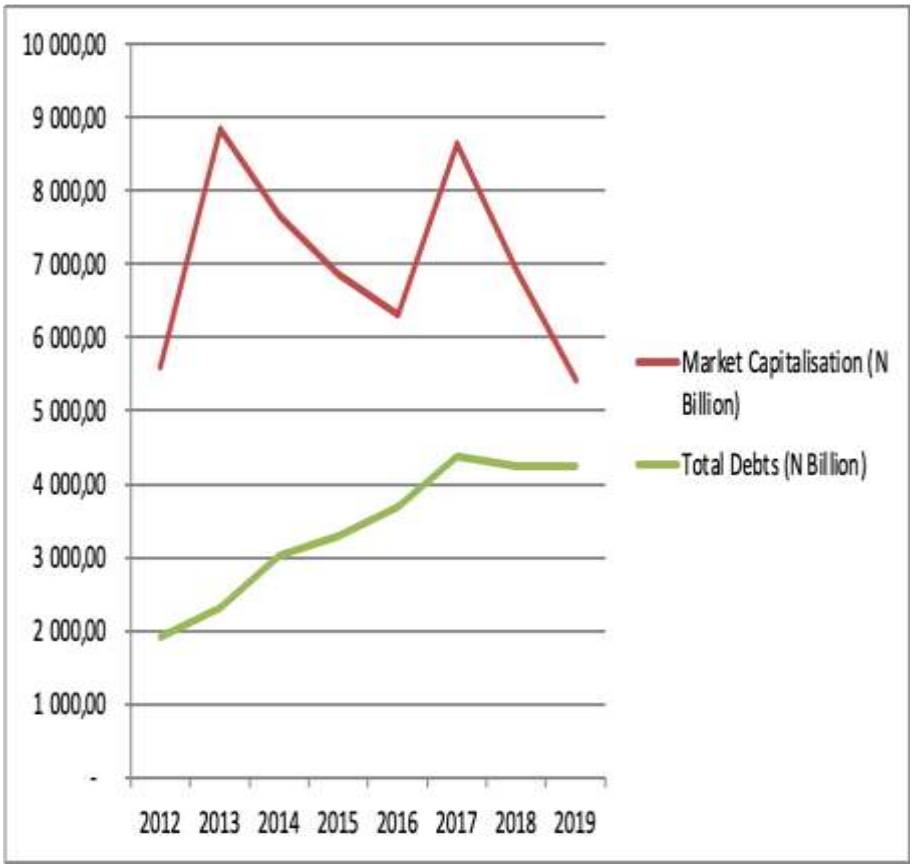


Figure 6.12: Trend comparison between total market value and total debt

iii Total assets

The total assets of the sample firms increased, as shown in Table 6.15, from ₦3.42 trillion in 2012 to ₦7.01 trillion in 2019, accounting for a 105% increase. There was an aggregate increase in investment in assets across the entire sample sectors. The highest three sectorial increases were recorded by the industrial goods sector (168%), the consumer goods sector (115%) and the conglomerates (98%). The least sectorial increase was recorded by the healthcare sector, with 2%.

Table 6.15: Sectorial yearly summary of Total Assets (N Billion) 2012-2019

Sectors	2012	2013	2014	2015	2016	2017	2018	2019	%age increase	Ranking
Industrial Goods	860.74	1190.04	1339.30	1602.94	1878.15	2238.67	2299.69	2311.04	168%	**1**
Consumer Goods	991.20	1115.73	1248.23	1368.30	1533.67	1996.75	2038.23	2126.44	115%	**2**
Conglomerates	224.34	300.31	327.06	249.10	253.54	439.36	448.49	443.7	98%	**3**
Agriculture	65.53	70.80	78.00	84.72	71.00	87.23	105.45	123.55	89%	**4**
Oil and Gas	838.29	982.94	1337.54	1399.90	1512.84	1542.98	1588.4	1443.92	72%	**5**
Natural Resources	3.18	3.529	35.06	3.82	4.15	4.74	4.923	5.452	72%	**6**
Construction/ Real Estate	252.96	296.05	328.51	321.61	333.13	345.38	341.97	349.6	38%	**7**
ICT	16.09	18.75	18.92	18.79	16.9	15.02	15.27	19.82	23%	**8**
Services	121.46	263.70	92.94	91.89	95	101.71	140.94	142.25	17%	**9**
Healthcare	48.23	53.65	57.82	54.43	53.82	56.85	53.35	49.11	2%	**10**
Total	**3,422.01**	**4,295.51**	**4,863.38**	**5,195.52**	**5,752.20**	**6,828.70**	**7,036.71**	**7,014.88**	105%	

The apathy towards investing in the healthcare sector, which affected the ability of the sector to improve its yearly revenue, does not appear to have been caused by poor profits, as the sector ranked sixth on the profitability Table 6.18.

iv Equity

The equity value (as contained in the annual reports) of the sample firms is presented in Table 6.16.

Table 6.16: Sectorial yearly summary of Equity (₦ Billion) 2012-2019

Sectors	2012	2013	2014	2015	2016	2017	2018	2019	%age increase / Ranking
Industrial Goods	507.05	763.01	808.65	844.23	874.67	912.59	1161.41	1286.50	154%/1
Consumer Goods	172.86	278.92	162.33	206.90	331.77	412.14	430.81	380.25	120%/2
Conglomerates	107.19	164.96	170.18	132.89	133.38	175.34	185.23	172.70	61%/3
Agriculture	531.25	441.57	498.01	556.19	583.14	782.54	818.7	777.73	46%/4
Oil and Gas	44.77	43.53	46.35	45.57	37.90	47.44	54.21	58.21	30%/5
Natural Resources	1.90	1.93	32.97	2.032	2.04	2.21	2.39	2.37	25%/6
Construction/Real Estate	23.88	25.219	26.98	30.84	32.25	34.23	33.01	25.58	7%/7
ICT	9.69	10.29	9.58	9.96	8.5	7.04	4.55	8.74	-10%/8
Services	46.16	54.5	62.82	60.13	58.49	63.74	52.25	40.84	-12%/9
Healthcare	65.49	205.43	29.22	17.48	10.01	9.16	40.23	26.69	-59%/10
Total	**1,510.24**	**1,989.36**	**1,847.07**	**1,906.23**	**2,072.14**	**2,446.43**	**2,782.79**	**2,779.61**	**84%**

As indicated in Table 6.16, the highest equity value of ₦1.29 trillion was recorded by the industrial goods sector, while the lowest of ₦26.69 billion was recorded by the

services sector. The second-largest equity was recorded by the oil and gas sector with ₦380.25 billion. The industrial goods sector recorded the highest percentage increase of 154% in equity value, while the services sector recorded the highest decrease of 59%. The total equity of the sample recorded an increase of only 27%, from ₦4.13 trillion in 2012 to ₦5.23 trillion in 2019. Thus, there was an aggregate increase in equity during the period.

v. Total revenue

The aggregate revenue details for the years 2012-2019 are presented in Table 6.17.

Table 6.17: Sectorial yearly summary of Total Revenue (N Billion) 2012-2019

Sectors	2012	2013	2014	2015	2016	2017	2018	2019	Percentage increase/ Ranking
ICT	7.00	9.43	11.74	11.75	13.20	14.75	23.22	30.48	336%/1
Agriculture	18.53	23.94	25.93	29.40	37.32	46.86	53.06	51.73	179%/2
Consumer Goods	1,091.08	1,190.99	1,205.19	1,242.51	1,391.44	1,782.61	1,920.58	1,794.55	64%/3
Conglomerates	105.59	123.55	156.72	114.46	122.67	184.05	193.76	168.48	60%/4
Natural Resources	2.42	2.18	2.28	3.05	2.41	2.60	2.95	3.13	29%/5
Construction/ Real Estate	215.30	226.65	211.42	144.01	148.64	150.77	201.07	274.66	28%/6
Services	63.52	63.67	55.26	56.28	57.13	57.27	70.47	77.16	21%/7
Oil and Gas	1,382.06	1,261.94	1,218.15	862.75	1,285.97	1,392.60	1,748.86	1,637.92	19%/8
Industrial Goods	1,203.91	504.29	617.73	790.47	870.09	1,144.87	1,256.64	1,156.39	-4%/9
Healthcare	37.15	42.61	44.65	27.94	26.83	34.98	39.40	32.29	-13%/10
Total	**4,126.56**	**3,449.25**	**3,549.06**	**3,282.60**	**3,955.70**	**4,811.36**	**5,510.00**	**5,226.78**	**27%**

Table 6.17 shows that the consumer goods sector, with ₦11.62 trillion, followed by the oil and gas sector with ₦10.79 trillion, recorded the highest revenue for the period, while the industrial goods sector occupied the third position with ₦7.54 trillion. The increasing trend, however, showed a different ranking. It indicates that the ICT sector achieved the highest rate of increase at 336%, from ₦6.99 billion in 2012 to ₦30.48 in 2019. The agricultural sector came second in terms of revenue increase rate, with 179% from ₦18.53 billion in 2012 to ₦51.73 billion in 2019. The lowest rate of increase in revenue relates to the healthcare sector, followed by the industrial goods sector with -13% and -4%, respectively.

vi Profit after tax

Table 6.18 presents the details of the profit after tax (PAT) for the period on a sectorial basis.

Table 6.18: Sectorial yearly summary of Profit after Tax (₦ Billion) 2012-2019

Sectors	2012	2013	2014	2015	2016	2017	2018	2019	Percentage increase /Ranking
Services	-0.72	0.89	1.11	3.86	-4.96	28.65	2.56	7.26	1093%/1
Industrial Goods	167.89	233.19	194.17	203.55	204.86	177.04	389.33	323.65	93%/2
ICT	0.4	0.75	-0.06	-2.76	-0.53	-1.27	-2.11	0.63	56%/3
Oil and Gas	21.85	20.77	-165.09	-31.3	35.53	53.66	56.23	32.89	51%/4
Consumer Goods	110.95	116.86	110.05	109.69	88.06	200.41	123.07	120.22	8%/5
Agriculture	12.26	1.68	3.84	5.05	12.32	13.53	11.61	10.13	-17%/6
Healthcare	3.28	1.34	1.41	5.3	1.89	-0.35	2.12	0.39	-88%/7
Natural Resources	0.75	0.27	0.24	0.14	0.83	0.28	0.26	-0.35	-147/8
Conglomerates	10.03	13.3	17.93	7.41	10.01	11.73	12.03	-7.4	-174%/9
Construction/Real Estate	10.24	11.79	11.6	2.41	1.37	1.91	20.99	-7.77	-176%/10
Total	**336.92**	**400.84**	**175.2**	**295.64**	**349.38**	**485.59**	**616.08**	**479.64**	42%

The figures of profit after tax show that the highest profit after tax of ₦1.89 trillion was recorded by the industrial goods sector, which came second both in terms of percentage increase in profit and in terms of the total value of profits for the eight consecutive years. However, the ICT sector took third place after recovering from a losing position between 2014 and 2018 to a profitable position in 2019. In terms of profit increment, five industrial sectors, representing 50% of the total sample, had a negative increase, while four recorded an overall percentage positive increase, with the service sector recording the highest positive percentage increase of 1093%. The high percentage increase resulted from recovering from an industrial loss of ₦0.72 billion in 2012 to a profit position of ₦7.26 billion in 2019.

vii Tobin's Q

The Tobin's Q data on a sectorial basis is presented in Table 6.19. The highest average Tobin's Q of 3.61 was achieved by the conglomerates sector, followed by the industrial goods sector with 2.64, and the consumer goods sector came third with 2.61. The natural resources sector took the 10th position with the lowest average Tobin's Q value of 0.92. Compared with the value of the investment in the industrial goods sector, the sector appeared not to have improved its value adequately. Tobin's Q value does not seem to have a close relationship with the total value of the investment. This suggests

that Tobin's Q may not be based solely on the amount of assets invested but may also be affected by other factors.

Table 6.19: Sectorial yearly summary of Tobin's Q 2012-2019

Sectors	2012	2013	2014	2015	2016	2017	2018	2019	Total Average/ Ranking
Conglomerates	3.87	4.73	3.83	3.50	3.38	3.10	3.16	3.31	3.61/1
Industrial Goods	3.18	3.83	3.16	2.59	2.25	2.48	1.98	1.62	2.64/2
Consumer Goods	3.26	3.87	2.98	2.41	2.18	2.47	2.03	1.69	2.61/3
ICT	1.64	1.28	1.46	1.37	1.98	2.20	1.90	1.23	1.63/4
Agriculture	0.93	1.66	1.10	1.24	1.61	2.02	1.80	1.36	1.46/5
Healthcare	1.51	1.89	1.52	1.33	0.85	1.01	0.90	0.82	1.23/6
Oil and Gas	0.96	1.16	1.28	1.31	1.05	0.93	0.90	0.87	1.06/7
Construction/ Real Estate	1.05	1.20	1.10	1.02	0.99	0.95	0.94	0.97	1.03/8
Services	0.78	0.36	1.03	1.14	1.19	1.20	0.93	0.99	0.95/9
Natural Resources	1.27	1.29	0.13	0.92	0.89	0.96	0.88	1.00	0.92/10
Average total	**1.85**	**2.13**	**1.76**	**1.68**	**1.64**	**1.73**	**1.54**	**1.38**	**1.71**

viii Return on equity (ROE)

The ROE of the various sectors on a yearly basis is presented in Table 6.20.

Table 6.20: Sectorial yearly summary of ROE 2012-2019

Sectors	2012	2013	2014	2015	2016	2017	2018	2019	Total Average// Ranking
Services	-0.01	0.00	0.04	-0.22	-0.50	3.13	0.06	0.27	35%/1
Industrial Goods	0.33	0.31	0.24	0.24	0.23	0.19	0.34	0.25	27%/2
Consumer Goods	0.21	0.26	0.22	0.20	0.15	0.26	0.15	0.15	20%/3
Agriculture	0.27	0.04	0.08	0.11	0.32	0.29	0.21	0.17	19%/4
Natural Resources	0.39	0.14	0.01	0.07	0.41	0.13	0.11	-0.15	14%/5
Construction/Real Estate	0.22	0.22	0.18	0.04	0.02	0.03	0.40	-0.19	12%/6
Healthcare	0.14	0.05	0.05	0.17	0.06	-0.01	0.06	0.02	7%/7
Oil and Gas	0.13	0.07	-1.02	-0.15	0.11	0.13	0.13	0.09	-6%/8
ICT	0.04	0.07	-0.01	-0.28	-0.06	-0.18	-0.46	0.07	-10%/9
Conglomerates	0.25	0.24	0.29	-0.21	0.30	0.29	0.61	-3.00	-15%/10
Average total	**0.20**	**0.14**	**0.01**	**- 0.00**	**0.10**	**0.42**	**0.16**	**- 0.23**	**10%**

Based on the ROE, the best sector was the services sector, with the highest average ROE of 35%. This percentage was made possible not necessarily because of the sustained efforts of the sector to increase profits over time, but because of the fall in its equity value, which is used in calculating the ROE rate. The second and third highest ROE rates related to the industrial and consumer goods sectors were 27% and 20%,

respectively. The lowest ROE of -15% was recorded by the conglomerates sector, followed by the ICT sector with -10% and the oil and gas sector with -6%.

As Table 6.20 shows, the high individual ROE of some sectors, although mathematically expedient, would challenge economic logic since the ROE of about 41% in 2016 recorded by the natural resources sector would indicate a profitable sector. However, the ratio is spurious as it resulted from expressing the profit value over an almost completely eroded equity. This is a clear example of one of the problems with accounting ratios, which could lead to wrong conclusions if they are not carefully understood and interpreted (Dandago, Dankwambo, Okafor & Agara, 2021).

ix Net asset turnover (NAT)

Table 6.21 shows the yearly details of NAT of the sample firms for the period.

Table 6.21: Sectorial yearly summary of NAT 2012-2019

Sectors	2012	2013	2014	2015	2016	2017	2018	2019	Total Average	Ranking
Conglomerates	2.64	2.57	2.80	2.30	2.50	2.11	2.03	2.03	2.37	1
Oil and Gas	1.65	1.28	0.91	0.62	0.85	0.90	1.10	1.13	1.06	2
Consumer Goods	1.10	1.07	0.97	0.91	0.91	0.89	0.94	0.84	0.95	3
ICT	0.43	0.50	0.62	0.63	0.78	0.98	1.52	1.54	0.88	4
Healthcare	0.77	0.79	0.77	0.51	0.50	0.62	0.74	0.66	0.67	5
Construction/Real Estate	0.85	0.77	0.64	0.45	0.45	0.44	0.59	0.79	0.62	6
Industrial Goods	1.40	0.42	0.46	0.49	0.46	0.51	0.55	0.50	0.60	7
Natural Resources	0.76	0.62	0.06	0.80	0.58	0.55	0.60	0.57	0.57	8
Services	0.52	0.24	0.59	0.61	0.60	0.56	0.50	0.54	0.52	9
Agriculture	0.28	0.34	0.33	0.35	0.53	0.54	0.50	0.42	0.41	10
Average total	**1.04**	**0.86**	**0.82**	**0.77**	**0.82**	**0.81**	**0.91**	**0.90**	**0.87**	

NAT stands for agency cost. Based on the value of NAT, the conglomerates, oil and gas, and consumer goods sectors occupied the first, second, and third positions, respectively. All sectors recorded a positive NAT ratio, with the conglomerates earning the highest NAT of 2.37, followed by the oil and gas sector with 1.06 and 0.95 by the consumer goods sector. The agriculture sector recorded the lowest rate of 0.41.

The aggregate sectorial performance ranking in terms of the score for the Tobin's Q, ROE, and NAT is presented in Table 6.22. Overall, based on the average of the positions occupied by the firms in the three dependent variables of Tobin's Q, ROE,

and NAT, the best three sectors were consumer goods, industrial goods, and conglomerates as shown in Table 6.22. The three worst sectors were services, agriculture and construction/real estate.

Table 6.22: Ranking of the Sectorial Performance 2012-2019

Sectors	Tobin's Q	ROE	NAT	Average position	Ranking
Consumer Goods	3	3	3	3.00	1
Industrial Goods	2	2	7	3.67	2
Conglomerates	1	10	1	4.00	3
Oil and Gas	7	8	2	5.67	4
ICT	4	9	4	5.67	5
Healthcare	6	7	5	6.00	6
Services	9	1	9	6.33	7
Agriculture	5	4	10	6.33	8
Construction/Real Estate	8	6	6	6.67	9
Natural Resources	10	5	8	7.67	10

6.6.3 Summary statistics of dependent variables and control variables

This study seeks to find a relationship between effective corporate governance and the financial performance of the firm by using three independent variables as proxies for financial performance. These are Tobin's Q, return on equity (ROE), and asset or net asset turnover (NAT). The use of each or all or a combination of these financial performance proxies has been adopted by prior research in corporate governance, including Chung and Pruitt (1994), Kajola, 2008, Ehikioya, 2009, Ntim (2009), Ujunwa (2012), Ranti (2011), Owusu (2012), Albassam (2014), Otman (2014), Ichsani and Rinta, (2015), Kijewska, (2016), Steyn (2018), and Nurlaela *et al.*, (2019).

The dependent variables were talked about in Chapter Five. Below is a short summary of what they are.

(i) Tobin's Q

As earlier stated in Chapter Five, the approximation of Tobin's Q value used in this study is the model suggested by Chung and Pruitt (1994) as:

$$\textbf{Approximate q} = \frac{\textbf{MVE + PS + DBT}}{\textbf{TOTAL ASSETS}}$$

Where:

MVE = product of the firm's share price and the number of ordinary shares outstanding as indicated in both the annual reports of the firm and data obtained from the Nigerian Stock Exchange.

PS = market or liquidating value of the firm's outstanding preference shares.

DBT = value of the firm's short-term liabilities + the value of the long term debts less current assets.

Total assets = Total assets is the book value as per the balance sheet.

(ii) Return on equity (ROE)

For this study, ROE is defined as profit after tax divided by book value of equity or net worth at the end of each financial year (Ichsani & Rinta, 2015; Kijewska, 2016) as:

$$\frac{\textbf{Net Profit after tax – Preference Dividend}}{\textbf{Book Value of Ordinary Equity or Net Worth}}$$

(iii) Net Assets or Asset Turnover/Asset Utilisation (NAT)

This study adopts the estimation of the ratio as suggested by Nurlaela *et al.*(2019 As:

$$\frac{\textbf{Total Revenue}}{\textbf{Total Assets}}$$

The statistical summaries of the three dependent variables and the independent corporate governance variables of the sample for the period 2012 to 2019 are presented in Table 6.23. The statistics of the dependent variables using the winsorized data of the dependent variables are presented in Table 6.23.

Table 6.23: Aggregate descriptive statistics of dependent variables

	Tobin's Q	ROE	NAT
Mean	1.541	0.018	0.913
Median	1.089	0.104	0.704
Maximum	9.433	50.000	8.034
Minimum	0.078	- 82.500	0.004
Standard Deviation	1.310	4.492	0.830
Skewness	2.835	- 9.811	3.590
Kurtosis	9.808	257.803	20.947
Jarque-Bera	2647.086	1375814	10098.56
Probability	0.00000	0.00000	0.00000

The average mean of Tobin's Q for the sample size is 1.54, 0.018 for ROE, and 0.91 for NAT. The standard deviation of 1.30 indicates that the Tobin's Q values were not widely dispersed from the mean but rather were distributed about the sample mean, although not normally distributed. This situation is different in the case of ROE, with a higher standard deviation of 4.49, which indicates that the ROE data set is not normally distributed. The NAT, with a standard deviation of 0.83 and a skewness value of 3.58,

suggests that the NAT data distribution is not normally distributed. The Kurtosis value of the NAT variable is leptokurtic with value being greater than 3 and having a higher value than the sample mean. However, Tobin's Q has a positive skewness value of 2.84, which is about 3, indicating that the data sets of Tobin's Q are about normal distribution. The skewness of ROE is negative. A negative skewness implies that the distribution has a left long-tail and that the data set contains more data with values below the sample mean. The Jarque-Bera statistics of all the variables have probability values of less than 0.05. Thus, generally, the three dependent variables have data sets for the concerned period that are not normally distributed around the mean. This gives credence to the winorization of the data sets to obtain a much better-balanced data set for the regression analysis. However, after winsorization, the data sets still indicate some form of non-normal data sets. Winsorization is discussed later in this chapter.

6.6.4 Summary statistics of control variables

This study considers three control variables. These were explained in Chapter Five as:

(a) Capital structure (debt and equity proportions) – CAPSTR.

(b) Size of the firm using market capitalisation as a proxy– FIRMSI.

(c) Age of the firms (percentage of the age of the firm from 1990 when the Companies Act was introduced to 2019) – FIRAGE.

As stated earlier, the incorporation of control variables into research on corporate governance has been identified as a way to mitigate the biases inherent with omitted variables and to improve the validity of research results (Sinha, 1998; Ntim, 2009; Manawaduge, 2012; Owusu, 2012; Albassam, 2014; Marashdeh, 2014; Farhat, 2014). The summary statistics of the control variables are presented in Table 6.24.

Table 6.24: Descriptive statistics of control variables

	CAPSTR	FIRMSI	FIRMAGE
Mean	0.347	0.002	0.812
Median	0.204	0.001	0.841
Maximum	17.875	0.027	0.981
Minimum	- 0.613	0.000	0.567
Standard Deviation	0.877	0.004	0.100
Skewness	16.257	4.705	- 0.949
Kurtosis	319.1112	26.59968	0.227791
Jarque-Bera	2118280	16401.35	76.1245
Probability	0.0000	0.0000	0.0000

As the summary statistics in Table 6.24 show, the data sets for the control variables are not normally distributed. The values of the Jarque-Bera, kurtosis and skewness confirm that the distribution of the data sets of the variables is non-normal, although the standard deviation values of the firm size (FIRMSI) of about "0" and 0.10 of the firm age can be said to be normal around the mean.

6.7 Dealing with outliers

Outliers refer to data points in a distribution that are substantially different from others (Aguinis *et al*., 2013). Outliers can be caused by a faulty data collection method, an error in data transcription, the presence of firms with disproportionate sizes in the sample (large, medium, and small firms), omitted variables, the effects of economic vagaries, data errors, variable construction errors, sampling errors, and a variety of other factors (Ntim, 2009; Aguinis *et al.*, 2013; Albassam, 2014; Adams *et al*., 2018). The presence of outliers may influence the conclusions of the study on the relationship between or among variables disproportionately, leading to errors in rejection or acceptance of faulty hypotheses, which would make the generalisation of research findings challenging (Aguinis *et al.*, 2013, Albassam, 2014). Although Leone *et al.* (2019) argue that winsorizing the variables that contain potential outliers affects the parameter estimates only modestly when compared to doing nothing, the winsorization of data series with potential outliers is still popular in accounting research. Thus, Molyneux *et al*. (2019) submit that winsorization of data is a valid and popular research approach.

Aguinis *et al.* (2013) observe that there are several methods of handling outliers that have been identified in the literature, which have led to a great deal of confusion and contradictory research results. There are so many methods of dealing with outliers, but the most common methods are trimming and winsorization (Cox, 2013; Jamaluddin *et al*., 2015). Winsorization involves the transformation of data whereby the extreme values are replaced with a certain percentile value from each end. By this approach, the influence of the outliers in the data set is minimised by assigning a lower or higher weight to the outliers to make them close to the other values in the data set. Trimming or truncating, on the other hand, means getting rid of or setting to zero the extreme values at both ends of a set of data (Cox, 2013).

This study adopts the winsorization method for three main reasons. First, winsorization is a popular data cleansing method in corporate governance research as many researchers have adopted the approach (Klapper & Love, 2004; Ntim, 2009; Albassam, 2014; Farhat, 2014; Mans-Kemp, 2014). Second, winsorization is simple to implement and justify. Third, winsorization is a recommended method of data cleansing, especially where the distribution of the data sets is substantially non-normal (Jamaluddin et al. 2015), as in the case of the data set used in this study.

A review of the financial data and results of the summary statistics based on the non-winsorized data discussed earlier suggests the presence of high-level outliers in the data set of the financial proxies of Tobin's Q, ROE, NAT, and other financial data, including market capitalisation, assets, debts, equity, revenue, profit after tax, and the debt-equity ratio (capital structure). Control variables, such as the age of the company, its capital structure, and its market share, are also thought to contain possible outliers.

The use of the ordinary least squares method to estimate the relationship between dependent and independent variables assumes that the data sets are normally distributed (Burton, 2021). Where the data sets are considered to contain outliers, the winsorization procedure has been considered in existing studies, as earlier indicated. However, to decide whether to winsorize the variables, the normal distribution graphs of the affected data sets were produced along with the Jarque–Bera test (See Appendix 5). The Jarque–Bera test is a test of the normality of the distribution of data sets. It is a goodness-of-fit test of whether the data sets in a sample are normally distributed and have the values of the skewness of 0 and kurtosis of 3 that match a normal distribution (Thadewald & Büning, 2004; Herbert, 2004). Where the value of the Jarque–Bera test is greater than 0.05, the distribution is said to be normal; otherwise, it is not. Thus, the null hypothesis is that the distributions are not normally distributed, while the alternate hypothesis is that the distributions are normally distributed.

Ho: The data distributions of the variables are not normal.

H1: The data distributions are normal.

Rule: Accept the alternative hypothesis if the probability value of the Jarque-Bera statistics is greater than 0.05, otherwise reject it.

The summary results of the test of normal distribution (Jarque–Bera test) are presented in Table 6.25 with remarks. The individual Jarque–Bera test results of the variables are presented in Appendix 5.

Table 6.25: Summary of Jarque–Bera test of normality of data series

Variables	Jarque–Bera	Probability	Remark
(i) Market value	44506.84	0.00000	Winsorize the data set
(ii) Total debts	11513.55	0.00000	Winsorize the data set
(iii) Total assets	16076.84	0.00000	Winsorize the data set
(iv) Equity	46673.47	0.00000	Winsorize the data set
(v) Total revenue	4817.171	0.00000	Winsorize the data set
(vi) Profit after tax (PAT)	109572.1	0.00000	Winsorize the data set
(vii) Tobin's Q	2646.604	0.00000	Winsorize the data set
(viii) Return on equity (ROE)	1376137	0.00000	Winsorize the data set
(ix) Net assets turnover (NAT)	10098.75	0.00000	Winsorize the data set
(x) Debt-equity ratio/Capital structure	2817240	0.00000	Winsorize the data set
(xi) Firm age	82.72419	0.00000	Winsorize the data set
(xii) Firm size	16401.35	0.00000	Winsorize the data set
(xiii) Market share	668.4492	0.00000	Winsorize the data set

Table 6.25 shows that all the variables have probabilities of less than zero and high values of the Jarque-Bera test. Since the alternative hypothesis is that the probability value of the Jarque-Bera test will be greater than 0.05 to accept, the value of the probabilities is less than 0.05. Therefore, the alternative hypothesis is rejected in favour of the null hypothesis, suggesting that the data sets for the variables are not normally distributed. Therefore, the winsorization of the data sets is appropriate. See Appendix 5 for details of the results of the Jarque–Bera test of normality.

Accordingly, adopting the approaches of Ntim (2009) and Albassam (2014), the financial proxies of Tobin's, ROE, and NAT, the control variables and the other financial outcomes of market value, debts, assets, and equity are winsorized before being used for the regression, because they all indicate that their data sets are not normally distributed. These data sets are winsorized at 5% and 95% levels. Thus, for the total data set of 504 firm years, the top 5% is approximately the 25^{th} value, while the last 95% is approximately the 479^{th} value. Adopting the winsorization approach, the top 25 values are replaced with the 26^{th} value, while the bottom 25 values are replaced with the 480^{th} value. The regression results are discussed in Chapter seven.

6.8 Nigerian Corporate Governance compliance index

The study considered 32 independent (explanatory) variables and three control variables. The summary of the constructed Nigerian corporate governance index (NCGI), including the yearly changes, is presented in Table 6.26. As earlier discussed in Chapter Five, the combination of the dichotomous scoring system and proportions is adopted in calculating the NCGI. Thus, variables that are present are scored as "1" and "0" if absent. Also, where proportions are used, they are calculated as percentages or ratios of the base figure. For instance, the percentage of females on boards is calculated as the number of females on boards divided by the total board size. Similarly, the proportion of independent directors on the boards is calculated as the number of independent directors divided by the board size. In the case of board members with accounting skills in the Audit Committee of the listed firms, the proportion is calculated as the number of board members with accounting skills divided by the committee membership size. Thus, the total score per variable is between "0" and "1". However, the values of the market share are the winsorized values. The detailed computation of the yearly compliance indexes is provided in Appendix 8.

Further, the SEC-N Code of 2011 did not state whether listed firms should include females on their boards or not. Rather, the SEC-N Code only requires that the boards be diversified to include people of appropriate skills and experience. Literature, however, provides support for the inclusion of women in corporate boards (Barnett *et al.*, 2010; Larkin *et al.*, 2012; Garba & Abubakar, 2014; Abubakar, 2014; Agyapong & Appiah, 2015; Hassan & Marimuthu, 2016; Onyali & Okerekeoti, 2018; Modest, Doaa & Khaled, 2018; Felix & Emmanuel, 2019; Okere *et al*., 2019; Pidani *et al*., 2020). Further, the SEC-N (2011) did not make provision for the inclusion of foreign directors on the boards of listed firms, but empirical literature supports the inclusion of foreign directors on boards as this makes more business sense, although empirical evidence is mixed (Masulis *et al.*, 2011; Ranti, 2012; Ujunwa, 2012; Zakaria *et al.*, 2014; Hassan & Marimuthu, 2016). The yearly corporate governance compliance indexes are shown in Table 6.26.

Table 6.26: NCGI Yearly compliance index 2012-2019

Year	Average NCGI- Internal Governance Index	Average NCGI- External Governance Index	Average NCGI	Control Variables
2012	74.27%	11.99%	70.38%	42.77%
2013	74.47%	10.86%	70.50%	40.25%
2014	74.49%	10.15%	70.47%	37.84%
2015	75.16%	9.42%	71.05%	36.67%
2016	74.94%	9.02%	70.82%	35.75%
2017	75.73%	8.36%	71.52%	34.80%
2018	75.13%	8.05%	70.94%	33.16%
2019	76.05%	7.06%	71.74%	31.23%

Table 6.26 shows that from an average rate of 70.38% in 2012 for the NCGI, the firms recorded a marginal increase of 1.36% to 71.74% in 2019. This may show that the sample firms were not under any pressure to improve the compliance level of the governance provisions. The absence of explicit provisions on the inclusion of female and foreign directors on most boards, as advocated in the corporate governance literature (Barnett *et al*., 2010; Bell & White, 2013; Garba & Abubakar, 2014; Kamonjoh, 2014; Wilson, Jr., 2014; Agyapong & Appiah, 2015), means that firms are free to include female and foreign directors on their boards.

The absence of clear specifications on female and foreign board membership and the maximum board size may have contributed to the motivation to improve the yearly corporate governance compliance rate. Another reason is the lack of enforceability of the Nigerian Code (SEC-N, 2011). For instance, the Code merely requires an explanation from a defaulting firm and places the enforcement of the implementation of the Code on the board of directors and the shareholders.

Another factor is a lack of compliance with disclosure requirements. For instance, lack of high-level disclosure on the process of board appointments; roles of the boards; roles of the management; code of ethics; responsibilities of directors; executive remuneration; and other disclosures as contained in Part G, section 34 of the Nigerian Code of 2011 (SEC-N (2011).

A further consideration of Table 6.26 indicates that whereas the internal governance compliance score increased from 74.27% in 2012 to 76.05% in 2019, the external governance compliance score decreased from 11.99% in 2012 to 7.06% in 2019. This implies that the sample firms improved their compliance with the internal governance provisions as contained in the SEC-N 2011 Code and CAMA 1990, but

there was no similar attempt to improve the proportion of institutional shareholding during the period. Further, there was a steady fall in aggregate sales between 2012 and 2016 and between 2018 and 2019. One of the main causes of the fall in sales was the economic recession, political instability and insecurity that characterised the period that might have led to divestment by institutional investors. The effect of the decrease in the performance of these two variables resulted in the downward trend of the external governance index. Therefore, it can be said that during the period of the investigation, the external governance variables did not effectively discipline the board and management of firms to motivate better performance.

As Figures 6.13a and 6.13b show, the CGI of the sample firms indicates an increasing trend. However, in 2018, the increase fell short of the favourable trend in 2017. However, this fall was compensated for by the increased growth rate in 2019. The total CGI showed an increasing trend during, although substantial fluctuations were noted during the period.

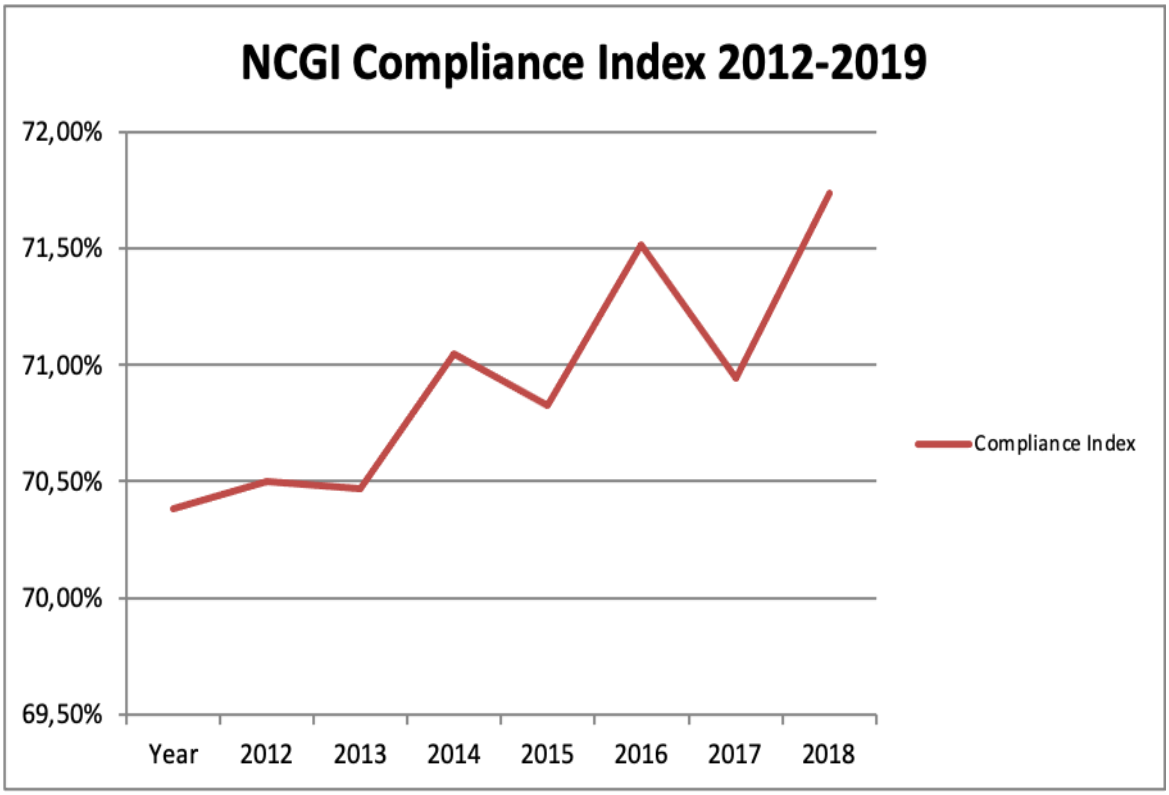


Figure 6.13a: NCGI compliance trend 2012-2019

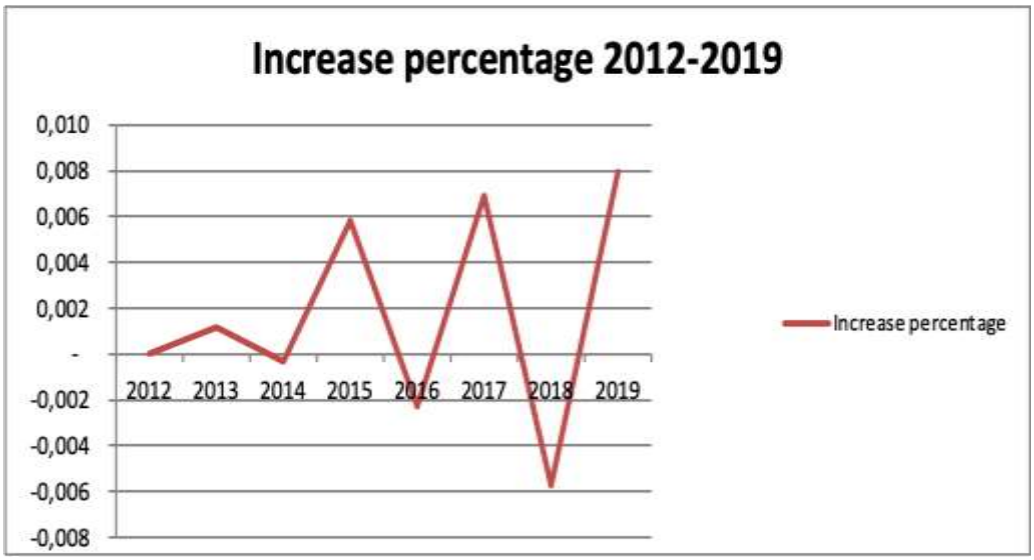


Figure 6.13b: NCGI compliance increase trend 2012-2019

On a sectorial basis (see Tables 6.27a and 6.27b), the lowest CGI of 61.23% compliance was recorded by the agricultural sector in 2012, while the highest of 78.66% was recorded by the industrial goods sector in 2019. However, by 2019, the ICT sector, with a CGI of 66.46%, recorded the least CGI. Generally, the average sectorial CGI increased marginally from 68.65% in 2012 to 70.93% in 2019 (about a 1.36% increase in 8 years). This means that the sample firms were not under pressure to improve their corporate governance practice.

Table 6.27a: Sectorial Average CGI 2012-2019

Sectors	**2012**	**2013**	**2014**	**2015**	**2016**	**2017**	**2018**	**2019**	**Sectorial Average**
Agriculture	61.23%	61.19%	63.28%	61.59%	61.69%	62.29%	62.38%	67.80%	62.68%
Conglomerates	71.59%	71.30%	73.46%	73.24%	73.16%	74.76%	70.96%	72.31%	72.60%
Construction/Real Estate	68.81%	64.54%	64.35%	67.47%	65.56%	66.64%	63.68%	73.84%	66.86%
Consumer Goods	72.33%	73.30%	72.88%	73.28%	72.83%	73.29%	74.17%	71.92%	73.00%
Healthcare	65.16%	65.69%	67.32%	66.16%	66.76%	66.02%	65.42%	68.51%	66.38%
ICT	65.17%	66.05%	59.58%	67.04%	67.70%	69.83%	70.57%	66.46%	66.55%
Industrial Goods	73.66%	73.22%	73.61%	74.33%	74.82%	75.29%	74.44%	78.66%	74.75%
Natural Resources	63.03%	62.87%	64.20%	64.19%	65.91%	69.03%	69.13%	67.06%	65.68%
Oil and Gas	73.25%	73.40%	74.21%	74.12%	74.22%	75.18%	73.80%	72.89%	73.88%
Services	72.33%	72.79%	71.47%	72.21%	70.71%	71.25%	70.66%	69.82%	71.40%
Yearly Average	**68.65%**	**68.44%**	**68.44%**	**69.36%**	**69.34%**	**70.36%**	**69.52%**	**70.93%**	**69.38%**

Table 6.27b: Ranking of sectorial CGI by 2019

Sector	2019 CGI	Ranking of 2019 CGI
Industrial Goods	78.66%	1st
Construction/Real Estate	73.84%	2nd
Oil and Gas	72.89%	3rd
Conglomerates	72.31%	4th
Consumer Goods	71.92%	5th
Services	69.82%	6th
Healthcare	68.51%	7th
Agriculture	67.80%	8th
Natural Resources	67.06%	9th
ICT	66.46%	10th

The possible explanation for the lack of pressure on the management and boards of the firms to improve their corporate governance scores is the lack of strict enforcement on the part of the SEC-N, to compel the sample firms to abide by the provisions of the Nigerian corporate governance guidelines.

The highest average control variable index for the period is 48.26%, which was recorded by the construction and real estate sector. The ICT sector had the lowest percentage at 25.15%. See Table 6.27c.

Table 6.27c: Sectorial average control variables index 2012-2019

Sectors	2012	2013	2014	2015	2016	2017	2018	2019	Periodic Average
Agriculture	45.58%	45.58%	38.29%	36.26%	35.66%	35.01%	34.24%	32.57%	37.90%
Conglomerates	47.62%	44.91%	43.17%	41.79%	38.91%	37.64%	36.61%	31.19%	40.23%
Construction /Real Estate	53.67%	49.09%	48.06%	47.78%	47.70%	47.41%	46.67%	45.68%	48.26%
Consumer Goods	43.29%	42.04%	38.02%	37.38%	36.65%	35.49%	57.23%	32.25%	40.29%
Healthcare	34.52%	33.51%	32.98%	32.28%	31.35%	30.46%	29.49%	28.19%	31.60%
ICT	38.43%	29.16%	23.13%	23.10%	22.20%	21.83%	21.72%	21.64%	25.15%
Industrial Goods	39.24%	37.85%	36.64%	34.66%	33.58%	32.08%	30.12%	29.70%	34.24%
Natural Resources	47.68%	47.34%	47.21%	47.05%	46.97%	46.97%	42.22%	30.04%	44.43%
Oil and Gas	43.47%	40.80%	39.13%	38.05%	37.36%	36.46%	35.03%	32.37%	38.61%
Services	43.60%	41.28%	37.86%	36.02%	35.04%	34.29%	31.32%	30.55%	36.24%
Average	**43.71%**	**41.16%**	**38.45%**	**37.44%**	**36.54%**	**35.76%**	**36.46%**	**31.42%**	**37.62%**

Evidence of the effect of the economic recession and its negative impact on share prices has been presented in Table 6.13, which showed a decrease in the market value of the firms by 3%, from ₦5.61 trillion in 2012 to ₦5.41 in 2018. Thus, the decreasing trend in the index of the control variables (Figure 6.13) is explained, majorly, by the falling trend in the market capitalisation and the capital structure as shown in Figures 6.8 and Figure 6.9.

The downward trend of the yearly index of the control variables (Figure 6.14), from an average of 43.71% in 2012 to 31.42% in 2019, may have been caused by changes in the firm size and capital structure values. These variables were calculated using financial data that was affected by the adverse economic environment that characterised the Nigerian economy between 2015 and 2019 and led to the underperformance of the industries and other players in the economy (PricewaterhouseCoopers, 2017; Ibrahim *et al.*, 2018; Marshal & Solomon, 2017; Kemi, 2019).

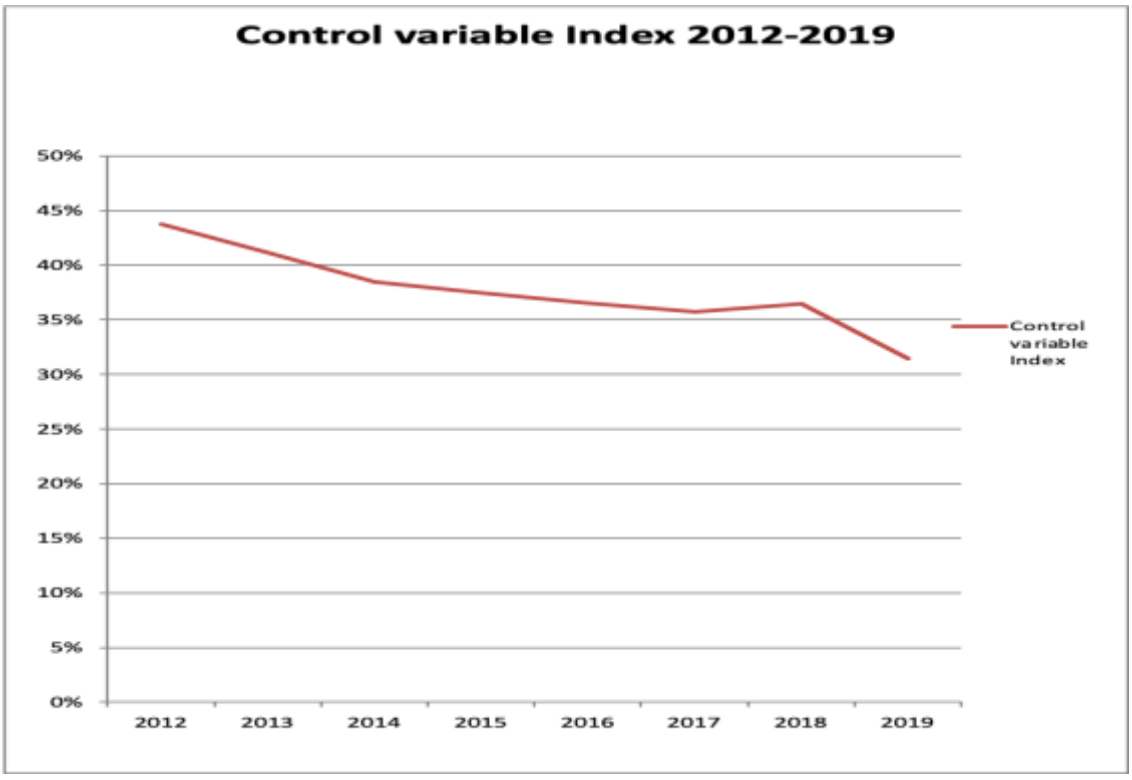


Figure 6.14: Trend of control variables 2012-2019

The yearly average trend of the sectorial compliance index for the period 2012 to 2019 is shown in Figure 6.15. The figure shows an overall improvement in the sectorial compliance rate during the period.

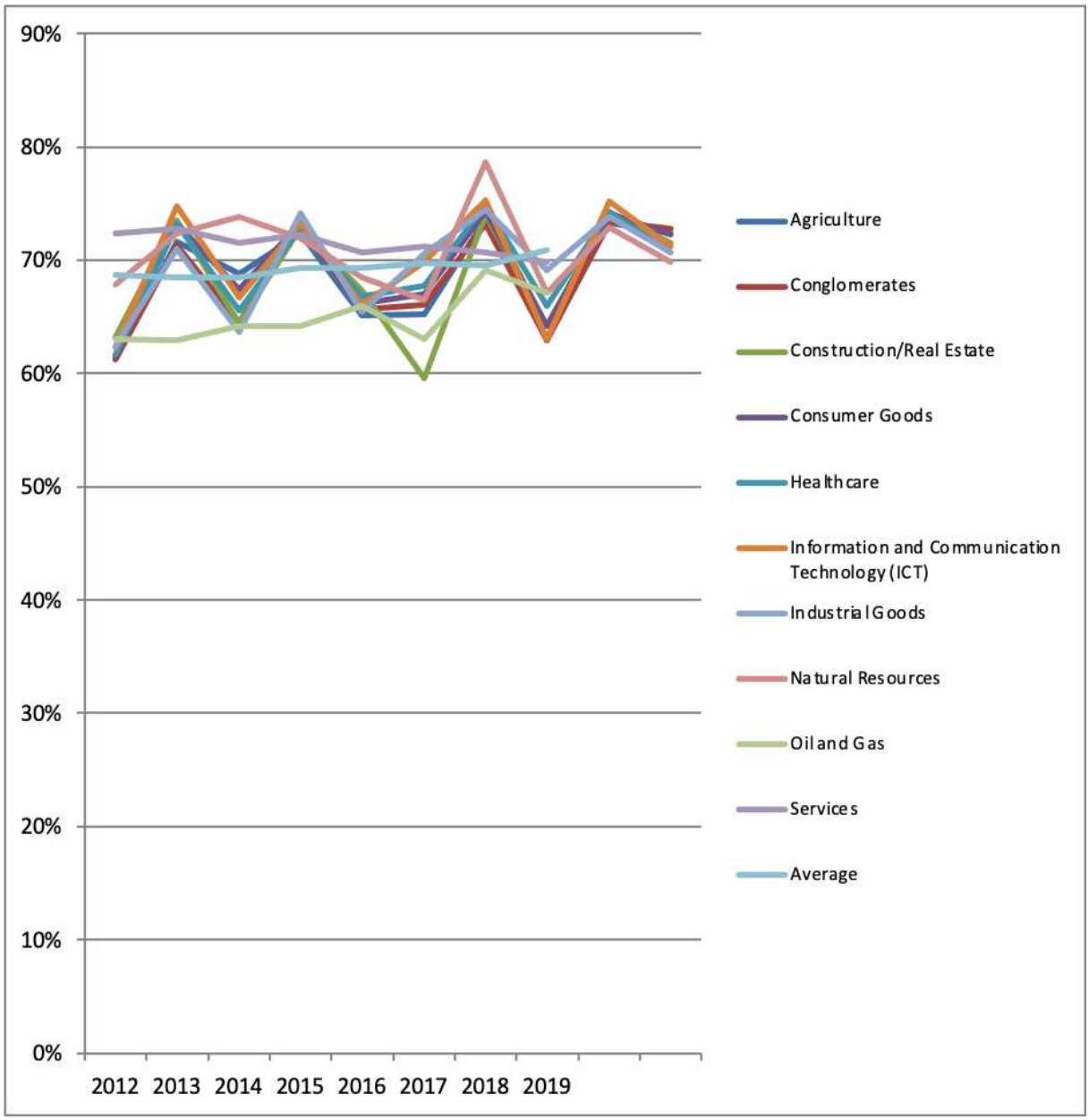


Figure 6.15: Average Total Sectorial compliance index trend 2012-2019

6.9 Descriptive statistics of independent variables using the corporate governance index

This section presents the descriptive statistics of the aggregate independent variables. There are two categories of independent variables: the aggregate corporate governance index and the control variables. The summary statistics of the corporate governance index were presented in Table 6.28.

Table 6.28: Aggregate descriptive statistics of independent variables

	Total NCGI	Control Variables
Mean	22.697	1.097
Median	22.462	1.040
Maximum	37.227	1.794
Minimum	15.021	0.588
Standard Deviation	2.716	0.285
Skewness	0.210	0.750
Kurtosis	0.786	-0.048
Jarque-Bera	16.0251	47.0542
Probability	0.000331	0.0000

Both variables have data sets that are not perfectly distributed. The mean CGI of the sample firms is 22.69, which is about 71% of the total CGI score of 32 points. The mean control variable index is 1.10. The standard deviations of 2.72 and 0.29 of the CGI and control variables, respectively, suggest that the distributions are not far from normal, although, the CGI data is more distributed about the mean than the index of the control variables. Both distributions are positively skewed, but with less skewness in the data sets of the CGI than in those of the control variables index. The kurtosis value of CGI is about four, while that of the control variables is about three. This suggests that the distribution of the data of the control variables index is mesokurtic and closer to a normal distribution than the CGI data set.

6.10 Summary statistics of the individual governance variables

The descriptive statistics are presented in line with hypothesis 2.1 to Hypothesis 3.2 under the following categories:

(i) Board Independence (BODIND),

(ii) Board Duality (BODLTY),

(iii) Board Meetings (BODMTG),

(iv) Board Size (BODSIZ),

(v) Gender diversity (GENDIV),

(vi) Foreign board members (FORMEM),

(vii) Board committees (BODCOM)

(viii) Independence of the Audit Committee and the External Auditor (EXACOM)

(ix) External Governance (non-promoter or institutional shareholders – NPISHR

(x) Market share of the firm using the proportional share of the total industrial revenue as a proxy – MKTSHR).

Thirty-two (32) governance variables were computed from the corporate governance provisions in the SEC-N (2011), the CAMA (1990) and empirical evidence for female and foreign board membership. The 32 variables are defined in Table 5.5.

To extract the values of the independent variables, the presence of a provision is scored as 1 and 0 if not. Where the Code refers to a proportion, the proportion is calculated from available details. For instance, the Code provides for the separation of the positions of the chairman of the Board and the CEO. Where the position is separated, the firm is scored "1" and "0" otherwise. However, in the case of the number of executive directors on the board, the Code (SEC-N, 2011) did not provide for a minimum number but rather states that the "majority of the board members should be non-executive directors". In this case, the proportion of the non-executive directors is calculated based on the board size. The approach also applies to the calculation of the proportion of female board members.

In computing the data for the independent variables, the corporate governance code that operated for the period 2011 to 2019 was used as a guide. In addition, the study considered the outcomes of empirical studies, especially as they related to areas in which the SEC-N 2011 Code did not explicitly provide for clear benchmarks. For instance, the SEC-N (2011) only provided for a minimum of five board members and no maximum board size. Rather, the firm is required to have a board size that corresponds to its size and complexity. This means that larger firms should have larger boards. This expectation is not supported by empirical studies, as studies have shown a mixed relationship between board size and firm performance (Hillman *et al.*, 2009; Ujunwa, 2012; Johl *et al.,* 2014; Darmadi, 2010; EL-Maude *et al*., 2018; Pantamee & Ya'u, 2018). This mixed evidence suggests that, perhaps there is an optimum board size that would maximise firm financial performance.

Further, on the inclusion of female and foreign directors, empirical evidence indicates that the inclusion of female and foreign directors affects firm financial performance (Barnett *et al.,* 2010; Larkin *et al.,* 2012; Bell & White, 2013; Garba & Abubakar, 2014; Agyapong & Appiah, 2015; Ujunwa, 2012; Zakaria *et al.,* 2014).

The summary statistics are discussed under the following headings: internal board mechanisms, external mechanisms, and the control variables. The board skill

index is excluded from the summary statistics because all the firms have a mix of skills and scored 100% compliance.

6.10.1 Summary statistics of the internal governance mechanisms

The internal governance mechanisms relate mostly to board governance characteristics. These include the following: board independence (BODIND), board duality (BODLTY), board meetings (BODMTG), board size (BODSIZ), gender diversity (GENDIV), foreign board membership (FORMEM), board committees (BODCOM) independence of the Audit Committee and the External Auditor (EXACOM). Table 6.28a presents the summary statistics of the board governance variables.

Table 6.29a: Descriptive statistics of the internal governance mechanisms index 2012-2019

	BODIND	BODLTY	BODSIZ	GENDIV	FORMEM
Mean	3.5737	0.9758	8.6091	0.1252	1.6925
Median	3.7273	1.0000	8.0000	0.1111	1.0000
Maximum	3.9333	1.0000	17.0000	0.6667	7.0000
Minimum	1.5000	0.0000	4.0000	0.0000	0.0000
Standard Deviation	0.4543	0.1954	2.3711	0.1333	1.9877
Skewness	-2.0579	-4.7161	0.5803	0.9417	0.9171
Kurtosis	6.6541	23.2413	3.2840	3.2704	2.6971
Jarque-Bera	634.0258	10472.2000	29.9786	76.0236	72.5796
Probability	0.0000	0.0000	0.0000	0.0000	0.0000

Table 6.29a: Descriptive statistics of the internal governance mechanisms index 2012-2019 (Continued)

	BODMTG	BODCOM	EXACOM
Mean	5.890873	3.228175	13.181580
Median	6.000000	3.000000	13.183330
Maximum	14.000000	4.000000	20.166670
Minimum	2.000000	1.000000	7.500000
Standard Deviation	1.417722	0.708876	1.809013
Skewness	1.073151	- 0.592229	- 0.785383
Kurtosis	5.719619	2.993262	4.325701
Jarque-Bera	252.061800	29.462690	88.720620
Probability	0.0000	0.0000	0.0000

Board duality scores "1" if the firm separates the position of the Board chairman from the CEO, and "0" otherwise. The mean of the board duality of the sample is 0.96 out of 1 point. This means about 96% of the listed sample firms separate the positions of the chairman of the Board and the CEOs. This suggests that not all listed firms complied with the requirement that the two positions should be separated. The kurtosis and Jarque-Bera values are large, suggesting that the data is not normally distributed. The mean gender diversity is 0.13. This means that, on average, the sample firms had no female directors (there is no 0.13 of a human being in reality). The mean board size is approximately nine, which is within the Wall Street average of 9.6 (Price, 2018). The mean number of foreign nationals on the boards of the sample firms is two. There is no yardstick provided for this variable in the Nigerian context. The mean score for board independence is 3.57 out of 4, which is approximately 89%. This indicates that the boards of the sample firms are substantially independent. The values of the kurtosis and skewness of all variables suggest that the data sets for the variables are not normally distributed and have both negative and positive skewness.

The SEC-N (2011) requires that the listed firms hold a minimum of four board meetings per year and at least once per quarter. The mean number of meetings of the sample firms is about six meetings. This is more than the required minimum. The mean number of board committees is three, which complies with the requirement of section 9.2 of the SEC-N (2011) which provides that listed firms should have at least three committees, including the Statutory Audit Committee, the Governance and Remuneration Committee and the Risk Management Committee at the minimum. The mean score of the external audit and audit committee independence is 13.18 out of a possible score of 15, which is approximately 88%. This is also a substantial level of audit independence on average.

From Table 6.28a it can be said that the data sets of the internal mechanisms are generally not normally distributed around the mean. The measure of the peakness or flatness of the data sets, the kurtosis values, are more than 3 for most of the variables, other than the kurtosis value of the foreign board membership, which is close to 3. All the data sets for the variables can be said to be leptokurtic with peaked-curves and higher values than the sample means.

6.10.2 Summary statistics of the external governance mechanisms

The inclusion of the external market mechanisms of the market share (MKTSHR) and the institutional non-promoter shareholding (NPISHR) is also motivated by the extant literature on corporate governance (Weir & Mcknight, 2002; Varshney, Kumar & Vasal, 2012; Dharmastuti & Wahyudi, Sugeng, 2013; Dada & Ghazali, 2016), which suggests that the external governance mechanisms of market share, non-promoter institutional shareholding, the corporate governance codes, company law and other regulations, the market for corporate control, the labour market, and many other mechanisms affect the value of the firm. Of the two external mechanisms (market share and institutional shareholding), the value of the market share has been winsorised while the proportions of the actual institutional shareholding are maintained per firm because the variable is not expected to be common to all the firms. The summary statistics of the external governance mechanisms is presented in Table 6.28b.

Table 6.29b: Descriptive statistics of the External governance mechanisms index 2012-2019

	NPISHR	MKTSHR
Mean	0.238452	0.150374
Median	0.000000	0.065579
Maximum	13.810000	0.703137
Minimum	0.000000	0.002077
Standard Deviation	1.658662	0.195100
Skewness	7.837230	1.683658
Kurtosis	62.984390	4.853158
Jarque-Bera	80,720.130000	310.233100
Probability	0.000000	0.000000

The non-promoter institutional shareholders (NPISHR) and the market share (MKTSHR) variables are considered based on the extant literature on corporate governance (Walsh & Seward, 1990; Weir *et al.,* 2002; Baber & Lian, 2008; Babatunde & Olaniran, 2009; Chang, 2015). The standard deviation of the market share (MKTSHR) is low but not zero (see Table 6.28b), suggesting that the data set for the variable is normally distributed. The standard deviation of the institutional shareholding (NPISHR) is greater than zero; therefore, the data of NPISHR is not normally distributed. The kurtosis values of both variables are above three, meaning they are

leptokurtic and have a peaked curve with higher values than the sample means. Both distributions do not have zero or close to zero skewness, but are positively higher than zero skewness. Therefore, they have a long right tail distribution and higher values than the sample mean.

6.10.3 Summary statistics of the control variables

As discussed in Chapter Five, the introduction of control variables in management research helps to mitigate the effect of unidentified variables on the dependent variable, improve the predictive ability of the identified independent variables and minimise the possible impact of biases associated with omitted variables. The aim is to improve the overall validity of the research results (Manawaduge, 2012; Owusu, 2012; Albassam, 2014; Marashdeh, 2014; Farhat, 2014).

The study considers only three control variables, which include the age of the firms (FIRAGE), capital structure (CAPSTR), and the size of the firms (FIRMSI). The summary statistics of the control variables are presented in Table 6.28c below. The statistics reveal that the standard deviation is close to zero for the three variables. Specifically, the standard deviation of the age of the firms (FIRAGE) of 0.10 and the size of the firm (FIRMSI) of 0.002 are close to zero.

Table 6.29c: Descriptive statistics of the control variables 2012-2019

	CAPSTR	FIRAAGE	FIRMSI
Mean	0.282326	0.828250	0.00165
Median	0.204259	0.841074	0.000869
Maximum	0.877527	0.922437	0.007998
Minimum	0.000000	0.582223	9.90E-05
Standard Deviation	0.257189	0.096387	0.002054
Skewness	0.943949	- 1.055380	1.977496
Kurtosis	2.892974	3.161554	6.14027
Jarque-Bera	75.087820	310.233100	535.5684
Probability	0.000000	0.000000	0.000000

This suggests that the distribution of the data sets for these two variables is clustered around the mean and normally distributed. However, the skewness suggests otherwise, as FIRAGE is negatively skewed, while the capital structure (CAPSTR) and the size of the firm (FIRMSI) are positively skewed with long right tail and data series that are more than the means of the two variables. Further, the kurtosis showed that the data sets of the three variables are not normally distributed as the values of the kurtosis of FIRMSI and FIRAGE are more than 3. However, CAPTURE, with a kurtosis value of close to 3, can be said to have data sets that have a normal distribution.

6.11 Chapter summary

The chapter presented the descriptive statistics and analysis of the financial details of the sample firms. Also discussed was the computation of the corporate governance compliance levels both at the aggregate and at the sectorial levels. The data set of the financial performance proxies of Tobin's Q, ROE, and NAT were winsorized in addition to some major financial results, including market capitalisation, equity, debt, revenue, profit, and assets. Also, the market share data was winsorized. The reason for the winsorization of the data sets was that the original data contained some obvious outliers. However, to confirm if the data sets could be subject to winsorization, the Jarque-Bera test statistics were conducted to guide the decision.

Arguably, the degree of progression in compliance with the corporate governance code was not impressive, especially as the change in the compliance level increased very negligibly by 1.36% from 70.38% in 2012 to 71.74% in 2019. On the sectorial basis, as of 2019, the best compliance index of 74.80% was recorded by the industrial goods sector while the ICT sector recorded the lowest compliance index of 66.46%. On an annual basis, the highest compliance index of 78.66% was recorded in 2019 in favour of the industrial goods sector, while the lowest was 61.26% recorded in 2012 in favour of the agricultural sector.

The next chapter presents the regression results. The regression results are used to support or reject the hypotheses discussed in Chapters Four.

CHAPTER SEVEN

EMPIRICAL EVIDENCE: GOVERNANCE AND PERFORMANCE RELATIONSHIP AND DISCUSSION OF HYPOTHESES

7.1 Introduction

Chapter Seven presents the empirical results of the data showing the causal relationships between the dependent (response) variables and the independent (explanatory) variables used in the study. The chapter seeks to present the empirical evidence in pursuance of the research objectives of the study. These, as earlier stated, include to provide an insight into corporate governance in the Nigerian with respect to listed non-financial firms by developing a unique corporate governance compliance index (CGI) of the listed non-financial firms from 2012 to 2019, and to establish a relationship between the financial performance of the listed non-financial firms in Nigeria from 2012 to 2019 and the compliance index and corporate governance mechanisms (internal and external). The first objective has been achieved by developing the CGI based on the corporate governance provisions of the SEC-N 2011 and the CAMA 1990 (as presented in Chapter Six). This chapter attempts to achieve the remaining two objectives by establishing the relationship between the response and explanatory variables using both the ***equilibrium-variable*** and ***compliance index*** models.

7.2 Empirical results

The regression results are presented in two categories. First are the correlation results of the variables, indicating the degree of the association between the variables and the direction of the change in one variable because of the change in the other. The correlation results are presented in section 7.2.1. The second category is the regression results. The regression results show the extent to which a change in the dependent financial proxies is predicted by the change in the independent variables. The regression results are used to resolve the three hypotheses. The two models of regression are presented. One is the compliance index model that presents the correlation results

between the aggregate CGI, control index, and the winsorised firm value proxies of Tobin's Q, ROE, and NAT, presented in Table 7.1. The second regression model is the equilibrium model. This model, as earlier discussed, presents the regression results between each of the individual independent variables and the dependent firm value proxies. This is presented in Table 7.2.

7.2.1 Empirical results: correlation analysis

Correlation analysis is a mathematical model that assists in the estimation of the relationship between the independent (predictors) and the financial performance (dependent or response) variables of the firm, or the ascertainment of the effects of the predictors on the financial performance of the firm. In its broader sense, correlation analysis helps to quantify the degree of the relationship or association between two variables in a data set and evaluates the extent to which the change in one variable is caused by the change in the other (Schober *et al*., 2018). It also helps figure out how strong the relationship is between two variables in a set of data and how much the change in one variable can be affected by the change in the other.

The correlation analysis assists in establishing the direction of the relationship, whether positive or negative, and does not explain the cause of the relationship (Senthilnathan, 2019). This is important in explaining the relationship or correlation between the independent and dependent variables and helps to identify the significance and size of the correlation or relationship (Steyn, 2018). Thus, the sign of the correlation coefficient can either be positive (+) or negative (–) and ranges from -1, a perfect negative correlation, to +1, a perfect positive correlation (Samuel & Okey, 2015; Senthilnathan, 2019). This study adopted the correlation interpretation guide by (Senthilnathan, 2019:4) as presented in Figure 6.8 below.

Typically, two correlation coefficients may be used. These are the Pearson's Product Moment Correlation Coefficient and the Spearman's Rank Correlation Coefficient. Further, correlations can be simple or multiple. The simple correlation expresses the relationship between two variables, while the multiple correlations express the relationship between the variables as well as the multiple correlation coefficients, which may reflect the influence of one of the combined influence of two or more factors on the other (Fincher, 1978; Popescu, 2015:231).

The multiple variables that were considered in this study make it necessary to adopt the multiple correlation approach to calculate the Pearson's Product Moment Correlation Coefficients since the sample is considered representative of the population made up of firms in the non-financial sectors. The model is also widely used in accounting research because it is easy to use and understand (Mukaka, 2012; Schober *et al*., 2018).

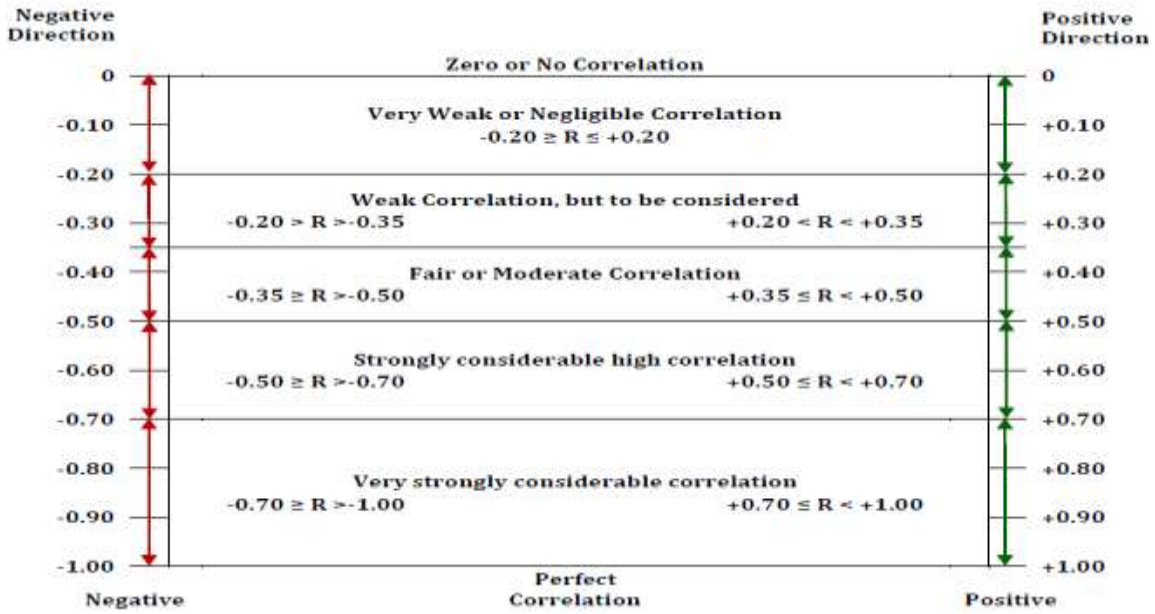


Figure 7.1: Guide for interpretation of correlation coefficients

Source: Senthilnathan, 2019:4

The variables, for which the correlation coefficients are determined, as earlier listed, include:

(i) Board Independence (BODIND),

(ii) Board Duality (BODLTY),

(iii) Board Meetings (BODMTG),

(iv) Board Size (BODSIZ),

(v) Gender diversity (GENDIV),

(vi) Foreign board members (FORMEM),

(vii) Board committees (BODCOM)

(viii) Independence of the Audit Committee and the External Auditor (EXACOM)

(ix) Non-promoter or institutional shareholders – NPISHR

(x) Market share of the firm – MKTSHR) and

(xi) Three Control Variables of Capital structure (Debt and equity proportions) – CAPSTR; Size of the firm using market capitalisation as proxy– FIRMSI; Age of the firms - FIRAGE).

7.2.2 Correlation between variables – using the CGI Compliance method

The results of the correlation between the financial performance proxies and the total corporate governance index, the internal component and the external components of the index and the control variables index are presented in Table 7.1.

Table 7.1: Correlation between variables using the CGI

	INTERNAL INDEX	EXTERNAL INDEX	GOV. INDEX	CONTROL VARIABLES	TOBIN's Q	ROE	NAT
INTERNAL INDEX	1						
EXTERNAL INDEX	0.02	1					
TOTAL GOV. INDEX	1.00	0.10	1				
CONTROL VARIABLES	- 0.11	0.14	-0.10	1			
TOBIN's Q	0.22	0.07	0.22	0.20	1		
ROE	0.10	0.07	0.10	0.30	0.54	1	
NAT	0.13	0.00	0.13	0.04	0.28	0.40	1

There is a positive correlation between the dependent variables (Tobin's Q, ROE, and NAT) and the independent variables and the control variables. Specifically, there is a positive correlation between Tobin's Q, ROE, NAT, and the total governance index (Total NCGI). However, the only considerable correlation coefficient is the coefficient between Tobin's Q and the internal governance and total governance indexes. NAT also indicates a considerable correlation coefficient with internal and total governance indexes, but no relationship with the external governance mechanisms. Tobin's Q and ROE have a proximately similar correlation coefficient of 0.07 with the external governance index. The coefficient of correlation between Tobin's Q and the total corporate governance index can be said to be considerable at 0.22. Thus, an increase in the total CGI would increase the value of the three financial performance proxies of Tobin's Q, ROE, and NAT positively but only marginally.

7.2.3 Correlation between individual governance, control variables and the financial performance proxies

Table 7.2 shows the relationship between each corporate governance variable, each control variable, and the three financial performance proxies.

Correlation with Tobin's Q

There is varying degrees of correlation among the variables, both dependent and independent, as shown in Table 7.2. Based on Tobin's Q, a mix of both negative and positive correlations has been found. Thus, apart from the board independence and institutional shareholding that tend to have a negative correlation with Tobin's Q, other governance and control variables of the sample firms indicate positive correlations during the period.

Table 7.2: Correlation between the corporate governance mechanisms, the control variables and Tobin's Q, ROE and NAT

	BODIND	BODLTY	BODMTG	BODSIZ	BODCOM	GENDIV	FORMEM	EXACOM	OTHDIS	NPISHR	MKTSHR	CAPSTR	FIRMSI	FIRAGE	TOBIN Q	ROE	NAT
BODIND	1																
BODLTY	0.03	1															
BODMTG	0.11	0.11	1														
BODSIZ	-0.04	0.11	0.17	1													
BODCOM	0.08	0.25	0.19	0.35	1												
GENDIV	-0.02	0.17	0.21	0.01	0.20	1											
FORMEM	0.04	-0.07	-0.09	0.36	-0.17	-0.11	1										
EXACOM	0.00	0.17	0.31	0.26	0.14	0.08	0.10	1									
OTHDIS	-0.03	0.07	0.22	0.10	0.19	0.01	0.11	0.23	1								
NPISHR	0.06	0.01	-0.08	-0.01	0.13	-0.01	-0.11	-0.08	-0.05	1							
MKTSHR	0.12	0.12	0.21	0.26	0.04	-0.14	0.19	0.20	0.00	-0.05	1						
CAPSTR	-0.04	0.02	-0.13	-0.01	-0.11	-0.17	0.14	-0.01	-0.14	0.00	0.13	1					
FIRMSI	-0.09	-0.01	0.23	0.34	0.17	-0.05	0.07	0.09	0.31	-0.04	0.24	0.08	1				
FIRAGE	0.13	0.14	0.09	-0.12	-0.03	0.15	-0.01	0.12	0.00	0.00	0.11	0.04	-0.03	1			
TOBIN Q	-0.03	-0.08	0.00	0.01	0.01	0.01	0.26	0.10	0.19	-0.02	0.08	0.15	0.18	0.15	1		
ROE	-0.04	-0.08	-0.06	0.03	-0.02	0.01	0.17	0.04	0.07	0.05	0.11	0.32	0.04	0.04	0.54	1	
NAT	-0.05	-0.08	-0.01	-0.08	-0.05	0.12	-0.01	0.17	0.11	-0.05	0.03	-0.03	-0.17	0.17	0.28	0.40	1

The top three correlation coefficients were recorded between the Q ratio and the foreign directorships of 0.26, other disclosures of +0.19, and the firm size of +0.18. Overall, with a correlation of between -0.08 and 0.26, the relationship between Tobin's Q and the corporate governance and control variables can be said to be weak in both directions. However, the correlation between Tobin's Q and foreign directorships of

0.26 can be said to be considerable. Specifically, Tobin's Q is negatively related to board independence (BODIND), board duality (BODLTY), and non-promoter institutional shareholding (NPISHR) and positively related to all other variables to varying degrees.

What Table 7 implies is that the change in the corporate governance variables would only marginally affect the value of Tobin's Q of the sample firms. Nevertheless, since the overall direction of coefficients is positive and there are more positive coefficients than negative coefficients, it can be said that better corporate governance would have a positive effect on the value of the sample firms in terms of Tobin's Q.

Correlation with ROE

Table 7.2 equally shows the relationship between corporate governance and control variables and the ROE of the listed sample firms. The results also indicate a mixed relationship. Apart from only four variables, board independence (BODIND) (-0.04), board duality (BODLTY) (-0.08), board meetings (BODMGT) (-0.06) and the board committees (BODCOM)(-0.02), which recorded negative correlations, other variables recorded positive correlations.

The highest negative correlation efficiency relates to the board duality of 0-0.08 while the highest positive correlation of 0.32 relates to the capital structure (CAPSTR). Overall, the range of correlation between -0.08 and 0.32 is very weak and insignificant. The results indicate that there is a very insignificant correlation between corporate governance variables and ROE. This also implies that improvement in corporate governance would only have a marginal influence on the value of the ROE of the listed sample firms.

Correlation with NAT

The correlation results between corporate governance variables, the control variables, and asset turnover (NAT) are shown in Table 7.2 as well. The results are also mixed. The highest correlation coefficient of 0.19 occurred between NAT and the firm age (FIRAGE), whereas the least of -0.17 occurred between NAT and the size of the firm (FIRMSI). Generally, the coefficients of the correlation are not significant. Therefore, improvement in corporate governance by the sample firms would have just a marginal impact on the NAT value.

These mixed results, as shown in the correlation table, are consistent with the results of prior studies such as Kim *et al.* (2006), Samia *et al*. (2011), Parig *et al.* (2014), El-Faitouri (2014), Kandukuri *et al*. (2015), O'Connor and Byrne (2015) and

Singh *et al.* (2018). These studies exhibited mixed directions in the correlation coefficients between the financial performance proxies (Tobin's Q, ROE, and NAT) and the corporate governance variables, although to varied degrees.

7.3 Empirical results: Multivariate regression analysis

Of the several statistical models, Nathans *et al*. (2012) argue that the multivariate regression analysis model is commonly deployed in social science research. This is also the approach of prior studies (Ojunwa, 2011; Albassam, 2014; Shyti *et al.*, 2016; Bahovec *et al*., 2017; Steyn, 2018; Ogunsanwo, 2019; Aluchna & Kuszewski, 2020). The reason for choosing this analytical tool is that the data sets are quantitative. Secondly, the model considers the basic assumptions of the model that include normality of distribution, linear relationship, and no extreme or missing data points. To address the problem of non-normality of the data used in this study, the financial proxies and the financial related independent variables such as market share were winsorized.

Whereas correlation analysis deals with establishing the degree of relationship between two variables, multivariate regression analysis is used to predict the value of the dependent variables or the extent to which the dependent variables are predicted by the independent variables. The goal is to figure out the level of relationship between variables that have a cause-and-effect relationship and how important it is for each predictor to be able to predict the dependent variable (Uyanik & Guler, 2013).

In other words, regression analysis is concerned with estimating treatment effects - how the value of the dependent variable (in this case, each of the three financial performance proxies of Tobin's Q, ROE, and NAT) changes when each of the dependent variables is varied with all other inputs held constant (Gelman & Hill, 2007). Koen & Holloway (2014) state that the use of the regression model has been considered to be appropriate for estimating the relationship between the dependent and independent variables where the dependent variables are more than one.

The results of the regression analysis were used to confirm or reject the hypotheses posed in the study. Two categories of regression models were considered: the equilibrium model and compliance-index model. The equilibrium model resolved hypotheses 2 (2.1 to 2.8) and 3 (3.1 and 3.2) which relates to the following independent variables:

(i) Board Independence (BODIND),

(ii) Board Duality (BODLTY),

(iii) Board Meetings (BODMTG),

(iv) Board Size (BODSIZ),

(v) Gender diversity (GENDIV),

(vi) Foreign board members (FORMEM),

(vii) Board committees (BODCOM),

(viii) Independence of the Audit Committee and the External Auditor (EXACOM),

(ix) External Governance (non-promoter or institutional shareholders – NPISHR,

(x) Market share of the firm using the proportional share of the total industrial revenue as a proxy – MKTSHR), and

The relationships between firm performance and the control variables were also considered. The three control variables were earlier stated to include: capital structure (debt/equity ratio) – CAPSTR; size of the firm (using market capitalisation as a proxy) – FIRMSI; and the age of the firms (log of the age of the firm from incorporation to 2019) - FIRAGE.

7.3.1 Estimating method

As stated in Chapter Five, there are three dominant regression estimation models. These are the pooled ordinary least square (POLS), random-effects (RE) and fixed-effect (FE). Although most authors have supported the use of either the random-effects or fixed-effect estimation models (Clark & Linzer, 2015), the choice of either model in this study was based not on the subjective assessment of the researcher but on the results of statistical tests. Therefore, first the POLS was used to estimate the relationships, and then the FE. Second, the most appropriate estimation model between the POLS and FE was determined using the Chow Test. The Chow test, a form of F test (MacKinnon, 1988), is said to have been developed by an economist named Gregory Chow for testing whether the coefficients in two different regression models are equal (Lee, 2008; Zulfikar, 2018). The guideline is that, if the output probability is lower than 0.05, select FE as the appropriate estimation model, otherwise, POLS is appropriate.

Thus, the hypothesis is:

H0: Select POLS if p> 0.05

H1: Select FE if p <0.05

The second test, the Hausman Test, was conducted to select between FE and RE estimation methods. The Hausman Test has dominated empirical social, economic, and by extension, accounting and finance research because of its simplicity and generality (Amini *et al.*, 2015). The hypothesis is:

H0: Select RE if p> 0.05

H1: Select FE if p <0.05

The relationship between the financial performance proxies and the NCGI (i.e compliance index) was estimated using the compliance index model. The equilibrium variable model explained the relationship between firm performance and the individual internal and external mechanisms.

7.3.2 Estimation using the corporate governance compliance index model

This section estimates the relationship between the total computed governance compliance index and the three firm performance proxies. The equation is

$$\textbf{FIRMVAL (Tobin's Q, ROE, NAT)} = \alpha + \beta NCGI + \beta CONTROLS + e_t$$

(i) Pool OLS estimation method (Tobin's Q, ROE, NAT)

First, the Pool OLS estimation method is used to run the regression equation for the three dependent variables of Tobin's Q, ROE, and NAT. The detailed results are presented in Appendix 3i-iii. The results showed very low values of both the R-squared and the adjusted R- squared of 09 for Tobin's Q, 0.11 for ROE, and 0.02 for NAT. These suggest that the OLS model is not a good estimation model even though the *p-values* of the regression results for the three proxies are all significant, as presented in Table 7.3. The low values of the R-squared and the adjusted R-squared indicate that the OLS does not strongly predict the values of the three dependent variables.

The coefficients are low as well, other than the control variables, which show a high positive coefficient with relation to Tobin's Q. The NCGI coefficients, however, are statistically significant with respect to the three financial proxies. The F-statistics, which indicate the simultaneous influence of the predictor (independent) variable on the response (dependent) variable, are also high for all three variables.

Table 7.3: Summary of OLS regression

Measures	Tobin's Q	ROE	NAT
Constant coefficient	-2.16 0.00** (-4.08)	-0.50 0.00** (-4.50)	0.11 0.64* (0.46)
Coefficient of CGI	0.12 0.00** (5.58)	0.01 0.00** (3.15)	0.03 0.00** (3.09)
Coefficient of Control variables	1.00 0.00** (5.17)	0.37 0.00** (7.50)	0.11 0.21* (1.26)
R-Squared	0.10	0.11	0.02
Adjusted R-Squared	0.10	0.11	0.02
F-Statistics	26.90	31.12	5.24
Prob. (F-Statistics)	0.00	0.00	0.00

The figures in parenthesis are the t – Statistics values. * Indicate the *p-values* above 0.05 . ** Indicate significant *p-values* below the critical value of 05.

(ii) Fixed Effect (Tobin's Q, ROE, NAT)

The above results make the use of an alternative estimation model imperative to find which estimation model would provide a better estimation of the values of the dependent variables in the equation. Thus, the Fixed Effect estimation method is used. The results using the FE model are presented in Table 7.4.

The FE indicates that the corporate governance compliance level significantly influences the values of the three financial performance proxies. For instance, both R-squared and the adjusted R-squared have values above 50%. Specifically, Tobin's Q and NAT have R-squared values of 84% and 85% predictive ability, respectively. The remaining 16% and 15%, respectively, can be attributed to other extraneous factors. This predictive ability is significant.

Table 7.4: Summary of FE regression - Tobin's Q

Measures	Tobin's Q	ROE	NAT
Constant coefficient	-0.62 0.23* (-1.20)	-0.59 0.00** (-3.26)	0.31 0.14* (1.47)
Coefficient of CGI	-0.01 0.53* (-0.62)	-0.01 0.06* (-1.92)	-0.01 0.09* (-1.71)
Coefficient of Control variables	2.32 0.00** (13.11)	0.97 0.00** (15.82)	0.81 0.00** (11.33)
R-Squared	0.84	0.57	0.85
Adjusted R-Squared	0.82	0.51	0.83
F-Statistics	36.11	9.19	38.99
Prob. (F-Statistics)	0.00	0.00	0.00

The figures in parenthesis are the t – Statistics values. Indicate the *p-values* above 0.05 . ** Indicate significant *p-values* below the critical value of 05.

The NCGI has a negative coefficient of -0.01 with respect to Tobin's Q. But the *p-value* is 0.53. This means improvement in the CGI of the sample firms would result in a negative but not statistically significant value. The value of the F-statistics is equally high, which suggests that the corporate governance compliance rate has a sustainable influence on the value of the firm in terms of Tobin's Q. However, the negative constant coefficient of 0.62 has an insignificant statistical *p-value* of 0.23.

The R-squared and the adjusted R-squared of the predictive ability of the corporate governance compliance index to influence ROE also have values above 50%. Specifically, they recorded 57% and 51%, respectively. This suggests that the change in the value of the ROE is explained by 51% at worst. The remaining 49% is attributed to other extraneous factors. Although its values are not as high as those of Tobin's Q, they are significant. The NCGI also has a negative coefficient of -0.014 with ROE, which suggests that improvement in corporate governance compliance would negatively affect the ROE value. However, the decrease will be insignificant since the *p-value* of approximately 0.06 is greater than the significant level of 0.05. The value of the F-statistics, of 0.00, which shows the combined effect of all the explanatory variables on the dependent variable, is significant. This implies that the corporate governance compliance rate has a substantial influence on the value of the firm in terms of the ROE and that the chances of error are low.

The R-squared and the adjusted R-squared of the NAT are equally high at 85% and 83%, respectively. With an adjusted R-squared score of 83%, it means that, at worst, the value of the NAT can be predicted by 83%. In other words, the corporate governance compliance index will predict the value of NAT by 83%. The remaining 17% can be predicted by other factors. The NCGI also has a negative coefficient of -0.014 but it is insignificant since the *p-value* of 0.09 is greater than the significant level of .05. The value of the F-statistics is equally high, implying that the rate of compliance with corporate governance has a substantial influence on the NAT.

(iii) Chow Test

Although the FE estimation results showed an improved situation, the decision to adopt either of the estimation methods cannot be based on intuition but on the outcome of a further statistical test. Thus, to determine which estimation model is better between FE and OLS, the Chow Test was conducted as shown in Appendix 3ii. The *p-*

values of the test for the three dependent variables is substantial at 0.00 (Tobin's Q), 0.00 (ROE) and 0.00 (NAT). The hypothesis of the Chow test, as earlier stated, is:

H0: Select OLS if p> 0.05

H1: Select FE if p <0.05

Since the probability of the FE model is less than 0.05, for all the dependent variables, it means the FE estimation method is the most appropriate model to predict Tobin's Q, ROE, and NAT compared to the OLS method.

(iv) Random Effects (RE) (Tobin's Q, ROE, NAT)

There is a need to also find out whether RE is a better estimation model compared with FE, which has been previously selected over OLS. The results using the RE model are presented in Table 7.5.

Using the RE model, the coefficients of the corporate governance compliance index (NCGI) are positive for Q ratio and ROE but negative with respect to NA. However, the relationships are not statistically significant since the probability values are all greater than 0.05. This means that although an improvement in the CGI compliance index would positively affect the value of Tobin's Q, and ROE, the increase would vary marginally.

Table 7.5 Summary of RE regression

Measures	**Tobin's Q**	**ROE**	**NAT**
Constant coefficient	-0.88 0.08* (-1.73)	-0.58* 0.00** (-4.30)	0.26 0.21* (1.26)
Coefficient of CGI	0.01 0.77* (0.29)	0.00 0.68* (0.41)	-0.01 0.25* (-1.14)
Coefficient of Control variables	2.17 0.00** (12.81)	0.63 0.00** (13.12)	0.74 0.00** (10.76)
R-Squared	0.24	0.23	0.19
Adjusted R-Squared	0.23	0.22	0.18
F-Statistics	80.05	72.76	58.14
Prob. (F-Statistics)	0.00	0.00	0.00

The figures in parenthesis are the t – Statistics values. Indicate the *p-values* above 0.05 . ** Indicate significant *p-values* below the critical value of 05.

The R-squared and adjusted R-squared (in parentheses) values of 0.24 (0.23), 0.23(0.22), and 0.19 (0.18) for Tobin's Q, ROE, and NAT, respectively, are small and below 50%. This shows that the RE model exhibits a weak predictive capability as more than 77% of the values of the Q ratio are predicted by other factors. The poor predictive

ability also occurred with respect to ROE of 22% while the rest 78% could be influenced by other factors. The value of NAT is predicted by only 18% under the RE model, while the rest of the NAT is influenced by factors other than the corporate compliance rate. The value of NAT can only be predicted by about 22.29% while the remaining 77.71% is influenced by other factors. The NCGI shows a negative coefficient with respect to NAT, although the probability is not significant. This means that an improvement in the corporate compliance index would marginally reduce the value of NAT. Overall, the predictive ability of the RE estimation method compared with the FE is low. However, the selection of either FE or RE is again based on the statistical results of yet another test. This is the Hausman test.

(v) Hausman Test

The Hausman test provides a guide to choosing between the random effect and fixed effect estimation models. Since the Chow test selected FE, the Hausman test would select the best between FE and RE estimation models. The results of the Hausman test are presented in Appendix 3iv. The hypothesis of the Hausman test is that:

H0: Select RE if $p > 0.05$

H1: Select FE if $p < 0.05$ (Zulfikar, 2018)

The probability of the Hausman test of Tobin's Q is less than 0.05, therefore the appropriate estimation model for Tobin's Q is the FE model. The null hypothesis is rejected in favour of the alternative hypothesis. The regression results using the FE estimation model as earlier presented indicate that the CGI has a negative coefficient of -0.01 with a probability of 0.53. This means that improvement in CGI compliance would have a negative marginal impact on Tobin's Q of the sample firms. The impact is, however, negligible, as the coefficient value is 0.01.

Also, the probability value of the Hausman test is less than 0.05 for ROE. It equally has a marginal negative coefficient of approximately -0.01. Therefore, the most appropriate model is also FE for the estimation of ROE. In the case of the estimation of NAT, the *p-value* is less than 0.05; therefore, the FE estimation model is also appropriate.

(vi) Selected estimation model

The results of the two tests support the application of the FE panel regression estimation model to gain insights into the governance-firm value relationship in the context of listed non-financial firms in Nigeria.

As earlier discussed, the FE estimation model indicates that the NCGI has a negative coefficient of -0.01 with relation to Tobin's Q with a *p-value* of 0.53. This means improvement in the CGI of the sample firms would negatively affect Tobin's Q value. However, the effect is not significant because the *p-value* is 0.53, which is higher than the critical value of 0.05. In the case of ROE, the NCGI shows a negative coefficient of -0.01 as well. This suggests that improvement in the corporate governance compliance rate would also result in a negative ROE value. However, the decrease will be insignificant since the probability is 0.06. Concerning NAT, the coefficient is also negative by -0.01 with a probability of 0.09. That is also insignificant. Evidence shows that the improvement in the corporate governance compliance rate of the sample firms affects the value of the three financial performance proxies. The level of impact is, however, not significant.

(vii) Resolution of hypothesis 1

Following the universal interest in the topic of corporate governance and the controversies it has sparked over decades, the central argument is that effective corporate governance would reduce agency costs and enable the resources of the firm to be deployed more efficiently in the interest of the firm, its owners, and other stakeholders (Larcker & Tayan, 2016). This suggests that if firm improves on its corporate governance practices, its financial performance and market value will improve. This is because investors prefer firms that are better managed to those that are poorly managed because of the security of their investments and rewards (Larcker & Tayan, 2016). The improvement in the value of the shares of better-managed firms would result from the willingness of investors to pay a premium to acquire an interest in well-governed firms (Larcker &Tayan, 2016:13). However, Plessis *et al*. (2011) argue that the adoption of good corporate governance does not automatically result in improved financial performance because of the presence of some environmental vagaries and risks. The mixed empirical evidence on the link between the level of compliance with corporate governance rules and the financial performance indicators (Kyere & Ausloos, 2019) is at the heart of this debate.

Arising from both theoretical and empirical discourse, Hypothesis 1 was proposed, which predicts that the relationship between corporate governance compliance and the performance of the firm would be significantly positive. The alternative and the null hypotheses were:

H_1: *There is a statistically significant positive relationship between the Nigerian corporate governance index and the firm's financial performance using return on equity (ROE), assets turnover (NAT) and Tobin's Q as proxies.*

H_0: *There is no statistically significant positive relationship between the Nigerian corporate governance index and the firm's financial performance using return on equity (ROE), assets turnover and Tobin's Q as the performance measures.*

Acceptance of null hypothesis 1

Overall, the results of the regression analysis show in that the alternative hypothesis is false and the null hypothesis is true, which means:

There is no statistically significant positive relationship between the Nigerian corporate governance index and the firm's financial performance using Tobin's Q, ROE, and assets turnover as the performance measures.

The above empirical evidence is consistent with the findings of other prior studies that identified a weak or no significant relationship between corporate governance and the financial performance of the firm (Peters & Bagshaw, 2014; Coşkun and Sayilir, 2012; El-Faitouri, 2014). Further, the evidence rejects the general notion, canvassed in corporate governance literature, that compliance with corporate governance principles will significantly improve the financial performance of a firm rather than be a burden to the firm (Rushton, 2008; Larcker & Tayan, 2016; Raval, 2020), especially in the face of a divergence of interests between the hired manager and the owner, leading to agency conflict (Raval, 2020). Rather, the impact of corporate governance practices on the performance of the firm may not be unconnected with the idiosyncrasies of the company's ownership, the board structure, and the effect of other external influences (Yang & Morgan, 2011).

The implication of accepting the null hypothesis is that other factors have a significant impact on the performance of the sample firms in Nigeria outside of their compliance with the SEC-N 2011 governance code and the corporate governance provisions of CAMA of 1990 (as amended). Therefore, rather than considering the level of corporate governance as the main basis for deciding on the value of the firm for

investment or otherwise, other factors should be considered. These other factors have been identified to include corruption, government control, poor infrastructure, inflation, which leads to a high operational cost of doing business and other social factors including insecurity (Afolabi, 2015; PricewaterhouseCoopers, 2017; Ibrahim *et al.,* 2018; Marshal & Solomon, 2017; Kemi, 2019; Pangestuti & Louisa, 2020). Therefore, the results show that it may not always be true, especially in developing economies with weak legal systems and capital markets that an improvement in the rate of corporate governance compliance would lead to a significant improvement in the financial performance of a firm.

7.3.3 Empirical results using the equilibrium-variable model with control variables

This section presents the results of the regression using the individual corporate governance variables (internal and external mechanisms). The variables have been explained earlier. However, to recap, these variables include the following:

Internal governance mechanism

i. Board committees (BODCOM), Board Independence (BODIND),
ii. Board Duality (BODLTY),
iii. Board Meetings (BODMTG),
iv. Board Size (BODSIZ),
v. Independence of the Audit Committee and the External Auditor (EXACOM),
vi. Foreign board members (FORMEM),
vii. Gender diversity (GENDIV), and
viii. Other disclosures (OTHDIS).

External governance mechanisms

i. Market share of the firm using the proportional share of the total industrial revenue as a proxy – MKTSHR), and
ii. External Governance (non-promoter or institutional shareholders – NPISHR.

Control variables

i. Size of the firm using market capitalisation as a proxy– FIRMSI,
ii. Capital structure (Debt and equity proportions) – CAPSTR, and
iii. Age of the firms (percentage of the age of the firm from 1990 when the Companies Act was incorporated to 2019 - FIRAGE).

To select the appropriate estimation model, the results under the OLS estimation method are compared with the FE results, which are further compared with the results of the RE estimation method. Each of the estimation methods would estimate the three firm value proxies: Tobin's Q, ROE, and NAT. This procedure was adopted in the case of the compliance index model.

The results of the OLS estimation methods showed a prediction level (adjusted R^2) of 16% for Tobin's Q, 14% for ROE, and 12% for NAT. These prediction rates are considered weak. Therefore, the FE method was considered next. The prediction ability as measured by the adjusted R^2 under the FE model is Tobin's Q, 84%, ROE, 58%, and 89%. The prediction rate of the FE model is better than that of the OLS. However, to decide on the better of the two models, the Chow Test was conducted. The Chow test (see Appendix 4(iii) results revealed the following *p-values* under the FE method.

Tobin's Q: *p-value* , 0.00 (significant);

ROE: p-*value* , 0.00(significant)

NAT: *p-value* , 0.00(significant)

This suggests that FE is a better estimation model compared to the OLS. Next, the results of the RE estimation method (Appendix 4 (iv)) are compared with FE using the Hausman test. The regression results under the FE estimation methods are presented in Table 7.6. The hypothesis of this test, as earlier stated, is that:

H0: Select RE if p> 0.05; H1: Select FE if p <0.05 (Zulfikar, 2018).

The Hausman test results (See Appendix 4(v) indicate the following *p-values*

Tobin's Q: *p-value* , 0.00 (significant)

ROE: *p-value* , 0.00(significant)

NAT: *p-value* , 0.00(significant)

The *p-value* of the Hausman test for all the financial proxies is less than 0.05. Therefore, the appropriate estimation model for Tobin's Q, ROE and NAT is the FE model.

The relationship between corporate governance variables and Tobin's Q has mixed results. The board committees, board independence, board duality, gender diversity, board meetings, board size, and firm age have varying degrees of negative coefficients that are statistically insignificant. However, of the variables with negative coefficients, only gender diversity, with a coefficient of -1.08, and firm age, with a coefficient of -6.89, are statistically significant, with *p-values* of 0.002 and 0.0001 respectively. Firm size, however, has a large positive coefficient of 105.78 and is

statistically significant with a *p-value* of 0.036. This variable has a very substantial impact on the value of the firm. The constant-coefficient is positive at 7.04 and exhibited a statistically significant *p-value* of 0.00.

Table 7.6 Summary of regression results based on FE estimation method

S/N	Variable	Tobin's Q		ROE		NAT	
		Coeff.	***p-values***	**Coeff.**	***p-values***	**Coeff.**	***p-values***
1	Constant (C)	7.034	0.000**	2.367	0.000**	4.753	0.000**
2	BODCOM	-0.082	0.428	-0.046	0.191	-0.066	0.069
3	BODIND	-0.016	0.906	-0.034	0.464	-0.07	0.145
4	BODLTY	-0.42	0.119	-0.326	0.000**	-0.381	0.000**
5	BODMTG	-0.019	0.442	-0.006	0.418	-0.018	0.030**
6	BODSIZ	-0.02	0.365	0.004	0.622	-0.003	0.694
7	EXACOM	0.016	0.615	-0.014	0.182	0.003	0.805
8	FORMEM	0.038	0.35	0.01	0.479	0.019	0.176
9	GENDIV	-1.084	0.002**	-0.167	0.163	-0.364	0.003**
10	OTHDIS	0.013	0.581	-0.001	0.95	0.005	0.543
11	MKTSHR	0.386	0.47	0.496	0.006**	1.113	0.000**
12	NPISHR	0.117	0.367	0.016	0.722	0.029	0.518
13	FIRMSI	105.781	0.036**	5.052	0.767	25.172	0.154
14	CAPSTR	1.498	0.000**	0.685	0.000**	0.277	0.000**
15	FIRAGE	-6.889	0.000**	-2.227	0.000**	-4.223	0.000**
	F-Statistics*	35.127	0.000**	10.317	0.000**	52.36	0.000**

* Not part of the independent variables. ** Significant with *p-value* < 0.05,

The predictive coefficients of the independent variables for ROE indicate mixed results as well. While board committees, board independence, board duality, board meetings, board committees, gender diversity, other disclosures, and firm age have negative coefficients, the coefficients of board size, foreign directorship, market share, non-promoter institutional shareholding, firm size, and capital structure are positive. Of those with negative coefficients, only board duality with -0.326 and firm age of -2.227 have probability values that are significant of 0.0004 and 0.0001 respectively are significant.

The relationship between corporate governance variables and NAT was equally mixed. Variables with negative coefficients included board committees, board independence, board duality, board meetings, board size, gender diversity, and firm age. Those with positive coefficients included the independence of the external auditors and audit committee, board size, foreign directorship, other disclosures, market share, non-

promoter institutional shareholding, firm size, and capital structure. Of those with negative coefficients, only board duality with -0.381, board meetings with -0.018, gender diversity with -0.364 and firm age of -4.224 have significant *p-values* of less than 0.05. Other negative coefficients have *p-values* that are more than 0.05 and therefore not significant. For the positive coefficients, only market share with 1.113 and capital structure with 0.278 have significant *p-values* that are less than 0.05, while others are insignificant as their *p-values* are more than 0.05. The positive relationship between capital structure and firm value in this study, however, rejects the study by MacCarthy and Ahulu (2019), which discovers a significant and negative relationship between capital structures and firms' performance in their study of firms listed on the Ghana Stock Exchange from 2009 to 2018.

7.4 Resolution of the hypothesis based on the individual governance variables

The summary of the findings based on the individual governance variables is presented in Table 7.7. The basis for resolving the hypotheses is the results of the regression analysis of empirical data from the annual reports of the sample firms. Each of the hypotheses has been discussed in relation to the three financial proxies of Tobin's Q, ROE, and NAT. Nine null hypotheses are accepted against the alternative hypotheses. For the tenth hypothesis, the null hypothesis is rejected in favour of the alternative hypothesis for ROE and NAT, while the null hypothesis is rejected in favour of the alternative hypothesis for Tobin's Q value.

Table 7.7: Summary of findings

Hypothesis	Variable	Alternative	Null	Regression results	Decision
1	Nigerian corporate governance index	There is a statistically significant positive relationship between the Nigerian corporate governance index and the firm's financial performance using return on equity (ROE), Assets Turnover (NAT) and Tobin's Q as proxies.	There is no statistically significant positive relationship between the Nigerian corporate governance index and the firm's financial performance using ROE, Assets Turnover, and Tobin' Q as the performance measures.	There is no statistically significant relationship between the CGI and each of the three proxies as the coefficients of the three proxies are and their associated *p-values* are not statistically significant. Specifically, the coefficient of CGI for Tobin's Q is negative at -0.01, concerning ROE is also negative at -0.01, and for NAT is negative as well at 0.01. Their *p-values* are: Tobin's Q:(0.53*), ROE (0.06*) and NAT (0.09*). However, the *p-values* of the control variables are significant for the three proxies.	Reject the alternative hypothesis and accept the null hypothesis of no significant positive relationship between the Nigerian corporate governance index and the firm's financial performance.

Table 7.7: Summary of hypotheses resolved – continued

Hypothesis	Variable	Alternative	Null	Regression results	Decision
2.1	Separation of the positions of the CEO from the chairman of the Board (CEO non-duality),	There is a statistically significant positive relationship between separating the CEO and chairman of Board's positions (CEO non-duality), and firm financial performance, as measured by Tobin's Q, ROE, and NAT.	There is no statistically significant positive relationship between separating the CEO and chairman of Board's positions (CEO non-duality) and firm financial performance as measured by Tobin's Q, ROE, and NAT.	Regression shows a negative coefficient between the separation of the two offices and Tobin's Q of -0.42 with a *p-value* of 0.119. This negative relationship is not, however, statistically significant as the *p-value* is more than 0.05. In the case of ROE, the coefficient is equally negative at -0.33 with a statistically significant *p-value* of 0.00. The NAT also maintains a negative coefficient of -0.38 with a statistically significant *p-value* of 0.00. The results show that the non-duality of the board would result in negative firm value but at a significant level only concerning ROE, and NAT.	Reject the alternative hypothesis and accept the null alternative hypothesis that there is no significant and positive relationship between separating the CEO and chairman of Board's positions (CEO non-duality) and firm financial performance.
2.2	The proportion of female board members	There is a statistically significant positive relationship between the proportion of female board members and firm financial performance, as measured by Tobin's Q, ROE, and NAT.	There is no statistically significant positive relationship between the proportion of female board members and firm financial performance, as measured by Tobin's Q, ROE, and NAT.	The regression results indicate that the coefficient between Tobin's Q and gender diversity is -1.04 with *p-value* of 0.00, and -0.17 with a *p-value* of 0.16 and -0.36 with a *p-value* of 0.00 for ROE, and NAT respectively. Thus, gender diversity is negatively and significantly associated with Tobin's Q and NAT but not significantly associated with the value of ROE.	Reject the alternative hypothesis and accept the null alternative hypothesis that there is no significant and positive relationship between the proportion of female board members and firm financial performance.
2.3	Board size	There is a statistically significant positive relationship between the proportion of board size, and firm financial performance, as measured by Tobin's Q, ROE, and NAT.	There is no statistically significant positive relationship between the proportion of board size, and firm financial performance, as measured by Tobin's Q, ROE, and NAT.	Tobin's Q value and NAT are negatively associated with board size by -0.02 with a *p-value* of 0.37 and -0.003 with a *p-value* of 0.94 respectively. The ROE is positively associated with a coefficient value of 0.004 but with a *p-value* of 0.622. However, the associations are not significant because all their *p-values* are greater than 0.05. Therefore, board size has no significant positive relationship with the financial performance measures of Tobin's Q, ROE, and NAT	Reject the alternative hypothesis and accept the null alternative hypothesis that there is no significant and positive relationship between the proportion of board size and firm financial performance.

Table 7.7: Summary of hypotheses resolved – continued

Hypothesis	Variable	Alternative	Null	Regression results	Decision
2.4	Foreign nationals in corporate boards	There is a statistically significant positive relationship between the presence of foreign nationals on the boards of Nigerian listed firms and firm financial performance, as measured by Tobin's Q, ROE, and NAT.	There is no statistically significant positive relationship between the proportion presence of foreign nationals on the boards of Nigerian listed firms and firm financial performance, as measured by Tobin's Q, ROE, and NAT.	Regression evidence shows that Tobin's Q, ROE, and NAT are positively associated with foreign board's membership. The coefficients and *p-values* of the financial proxies are Tobin's Q, 0.04 with a *p-value* of 0.35, ROE with a coefficient of 0.01 with a *p-value* of 0.48 and NAT with a coefficient of 0.02 and a *p-value* of 0.18. The three performance proxies have positive but marginal coefficients that are not statistically significant since their *p-values* are all greater than 0.05. Therefore, foreign board membership has no significant positive relationship with the financial performance measures of Tobin's Q, ROE, and NAT.	Accept the null hypothesis and reject the alternative hypothesis that there is no significant and positive relationship between the proportion presence of foreign nationals on the boards of Nigerian listed firms and firm financial performance.
2.5	Board indepen-dence	There is a statistically significant positive relationship between board independence and firm financial performance, as measured by Tobin's Q, ROE, and NAT.	There is no statistically significant positive relationship between board independence and firm financial performance, as measured by Tobin's Q, ROE, and NAT.	Tobin's Q, ROE, and NAT are negatively associated with board independence. The coefficients and *p-values* of the financial proxies are Tobin's Q, -0.016 with a *p-values* of 0.91, ROE with a coefficient of -0.03 with a *p-values* of 0.46 and NAT with a coefficient of -0.07 and a *p-values* of 0.15. The three performance proxies have a negative association which is not statistically significant since their *p-values* are all greater than 0.05. Therefore, board independence has no significant positive relationship with the financial performance measures of Tobin's Q, ROE, and NAT.	Rejects the alternative hypothesis and accept the null hypothesis that there is no significant and positive relationship between board independence and firm financial performance.
2.6	Frequency of board meetings	There is a statistically significant positive relationship between the frequency of board meetings, and firm financial performance,	There is no statistically significant positive relationship between the frequency of board meetings, and firm financial performance,	Regularity of board meetings indicated a negative coefficient of -0.019 with a *p-value* of 0.44 in terms of the Q ratio, -0.006 and *p-value* of 0.42 in terms of ROE and -0.02 with *p-value* of 0.03 in terms of NAT. The results indicate that the frequency of board meetings has a negative association with the	Rejects the alternative hypothesis and accept the null hypothesis that there is no significant and positive relationship between the frequency of board

Table 7.7: Summary of hypotheses resolved – continued

Hypothesis	Variable	Alternative	Null	Regression results	Decision
		as measured by Tobin's Q, ROE, and NAT.	as measured by Tobin's Q, ROE, and NAT.	financial measures that are not significant for Q ratio and ROE but significant for NAT.	meetings, and firm financial performance.
2.7	Number of board committees	There is a statistically significant positive relationship between the number of board committees and the firm financial performance, as measured by Tobin's Q, ROE, and NAT.	There is no statistically significant positive relationship between the number of board committees and the firm financial performance, as measured by Tobin's Q, ROE, and NAT.	The regression result of this study indicates that the number of board committees is negatively associated with the Q ratios with a coefficient of -0.08 and *p-value* of 0.43, ROE with a coefficient of -0.05 and *p-value* of 0.19 and NAT with a coefficient of -0.07 and a *p-value* of 0.07. This means that an increase in the number of board committees would affect the three firm performance proxies, negatively. However, since the *p-values* of all the three proxies are greater than 0.05 the negative relationship is not statistically significant.	Rejects the alternate hypothesis and accepts the null hypothesis that there is no significant and positive relationship between the number of board committees and the firm financial performance.
2.8	Indepen-dence of the External Auditor and Audit Committee	There is a statistically significant positive relationship between the independence of the External Auditor and Audit Committee and firm financial performance, as measured by Tobin's Q, ROE, and NAT.	There is no statistically significant positive relationship between the independence of the External Auditor and Audit Committee and firm financial performance, as measured by Tobin's Q, ROE, and NAT.	Regression results indicate a positive and insignificant relationship between the Q ratio and the independence of the Audit Committee and External Auditors. with a coefficient of 0.02 and a *p-value* of 0.62. ROE also indicates an insignificant negative coefficient value of -0.01 and *p-value* of 0.18. The NAT shows a coefficient value of .00 and a *p-value* of 0.81, which is also not statistically significant. In summary, there is no positive and significant association between the independence of the Audit Committee and External Auditors and the financial performance of the firm measured in terms of the Q ratio, ROE, and NAT.	Rejects the alternative hypothesis and accepts the null hypothesis there is no significant and positive relationship between the independence of the External Auditor and Audit Committee and firm financial performance.
3.1	The proportion of	There is a statistically significant positive relationship between	There is no statistically significant positive relationship between	The regression results indicate a positive but not statistically significant relationship between institutional and non-promoter shareholding and the	Rejects the alternative hypothesis and accepts the null hypothesis there is no

Table 7.7: Summary of hypotheses resolved – continued

Hypothesis	Variable	Alternative	Null	Regression results	Decision
	institutional shareholding	the proportion of institutional shareholding and firm financial performance, as measured by Tobin's Q, ROE, and NAT.	the proportion of institutional shareholding and firm financial performance, as measured by Tobin's Q, ROE, and NAT.	value of the firm measured in terms of the three financial performance proxies of the Q ratios, ROE, and NAT. Specifically, the coefficient of 0.12 with a *p-value* of 0.37 was recorded between the Q value and the institutional and non-promoter shareholding (NPISHR). The relationship between ROE and NPISHR is also positive but not significant as it exhibited a coefficient of 0.02 with a *p-value* of 0.72 while the coefficient and *p-value* of 0.03 and 0.52 relating to NAT. As the regression results do not show significant coefficients and the *p-values* of the three financial proxies, therefore there is no significant positive relationship between NPISHR and the three financial performance proxies of Tobin's Q, ROE, and NAT.	significant and positive relationship between the proportion of institutional shareholding and firm financial performance.
3.2	Market share	There is a statistically significant positive relationship between the market share and the firm financial performance, as measured by Tobin's Q, ROE, and NAT.	There is no statistically significant positive relationship between the market share and the firm financial performance, as measured by Tobin's Q, ROE, and NAT.	Regression results of this study show an overall positive relationship between the market share and the firm values of Q ratio, ROE, and NAT. The coefficient value of 0.39 and *p-value* of 0.47 relates to the association between Market share and the Q ratio and is not statistically significant. The relationship with ROE is 0.97 and *p-value* of 0.01 while with NAT is a coefficient of 1.11 and a *p-value* of 0.00. From the results, it can be said that there is a significant positive relationship between market share and the ROE, and NAT values since their *p-values* are less than 0.05.	The alternative hypothesis is accepted in favour of ROE and NAT while the null hypothesis is accepted for Tobin's Q.

Resolution of hypothesis 2.1

This hypothesis tests the significance of the relationship between the board duality variable and the financial performance of firms measured in terms of Tobin's Q, ROE, and NAT. Board duality is a board leadership system where the Chief Executive Officer (CEO) of the firm also doubles as the chairman of the Board of Directors (COB) (Yang & Zhao, 2014). In other words, the two positions of the CEO and the board chairman are vested in one person. This approach, although against the principles of agency theory, is supported by stewardship theory (Palanissamy, 2015). Specifically, section 8.1 (b) of SEC-N (2011) provides that these two positions should be separated. It states that

> "*For all public companies with listed securities, the positions of the chairman of the Board and Chief Executive Officer shall be separate and held by different individuals. This is to avoid over-concentration of powers in one individual which may rob the Board of the required checks and balances in the discharge of its duties".*

Literature on board duality concludes that although there is no right or wrong board structure, some countries, such as the USA and other European countries, allow board duality. Other countries, especially the UK and countries with similar common law principles, prefer the separation of the two positions (Abels & Martelli, 2013). However, shareholders and stakeholders are more inclined towards the separation of the two positions as this is considered to promote independence and transparency in board governance, curb the ability of the CEO to influence the recruitment of directors and prevent the CEO's discretion and powers from being detrimental to firm performance (Misangyi & Acharya, 2014; Palanissamy, 2015; Caiffa *et al.*, 2021).

Extant literature suggests mixed evidence on the effects of board duality on the performance of the firm, too numerous to mention here, although the argument against board or CEO duality is becoming more persuasive (Spahaj, 2015). However, some researchers found no significant effect of board duality on firm performance (Richard *et al.,* 2020). The mixed empirical results support the conclusion by Misangyi and Acharya (2014:1681) that the "effectiveness of CEO duality depends on how well it is combined with other mechanisms within the governance bundle".

The empirical data used in this study suggests that not all the sample firms complied with the provisions of the 2011 Code against the board or CEO duality. Thus, there was a presence of board duality during the period. The results of the regression earlier stated were used to resolve hypothesis 2 as stated below.

$H_{2.1}$: There is a statistically significant positive relationship between CEO duality and firm financial performance, as measured by Tobin's Q, ROE, and NAT.

H_0: There is no statistically significant positive relationship between CEO duality and firm financial performance as measured by Tobin's Q, ROE, and NAT.

The results of the regression show a negative coefficient between the separation of the two offices and Tobin's Q of -0.42 with a *p-value* of 0.119. This negative relationship is not, however, statistically significant as the *p-value* is greater than 0.05. In the case of ROE, the coefficient is equally negative at -0.33 with a statistically significant *p-value* of 0.00. Though the relationship is statistically significant, the coefficient value of -0.33 is not material. The NAT also maintains a statistically significant negative coefficient of -0.38 with a *p-value* of 0.00. Like the ROE, the negative coefficient is small at -0.38. Therefore, the impact on the value of NAT would be marginal. The results show that the non-duality of the board would result in negative firm value, but at a significant level only concerning ROE and NAT.

Acceptance of the null hypothesis 2.1

Overall, the results of the regression analysis show in this study that the alternative hypothesis is false and the null hypothesis is true, which means:

> *There is no statistically significant positive relationship between the separation of the positions of CEO and the chairman and the firm financial performance, as measured by Tobin's Q, ROE, and NAT.*

The meaning of hypothesis 2 is that firms that separate the two offices would record low results against the alternative that states otherwise. Data used for the analysis awards "1" for separating the two offices and "0" for combining them. The results indicate that separating the two offices does not significantly and positively affect the value of the financial performance. In other words, CEO duality improves performance. The findings of hypothesis 2 above are consistent with the findings by Yang and Zhao (2014), and Yang and Chen (2021), which identify that CEO duality

improves the performance of the firm. Therefore, the findings of this study contradict the studies that argue against CEO duality (Ehikioya, 2009; Erah *et al*., 2012; Ujunwa *et al.* 2013; Doğan, 2013; Nazar, 2016; Duru *et al.*, 2016; Rutledge *et al.*, 2016; Nazar, 2016; Atty *et al.,* 2018; Kao *et al.*, 2018; Chineme, 2019). Therefore, this study rejects the separation of the offices of the CEO and chairman of the listed non-financial firms in the Nigerian context.

Resolution of hypothesis 2.2

The focus of hypothesis 2.2 is to test whether female board membership significantly affects the financial performance of the firm positively. SEC- N (2011) did not make any specific provision for the inclusion of women on the boards of listed firms. However, this hypothesis derives from the empirical and theoretical literature on corporate governance, especially the resource dependence theory. This theory suggests that the board comprises the skills, experience, and characteristics of people to provide a robust debate at the board before arriving at a strategic decision. Thus, the development of hypothesis 3 leans heavily on extant corporate governance literature on female board membership.

To obtain the ratio of female representation on the boards of the sample firms, the proportion of the female board members is used. During the period, the percentage of sample firms with female board members was 54% in 2012, and improved to 70% in 2019. This situation is an improvement on the observation of Mahadeo *et* al. (2012) that the boards of most firms in developing economies have no female representation.

In this study, the aggregate net margin fell from 6% in 2012 to 4%, and the ROE also fell from 21% to a negative of 3%. This showed that the increase in the percentage of firms that included female board members did not appear to be reflected in the profit performance of the firms. The summary regression results in Table 7.6 indicate that the coefficient between Tobin's Q and gender diversity is -1.08 with a *p-value* of 0.00, and -0.17 with a *p-value* of 0.16 and -0.36 with a *p-value* of 0.00 for ROE, and NAT, respectively. Thus, gender diversity is negatively and significantly associated with Tobin's Q and NAT but not significantly associated with ROE. This means the increase in the proportion of females on the boards of the listed non-financial firms was negatively related to Tobin's Q and NAT at a statistically significant level. The regression results have helped to resolve the hypothesis stated below.

$H_{2.2}$ There is a statistically significant positive relationship between the proportion of female board members and firm financial performance, as measured by Tobin's Q, ROE, and NAT.

H_0 There is no statistically significant positive relationship between the proportion of female board members, and firm financial performance, as measured by Tobin's Q, ROE, and NAT.

Acceptance of null hypothesis 2.2

The outcome of the regression results has provided empirical evidence to reject the alternative hypothesis and accept the null hypothesis that

> *There is no statistically significant positive relationship between the proportion of female board members, and firm financial performance, as measured by Tobin's Q, ROE, and NAT.*

This finding is consistent with those of Akinwole and Ajide (2020), Simionescu *et al*. (2021), and Bennouri *et al.* (2018), but it contradicts those of Bennouri *et al.* (2018), Green and Homroy (2017), Ararat and Yurtoglu (2020), and Garanina and Muravyev (2020).

Resolution of hypothesis 2.3

Hypothesis 2.3 sought to test whether board size has any significant effect on the value of the firm in terms of the three financial performance proxies. In theory, especially considering the argument of resource dependency theory, large board sizes are supported because large boards can moderate the power of controlling shareholders that may exhibit tendencies to expropriate the resources of the firm in favour of the majority shareholders (Ozili, 2021). However, Ting (2011) and Price (2018) observe that the board size should depend on the type of industry, ownership characteristics, unique needs of the firm, exigencies, and the expected value to the firm based on the prevailing circumstances. Empirical evidence, as will be seen later, appears not to completely agree with this position.

SEC-N (2011) specifies only the minimum board size of five for listed non-financial firms in Nigeria. Specifically, sections 4.1 and 4.2 state:

> *"The Board should be of sufficient size relative to the scale and complexity of the company's operations and be composed without compromising independence, compatibility, integrity and availability of members to attend meetings. Membership of the Board should not be less than five".*

No maximum board size was stated. This means that firms are at liberty to fix their board sizes. Therefore, there is a need to base the optimum board size on two criteria. One is based on the extant empirical evidence. The second is in the business sense, after taking into consideration the nature and complexities of the firm.

Arising from the empirical evidence, hypothesis 2.3 was proposed as follows:

Hypothesis 2.3

$H_{2.3}$ There is a statistically significant positive relationship between the proportion of board size, and firm financial performance, as measured by Tobin's Q, ROE, and NAT.

H_0 There is no statistically significant positive relationship between the proportion of board size, and firm financial performance, as measured by Tobin's Q, ROE, and NAT.

The regression evidence shows that Tobin's Q value and NAT are negatively associated with board size by -0.02 with a *p-value* of 0.37 and -0.003 with a *p-value* of 0.94, respectively. The ROE is positively associated with board size with a coefficient of 0.004 but with a *p-value* of 0.622. However, the associations are not significant because all their *p-values* are greater than 0.05. Therefore, board size has no significant and positive relationship with the financial performance measures of Tobin's Q, ROE, and NAT.

Acceptance of null hypothesis 2.3

The overall findings of the regression results above provide empirical evidence in this study to reject the alternative hypothesis and accept the null hypothesis that

> *There is no statistically significant positive relationship between the proportion of board size, and firm financial performance, as measured by Tobin's Q, ROE, and NAT.*

This finding is consistent with the findings of Vaidya (2019), Alshetwi (2017) and Jenter and Urban (2019), but contradicts the findings of Agyemang and Nyarko (2021), Shrivastav and Kalsie (2016), Sobhan (2021) and Orozco *et al.* (2018).

Resolution of hypothesis 2.4

Hypothesis 2.4 tests the level of relationship between the presence of foreign board nationals and the financial performance of the firm, measured by Tobin's Q, ROE, and NAT. This hypothesis is based more on empirical evidence than on the provisions of the SEC-N (2011) and CAMA (1990) (as amended) because there are

no specific requirements for the inclusion of foreign board members in the boards of listed firms other than to ensure diversity of experience.

The inclusion of foreign nationals on boards has become an interesting research area. In particular, for an emerging economy like Nigeria, the inclusion of foreign nationals on the boards of listed firms would provide the firm with a better understanding of the needs of investors and markets outside Nigeria. Thus, the choice of whether or not to include foreign directors on the boards should be based more on the business angle than on any other consideration. The inclusion of foreign directors with different cultures, orientations, beliefs, and perhaps understanding of phenomena may influence the decision-making process in the firm. However, in selecting foreign board members, the question of whether there are any measurable benefits available to firms that engage directors of other nationalities should be answered (Estélyi & Nisar, 2016).

The inclusion of foreign directors should assist the firm in dealing effectively with events in the external environment and give the firm a competitive advantage over others (Estélyi & Nisar, 2016). Consequently, national or international board diversity is expected to improve the quality of an organisation, especially for developing economies, since the mixture of foreign directors exposes the firm to cross-ventilation of ideas and practices, which are catalysts for innovation and growth. This is because problem-solving by a diverse group is more effective than individual skills, and when different perspectives are brought to bear on specific issues, the quality of decisions will improve and affect the firm positively (Estélyi & Nisar, 2016). Thus, foreign directors bring to the firm their international experience and exposure, which is a strategic resource for overcoming international competition (Handa, 2020). A priori, firms with foreign directors perform better since foreign directors provide the board with the capacity to have a wider scope of considerations while discussing and framing policies and strategies. This could lead to better governance practises that are in line with international standards and independent monitoring of domestic majority shareholders that works well (Mi Choi *et al*., 2012).

Hypothesis 2.4 is based on empirical evidence that has generally supported the inclusion of foreign nationals on the boards of firms. Estélyi and Nisar (2016) equally discover that diverse nationalities display better firm performance, effective board monitoring, and resource provision in FTSE companies with foreign directors over the period 2001–2011. Thus, firms with "the presence of foreign nationals serving on

their boards exhibit a significant positive relationship with profitability ratios of ROA and ROE" (Rahman *et al*., 2018; Joenoes & Rokhim, 2019:220; Khidmat *et al.,* 2020:25). Therefore, Hypothesis 2.4 was posed as:

$H_{2.4}$: There is a statistically significant positive relationship between the presence of foreign nationals on the boards of Nigerian listed firms and firm financial performance, as measured by Tobin's Q, ROE, and NAT.

H_0: There is no statistically significant positive relationship between the presence of foreign nationals on the boards of Nigerian listed firms and firm financial performance, as measured by Tobin's Q, ROE, and NAT.

The regression evidence shows that Tobin's Q, ROE, and NAT are positively associated with a foreign board's membership. The coefficients and *p-values* of the financial proxies are Tobin's Q, 0.04, with a *p-value* of 0.3; ROE, with a coefficient of 0.01 and a *p-value* of 0.48; and NAT, with a coefficient of 0.02 and a *p-value* of 0.18. The three performance proxies have positive but marginal coefficients that are not statistically significant since their *p-values* are all greater than 0.05. Therefore, having a foreign board member has no significant positive effect on Tobin's Q, ROE, and NAT.

Acceptance of null Hypothesis 2.4

The regression results above have provided the empirical evidence in this study to reject the alternative hypothesis in favour of the null hypothesis that

> *There is no statistically significant positive relationship between the proportion of foreign nationals on the boards of Nigerian listed firms and firm financial performance, as measured by Tobin's Q, ROE, and NAT***.**

This finding is consistent with the findings of Aghadike (2021), Ilaboya and Ashafoke (2017) and Khidmat *et al.* (2020:25) and rejects the position of Okere *et al*. (2019).

Resolution of Hypothesis 2.5

Fuzi *et al*. (2016:464) argue that the "representation of independent directors on the board should show a positive relation to the firm's performance". Hypothesis 2.5 seeks to test the extent to which board independence affects the value of the firm. The concept of board independence is not defined in SEC-N (2011) but section 4.3 requires that the board of listed firms "should comprise a mix of executive and non-

executive directors, headed by a chairman. The majority of board members should be non-executive directors, at least one of whom should be an independent director." This is the only provision that indicates some form of independence for the board. Therefore, board independence can be said to be a state in which the majority of the board members are either non-executive or independent board members. In SEC-N (2011: section 5.5), a board member is independent, where he:

> *"(i)is not a* substantial *shareholder of the company, that is one whose shareholding, directly or indirectly, does not exceed 0.1% of the company's paid up capital; (ii) is not a representative of a shareholder that has the ability to control or significantly influence management; (iii) has not been employed by the company or the group of which it currently forms part, or has served in any executive capacity in the company or group for the preceding three financial years; (iv) is not a member of the immediate family of an individual who is, or has been in any of the past three financial years, employed by the company or the group in an executive capacity; (v) is not a professional advisor to the company or the group, other than in a capacity of a director; (vi) is not a significant supplier to or customer of the company or group; (vii) has no significant contractual relationship with the company or group and is free from any business or other relationship which could materially interfere with his/her capacity to act in an independent manner; and (viii) is not a partner or an executive of the company's statutory audit firm, internal audit firm, legal or other consulting firm that have material association with the company and has not been a partner or an executive of any such firm for three financial years preceding his/her appointment;(b) an independent director should be free of any relationship with the company or its management that may impair, or appear to impair, the director's ability to make independent judgments;(c) every public company should have a minimum of one independent director on its Board".*

To measure the level of independence, the following four variables were considered:

(i) At least one director is independent with not more than 0.1% shareholding and does not represent a shareholder.

(ii) Majority of directors are independent or non-executive.

(iii) Chairperson is an independent or non-executive director.

(iv) Proportion of non-executive outside directors is greater than fifty per cent of the board population.

The total score of the above four variables represents the level of board independence that is regressed against the financial performance proxies along with other dependent variables. There is conflicting evidence on the relationship between board independence and firm performance. Hypothesis 2.5, on the effect of the

independence of the board on the financial performance of the firm is posed as follows:

$H_{2.5}$: There is a statistically significant positive relationship between board independence and firm financial performance, as measured by Tobin's Q, ROE, and NAT.

H_0: There is no statistically significant positive relationship between board independence and firm financial performance, as measured by Tobin's Q, ROE, and NAT.

The results of the regression analysis show that Tobin's Q, ROE, and NAT are negatively associated with board independence. The coefficients and *p-values* of the financial proxies are Tobin's Q, -0.016 with a *p-value* of 0.91, ROE with a coefficient of -0.03 and a *p-value* of 0.46, and NAT with a coefficient of -0.07 and a *p-value* of 0.15. The three performance proxies have a negative association, which are not statistically significant since their *p-values* are all greater than 0.05. Therefore, board independence has no significant positive relationship with the financial performance measures of Tobin's Q, ROE, and NAT.

Acceptance of null Hypothesis 2.5

The overall findings of the regression results reject the alternative hypothesis and accept the null hypothesis that:

> *There is no statistically significant positive relationship between board independence and firm financial performance, as measured by Tobin's Q, ROE, and NAT.*

These finding are consistent with those by Ponnu and Karthigeyan (2010), Johl *et al*. (2014), Kweh *et al*. (2019), Sobhan (2021), and Bird *et al.* (2017) that identified a negative relationship between board independence and the performance of the firm. They, however, conflict with the findings by Qadorah and Bt Fadzil (2018b), Sanda *et al.* (2011), Liu *et al.* (2014), and Altuwaijri and Kalyanaraman (2016) that found that board independence is positively associated with the financial performance of the firm.

Resolution of Hypothesis 2.6

The empirical literature on the benefits frequent board meetings is also split. Some strands of the literature argue in support of regular board meetings, arguing that regular board meetings improve board effectiveness and monitoring of the management team (Vafeas, 1999; Eluyela *et al*., 2018). In contrast, other studies submit that the frequency of meetings leads to the waste of financial resources and executive time, as such does not improve the performance of the firm (Ntim and Osei, 2011; Akpan, 2015). Hypothesis 2.6 tests the association between the frequency of board meetings and the financial performance of the firm as presented below.

$H_{2.6}$: There is a statistically significant positive relationship between the frequency of board meetings and the financial performance of the firm, as measured by Tobin's Q, ROE, and NAT.

H_0: There is no statistically significant positive relationship between the frequency of board meetings and the financial performance of the firm, as measured by Tobin's Q, ROE, and NAT.

The empirical literature on corporate governance suggests a mixed outcome concerning the association between the frequency of board meetings and the financial performance of the firm. SEC-N (2011) only requires that listed firms in Nigeria hold board meetings at least once a quarter. Specifically, Section 12 of the 2011 Code states that:

> *"To effectively perform its oversight function and monitor management's performance, the Board should meet at least once every quarter. Every director should be required to attend at least two-thirds of all Board meetings. Such attendance shall be criteria for the re-nomination of a director except there are cogent reasons, which the Board must notify the shareholders of at the annual general meeting".*

A similar provision is not contained in the CAMA of 1990. However, the amended version (FGN, 2020) provides in section 289 that

> *"directors may meet together for the dispatch of business, adjourn and otherwise regulate their meetings as they think fit, and the first meeting of the directors shall be held not later than six months after the incorporation of the company" (CAMA,1990).*

The absence of the statutory provision on the maximum number of directors' meetings suggests that firms are to be guided by business exigencies and rationale in holding meetings provided the four mandatory meetings have been held. Therefore,

the number of board meetings must depend on the benefit of such meetings to the firm.

Extant empirical literature on the association between board meetings and the financial performance of the firm is twofold. Some studies have identified a positive relationship (Lin *et al*., 2014; Azubike *et al*., 2015; Al-Daoud *et al.,* 2016; Usman, 2018; Agarwal & Singh, 2020), while others identify a negative relationship (Vafeas, 1999; Ntim, 2009; Modum *et al*., 2013; EL-Maude *et al.*, 2018; Hanh *et al.,* 2018; Ebun & Emmanuel, 2019).

The regression evidence of this study shows that the frequency of board meetings indicated a negative coefficient of -0.019 with a *p-value* of 0.44 in terms of the Q ratio, -0.006 and a *p-value* of 0.42 in terms of ROE, and -0.02 with a *p-value* of 0.03 in terms of the NAT. As the results indicate, the frequency of board meetings has a negative association with the financial measures but is not significant for the Q ratio and the ROE. It is, however, significant for the NAT.

Acceptance of null Hypothesis 2.6

The evidence from this study is consistent with the findings by Vafeas (1999), Ntim (2009), Modum *et al*. (2013), Okon (2015), Qadorah and Bt Fadzil (2018b), Hanh *et al.* (2018); EL-Maude *et al.* (2018) and Ebun and Emmanuel (2019) that a negative association exists between the frequency of board meetings and the firm financial performance. It is, however, inconsistent with the evidence by Lin *et al*. (2014), Al-Daoud *et al*. (2016), Azubike *et al.* (2015), Usman (2018) that find a positive relationship. Therefore, the results reject the alternative hypothesis and accept the null hypothesis that:

> *There is no statistically significant positive relationship between the number of board meetings, and firm financial performance, as measured by Tobin's Q, ROE, and NAT.*

The consequence of this finding is that firms that hold regular board meetings, are likely to reduce their value. The reason behind this is that frequent board meetings incur more costs and result in frequent intervention in the management process. This will demotivate the management team and have a negatively impact on the drive of the management to increase revenue and ensure effective cost control. However, this finding disagrees with the philosophical stance of agency theory, which supports the high level of control that frequent board meetings are expected to achieve. However,

Ntim and Osei (2011) and Agarwal and Singh (2020) argue that the frequency of board meetings makes the directors well informed of the firm's policies and operations. Therefore, regular meetings would enable the directors to acquire the capacity to effectively advise, monitor, and discipline management and improve corporate financial performance (Ntim & Osei, 2011; Agarwal & Singh, 2020).

Resolution of Hypothesis 2.7

Hypothesis eight tests whether multiple board committees benefit the firm. Corporate boards are, by law, empowered to act on behalf of the firm. In Nigeria, CAMA (2020) specifically states this requirement in section 87 as follows:

> *"A company shall act through its members in general meetings or its board of directors or through officers or agents appointed by, or under authority derived from, the members in general meetings or the board of directors".*

However, the board, in the exercise of its mandates, may, pursuant to section 88 of CAMA (2020).

> *"(a) exercise its powers through committees consisting of such members of their body as they think fit; or (b) from time to time, appoint one or more of its members to the office of managing director and may delegate all or any of its powers to such managing director".*

Thus, effectively, and as with other climes, corporate boards in Nigeria are encouraged to operate with board committees (SEC-N, 2011, FRN, 2020). Generally, most countries allow directors the freedom to determine the number of such committees, except for the statutory audit committee, which is made compulsory for listed firms in Nigeria (Global Corporate Governance Forum, 2011; SEC-N, 2011; FRN, 2020). This liberty is responsible for the varied number of board committees in firms, even within the same economic zone or industry, as the data in this study reveals. The average number of board committees revealed in this study is three, the maximum is four, and minimum is two.

The SEC-N provides for at least two additional committees to the statutory board's Audit Committee. These committees are the Governance/Remuneration Committee and the Risk Management Committee. Specifically, sections 9.1 and 9.2 provide that

> "*The Board should determine the extent to which its duties and responsibilities should be undertaken through committees. It should determine the number and composition of such committees ensuring that each committee comprises the relevant skills and competences and*

its members are able to devote sufficient time to the committee's work (Section.9.1). The Board may in addition to the Audit Committee required by CAMA establish a Governance/Remuneration Committee and Risk Management Committee and such other committees as the Board may deem appropriate depending on the size, needs, or industry requirements of the company (Section. 9.2)".

The above provisions allow the firm the opportunity to adopt any board committee structure that it deems fit and which would maximise its value. Thus, firms are therefore at liberty to base their committee structure on parameters that would enable them to perform optimally in the face of global and domestic competition. However, in deciding on the number and composition of the committees, the need to properly structure the board committees for overall efficiency and effectiveness should be paramount while also considering that directors have different skills that should be deployed optimally. One remarkable observation is that the risk committee appears not to be common among the sample firms, even when the Code requires the risk committee to be in place. This phenomenon appears also to be common with listed firms in other countries, as observed by the OECD (2011). This suggests that firms, apart from listed banks, do not appear to pay attention to the management of risk.

The structure of the committees, in terms of number and composition, apart from the statutory audit committee, is determined by the industry/sector of the firm, the size of the board, the complexity of the business, and other dynamics of the firm. Hence, SEC-C (2011) allows the boards to determine the number and composition of their committees. Thus, DCSL Corporate Services Limited (2017) advises that, beyond the regulatory or compliance requirements, there should be structure to ensure that the firm benefits from the varied experience, competencies, and skills of the directors. Consequently, Hypothesis 2.7 has been proposed to test the extent of the relationship between the number of board committees and firm financial performance. As a result, it is hypothesised that:

$H_{2.7}$: There is a statistically significant positive relationship between the number of board committees, and the firm financial performance, as measured by Tobin's Q, ROE, and NAT.

H_0: There is no statistically significant positive relationship between the number of board committees, and the firm financial performance, as measured by Tobin's Q, ROE, and NAT.

Abu *et al.* (2020) observe that the number of board committees has a positive relationship with the performance of deposit banks in Nigeria. Lam and Lee (2012) equally find a positive relationship between the existence of the nomination (remuneration) committee and firm performance. In Ghana, Puni (2015) found no significant association between the number of committees and firm performance. Ammari *et al.* (2016) identify a positive relationship between large boards and at least three committees with accounting performance but not with market performance.

Acceptance of the null Hypothesis 2.7

The regression results indicate that the number of board committees is negatively associated with the Q ratio with a coefficient of -0.08 and a *p-value* of 0.43; ROE with a coefficient of -0.05 and a *p-value* of 0.19 and NAT with a coefficient of -0.07 and a *p-value* of 0.07. This means that an increase in the number of board committees would affect the financial performance of the firm negatively. However, since the *p-values* of all the three proxies are greater than 0.05, it means that the negative coefficients are not statistically significant. Therefore, the alternative hypothesis is rejected in favour of the null hypothesis that

> *There is no statistically significant positive relationship between the number of board committees, and firm financial performance, as measured by Tobin's Q, ROE, and NAT.*

This evidence contradicts the findings by Abu *et al*. (2020), Lam and Lee (2012), Puni (2015), and Ammari *et al.*, 2016), which suggest that large board committees positively affect the financial performance of the firm.

Resolution of Hypothesis 2.8

For the effectiveness of corporate governance, CAMA (1990, 2020) and the SEC-N Code 2011 (SEC-N, 2011) stipulate that listed firms should have an Audit Committee, among other committees they may wish to have. Hypothesis 2.8 is proposed to test the level of association between the independence of the external auditor and the audit committee and the financial performance of the firm measured in terms of the Q ratio, ROE, and NAT.

The seven variables used in estimating the level of independence include the following:

i. Membership of the audit committee of 2-6 members of equal directors and shareholders representatives.
ii. Number of meetings held is four minimum
iii. All members of the audit committee are non-executive independent directors
iv. Chairman of the committee is a non-executive director
v. Proportion of committee members with financial or accounting knowledge
vi. External auditor does not handle other consulting for the firm.
vii. External auditors are PWC, KPMG, Deloitte, and Ernst and Young.

The actual number of members and meetings held are considered in "i" and "ii" above, while for "iii", a firm is scored "1" if the criteria are met or "0", otherwise. Firms had the maximum audit committee membership of six members. Each of the above variables is considered in determining the independence of the audit committee. The overall score is regressed against the three financial proxies. Thus, Hypothesis 2.8 is proposed as follows:

$H_{2.8}$: There is a statistically significant positive relationship between the independence of the external auditor and audit committee, and firm financial performance, as measured by Tobin's Q, ROE, and NAT.

H_0: There is no statistically significant positive relationship between the independence of the external auditor and audit committee, and firm financial performance, as measured by Tobin's Q, ROE, and NAT.

The average membership of the audit committee of the sample firms was 5.55, which is approximately six people. The least number was two. The average number of meetings held by the audit committee was 3.86, approximately 4 times. The highest number of times the audit committee met was 10. The evidence did not indicate that external auditors undertook financial and consultancy services for their firms. Also, about 40 listed firms, representing 63% of the sample firms, engaged the services of the four largest firms during the period. These auditors were PWC, KPMG, Deloitte, and Ernst and Young. The consideration of the big audit firms in the estimation of audit independence is the capacity of the big audit firms not to be assuaged from objectivity and fairness in their audit exercise because of fear of earnings reduction but to perform their audit assignment in honour of their integrity.

Using the big audit firms provides the opportunity to reduce agency costs that are inherent in large listed firms. This makes the external auditor a critical actor in the corporate governance process (Fan & Wong 2005). But, as earlier discussed in Chapter four, empirical evidence is also mixed concerning the effects of the independence of the audit committee and the external auditor and firm performance.

The effectiveness of the Audit Committee has been found to affect the earnings per share of listed non-financial firms as well (Modum *et al.,* 2013). In Iraq, the study by Mohammed *et al*. (2019) indicates a significant positive association between the existence of the Audit Committee and the financial performance of the firm measured in terms of ROA. Al-Matari *et al.* (2014a) also found a positive association between the audit committee and firm performance in Oman.

Acceptance of null Hypothesis 2.8

The regression results indicate a positive but not so significant coefficient of 0.02 and a *p-value* of 0.62 between the Q ratio and the independence of the audit committee and external auditors. ROE indicates a negative coefficient value of -0.01 and a *p-value* of 0.18 that is also not statistically significant. The NAT shows a coefficient value of .00 and a *p-value* of 0.8, not significant. In summary, there is no positive and significant association between the independence of the audit committee and external auditors and the financial performance of the firm measured in terms of the Q ratio, ROE, and NAT. Therefore, the alternative hypothesis is rejected in favour of the null hypothesis that

> *There is no statistically significant positive relationship between the independence of the external auditor and audit committee, and firm financial performance, as measured by Tobin's Q, ROE, and NAT.*

This finding rejects the conclusion of the prior findings of Mohammed et al. (2019), Modum *et al*. (2013), Al-Matari *et al.* (2014a), Eyenubo *et al.* (2017b) and a host of others that indicate a positive and significant association between the independence of the audit committee and external auditors and the financial performance of the firm measured in terms of the Q ratio, ROE, and NAT. However, the prior studies by Olayinka (2019), Bansal *et al*. (2016), Rahimi *et al.* (2015) and Awa and Obinabo (2020) are supported by this study that there is no significant and positive relationship between the independence of the external auditor and audit

committee, and the financial performance of the firm, as measured by Tobin's Q, ROE, and NAT.

Resolution of Hypothesis 3.1

Institutional shareholding is one of the two external governance variables considered in this study. Institutional shareholders refer to bulk shareholding by corporate bodies, mutual funds, investment companies, pension funds, asset managers, insurance companies, banks, governments, international investment funds, and any such organisations that hold portions of the equity of firms. The Nigerian Code (SEC-N, 2011) does not provide for a particular proportion of the equity of listed firms to be owned by institutional shareholders. Instead, it merely provides for the responsibilities of institutional shareholders in section 27 as follows:

> *"Shareholders of public companies should play a key role in good corporate governance. In particular, institutional shareholders and other shareholders with large holdings should seek to positively influence the standard of corporate governance in the companies in which they invest. They should demand compliance with the principles and provisions of this Code. They should seek explanations whenever they observe non-compliance with the Code".*

However, the OECD (2011:20) states that

> *"the effectiveness and credibility of the entire corporate governance system and company oversight will… to a large extent depend on institutional investors that can make informed use of their shareholder rights and effectively exercise their ownership functions in companies in which they invest"*

The above statements underscore the importance of institutional shareholders in ensuring the effectiveness of corporate governance by using their shareholders' rights to ensure that the management's actions support value creation in the interests of not only the shareholders but of other stakeholders. Thus, Hypothesis 3.1 has been proposed to test the extent to which INS affects the financial performance of the firm. Considering that, there is specificity on the proportion of INS holdings for listed firms in Nigeria; Hypothesis 3.1 is based on a combination of the provisions of the Code (SEC-N, 2011) and empirical evidence.

Arising from the empirical evidence discussed in Chapter Four, Hypothesis 3.1 is posed as follows:

$H_{3.1}$: There is a statistically significant positive relationship between the proportion of institutional shareholding and firm financial performance, as measured by Tobin's Q, ROE, and NAT.

H_0: There is no statistically significant positive relationship between the proportion of institutional shareholding and firm financial performance, as measured by Tobin's Q, ROE, and NAT.

Acceptance of null Hypothesis 3.1

The regression results indicate a positive but not statistically significant relationship between institutional and non-promoter shareholding (NPISHR) and the value of the firm measured in terms of the three financial performance proxies of Tobin's Q, ROE and NAT. Specifically, the coefficient of 0.12 and a *p-value* of 0.37 was observed between the Q value and NPISHR. The relationship between ROE and NPISHR is also positive but not significant as it exhibited a coefficient of 0.02 with a *p-value* of 0.72, while the coefficient and *p-value* of 0.03 and 0.52 were the coefficients and the value of NAT, respectively. The regression results do not show significant coefficient ratios and the *p-values* between NPISHR and the three financial performance proxies of Tobin's Q, ROE, and NAT. Therefore, the alternative hypothesis is rejected and the null hypothesis is accepted that

> *There is no statistically significant positive relationship between the proportion of institutional shareholding and firm financial performance, as measured by Tobin's Q, ROE, and NAT.*

This finding supports the prior findings of Li *et al*. (2006), Ahmad *et al*. (2019), Gabriel and Osazuwa (2020), Sani and Alifiah (2021) and AL-Najjar (2015) which indicate that NPISHR is negatively related to the financial performance of the firm in terms of Q ratio, ROE, and NAT. Therefore, the studies by Aanu *et al.* (2016), Kapil and Mishra (2019), Nicolai *et al*. (2013), Dogan (2020), Sakawa and Watanabel, (2020), Eluyela, *et al.* (2020) and Gill and Obradovich (2013), which reveal either an insignificantly negative association or positive but insignificant positive relationship between NPISHR and the firm value proxies of the Q ratio, ROE, and NAT are not supported by this study and therefore rejected.

Resolution of Hypothesis 3.2

The second of the external governance variables is market share. The market share is determined by calculating the yearly proportion of the revenue of each sample firm divided by the aggregate yearly industrial or sectorial total. The Code (SEC-N, 2011) does not contain specific provisions on the required proportion of market share by listed firms in Nigeria. The lack of specific provisions by the SEC-N 2011 Code on the market share of listed firms in Nigeria has made the use of empirical literature the main basis for Hypothesis 3.2.

Chang *et al*. (2015) discovered that product market competition increases the incentives for firms with weak governance structures to maximise the wealth of shareholders. In other words, the product market can effectively compel the firm to put in place efficient systems to produce quality services and goods to remain in business. This approach would lead to improved financial performance. The expectation is that there is a positive relationship between improved market share and corporate governance. Therefore, if the relationship between market share index and firm value measured in terms of Tobin's Q, ROE, and NAT is not significant, the alternative hypothesis is rejected in favour of the null.

Product market competition has also been identified to exert a significant level of pressure, which imposes discipline on managers to maximise firm value (Ammann *et al.,* 2011). Thus, Giroud and Mueller (2011:563) argue that managers of firms that operate in competitive industries are constantly under pressure to "reduce slack and maximise profits, or else the firm will go out of business." Hypothesis 3.2 has been proposed to investigate the level of the relationship between market share and firm financial performance in Nigeria as follows:

$H_{3.2}$: There is a statistically significant positive relationship between the market share and the firm financial performance, as measured by Tobin's Q, ROE, and NAT.

H_0: There is no statistically significant positive relationship between the market share and the firm financial performance, as measured by Tobin's Q, ROE, and NAT.

Acceptance of the alternative Hypothesis 3.2 regarding ROE, and NAT and the null hypothesis for Q ratio

The regression results of this study show an overall positive relationship between the market share and the firm values of Q ratio, ROE, and NAT. However, the coefficient value of 0.39 and *p-value* of 0.47 relate to the association with the Q ratio and are not statistically significant. The relationship with ROE has a coefficient of 0.97 and a p-value of 0.01 while the relationship with NAT has a coefficient of 1.11 and a p-value of 0.00. Both relationships are statistically significant. It can be concluded that there is no significant positive relationship between market share and the Q ratio since the *p-value* is above 0.05. However, in the case of ROE and NAT, a significant positive association was found with *p-values* of 0.01 and 0.00 respectively. As a result, for ROE and NAT, the alternative hypothesis is accepted and the null hypothesis is rejected. Thus,

> *There is a significant positive relationship between market share and firm financial performance, as measured by ROE, and NAT.*

In the case of Tobin's Q values, the null hypothesis is accepted.

> *There is no statistically significant positive relationship between the market share and firm financial performance, as measured by Tobin's Q.*

The evidence for ROE, and NAT can be said to confirm the findings by Januszewski *et al.* (2002), Wang *et al.* (2014), Omidfar *et al.* (2017) and Le Thi and Le Thanh (2021) which identified a positive relationship between market share and firm performance. However, the rejection of the alternative hypothesis for the Q ratio supports the findings by Beiner, Schmid and Wanzenried (2008), Magoro (2009), and Fazlzadeh and Sabbaghi (2010), which support the null hypothesis that there is no positive relationship between market share and the Q ratio of the firm.

7.5 Control variables

Three control variables are considered in the study. These include the size of the firm (FIRMSI) measured in terms of market capitalisation, capital structures (CAPSTR) and the age of the firm (FIRAGE). The regression results show that the size of the firm is significantly and positively associated with the value of the Q ratio with a coefficient of 105.78 and a *p-value* of 0.04. The ROE and NAT indicate no

significant positive association with the Q ratio. In the case of the capital structure, a significant and positive association is established with the three firm value proxies of Tobin's Q, ROE, and NAT, with all positive coefficients having *p-values* of less than 0.05. The age of the company, on the other hand, has negative coefficients that are statistically significant for all three of the financial performance proxies.

This finding implies that an increase in the size of the firm would only significantly improve the value of Tobin's Q while those of ROE and NAT would not significantly increase. In the case of the capital structure, a change in the capital structure ratio would lead to a significant and positive increase in the value of the firm in terms of ROE and NAT. For the age of the firms, a single increase in the age of the firm will significantly reduce its value across the three firm values.

As with other main variables, empirical evidence on the relationship between the three control variables and the financial performance of the firm is also mixed. Ghafoorifard *et al.* (2014) found in their study of 96 companies listed on the Tehran Stock Exchange over a period from 2008 to 2011, that firm size has a positive and significant association with the financial performance of the firm. This positive and significant relationship was also observed by Irom *et al*. (2018) in their study of 41 listed Nigerian manufacturing firms from 2012 to 2016 and its effect on profitability. The study by Putri and Hidayati (2021) finds that the size of the firm also has a positive and significant effect on the ROA listed firms in Indonesia. However, Shuaibu, Ali, and Amin (2019) find no significant positive impact on firm value in the case of Nigeria. Lawson and Osaremwinda (2019) also find that the size of a firm has a negative and insignificant relationship with the value of selected quoted manufacturing firms in Nigeria.

The age of the firm has also been found to be positively and significantly related to the financial performance of the firm in Iran (Ghafoorifard *et al.*, 2014). Lawson and Osaremwinda (2019) also find a similar relationship in their study of quoted fifteen (15) Nigerian listed firms covering a period of 2012 to 2017 and by Ibrahim (2017) in the case of the Nigerian manufacturing industry for the period 2012–2016 in terms of Tobin's Q. Akben-Selcuk (2016) equally identified a negative relationship between the age of the firm and the financial performance of non-financial listed Turkish firms in terms of ROA, ROE and gross profit margin.

Irom *et al.* (2018) also found an insignificant but negative impact of age on the return on the assets of 41 listed Nigerian manufacturing firms for the period 2012-2016. Gunu and Adamde (2015) also confirm, in their study of 30 firms from the eight sectors of the Nigerian Stock Exchange market listed between 2003 and 2007, an inverse relationship between firm age and financial performance. Loderer and Waelchli (2010), in their study of various firms contained in the CRSP and COMPUSTAT database between 1978 and 2004, find a significant inverse relationship between firm age and profitability as well.

In the case of the capital structure, Shuaibu, Ali and Amin (2019), in their study of the listed consumer goods sector in Nigeria covering the period of 2005 to 2014, observe that firm leverage has a positive relationship with the sample firm value but is not significant. Ogbulu and Emeni (2012) also identify the positive relationship between long-term debt and firm value in their study of a sample of 124 companies quoted on the Nigerian Stock Exchange (NSE) for the year ended 31st December 2007. Further, Okeke and Okeke (2019), in their study of the Nigerian listed firms in the conglomerates and the consumer goods sectors from 2007 to 2015, found a negative relationship between the capital structure regarding long-term debt and firm value, while equity capital was positively insignificant. However, Ogieva and Ogiemudia (2019) found that the capital structure is significant and negatively affects the performance of multinational firms in Nigeria. A negative relationship is also found between capital structure and Tobin's Q of fifteen (15) quoted Nigerian firms covering the period of 2012 to 2017 (Lawson & Osaremwinda, 2019) and by Ibrahim (2017) for the Nigerian manufacturing industry from 2012 to 2016.

7.6 Comparison of the empirical results: compliance index and the equilibrium-variable models

Two different models have been used in examining the relationship between corporate governance and financial performance. The compliance-index model and the equilibrium-variable model are the two models. The compliance index model uses the computed aggregate Nigerian corporate governance index (NCGI) based on 32 corporate governance variables, which are based on the Nigerian Code (SEC-N., 2011), the Company Act (CAC, 1990) and extant corporate governance literature. Thus, the compliance index model uses the aggregate corporate computed index in examining the relationship between corporate governance and the firm financial

performance proxies of Tobin's Q, ROE, and NAT. The equilibrium variable model, on the other hand, looks at the relationship based on each of the corporate governance variables.

Adopting the approach by Abassam (2014), the predictability levels of the two models are compared in terms of the adjusted R^2 and the values of the F-Statistics. The estimation results are presented in Tables 7.8i and 7.8ii. As the tables show, the relationship between the corporate governance compliance index and Tobin's Q, ROE, and NAT can be estimated by the compliance index (See Table 7.8i) model at 82% for the Q ratio, 51% for ROE, and 83% for NAT.

Table 7.8(i): Summary of predictability of the governance compliance index using the FE estimation method

Variable	Tobin's Q		ROE		NAT	
	Coeff.	**P-Vulue**	**Coeff.**	**P-Vulue**	**Coeff.**	**P-Vulue**
Constant (C)	-0.62	0.23	-0.59	0.00**	0.30	0.14
F-Statistics (value)	**36.11**	**0.00****	**9.19**	**0.00****	**38.99**	**0.00****
Adjusted R- Squared (value)	**82%**		**51%**		**83%**	

** These are the values at 5% significant level.

The constant coefficients for the three proxies are negative regarding Tobin's Q ratio and ROE and positive for NAT. However, only the constant of ROE is statistically significant with a *p-value* of 0.00. The adjusted R^2 predictability capacity for the three proxies is all above 50%, which suggests that the index model has a substantially high predictability of the value of the firm. In other words, the compliance index can predict the value of Tobin's Q by as high as 82% while the remaining 18% is influenced by other extraneous variables not considered in the regression. Similarly, the compliance index can predict about 83% of the value of NAT and the rest of 17% by other factors. In the case of ROE, the compliance index predicts the value at a 51% level. The remaining 49% is predicted by other variables.

The equilibrium model (See Table 7.8ii) also predicts the value of Tobin's Q ratio by 84%, ROE by 58%, and NAT by 89%. These values are not too far apart from those of the compliance index model. Therefore, it can be said that both models highly predict each of the three firm value proxies within the same range. However, the equilibrium model prediction rate is marginally higher.

Table 7.8(ii): Summary of predictability of the equilibrium variable model using the FE estimation method

Variable	Tobin's Q		ROE		NAT	
	Coeff.	**P. Vu**	**Coeff.**	**P. Vu**	**Coeff.**	**P. Vu**
Constant (C)	7.034	0.00**	2.37	0.00**	4.75	0.000**
F-Statistics (value)	**36.13**	**0.00****	**10.32**	**0.00****	**52.36**	**0.000****
Adjusted R-Squared value	**84%**		**58%**		**89%**	

This same differential rate occurs for the F–Statistics values of 36.11, 9.19, and 38.99 respectively for the Q ratio, ROE, and NAT under the compliance index model, compared to moderately higher F –Statistics values of 36.13; 10.32 and 52.36 for the Q ratio, ROE, and NAT, respectively under the equilibrium model.

7.7 Chapter summary

The chapter discussed the empirical results of the 63 sample firms. The empirical results on the association between the three firm financial performance proxies of Tobin's Q, ROE, and NAT have been presented under both the compliance index and the equilibrium variable models. Some regression analyses were carried out on the winsorised financial data of the sample for the period. First, the aggregate compliance index (NCGI) and the control variables were regressed against the three firm financial performance proxies mentioned above.

Three regression estimation methods were used. These are the Pools OLS, Fixed Effect (FE), and Random Effects (RE) methods. The Chow test statistics were used to select between the OLS and the FE as the better choice. The test confirms FE as the better choice between both in terms of the degree of predictability. The next step was to select between the FE and RE methods for the better estimation model using the Hausman Test. The Hausman Test results also suggest that the best estimation method is the FE method. Consequently, the FE estimation method was used to establish the relationship between the dependent and the independent variables under the compliance index and the equilibrium variable approaches.

In total, three hypotheses were proven. Empirical evidence shows that the NCGI is not significantly associated with positive firm financial performance during the period using the compliance index model. This result is at variance with most established empirical evidence that corporate governance improves firm financial performance. In other words, the results of this study suggest that in Nigeria,

improvement in the level of compliance with corporate governance by non-financial listed firms did not lead to a significant improvement in the financial performance of the sample firms from 2012 to 2019.

The equilibrium variable model presents the results based on the individual independent variables. The results show that generally, there is no significant positive relationship between the governance variables and the three financial performance proxies. Thus, in most results, the association between firm financial performance and the independent individual variables is negative but insignificant. Even in situations where the relationship is positive, the association is also statistically insignificant except for the market share that is significantly positive for ROE and NAT.

Further, the chapter compares the predictability levels of the two models: the compliance index model and the equilibrium variable model. The compliance index model estimated the relationship between the corporate governance compliance index and Tobin's Q, ROE, and NAT by 82% for Tobin's Q ratio, 51% for ROE, and 83% for NAT. The constant coefficients for the three proxies are negative for the Q ratio and ROE and positive for NAT. However, only the constant coefficient of ROE is statistically significant with a *p-value* of 0.00.

The equilibrium model also predicts the value of the Q ratio by 84%, ROE by 58%, and NAT by 89%. These values are not too far apart from those of the compliance index model. Therefore, it can be said that both models highly predict each of the three firm financial performance proxies within the same range. However, the equilibrium model prediction rate is marginally higher.

In all, the alternative hypotheses one to ten are rejected in favour of the null hypotheses. For hypothesis 3.2., the alternative is accepted for ROE, and NAT, while the null hypothesis is accepted for Tobin's Q. Thus, the evidence of the study indicates that, generally, there was no significant positive association between compliance with the corporate governance principles and the improvement in the financial performance of listed non-financial firms for the period 2012 to 2019.

The next chapter, Chapter Eight, presents the conclusion and recommendations of the study. The conclusion and recommendations are based on the empirical evidence contained in this chapter.

CHAPTER EIGHT

SUMMARY OF FINDINGS, CONCLUSION AND RECOMMENDATIONS

8.1 Introduction

This chapter discusses the findings, conclusion, and recommendations of the study. Thirteen recommendations have been made based on the findings in Chapter Seven. The achievement of the RO of this study, as discussed in Chapter One, was actualised in three stages. One stage involved the construction of the Nigerian corporate governance index (NCGI) of the listed non-financial firms whose shares were actively traded for the period 2012 to 2019. The second stage was the establishment of the extent of the relationship between the compliance index and the firm financial performance of the sample firms, measured in terms of the three financial performance proxies of Tobin's Q, ROE, and NAT, using the compliance model approach. The third stage was the establishment of the extent of the relationship between the individual corporate governance variables and the three firm financial performance proxies using the equilibrium variable model approach. These approaches enabled the study to provide empirical support for the recommendations and the conclusion.

The remainder of the chapter is structured into seven sections. Section 8.2 presents the summary of the chapters in the study. Section 8.3 highlights the major findings on the compliance level, the relationship between the compliance level and firm financial performance using the compliance index, and the relationship between the individual corporate governance mechanisms and firm performance using the equilibrium variable model. Section 8.4 discusses the recommendations, while Section 8.5 highlights the contributions of this study to the literature on corporate governance. The limitations of the study are highlighted in Section 8.6, while Section 8.7 provides the limitations of the study. Section 8.8 provides suggestions for future research. The summary of the chapter is presented in Section 8.9.

8.2 Summary of the chapters in the study

The structure of the study has earlier been presented in Figure 1.1 in Chapter One. The study is organised into eight chapters covering the identification of the problem and literature gap to be addressed by the study, the justification of the study, and the formulation of research questions and hypotheses in Chapter One. Chapters Two and Three explained corporate governance, the relevant theories, and the contextual underpinnings of corporate governance in Nigeria. The development of the hypothesis and the underlying empirical literature, which supports each hypothesis, are examined in Chapter Four. Chapter Five lays out the methodology for carrying out the study, including the development of estimation models. The empirical evidence is presented in two parts. The summary or descriptive statistics are presented in Chapter Six, while the regression results and the resolution of the hypotheses are presented in Chapter Seven. Finally, Chapter Eight presents the summary of findings, conclusion, and recommendations.

8.3 Summary of research findings

The study identified three main classes of findings: (i) level of compliance with the self-computed NCGI for the listed firms for the period; (ii) the level of relationship between the NCGI and the financial performance of the firm using the compliance index model; and (iii) the level of relationship between the individual independent corporate governance mechanisms and the three financial performance proxies of Tobin's Q, ROE, and NAT using the equilibrium variable model. These are discussed in the subsections that follow**.**

8.3.1 Rate of compliance with NCGI

The NCGI was computed using 32 corporate governance provisions contained in the 2011 Code SEC-N (2011), the Company and Allied Act (1990 as amended) and empirical evidence. Empirical evidence has been used to support the inclusion of female and foreign directors, market share, and institutional shareholding in the determination of NCGI because the SEC-N Code did not specifically provide for some measurable yardsticks on the four variables, other than a passive reference. The yearly average compliance index is shown in Table 8.1.

Table 8.1: NCGI Yearly compliance index 2012-2019

Year	Total NCGI-Internal Governance Index	TOTAL NCGI-External Governance Index	TOTAL NCGI	Control Variables
2012	74.27%	11.99%	70.38%	42.77%
2013	74.47%	10.86%	70.50%	40.25%
2014	74.49%	10.15%	70.47%	37.84%
2015	75.16%	9.42%	71.05%	36.67%
2016	74.94%	9.02%	70.82%	35.75%
2017	75.73%	8.36%	71.52%	34.80%
2018	75.13%	8.05%	70.94%	33.16%
2019	76.05%	7.06%	71.74%	31.23%
Average	**75.03%**	**9.36%**	**70.93%**	**36.56%**

The results indicate that the highest compliance level of 71.74% was recorded in 2019, compared to the level of 70.38% in 2012. Thus, a marginal growth rate of 1.36% was recorded during the eight years. The compliance rate revealed in this study is lower than the 100% recorded by Ishaku *et al*. (2020) in their study of the six conglomerates listed on the Nigerian Stock Exchange as of 31st of December 2019. Also, a closely related study by Akinkoye and Olasanmi (2014) of the compliance level of listed non-financial firms based on the Nigerian maiden code of 2003 indicated a compliance level of 72.15% and a growth rate of 5.83 %. This indicated that, on the aggregate, firms were not substantially motivated to improve upon their compliance levels. The apathy towards compliance may not be unconnected with the lack of statutory enforcement of compliance with the Code during the period. However, the high-performance rate discovered by Ishaku *et al.* (2020) could have been influenced by the limited sample size and the consideration of only one sector compared to this study with a larger sample size and multiple sectors. So, relatively, it can be said that the compliance rate is appreciably high at 71.74% in 2019 compared to the study by Ishaku *et al.* (2020).

On an industrial basis, the most effective industrial sector was the industrial goods sector, with a corporate governance score of 74.75%, far above the aggregate average of 69.38% for the period. The sectorial compliance rates are presented in Table 8.2.

Table 8.2: Aggregate average compliance index2012-2019

Sectors	Sectorial Average	Ranking
Industrial Goods	74.75%	1
Oil and Gas	73.88%	2
Consumer Goods	73.00%	3
Conglomerates	72.60%	4
Services	71.40%	5
Construction/Real Estate	66.86%	6
ICT	66.55%	7
Healthcare	66.38%	8
Natural Resources	65.68%	9
Agriculture	62.68%	10
Aggregate Average	**69.38%**	

As Table 8.2 shows, five of the ten (about 50%) sectors recorded an above-average compliance score, while the remaining 50% recorded below the aggregate sample mean score for the period. The empirical results indicate that the sample firms recorded a progressively increasing trend in corporate governance compliance. However, the yearly increase rate is not significant. Nevertheless, the introduction of the 2011 version of the Code to replace the 2003 Code, coupled with the effective involvement of the Nigerian Stock Exchange (NSE) and SEC-N in ensuring that firms operate with boards that are properly set up and according to guidelines and principles enunciated in the 2011 Code, may have been responsible for the level of performance achieved.

8.3.2 Findings based on the compliance index model

Having established the corporate governance index, the Fixed Effect (FE) estimation model was applied to estimate the level of relationship between compliance with the corporate governance index and firm performance. The empirical results showed that the NCGI is negatively correlated with the three firm financial performance proxies of Tobin's Q, ROE, and NAT. The coefficients of the relationship between the compliance index and the three financial performance independent variables are all negative as follows: Q ratio -0.01, ROE -0.06, and NAT -0.09. Although the coefficients are all negative, they are not statistically significant since their respective *p-values* are greater than 0.05, which is the critical value. The control variables exhibit statically significant and positive coefficients and *p-values*

for all dependent variables. Table 8 shows a more in-depth look at the relationship between the compliance index and some financial variables. 3.

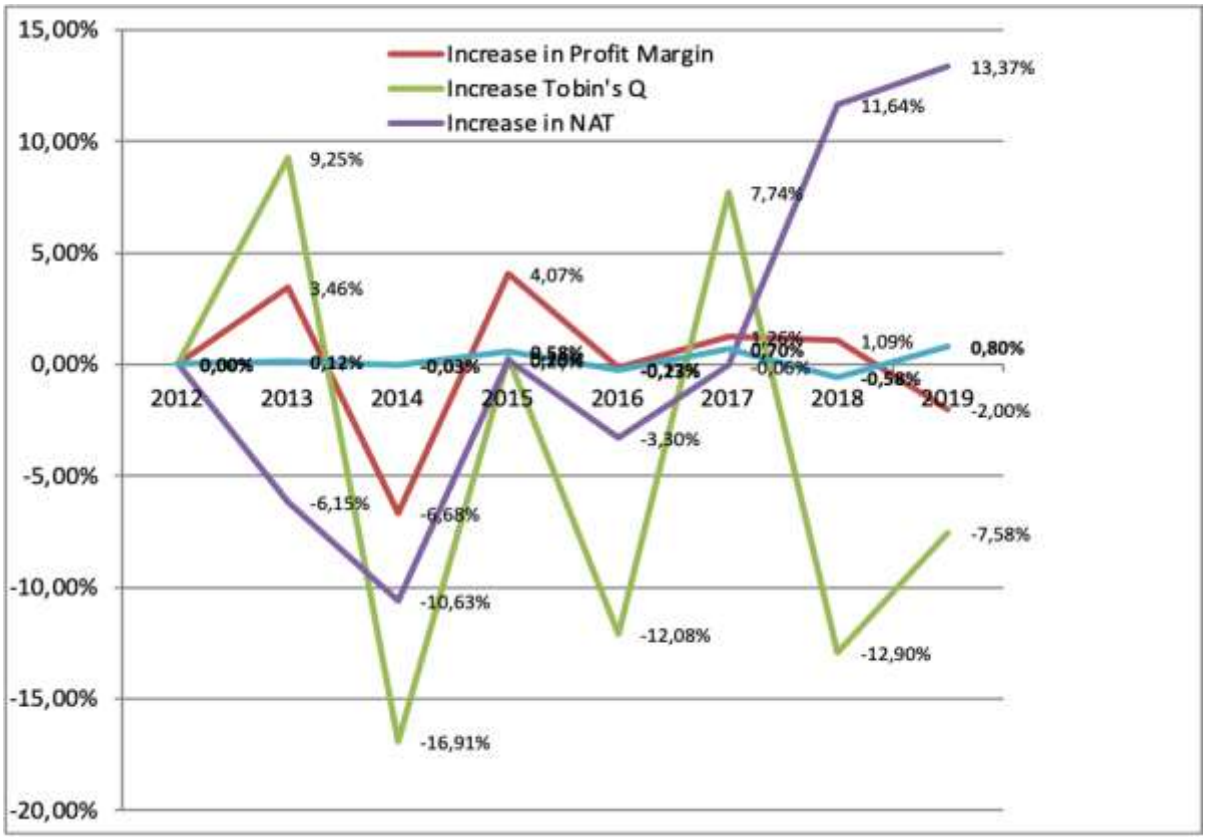
Table 8.3: Summary empirical FE regression results- compliance index model

Measures	Tobin's Q	ROE	NAT
Constant coefficient	-0.62	-0.59*	0.31
T – Statistics	(-1.20)	(-3.26)	(1.47)
p-value	0.23	0.00*	0.14
Coefficient of CGI	-0.01	-0.06	-0.09
T – Statistics	(-0.62)	(-1.92)	(-1.71)
p-value	0.53	0.06	0.09
Coefficient of Control variables	2.32*	0.97*	0.81*
T – Statistics	(13.11)	(15.82)	(11.33)
p-value	0.00*	0.00*	0.00*

The NCGI index shows an overall progressive increase in the compliance level from 2012 to 2019. The yearly compliance increase percentages are presented in Table 8.4. Also, Figure 8.1 indicates that whereas the NCGI had a marginal yearly increase rate, there was a high level of deviation in the yearly changes in the case of the financial variables.

Table 8.4: Percentage change of financial variables and NCGI 2012-2019

Year	Increase in profit margin	Increase in Tobin's Q	Increase in NAT	Increase in NCGI
2012	0.00%	0.00%	0.00%	0.00%
2013	3.46%	9.25%	-6.15%	0.12%
2014	-6.68%	-16.91%	-10.63%	-0.03%
2015	4.07%	0.28%	0.20%	0.58%
2016	-0.17%	-12.08%	-3.30%	-0.23%
2017	1.26%	7.74%	-0.06%	0.70%
2018	1.09%	-12.90%	11.64%	-0.58%
2019	-2.00%	-7.58%	13.37%	0.80%



ROE is excluded from Table 8.2 and Figure 8.1 because of the wide variation pattern, which could exhibit some illogical extreme trends. The extreme trend resulted from the ROE of some firms whose equity figures are negative or very small, as the ROE expresses the profit after tax (PAT) over the value of equity.

Figure 8.1: Trend of change of financial variables and NCGI 2012-2019

The results disagree with the notion that an increase in the compliance index level will result in improved firm financial performance. As can be seen in Figure 8.1, whereas the NCGI showed a marginal increase, the profit margin did not show a similar trend, although other financial variables showed some positive increasing trend. However, the results support the argument of Plessis *et al*. (2011) that an increase in the corporate governance level may not necessarily result in improved firm performance at all times because of the impact of differences in both the internal and external environment and the resources at the disposal of the firm. Accordingly, the empirical evidence rejects the alternative hypothesis 1 and accepts the null hypothesis that improvement in corporate governance compliance level does not significantly and positively affect the financial performance of firms in all economic climes.

One explanation for this result could be the absence of adequate corporate governance disclosures by firms in their annual reports, especially as they relate to the remuneration of directors, the existence of an internal audit unit, the process of board appointments, the roles of the board and management, code of ethics and conduct, and

the statement on the level of compliance with the code, among others. Also, only a few firms had more than two female and foreign directors on their boards.

8.3.3 Findings based on the Equilibrium-Variable Model

The equilibrium variable model expresses the relationship between the individual independent variables and the financial performance proxies of Tobin's Q, ROE, and NAT. Using the FE estimation model, the results indicate that not all the independent variables are positively related to the three dependent variables as suggested in hypotheses 2 to 11. Table 8.5 presents the summary of the relationship between the dependent and independent variables.

Table 8.5: Relationship between the dependent and the independent variables

S/N	Variable	Tobin's Q			ROE			NAT		
		Coeff.	P. Value	T-Stat.	Coeff.	P. Value	T-Stat.	Coeff.	P. Value	T-Stat.
1	Constant (C)	7.034	0.000**	4.71	2.367	0.000**	4.67	4.753	0.000**	9.07
2	BODCOM *	-0.082	0.428	-0.79	-0.046	0.191	-1.31	-0.066	0.069	-1.82
3	BODIND*	-0.016	0.906	-0.12	-0.034	0.464	-0.73	-0.070	0.145	-1.46
4	BODLTY*	-0.420	0.119	-1.56	-0.326	0.000**	-3.57	-0.381	0.000**	-4.03
5	BODMTG*	-0.019	0.442	-0.77	-0.006	0.418	-0.81	-0.018	0.030**	-2.17
6	BODSIZ*	-0.020	0.365	-0.91	0.004	0.622	0.49	-0.003	0.694	-0.39
7	EXACOM*	0.016	0.615	7.45	-0.014	0.182	10.05	0.003	0.805	3.94
8	FORMEM*	0.038	0.350	0.50	0.010	0.479	-1.34	0.019	0.176	0.25
9	GENDIV*	-1.084	0.002**	-4.09	-0.167	0.163	-3.90	-0.364	0.003**	-7.15
10	OTHDIS*	0.013	0.581	2.10	-0.001	0.950	0.30	0.005	0.543	1.42
11	MKTSHR*	0.386	0.470	0.94	0.496	0.006**	0.71	1.113	0.000**	1.36
12	NPISHR*	0.117	0.367	-3.08	0.016	0.722	-1.40	0.029	0.518	-2.95
13	FIRMSI*	105.781	0.036**	0.72	5.052	0.767	2.75	25.172	0.154	5.96
14	CAPSTR*	1.498	0.000**	0.90	0.685	0.000**	0.36	0.277	0.000**	0.65
15	FIRAGE*	-6.889	0.000**	0.55	-2.227	0.000**	-0.06	-4.223	0.000**	0.61
	F-Statistics	35.127	0.000**		10.317	0.000**		52.360	0.000**	

***Board Committees (BODCOM), Board Independence (BODIND), Board Duality (BODLTY), Board Meetings (BODMTG), Board Size (BODSIZ), Audit Committee and the External Auditor independence (EXACOM), Foreign board members (FORMEM), Gender diversity (GENDIV), Other disclosures (OTHDIS), Market share (MKTSHR), Non-promoter institutional shareholders (NPISHR), Size of the firm (FIRMSI) Capital structure (CAPSTR), Age of the firm (FIRAGE).** Significant value at .05 confidence interval.**

As Table 8.5 shows, other than the gender diversity (GENDIV) that indicates a significant negative association with the Q ratio, all the other independent variables (other than the control variables) have an insignificant relationship with the Q ratio. The audit committee and external auditor; foreign board membership, other disclosures, market share, and the proportion of institutional shareholding are positively associated with Tobin's Q.

These results imply that when firms improve the independence of the audit committee and external auditor; foreign board membership, other disclosures, market share, the proportion of institutional shareholding, firm size and capital structure, the market-based value, Tobin's Q, will improve favourably. In contrast, an attempt to improve the number of board committees, board independence, number of board meetings, board size, the number of females on the boards, and the separation of the positions of the CEO and chairman of listed non-financial firms decreases Tobin's Q value. All the control variables have a significant relationship with the Q ratio. The firm size and the capital structure have a significant positive relationship with the Q ratio while the relationship between the firm age and the Q ratio, is significantly negative.

The number of board committees, board independence, separation of the CEO and chairman positions, board meetings, independence of the audit committee and the external auditors, proportion of females on boards, and other disclosures have various degrees of negative coefficients with ROE. However, only the separation of the CEO and chairman positions is negatively significant, while others do not show statistical significance. On the positive side, the board size, the inclusion of foreign board members, market share, the existence of institutional shareholders, firm size, and capital structure indicate various values of positive coefficients with ROE. However, only the market share and the capital structure show a significantly positive association with ROE.

The implication of the ROE regression results is that the separation of the positions of CEO and chairman of the board would significantly reduce the value of ROE. The other negative coefficients have an insignificant *p-value* and may not significantly affect the value of the ROE. On the other hand, improving the market share and the capital structure ratio would significantly improve the value of the ROE of listed non-financial firms in Nigeria. However, the improvement of the board size, the proportion of foreign board members, the increase in the proportion of institutional shareholding, and the firm size would only improve the value of ROE marginally as the *p-values* of these variables are not statistically significant.

For NAT, the number of board committees, level of board independence, separation of the CEO and chairman positions, the number of board meetings, the board size, and the proportion of females on boards indicate varying degrees of a negative relationship with NAT. However, only the separation of the CEO and the chairman positions, the number of board meetings, the proportion of females on boards, and the market share, indicate statistically significant negative coefficients for NAT. In contrast, independence of the audit committee and the external auditors, foreign board membership, other disclosures, market share, and institutional shareholders reveal a positive association with NAT, but at varying levels. Only the market share and capital structure recorded a statistically significant positive relationship with NAT.

This evidence suggests that an increase in the number of board committees, enhancement of board independence, the separation of the CEO and chairman positions, an increase in the number of board meetings, large board size, and the proportion of females on corporate boards could reduce the value of the NAT of non-listed firms. However, the negative effect is not significant unless in the case of the separation of the CEO and chairman positions, an increase in the number of board meetings, and an increase in the proportion of female directors on boards.

On the other hand, the regression results suggest that improvement in the independence of the audit committee and the external auditors, foreign board membership, other disclosures, market shares, institutional shareholders, and capital structure would improve the financial performance of the firm. However, only an improvement in the market share and capital structure could significantly improve the value of NAT.

The aggregate effect is that an increase in the proportion of foreign directors, market share, institutional shareholding, firm size, and capital structure could positively affect the values of the three financial performance proxies. The results imply that firms should improve these independent variables to improve their overall financial performance. On the contrary, the increase in the five independent variables of board committees, board independence, separation of the positions of the CEO and chairman of the Board, increase in the number of board meetings, and increase in the proportion of female directors negatively affect the financial performance proxies. The implication of the results is that the continuous increase in the values of these value-reducing variables would reduce the overall value of the firm.

One interesting finding of the study is that the constant (C) variable of the regression results is positive for all three firm performance proxies. Secondly, the *p-values* of the constant coefficients are statistically significant since all the *p-values* are less than 0.05. This shows that the overall effect of the corporate governance practices on the financial performance of the listed non-financial firms for the period 2012 to 2019 was significantly positive.

What the outcomes of the regression results suggest is that the design of the corporate governance framework should consider the characteristics of the firm and allow the firm to adopt the practices that suit its structure and operations. In other words, the adoption of corporate governance practices should depend on the corporate structure, nature of operations, and the expected business outcomes of the firm.

8.4 Recommendations

Research is all about the systematic investigation into phenomena using some form of organised procedures to gather relevant data with the aim of contributing to generalizable knowledge, establish facts and reach new conclusions (Ahmad, 2015). Research provides unquantifiable benefits to individuals and to society in general and contributes to the efforts of organisations and governments in resolving social challenges (Basu, 2020). It also shows how management and finance theories work at the firm level, including the impact of technology and other forms of scientific breakthroughs on the performance of social systems and economic entities (Alfred *et al*., 2015).

For a study to achieve its objectives, the researcher must, of necessity, communicate the research findings effectively to the public or sponsors of the research. The communication of research results and recommendations is important for several reasons. Zarah (2021) suggests some reasons for communicating research findings. These include: building knowledge and facilitating learning, understanding issues and increasing public awareness, facilitation of business success, disproving lies in support of truths, identifying opportunities, encouraging others to analyse and share valuable information for the betterment of society, and providing nourishment and exercise for the mind.

Specifically, the recommendations discussed in this study are intended to achieve the following main objectives:

(1) Give an insight into how the 2011 Code has affected the performance of the listed firms and what the policy framers need to do to improve compliance with the corporate governance codes whenever they are issued.

(2) Inform investors about the dynamics of firm performance for better investment decision making.

(3) Provide literary evidence based on the 2011 Code to stimulate further research on corporate governance and its impact on firm performance.

(4) Provide a guide to the design and installation of corporate governance in the Nigerian context.

To achieve the above four objectives, the recommendations, which are discussed in the three subsections that follow, are based on three main headings: compliance level; the relationship between NCGI and firm performance; and the relationship between the various governance mechanisms (internal and external) and the financial performance of the firm. They are.

8.4.1 Recommendation based on compliance with NCGI

The average industrial compliance index between 2012 and 2019 ranged from 62.68% to 74.75%. Although the results suggest that compliance rate does not significantly improve performance of the firm, better compliance level is desired since the listed Nigerian firms are expected to participate in the global product and capital market. The onus of ensuring the effectiveness of corporate governance leans heavily on the board of directors. Thus, Section 24.2 of the 2018 Code states, "The Board should be responsible for monitoring adherence to the Code of Business Conduct and Ethics to ensure that breaches are effectively sanctioned." Again, no specific sanctions or penalties are specified. This exposes the new code to subjective application and judgement by the directors of the company. A form of penalty for an infraction is desirable to improve the compliance level (Adegbite, 2012). Hence, recommendations 1 and 2 are made.

Recommendation 1

A clear provision should be included in the code by the government or regulatory body, stipulating clearly what infractions may be penalised and the type of penalty or sanction for the various infractions.

Recommendation 2

The Security and Exchange Commission of Nigeria, the Financial Reporting Council of Nigeria and the Nigerian Stock Exchange should collaborate to organise training to educate directors and investors of listed firms in Nigeria, especially non-financial firms, on the business imperatives of adopting effective corporate governance frameworks. The argument should focus on the nexus between effective corporate governance and the improvement of the operational and financial performance of the firm and the expectations of the world economic arena.

8.4.2 Recommendations based on the relationship between NCGI and the value of the firm

The regression results suggest a negative relationship between the NCGI and the three firm financial performance proxies. This suggests that compliance with the code was not enough to improve the financial performance of the firm but that there were, possibly, other factors not identified by the measurement instrument that might also have influenced the performance of the firms. When it is up to the researcher to find and assign weights to measurement variables, the researcher will inadvertently exclude some important variables.

Recommendation 3

The Code should be reviewed to include a list of weights for each compliance variable. This would ensure the objective assessment of the firms' corporate governance compliance level and enable firms to also undertake their self-assessment early enough. The second advantage of this approach is that the researchers would have the weights to use as independent variables to gauge the level of corporate governance practices and their compliance level. Further, the provision of a standard list of weights would reduce the challenges of researchers in self-computing the corporate governance compliance index.

8.4.3 Recommendations based on the relationship between the various governance mechanisms (internal and external) and the value of the firm

The interesting indication of the regression results is that the constant variable is positive and significant for the three financial performance proxies. This, as earlier indicated, confirms the general position in corporate governance literature that effective governance has a positive effect on the financial performance of the firm

(Kajola, 2008; Rushton, 2008; Alalade *et al.*, 2014; Ademola *et al*., 2016; Adefemi *et al.*, 2018; Ibrahim & Abdullahi, 2019). The next section gives recommendations for each of the governance mechanisms, starting with those that have strong statistical connections, as shown in Table 8.6.

Table 8.6: Table of variables with significant associations with financial performance proxies.

Variable	Coef.	*p-value*	Relationship with		
			Tobin's Q	**ROE**	**NAT**
Internal Corporate Governance Mechanisms					
BODLTY (CEOduality)	-0.326 -0.381	0.000** 0.000**		Significant	Significant
GENDIV (Female board membership)	-1.084 -0.364	0.002** 0.003**	Significant		Significant
BODMTG (Board meetings)	-0.018	0.030**			Significant
External Corporate Governance Mechanisms					
MKTSHR (Market share)	0.496 1.113	0.006** 0.000**		Significant	Significant

CEO duality (BODLTY)

The SEC-N Code of 2011 provides that the positions of the chairman and the CEO should be separated and held by two unconnected individuals. Supporting this position, Croci (2018:16) argues that

> *"The concentration of the titles of CEO and chairman of the Board in the hands of a single person has often been perceived negatively because the monitored party becomes the leader of the body in charge of monitoring activity. For this reason, institutional investors, proxy advisors, and several corporate governance scholars have pushed for the separation of the two roles".*

Prior empirical evidence (earlier discussed) supports the argument by Croci (2018) in one strand and rejects the argument in another, as discussed in Chapter Four. The opposing evidence suggests that there is no right or wrong board structure with special reference to board duality, although as Palanissamy (2015:33) observes, "generally shareholders and stakeholders are more inclined towards the separation of the roles to promote independence and transparency." The evidence in this study rejects the argument of Croci (2018) in the context of Nigeria's listed non-financial firms. Thus, the study reveals that the CEO's non-duality negatively affected the

performance of the sample firms. In other words, the provision of the Code that two unconnected individuals separately hold the two positions does not have a positive effect on the performance of listed non-financial firms in Nigeria. Further, the separation of the CEO and the chairman positions works better for firms that are subject to strict government or intuitional controls, such as banks and other strictly controlled sectors (Gontarek & Belghitar, 2021). When compared to the banking and financial sector, the Nigerian government does not have a lot of control over listed companies that are not in the financial sector.

Recommendation 4

The separation of the positions of the CEO and the chairman of the Board of listed non-financial firms in Nigeria should not be a strict requirement. Firms should be allowed to choose either to separate or to combine the two positions. The selection of either approach should depend on the structure, culture, and history of the firm. This will significantly improve the value of ROE, NAT, and the Q ratio, since separation results in negative coefficients.

Female board membership (GENDIV)

There is a growing agitation in support of increasing female board membership (Croci, 2018). Even though the 2011 SEC-N Code does not provide for some specific proportion of female directors, it does advise that boards should be gender-sensitive. For instance, Section 13.2. stipulates that the "criteria for the selection of directors should be written and defined to reflect the existing board's strengths and weaknesses, required skill and experience, and age range and gender composition". Empirical evidence, as earlier mentioned, is divided about the effect of female board membership on the performance of the firm. While some studies find a positive relationship between female board membership and the financial performance of the firm (Terjesen *et al*., 2015; Cherotich *et al*., 2018; Bennouri *et al*., 2018), others disagree with the inclusion of females on boards because of its negative relationship with firm performance (Akinwole & Ajide, 2020; Kweh *et al*., 2019; Simionescu *et al*., 2021). This study finds a significant negative relationship between the inclusion of female directors on the boards of listed non-financial firms in Nigeria and their financial performance in terms of Tobin's Q and NAT, but not with ROE. Therefore, the following recommendation is made.

Recommendation 5

The inclusion of female directors on the boards of non-financial listed firms in Nigeria should not be made mandatory because such a requirement would reduce the value of the listed non-financial firms. Rather, firms should be guided by business sense and the impact of such decisions on the value of the firm. This means that inclusion should not be motivated to achieve the world's clamour for female liberation but, critically, as a rewarding business strategy.

Board meetings (BODMTG)

To be effective, the board necessarily needs to meet regularly. SEC-N (2011) provides in Section 12 that:

> *"To effectively perform its oversight function and monitor management's performance, the Board should meet at least once every quarter. Every director should be required to attend at least two-thirds of all Board meetings. Such attendance shall be a criterion for the re-nomination of a director except there are cogent reasons which the Board must notify the shareholders of at the annual general meeting".*

The Code does not specify the maximum number of board meetings but defines a minimum of four per year. Therefore, business imperatives should drive how regular board meetings are held, bearing in mind that meetings are expensive to hold, especially for large boards. Board members are to be accommodated, sometimes in costly hotels, and their transportation costs and other allowances paid. In spite of all this, Croci (2018:10) argues that board meetings are an important "resource in improving the effectiveness of a board and increasing the quality of the monitoring activity."

Boards that meet more frequently are more likely to perform their duties in accordance with shareholders' interests. However, for dominant CEOs who succeed in hijacking the agenda of the meeting, a practice more associated with large and dispersedly held firms, regular board meetings would not effectively monitor the activities of management (Jensen, 1993). This probably explains the mixed empirical results on the effect of regular meetings on the financial performance of firms. Some empirical evidence has supported regular meetings because of their positive relationship with firm financial performance (Azubike *et al.*, 2015; Usman, 2018), while others reject regular board meetings because of their negative effect on the firm's bottom line (Vafeas, 1999; Hanh *et al.*, 2018; Ebun & Emmanuel, 2019).

For this study, the number of board meetings has a significant negative association with the value of NAT, while the relationship with the Q ratio and ROE is negative but insignificant. Therefore, recommendation 6 is made as stated below.

Recommendation 6

The minimum number of board meetings for non-financial listed firms should be lower than four since the frequency of board meetings is inversely related to the financial performance of the firm. Better still, the frequency of board meetings should be determined by business imperatives rather than by regulatory provisions.

Market share (MKTSHR)

The inclusion of the market share variable in this study was motivated by empirical evidence and the argument of economic theory on the relationship between quality production brought about by efficient and effective internal processes and the improvement of the product market share (Fama, 1970 & 1991; Raith, 2003; Selarka, 2014). The expectation is that firms that are effectively managed and governed will provide quality products and services sustainably (International Federation of Accountants, 2009). In other words, the product market rewards firms that are properly managed to provide goods and services at the best possible prices because of their cost management capability. The nexus between effective corporate governance and the optimal performance of the firm is already public knowledge. Thus, the OECD (2015) stresses the importance of effective corporate governance as a mechanism for ensuring business integrity and quality service delivery that attract customers, especially in a globalised market economy. A priori, effective corporate governance would result in optimum quality service and product delivery at the best price possible and lead to the enhancement of market share. Taolin *et al. (*2019) identify a positive nexus between the implementation of effective corporate governance practices and improvements in public trust and the corporate image of the firm. The customer that trusts the firm will patronise it because of the guarantee of quality. This will result in improved market share. Thus, firms that operate in the competitive product market are likely to reduce agency costs because the product market would discipline management and motivate them to take value-driven actions to improve their market share to avoid liquidation or forceful takeover.

As with other governance mechanisms, the association between market share and firm value is mixed. While some studies show a negative and insignificant relationship (Beiner *et al*., 2008; Fazlzadeh & Sabbaghi, 2010; Magoro, 2009) others observe a positive relationship (Huang & Peyer, 2012; Omidfar *et al.*, 2017; Gempesaw, 2020; Ammann *et al*., 2013; Giroud, and Mueller, 2011; Januszewski *et al.*, 2002; Wang *et al*., 2014; Omidfar *et al.*, 2017) between market share and the financial performance of the firm.

The relationship between the market share and the financial performance of the sample-listed firms in this study is positively significant for the firm value measured in terms of ROE and NAT but not with respect to the Q ratio. Thus, improvements in the market share of the firm will result in an improvement in the financial performance of the firm. Therefore, recommendation seven is made.

Recommendation 7

(a) *The government should provide infrastructure at a subsidised or affordable cost, such as constant power supply and good roads to industrial clusters to reduce the cost of production; provide stimulus grants and long-term low-interest loan facilities to the non-financial sector to enable the sector to produce quality goods and services at a reduced cost for the domestic and export markets. This will enable non-financial firms to effectively participate in the global economy and improve the profitability and market share of the firm, especially in Sub-Saharan Africa.*

(b) *Improve customers' rights and strengthen the justice system to ensure that firms seek to capture market share through value-driven strategies that would promote quality goods and service and increase the market share of the firm.*

Other recommendations

Other recommendations based on the non-significant relationships as indicated in Table 8.7 are discussed below. The *p-value*s of the variables are all greater than 0.05.

Table 8.7: Table of variables with insignificant association with financial performance proxies.

S/N	Variable	Tobin's Q	ROE	NAT
		Coeff.	Coeff.	Coeff.
1	Board Committees (BODCOM)	-0.082	-0.046	-0.066
2	Board Independence (BODIND)	-0.016	-0.034	-0.070
3	Board Size (BODSIZ)	-0.020	0.004	-0.003
4	Independence of the Audit Committee and External Auditor (EXACOM)	0.016	-0.014	0.003
5	Foreign Board Membership (FORMEM)	0.038	0.010	0.019
6	Other Disclosures (OTHDIS)	0.013	-0.001	0.005
7	Non-promoter Institutional Shareholding (NPISHR)	0.117	0.016	0.029

Board Committees (BODCOM)

The 2011 Code provides that listed firms in Nigeria should have a minimum of three board committees, including the statutory Audit Committee (SEC-N, 2011). Specifically, the Code provides in section 9.2 that "in addition to the statutory audit committee, firms should establish a governance/remuneration committee, a risk management committee, and such other committees as the Board may deem appropriate depending on the size, needs, or industry requirements of the company." The results of the study indicate that the number of committees is negatively related to the financial performance of the firm. This evidence is closely linked to the board meeting variable. This is because, practically, the cost of holding board meetings is likely to be positively related to the number of committees since each committee incurs allowances and entertainment costs. The negative coefficients suggest that an increase in the number of committees would negatively affect the value of the firm. Thus, recommendation 8 is presented below.

Recommendation 8

The Code of corporate governance should not mandate listed firms to have more than the three committees indicated and should require that the creation of additional committees must be driven by operational exigencies. Therefore, a performance weight should be attached to justify the establishment of any additional committee, such as calculating the revenue and profit after tax (PAT) per committee. This would ensure that the number of board committees is based on the dynamics of the firms and the need to improve effective value creation.

Board Independence (BODIND)

To ensure board independence, the Code (SEC-N, 2011) made far-reaching provisions earlier discussed in Chapter Seven under the resolution of Hypothesis 2.5. These include having more non-executive directors on the board; the inclusion of independent directors with a shareholding not exceeding 0.1% and without any form of relationship with the management of the firm, among other provisions. Empirical evidence in this study shows that board independence is adversely associated with the three financial performance proxies. Thus, an increase in the level of independence of the board would negatively affect the value of the firm. Therefore, the directors should comprise more of those who have substantial stakes in the firm to curb the negative consequence of increasing the level of board independence. The recommendation on this finding is presented below.

Recommendation 9

Non-financial institutions are exposed to external market control, which is effective in controlling the activities of the firms since their poor performance would lead to avoidance of the products or services. As a result, the level of board independence for non-financial listed firms should be as close to that of privately owned family firms as possible. Let the motivation board's independence be the improvement of the performance of the firm rather than meeting the provisions of the code.

Board Size (BODSIZ)

The empirical evidence of this study suggests that board size has a negative but insignificant impact on the financial performance of the firm in terms of Tobin's Q ratio and NAT, but has an insignificant positive relationship with ROE. Thus, an increase in the board size would reduce the value of Tobin's Q and NAT and increase ROE, but not substantially. This suggests that there may be an optimal board size, as argued by Wang *et al.* (2009). The determination of the optimum board size should, however, be left to the firms and not by any form of regulation. This conclusion is made based on the mixed empirical evidence on the effect of board size on the financial performance of the firm (Wang *et al*., 2009; Ibrahim & Salihu, 2015; Shrivastav & Kalsie, 2016; Pantamee & Ya'u, 2018; Qadorah and Bt Fadzil (2018a).

Recommendation 10

The size of the board should be allowed to be determined by the owners of non-financial firms. Thus, the determinants of the board size of listed non-financial firms should be internally motivated rather than by the Code. However, firms should be required to include a representative of the minority shareholders on their boards and be given a bundle vote that can be used to express disagreement in cases where the representative considers actions by the controlling shareholders to be an attempt to expropriate the resources of the firm.

Independence of the audit committee and external auditor (EXACOM)

Both the 2011 Code and CAMA 1990 recognise the imperatives of having an independent audit committee and external auditor. The results of the regression suggest that the independence of the audit committee and the external auditor is positively but not significantly associated with the Q ratio and NAT, but negatively associated with ROE. These results can be considered as an overall positive, though insignificant, relationship between the independence of the audit committee and external auditor (EXACOM) and the financial performance of the firm. However, considering that too much familiarity with the external auditor could lead to some compromise, there is a need to review the tenor and other engagements of the external auditor to further enhance the independence. The recommendation is presented below.

Recommendation 11

(a) *The external auditor should not be allowed to undertake consulting services for audit clients. Another consultant should be engaged to avoid the auditor compromising his responsibilities.*

(b) *The audit committee of a listed firm should comprise a majority proportion of shareholders' representatives and a minority proportion of independent directors.*

(c) *The firm should determine the size of the audit committee and not by any legal instrument or code.*

(d) *The appointment of members of the SAC should be communicated to the SEC for approval to enable the members of the committee to have adequate protection against intimidation by the board or management.*

Foreign Board Membership (FORMEM)

Foreign board membership refers to members of the board of a company who are foreign nationals. The inclusion of foreign board membership as an independent variable in this study is motivated by extant empirical evidence that suggests that the engagement of foreign board members can substantially improve the performance of the board and enable the board and the firm to develop and implement strategies that are much more value-focused and make the firm attractive to foreign collaborations and investors (Estélyi & Nisar, 2016; Handa, 2020). However, both the 2011 Code and CAMA 1990 do not contain any provision to encourage listed firms to include foreign directors on their boards. The new code only requires firms to consider board diversity in terms of knowledge, skills, and experience, age, culture, and gender without indicating nationality. Consequently, recommendation 12 is made.

Recommendation 12

The listed non-financial firms should be grouped into two categories according to the value of assets and market capitalisation as follows:(i) firms in the premium board, (ii) firms in the mainboard. The firms in these two categories should have slightly modified corporate governance requirements with regard to the inclusion of foreign board members. Firms in the premium-listing category should be required to include a foreign national on their boards since most of these firms are large and could easily access the international product and capital markets. The other firms should not be compelled to include foreign directors on their boards but may do so if they so desire. This recommendation is meant to encourage the exchange of international best corporate governance practices in order to position Nigerian listed firms to actively participate in the global market.

Non-promoter Institutional Shareholding (NPISHR)

Prior empirical evidence on the relationship between institutional shareholding and the financial performance of the firm has been discussed in Chapter Seven. There is no specific requirement for firms to have institutional investors, other than that "shareholders, especially institutional shareholders, are expected to familiarise themselves with the letter and spirit of the code and encourage, or whenever necessary, demand compliance by their companies" (SEC-N, 2011: section 1.3b). SEC-N (2011: section 27) imposes the following additional mandate on institutional shareholders:

Shareholders of public companies should play a key role in good corporate governance. In particular, institutional shareholders and other shareholders with large holdings should seek to positively influence the standard of corporate governance in the companies in which they invest.
They should demand compliance with the principles and provisions of this code. They should seek explanations whenever they observe non-compliance with the Code'

Taken together, the sections indicate the critical role institutional shareholders should play in ensuring the effectiveness of corporate governance of listed firms. Therefore, demanding a proportion of the shareholding to be for institutional shareholders would be a worthy capital market development strategy. Consequently, recommendation 13 is presented below.

Recommendation 13

The regulatory bodies should require listed firms, especially those listed on the premium board, to reserve a percentage of their shares for institutional shareholders to deepen the effectiveness of corporate governance practice in the firms and stimulate liquidity of the shares of listed firms since institutional shareholders are quick to liquidate the substantial proportion of the shares of low-performing firms compared to individual non-promoter shareholders. Also, the encouragement of firms to attract institutional shareholding would strengthen the external market of corporate control that is very weak in Nigeria. One of the motivations should include granting a lower withholding tax rate on the dividends paid to institutional shareholders.

8.4.4 Comments based on the control variables

The study considered three control variables: firm size (FIRMSI), capital structure (CAPSTR), and firm age (FIRAGE). Although the three control variables are not part of the relationships for which the hypotheses are tested, they are still equally important in shaping the outcome of this study. Regression results show that firm size and capital structure are positively associated with the three financial performance proxies. However, a significant positive relationship was indicated for the Q ratio (for all the control variables) and only positively significant for the capital structure and firm age for ROE and NAT. The ROE and the NAT have no significant relationship with firm size. The age of the firm has a significant negative relationship with the three financial performance variables. These mixed results confirm the evidence of similar studies discussed in Chapter Seven. However, the conclusion by

Orji *et al*. (2021) that debt financing improves the performance of firms in Nigeria makes comment on the evidence of this study on the relationship between capital structure and the performance of listed non-financial firms necessary. The capital structure is the ratio of debt to equity. The positive relationship in the study shows that listed non-financial firms in Nigeria should adopt more debt capital in their capital mix. The main advantages of the debt financing option are that the interest paid is exempt from tax and the ownership remains undiluted.

8.5 Policy implications of research findings

The world has become a global economic village. This implies that the emergence of management practices and technologies in one economic zone or country will affect the world. Therefore, the Nigerian economy and its players are exposed to the vagaries of economic dynamics that originate from other economic territories, including social effects. Examples of these include educational and political systems; technology; social practices; and illnesses. Recently, the World Health Organisation (2020) stated that the first human case of COVID-19, the disease caused by the novel coronavirus, subsequently named SARS-CoV-2, was first reported by officials in Wuhan City, China, in December 2019. In June 2021, the United Nations Conference on Trade and Development (2021) projected that the global economy could lose over $4 trillion due to the COVID-19 impact on tourism. Already, as observed by Oni (2020), the pandemic negatively affected the Nigerian economy, with the economy declining by 6.1% in quarter 2 of 2020. Andam et al. (2020) also observe that the COVID-19 resulted in a 14-percentage point temporary increase in the poverty headcount rate in Nigeria, implying that 27 million additional people fell below the poverty line during the lockdown in 2020. In response, the Central Bank of Nigeria proposed a targeted loan of ₦3.5 trillion to support some sectors. The support did not significantly stabilise the economy because factories were virtually working at below capacity since employees were sceptical of work for fear of contracting the virus (Ozili, 2020). This shows how the economies of the world are interconnected and stresses the importance of considering the impact of decisions, including business decisions, on society. The continuous interaction between national economies and peoples makes it impossible for any economy to exist in isolation and survive. Therefore, the consideration of the corporate practices and governance systems of other world economies is necessary when designing corporate governance

frameworks. Thus, the introduction of formal corporate governance codes in Nigeria seeks to position the Nigerian listed firms to operate more efficiently in order to take advantage of the opportunities offered by the global market economy.

With respect to this study, several policy implications can arise from the empirical evidence. The first is that the Nigerian Stock Exchange, SEC-N and a host of other control agencies responsible for the supervision of listed firms in Nigeria should perform their duties effectively. Secondly, the increase in the compliance rate affected the performance of the firm, especially with regard to the non-financial listed firms from 2012 to 2019, although not substantially. The positive trend of compliance with the 2011 Code, although marginally from 70.38% in 2012 to 71.74% in 2019 (about an increase of 1.36%) suggests that enforcement is fairly effective and that strengthening of some specific provisions that mandate compliance could significantly improve the compliance level and impact favourably on the performance of the firms.

The third is that the outcome of the study confirms the divergence in the outcomes of various studies. This means that there is no "one-size-fits-all" in the design and implementation of corporate governance frameworks (Davies & Schlitzer, 2008). For instance, whereas the adoption of board duality is allowed in the USA (Yang & Zhao, 2014), the UK experience does not encourage board duality. Rather, the separation of the offices of the CEO and the chairman of the board is encouraged. Empirical evidence, however, does not strictly support either of these two positions. Rather, evidence is mixed, even among firms in different industrial sectors in the same country. Thus, as discussed in Chapter Seven, the empirical evidence for this study has been supported by prior studies. Therefore, the design and implementation of corporate governance frameworks, even at the firm level, should consider the idiosyncrasies of the firm, its environment, and the interests of the stakeholders and the government.

One of the major pitfalls of the 2011 Code is that the SEC-N does not require the inclusion of a report on the compliance with the Code in the prospectus of firms applying for listing, as in the UK (Financial Reporting Council Limited of the UK, 2018). The securities listing rules do not require inclusion either. This has the effect of demeaning the importance of compliance with the Code of corporate governance by listed firms. This area may need to be considered.

The philosophical stance of agency theory is that when one is placed in charge of something that is not his, the tendency is for that person to misuse that trust most of the time unless there are control mechanisms in place to discourage that tendency (Jensen & Meckling, 1976). Adam Smith (Jensen & Meckling, 1976:700) correctly supports this, stating that when people are placed

> *"like the stewards of a rich man, they are apt to consider attention to small matters as not for their master's honour and very easily give themselves a dispensation from having it"*.

Berle and Means (1932) support the argument of Adam Smith, by highlighting that agency conflict would arise between management and the owners of the firm as long as the ownership and control of the firm are separate. Considering that Nigerian listed firms are characterised by numerous shareholders and the use of professional managers to control the firms, it can be argued that the most effective and dominant theory that should guide the design of the corporate governance framework in Nigeria should be the agency theory. However, empirical evidence indicates otherwise. For instance, the separation of the offices of the CEO and the chairman; the use of many committees; frequent meetings; independence of the board; and other variables that are the foundations of the agency theory do not indicate substantial support for the propriety or otherwise of the adoption of the agency theory in the Nigerian context.

Bonazzi and Islam (2017:8) observe that the agency theory assumes that a well-developed market for corporate controls is "non-existent, leading to market failures, moral hazards, asymmetric information, and incomplete contracts," among other unwholesome practices. Therefore, to control the agency conflict effectively, the board must be independent from the management. This is the basis for arguing in favour of the separation of the offices of the CEO and the chairman of the board and maintaining a higher proportion of non-executive directors on boards. However, the main driving force behind the agency theory is human behaviour rather than business sense. Thus, while noting that controlling the human tendency to pursue self-interest is critical, it can be argued that the design and application of corporate governance codes should be considered based on business imperatives and not to legitimise the practices of some principles "line, hook and sinker" without consideration of local expediencies. In other words, adaptation rather than adoption of corporate governance philosophies and principles should guide the design of the corporate governance frameworks not only in Nigeria but also in all developing economies.

Corporate governance provisions focus more on the internal board governance mechanisms without appropriate consideration of the external mechanisms, which are equally effective in controlling agency costs and motivating managers for improved performance. Therefore, the government and other policy formulators should put in place frameworks that would ensure that the external market mechanisms function effectively and improve the integrity quotient of Nigeria *vis-a-vis* the need for the Nigerian economy to attract foreign direct investment. This is critical as literature highlights the importance of strengthening external corporate governance mechanisms, especially in developing countries where the legal system is weak. In this regard, when we consider the critical nature of the international market, the requirement to include foreign directors on the boards of listed firms and provide for a proportion of institutional ownership, especially for firms in the premium board category, is arguably important, especially as these considerations are associated with firm strategic survival in the globalised world economy.

The 2011 Code has improved the consciousness of listed firms in Nigeria towards a management style that is value-focused. Accordingly, the incorporation of the recommendations of this study into the subsequent versions of the Nigerian code and other company regulations would enable listed firms in Nigeria, especially those in the non-financial sectors, to be governed efficiently at levels comparable with firms in other advanced economies. This approach is justified since Nigeria is part of the global business community and listed firms can only benefit from the opportunities of the global market when their outputs (products and services) and operational systems conform to international standards and ethics. This approach has become necessary as several empirical studies have established a link between effective corporate governance and increased foreign direct investment and growth (Dombin, 2014; Nizam & Hassan, 2018; Adeja, 2019; Agyemang *et al.*, 2020; Appiah-Kubi *et al*., 2020; Iheanachor & Ozegbe, 2021).

The disclosure requirements and the publication of the annual reports of firms should be enforced for all firms in line with international practices. Experience, in the course of this study, is that many companies do not publish their annual reports with the full complement of corporate governance disclosure requirements as stated in the Code. One of the advantages of ensuring that listed firms publish their comprehensive annual reports with the full complement of corporate governance information is that the financial and corporate governance details are readily available for potential

investors, the research community, and planning by the government. To ensure this, regulators or government agencies may consider giving awards and some financial or tax rebates to firms that comply with corporate governance provisions.

Overall, the findings of this study suggest that the governance needs of the sample firms may vary according to the operational and capital structure, sector, age, and size of the firm. Therefore, flexibility in the enforcement of the provisions of the Code may improve the level of compliance and overall firm performance. For instance, the requirements of the Code on duality, number of board meetings, and board committees, among others, for non-financial listed firms may be based on the structure and capacity of the firm and not apply across to all sectors of listed firms. In other words, subsequent codes should provide some level of scalability for listed firms of different categories and capacities to comply with.

8.6 Research contributions

The imperatives of this study and its contributions are aimed at furthering the international literature on corporate governance by addressing the limitations of prior studies and expanding the empirical evidence on corporate governance in the context of the listed non-financial firms in Nigeria. One of the major limitations of the prior studies, which this study has addressed, is that prior research efforts did not develop a unique compliance index for listed non-financial firms, which is based on the corporate governance provisions of the SEC-N 2011 Code and CAMA 1990. More specifically, prior studies did not create a unique Nigerian corporate governance index (NCGI) of the listed non-financial firms in Nigeria for the period 2012 to 2019.

Linked to this gap is the absence of prior studies that established a relationship between the NCGI and firm performance. Existing studies used the equilibrium variable model to gauge the association between the individual corporate governance mechanisms and the financial performance of the firm without attempting to measure the association between the aggregate compliance index and the financial performance of the firm. The attempt by Akinkoye and Olasanmi (2014) to compute the compliance level of non-financial listed firms was based on the 2003 Code and not on the 2011 Code. Another attempt by Obiyo and Torbira (2011) used the corporate governance provisions created by Institutional Investors Services. Ademola *et al.* (2016), while attempting to develop the CGI of the Nigerian listed firms for the period 2010 to 2014, concentrated effort on 30 manufacturing firms and did not consider

other firms. In addition, Ademola *et al.* (2016) used only three variables: the board structure index, the ownership structure index, and the audit committee index.

Another study by Ndum and Oranefo (2021), that would have considered the provisions of the SEC-N (2011) since it covered from 2012 to 2019, covered only six conglomerates, and used only the board composition and audit committee as the independent variables. Further, existing studies did not consider the external governance index of market share and institutional non-promoter shareholders. Thus, prior research attempts were inadequate to draw a robust conclusion on the impact of corporate governance on the performance of the listed non-financial firms in Nigeria. Consequently, prior studies had no sufficient statistical evidence to explain the effect of good corporate governance on the performance of non-financial listed firms from 2012 to 2019, based on the SEC-N 2011 Code and CAMA 1990. This study addresses these deficiencies.

Given the shortcomings of prior studies, this study can be said to be a novel contribution to the development of international literature on corporate governance in the context of Nigeria as a developing economy in the following ways:

(i) Using the provisions of the SEC-N Code of 2011 (SEC-N, 2011) and additional corporate governance provisions in CAMA 1990 for the construction of the NCGI of the non-financial listed firms in Nigeria from 2012 to 2019. In addition, the independent variables of female and foreign board directors, market share, and institutional shareholding) were considered based on empirical evidence. A review of popular search engines such as Google, Google Scholar, and Mamma indicates that there is no research work that has considered the number of internal and external governance variables comparable to the variables considered in this study, covering 2012 to 2019, when the SEC-N 2011 code operated. This study is the first to compute the NCGI for listed non-financial firms using both the combined provisions of the 2011 Code and the Companies Act (CAC, 1990) as amended and empirical evidence.

(ii) The study uses both the equilibrium variable and the compliance index models in estimating the effects of effective corporate governance on the financial performance of the firm. The use of both the compliance and equilibrium models adds to a recent body of knowledge on corporate governance research in emerging economies that adopts this approach. This study fills this gap in

the existing literature by offering, for the first time, comprehensive and recent evidence on the relationship between the NCGI and the performance of listed non-financial firms on the one hand and between the individual corporate governance variables and the financial performance of the sample firm on the other.

(iii) This study provides a better basis for assessing the performance of the non-financial sectors of the Nigerian economy by using only the listed non-financial sectors. The approach adopted by most prior studies, which combined both financial and non-financial firms in a single study, could lead to biased relationship. This is because non-financial and financial firms are governed by different codes. Therefore, this study provides better empirical evidence on the nexus between effective corporate governance and the performance of the listed non-financial firms for the period 2012 to 2019.

(iv) The treatment of outliers through the winorization process, rather than by simply excluding the outliers or doing nothing about them, improves the quality of the data set used for the study and the resulting regression. Most previous Nigerian studies (Ranti (2011), Kajola (2008), Umoren and Okougbo (2011), Uadiale (2012), Ujunwa (2012), Garba and Abubakar (2014), Simpson (2016), Adegbie *et al.,* (2019), Ogunsanwo (2019), Adejare and Aliu (2020), and Wadesango *et al.* (2020) did not take into account this critical treatment of data. Therefore, it can be argued that the predictive ability of prior Nigerian studies is not as good as in this study.

(v) This study is the most recent study on the subject that is based on the combined provisions of the SEC-N 2011, CAMA 1990, and the fallout of empirical evidence. Therefore, it provides emerging scholars with the most-up-date information on the relationship between firm financial performance and corporate governance in the Nigerian context for the period 2012 - 2019, where the dependent variables include both internal and external governance mechanisms.

8.7 Limitations of the study

One of the popular research phenomena is that every piece of research is characterised by limitations that constrain the achievement of the research objectives to a level that satisfies the researcher. These limitations take various forms, including time, scarce resources, lack of data, and the unwillingness of the object studied (in the case of humans) to co-operate with the researcher. This section aims at providing a guide for the proper interpretation and application of the conclusions contained in this study amidst the limitations.

One of the major limitations of this study is the non-availability of the annual reports of some listed firms with comprehensive information on corporate governance for the period. Due to this limitation, the sample size was cut down to 63 firms out of a possible population of 100 firms, after firms that did not operate from 2012 to 2019 were taken into account.

The second limitation is the incidence of liquidation, merger, or reconstruction of firms that resulted in their being delisted during the period. The fallout is that some firms that were listed in some years ended up being delisted during the year and therefore did not qualify for inclusion in the sample since their data was not available for the full period covered by the study. The presence of complete data for a firm was a primary condition for inclusion in the sample, which exposed the sample to survivor bias (Ntim, 2009).

The manual extraction of the financial and corporate governance data was labour intensive and exposed the data to some unintentional data extraction errors (Albassam, 2014; Ntim, 2009). However, to minimise this challenge, the data sets were reviewed several times to check for reasonability where practicable.

The fourth challenge was the difficulty in constructing the unique NCGI using the binary approach. The use of both binary and proportions was challenging because assigning the binary “1” and “0” to the presence or absence of a variable without considering the weight of such a variable and its capacity to moderate the effectiveness of firm-level corporate governance was subjective as there were no approved weights to use. As observed by Ntim (2009), the use of binary indexes may introduce reliability and validity problems. However, despite this limitation, the binary approach is still widely used in the computation of corporate governance compliance indices for research (Barako, Hancock & Izan, 2006; Hassan & Marston,

2010). Also, using an unweighted binary avoids the temptation to use a personal value judgement when giving values to variables (Ntim, 2009). This is because the provisions in the 2011 Code did not have official weights.

8.8 Suggestions for future research

The limitations and empirical evidence of this study provide many opportunities for further research to probe deeper into some phenomena identified in this study and present additional evidence. First, in the course of this study, it became evident to identify the relationship between corporate governance compliance and product quality or integrity of firms. The focus has been on relating corporate governance to financial performance and not to the quality of service delivery or products. The mixed method of research will be appropriate for this level of investigation since it would consider both qualitative and quantitative data. The mixed-method is a research approach that enables researchers to collect, analyse, and integrate both quantitative and qualitative data using diverse mixed methods of research design (Creswell, 2014).

Second, the scope of the research should extend to cover the effects of the external governance mechanisms of the product market share, market for corporate control, managerial labour market, the control agents and the courts, among others, on the performance of the firm. The data may be extended to include listed firms in other countries in Sub-Saharan Africa.

Third, the exploration of supportive literature suggests that there may only be a handful of studies that investigated the impact of directors' earnings and senior management's remuneration on the performance of the firm. Further research in this important area, for the period 2011–2019, would deepen the literature on corporate governance in Nigeria.

Fourth, although the focus of research on corporate governance is more on listed firms, future research could consider investigating the level of corporate governance in non-listed family and private firms. The mixed method of enquiry, which involves the use of interviews and questionnaires, may also be used to obtain data on the affairs of private firms that are not required to publish annual reports.

Fifth, future studies may also focus on the impact of foreign equity shareholding and debt on the financial performance of Nigerian listed firms. A study in this direction could provide insight into the extent to which foreign shareholding and debts improve the financial performance of the firm.

Sixth, a comparison between the effects of the two corporate governance regimes of 2003-2010 and 2011-2019 to determine the effectiveness of both regimes to control agency costs would also be an interesting enquiry.

Seventh, future studies can look into the nexus between corporate disclosure and the cost of equity capital or risk among Nigerian listed firms.

Eight, future studies can improve on the construction of the corporate governance index of Nigerian listed non-financial firms by using the 2018 Code along with the 2020 CAMA provisions, along with the official corporate governance weights, when available. The resulting index would measure the corporate governance index of listed non-financial firms in Nigeria more effectively and accurately.

8.9 Chapter summary

The chapter discussed the research findings and provided conclusions on the study, which formed the basis of the recommendations. Specifically, the chapter discussed the summary of the findings based on the two models: **the compliance index model** and the **equilibrium variable model**. On the compliance rate, evidence showed that the sample firms recorded an appreciable level of compliance. The compliance level improved steadily from 70.38% in 2012 to 71.74% in 2019. However, the coefficients of the relationship between the compliance index and the three financial performance independent variables are all negative as follows: Q ratio -0.01, ROE -0.06, and NAT -0.09. Even though all of the coefficients are negative, they are not statistically important because each of their p-values is greater than 0.05.

Other than gender diversity (GENDIV), which has a significant association with the Q ratio, evidence shows that all other independent variables (aside from the control variables) have an insignificant relationship with the Q ratio. However, all the control variables have a significant relationship with the Q ratio. The size of the company and its capital structure have a positive and significant relationship with the Q ratio. On the other hand, the age of the company has a negative and significant relationship with the Q ratio.

The number of board committees, board independence, separation of the CEO and chairman positions, board meetings, independence of the audit committee and the external auditors, the proportion of females on boards, and other disclosures have various degrees of negative coefficients with ROE. Only the separation of the CEO and chairman positions is, however, negatively significant, while others did not show statistical significance. On the positive side, the board size, foreign directors, market share, existence of institutional shareholders, firm size, and capital structure indicated various values of positive coefficients with ROE. However, only the market share and the capital structure showed a significantly positive association with ROE.

For NAT, the number of board committees, board independence, separation of the CEO and chairman positions, number of board meetings, board size, and proportion of females on boards indicated varied degrees of a negative association with NAT. But, only the separation of the CEO and chairman positions, the number of board meetings, the proportion of female directors, and market share indicated statistically significant positive coefficients.

Several recommendations have been made, covering the whole spectrum of the research evidence. Two recommendations were based on the results of the compliance index regression, and eleven recommendations were based on the results of the equilibrium variable regression. To select the optimal estimation method, the Chow test method was used to elect FE against the OLS. The Hausman test was also used to select the FE as the final estimation method against the random effects (RE) estimation method.

The policy implications of the research findings and the expected policy implementation strategies were discussed. In this regard, the study argues that the governance needs of listed non-financial firms may vary according to the structure, industrial sector, and size of the firm. Therefore, the need to be flexible with the enforcement of the provisions of the code may improve the level of compliance and overall firm performance, although firms should be motivated to encourage compliance. Thus, to improve compliance, the Code should contain distinct provisions for firms in the premium board and others for the main board listing categories. However, the enforcement of compliance should consider the dynamics of the firms in terms of capacity and resources to accommodate the level of corporate governance structure relevant to the firm.

A wide range of research contributions have been identified in this study. The first is the improvement in the construction of the corporate governance index by considering both internal and external governance mechanisms. Second, the study used the larger sample of non-financial firms to estimate the relationship between corporate governance and the financial performance of the firm based on the 2011 Code, compared to the sample sizes of prior studies. Third, the use of both the compliance index and the equilibrium variable model to establish the relationship between corporate governance and the financial performance of the firm in this study, as opposed to prior studies that used only the equilibrium variable method, strengthens the basis of the conclusion and recommendations. Fourth, the treatment of the data set to remove potential outliers through winsorization helped to improve the quality of the results of the regression equation and affect the validity and reliability of the conclusions. The winsorization of the data set is an important approach that stands this study out when compared with similar studies in the Nigerian context.

Some limitations identified included: (1) Lack of annual reports of some firms with the required corporate governance disclosures to provide data for the study. (2) Incidence of liquidation, merger, or reconstruction of firms leading to their being delisted during the period. (3) The challenge of manual extraction of the financial and corporate governance data that exposed it to some unintentional data extraction errors. (4) The challenge of using the binary approach to compute the corporate governance index introduces reliability and validity problems since binary codes cannot be said to be free from biases.

Some areas of further research were identified. These include considering the effect of corporate governance on product quality and the incorporation of more external mechanisms in constructing the compliance index. Other areas include ascertaining the effect of corporate governance on the performance of family-owned and private firms and investigating the relationship between foreign ownership and the performance of listed non-financial firms in Nigeria.

Further, in the course of this study, several firms were excluded for lack of data. It is expected that the affected firms will update their annual reports, which would increase the number of firms with complete corporate governance and financial data. Specifically, a further enquiry into the relationship between corporate governance and firm performance using a larger sample size and incorporating more governance variables (internal and external) would provide a better understanding of

how listed firms in Nigeria are governed and whether the market effectively rewards firms that are well-governed in Nigeria. Therefore, a later study on the relationship between firm performance and compliance with the new 2018 Code and CAMA 2020 would further improve the research evidence on the nexus between corporate and the performance of listed non-financial firms in Nigeria. Nigeria needs this level of evidence as a potential player in the emerging global market in Sub-Saharan Africa. Thus, the study has provided insight into the outcome of an overall litmus test of the extent to which the market rewards firms that practise effective corporate governance in the Nigerian context, specifically concerning the listed non-financial firms for the period of 2012 to 2019.

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APPENDICES

Appendix 1: List of Sample Firms

S/N	Name of Firm	Industrial Sector	Year of Incorporation
1	Ftn Cocoa Processors Plc	Agriculture	1991
2	Livestock Feeds Plc	Agriculture	1964
3	Okomu Oil Palm Plc.	Agriculture	1989
4	Presco Plc	Agriculture	2006
5	Chellarams Plc.	Conglomerates	1960
6	John Holt Plc.	Conglomerates	1959
7	Transnational Corporation Of Nigeria Plc	Conglomerates	1962
8	UACN Plc.	Conglomerates	1879
9	Arbico Plc.	Constr./Real Estate	1958
10	Julius Berger Nig. Plc.	Constr./Real Estate	1964
11	UACN Property Development Co. Limited	Constr./Real Estate	1959
12	Cadbury Nigeria Plc.	Consumer Goods	1965
13	Champion Brew. Plc.	Consumer Goods	1990
14	Dangote Sugar Refinery Plc	Consumer Goods	1965
15	Flour Mills Nig. Plc.	Consumer Goods	1981
16	Guinness Nig Plc	Consumer Goods	1962
17	Honeywell Flour Mill Plc	Consumer Goods	1974
18	International Breweries Plc.	Consumer Goods	1985
19	Nascon Allied Industries Plc	Consumer Goods	1991
20	Nestle Nigeria Plc.	Consumer Goods	1958
21	Nigerian Brew. Plc.	Consumer Goods	1946
22	Nigerian Enamelware Plc.	Consumer Goods	1991
23	P Z Cussons Nigeria Plc.	Consumer Goods	1982
24	Unilever Nigeria Plc.	Consumer Goods	1923
25	Vitafoam Nig Plc.	Consumer Goods	1992
26	Fidson Healthcare Plc	Healthcare	1949
27	Glaxo Smithkline Consumer Nig. Plc.	Healthcare	1957
28	Morison Industries Plc.	Healthcare	1970
29	Neimeth International Pharmaceuticals Plc	Healthcare	1969
30	Pharma-Deko Plc.	Healthcare	1964
31	Union Diagnostic & Clinical Services Plc	Healthcare	2005
32	Chams Plc	Ict	1960
33	Courteville Business Solutions Plc	Ict	2005
34	E-Tranzact International Plc	Ict	1969

Appendix 1: List Of Sample Firms (Continued)

S/N	Name Of Firm	Industrial Sector	Year Of Incorporation
35	Berger Paints Plc	Industrial Goods	1985
36	Beta Glass Co Plc.	Industrial Goods	1982
37	Cap Plc	Industrial Goods	1970
38	Cutix Plc.	Industrial Goods	1957
39	Dangote Cement Plc	Industrial Goods	1982
40	Greif Nigeria Plc	Industrial Goods	1992
41	Lafarge Africa Plc.	Industrial Goods	1993
42	Meyer Plc.	Industrial Goods	1974
43	Portland Paints & Products Nigeria Plc	Industrial Goods	1985
44	B.O.C. Gases Plc.	Natural Resources	1959
45	Thomas Wyatt Nig. Plc.	Natural Resources	1966
46	11 Plc (Mobil Oil Nig Plc.)	Oil And Gas	1980
47	Conoil Plc	Oil And Gas	1981
48	Eterna Plc.	Oil And Gas	1960
49	Forte/Ardova Oil Plc.	Oil And Gas	1964
50	Mrs Oil Nigeria Plc.	Oil And Gas	1984
51	Oando Plc	Oil And Gas	1997
52	Total Nigeria Plc.	Oil And Gas	1956
53	Academy Press Plc.	Services	1964
54	Afromedia Plc	Services	1984
55	C & I Leasing Plc.	Services	2004
56	Capital Hotel Plc	Services	1980
57	Learn Africa Plc	Services	1991
58	Nigerian Aviation Handling Company Plc	Services	1992
59	R T Briscoe Plc.	Services	1961
60	Red Star Express Plc	Services	2002
61	Tourist Company Of Nigeria Plc.	Services	1973
62	Trans-Nationwide Express Plc.	Services	1984
63	University Press Plc.	Services	1990

Note: The list contains listed firms whose shares were actively traded for the eight years from 2012 to 2019.

Appendix 2: Corporate governance variables for the computation of corporate governance index

Internal Governance Mechanism					
Mechanism	**S/N**	**Governance item**	**Range of score**	**Measurement**	**Reference**
		Board Directors			
	1	At least one director is independent with not more than 0.1% shareholding and does not represent a shareholder.	0-1	A binary number of 1 if one of directors is independent, 0 otherwise.	SEC-N (2011: Section 4)
	2	Majority of directors are independent or non-executive	0-1	Calculates the proportion of independent directors	SEC-N (2011: Section 4)
	3	Chairperson is an independent or non-executive director	0-1	A binary number of 1 if board chair is an independent or non-executive director , 0 otherwise.	SEC-N (2011: Section 4)
	4	Proportion of non-executive outside directors is greater than fifty percent of the board population	0-1	A binary number of 1 if Proportion of non-executive outside directors is greater than fifty percent of board population, 0 otherwise.	SEC-N (2011: Section 4)
	5	Position of the chairman and CEO are separated	0-1	A binary number of 1 if the positions of Chairman and CEO are occupied by two persons, 0 otherwise.	SEC-N (2011: Section 5)
	6	Board of directors' meetings are held a minimum of 4 times a year	0-1	A binary number of 1 if board of directors' meetings are held a minimum of 4 times a year, 0 otherwise.	SEC-N (2011: Section 12)
	7	Directors attend board meetings at least 2/3 times	0-1	A binary number of 1 if at least 2/3 directors attend meetings when held, 0 otherwise.	SEC-N (2011: Section 12)

Appendix 2: Corporate governance variables for the computation of corporate governance index (continued)

Mechanism	S/N	Governance item	Range of score	Measurement	Reference
	8	The number of directors is between minimum of 5	0-1	A binary number of 1 if number of directors is minimum of 5, 0 otherwise.	SEC-N (2011: Section 4)
	9	Foreign directors	0-1	A binary number of 1 if one of directors is a foreign national, 0 otherwise.	SEC-N (2011: Section 4)
	10	Presence of Audit Committee	0-1	A binary number of 1 if here is Audit Committee, 0 otherwise.	SEC-N (2011, Section 9)
	11	Presence of Governance and Remuneration Committee	0-1	A binary number of 1 if there is Governance and Remuneration committee, 0 otherwise.	SEC-N (2011, Section 9, 10, 11, 12)
	12	Presence of Risk Management Committee	0-1	A binary number of 1 if there is Risk Management Committee, 0 otherwise.	SEC-N (2011, Section 9, 10, 11, 12)
	13	Presence of any other committee	0-1	A binary number of 1 if there is any other board committee, 0 otherwise.	SEC-N (2011, Section 9, 10, 11, 12)
	14	Percentage of female on board	0-1	A binary number of 1 if there is a female board member, 0 otherwise.	SEC-N (2011, Section 4)
	15	Skills- Boards with mix of various professional skills	0-1	A binary number of 1 if the Board has a mix of various professionals, 0 otherwise.	SEC-N (2011, Section 4)
	16	Process of board appointments is disclosed in the annual report	0-1	A binary number of 1 if the process of board appointments is disclosed in the annual report, 0 otherwise.	SEC-N (2011, Section 12)
	17	Roles of the board is clearly stated	0-1	A binary number of 1 if the roles of the board are disclosed, 0 otherwise.	SEC-N (2011, Section 5)
	18	Roles of the Management is clearly stated	0-1	A binary number of 1 if the roles of the management are disclosed, 0 otherwise.	SEC-N (2011, Section 5)
	19	Code of ethics and conduct is stated	0-1	A binary number of 1 if the of the codes of ethics and conduct are disclosed, 0 otherwise.	SEC-N (2011, Section 35)

Appendix 2: Corporate governance variables for the computation of corporate governance index (continued)

Mechanism	S/N	Governance item	Range of score	Measurement	Reference
	20	Report contains directors responsibilities for the preparation of the financial statements	0-1	A binary of 1 if the report contains directors responsibilities for the preparation of the financial statements 0 otherwise.	SEC-N (2011, Part, G)
	21	Executive directors' remunerations is disclosed in the report	0-1	A binary of 1 if the Executive directors' remunerations is disclosed in the report, 0 otherwise	SEC-N (2011, Part, G)
	22	Annual report contains the Chairman's statement	0-1	A binary of 1 if the annual report contains the Chairman's statement, 0 if not.	SEC-N (2011, Part, G)
	23	Annual report contains statement on the compliance level of the code	0-1	A binary of 1 if the report contains a statement on the compliance level of the code, 0 otherwise,	SEC-N (2011, Part, G)
		Sub-total	**0-23**		

Appendix 2: Corporate governance variables for the computation of corporate governance index (continued)

Mechanism	S/N	Governance item	Range of score	Measurement	Reference
		External Audit and Audit Committee			
	24	Audit Committee is composed of 2-6 members of equal directors and shareholders representatives	0-1	A binary number of 1 if Audit Committee is composed of 2-6 members of equal directors and shareholders representatives, 0 otherwise.	CAMA(1990 as amended, SEC-N, 2011)
	25	All members of the Audit Committee are nonexecutive independent directors	0-1	A binary number of 1 if all members of the Audit Committee are non-executive independent directors, 0 otherwise.	CAMA(1990 as amended and SEC-N, 2011)
	26	Chairman of Committee is independent director	0-1	A binary number of 1 if Chairman of Committee is independent director, 0 otherwise.	CAMA(1990 as amended and SEC-N, 2011)
	27	Proportion of committee members with financial or accounting knowledge	0-1	Calculate the proportion of committee members with financial or accounting knowledge	CAMA(1990 as amended and SEC-N, 2011)
	29	Number of meetings held is four minimum	0-1	A binary number of 1 if the number of the number of meetings held is four minimum, 0 otherwise.	CAMA(1990 as amended and SEC-N, 2011)
	30	External Auditor does not handle other consulting for the firm	0-1	A binary number of 1 if External Auditor does not handle other consulting for the firm, 0 otherwise.	CAMA(1990 as amended and SEC-N, 2011)
	31	External auditors is either of PWC, KPMG, Deloitte, Ernst and Young	0-1	A binary number of 1 if External Auditor is one of the four large audit firms, 0 otherwise.	Empirical literature
		Sub-total	7		

Appendix 2: Corporate governance variables for the computation of corporate governance index (continued)

External Governance Mechanisms

S/N	Governance item	Range of score	Measurement	Reference
32	The proportion of equity holding by institutional shareholders	0-1	Calculate the proportion of foreign institutional ownership. A greater proportion suggests high level of control.	SEC-N (2011)
33	Proportionate share of the total industrial revenue	0-1	Calculate the proportionate share of the firm's revenue over the total industrial revenue. Higher proportion indicates market recognition of the efficient and quality services/goods of the firm. Lower proportion indicates weakness which exposes the firm to possible takeover.	Fama 1991; Nickell 1996; Januszewski *et al.* 2002; Raith 2003; Tian and Twite 2011; Chou *et al.* 2011; Mohebbi and Kamyabi 2014 and a host of other studies.
	Sub-total	**0-2**		
	Grand total of internal governance mechanism	**0-33**		

Appendix 2: Corporate governance variables for the computation of corporate governance index (continued)

Control Variables

S/N	Governance item	Range of score	Measurement	Reference
1	Capital structure (Debt and equity proportions)	0-1	Calculate the capital structure (Debt and equity proportions) A higher debt-equity ratio suggest stiffer control leading to better firm performance	Empirical and theoretical literature including Jensen 1986; Morellec, Nikolov and Schurhooff 2010; Ahmadpour, Samimi and Golmohammadi 2012; Liao; Mukherjee and Wei 2013; and Liao, Tarun and Wang 2013; Kumar 2015 and a host of other studies.
2	Proportionate size of the firm using market capitalisation as proxy	0-1	Calculate the proportionate size of the firm using market capitalisation as proxy. Bigger firms have resources to engage in better practices that firms with lean resources	Beiner, Drobetz, Schmid, and Zimmermann (2004); Ettredge 2011; Swastika 2013; Mirza and Javed 2013 and others.
3	Age of the firms (age of the firm from incorporation to 2019)	0-1	Calculate the proportionate age of the firms (age of the firm from incorporation to 2019) . Older firms have a lot of experience in their favour which impacts favourably on the performance of the firm.	Loderer & Waelchli, 2009; Yasser, Qaiser & Rafique, 2011; Bell, Filatotchev & Aguilera, 2014.
	TOTAL	**3**		

Appendix 3: Pooled Ordinary Least Square Results of the CGI regression(Tobin's Q, ROE, NAT)

Tobin's Q

Dependent Variable: TOBIN_Q
Method: Panel Least Squares
Date: 07/01/21 Time: 17:18
Sample: 2012 2019
Periods included: 8
Cross-sections included: 63
Total panel (balanced) observations: 504

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	-2.160230	0.529606	-4.078938	0.0001
TOTAL_GOV__INDEX	0.116192	0.020473	5.675265	0.0000
CONTROL_VARIABLES	1.009455	0.195067	5.174907	0.0000

Root MSE	1.237382	R-squared	0.096977
Mean dependent var	1.548304	Adjusted R-squared	0.093372
S.D. dependent var	1.303424	S.E. of regression	1.241081
Akaike info criterion	3.275778	Sum squared resid	771.6816
Schwarz criterion	3.300912	Log likelihood	-822.4959
Hannan-Quinn criter.	3.285637	F-statistic	26.90162
Durbin-Watson stat	0.110950	Prob(F-statistic)	0.000000

ROE

Dependent Variable: ROE
Method: Panel Least Squares
Date: 07/01/21 Time: 17:19
Sample: 2012 2019
Periods included: 8
Cross-sections included: 63
Total panel (balanced) observations: 504

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	-0.500831	0.111413	-4.495255	0.0000
TOTAL_GOV__INDEX	0.013577	0.004307	3.152399	0.0017
CONTROL_VARIABLES	0.307899	0.041036	7.503084	0.0000

Root MSE	0.260308	R-squared	0.110496
Mean dependent var	0.134110	Adjusted R-squared	0.106945
S.D. dependent var	0.276277	S.E. of regression	0.261086
Akaike info criterion	0.158002	Sum squared resid	34.15116
Schwarz criterion	0.183136	Log likelihood	-36.81653
Hannan-Quinn criter.	0.167861	F-statistic	31.11771
Durbin-Watson stat	0.302655	Prob(F-statistic)	0.000000

Appendix 3: Pooled Ordinary Least Square Results of the CGI regression (Tobin's Q, ROE, NAT) (continued)

NAT

Dependent Variable: NAT
Method: Panel Least Squares
Date: 07/01/21 Time: 17:20
Sample: 2012 2019
Periods included: 8
Cross-sections included: 63
Total panel (balanced) observations: 504

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	0.107206	0.230656	0.464786	0.6423
TOTAL_GOV__INDEX	0.027556	0.008917	3.090363	0.0021
CONTROL_VARIABLES	0.107320	0.084957	1.263238	0.2071

Root MSE	0.538910	R-squared	0.020505
Mean dependent var	0.846533	Adjusted R-squared	0.016595
S.D. dependent var	0.545063	S.E. of regression	0.540521
Akaike info criterion	1.613370	Sum squared resid	146.3739
Schwarz criterion	1.638504	Log likelihood	-403.5692
Hannan-Quinn criter.	1.623229	F-statistic	5.244100
Durbin-Watson stat	0.102142	Prob(F-statistic)	0.005572

Appendix 4 Results of the CGI regression (Tobin's Q, ROE, NAT) Fixed Effect model (Tobin's Q, ROE, NAT)

Tobi's Q

Dependent Variable: TOBIN_Q
Method: Panel Least Squares
Date: 07/06/21 Time: 12:30
Sample: 2012 2019
Periods included: 8
Cross-sections included: 63
Total panel (balanced) observations: 504

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	-0.624256	0.519395	-1.201892	0.2301
TOTAL_GOV__INDEX	-0.012873	0.020632	-0.623960	0.5330
CONTROL_VARIABLES	2.322343	0.177192	13.10638	0.0000

Effects Specification

Cross-section fixed (dummy variables)

Root MSE	0.520286	R-squared	0.840348
Mean dependent var	1.548304	Adjusted R-squared	0.817073
S.D. dependent var	1.303424	S.E. of regression	0.557474
Akaike info criterion	1.789060	Sum squared resid	136.4314
Schwarz criterion	2.333638	Log likelihood	-385.8430
Hannan-Quinn criter.	2.002678	F-statistic	36.10509
Durbin-Watson stat	0.604225	Prob(F-statistic)	0.000000

Appendix 4 Results of the CGI regression (Tobin's Q, ROE, NAT) Fixed Effect model (continued)

aROE

Dependent Variable: ROE
Method: Panel Least Squares
Date: 07/06/21 Time: 12:31
Sample: 2012 2019
Periods included: 8
Cross-sections included: 63
Total panel (balanced) observations: 504

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	-0.586637	0.180155	-3.256284	0.0012
TOTAL_GOV__INDEX	-0.013715	0.007156	-1.916561	0.0559
CONTROL_VARIABLES	0.972415	0.061460	15.82190	0.0000

Effects Specification

Cross-section fixed (dummy variables)

Root MSE	0.180464	R-squared	0.572480
Mean dependent var	0.134110	Adjusted R-squared	0.510154
S.D. dependent var	0.276277	S.E. of regression	0.193364
Akaike info criterion	-0.328629	Sum squared resid	16.41398
Schwarz criterion	0.215949	Log likelihood	147.8146
Hannan-Quinn criter.	-0.115010	F-statistic	9.185204
Durbin-Watson stat	0.660591	Prob(F-statistic)	0.000000

NAT

Dependent Variable: NAT
Method: Panel Least Squares
Date: 07/06/21 Time: 12:31
Sample: 2012 2019
Periods included: 8
Cross-sections included: 63
Total panel (balanced) observations: 504

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	0.308099	0.210254	1.465362	0.1435
TOTAL_GOV__INDEX	-0.014292	0.008352	-1.711179	0.0878
CONTROL_VARIABLES	0.812958	0.071728	11.33383	0.0000

Effects Specification

Cross-section fixed (dummy variables)

Root MSE	0.210615	R-squared	0.850394
Mean dependent var	0.846533	Adjusted R-squared	0.828584
S.D. dependent var	0.545063	S.E. of regression	0.225669
Akaike info criterion	-0.019631	Sum squared resid	22.35682
Schwarz criterion	0.524947	Log likelihood	69.94703
Hannan-Quinn criter.	0.193988	F-statistic	38.99026
Durbin-Watson stat	0.695851	Prob(F-statistic)	0.000000

Appendix 5: Chow Test Results for the selection of the Fixed Effect estimation of the CGI regression

Chow test results – Tobin's Q

Redundant Fixed Effects Tests
Equation: Untitled
Test cross-section fixed effects

Effects Test	Statistic	d.f.	Prob.
Cross-section F	32.968797	(62,439)	0.0000
Cross-section Chi-square	873.305860	62	0.0000

Cross-section fixed effects test equation:
Dependent Variable: TOBIN_Q
Method: Panel Least Squares
Date: 07/01/21 Time: 17:31
Sample: 2012 2019
Periods included: 8
Cross-sections included: 63
Total panel (balanced) observations: 504

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	-2.160230	0.529606	-4.078938	0.0001
TOTAL_GOV__INDEX	0.116192	0.020473	5.675265	0.0000
CONTROL_VARIABLES	1.009455	0.195067	5.174907	0.0000

Root MSE	1.237382	R-squared	0.096977
Mean dependent var	1.548304	Adjusted R-squared	0.093372
S.D. dependent var	1.303424	S.E. of regression	1.241081
Akaike info criterion	3.275778	Sum squared resid	771.6816
Schwarz criterion	3.300912	Log likelihood	-822.4959
Hannan-Quinn criter.	3.285637	F-statistic	26.90162
Durbin-Watson stat	0.110950	Prob(F-statistic)	0.000000

Chow test results – ROE

Redundant Fixed Effects Tests
Equation: Untitled
Test cross-section fixed effects

Effects Test	Statistic	d.f.	Prob.
Cross-section F	7.651445	(62,439)	0.0000
Cross-section Chi-square	369.262200	62	0.0000

Cross-section fixed effects test equation:
Dependent Variable: ROE
Method: Panel Least Squares
Date: 07/01/21 Time: 17:32
Sample: 2012 2019
Periods included: 8
Cross-sections included: 63
Total panel (balanced) observations: 504

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	-0.500831	0.111413	-4.495255	0.0000
TOTAL_GOV__INDEX	0.013577	0.004307	3.152399	0.0017
CONTROL_VARIABLES	0.307899	0.041036	7.503084	0.0000

Root MSE	0.260308	R-squared	0.110496
Mean dependent var	0.134110	Adjusted R-squared	0.106945
S.D. dependent var	0.276277	S.E. of regression	0.261086
Akaike info criterion	0.158002	Sum squared resid	34.15116
Schwarz criterion	0.183136	Log likelihood	-36.81653
Hannan-Quinn criter.	0.167861	F-statistic	31.11771
Durbin-Watson stat	0.302655	Prob(F-statistic)	0.000000

Appendix 5**: Chow Test Results for the selection of the Fixed Effect estimation of the CGI regression (Continued)**

Chow test results – NAT

Redundant Fixed Effects Tests
Equation: Untitled
Test cross-section fixed effects

Effects Test	Statistic	d.f.	Prob.
Cross-section F	39.277523	(62,439)	0.0000
Cross-section Chi-square	947.032369	62	0.0000

Cross-section fixed effects test equation:
Dependent Variable: NAT
Method: Panel Least Squares
Date: 07/01/21 Time: 17:33
Sample: 2012 2019
Periods included: 8
Cross-sections included: 63
Total panel (balanced) observations: 504

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	0.107206	0.230656	0.464786	0.6423
TOTAL_GOV__INDEX	0.027556	0.008917	3.090363	0.0021
CONTROL_VARIABLES	0.107320	0.084957	1.263238	0.2071

Root MSE	0.538910	R-squared	0.020505
Mean dependent var	0.846533	Adjusted R-squared	0.016595
S.D. dependent var	0.545063	S.E. of regression	0.540521
Akaike info criterion	1.613370	Sum squared resid	146.3739
Schwarz criterion	1.638504	Log likelihood	-403.5692
Hannan-Quinn criter.	1.623229	F-statistic	5.244100
Durbin-Watson stat	0.102142	Prob(F-statistic)	0.005572

Appendix 6: Random Effects Results of the CGI regression estimation

Tobin's Q

Dependent Variable: TOBIN_Q
Method: Panel EGLS (Cross-section random effects)
Date: 07/01/21 Time: 17:33
Sample: 2012 2019
Periods included: 8
Cross-sections included: 63
Total panel (balanced) observations: 504
Swamy and Arora estimator of component variances

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	-0.880709	0.509774	-1.727646	0.0847
TOTAL_GOV__INDEX	0.005642	0.019438	0.290244	0.7717
CONTROL_VARIABLES	2.168024	0.169182	12.81477	0.0000

Effects Specification		
	S.D.	Rho
Cross-section random	1.095147	0.7942
Idiosyncratic random	0.557474	0.2058

Weighted Statistics

Root MSE	0.564001	R-squared	0.242164
Mean dependent var	0.274247	Adjusted R-squared	0.239138
S.D. dependent var	0.648521	S.E. of regression	0.565687
Sum squared resid	160.3211	F-statistic	80.04634
Durbin-Watson stat	0.499986	Prob(F-statistic)	0.000000

Unweighted Statistics

R-squared	-0.031564	Mean dependent var	1.548304
Sum squared resid	881.5269	Durbin-Watson stat	0.090931

Appendix 6: Random Effects Results of the CGI regression estimation (continued)

ROE

Dependent Variable: ROE
Method: Panel EGLS (Cross-section random effects)
Date: 07/01/21 Time: 17:34
Sample: 2012 2019
Periods included: 8
Cross-sections included: 63
Total panel (balanced) observations: 504
Swamy and Arora estimator of component variances

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	-0.584285	0.135990	-4.296520	0.0000
TOTAL_GOV__INDEX	0.002169	0.005292	0.409939	0.6820
CONTROL_VARIABLES	0.630497	0.048070	13.11625	0.0000

Effects Specification		
	S.D.	Rho
Cross-section random	0.134448	0.3259
Idiosyncratic random	0.193364	0.6741

Weighted Statistics

Root MSE	0.209978	R-squared	0.225090
Mean dependent var	0.060785	Adjusted R-squared	0.221997
S.D. dependent var	0.238769	S.E. of regression	0.210605
Sum squared resid	22.22165	F-statistic	72.76339
Durbin-Watson stat	0.438432	Prob(F-statistic)	0.000000

Unweighted Statistics

R-squared	-0.020071	Mean dependent var	0.134110
Sum squared resid	39.16410	Durbin-Watson stat	0.248766

Appendix 6: Random Effects Results of the CGI regression estimation (continued)

NAT

Dependent Variable: NAT
Method: Panel EGLS (Cross-section random effects)
Date: 07/01/21 Time: 17:35
Sample: 2012 2019
Periods included: 8
Cross-sections included: 63
Total panel (balanced) observations: 504
Swamy and Arora estimator of component variances

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	0.264536	0.209397	1.263325	0.2071
TOTAL_GOV__INDEX	-0.009057	0.007938	-1.140949	0.2544
CONTROL_VARIABLES	0.742064	0.068962	10.76054	0.0000

Effects Specification

	S.D.	Rho
Cross-section random	0.483655	0.8212
Idiosyncratic random	0.225669	0.1788

Weighted Statistics

Root MSE	0.228566	R-squared	0.188373
Mean dependent var	0.137786	Adjusted R-squared	0.185133
S.D. dependent var	0.253960	S.E. of regression	0.229249
Sum squared resid	26.33015	F-statistic	58.13936
Durbin-Watson stat	0.571667	Prob(F-statistic)	0.000000

Unweighted Statistics

R-squared	-0.134670	Mean dependent var	0.846533
Sum squared resid	169.5630	Durbin-Watson stat	0.088770

Appendix 7: Hausman test for the selection of the Fixed Effect estimation of the CGI regression

Tobin's Q

Correlated Random Effects - Hausman Test
Equation: Untitled
Test cross-section random effects

Test Summary	Chi-Sq. Statistic	Chi-Sq. d.f.	Prob.
Cross-section random	16.870656	2	0.0002

Cross-section random effects test comparisons:

Variable	Fixed	Random	Var(Diff.)	Prob.
TOTAL_GOV__INDEX	-0.012873	0.005642	0.000048	0.0074
CONTROL_VARIABLES	2.322343	2.168024	0.002774	0.0034

Cross-section random effects test equation:
Dependent Variable: TOBIN_Q
Method: Panel Least Squares
Date: 07/01/21 Time: 17:36
Sample: 2012 2019
Periods included: 8
Cross-sections included: 63
Total panel (balanced) observations: 504

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	-0.624256	0.519395	-1.201892	0.2301
TOTAL_GOV__INDEX	-0.012873	0.020632	-0.623960	0.5330
CONTROL_VARIABLES	2.322343	0.177192	13.10638	0.0000

Effects Specification

Cross-section fixed (dummy variables)

Root MSE	0.520286	R-squared	0.840348
Mean dependent var	1.548304	Adjusted R-squared	0.817073
S.D. dependent var	1.303424	S.E. of regression	0.557474
Akaike info criterion	1.789060	Sum squared resid	136.4314
Schwarz criterion	2.333638	Log likelihood	-385.8430
Hannan-Quinn criter.	2.002678	F-statistic	36.10509
Durbin-Watson stat	0.604225	Prob(F-statistic)	0.000000

Appendix 7 Hausman test for the selection of the Fixed Effect estimation of the CGI regression (continued)

ROE

Correlated Random Effects - Hausman Test
Equation: Untitled
Test cross-section random effects

Test Summary	Chi-Sq. Statistic	Chi-Sq. d.f.	Prob.
Cross-section random	95.328955	2	0.0000

Cross-section random effects test comparisons:

Variable	Fixed	Random	Var(Diff.)	Prob.
TOTAL_GOV__INDEX	-0.013715	0.002169	0.000023	0.0010
CONTROL_VARIABLES	0.972415	0.630497	0.001467	0.0000

Cross-section random effects test equation:
Dependent Variable: ROE
Method: Panel Least Squares
Date: 07/01/21 Time: 17:37
Sample: 2012 2019
Periods included: 8
Cross-sections included: 63
Total panel (balanced) observations: 504

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	-0.586637	0.180155	-3.256284	0.0012
TOTAL_GOV__INDEX	-0.013715	0.007156	-1.916561	0.0559
CONTROL_VARIABLES	0.972415	0.061460	15.82190	0.0000

Effects Specification

Cross-section fixed (dummy variables)

Root MSE	0.180464	R-squared	0.572480
Mean dependent var	0.134110	Adjusted R-squared	0.510154
S.D. dependent var	0.276277	S.E. of regression	0.193364
Akaike info criterion	-0.328629	Sum squared resid	16.41398
Schwarz criterion	0.215949	Log likelihood	147.8146
Hannan-Quinn criter.	-0.115010	F-statistic	9.185204
Durbin-Watson stat	0.660591	Prob(F-statistic)	0.000000

Appendix 7: Hausman test for the selection of the Fixed Effect estimation of the CGI regression (continued)

NAT

Correlated Random Effects - Hausman Test
Equation: Untitled
Test cross-section random effects

Test Summary	Chi-Sq. Statistic	Chi-Sq. d.f.	Prob.
Cross-section random	18.020539	2	0.0001

Cross-section random effects test comparisons:

Variable	Fixed	Random	Var(Diff.)	Prob.
TOTAL_GOV__INDEX	-0.014292	-0.009057	0.000007	0.0437
CONTROL_VARIABLES	0.812958	0.742064	0.000389	0.0003

Cross-section random effects test equation:
Dependent Variable: NAT
Method: Panel Least Squares
Date: 07/01/21 Time: 17:37
Sample: 2012 2019
Periods included: 8
Cross-sections included: 63
Total panel (balanced) observations: 504

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	0.308099	0.210254	1.465362	0.1435
TOTAL_GOV__INDEX	-0.014292	0.008352	-1.711179	0.0878
CONTROL_VARIABLES	0.812958	0.071728	11.33383	0.0000

Effects Specification
Cross-section fixed (dummy variables)

Root MSE	0.210615	R-squared	0.850394
Mean dependent var	0.846533	Adjusted R-squared	0.828584
S.D. dependent var	0.545063	S.E. of regression	0.225669
Akaike info criterion	-0.019631	Sum squared resid	22.35682
Schwarz criterion	0.524947	Log likelihood	69.94703
Hannan-Quinn criter.	0.193988	F-statistic	38.99026
Durbin-Watson stat	0.695851	Prob(F-statistic)	0.000000

Appendix 8: Pooled Ordinary Least Square Results of the Equilibrium Model Regression

Tobin's –Q

Dependent Variable: TOBIN_Q
Method: Panel Least Squares
Date: 07/01/21 Time: 17:56
Sample: 2012 2019
Periods included: 8
Cross-sections included: 63
Total panel (balanced) observations: 504

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	0.224830	0.704433	0.319164	0.7497
BODCOM	0.210893	0.091477	2.305426	0.0216
BODIND	-0.158363	0.122699	-1.290662	0.1974
BODLTY	-0.786666	0.291978	-2.694266	0.0073
BODMTG	-0.029998	0.043635	-0.687466	0.4921
BODSIZ	-0.106271	0.029856	-3.559425	0.0004
EXACOM	0.049033	0.033083	1.482123	0.1390
FORMEM	0.192957	0.032284	5.976900	0.0000
GENDIV	0.483243	0.437666	1.104136	0.2701
OTHDIS	0.081197	0.030709	2.644114	0.0085
MKTSHR	0.151364	0.311839	0.485393	0.6276
NPISHR	0.016489	0.032857	0.501833	0.6160
FIRMSI	97.90738	30.43370	3.217071	0.0014
CAPSTR	0.613219	0.219064	2.799267	0.0053
FIRAGE	1.651085	0.496135	3.327893	0.0009

Root MSE	1.174418	R-squared	0.186540
Mean dependent var	1.548304	Adjusted R-squared	0.163251
S.D. dependent var	1.303424	S.E. of regression	1.192294
Akaike info criterion	3.218946	Sum squared resid	695.1454
Schwarz criterion	3.344618	Log likelihood	-796.1743
Hannan-Quinn criter.	3.268242	F-statistic	8.009700
Durbin-Watson stat	0.134016	Prob(F-statistic)	0.000000

Appendix 8: Pooled Ordinary Least Square Results of the Equilibrium Model Regression (continued)

ROE

Dependent Variable: ROE
Method: Panel Least Squares
Date: 07/01/21 Time: 17:42
Sample: 2012 2019
Periods included: 8
Cross-sections included: 63
Total panel (balanced) observations: 504

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	0.099961	0.151722	0.658844	0.5103
BODCOM	0.015596	0.019702	0.791601	0.4290
BODIND	-0.026068	0.026427	-0.986417	0.3244
BODLTY	-0.171806	0.062887	-2.731989	0.0065
BODMTG	-0.012403	0.009398	-1.319772	0.1875
BODSIZ	-0.003624	0.006430	-0.563562	0.5733
EXACOM	0.002910	0.007125	0.408422	0.6831
FORMEM	0.015968	0.006953	2.296411	0.0221
GENDIV	0.229667	0.094265	2.436393	0.0152
OTHDIS	0.017636	0.006614	2.666366	0.0079
MKTSHR	0.145731	0.067164	2.169770	0.0305
NPISHR	0.011459	0.007077	1.619233	0.1060
FIRMSI	-4.367818	6.554863	-0.666348	0.5055
CAPSTR	0.345310	0.047182	7.318617	0.0000
FIRAGE	0.070968	0.106858	0.664134	0.5069

Root MSE	0.252948	R-squared	0.160085
Mean dependent var	0.134110	Adjusted R-squared	0.136038
S.D. dependent var	0.276277	S.E. of regression	0.256798
Akaike info criterion	0.148259	Sum squared resid	32.24729
Schwarz criterion	0.273930	Log likelihood	-22.36116
Hannan-Quinn criter.	0.197555	F-statistic	6.657251
Durbin-Watson stat	0.323556	Prob(F-statistic)	0.000000

Appendix 8: Pooled Ordinary Least Square Results of the Equilibrium Model Regression (continued)

NAT

Dependent Variable: NAT
Method: Panel Least Squares
Date: 07/01/21 Time: 17:56
Sample: 2012 2019
Periods included: 8
Cross-sections included: 63
Total panel (balanced) observations: 504

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	0.519006	0.300629	1.726404	0.0849
BODCOM	-0.024377	0.039039	-0.624435	0.5326
BODIND	-0.092974	0.052364	-1.775536	0.0764
BODLTY	-0.463746	0.124607	-3.721687	0.0002
BODMTG	-0.034071	0.018622	-1.829591	0.0679
BODSIZ	-0.001526	0.012742	-0.119778	0.9047
EXACOM	0.046859	0.014119	3.318929	0.0010
FORMEM	-0.017146	0.013778	-1.244477	0.2139
GENDIV	0.555939	0.186781	2.976416	0.0031
OTHDIS	0.050925	0.013105	3.885789	0.0001
MKTSHR	0.341503	0.133082	2.566101	0.0106
NPISHR	-0.011616	0.014022	-0.828397	0.4078
FIRMSI	-62.30588	12.98809	-4.797155	0.0000
CAPSTR	0.031044	0.093489	0.332056	0.7400
FIRAGE	0.705145	0.211734	3.330334	0.0009

Root MSE	0.501202	R-squared	0.152782
Mean dependent var	0.846533	Adjusted R-squared	0.128526
S.D. dependent var	0.545063	S.E. of regression	0.508831
Akaike info criterion	1.515910	Sum squared resid	126.6067
Schwarz criterion	1.641582	Log likelihood	-367.0093
Hannan-Quinn criter.	1.565207	F-statistic	6.298802
Durbin-Watson stat	0.170698	Prob(F-statistic)	0.000000

Appendix 9: FE Regression Results

Tobin's Q

Dependent Variable: TOBIN_Q
Method: Panel Least Squares
Date: 07/01/21 Time: 17:49
Sample: 2012 2019
Periods included: 8
Cross-sections included: 63
Total panel (balanced) observations: 504

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	7.035418	1.495083	4.705705	0.0000
BODCOM	-0.082233	0.103647	-0.793388	0.4280
BODIND	-0.016112	0.136449	-0.118083	0.9061
BODLTY	-0.420777	0.269477	-1.561456	0.1192
BODMTG	-0.018688	0.024269	-0.770013	0.4417
BODSIZ	-0.020082	0.022151	-0.906613	0.3651
EXACOM	0.015604	0.031024	0.502986	0.6152
FORMEM	0.038316	0.040926	0.936222	0.3497
GENDIV	-1.083607	0.351802	-3.080160	0.0022
OTHDIS	0.012907	0.023373	0.552247	0.5811
MKTSHR	0.386116	0.532819	0.724666	0.4691
NPISHR	0.116843	0.129527	0.902075	0.3675
FIRMSI	105.7812	50.30170	2.102934	0.0361
CAPSTR	1.498154	0.201072	7.450822	0.0000
FIRAGE	-6.889296	1.686096	-4.085946	0.0001

Effects Specification

Cross-section fixed (dummy variables)

Root MSE	0.483532	R-squared	0.862107
Mean dependent var	1.548304	Adjusted R-squared	0.837565
S.D. dependent var	1.303424	S.E. of regression	0.525323
Akaike info criterion	1.690155	Sum squared resid	117.8366
Schwarz criterion	2.335271	Log likelihood	-348.9191
Hannan-Quinn criter.	1.943211	F-statistic	35.12650
Durbin-Watson stat	0.602264	Prob(F-statistic)	0.000000

Appendix 9: FE Regression Results (continued)

ROE

Dependent Variable: ROE
Method: Panel Least Squares
Date: 07/01/21 Time: 17:49
Sample: 2012 2019
Periods included: 8
Cross-sections included: 63
Total panel (balanced) observations: 504

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	2.367820	0.506738	4.672672	0.0000
BODCOM	-0.046035	0.035130	-1.310428	0.1908
BODIND	-0.033918	0.046248	-0.733409	0.4637
BODLTY	-0.326160	0.091336	-3.571004	0.0004
BODMTG	-0.006669	0.008226	-0.810697	0.4180
BODSIZ	0.003700	0.007508	0.492824	0.6224
EXACOM	-0.014064	0.010515	-1.337492	0.1818
FORMEM	0.009832	0.013871	0.708795	0.4788
GENDIV	-0.166757	0.119239	-1.398516	0.1627
OTHDIS	-0.000500	0.007922	-0.063179	0.9497
MKTSHR	0.496185	0.180592	2.747552	0.0063
NPISHR	0.015607	0.043902	0.355505	0.7224
FIRMSI	5.051508	17.04907	0.296292	0.7672
CAPSTR	0.685071	0.068151	10.05230	0.0000
FIRAGE	-2.227309	0.571479	-3.897446	0.0001

Effects Specification

Cross-section fixed (dummy variables)

Root MSE	0.163886	R-squared	0.647419
Mean dependent var	0.134110	Adjusted R-squared	0.584665
S.D. dependent var	0.276277	S.E. of regression	0.178051
Akaike info criterion	-0.473731	Sum squared resid	13.53681
Schwarz criterion	0.171385	Log likelihood	196.3801
Hannan-Quinn criter.	-0.220674	F-statistic	10.31670
Durbin-Watson stat	0.680218	Prob(F-statistic)	0.000000

Appendix 9: FE Regression Results (continued)

NAT

Dependent Variable: NAT
Method: Panel Least Squares
Date: 07/01/21 Time: 17:49
Sample: 2012 2019
Periods included: 8
Cross-sections included: 63
Total panel (balanced) observations: 504

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	4.753784	0.524121	9.070017	0.0000
BODCOM	-0.066267	0.036335	-1.823793	0.0689
BODIND	-0.069774	0.047834	-1.458664	0.1454
BODLTY	-0.380760	0.094469	-4.030539	0.0001
BODMTG	-0.018492	0.008508	-2.173515	0.0303
BODSIZ	-0.003062	0.007765	-0.394345	0.6935
EXACOM	0.002688	0.010876	0.247168	0.8049
FORMEM	0.019440	0.014347	1.355013	0.1761
GENDIV	-0.364055	0.123329	-2.951905	0.0033
OTHDIS	0.004988	0.008194	0.608762	0.5430
MKTSHR	1.113484	0.186787	5.961260	0.0000
NPISHR	0.029382	0.045407	0.647078	0.5179
FIRMSI	25.17190	17.63392	1.427471	0.1542
CAPSTR	0.277734	0.070488	3.940133	0.0001
FIRAGE	-4.223845	0.591083	-7.145944	0.0000

Effects Specification

Cross-section fixed (dummy variables)

Root MSE	0.169508	R-squared	0.903094
Mean dependent var	0.846533	Adjusted R-squared	0.885846
S.D. dependent var	0.545063	S.E. of regression	0.184159
Akaike info criterion	-0.406274	Sum squared resid	14.48146
Schwarz criterion	0.238841	Log likelihood	179.3811
Hannan-Quinn criter.	-0.153218	F-statistic	52.35960
Durbin-Watson stat	0.806416	Prob(F-statistic)	0.000000

Appendix 10: RE Regression Results

Tobin's Q

Dependent Variable: TOBIN_Q
Method: Panel EGLS (Cross-section random effects)
Date: 08/13/21 Time: 08:50
Sample: 2012 2019
Periods included: 8
Cross-sections included: 63
Total panel (balanced) observations: 504
Swamy and Arora estimator of component variances

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	2.851460	0.993327	2.870617	0.0043
BODCOM	-0.011036	0.093552	-0.117965	0.9061
BODIND	-0.078162	0.125310	-0.623750	0.5331
BODLTY	-0.463940	0.255842	-1.813384	0.0704
BODMTG	-0.020602	0.023929	-0.860943	0.3897
BODSIZ	-0.023800	0.021225	-1.121303	0.2627
CAPSTR	1.685161	0.180923	9.314236	0.0000
EXACOM	0.011076	0.028673	0.386266	0.6995
FIRAGE	-1.610123	1.004615	-1.602727	0.1096
FIRMSI	110.6543	41.37038	2.674724	0.0077
FORMEM	0.062566	0.036158	1.730352	0.0842
GENDIV	-0.922117	0.339130	-2.719071	0.0068
MKTSHR	0.793779	0.424914	1.868096	0.0623
NPISHR	0.041570	0.072143	0.576223	0.5647
OTHDIS	0.023905	0.022449	1.064864	0.2875

Effects Specification

	S.D.	Rho
Cross-section random	1.114277	0.8182
Idiosyncratic random	0.525323	0.1818

Weighted Statistics

Root MSE	0.530666	R-squared	0.319833
Mean dependent var	0.254562	Adjusted R-squared	0.300360
S.D. dependent var	0.644087	S.E. of regression	0.538743
Sum squared resid	141.9295	F-statistic	16.42436
Durbin-Watson stat	0.520316	Prob(F-statistic)	0.000000

Unweighted Statistics

R-squared	-0.045870	Mean dependent var	1.548304
Sum squared resid	893.7518	Durbin-Watson stat	0.082627

Appendix 10: RE Regression Results (continued)

ROE

Dependent Variable: ROE
Method: Panel EGLS (Cross-section random effects)
Date: 08/13/21 Time: 08:51
Sample: 2012 2019
Periods included: 8
Cross-sections included: 63
Total panel (balanced) observations: 504
Swamy and Arora estimator of component variances

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	0.578639	0.199980	2.893488	0.0040
BODCOM	0.004608	0.023676	0.194617	0.8458
BODIND	-0.045790	0.032373	-1.414460	0.1579
BODLTY	-0.247553	0.071312	-3.471402	0.0006
BODMTG	-0.009382	0.007738	-1.212525	0.2259
BODSIZ	0.000690	0.006338	0.108909	0.9133
CAPSTR	0.658041	0.049986	13.16462	0.0000
EXACOM	-0.011515	0.007872	-1.462777	0.1442
FIRAGE	-0.200667	0.166405	-1.205899	0.2284
FIRMSI	0.620135	8.874759	0.069876	0.9443
FORMEM	0.006120	0.008733	0.700737	0.4838
GENDIV	0.016801	0.099283	0.169224	0.8657
MKTSHR	0.345475	0.091731	3.766192	0.0002
NPISHR	0.011516	0.011398	1.010321	0.3128
OTHDIS	0.009700	0.006654	1.457800	0.1455

Effects Specification

	S.D.	Rho
Cross-section random	0.138400	0.3766
Idiosyncratic random	0.178051	0.6234

Weighted Statistics

Root MSE	0.194560	R-squared	0.324914
Mean dependent var	0.055525	Adjusted R-squared	0.305586
S.D. dependent var	0.237031	S.E. of regression	0.197522
Sum squared resid	19.07821	F-statistic	16.81087
Durbin-Watson stat	0.490844	Prob(F-statistic)	0.000000

Unweighted Statistics

R-squared	-0.019119	Mean dependent var	0.134110
Sum squared resid	39.12754	Durbin-Watson stat	0.239331

Appendix 10: RE Regression Results (continued)

NAT

Dependent Variable: NAT
Method: Panel EGLS (Cross-section random effects)
Date: 08/13/21 Time: 08:52
Sample: 2012 2019
Periods included: 8
Cross-sections included: 63
Total panel (balanced) observations: 504
Swamy and Arora estimator of component variances

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	2.849710	0.372841	7.643236	0.0000
BODCOM	-0.046794	0.033538	-1.395243	0.1636
BODIND	-0.090783	0.044779	-2.027368	0.0432
BODLTY	-0.368400	0.090808	-4.056931	0.0001
BODMTG	-0.021704	0.008415	-2.579354	0.0102
BODSIZ	-0.003987	0.007507	-0.531055	0.5956
CAPSTR	0.423720	0.064642	6.554842	0.0000
EXACOM	-0.004153	0.010221	-0.406305	0.6847
FIRAGE	-1.649941	0.384259	-4.293823	0.0000
FIRMSI	9.610031	15.11377	0.635846	0.5252
FORMEM	0.011899	0.013025	0.913600	0.3614
GENDIV	-0.286014	0.119937	-2.384705	0.0175
MKTSHR	1.123493	0.155471	7.226397	0.0000
NPISHR	0.006621	0.027821	0.237968	0.8120
OTHDIS	0.007581	0.007940	0.954795	0.3402

Effects Specification

	S.D.	Rho
Cross-section random	0.453572	0.8585
Idiosyncratic random	0.184159	0.1415

Weighted Statistics

Root MSE	0.196672	R-squared	0.384713
Mean dependent var	0.120286	Adjusted R-squared	0.367098
S.D. dependent var	0.250977	S.E. of regression	0.199665
Sum squared resid	19.49462	F-statistic	21.83939
Durbin-Watson stat	0.627454	Prob(F-statistic)	0.000000

Unweighted Statistics

R-squared	-0.478069	Mean dependent var	0.846533
Sum squared resid	220.8799	Durbin-Watson stat	0.055378

Appendix 11: Chow Test Results for the selection of the Fixed Effect estimation of the Equilibrium Model Regression

Tobin's Q

Redundant Fixed Effects Tests
Equation: Untitled
Test cross-section fixed effects

Effects Test	Statistic	d.f.	Prob.
Cross-section F	33.741486	(62,427)	0.0000
Cross-section Chi-square	894.510388	62	0.0000

Cross-section fixed effects test equation:
Dependent Variable: TOBIN_Q
Method: Panel Least Squares
Date: 07/06/21 Time: 18:19
Sample: 2012 2019
Periods included: 8
Cross-sections included: 63
Total panel (balanced) observations: 504

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	0.224830	0.704433	0.319164	0.7497
BODCOM	0.210893	0.091477	2.305426	0.0216
BODIND	-0.158363	0.122699	-1.290662	0.1974
BODLTY	-0.786666	0.291978	-2.694266	0.0073
BODMTG	-0.029998	0.043635	-0.687466	0.4921
BODSIZ	-0.106271	0.029856	-3.559425	0.0004
EXACOM	0.049033	0.033083	1.482123	0.1390
FORMEM	0.192957	0.032284	5.976900	0.0000
GENDIV	0.483243	0.437666	1.104136	0.2701
OTHDIS	0.081197	0.030709	2.644114	0.0085
MKTSHR	0.151364	0.311839	0.485393	0.6276
NPISHR	0.016489	0.032857	0.501833	0.6160
FIRMSI	97.90738	30.43370	3.217071	0.0014
CAPSTR	0.613219	0.219064	2.799267	0.0053
FIRAGE	1.651085	0.496135	3.327893	0.0009

Root MSE	1.174418	R-squared	0.186540
Mean dependent var	1.548304	Adjusted R-squared	0.163251
S.D. dependent var	1.303424	S.E. of regression	1.192294
Akaike info criterion	3.218946	Sum squared resid	695.1454
Schwarz criterion	3.344618	Log likelihood	-796.1743
Hannan-Quinn criter.	3.268242	F-statistic	8.009700
Durbin-Watson stat	0.134016	Prob(F-statistic)	0.000000

Appendix 11: Chow Test Results for the selection of the Fixed Effect estimation of the Equilibrium Model Regression (continued)

ROE

Redundant Fixed Effects Tests
Equation: Untitled
Test cross-section fixed effects

Effects Test	Statistic	d.f.	Prob.
Cross-section F	9.519289	(62,427)	0.0000
Cross-section Chi-square	437.482586	62	0.0000

Cross-section fixed effects test equation:
Dependent Variable: ROE
Method: Panel Least Squares
Date: 07/06/21 Time: 18:20
Sample: 2012 2019
Periods included: 8
Cross-sections included: 63
Total panel (balanced) observations: 504

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	0.099961	0.151722	0.658844	0.5103
BODCOM	0.015596	0.019702	0.791601	0.4290
BODIND	-0.026068	0.026427	-0.986417	0.3244
BODLTY	-0.171806	0.062887	-2.731989	0.0065
BODMTG	-0.012403	0.009398	-1.319772	0.1875
BODSIZ	-0.003624	0.006430	-0.563562	0.5733
EXACOM	0.002910	0.007125	0.408422	0.6831
FORMEM	0.015968	0.006953	2.296411	0.0221
GENDIV	0.229667	0.094265	2.436393	0.0152
OTHDIS	0.017636	0.006614	2.666366	0.0079
MKTSHR	0.145731	0.067164	2.169770	0.0305
NPISHR	0.011459	0.007077	1.619233	0.1060
FIRMSI	-4.367818	6.554863	-0.666348	0.5055
CAPSTR	0.345310	0.047182	7.318617	0.0000
FIRAGE	0.070968	0.106858	0.664134	0.5069

Root MSE	0.252948	R-squared	0.160085
Mean dependent var	0.134110	Adjusted R-squared	0.136038
S.D. dependent var	0.276277	S.E. of regression	0.256798
Akaike info criterion	0.148259	Sum squared resid	32.24729
Schwarz criterion	0.273930	Log likelihood	-22.36116
Hannan-Quinn criter.	0.197555	F-statistic	6.657251
Durbin-Watson stat	0.323556	Prob(F-statistic)	0.000000

Appendix 11: Chow Test Results for the selection of the Fixed Effect estimation of the Equilibrium Model Regression (continued)

NAT

Redundant Fixed Effects Tests
Equation: Untitled
Test cross-section fixed effects

Effects Test	Statistic	d.f.	Prob.
Cross-section F	53.324538	(62,427)	0.0000
Cross-section Chi-square	1092.780849	62	0.0000

Cross-section fixed effects test equation:
Dependent Variable: NAT
Method: Panel Least Squares
Date: 08/13/21 Time: 08:59
Sample: 2012 2019
Periods included: 8
Cross-sections included: 63
Total panel (balanced) observations: 504

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	0.519006	0.300629	1.726404	0.0849
BODCOM	-0.024377	0.039039	-0.624435	0.5326
BODIND	-0.092974	0.052364	-1.775536	0.0764
BODLTY	-0.463746	0.124607	-3.721687	0.0002
BODMTG	-0.034071	0.018622	-1.829591	0.0679
BODSIZ	-0.001526	0.012742	-0.119778	0.9047
CAPSTR	0.031044	0.093489	0.332056	0.7400
EXACOM	0.046859	0.014119	3.318929	0.0010
FIRAGE	0.705145	0.211734	3.330334	0.0009
FIRMSI	-62.30588	12.98809	-4.797155	0.0000
FORMEM	-0.017146	0.013778	-1.244477	0.2139
GENDIV	0.555939	0.186781	2.976416	0.0031
MKTSHR	0.341503	0.133082	2.566101	0.0106
NPISHR	-0.011616	0.014022	-0.828397	0.4078
OTHDIS	0.050925	0.013105	3.885789	0.0001

Root MSE	0.501202	R-squared	0.152782
Mean dependent var	0.846533	Adjusted R-squared	0.128526
S.D. dependent var	0.545063	S.E. of regression	0.508831
Akaike info criterion	1.515910	Sum squared resid	126.6067
Schwarz criterion	1.641582	Log likelihood	-367.0093
Hannan-Quinn criter.	1.565207	F-statistic	6.298802
Durbin-Watson stat	0.170698	Prob(F-statistic)	0.000000

Appendix 12: Hausman Test

Tobin's Q

Correlated Random Effects - Hausman Test
Equation: Untitled
Test cross-section random effects

Test Summary	Chi-Sq. Statistic	Chi-Sq. d.f.	Prob.
Cross-section random	39.304598	14	0.0003

Cross-section random effects test comparisons:

Variable	Fixed	Random	Var(Diff.)	Prob.
BODCOM	-0.082233	-0.011036	0.001991	0.1106
BODIND	-0.016112	-0.078162	0.002916	0.2505
BODLTY	-0.420777	-0.463940	0.007163	0.6101
BODMTG	-0.018688	-0.020602	0.000016	0.6363
BODSIZ	-0.020082	-0.023800	0.000040	0.5574
EXACOM	0.015604	0.011076	0.000140	0.7022
FORMEM	0.038316	0.062566	0.000367	0.2059
GENDIV	-1.083607	-0.922117	0.008756	0.0844
OTHDIS	0.012907	0.023905	0.000042	0.0909
MKTSHR	0.386116	0.793779	0.103345	0.2048
NPISHR	0.116843	0.041570	0.011573	0.4841
FIRMSI	105.781173	110.654340	818.752736	0.8648
CAPSTR	1.498154	1.685161	0.007697	0.0330
FIRAGE	-6.889296	-1.610123	1.833667	0.0001

Cross-section random effects test equation:
Dependent Variable: TOBIN_Q
Method: Panel Least Squares
Date: 07/02/21 Time: 18:26
Sample: 2012 2019
Periods included: 8
Cross-sections included: 63
Total panel (balanced) observations: 504

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	7.035418	1.495083	4.705705	0.0000
BODCOM	-0.082233	0.103647	-0.793388	0.4280
BODIND	-0.016112	0.136449	-0.118083	0.9061
BODLTY	-0.420777	0.269477	-1.561456	0.1192
BODMTG	-0.018688	0.024269	-0.770013	0.4417
BODSIZ	-0.020082	0.022151	-0.906613	0.3651
EXACOM	0.015604	0.031024	0.502986	0.6152
FORMEM	0.038316	0.040926	0.936222	0.3497
GENDIV	-1.083607	0.351802	-3.080160	0.0022
OTHDIS	0.012907	0.023373	0.552247	0.5811
MKTSHR	0.386116	0.532819	0.724666	0.4691
NPISHR	0.116843	0.129527	0.902075	0.3675
FIRMSI	105.7812	50.30170	2.102934	0.0361
CAPSTR	1.498154	0.201072	7.450822	0.0000
FIRAGE	-6.889296	1.686096	-4.085946	0.0001

Effects Specification

Cross-section fixed (dummy variables)

Root MSE	0.483532	R-squared	0.862107
Mean dependent var	1.548304	Adjusted R-squared	0.837565
S.D. dependent var	1.303424	S.E. of regression	0.525323
Akaike info criterion	1.690155	Sum squared resid	117.8366
Schwarz criterion	2.335271	Log likelihood	-348.9191
Hannan-Quinn criter.	1.943211	F-statistic	35.12650
Durbin-Watson stat	0.602264	Prob(F-statistic)	0.000000

Appendix 12: Hausman Test (continued)

ROE

Correlated Random Effects - Hausman Test
Equation: Untitled
Test cross-section random effects

Test Summary	Chi-Sq. Statistic	Chi-Sq. d.f.	Prob.
Cross-section random	126.795671	14	0.0000

Cross-section random effects test comparisons:

Variable	Fixed	Random	Var(Diff.)	Prob.
BODCOM	-0.046035	0.004608	0.000674	0.0510
BODIND	-0.033918	-0.045790	0.001091	0.7193
BODLTY	-0.326160	-0.247553	0.003257	0.1684
BODMTG	-0.006669	-0.009382	0.000008	0.3309
BODSIZ	0.003700	0.000690	0.000016	0.4545
EXACOM	-0.014064	-0.011515	0.000049	0.7146
FORMEM	0.009832	0.006120	0.000116	0.7305
GENDIV	-0.166757	0.016801	0.004361	0.0054
OTHDIS	-0.000500	0.009700	0.000018	0.0176
MKTSHR	0.496185	0.345475	0.024199	0.3326
NPISHR	0.015607	0.011516	0.001797	0.9231
FIRMSI	5.051508	0.620135	211.909604	0.7608
CAPSTR	0.685071	0.658041	0.002146	0.5596
FIRAGE	-2.227309	-0.200667	0.298898	0.0002

Cross-section random effects test equation:
Dependent Variable: ROE
Method: Panel Least Squares
Date: 07/02/21 Time: 18:28
Sample: 2012 2019
Periods included: 8
Cross-sections included: 63
Total panel (balanced) observations: 504

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	2.367820	0.506738	4.672672	0.0000
BODCOM	-0.046035	0.035130	-1.310428	0.1908
BODIND	-0.033918	0.046248	-0.733409	0.4637
BODLTY	-0.326160	0.091336	-3.571004	0.0004
BODMTG	-0.006669	0.008226	-0.810697	0.4180
BODSIZ	0.003700	0.007508	0.492824	0.6224
EXACOM	-0.014064	0.010515	-1.337492	0.1818
FORMEM	0.009832	0.013871	0.708795	0.4788
GENDIV	-0.166757	0.119239	-1.398516	0.1627
OTHDIS	-0.000500	0.007922	-0.063179	0.9497
MKTSHR	0.496185	0.180592	2.747552	0.0063
NPISHR	0.015607	0.043902	0.355505	0.7224
FIRMSI	5.051508	17.04907	0.296292	0.7672
CAPSTR	0.685071	0.068151	10.05230	0.0000
FIRAGE	-2.227309	0.571479	-3.897446	0.0001

Effects Specification

Cross-section fixed (dummy variables)

Root MSE	0.163886	R-squared	0.647419
Mean dependent var	0.134110	Adjusted R-squared	0.584665
S.D. dependent var	0.276277	S.E. of regression	0.178051
Akaike info criterion	-0.473731	Sum squared resid	13.53681
Schwarz criterion	0.171385	Log likelihood	196.3801
Hannan-Quinn criter.	-0.220674	F-statistic	10.31670
Durbin-Watson stat	0.680218	Prob(F-statistic)	0.000000

Appendix 12: Hausman Test (continued)

NAT

Correlated Random Effects - Hausman Test
Equation: Untitled
Test cross-section random effects

Test Summary	Chi-Sq. Statistic	Chi-Sq. d.f.	Prob.
Cross-section random	99.817990	14	0.0000

Cross-section random effects test comparisons:

Variable	Fixed	Random	Var(Diff.)	Prob.
BODCOM	-0.066267	-0.046794	0.000195	0.1636
BODIND	-0.069774	-0.090783	0.000283	0.2117
BODLTY	-0.380760	-0.368400	0.000678	0.6351
BODMTG	-0.018492	-0.021704	0.000002	0.0106
BODSIZ	-0.003062	-0.003987	0.000004	0.6413
EXACOM	0.002688	-0.004153	0.000014	0.0656
FORMEM	0.019440	0.011899	0.000036	0.2101
GENDIV	-0.364055	-0.286014	0.000825	0.0066
OTHDIS	0.004988	0.007581	0.000004	0.1997
MKTSHR	1.113484	1.123493	0.010718	0.9230
NPISHR	0.029382	0.006621	0.001288	0.5259
FIRMSI	25.171900	9.610031	82.528918	0.0867
CAPSTR	0.277734	0.423720	0.000790	0.0000
FIRAGE	-4.223845	-1.649941	0.201724	0.0000

Cross-section random effects test equation:
Dependent Variable: NAT
Method: Panel Least Squares
Date: 07/02/21 Time: 18:18
Sample: 2012 2019
Periods included: 8
Cross-sections included: 63
Total panel (balanced) observations: 504

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	4.753784	0.524121	9.070017	0.0000
BODCOM	-0.066267	0.036335	-1.823793	0.0689
BODIND	-0.069774	0.047834	-1.458664	0.1454
BODLTY	-0.380760	0.094469	-4.030539	0.0001
BODMTG	-0.018492	0.008508	-2.173515	0.0303
BODSIZ	-0.003062	0.007765	-0.394345	0.6935
EXACOM	0.002688	0.010876	0.247168	0.8049
FORMEM	0.019440	0.014347	1.355013	0.1761
GENDIV	-0.364055	0.123329	-2.951905	0.0033
OTHDIS	0.004988	0.008194	0.608762	0.5430
MKTSHR	1.113484	0.186787	5.961260	0.0000
NPISHR	0.029382	0.045407	0.647078	0.5179
FIRMSI	25.17190	17.63392	1.427471	0.1542
CAPSTR	0.277734	0.070488	3.940133	0.0001
FIRAGE	-4.223845	0.591083	-7.145944	0.0000

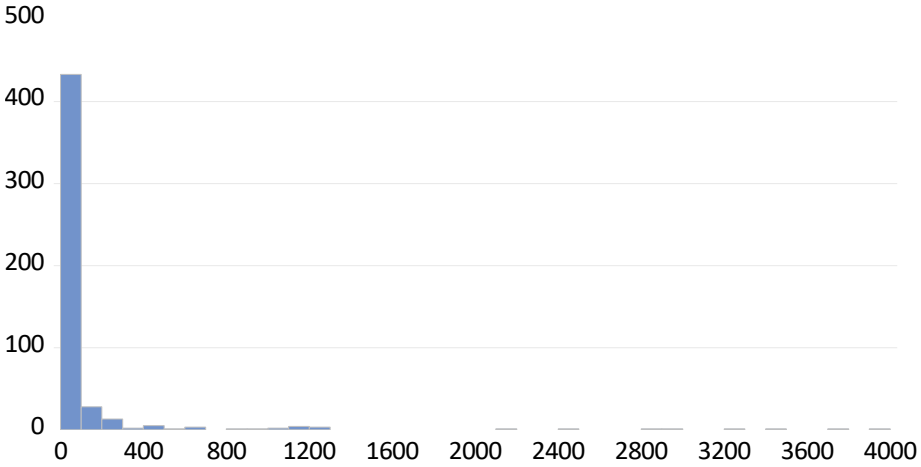
Effects Specification

Cross-section fixed (dummy variables)

Root MSE	0.169508	R-squared	0.903094
Mean dependent var	0.846533	Adjusted R-squared	0.885846
S.D. dependent var	0.545063	S.E. of regression	0.184159
Akaike info criterion	-0.406274	Sum squared resid	14.48146
Schwarz criterion	0.238841	Log likelihood	179.3811
Hannan-Quinn criter.	-0.153218	F-statistic	52.35960
Durbin-Watson stat	0.806416	Prob(F-statistic)	0.000000

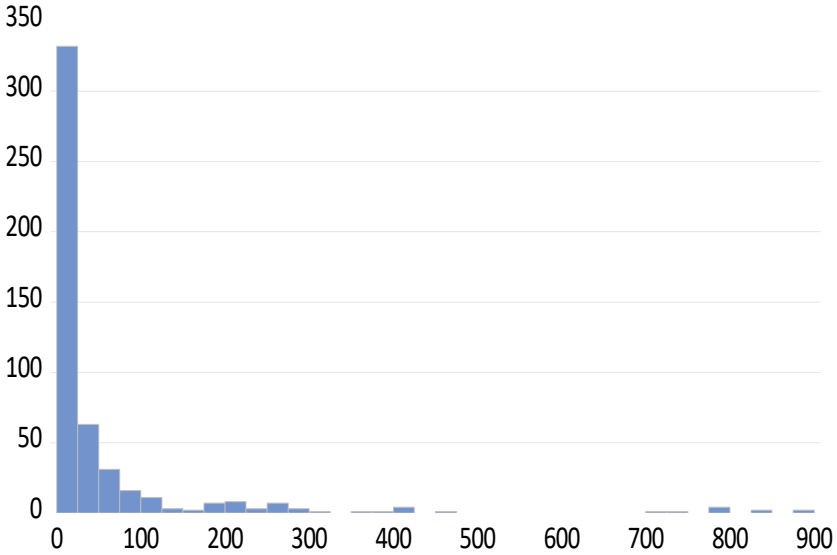
Appendix 13: Summary of Jarque–Bera test of normality of data series

(i) Market value



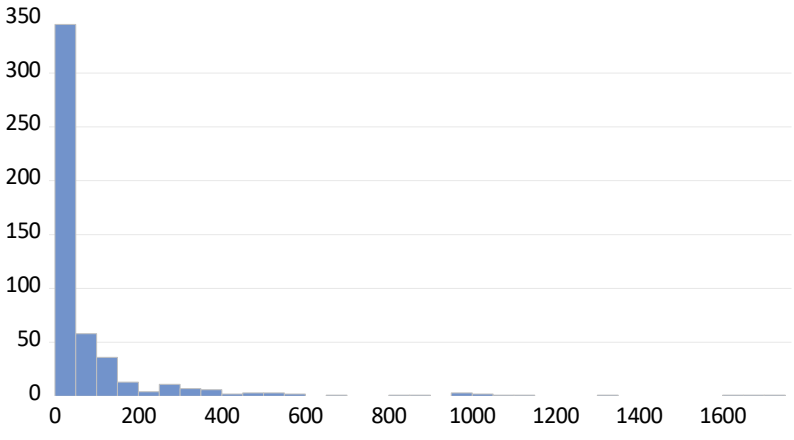
Series: MARKT_VALU	
Sample 2012 2019	
Observations 504	
Mean	111.6028
Median	6.134513
Maximum	3919.317
Minimum	0.050600
Std. Dev.	425.9779
Skewness	6.359776
Kurtosis	47.24462
Jarque-Bera	44506.84
Probability	0.000000

(ii) Total debts



Series: TOTAL_DEBTS	
Sample 2012 2019	
Observations 504	
Mean	53.72047
Median	9.600000
Maximum	895.5000
Minimum	0.106000
Std. Dev.	129.4855
Skewness	4.414595
Kurtosis	24.68662
Jarque-Bera	11513.55
Probability	0.000000

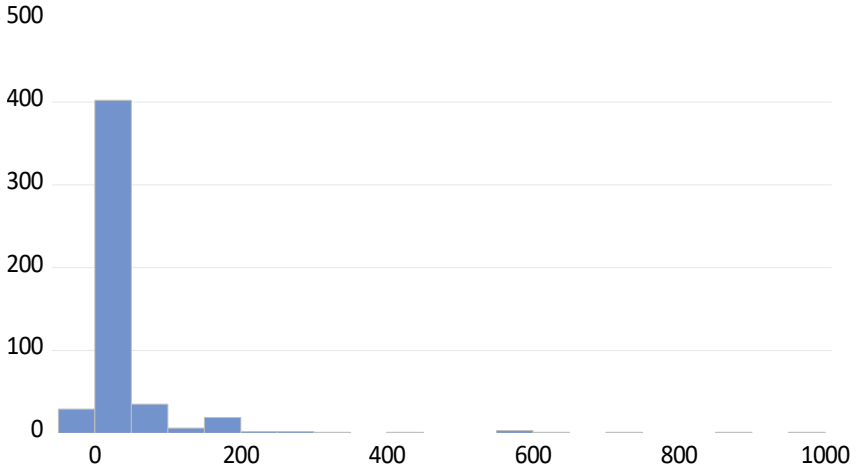
(iii) Total assets



Series: TOTAL_ASSETS	
Sample 2012 2019	
Observations 504	
Mean	88.11294
Median	14.02500
Maximum	1741.000
Minimum	0.174000
Std. Dev.	210.5444
Skewness	4.691770
Kurtosis	29.02908
Jarque-Bera	16076.84
Probability	0.000000

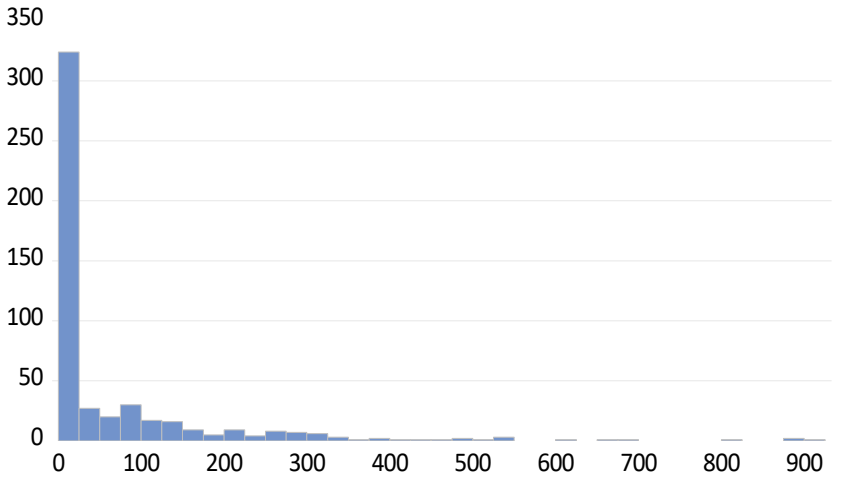
Appendix 13: Summary of Jarque–Bera test of normality of data series (continued)

(iv)Equity



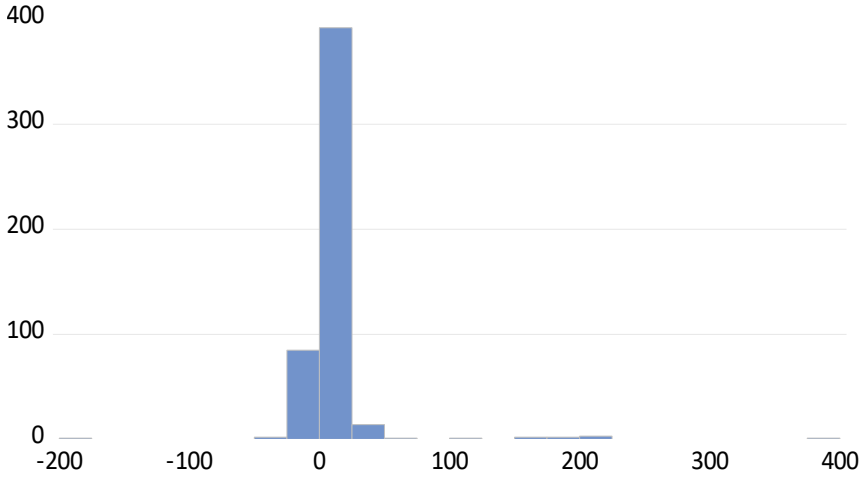
Series: EQUITY	
Sample 2012 2019	
Observations 504	
Mean	34.39246
Median	5.906000
Maximum	987.0000
Minimum	-10.20000
Std. Dev.	95.87258
Skewness	6.155802
Kurtosis	48.50792
Jarque-Bera	46673.47
Probability	0.000000

(v) Total revenue



Series: TOTAL_REVENUE	
Sample 2012 2019	
Observations 504	
Mean	67.28435
Median	9.180000
Maximum	901.0000
Minimum	0.018000
Std. Dev.	131.2024
Skewness	3.335093
Kurtosis	16.59771
Jarque-Bera	4817.171
Probability	0.000000

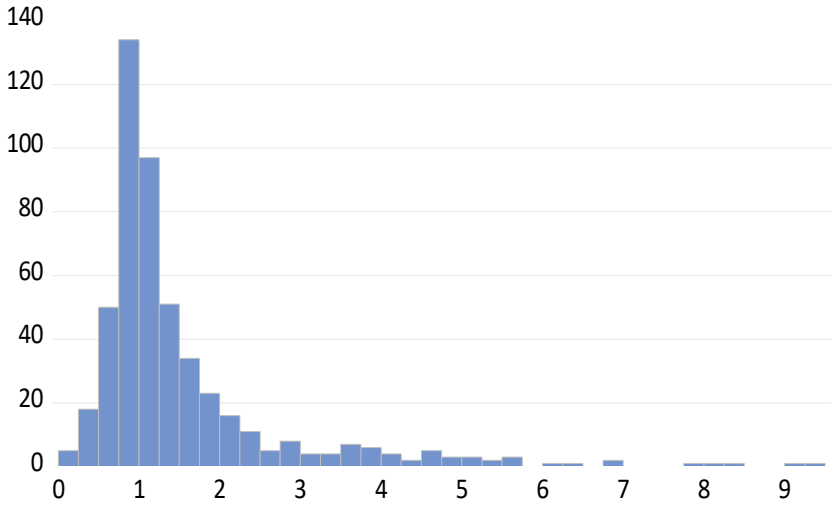
(vi)Profit after tax (PAT)



Series: PAT	
Sample 2012 2019	
Observations 504	
Mean	6.228754
Median	0.532500
Maximum	390.0000
Minimum	-183.0000
Std. Dev.	30.07820
Skewness	6.665671
Kurtosis	73.99292
Jarque-Bera	109572.1
Probability	0.000000

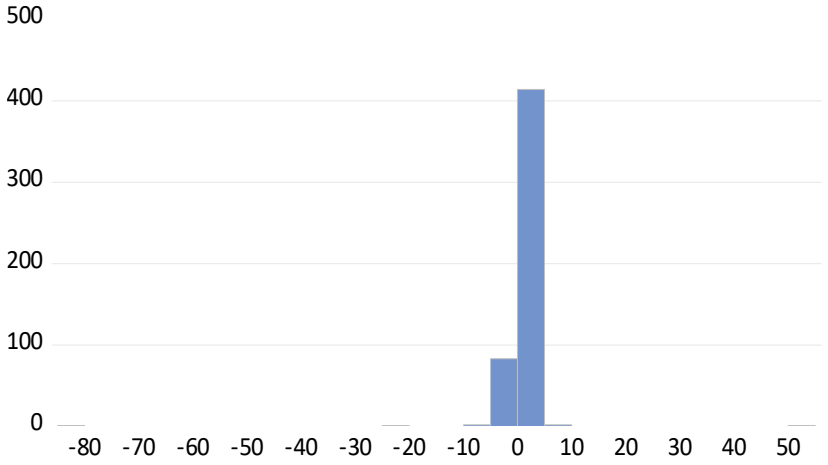
Appendix 13: Summary of Jarque–Bera test of normality of data series (continued)

(vii) Tobin's Q



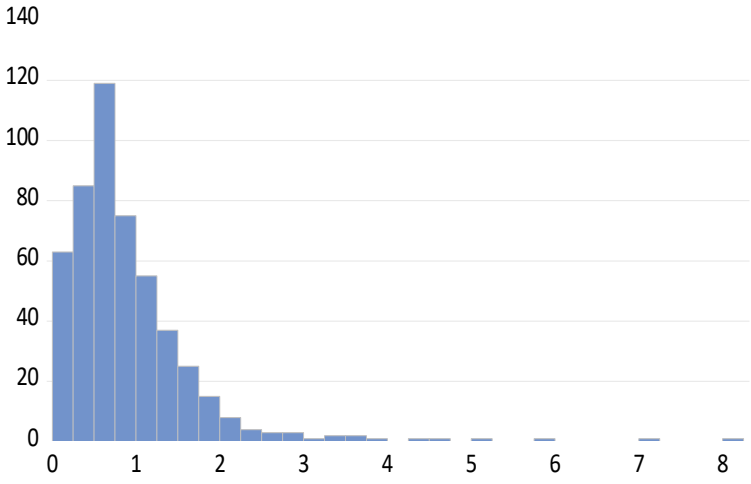
Series: TOBIN_Q	
Sample 2012 2019	
Observations 504	
Mean	1.540952
Median	1.089469
Maximum	9.433218
Minimum	0.078175
Std. Dev.	1.309975
Skewness	2.826086
Kurtosis	12.69957
Jarque-Bera	2646.604
Probability	0.000000

(viii) Return on equity (ROE)



Series: ROE	
Sample 2012 2019	
Observations 504	
Mean	0.017706
Median	0.104283
Maximum	50.00000
Minimum	-82.50000
Std. Dev.	4.492426
Skewness	-9.782233
Kurtosis	258.2402
Jarque-Bera	1376137.
Probability	0.000000

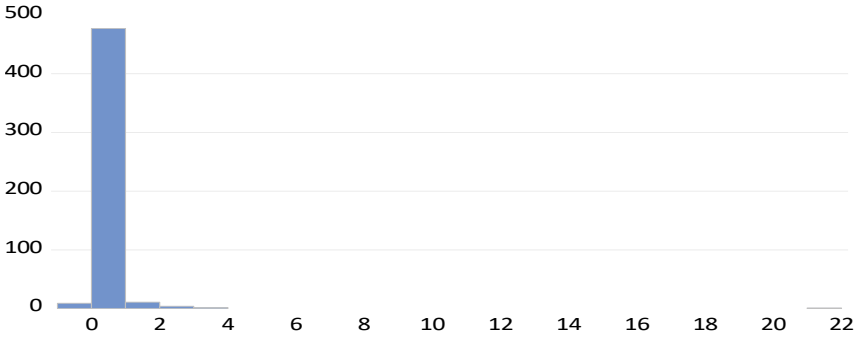
(ix)Net assets turnover (NAT)



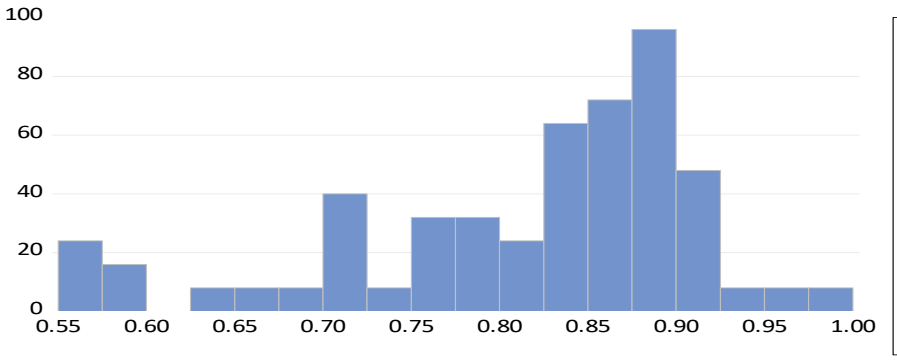
Series: NAT	
Sample 2012 2019	
Observations 504	
Mean	0.912592
Median	0.704113
Maximum	8.033649
Minimum	0.003750
Std. Dev.	0.830320
Skewness	3.579410
Kurtosis	23.72786
Jarque-Bera	10098.75
Probability	0.000000

Appendix 13: Summary of Jarque–Bera test of normality of data series (continued)

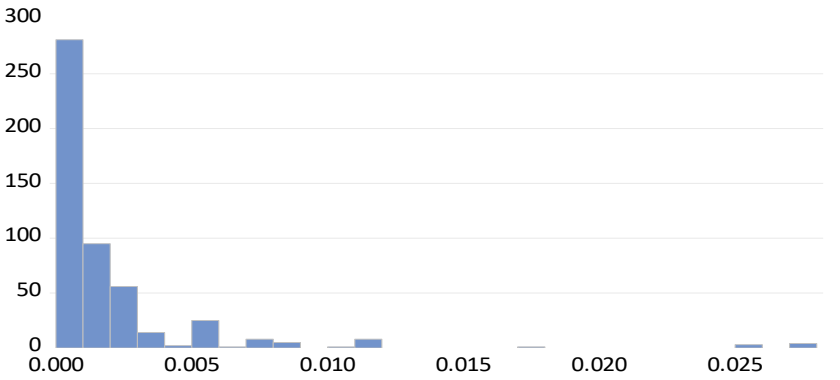
(x) Debt-equity ratio/Capital structure



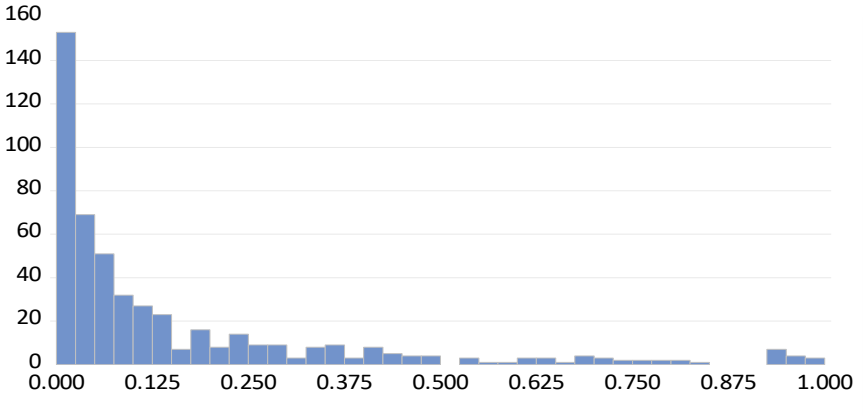
(Xi) Firm Age



(xi)Firm size



(xii) Market share



Appendix 14: Financial Values of Sample Firms

FIRM	INDUSTRY	DATA YEAR	MARKT VALU (N' BILLION)	TOTAL DEBTS (N' BILLION)	TOTAL ASSETS (N' BILLION)	EQUITY (N' BILLION)	TOTAL REVENUE (N' BILLION)	PAT (N' BILLION)
FTN COCOA PROCESSORS PLC	AGRICULTURE	2012	1.100	**2.400**	4.400	**2.000**	0.278	-0.405
LIVESTOCK FEEDS PLC	AGRICULTURE	2012	1.728	**1.940**	2.070	**0.130**	3.300	0.140
OKOMU OIL PALM PLC.	AGRICULTURE	2012	20.271	**5.520**	31.050	**25.530**	10.700	8.970
PRESCO PLC	AGRICULTURE	2012	17.000	**10.900**	28.010	**17.110**	4.250	3.550
CHELLARAM	CONGLOMERATES	2012	4.128	**11.670**	14.760	**3.090**	25.000	0.230
JOHN HOLT PLC.	CONGLOMERATES	2012	1.323	**8.940**	11.000	**2.060**	2.760	-0.007
TRANSNATIONAL CORPORATION O	CONGLOMERATES	2012	27.105	**34.170**	75.600	**41.430**	13.200	2.710
U A C N PLC.	CONGLOMERATES	2012	67.230	**62.370**	122.980	**60.610**	64.630	7.100
ARBICO PLC.	CONSTRUCTION/REAL ESTATE	2012	1.026	**2.780**	2.550	**-0.230**	1.900	-0.200
JULIUS BERGER NIG. PLC.	CONSTRUCTION/REAL ESTATE	2012	41.580	**163.890**	179.000	**15.110**	201.360	8.260
UACN PROPERTY DEVELOPMENT CO. LIMITED	CONSTRUCTION/REAL ESTATE	2012	16.225	**40.110**	71.360	**31.250**	12.040	2.180
CADBURY NIGERIA PLC.	CONSUMER GOODS	2012	90.746	**20.120**	40.160	**20.040**	33.550	3.500
CHAMPION BREW. PLC.	CONSUMER GOODS	2012	3.735	**10.230**	6.800	**-3.430**	1.800	-1.300
DANGOTE SUGAR REFINERY PLC	CONSUMER GOODS	2012	72.000	**36.700**	82.900	**46.200**	106.000	10.800
FLOUR MILLS NIG. PLC.	CONSUMER GOODS	2012	151.760	**74.800**	232.700	**157.900**	258.270	7.700
GUINNESS NIG PLC	CONSUMER GOODS	2012	405.605	**62.160**	102.530	**40.370**	126.300	14.670
HONEYWELL FLOUR MILL PLC	CONSUMER GOODS	2012	16.574	**29.000**	44.900	**15.900**	38.070	2.700
INTERNATIONAL BREWERIES PLC.	CONSUMER GOODS	2012	52.853	**12.700**	14.290	**1.590**	9.910	2.170
NASCON ALLIED INDUSTRIES PLC	CONSUMER GOODS	2012	21.196	**4.100**	10.700	**6.600**	3.410	2.770
NESTLE NIGERIA PLC.	CONSUMER GOODS	2012	554.859	**54.180**	88.960	**34.780**	116.710	21.140
NIGERIAN BREW. PLC.	CONSUMER GOODS	2012	1111.718	**100.190**	253.600	**153.410**	252.670	38.060
NIGERIAN ENAMELWARE PLC.	CONSUMER GOODS	2012	2.152	**1.030**	2.170	**1.140**	2.490	0.060
P Z CUSSONS NIGERIA PLC.	CONSUMER GOODS	2012	111.173	**21.250**	64.400	**43.150**	72.150	2.540
UNILEVER NIGERIA PLC.	CONSUMER GOODS	2012	175.923	**26.450**	36.500	**10.050**	55.750	5.600
VITAFOAM NIG PLC.	CONSUMER GOODS	2012	2.998	**7.070**	10.590	**3.520**	14.000	0.540
FIDSON HEALTHCARE PLC	HEALTHCARE	2012	1.590	**6.990**	12.240	**5.250**	7.170	0.196
GLAXO SMITHKLINE CONSUMER NI	HEALTHCARE	2012	43.147	**13.860**	26.200	**12.340**	25.300	2.900
MORISON INDUSTRIES PLC.	HEALTHCARE	2012	0.528	**0.152**	0.586	**0.434**	0.410	-0.020
NEIMETH INTERNATIONAL PHARMACEUTICALS PLC	HEALTHCARE	2012	1.282	**1.320**	2.900	**1.580**	2.330	0.130
PHARMA-DEKO PLC.	HEALTHCARE	2012	0.259	**1.667**	2.490	**0.823**	1.040	0.740
UNION DIAGNOSTIC & CLINICAL SE	HEALTHCARE	2012	1.777	**0.354**	3.809	**3.455**	0.904	-0.670
CHAMS PLC	ICT	2012	2.348	**4.200**	8.700	**4.500**	2.835	0.090
COURTEVILLE BUSINESS SOLUTIONS PLC	ICT	2012	1.480	**1.300**	4.100	**2.800**	1.060	0.300
E-TRANZACT INTERNATIONAL PLC[I	ICT	2012	16.128	**0.902**	3.290	**2.388**	3.100	0.013
BERGER PAINTS PLC	INDUSTRIAL GOODS	2012	1.952	**1.130**	2.900	**1.770**	2.500	0.196
BETA GLASS CO PLC.	INDUSTRIAL GOODS	2012	5.250	**10.000**	22.460	**12.460**	12.930	1.330
CAP PLC	INDUSTRIAL GOODS	2012	15.680	**1.760**	2.880	**1.120**	5.200	1.100
CUTIX PLC.	INDUSTRIAL GOODS	2012	1.347	**0.432**	0.946	**0.514**	1.570	0.079
DANGOTE CEMENT PLC	INDUSTRIAL GOODS	2012	2182.889	**253.600**	674.000	**420.400**	298.000	151.900
GREIF NIGERIA PLC	INDUSTRIAL GOODS	2012	0.553	**0.360**	0.682	**0.322**	0.748	0.030
LAFARGE AFRICA PLC.	INDUSTRIAL GOODS	2012	175.684	**83.500**	151.900	**68.400**	878.900	14.500
MEYER PLC.	INDUSTRIAL GOODS	2012	0.504	**1.300**	2.580	**1.280**	1.490	-0.027
PORTLAND PAINTS & PRODUCTS NIGERIA PLC	INDUSTRIAL GOODS	2012	1.744	**1.610**	2.390	**0.780**	2.570	-1.220
B.O.C. GASES PLC.	NATURAL RESOURCES	2012	2.457	**0.760**	2.650	**1.890**	2.300	0.300
THOMAS WYATT NIG. PLC.[MRS]	NATURAL RESOURCES	2012	0.290	**0.520**	0.529	**0.009**	0.122	0.450
11 Plc (MOBIL OIL NIG PLC.)	OIL AND GAS	2012	39.395	**26.970**	33.660	**6.690**	80.800	3.590
CONOIL PLC	OIL AND GAS	2012	14.226	**67.430**	83.000	**15.570**	150.000	0.715
ETERNA PLC.	OIL AND GAS	2012	2.595	**26.300**	32.440	**6.140**	89.600	0.950
FORTE/ARDOVA OIL PLC.	OIL AND GAS	2012	8.351	**34.930**	42.510	**7.580**	90.980	1.070
MRS OIL NIGERIA PLC.	OIL AND GAS	2012	6.035	**36.000**	55.600	**19.600**	79.700	0.021
OANDO PLC	OIL AND GAS	2012	28.085	**409.000**	515.080	**106.080**	673.180	10.700
TOTAL NIGERIA PLC.	OIL AND GAS	2012	40.936	**64.800**	76.000	**11.200**	217.800	4.800
ACADEMY PRESS PLC.	SERVICES	2012	0.816	**2.100**	2.900	**0.800**	2.300	0.990
AFROMEDIA PLC	SERVICES	2012	2.220	**4.000**	4.500	**0.500**	1.600	-4.400
C & I LEASING PLC.	SERVICES	2012	0.941	**16.500**	21.432	**4.932**	11.760	0.259
CAPITAL HOTEL PLC[BLS]	SERVICES	2012	9.711	**3.700**	6.400	**2.700**	4.300	0.357
LEARN AFRICA PLC	SERVICES	2012	1.481	**1.030**	4.740	**3.710**	2.900	0.175
NIGERIAN AVIATION HANDLING COMPANY PLC	SERVICES	2012	7.959	**5.510**	10.950	**5.440**	7.400	0.593
R T BRISCOE PLC.	SERVICES	2012	1.788	**10.980**	14.110	**3.130**	21.980	0.291
RED STAR EXPRESS PLC	SERVICES	2012	1.768	**1.600**	10.600	**9.000**	5.060	0.345
TOURIST COMPANY OF NIGERIA PLC.	SERVICES	2012	10.176	**9.430**	11.160	**1.730**	3.400	0.125
TRANS -NATIONAL EXPRESS	SERVICES	2012	0.553	**0.283**	0.664	**0.381**	0.718	0.077
UNIVERSITY PRESS PLC.	SERVICES	2012	1.928	**0.832**	34.000	**33.168**	2.100	0.470
	AVERAGE		**89.014**	**30.346**	**54.317**	**23.971**	**65.501**	**5.348**

Appendix 14: Financial Values of Sample Firms (continued)

FIRM	INDUSTRY	DATA YEAR	MARKT VALU	TOTAL DEBTS	TOTAL ASSETS	EQUITY	TOTAL REVENUE	PAT
			(N' BILLION)	(N' BILLION)	(N' BILLION)	(N' BILLION)	(N' BILLION)	(N' BILLION)
FTN COCOA PROCESSORS PLC	AGRICULTURE	2013	1.100	**2.900**	4.500	**1.600**	0.491	-0.286
LIVESTOCK FEEDS PLC	AGRICULTURE	2013	8.600	**1.940**	3.700	**1.760**	6.100	0.210
OKOMU OIL PALM PLC.	AGRICULTURE	2013	41.972	**7.430**	30.000	**22.570**	8.860	0.430
PRESCO PLC	AGRICULTURE	2013	38.500	**15.000**	32.600	**17.600**	8.490	1.330
CHELLARAM	CONGLOMERATES	2013	3.000	**10.960**	15.410	**4.450**	23.000	0.090
JOHN HOLT PLC.	CONGLOMERATES	2013	0.436	**7.220**	9.300	**2.080**	3.040	0.093
TRANSNATIONAL CORPORATION O	CONGLOMERATES	2013	168.436	**62.800**	149.000	**86.200**	18.800	3.300
U A C N PLC.	CONGLOMERATES	2013	128.698	**54.370**	126.600	**72.230**	78.710	9.820
ARBICO PLC.	CONSTRUCTION/REAL ESTATE	2013	0.750	**2.450**	2.500	**0.050**	3.350	0.250
JULIUS BERGER NIG. PLC.	CONSTRUCTION/REAL ESTATE	2013	86.748	**206.000**	227.000	**21.000**	212.000	8.420
UACN PROPERTY DEVELOPMENT	CONSTRUCTION/REAL ESTATE	2013	26.125	**33.100**	66.550	**33.450**	11.300	3.120
CADBURY NIGERIA PLC.	CONSUMER GOODS	2013	184.723	**19.170**	43.170	**24.000**	35.700	1.550
CHAMPION BREW. PLC.	CONSUMER GOODS	2013	15.219	**13.750**	9.137	**-4.613**	2.230	1.170
DANGOTE SUGAR REFINERY PLC	CONSUMER GOODS	2013	140.400	**38.100**	83.200	**45.100**	103.000	10.800
FLOUR MILLS NIG. PLC.	CONSUMER GOODS	2013	207.553	**196.350**	280.250	**83.900**	301.940	7.760
GUINNESS NIG PLC	CONSUMER GOODS	2013	355.390	**75.000**	121.000	**46.000**	122.400	11.860
HONEYWELL FLOUR MILL PLC	CONSUMER GOODS	2013	29.104	**36.880**	55.400	**18.520**	45.700	2.840
INTERNATIONAL BREWERIES PLC.	CONSUMER GOODS	2013	93.635	**13.650**	23.000	**9.350**	17.300	2.300
NASCON ALLIED INDUSTRIES PLC	CONSUMER GOODS	2013	39.715	**4.540**	11.430	**6.890**	10.840	2.690
NESTLE NIGERIA PLC.	CONSUMER GOODS	2013	951.188	**67.600**	108.000	**40.400**	133.080	22.260
NIGERIAN BREW. PLC.	CONSUMER GOODS	2013	1269.778	**140.400**	252.760	**112.360**	268.600	43.080
NIGERIAN ENAMELWARE PLC.	CONSUMER GOODS	2013	2.045	**1.020**	2.200	**1.180**	2.520	0.070
P Z CUSSONS NIGERIA PLC.	CONSUMER GOODS	2013	146.908	**25.860**	72.296	**46.436**	71.340	5.320
UNILEVER NIGERIA PLC.	CONSUMER GOODS	2013	203.541	**34.410**	43.750	**9.340**	60.000	4.720
VITAFOAM NIG PLC.	CONSUMER GOODS	2013	4.013	**7.430**	10.140	**2.710**	16.340	0.441
FIDSON HEALTHCARE PLC	HEALTHCARE	2013	4.185	**10.000**	15.740	**5.740**	9.230	0.669
GLAXO SMITHKLINE CONSUMER NI	HEALTHCARE	2013	65.056	**15.040**	27.990	**12.950**	29.100	1.850
MORISON INDUSTRIES PLC.	HEALTHCARE	2013	0.291	**0.118**	0.449	**0.331**	0.345	-0.080
NEIMETH INTERNATIONAL PHARMA	HEALTHCARE	2013	1.648	**1.100**	2.890	**1.790**	2.016	-0.228
PHARMA-DEKO PLC.	HEALTHCARE	2013	0.184	**1.987**	2.830	**0.843**	1.060	0.121
UNION DIAGNOSTIC & CLINICAL SE	HEALTHCARE	2013	1.777	**0.190**	3.755	**3.565**	0.862	-0.996
CHAMS PLC	ICT	2013	2.348	**6.040**	10.780	**4.740**	3.440	0.190
COURTEVILLE BUSINESS SOLUTIO	ICT	2013	2.380	**1.400**	4.370	**2.970**	1.290	0.370
E-TRANZACT INTERNATIONAL PLC[I	ICT	2013	10.752	**1.020**	3.600	**2.580**	4.700	0.192
BERGER PAINTS PLC	INDUSTRIAL GOODS	2013	2.319	**1.151**	3.627	**2.476**	2.710	0.320
BETA GLASS CO PLC.	INDUSTRIAL GOODS	2013	7.215	**13.413**	27.160	**13.747**	3.450	1.470
CAP PLC	INDUSTRIAL GOODS	2013	33.915	**6.040**	10.700	**4.660**	6.200	1.420
CUTIX PLC.	INDUSTRIAL GOODS	2013	1.568	**0.476**	1.070	**0.594**	1.920	0.161
DANGOTE CEMENT PLC	INDUSTRIAL GOODS	2013	3731.701	**294.000**	844.000	**550.000**	386.100	201.200
GREIF NIGERIA PLC	INDUSTRIAL GOODS	2013	0.541	**0.360**	0.682	**0.322**	0.795	0.300
LAFARGE AFRICA PLC.	INDUSTRIAL GOODS	2013	345.184	**109.000**	298.100	**189.100**	98.800	28.200
MEYER PLC.	INDUSTRIAL GOODS	2013	0.458	**1.300**	2.630	**1.330**	1.590	0.047
PORTLAND PAINTS & PRODUCTS N	INDUSTRIAL GOODS	2013	2.200	**1.290**	2.070	**0.780**	2.720	0.070
B.O.C. GASES PLC.	NATURAL RESOURCES	2013	2.772	**1.066**	2.890	**1.824**	2.090	0.260
THOMAS WYATT NIG. PLC.[MRS]	NATURAL RESOURCES	2013	0.191	**0.530**	0.639	**0.109**	0.094	0.007
11 Plc (MOBIL OIL NIG PLC.)	OIL AND GAS	2013	42.767	**31.190**	40.730	**9.540**	78.740	4.750
CONOIL PLC	OIL AND GAS	2013	47.140	**64.330**	82.370	**18.040**	159.530	3.070
ETERNA PLC.	OIL AND GAS	2013	5.882	**11.140**	18.230	**7.090**	128.000	0.713
FORTE/ARDOVA OIL PLC.	OIL AND GAS	2013	105.597	**62.300**	104.710	**42.410**	120.000	5.000
MRS OIL NIGERIA PLC.	OIL AND GAS	2013	13.827	**45.900**	65.600	**19.700**	87.700	0.634
OANDO PLC	OIL AND GAS	2013	165.442	**423.000**	591.900	**168.900**	449.870	1.300
TOTAL NIGERIA PLC.	OIL AND GAS	2013	57.719	**66.160**	79.400	**13.240**	238.100	5.300
ACADEMY PRESS PLC.	SERVICES	2013	1.285	**2.800**	3.500	**0.700**	2.280	0.006
AFROMEDIA PLC	SERVICES	2013	2.220	**4.290**	4.200	**-0.090**	0.740	-0.851
C & I LEASING PLC.	SERVICES	2013	0.941	**13.990**	191.000	**177.010**	12.290	0.100
CAPITAL HOTEL PLC[BLS]	SERVICES	2013	7.047	**3.200**	6.300	**3.100**	4.700	0.520
LEARN AFRICA PLC	SERVICES	2013	1.520	**1.110**	4.650	**3.540**	2.300	0.100
NIGERIAN AVIATION HANDLING CO	SERVICES	2013	9.155	**7.800**	13.600	**5.800**	8.090	0.880
R T BRISCOE PLC.	SERVICES	2013	1.729	**13.270**	15.310	**2.040**	21.770	0.092
RED STAR EXPRESS PLC	SERVICES	2013	2.606	**1.600**	10.700	**9.100**	5.030	0.327
TOURIST COMPANY OF NIGERIA PL	SERVICES	2013	9.165	**9.280**	11.100	**1.820**	3.450	-0.602
TRANS -NATIONAL EXPRESS	SERVICES	2013	0.233	**0.283**	0.664	**0.381**	0.718	0.077
UNIVERSITY PRESS PLC.	SERVICES	2013	1.803	**0.656**	2.680	**2.024**	2.300	0.240
	AVERAGE		**140.323**	**36.606**	**68.183**	**31.577**	**54.750**	**6.362**

Appendix 14: Financial Values of Sample Firms (continued)

FIRM	INDUSTRY	DATA YEAR	MARKT VALU (N' BILLION)	TOTAL DEBTS (N' BILLION)	TOTAL ASSETS (N' BILLION)	EQUITY (N' BILLION)	TOTAL REVENUE (N' BILLION)	PAT (N' BILLION)
FTN COCOA PROCESSORS PLC	AGRICULTURE	2014	1.100	**3.200**	4.400	**1.200**	0.247	-0.577
LIVESTOCK FEEDS PLC	AGRICULTURE	2014	4.560	**3.800**	5.800	**2.000**	7.900	0.250
OKOMU OIL PALM PLC.	AGRICULTURE	2014	24.182	**9.650**	32.900	**23.250**	8.650	1.570
PRESCO PLC	AGRICULTURE	2014	24.500	**15.000**	34.900	**19.900**	9.130	2.600
CHELLARAM	CONGLOMERATES	2014	2.856	**13.000**	16.700	**3.700**	27.000	-0.488
JOHN HOLT PLC.	CONGLOMERATES	2014	0.381	**6.970**	10.000	**3.030**	2.820	0.591
TRANSNATIONAL CORPORATION O	CONGLOMERATES	2014	125.843	**81.000**	170.000	**89.000**	41.300	6.900
U A C N PLC.	CONGLOMERATES	2014	65.309	**55.910**	130.360	**74.450**	85.600	10.930
ARBICO PLC.	CONSTRUCTION/REAL ESTATE	2014	0.787	**4.660**	4.450	**-0.210**	3.720	-0.260
JULIUS BERGER NIG. PLC.	CONSTRUCTION/REAL ESTATE	2014	80.071	**229.000**	256.000	**27.000**	196.000	8.260
UACN PROPERTY DEVELOPMENT	CONSTRUCTION/REAL ESTATE	2014	16.328	**32.030**	68.060	**36.030**	11.700	3.600
CADBURY NIGERIA PLC.	CONSUMER GOODS	2014	75.128	**17.270**	28.820	**11.550**	30.510	1.880
CHAMPION BREW. PLC.	CONSUMER GOODS	2014	50.256	**3.700**	9.592	**5.892**	3.300	0.793
DANGOTE SUGAR REFINERY PLC	CONSUMER GOODS	2014	76.200	**41.380**	92.800	**51.420**	94.350	11.640
FLOUR MILLS NIG. PLC.	CONSUMER GOODS	2014	102.870	**213.000**	296.560	**83.560**	325.790	6.060
GUINNESS NIG PLC	CONSUMER GOODS	2014	253.215	**87.000**	132.300	**45.300**	109.200	9.570
HONEYWELL FLOUR MILL PLC	CONSUMER GOODS	2014	27.438	**43.220**	63.830	**20.610**	55.080	3.350
INTERNATIONAL BREWERIES PLC.	CONSUMER GOODS	2014	76.245	**13.100**	24.400	**11.300**	18.490	2.100
NASCON ALLIED INDUSTRIES PLC	CONSUMER GOODS	2014	16.480	**6.230**	12.560	**6.330**	11.250	1.870
NESTLE NIGERIA PLC.	CONSUMER GOODS	2014	801.970	**70.120**	106.000	**35.880**	143.320	22.240
NIGERIAN BREW. PLC.	CONSUMER GOODS	2014	1250.115	**177.790**	349.670	**171.880**	266.400	42.520
NIGERIAN ENAMELWARE PLC.	CONSUMER GOODS	2014	2.016	**1.840**	3.080	**1.240**	2.570	0.080
P Z CUSSONS NIGERIA PLC.	CONSUMER GOODS	2014	94.497	**28.430**	70.965	**42.535**	72.900	5.080
UNILEVER NIGERIA PLC.	CONSUMER GOODS	2014	135.442	**38.260**	45.740	**7.480**	55.750	2.410
VITAFOAM NIG PLC.	CONSUMER GOODS	2014	3.301	**8.880**	11.910	**3.030**	16.280	0.456
FIDSON HEALTHCARE PLC	HEALTHCARE	2014	5.850	**10.300**	16.670	**6.370**	9.720	0.780
GLAXO SMITHKLINE CONSUMER NI	HEALTHCARE	2014	47.835	**18.100**	31.320	**13.220**	30.500	0.954
MORISON INDUSTRIES PLC.	HEALTHCARE	2014	0.277	**0.200**	0.420	**0.220**	0.247	-0.108
NEIMETH INTERNATIONAL PHARMA	HEALTHCARE	2014	1.224	**1.152**	2.780	**1.628**	1.628	-0.330
PHARMA-DEKO PLC.	HEALTHCARE	2014	0.213	**0.784**	2.570	**1.786**	1.560	0.101
UNION DIAGNOSTIC & CLINICAL SE	HEALTHCARE	2014	1.777	**0.308**	4.060	**3.752**	0.998	0.011
CHAMS PLC	ICT	2014	2.348	**6.170**	9.544	**3.374**	3.300	-0.775
COURTEVILLE BUSINESS SOLUTIO	ICT	2014	1.776	**1.501**	4.720	**3.219**	1.350	0.309
E-TRANZACT INTERNATIONAL PLC[I	ICT	2014	14.238	**1.676**	4.660	**2.984**	7.090	0.407
BERGER PAINTS PLC	INDUSTRIAL GOODS	2014	2.608	**1.180**	3.640	**2.460**	3.080	0.186
BETA GLASS CO PLC.	INDUSTRIAL GOODS	2014	13.889	**12.580**	26.680	**14.100**	3.920	0.343
CAP PLC	INDUSTRIAL GOODS	2014	26.250	**6.170**	12.090	**5.920**	6.990	1.060
CUTIX PLC.	INDUSTRIAL GOODS	2014	1.145	**1.044**	1.700	**0.656**	2.223	0.207
DANGOTE CEMENT PLC	INDUSTRIAL GOODS	2014	3408.101	**392.000**	984.000	**592.000**	391.000	157.500
GREIF NIGERIA PLC	INDUSTRIAL GOODS	2014	0.515	**0.320**	0.663	**0.343**	0.788	0.104
LAFARGE AFRICA PLC.	INDUSTRIAL GOODS	2014	241.629	**114.200**	305.800	**191.600**	205.600	34.660
MEYER PLC.	INDUSTRIAL GOODS	2014	0.283	**1.810**	2.450	**0.640**	1.340	-0.037
PORTLAND PAINTS & PRODUCTS N	INDUSTRIAL GOODS	2014	1.560	**1.350**	2.277	**0.927**	2.790	0.148
B.O.C. GASES PLC.	NATURAL RESOURCES	2014	2.281	**1.390**	34.420	**33.030**	2.221	0.220
THOMAS WYATT NIG. PLC.[MRS]	NATURAL RESOURCES	2014	0.161	**0.707**	0.645	**-0.062**	0.054	0.022
11 Plc (MOBIL OIL NIG PLC.)	OIL AND GAS	2014	56.974	**35.680**	49.730	**14.050**	79.580	6.180
CONOIL PLC	OIL AND GAS	2014	26.447	**71.430**	87.370	**15.940**	128.350	0.834
ETERNA PLC.	OIL AND GAS	2014	3.886	**10.150**	18.570	**8.420**	81.240	1.310
FORTE/ARDOVA OIL PLC.	OIL AND GAS	2014	246.196	**94.900**	139.200	**44.300**	171.400	4.440
MRS OIL NIGERIA PLC.	OIL AND GAS	2014	13.512	**37.600**	57.800	**20.200**	92.300	0.746
OANDO PLC	OIL AND GAS	2014	146.354	**843.870**	889.370	**45.500**	424.680	-183.000
TOTAL NIGERIA PLC.	OIL AND GAS	2014	48.382	**81.580**	95.500	**13.920**	240.600	4.400
ACADEMY PRESS PLC.	SERVICES	2014	0.595	**3.000**	3.800	**0.800**	2.340	0.102
AFROMEDIA PLC	SERVICES	2014	2.220	**5.100**	3.600	**-1.500**	0.341	-1.400
C & I LEASING PLC.	SERVICES	2014	0.941	**17.530**	23.330	**5.800**	13.880	0.310
CAPITAL HOTEL PLC[BLS]	SERVICES	2014	6.629	**3.400**	7.000	**3.600**	4.600	0.250
LEARN AFRICA PLC	SERVICES	2014	1.041	**0.560**	4.050	**3.490**	2.200	0.058
NIGERIAN AVIATION HANDLING CO	SERVICES	2014	7.324	**8.500**	14.300	**5.800**	8.130	0.580
R T BRISCOE PLC.	SERVICES	2014	0.906	**13.980**	18.950	**4.970**	11.950	3.300
RED STAR EXPRESS PLC	SERVICES	2014	2.323	**1.300**	3.400	**2.100**	5.290	0.304
TOURIST COMPANY OF NIGERIA PL	SERVICES	2014	7.885	**9.390**	11.080	**1.690**	3.380	-2.640
TRANS -NATIONAL EXPRESS	SERVICES	2014	0.245	**0.229**	0.627	**0.398**	0.716	0.077
UNIVERSITY PRESS PLC.	SERVICES	2014	1.821	**0.731**	2.800	**2.069**	2.430	0.164
	AVERAGE		**121.567**	**47.878**	**77.197**	**29.319**	**56.334**	**2.781**

Appendix 14: Financial Values of Sample Firms (continued)

FIRM	INDUSTRY	DATA YEAR	MARKT VALU	TOTAL DEBTS	TOTAL ASSETS	EQUITY	TOTAL REVENUE	PAT
			(N' BILLION)	(N' BILLION)	(N' BILLION)	(N' BILLION)	(N' BILLION)	(N' BILLION)
FTN COCOA PROCESSORS PLC	AGRICULTURE	2015	1.100	**3.700**	4.740	**1.040**	1.400	-0.200
LIVESTOCK FEEDS PLC	AGRICULTURE	2015	2.660	**2.600**	4.500	**1.900**	8.900	0.187
OKOMU OIL PALM PLC.	AGRICULTURE	2015	28.903	**7.800**	20.000	**12.200**	8.650	2.740
PRESCO PLC	AGRICULTURE	2015	33.000	**25.050**	55.480	**30.430**	10.450	2.320
CHELLARAM	CONGLOMERATES	2015	2.588	**15.000**	18.400	**3.400**	25.000	-0.917
JOHN HOLT PLC.	CONGLOMERATES	2015	0.358	**7.600**	10.800	**3.200**	2.400	-0.254
TRANSNATIONAL CORPORATION O	CONGLOMERATES	2015	58.856	**39.100**	91.300	**52.200**	13.900	3.400
U A C N PLC.	CONGLOMERATES	2015	39.858	**54.510**	128.600	**74.090**	73.160	5.180
ARBICO PLC.	CONSTRUCTION/REAL ESTATE	2015	0.748	**4.450**	4.530	**0.080**	4.500	0.270
JULIUS BERGER NIG. PLC.	CONSTRUCTION/REAL ESTATE	2015	55.440	**220.800**	245.100	**24.300**	133.800	1.760
UACN PROPERTY DEVELOPMENT	CONSTRUCTION/REAL ESTATE	2015	10.467	**36.230**	71.980	**35.750**	5.710	0.380
CADBURY NIGERIA PLC.	CONSUMER GOODS	2015	32.211	**16.130**	28.400	**12.270**	27.820	8.900
CHAMPION BREW. PLC.	CONSUMER GOODS	2015	26.385	**3.200**	10.320	**7.120**	3.500	0.094
DANGOTE SUGAR REFINERY PLC	CONSUMER GOODS	2015	72.360	**44.400**	102.230	**57.830**	101.000	11.140
FLOUR MILLS NIG. PLC.	CONSUMER GOODS	2015	54.584	**255.000**	342.850	**87.850**	308.770	8.470
GUINNESS NIG PLC	CONSUMER GOODS	2015	181.309	**73.900**	132.600	**58.700**	118.500	7.900
HONEYWELL FLOUR MILL PLC	CONSUMER GOODS	2015	16.257	**47.600**	67.900	**20.300**	49.050	1.058
INTERNATIONAL BREWERIES PLC.	CONSUMER GOODS	2015	52.675	**18.000**	30.100	**12.100**	20.600	1.900
NASCON ALLIED INDUSTRIES PLC	CONSUMER GOODS	2015	18.943	**9.200**	16.290	**7.090**	16.170	2.100
NESTLE NIGERIA PLC.	CONSUMER GOODS	2015	681.684	**81.200**	119.200	**38.000**	151.270	23.740
NIGERIAN BREW. PLC.	CONSUMER GOODS	2015	1078.358	**184.400**	382.720	**198.320**	293.700	38.000
NIGERIAN ENAMELWARE PLC.	CONSUMER GOODS	2015	1.887	**3.720**	5.020	**1.300**	2.610	0.070
P Z CUSSONS NIGERIA PLC.	CONSUMER GOODS	2015	102.041	**23.710**	67.380	**43.670**	73.126	4.570
UNILEVER NIGERIA PLC.	CONSUMER GOODS	2015	163.628	**42.100**	50.100	**8.000**	59.200	1.190
VITAFOAM NIG PLC.	CONSUMER GOODS	2015	5.317	**9.550**	13.190	**3.640**	17.190	0.560
FIDSON HEALTHCARE PLC	HEALTHCARE	2015	3.750	**10.070**	16.660	**6.590**	8.210	0.340
GLAXO SMITHKLINE CONSUMER NI	HEALTHCARE	2015	40.899	**11.100**	28.180	**17.080**	15.380	4.209
MORISON INDUSTRIES PLC.	HEALTHCARE	2015	0.263	**0.269**	0.410	**0.141**	0.184	0.078
NEIMETH INTERNATIONAL PHARMA	HEALTHCARE	2015	1.397	**1.466**	2.680	**1.214**	1.460	0.006
PHARMA-DEKO PLC.	HEALTHCARE	2015	0.488	**0.582**	2.324	**1.742**	1.481	0.650
UNION DIAGNOSTIC & CLINICAL SE	HEALTHCARE	2015	1.777	**0.106**	4.180	**4.074**	1.220	0.019
CHAMS PLC	ICT	2015	2.348	**5.200**	8.560	**3.360**	1.610	-3.400
COURTEVILLE BUSINESS SOLUTIO	ICT	2015	1.776	**1.270**	4.400	**3.130**	1.470	-0.060
E-TRANZACT INTERNATIONAL PLC[I	ICT	2015	12.768	**2.360**	5.833	**3.473**	8.670	0.704
BERGER PAINTS PLC	INDUSTRIAL GOODS	2015	2.898	**1.310**	3.900	**2.590**	3.020	0.343
BETA GLASS CO PLC.	INDUSTRIAL GOODS	2015	26.724	**9.600**	27.170	**17.570**	15.900	1.930
CAP PLC	INDUSTRIAL GOODS	2015	26.320	**1.890**	3.400	**1.510**	7.050	1.730
CUTIX PLC.	INDUSTRIAL GOODS	2015	1.462	**1.220**	1.960	**0.740**	2.350	0.149
DANGOTE CEMENT PLC	INDUSTRIAL GOODS	2015	2896.886	**466.000**	1110.000	**644.000**	491.000	181.300
GREIF NIGERIA PLC	INDUSTRIAL GOODS	2015	0.419	**0.350**	0.715	**0.365**	0.805	0.024
LAFARGE AFRICA PLC.	INDUSTRIAL GOODS	2015	440.914	**275.500**	451.600	**176.100**	267.000	18.300
MEYER PLC.	INDUSTRIAL GOODS	2015	0.228	**1.640**	2.300	**0.660**	1.180	0.005
PORTLAND PAINTS & PRODUCTS N	INDUSTRIAL GOODS	2015	1.504	**1.200**	1.899	**0.699**	2.160	-0.230
B.O.C. GASES PLC.	NATURAL RESOURCES	2015	1.578	**1.103**	3.214	**2.111**	1.987	0.121
THOMAS WYATT NIG. PLC.[MRS]	NATURAL RESOURCES	2015	0.141	**0.689**	0.609	**-0.080**	1.060	0.017
11 Plc (MOBIL OIL NIG PLC.)	OIL AND GAS	2015	57.695	**38.710**	54.070	**15.360**	64.220	4.190
CONOIL PLC	OIL AND GAS	2015	17.168	**51.670**	69.390	**17.720**	82.000	2.310
ETERNA PLC.	OIL AND GAS	2015	2.673	**18.800**	28.500	**9.700**	94.000	1.200
FORTE/ARDOVA OIL PLC.	OIL AND GAS	2015	429.819	**75.400**	121.750	**46.350**	124.000	5.700
MRS OIL NIGERIA PLC.	OIL AND GAS	2015	12.613	**45.920**	66.890	**20.970**	87.100	0.936
OANDO PLC	OIL AND GAS	2015	71.004	**895.500**	976.300	**80.800**	203.430	-49.680
TOTAL NIGERIA PLC.	OIL AND GAS	2015	49.913	**67.000**	83.000	**16.000**	208.000	4.047
ACADEMY PRESS PLC.	SERVICES	2015	0.333	**3.000**	3.730	**0.730**	2.310	-0.025
AFROMEDIA PLC	SERVICES	2015	2.220	**6.560**	2.300	**-4.260**	0.410	-2.750
C & I LEASING PLC.	SERVICES	2015	0.941	**23.500**	29.280	**5.780**	14.500	0.148
CAPITAL HOTEL PLC[BLS]	SERVICES	2015	5.994	**3.600**	6.330	**2.730**	4.700	0.490
LEARN AFRICA PLC	SERVICES	2015	0.548	**0.840**	3.580	**2.740**	1.880	-0.640
NIGERIAN AVIATION HANDLING CO	SERVICES	2015	6.140	**8.830**	14.900	**6.070**	8.400	0.530
R T BRISCOE PLC.	SERVICES	2015	0.588	**13.980**	13.940	**-0.040**	11.940	3.300
RED STAR EXPRESS PLC	SERVICES	2015	2.505	**1.500**	3.818	**2.318**	6.420	0.403
TOURIST COMPANY OF NIGERIA PL	SERVICES	2015	7.885	**11.820**	10.390	**-1.430**	3.200	-5.540
TRANS -NATIONAL EXPRESS	SERVICES	2015	0.225	**0.228**	0.656	**0.428**	0.798	0.050
UNIVERSITY PRESS PLC.	SERVICES	2015	2.588	**0.574**	2.970	**2.396**	1.720	0.174
	AVERAGE		**108.841**	**52.211**	**82.469**	**30.257**	**52.105**	**4.693**

Appendix 14: Financial Values of Sample Firms (continued)

FIRM	INDUSTRY	DATA YEAR	MARKT VALU (N' BILLION)	TOTAL DEBTS (N' BILLION)	TOTAL ASSETS (N' BILLION)	EQUITY (N' BILLION)	TOTAL REVENUE (N' BILLION)	PAT (N' BILLION)
	AVERAGE		**108.841**	**52.211**	**82.469**	**30.257**	**52.105**	**4.693**
FTN COCOA PROCESSORS PLC	AGRICULTURE	2016	1.100	**4.100**	5.300	**1.200**	0.855	0.135
LIVESTOCK FEEDS PLC	AGRICULTURE	2016	1.680	**5.200**	7.300	**2.100**	11.000	0.152
OKOMU OIL PALM PLC.	AGRICULTURE	2016	38.319	**7.500**	24.500	**17.000**	9.740	5.000
PRESCO PLC	AGRICULTURE	2016	40.100	**16.300**	33.900	**17.600**	15.720	7.030
CHELLARAM	CONGLOMERATES	2016	2.465	**12.200**	13.600	**1.400**	20.080	0.150
JOHN HOLT PLC.	CONGLOMERATES	2016	0.257	**8.700**	11.010	**2.310**	2.660	0.097
TRANSNATIONAL CORPORATION O	CONGLOMERATES	2016	35.372	**37.500**	90.700	**53.200**	15.310	4.090
U A C N PLC.	CONGLOMERATES	2016	32.290	**61.760**	138.230	**76.470**	84.620	5.670
ARBICO PLC.	CONSTRUCTION/REAL ESTATE	2016	0.711	**3.860**	3.930	**0.070**	3.400	-0.077
JULIUS BERGER NIG. PLC.	CONSTRUCTION/REAL ESTATE	2016	50.926	**233.900**	259.200	**25.300**	138.900	3.000
UACN PROPERTY DEVELOPMENT	CONSTRUCTION/REAL ESTATE	2016	4.503	**36.880**	70.000	**33.120**	6.340	-1.550
CADBURY NIGERIA PLC.	CONSUMER GOODS	2016	19.327	**17.340**	28.400	**11.060**	29.970	6.900
CHAMPION BREW. PLC.	CONSUMER GOODS	2016	19.182	**2.290**	9.960	**7.670**	3.800	0.549
DANGOTE SUGAR REFINERY PLC	CONSUMER GOODS	2016	73.320	**112.200**	178.380	**66.180**	169.700	14.390
FLOUR MILLS NIG. PLC.	CONSUMER GOODS	2016	48.522	**183.040**	345.350	**162.310**	342.590	14.420
GUINNESS NIG PLC	CONSUMER GOODS	2016	125.064	**95.300**	136.900	**41.600**	101.900	2.010
HONEYWELL FLOUR MILL PLC	CONSUMER GOODS	2016	10.309	**59.600**	76.000	**16.400**	50.880	3.207
INTERNATIONAL BREWERIES PLC.	CONSUMER GOODS	2016	60.944	**19.500**	33.400	**13.900**	23.200	2.600
NASCON ALLIED INDUSTRIES PLC	CONSUMER GOODS	2016	22.520	**16.550**	24.600	**8.050**	18.290	2.400
NESTLE NIGERIA PLC.	CONSUMER GOODS	2016	642.052	**138.700**	169.500	**30.800**	181.910	7.900
NIGERIAN BREW. PLC.	CONSUMER GOODS	2016	1173.428	**201.230**	367.150	**165.920**	313.740	28.400
NIGERIAN ENAMELWARE PLC.	CONSUMER GOODS	2016	1.858	**3.120**	4.540	**1.420**	2.740	0.130
P Z CUSSONS NIGERIA PLC.	CONSUMER GOODS	2016	57.572	**31.020**	74.430	**43.410**	69.520	2.120
UNILEVER NIGERIA PLC.	CONSUMER GOODS	2016	132.415	**60.800**	72.790	**11.990**	69.700	3.070
VITAFOAM NIG PLC.	CONSUMER GOODS	2016	2.502	**9.840**	12.270	**2.430**	13.500	-0.032
FIDSON HEALTHCARE PLC	HEALTHCARE	2016	1.920	**9.820**	17.440	**7.620**	7.680	1.104
GLAXO SMITHKLINE CONSUMER NI	HEALTHCARE	2016	18.835	**9.300**	26.400	**17.100**	14.380	0.486
MORISON INDUSTRIES PLC.	HEALTHCARE	2016	0.251	**0.269**	0.412	**0.143**	0.132	-0.181
NEIMETH INTERNATIONAL PHARMA	HEALTHCARE	2016	1.224	**1.470**	2.800	**1.330**	2.001	0.184
PHARMA-DEKO PLC.	HEALTHCARE	2016	0.386	**0.583**	2.270	**1.687**	1.090	-0.011
UNION DIAGNOSTIC & CLINICAL SE	HEALTHCARE	2016	1.777	**0.128**	4.500	**4.372**	1.550	0.307
CHAMS PLC	ICT	2016	2.348	**4.190**	6.030	**1.840**	1.483	-1.510
COURTEVILLE BUSINESS SOLUTIO	ICT	2016	1.776	**0.810**	3.970	**3.160**	1.320	0.535
E-TRANZACT INTERNATIONAL PLC[	ICT	2016	21.000	**3.400**	6.900	**3.500**	10.400	0.449
BERGER PAINTS PLC	INDUSTRIAL GOODS	2016	1.855	**1.500**	4.100	**2.600**	2.600	0.224
BETA GLASS CO PLC.	INDUSTRIAL GOODS	2016	15.159	**11.700**	33.180	**21.480**	19.090	4.095
CAP PLC	INDUSTRIAL GOODS	2016	22.400	**2.630**	4.900	**2.270**	6.810	1.600
CUTIX PLC.	INDUSTRIAL GOODS	2016	1.664	**1.021**	1.890	**0.869**	2.830	0.190
DANGOTE CEMENT PLC	INDUSTRIAL GOODS	2016	2964.878	**730.000**	1327.000	**597.000**	615.000	181.600
GREIF NIGERIA PLC	INDUSTRIAL GOODS	2016	0.413	**0.380**	0.722	**0.342**	0.999	0.027
LAFARGE AFRICA PLC.	INDUSTRIAL GOODS	2016	223.787	**253.500**	502.400	**248.900**	219.700	16.900
MEYER PLC.	INDUSTRIAL GOODS	2016	0.283	**1.700**	2.200	**0.500**	1.090	0.219
PORTLAND PAINTS & PRODUCTS N	INDUSTRIAL GOODS	2016	0.720	**1.050**	1.756	**0.706**	1.970	0.008
B.O.C. GASES PLC.	NATURAL RESOURCES	2016	1.465	**1.458**	3.630	**2.172**	1.983	0.760
THOMAS WYATT NIG. PLC.[MRS]	NATURAL RESOURCES	2016	0.119	**0.667**	0.522	**-0.145**	0.430	0.066
11 Plc (MOBIL OIL NIG PLC.)	OIL AND GAS	2016	100.606	**40.240**	61.700	**21.460**	94.110	8.680
CONOIL PLC	OIL AND GAS	2016	26.009	**51.370**	69.830	**18.460**	85.010	2.840
ETERNA PLC.	OIL AND GAS	2016	4.043	**20.860**	31.600	**10.740**	106.000	1.470
FORTE/ARDOVA OIL PLC.	OIL AND GAS	2016	109.968	**97.400**	140.750	**43.350**	148.000	2.900
MRS OIL NIGERIA PLC.	OIL AND GAS	2016	10.982	**59.200**	81.360	**22.160**	107.100	1.390
OANDO PLC	OIL AND GAS	2016	56.563	**799.000**	991.600	**192.600**	455.750	3.490
TOTAL NIGERIA PLC.	OIL AND GAS	2016	101.517	**113.000**	136.000	**23.000**	290.000	14.761
ACADEMY PRESS PLC.	SERVICES	2016	0.302	**2.900**	3.530	**0.630**	2.090	-0.154
AFROMEDIA PLC	SERVICES	2016	2.220	**8.200**	2.160	**-6.040**	0.494	-1.780
C & I LEASING PLC.	SERVICES	2016	0.941	**30.280**	38.370	**8.090**	17.000	0.920
CAPITAL HOTEL PLC[BLS]	SERVICES	2016	5.421	**3.700**	7.100	**3.400**	5.400	1.270
LEARN AFRICA PLC	SERVICES	2016	0.594	**1.657**	4.630	**2.973**	2.600	-0.230
NIGERIAN AVIATION HANDLING CO	SERVICES	2016	5.133	**6.280**	12.600	**6.320**	7.900	0.580
R T BRISCOE PLC.	SERVICES	2016	0.588	**11.850**	8.900	**-2.950**	9.800	-2.890
RED STAR EXPRESS PLC	SERVICES	2016	2.594	**1.700**	3.756	**2.056**	6.380	0.380
TOURIST COMPANY OF NIGERIA PL	SERVICES	2016	7.885	**17.530**	10.550	**-6.980**	2.890	-3.210
TRANS -NATIONAL EXPRESS	SERVICES	2016	0.199	**0.137**	0.564	**0.427**	0.803	0.020
UNIVERSITY PRESS PLC.	SERVICES	2016	1.829	**0.791**	2.840	**2.049**	1.770	0.133
	AVERAGE		**100.260**	**58.414**	**91.305**	**32.890**	**62.789**	**5.546**

Appendix 14: Financial Values of Sample Firms (continued)

FIRM	INDUSTRY	DATA YEAR	MARKT VALU (N' BILLION)	TOTAL DEBTS (N' BILLION)	TOTAL ASSETS (N' BILLION)	EQUITY (N' BILLION)	TOTAL REVENUE (N' BILLION)	PAT (N' BILLION)
FTN COCOA PROCESSORS PLC	AGRICULTURE	2017	1.100	**4.430**	4.800	**0.370**	0.018	-0.290
LIVESTOCK FEEDS PLC	AGRICULTURE	2017	2.490	**3.160**	5.260	**2.100**	10.180	-0.780
OKOMU OIL PALM PLC.	AGRICULTURE	2017	64.570	**8.100**	31.270	**23.170**	14.360	9.000
PRESCO PLC	AGRICULTURE	2017	68.500	**24.100**	45.900	**21.800**	22.300	5.600
CHELLARAM	CONGLOMERATES	2017	2.227	**11.500**	13.200	**1.700**	12.400	0.330
JOHN HOLT PLC.	CONGLOMERATES	2017	0.195	**5.320**	11.100	**5.780**	2.290	-0.165
TRANSNATIONAL CORPORATION O	CONGLOMERATES	2017	59.346	**189.800**	285.000	**95.200**	80.260	10.600
U A C N PLC.	CONGLOMERATES	2017	32.463	**57.400**	130.060	**72.660**	89.100	0.960
ARBICO PLC.	CONSTRUCTION/REAL ESTATE	2017	0.711	**5.200**	5.400	**0.200**	4.890	0.061
JULIUS BERGER NIG. PLC.	CONSTRUCTION/REAL ESTATE	2017	36.960	**245.500**	275.400	**29.900**	141.900	4.800
UACN PROPERTY DEVELOPMENT	CONSTRUCTION/REAL ESTATE	2017	7.250	**30.940**	64.580	**33.640**	3.980	-2.950
CADBURY NIGERIA PLC.	CONSUMER GOODS	2017	29.431	**16.680**	28.400	**11.720**	33.070	0.439
CHAMPION BREW. PLC.	CONSUMER GOODS	2017	16.285	**1.950**	10.100	**8.150**	4.770	0.460
DANGOTE SUGAR REFINERY PLC	CONSUMER GOODS	2017	240.000	**102.300**	195.000	**92.700**	204.000	39.800
FLOUR MILLS NIG. PLC.	CONSUMER GOODS	2017	76.103	**307.500**	482.600	**175.100**	524.460	69.600
GUINNESS NIG PLC	CONSUMER GOODS	2017	205.896	**103.100**	146.000	**42.900**	125.900	1.920
HONEYWELL FLOUR MILL PLC	CONSUMER GOODS	2017	16.653	**60.800**	113.000	**52.200**	53.200	3.900
INTERNATIONAL BREWERIES PLC.	CONSUMER GOODS	2017	468.474	**192.900**	232.100	**39.200**	36.500	0.874
NASCON ALLIED INDUSTRIES PLC	CONSUMER GOODS	2017	49.015	**18.580**	30.120	**11.540**	27.000	5.300
NESTLE NIGERIA PLC.	CONSUMER GOODS	2017	1233.365	**101.900**	146.800	**44.900**	244.100	33.700
NIGERIAN BREW. PLC.	CONSUMER GOODS	2017	1069.636	**203.930**	382.230	**178.300**	344.560	33.648
NIGERIAN ENAMELWARE PLC.	CONSUMER GOODS	2017	1.766	**4.400**	5.830	**1.430**	2.530	0.450
P Z CUSSONS NIGERIA PLC.	CONSUMER GOODS	2017	81.792	**44.950**	90.080	**45.130**	79.630	3.680
UNILEVER NIGERIA PLC.	CONSUMER GOODS	2017	235.545	**45.180**	121.080	**75.900**	85.190	6.770
VITAFOAM NIG PLC.	CONSUMER GOODS	2017	3.127	**10.040**	13.410	**3.370**	17.700	-0.127
FIDSON HEALTHCARE PLC	HEALTHCARE	2017	5.550	**13.320**	20.480	**7.160**	14.050	-0.680
GLAXO SMITHKLINE CONSUMER NI	HEALTHCARE	2017	25.843	**6.800**	26.500	**19.700**	16.080	0.617
MORISON INDUSTRIES PLC.	HEALTHCARE	2017	0.081	**0.286**	0.530	**0.244**	0.151	-0.190
NEIMETH INTERNATIONAL PHARMA	HEALTHCARE	2017	1.295	**1.320**	2.380	**1.060**	1.534	-0.411
PHARMA-DEKO PLC.	HEALTHCARE	2017	0.512	**0.730**	2.323	**1.593**	1.593	0.012
UNION DIAGNOSTIC & CLINICAL SE	HEALTHCARE	2017	1.777	**0.169**	4.640	**4.471**	1.570	0.307
CHAMS PLC	ICT	2017	2.348	**4.130**	4.700	**0.570**	1.950	-1.510
COURTEVILLE BUSINESS SOLUTIO	ICT	2017	1.776	**0.900**	4.080	**3.180**	1.120	0.037
E-TRANZACT INTERNATIONAL PLC[I	ICT	2017	21.000	**2.950**	6.240	**3.290**	11.680	0.208
BERGER PAINTS PLC	INDUSTRIAL GOODS	2017	2.461	**1.670**	4.310	**2.640**	3.013	0.265
BETA GLASS CO PLC.	INDUSTRIAL GOODS	2017	25.654	**13.060**	38.200	**25.140**	22.180	4.110
CAP PLC	INDUSTRIAL GOODS	2017	23.800	**2.770**	5.010	**2.240**	7.110	1.490
CUTIX PLC.	INDUSTRIAL GOODS	2017	1.770	**1.536**	2.836	**1.300**	5.057	0.440
DANGOTE CEMENT PLC	INDUSTRIAL GOODS	2017	3919.317	**884.000**	1605.000	**721.000**	805.000	204.000
GREIF NIGERIA PLC	INDUSTRIAL GOODS	2017	0.388	**0.420**	0.786	**0.366**	0.140	0.490
LAFARGE AFRICA PLC.	INDUSTRIAL GOODS	2017	250.297	**420.740**	577.730	**156.990**	299.000	-34.600
MEYER PLC.	INDUSTRIAL GOODS	2017	0.372	**1.250**	2.800	**1.550**	1.070	0.267
PORTLAND PAINTS & PRODUCTS N	INDUSTRIAL GOODS	2017	1.746	**0.640**	2.000	**1.360**	2.300	0.580
B.O.C. GASES PLC.	NATURAL RESOURCES	2017	1.906	**1.850**	4.248	**2.398**	2.540	0.236
THOMAS WYATT NIG. PLC.[MRS]	NATURAL RESOURCES	2017	0.110	**0.678**	0.490	**-0.188**	0.064	0.042
11 Plc (MOBIL OIL NIG PLC.)	OIL AND GAS	2017	70.172	**47.290**	74.650	**27.360**	125.360	8.790
CONOIL PLC	OIL AND GAS	2017	19.431	**44.960**	62.860	**17.900**	115.970	1.540
ETERNA PLC.	OIL AND GAS	2017	5.295	**35.600**	48.000	**12.400**	173.000	2.001
FORTE/ARDOVA OIL PLC.	OIL AND GAS	2017	56.632	**91.900**	147.200	**55.300**	86.165	12.200
MRS OIL NIGERIA PLC.	OIL AND GAS	2017	6.975	**39.100**	62.190	**23.090**	107.100	1.385
OANDO PLC	OIL AND GAS	2017	74.464	**776.000**	1040.180	**264.180**	497.000	19.720
TOTAL NIGERIA PLC.	OIL AND GAS	2017	78.073	**95.986**	107.900	**11.914**	288.000	8.019
ACADEMY PRESS PLC.	SERVICES	2017	0.302	**2.750**	2.964	**0.214**	2.177	-0.630
AFROMEDIA PLC	SERVICES	2017	2.220	**7.200**	1.840	**-5.360**	0.043	0.628
C & I LEASING PLC.	SERVICES	2017	2.429	**35.880**	44.900	**9.020**	21.300	1.100
CAPITAL HOTEL PLC[BLS]	SERVICES	2017	4.879	**3.600**	9.800	**6.200**	5.020	0.935
LEARN AFRICA PLC	SERVICES	2017	0.679	**1.220**	4.390	**3.170**	2.490	0.267
NIGERIAN AVIATION HANDLING CO	SERVICES	2017	6.464	**5.490**	12.200	**6.710**	7.920	0.775
R T BRISCOE PLC.	SERVICES	2017	0.588	**13.600**	7.610	**-5.990**	4.370	2.200
RED STAR EXPRESS PLC	SERVICES	2017	3.018	**1.500**	4.220	**2.720**	6.660	0.330
TOURIST COMPANY OF NIGERIA PL	SERVICES	2017	7.863	**20.110**	9.910	**-10.200**	4.990	22.900
TRANS -NATIONAL EXPRESS	SERVICES	2017	0.366	**0.161**	0.750	**0.589**	0.701	0.003
UNIVERSITY PRESS PLC.	SERVICES	2017	0.984	**1.040**	3.139	**2.099**	1.600	0.138
	AVERAGE		**137.012**	**69.560**	**108.392**	**38.832**	**76.371**	**7.708**

Appendix 14: Financial Values of Sample Firms (continued)

FIRM	INDUSTRY	DATA YEAR	MARKT VALU	TOTAL DEBTS	TOTAL ASSETS	EQUITY	TOTAL REVENUE	PAT
			(N' BILLION)	(N' BILLION)	(N' BILLION)	(N' BILLION)	(N' BILLION)	(N' BILLION)
FTN COCOA PROCESSORS PLC	AGRICULTURE	2018	0.440	**4.340**	4.800	**0.460**	0.241	-0.210
LIVESTOCK FEEDS PLC	AGRICULTURE	2018	1.470	**2.500**	3.940	**1.440**	7.830	-0.620
OKOMU OIL PALM PLC.	AGRICULTURE	2018	72.688	**9.900**	38.410	**28.510**	23.690	8.240
PRESCO PLC	AGRICULTURE	2018	64.000	**34.500**	58.300	**23.800**	21.300	4.200
CHELLARAM	CONGLOMERATES	2018	2.227	**9.600**	10.100	**0.500**	8.700	0.200
JOHN HOLT PLC.	CONGLOMERATES	2018	0.171	**5.160**	10.300	**5.140**	2.260	0.728
TRANSNATIONAL CORPORATION OF NIGERIA PLC	CONGLOMERATES	2018	53.655	**191.700**	297.000	**105.300**	104.100	20.600
U A C N PLC.	CONGLOMERATES	2018	28.093	**56.800**	131.090	**74.290**	78.700	-9.500
ARBICO PLC.	CONSTRUCTION/REAL ESTATE	2018	0.711	**8.310**	6.880	**-1.430**	4.170	-1.070
JULIUS BERGER NIG. PLC.	CONSTRUCTION/REAL ESTATE	2018	26.532	**253.000**	288.400	**35.400**	194.600	7.000
UACN PROPERTY DEVELOPMENT CO. LIMITED	CONSTRUCTION/REAL ESTATE	2018	4.963	**28.410**	46.670	**18.260**	2.300	15.060
CADBURY NIGERIA PLC.	CONSUMER GOODS	2018	18.782	**14.850**	27.500	**12.650**	35.970	1.137
CHAMPION BREW. PLC.	CONSUMER GOODS	2018	15.581	**2.550**	10.490	**7.940**	4.760	-0.260
DANGOTE SUGAR REFINERY PLC	CONSUMER GOODS	2018	183.000	**76.100**	175.100	**99.000**	150.000	21.990
FLOUR MILLS NIG. PLC.	CONSUMER GOODS	2018	94.719	**257.730**	408.350	**150.620**	542.670	13.050
GUINNESS NIG PLC	CONSUMER GOODS	2018	157.708	**65.500**	153.300	**87.800**	142.900	6.700
HONEYWELL FLOUR MILL PLC	CONSUMER GOODS	2018	10.151	**68.400**	124.000	**55.600**	71.500	4.500
INTERNATIONAL BREWERIES PLC.	CONSUMER GOODS	2018	262.174	**275.100**	310.200	**35.100**	120.600	-4.060
NASCON ALLIED INDUSTRIES PLC	CONSUMER GOODS	2018	47.690	**18.370**	30.270	**11.900**	25.700	4.400
NESTLE NIGERIA PLC.	CONSUMER GOODS	2018	1177.095	**112.100**	162.300	**50.200**	266.200	43.000
NIGERIAN BREW. PLC.	CONSUMER GOODS	2018	683.735	**221.430**	388.260	**166.830**	365.700	19.437
NIGERIAN ENAMELWARE PLC.	CONSUMER GOODS	2018	1.680	**3.200**	4.580	**1.380**	1.650	-0.030
P Z CUSSONS NIGERIA PLC.	CONSUMER GOODS	2018	48.043	**43.000**	96.000	**53.000**	80.500	1.930
UNILEVER NIGERIA PLC.	CONSUMER GOODS	2018	212.565	**49.050**	131.840	**82.790**	92.900	10.670
VITAFOAM NIG PLC.	CONSUMER GOODS	2018	4.586	**12.150**	16.040	**3.890**	19.530	0.602
FIDSON HEALTHCARE PLC	HEALTHCARE	2018	7.425	**11.130**	21.800	**10.670**	16.220	2.800
GLAXO SMITHKLINE CONSUMER NIG. PLC.	HEALTHCARE	2018	17.340	**4.930**	15.700	**10.770**	18.400	-0.080
MORISON INDUSTRIES PLC.	HEALTHCARE	2018	0.544	**1.110**	2.900	**1.790**	0.134	-0.590
NEIMETH INTERNATIONAL PHARMACEUTICALS PL	HEALTHCARE	2018	1.347	**1.450**	2.310	**0.860**	2.270	0.150
PHARMA-DEKO PLC.	HEALTHCARE	2018	0.325	**0.550**	5.000	**4.450**	1.023	-0.265
UNION DIAGNOSTIC & CLINICAL SERVICES PLC[M	HEALTHCARE	2018	0.888	**1.169**	5.640	**4.471**	1.350	0.101
CHAMS PLC	ICT	2018	0.939	**3.980**	5.100	**1.120**	3.010	0.950
COURTEVILLE BUSINESS SOLUTIONS PLC	ICT	2018	0.710	**0.934**	4.210	**3.276**	1.450	0.078
E-TRANZACT INTERNATIONAL PLC[BLS]	ICT	2018	16.590	**5.807**	5.960	**0.153**	18.760	-3.136
BERGER PAINTS PLC	INDUSTRIAL GOODS	2018	2.492	**1.720**	4.530	**2.810**	3.370	0.320
BETA GLASS CO PLC.	INDUSTRIAL GOODS	2018	34.148	**16.450**	46.070	**29.620**	26.320	5.050
CAP PLC	INDUSTRIAL GOODS	2018	24.395	**3.560**	6.311	**2.751**	7.670	2.020
CUTIX PLC.	INDUSTRIAL GOODS	2018	2.889	**1.248**	2.861	**1.613**	5.540	0.477
DANGOTE CEMENT PLC	INDUSTRIAL GOODS	2018	3232.584	**707.000**	1694.000	**987.000**	901.000	390.000
GREIF NIGERIA PLC	INDUSTRIAL GOODS	2018	0.388	**0.370**	0.475	**0.105**	0.545	-0.260
LAFARGE AFRICA PLC.	INDUSTRIAL GOODS	2018	107.984	**406.200**	540.740	**134.540**	308.400	-8.800
MEYER PLC.	INDUSTRIAL GOODS	2018	0.313	**1.020**	2.500	**1.480**	0.970	0.319
PORTLAND PAINTS & PRODUCTS NIGERIA PLC	INDUSTRIAL GOODS	2018	1.999	**0.710**	2.200	**1.490**	2.820	0.200
B.O.C. GASES PLC.	NATURAL RESOURCES	2018	1.752	**1.820**	4.491	**2.671**	2.860	0.357
THOMAS WYATT NIG. PLC.[MRS]	NATURAL RESOURCES	2018	0.051	**0.719**	0.432	**-0.287**	0.090	-0.098
11 Plc (MOBIL OIL NIG PLC.)	OIL AND GAS	2018	66.890	**36.890**	70.660	**33.770**	164.610	9.330
CONOIL PLC	OIL AND GAS	2018	16.134	**42.500**	60.900	**18.400**	122.210	1.800
ETERNA PLC.	OIL AND GAS	2018	6.129	**40.200**	53.100	**12.900**	251.800	1.080
FORTE/ARDOVA OIL PLC.	OIL AND GAS	2018	37.381	**97.900**	141.530	**43.630**	134.740	8.300
MRS OIL NIGERIA PLC.	OIL AND GAS	2018	7.833	**39.100**	54.200	**15.100**	89.500	-1.028
OANDO PLC	OIL AND GAS	2018	62.157	**797.000**	1075.110	**278.110**	679.000	28.790
TOTAL NIGERIA PLC.	OIL AND GAS	2018	68.923	**104.000**	132.900	**28.900**	307.000	7.960
ACADEMY PRESS PLC.	SERVICES	2018	0.302	**2.400**	2.730	**0.330**	2.177	0.650
AFROMEDIA PLC	SERVICES	2018	2.220	**6.650**	2.150	**-4.500**	0.896	0.381
C & I LEASING PLC.	SERVICES	2018	3.351	**40.780**	52.610	**11.830**	28.100	1.130
CAPITAL HOTEL PLC[BLS]	SERVICES	2018	4.801	**3.600**	16.070	**12.470**	5.900	0.379
LEARN AFRICA PLC	SERVICES	2018	1.049	**0.960**	4.230	**3.270**	3.320	0.209
NIGERIAN AVIATION HANDLING COMPANY PLC	SERVICES	2018	5.928	**6.020**	12.340	**6.320**	9.820	0.190
R T BRISCOE PLC.	SERVICES	2018	0.447	**15.917**	7.730	**-8.187**	5.181	-2.190
RED STAR EXPRESS PLC	SERVICES	2018	2.476	**1.990**	4.990	**3.000**	7.900	0.420
TOURIST COMPANY OF NIGERIA PLC.	SERVICES	2018	7.863	**21.400**	34.100	**12.700**	3.600	1.227
TRANS -NATIONAL EXPRESS	SERVICES	2018	0.305	**0.148**	0.424	**0.276**	0.775	0.026
UNIVERSITY PRESS PLC.	SERVICES	2018	0.940	**0.848**	3.570	**2.722**	2.800	0.138
	AVERAGE		**109.884**	**67.523**	**111.694**	**44.171**	**87.460**	**9.779**

Appendix 14: Financial Values of Sample Firms (continued)

FIRM	INDUSTRY	DATA YEAR	MARKT VALU (N' BILLION)	TOTAL DEBTS (N' BILLION)	TOTAL ASSETS (N' BILLION)	EQUITY (N' BILLION)	TOTAL REVENUE (N' BILLION)	PAT (N' BILLION)
FTN COCOA PROCESSORS PLC	AGRICULTURE	2019	0.440	**5.410**	4.650	**-0.760**	0.670	0.800
LIVESTOCK FEEDS PLC	AGRICULTURE	2019	1.500	**2.400**	4.300	**1.900**	9.950	0.106
OKOMU OIL PALM PLC.	AGRICULTURE	2019	53.037	**14.410**	43.600	**29.190**	21.410	5.370
PRESCO PLC	AGRICULTURE	2019	47.500	**43.120**	71.000	**27.880**	19.700	3.850
CHELLARAM	CONGLOMERATES	2019	2.010	**11.900**	12.600	**0.700**	11.240	-2.070
JOHN HOLT PLC.	CONGLOMERATES	2019	0.218	**7.800**	10.600	**2.800**	1.700	0.220
TRANSNATIONAL CORPORATION OF NIGERIA PLC	CONGLOMERATES	2019	40.242	**204.300**	313.000	**108.700**	76.340	3.700
U A C N PLC.	CONGLOMERATES	2019	24.779	**47.000**	107.500	**60.500**	79.200	-9.250
ARBICO PLC.	CONSTRUCTION/REAL ESTATE	2019	0.521	**8.670**	7.770	**-0.900**	6.080	0.520
JULIUS BERGER NIG. PLC.	CONSTRUCTION/REAL ESTATE	2019	26.268	**273.330**	313.000	**39.670**	266.430	7.558
UACN PROPERTY DEVELOPMENT CO. LIMITED	CONSTRUCTION/REAL ESTATE	2019	2.598	**26.760**	28.900	**2.140**	2.150	-15.850
CADBURY NIGERIA PLC.	CONSUMER GOODS	2019	19.815	**15.235**	28.800	**13.565**	39.300	1.070
CHAMPION BREW. PLC.	CONSUMER GOODS	2019	7.438	**2.950**	10.980	**8.030**	6.900	0.170
DANGOTE SUGAR REFINERY PLC	CONSUMER GOODS	2019	163.200	**85.560**	193.705	**108.145**	161.685	22.390
FLOUR MILLS NIG. PLC.	CONSUMER GOODS	2019	80.777	**265.847**	416.821	**150.974**	527.400	4.290
GUINNESS NIG PLC	CONSUMER GOODS	2019	65.821	**71.732**	160.792	**89.060**	131.400	5.485
HONEYWELL FLOUR MILL PLC	CONSUMER GOODS	2019	7.851	**80.837**	137.500	**56.663**	4.040	0.080
INTERNATIONAL BREWERIES PLC.	CONSUMER GOODS	2019	81.661	**357.600**	365.100	**7.500**	132.300	27.790
NASCON ALLIED INDUSTRIES PLC	CONSUMER GOODS	2019	34.310	**27.570**	38.600	**11.030**	27.000	1.845
NESTLE NIGERIA PLC.	CONSUMER GOODS	2019	1165.125	**144.000**	193.300	**49.300**	284.000	46.683
NIGERIAN BREW. PLC.	CONSUMER GOODS	2019	471.817	**215.000**	383.000	**168.000**	323.000	16.000
NIGERIAN ENAMELWARE PLC.	CONSUMER GOODS	2019	1.680	**3.200**	4.380	**1.180**	0.740	-0.240
P Z CUSSONS NIGERIA PLC.	CONSUMER GOODS	2019	22.433	**34.180**	79.000	**44.820**	74.000	1.900
UNILEVER NIGERIA PLC.	CONSUMER GOODS	2019	126.390	**37.150**	103.680	**66.530**	60.500	-7.400
VITAFOAM NIG PLC.	CONSUMER GOODS	2019	5.504	**7.850**	10.780	**2.930**	22.280	0.154
FIDSON HEALTHCARE PLC	HEALTHCARE	2019	6.468	**10.740**	20.360	**9.620**	14.000	0.410
GLAXO SMITHKLINE CONSUMER NIG. PLC.	HEALTHCARE	2019	7.295	**9.800**	18.690	**8.890**	14.000	0.417
MORISON INDUSTRIES PLC.	HEALTHCARE	2019	0.495	**0.300**	0.450	**0.150**	0.090	-0.100
NEIMETH INTERNATIONAL PHARMACEUTICALS PL	HEALTHCARE	2019	1.177	**1.680**	2.750	**1.070**	2.370	0.220
PHARMA-DEKO PLC.	HEALTHCARE	2019	0.325	**0.890**	2.200	**1.310**	0.480	-0.280
UNION DIAGNOSTIC & CLINICAL SERVICES PLC[M	HEALTHCARE	2019	0.782	**0.120**	4.660	**4.540**	1.350	-0.280
CHAMS PLC	ICT	2019	1.550	**4.000**	9.000	**5.000**	3.300	0.320
COURTEVILLE BUSINESS SOLUTIONS PLC	ICT	2019	0.817	**0.621**	4.050	**3.429**	1.980	0.160
E-TRANZACT INTERNATIONAL PLC[BLS]	ICT	2019	10.962	**6.460**	6.770	**0.310**	25.200	0.150
BERGER PAINTS PLC	INDUSTRIAL GOODS	2019	1.956	**1.990**	5.100	**3.110**	3.580	0.450
BETA GLASS CO PLC.	INDUSTRIAL GOODS	2019	26.898	**17.500**	52.100	**34.600**	29.400	5.580
CAP PLC	INDUSTRIAL GOODS	2019	16.800	**4.240**	6.760	**2.520**	8.400	1.740
CUTIX PLC.	INDUSTRIAL GOODS	2019	2.343	**1.250**	2.860	**1.610**	5.400	0.480
DANGOTE CEMENT PLC	INDUSTRIAL GOODS	2019	2419.752	**843.000**	1741.000	**898.000**	892.000	200.000
GREIF NIGERIA PLC	INDUSTRIAL GOODS	2019	0.388	**0.390**	0.174	**-0.216**	0.910	0.310
LAFARGE AFRICA PLC.	INDUSTRIAL GOODS	2019	246.449	**152.240**	497.000	**344.760**	213.000	115.000
MEYER PLC.	INDUSTRIAL GOODS	2019	0.287	**3.260**	3.750	**0.490**	1.100	0.010
PORTLAND PAINTS & PRODUCTS NIGERIA PLC	INDUSTRIAL GOODS	2019	1.769	**0.670**	2.300	**1.630**	2.600	0.080
B.O.C. GASES PLC.	NATURAL RESOURCES	2019	2.289	**2.320**	5.030	**2.710**	3.070	0.220
THOMAS WYATT NIG. PLC.[MRS]	NATURAL RESOURCES	2019	0.084	**0.765**	0.422	**-0.343**	0.060	-0.570
11 Plc (MOBIL OIL NIG PLC.)	OIL AND GAS	2019	53.332	**51.500**	91.190	**39.690**	191.600	8.800
CONOIL PLC	OIL AND GAS	2019	12.838	**44.000**	63.580	**19.580**	139.700	1.900
ETERNA PLC.	OIL AND GAS	2019	4.695	**16.120**	28.530	**12.410**	229.200	-0.114
FORTE/ARDOVA OIL PLC.	OIL AND GAS	2019	23.575	**30.880**	47.000	**16.120**	176.500	3.900
MRS OIL NIGERIA PLC.	OIL AND GAS	2019	4.663	**25.100**	44.200	**19.100**	64.900	-1.704
OANDO PLC	OIL AND GAS	2019	49.601	**790.667**	1035.630	**244.963**	543.917	17.333
TOTAL NIGERIA PLC.	OIL AND GAS	2019	37.653	**105.400**	133.787	**28.387**	292.100	2.778
ACADEMY PRESS PLC.	SERVICES	2019	0.224	**2.340**	2.600	**0.260**	2.430	0.340
AFROMEDIA PLC	SERVICES	2019	1.509	**6.020**	2.110	**-3.910**	0.347	0.585
C & I LEASING PLC.	SERVICES	2019	2.385	**44.460**	56.240	**11.780**	32.550	0.940
CAPITAL HOTEL PLC[BLS]	SERVICES	2019	4.259	**9.000**	9.900	**0.900**	5.180	4.170
LEARN AFRICA PLC	SERVICES	2019	0.872	**2.405**	5.540	**3.135**	3.500	0.161
NIGERIAN AVIATION HANDLING COMPANY PLC	SERVICES	2019	3.898	**8.060**	14.707	**6.647**	9.996	0.717
R T BRISCOE PLC.	SERVICES	2019	0.247	**18.400**	8.910	**-9.490**	6.900	-1.287
RED STAR EXPRESS PLC	SERVICES	2019	2.623	**2.700**	5.548	**2.848**	10.000	0.400
TOURIST COMPANY OF NIGERIA PLC.	SERVICES	2019	7.863	**21.100**	32.500	**11.400**	1.870	-0.540
TRANS -NATIONAL EXPRESS	SERVICES	2019	0.431	**0.198**	0.785	**0.587**	0.790	-0.026
UNIVERSITY PRESS PLC.	SERVICES	2019	0.552	**0.875**	3.410	**2.535**	3.600	1.800
	AVERAGE		**85.921**	**67.227**	**111.348**	**44.122**	**82.965**	**7.613**

Appendix 15: Financial Proxies of the Sample Firms 2012-2019

FIRM	INDUSTRY	DATA YEAR	TOBIN Q	ROE	NAT	DE RATIO
FTN COCOA PROCESSORS PLC	AGRICULTURE	2012	0.795	-0.203	0.063	**0.394**
LIVESTOCK FEEDS PLC	AGRICULTURE	2012	1.772	1.077	1.594	**0.806**
OKOMU OIL PALM PLC.	AGRICULTURE	2012	0.831	0.351	0.345	**0.121**
PRESCO PLC	AGRICULTURE	2012	0.996	0.207	0.152	**0.322**
CHELLARAM	CONGLOMERATES	2012	1.070	0.074	1.694	**0.399**
JOHN HOLT PLC.	CONGLOMERATES	2012	0.933	-0.003	0.251	**0.019**
TRANSNATIONAL CORPORATION OF NIGERIA PLC	CONGLOMERATES	2012	0.811	0.065	0.175	**0.298**
U A C N PLC.	CONGLOMERATES	2012	1.054	0.117	0.526	**0.420**
ARBICO PLC.	CONSTRUCTION/REAL ESTATE	2012	1.493	0.870	0.745	**1.333**
JULIUS BERGER NIG. PLC.	CONSTRUCTION/REAL ESTATE	2012	1.148	0.547	1.125	**0.863**
UACN PROPERTY DEVELOPMENT CO. LIMITED	CONSTRUCTION/REAL ESTATE	2012	0.789	0.070	0.169	**0.310**
CADBURY NIGERIA PLC.	CONSUMER GOODS	2012	2.761	0.175	0.835	**0.138**
CHAMPION BREW. PLC.	CONSUMER GOODS	2012	2.054	0.379	0.265	**1.509**
DANGOTE SUGAR REFINERY PLC	CONSUMER GOODS	2012	1.311	0.234	1.279	**0.085**
FLOUR MILLS NIG. PLC.	CONSUMER GOODS	2012	0.974	0.049	1.110	**0.000**
GUINNESS NIG PLC	CONSUMER GOODS	2012	4.562	0.363	1.232	**0.365**
HONEYWELL FLOUR MILL PLC	CONSUMER GOODS	2012	1.015	0.170	0.848	**0.372**
INTERNATIONAL BREWERIES PLC.	CONSUMER GOODS	2012	4.587	1.365	0.693	**0.616**
NASCON ALLIED INDUSTRIES PLC	CONSUMER GOODS	2012	2.364	0.420	0.319	**0.096**
NESTLE NIGERIA PLC.	CONSUMER GOODS	2012	6.846	0.608	1.312	**0.455**
NIGERIAN BREW. PLC.	CONSUMER GOODS	2012	4.779	0.248	0.996	**0.080**
NIGERIAN ENAMELWARE PLC.	CONSUMER GOODS	2012	1.466	0.053	1.147	**0.235**
P Z CUSSONS NIGERIA PLC.	CONSUMER GOODS	2012	2.056	0.059	1.120	**0.085**
UNILEVER NIGERIA PLC.	CONSUMER GOODS	2012	5.544	0.557	1.527	**0.291**
VITAFOAM NIG PLC.	CONSUMER GOODS	2012	0.951	0.153	1.322	**0.139**
FIDSON HEALTHCARE PLC	HEALTHCARE	2012	0.701	0.037	0.586	**0.355**
GLAXO SMITHKLINE CONSUMER NIG. PLC.	HEALTHCARE	2012	2.176	0.235	0.966	**0.144**
MORISON INDUSTRIES PLC.	HEALTHCARE	2012	1.161	-0.046	0.700	**0.127**
NEIMETH INTERNATIONAL PHARMACEUTICALS PLC	HEALTHCARE	2012	0.897	0.082	0.803	**0.122**
PHARMA-DEKO PLC.	HEALTHCARE	2012	0.773	0.899	0.418	**0.115**
UNION DIAGNOSTIC & CLINICAL SERVICES PLC[MRF]	HEALTHCARE	2012	0.559	-0.194	0.237	**0.004**
CHAMS PLC	ICT	2012	0.753	0.020	0.326	**0.038**
COURTEVILLE BUSINESS SOLUTIONS PLC	ICT	2012	0.678	0.107	0.259	**0.166**
E-TRANZACT INTERNATIONAL PLC[BLS]	ICT	2012	5.176	0.005	0.942	**0.000**
BERGER PAINTS PLC	INDUSTRIAL GOODS	2012	1.063	0.111	0.862	**0.119**
BETA GLASS CO PLC.	INDUSTRIAL GOODS	2012	0.679	0.107	0.576	**0.270**
CAP PLC	INDUSTRIAL GOODS	2012	6.056	0.982	1.806	**0.067**
CUTIX PLC.	INDUSTRIAL GOODS	2012	1.881	0.154	1.660	**0.138**
DANGOTE CEMENT PLC	INDUSTRIAL GOODS	2012	3.615	0.361	0.442	**0.219**
GREIF NIGERIA PLC	INDUSTRIAL GOODS	2012	1.339	0.093	1.097	**0.101**
LAFARGE AFRICA PLC.	INDUSTRIAL GOODS	2012	1.706	0.212	5.786	**0.430**
MEYER PLC.	INDUSTRIAL GOODS	2012	0.699	-0.021	0.578	**0.467**
PORTLAND PAINTS & PRODUCTS NIGERIA PLC	INDUSTRIAL GOODS	2012	1.403	-1.564	1.075	**0.264**
B.O.C. GASES PLC.	NATURAL RESOURCES	2012	1.214	0.159	0.868	**0.005**
THOMAS WYATT NIG. PLC.[MRS]	NATURAL RESOURCES	2012	1.532	50.000	0.231	**0.526**
11 Plc (MOBIL OIL NIG PLC.)	OIL AND GAS	2012	1.972	0.537	2.400	**0.686**
CONOIL PLC	OIL AND GAS	2012	0.984	0.046	1.807	**0.125**
ETERNA PLC.	OIL AND GAS	2012	0.891	0.155	2.762	**0.105**
FORTE/ARDOVA OIL PLC.	OIL AND GAS	2012	1.018	0.141	2.140	**0.044**
MRS OIL NIGERIA PLC.	OIL AND GAS	2012	0.756	0.001	1.433	**0.234**
OANDO PLC	OIL AND GAS	2012	0.849	0.101	1.307	**0.490**
TOTAL NIGERIA PLC.	OIL AND GAS	2012	1.391	0.429	2.866	**0.206**
ACADEMY PRESS PLC.	SERVICES	2012	1.006	1.238	0.793	**0.467**
AFROMEDIA PLC	SERVICES	2012	1.382	-8.800	0.356	**0.444**
C & I LEASING PLC.	SERVICES	2012	0.814	0.053	0.549	**0.709**
CAPITAL HOTEL PLC[BLS]	SERVICES	2012	2.095	0.132	0.672	**0.460**
LEARN AFRICA PLC	SERVICES	2012	0.530	0.047	0.612	**0.024**
NIGERIAN AVIATION HANDLING COMPANY PLC	SERVICES	2012	1.230	0.109	0.676	**0.491**
R T BRISCOE PLC.	SERVICES	2012	0.905	0.093	1.558	**0.037**
RED STAR EXPRESS PLC	SERVICES	2012	0.318	0.038	0.477	**0.032**
TOURIST COMPANY OF NIGERIA PLC.	SERVICES	2012	1.757	0.072	0.305	**0.818**
TRANS -NATIONAL EXPRESS	SERVICES	2012	1.259	0.202	1.081	**0.198**
UNIVERSITY PRESS PLC.	SERVICES	2012	0.081	0.014	0.062	**0.002**
	AVERAGE		**1.687**	**0.863**	**0.999**	**0.302**

Appendix 15: Financial Proxies of the Sample Firms 2012-2019 (Continued)

FIRM	INDUSTRY	DATA YEAR	TOBIN Q	ROE	NAT	DE RATIO
FTN COCOA PROCESSORS PLC	AGRICULTURE	2013	0.889	-0.179	0.109	**0.571**
LIVESTOCK FEEDS PLC	AGRICULTURE	2013	2.849	0.119	1.649	**0.022**
OKOMU OIL PALM PLC.	AGRICULTURE	2013	1.647	0.019	0.295	**0.177**
PRESCO PLC	AGRICULTURE	2013	1.641	0.076	0.260	**0.376**
CHELLARAM	CONGLOMERATES	2013	0.906	0.020	1.493	**0.315**
JOHN HOLT PLC.	CONGLOMERATES	2013	0.823	0.045	0.327	**0.388**
TRANSNATIONAL CORPORATION OF NIGERIA PLC	CONGLOMERATES	2013	1.552	0.038	0.126	**0.353**
U A C N PLC.	CONGLOMERATES	2013	1.446	0.136	0.622	**0.141**
ARBICO PLC.	CONSTRUCTION/REAL ESTATE	2013	1.280	5.000	1.340	**0.970**
JULIUS BERGER NIG. PLC.	CONSTRUCTION/REAL ESTATE	2013	1.290	0.401	0.934	**0.828**
UACN PROPERTY DEVELOPMENT CO. LIMITED	CONSTRUCTION/REAL ESTATE	2013	0.890	0.093	0.170	**0.174**
CADBURY NIGERIA PLC.	CONSUMER GOODS	2013	4.723	0.065	0.827	**0.169**
CHAMPION BREW. PLC.	CONSUMER GOODS	2013	3.171	-0.254	0.244	**1.508**
DANGOTE SUGAR REFINERY PLC	CONSUMER GOODS	2013	2.145	0.239	1.238	**0.157**
FLOUR MILLS NIG. PLC.	CONSUMER GOODS	2013	1.441	0.092	1.077	**0.494**
GUINNESS NIG PLC	CONSUMER GOODS	2013	3.557	0.258	1.012	**0.340**
HONEYWELL FLOUR MILL PLC	CONSUMER GOODS	2013	1.191	0.153	0.825	**0.336**
INTERNATIONAL BREWERIES PLC.	CONSUMER GOODS	2013	4.665	0.246	0.752	**0.393**
NASCON ALLIED INDUSTRIES PLC	CONSUMER GOODS	2013	3.872	0.390	0.948	**0.097**
NESTLE NIGERIA PLC.	CONSUMER GOODS	2013	9.433	0.551	1.232	**0.459**
NIGERIAN BREW. PLC.	CONSUMER GOODS	2013	5.579	0.383	1.063	**0.263**
NIGERIAN ENAMELWARE PLC.	CONSUMER GOODS	2013	1.393	0.059	1.145	**0.224**
P Z CUSSONS NIGERIA PLC.	CONSUMER GOODS	2013	2.390	0.115	0.987	**0.088**
UNILEVER NIGERIA PLC.	CONSUMER GOODS	2013	5.439	0.505	1.371	**0.404**
VITAFOAM NIG PLC.	CONSUMER GOODS	2013	1.129	0.163	1.611	**0.309**
FIDSON HEALTHCARE PLC	HEALTHCARE	2013	0.901	0.117	0.586	**0.417**
GLAXO SMITHKLINE CONSUMER NIG. PLC.	HEALTHCARE	2013	2.862	0.143	1.040	**0.124**
MORISON INDUSTRIES PLC.	HEALTHCARE	2013	0.910	-0.242	0.768	**0.243**
NEIMETH INTERNATIONAL PHARMACEUTICALS PLC	HEALTHCARE	2013	0.951	-0.127	0.698	**0.091**
PHARMA-DEKO PLC.	HEALTHCARE	2013	0.767	0.144	0.375	**0.189**
UNION DIAGNOSTIC & CLINICAL SERVICES PLC[MRF]	HEALTHCARE	2013	0.524	-0.279	0.230	**0.005**
CHAMS PLC	ICT	2013	0.778	0.040	0.319	**0.000**
COURTEVILLE BUSINESS SOLUTIONS PLC	ICT	2013	0.865	0.125	0.295	**0.119**
E-TRANZACT INTERNATIONAL PLC[BLS]	ICT	2013	3.270	0.074	1.306	**0.000**
BERGER PAINTS PLC	INDUSTRIAL GOODS	2013	0.957	0.129	0.747	**0.125**
BETA GLASS CO PLC.	INDUSTRIAL GOODS	2013	0.759	0.107	0.127	**0.225**
CAP PLC	INDUSTRIAL GOODS	2013	3.734	0.305	0.579	**0.000**
CUTIX PLC.	INDUSTRIAL GOODS	2013	1.910	0.271	1.794	**0.126**
DANGOTE CEMENT PLC	INDUSTRIAL GOODS	2013	4.770	0.366	0.457	**0.190**
GREIF NIGERIA PLC	INDUSTRIAL GOODS	2013	1.321	0.932	1.166	**0.101**
LAFARGE AFRICA PLC.	INDUSTRIAL GOODS	2013	1.524	0.149	0.331	**0.189**
MEYER PLC.	INDUSTRIAL GOODS	2013	0.669	0.035	0.605	**0.478**
PORTLAND PAINTS & PRODUCTS NIGERIA PLC	INDUSTRIAL GOODS	2013	1.686	0.090	1.314	**0.371**
B.O.C. GASES PLC.	NATURAL RESOURCES	2013	1.328	0.143	0.723	**0.136**
THOMAS WYATT NIG. PLC.[MRS]	NATURAL RESOURCES	2013	1.129	0.064	0.147	**0.000**
11 Plc (MOBIL OIL NIG PLC.)	OIL AND GAS	2013	1.816	0.498	1.933	**0.638**
CONOIL PLC	OIL AND GAS	2013	1.353	0.170	1.937	**0.045**
ETERNA PLC.	OIL AND GAS	2013	0.934	0.101	7.021	**0.217**
FORTE/ARDOVA OIL PLC.	OIL AND GAS	2013	1.603	0.118	1.146	**0.270**
MRS OIL NIGERIA PLC.	OIL AND GAS	2013	0.910	0.032	1.337	**0.230**
OANDO PLC	OIL AND GAS	2013	0.994	0.008	0.760	**0.361**
TOTAL NIGERIA PLC.	OIL AND GAS	2013	1.560	0.400	2.999	**0.185**
ACADEMY PRESS PLC.	SERVICES	2013	1.167	0.009	0.651	**0.650**
AFROMEDIA PLC	SERVICES	2013	1.550	9.456	0.176	**1.214**
C & I LEASING PLC.	SERVICES	2013	0.078	0.001	0.064	**0.043**
CAPITAL HOTEL PLC[BLS]	SERVICES	2013	1.626	0.168	0.746	**0.367**
LEARN AFRICA PLC	SERVICES	2013	0.566	0.028	0.495	**0.019**
NIGERIAN AVIATION HANDLING COMPANY PLC	SERVICES	2013	1.247	0.152	0.595	**0.458**
R T BRISCOE PLC.	SERVICES	2013	0.980	0.045	1.422	**0.424**
RED STAR EXPRESS PLC	SERVICES	2013	0.393	0.036	0.470	**0.042**
TOURIST COMPANY OF NIGERIA PLC.	SERVICES	2013	1.662	-0.331	0.311	**0.806**
TRANS -NATIONAL EXPRESS	SERVICES	2013	0.777	0.202	1.081	**0.198**
UNIVERSITY PRESS PLC.	SERVICES	2013	0.917	0.119	0.858	**0.245**
	AVERAGE		**1.859**	**0.358**	**0.941**	**0.303**

Appendix 15: Financial Proxies of the Sample Firms 2012-2019 (Continued)

FIRM	INDUSTRY	DATA YEAR	TOBIN Q	ROE	NAT	DE RATIO
FTN COCOA PROCESSORS PLC	AGRICULTURE	2014	0.977	-0.481	0.056	**0.679**
LIVESTOCK FEEDS PLC	AGRICULTURE	2014	1.441	0.125	1.362	**0.048**
OKOMU OIL PALM PLC.	AGRICULTURE	2014	1.028	0.068	0.263	**0.179**
PRESCO PLC	AGRICULTURE	2014	1.132	0.131	0.262	**0.350**
CHELLARAM	CONGLOMERATES	2014	0.949	-0.132	1.617	**0.479**
JOHN HOLT PLC.	CONGLOMERATES	2014	0.735	0.195	0.282	**0.652**
TRANSNATIONAL CORPORATION OF NIGERIA PLC	CONGLOMERATES	2014	1.217	0.078	0.243	**0.354**
U A C N PLC.	CONGLOMERATES	2014	0.930	0.147	0.657	**0.156**
ARBICO PLC.	CONSTRUCTION/REAL ESTATE	2014	1.224	1.238	0.836	**1.110**
JULIUS BERGER NIG. PLC.	CONSTRUCTION/REAL ESTATE	2014	1.207	0.306	0.766	**0.809**
UACN PROPERTY DEVELOPMENT CO. LIMITED	CONSTRUCTION/REAL ESTATE	2014	0.711	0.100	0.172	**0.195**
CADBURY NIGERIA PLC.	CONSUMER GOODS	2014	3.206	0.163	1.059	**0.221**
CHAMPION BREW. PLC.	CONSUMER GOODS	2014	5.625	0.135	0.344	**0.020**
DANGOTE SUGAR REFINERY PLC	CONSUMER GOODS	2014	1.267	0.226	1.017	**0.083**
FLOUR MILLS NIG. PLC.	CONSUMER GOODS	2014	1.065	0.073	1.099	**0.513**
GUINNESS NIG PLC	CONSUMER GOODS	2014	2.572	0.211	0.825	**0.486**
HONEYWELL FLOUR MILL PLC	CONSUMER GOODS	2014	1.107	0.163	0.863	**0.425**
INTERNATIONAL BREWERIES PLC.	CONSUMER GOODS	2014	3.662	0.186	0.758	**0.365**
NASCON ALLIED INDUSTRIES PLC	CONSUMER GOODS	2014	1.808	0.295	0.896	**0.128**
NESTLE NIGERIA PLC.	CONSUMER GOODS	2014	8.227	0.620	1.352	**0.416**
NIGERIAN BREW. PLC.	CONSUMER GOODS	2014	4.084	0.247	0.762	**0.269**
NIGERIAN ENAMELWARE PLC.	CONSUMER GOODS	2014	1.252	0.065	0.834	**0.205**
P Z CUSSONS NIGERIA PLC.	CONSUMER GOODS	2014	1.732	0.119	1.027	**0.094**
UNILEVER NIGERIA PLC.	CONSUMER GOODS	2014	3.798	0.322	1.219	**0.479**
VITAFOAM NIG PLC.	CONSUMER GOODS	2014	1.023	0.150	1.367	**0.289**
FIDSON HEALTHCARE PLC	HEALTHCARE	2014	0.969	0.122	0.583	**0.365**
GLAXO SMITHKLINE CONSUMER NIG. PLC.	HEALTHCARE	2014	2.105	0.072	0.974	**0.185**
MORISON INDUSTRIES PLC.	HEALTHCARE	2014	1.136	-0.491	0.588	**0.267**
NEIMETH INTERNATIONAL PHARMACEUTICALS PLC	HEALTHCARE	2014	0.855	-0.203	0.586	**0.059**
PHARMA-DEKO PLC.	HEALTHCARE	2014	0.388	0.057	0.607	**0.039**
UNION DIAGNOSTIC & CLINICAL SERVICES PLC[MRF]	HEALTHCARE	2014	0.513	0.003	0.246	**0.067**
CHAMS PLC	ICT	2014	0.893	-0.230	0.346	**0.000**
COURTEVILLE BUSINESS SOLUTIONS PLC	ICT	2014	0.694	0.096	0.286	**0.120**
E-TRANZACT INTERNATIONAL PLC[BLS]	ICT	2014	3.415	0.136	1.521	**0.000**
BERGER PAINTS PLC	INDUSTRIAL GOODS	2014	1.041	0.076	0.846	**0.129**
BETA GLASS CO PLC.	INDUSTRIAL GOODS	2014	0.992	0.024	0.147	**0.196**
CAP PLC	INDUSTRIAL GOODS	2014	2.682	0.179	0.578	**0.000**
CUTIX PLC.	INDUSTRIAL GOODS	2014	1.288	0.316	1.308	**0.350**
DANGOTE CEMENT PLC	INDUSTRIAL GOODS	2014	3.862	0.266	0.397	**0.384**
GREIF NIGERIA PLC	INDUSTRIAL GOODS	2014	1.260	0.303	1.189	**0.078**
LAFARGE AFRICA PLC.	INDUSTRIAL GOODS	2014	1.164	0.181	0.672	**0.223**
MEYER PLC.	INDUSTRIAL GOODS	2014	0.854	-0.058	0.547	**0.644**
PORTLAND PAINTS & PRODUCTS NIGERIA PLC	INDUSTRIAL GOODS	2014	1.278	0.160	1.225	**0.290**
B.O.C. GASES PLC.	NATURAL RESOURCES	2014	0.107	0.007	0.065	**0.014**
THOMAS WYATT NIG. PLC.[MRS]	NATURAL RESOURCES	2014	1.345	-0.355	0.084	**1.639**
11 Plc (MOBIL OIL NIG PLC.)	OIL AND GAS	2014	1.863	0.440	1.600	**0.579**
CONOIL PLC	OIL AND GAS	2014	1.120	0.052	1.469	**0.084**
ETERNA PLC.	OIL AND GAS	2014	0.756	0.156	4.375	**0.139**
FORTE/ARDOVA OIL PLC.	OIL AND GAS	2014	2.450	0.100	1.231	**0.220**
MRS OIL NIGERIA PLC.	OIL AND GAS	2014	0.884	0.037	1.597	**0.217**
OANDO PLC	OIL AND GAS	2014	1.113	-4.022	0.478	**0.878**
TOTAL NIGERIA PLC.	OIL AND GAS	2014	1.361	0.316	2.519	**0.176**
ACADEMY PRESS PLC.	SERVICES	2014	0.946	0.128	0.616	**0.699**
AFROMEDIA PLC	SERVICES	2014	2.033	0.933	0.095	**-0.613**
C & I LEASING PLC.	SERVICES	2014	0.792	0.053	0.595	**0.005**
CAPITAL HOTEL PLC[BLS]	SERVICES	2014	1.433	0.069	0.657	**0.333**
LEARN AFRICA PLC	SERVICES	2014	0.395	0.017	0.543	**0.000**
NIGERIAN AVIATION HANDLING COMPANY PLC	SERVICES	2014	1.107	0.100	0.569	**0.463**
R T BRISCOE PLC.	SERVICES	2014	0.786	0.664	0.631	**0.101**
RED STAR EXPRESS PLC	SERVICES	2014	1.065	0.145	1.556	**0.095**
TOURIST COMPANY OF NIGERIA PLC.	SERVICES	2014	1.559	-1.562	0.305	**0.823**
TRANS -NATIONAL EXPRESS	SERVICES	2014	0.755	0.193	1.142	**0.034**
UNIVERSITY PRESS PLC.	SERVICES	2014	0.911	0.079	0.868	**0.085**
	AVERAGE		**1.590**	**0.053**	**0.850**	**0.292**

Appendix 15: Financial Proxies of the Sample Firms 2012-2019 (Continued)

FIRM	INDUSTRY	DATA YEAR	TOBIN Q	ROE	NAT	DE RATIO
FTN COCOA PROCESSORS PLC	AGRICULTURE	2015	1.013	-0.192	0.295	**0.598**
LIVESTOCK FEEDS PLC	AGRICULTURE	2015	1.169	0.098	1.978	**0.050**
OKOMU OIL PALM PLC.	AGRICULTURE	2015	1.835	0.225	0.433	**0.311**
PRESCO PLC	AGRICULTURE	2015	1.046	0.076	0.188	**0.380**
CHELLARAM	CONGLOMERATES	2015	0.956	-0.270	1.359	**0.030**
JOHN HOLT PLC.	CONGLOMERATES	2015	0.737	-0.079	0.222	**0.575**
TRANSNATIONAL CORPORATION OF NIGERIA PLC	CONGLOMERATES	2015	1.073	0.065	0.152	**0.333**
U A C N PLC.	CONGLOMERATES	2015	0.734	0.070	0.569	**0.153**
ARBICO PLC.	CONSTRUCTION/REAL ESTATE	2015	1.148	3.375	0.993	**0.964**
JULIUS BERGER NIG. PLC.	CONSTRUCTION/REAL ESTATE	2015	1.127	0.072	0.546	**0.834**
UACN PROPERTY DEVELOPMENT CO. LIMITED	CONSTRUCTION/REAL ESTATE	2015	0.649	0.011	0.079	**0.202**
CADBURY NIGERIA PLC.	CONSUMER GOODS	2015	1.702	0.725	0.980	**0.270**
CHAMPION BREW. PLC.	CONSUMER GOODS	2015	2.867	0.013	0.339	**0.018**
DANGOTE SUGAR REFINERY PLC	CONSUMER GOODS	2015	1.142	0.193	0.988	**0.081**
FLOUR MILLS NIG. PLC.	CONSUMER GOODS	2015	0.903	0.096	0.901	**0.589**
GUINNESS NIG PLC	CONSUMER GOODS	2015	1.925	0.135	0.894	**0.321**
HONEYWELL FLOUR MILL PLC	CONSUMER GOODS	2015	0.940	0.052	0.722	**0.438**
INTERNATIONAL BREWERIES PLC.	CONSUMER GOODS	2015	2.348	0.157	0.684	**0.401**
NASCON ALLIED INDUSTRIES PLC	CONSUMER GOODS	2015	1.728	0.296	0.993	**0.155**
NESTLE NIGERIA PLC.	CONSUMER GOODS	2015	6.400	0.625	1.269	**0.361**
NIGERIAN BREW. PLC.	CONSUMER GOODS	2015	3.299	0.192	0.767	**0.181**
NIGERIAN ENAMELWARE PLC.	CONSUMER GOODS	2015	1.117	0.054	0.520	**0.193**
P Z CUSSONS NIGERIA PLC.	CONSUMER GOODS	2015	1.866	0.105	1.085	**0.088**
UNILEVER NIGERIA PLC.	CONSUMER GOODS	2015	4.106	0.149	1.182	**0.481**
VITAFOAM NIG PLC.	CONSUMER GOODS	2015	1.127	0.154	1.303	**0.352**
FIDSON HEALTHCARE PLC	HEALTHCARE	2015	0.830	0.052	0.493	**0.342**
GLAXO SMITHKLINE CONSUMER NIG. PLC.	HEALTHCARE	2015	1.845	0.246	0.546	**0.000**
MORISON INDUSTRIES PLC.	HEALTHCARE	2015	1.298	0.553	0.449	**0.329**
NEIMETH INTERNATIONAL PHARMACEUTICALS PLC	HEALTHCARE	2015	1.068	0.005	0.545	**0.212**
PHARMA-DEKO PLC.	HEALTHCARE	2015	0.460	0.373	0.637	**0.054**
UNION DIAGNOSTIC & CLINICAL SERVICES PLC[MRF]	HEALTHCARE	2015	0.450	0.005	0.292	**0.000**
CHAMS PLC	ICT	2015	0.882	-1.012	0.188	**0.000**
COURTEVILLE BUSINESS SOLUTIONS PLC	ICT	2015	0.692	-0.019	0.334	**0.117**
E-TRANZACT INTERNATIONAL PLC[BLS]	ICT	2015	2.594	0.203	1.486	**0.017**
BERGER PAINTS PLC	INDUSTRIAL GOODS	2015	1.079	0.132	0.774	**0.062**
BETA GLASS CO PLC.	INDUSTRIAL GOODS	2015	1.337	0.110	0.585	**0.189**
CAP PLC	INDUSTRIAL GOODS	2015	8.297	1.146	2.074	**0.056**
CUTIX PLC.	INDUSTRIAL GOODS	2015	1.368	0.201	1.199	**0.287**
DANGOTE CEMENT PLC	INDUSTRIAL GOODS	2015	3.030	0.282	0.442	**0.420**
GREIF NIGERIA PLC	INDUSTRIAL GOODS	2015	1.076	0.066	1.126	**0.000**
LAFARGE AFRICA PLC.	INDUSTRIAL GOODS	2015	1.586	0.104	0.591	**0.508**
MEYER PLC.	INDUSTRIAL GOODS	2015	0.812	0.008	0.513	**0.618**
PORTLAND PAINTS & PRODUCTS NIGERIA PLC	INDUSTRIAL GOODS	2015	1.424	-0.329	1.137	**0.177**
B.O.C. GASES PLC.	NATURAL RESOURCES	2015	0.834	0.057	0.618	**0.143**
THOMAS WYATT NIG. PLC.[MRS]	NATURAL RESOURCES	2015	1.363	-0.213	1.741	**2.143**
11 Plc (MOBIL OIL NIG PLC.)	OIL AND GAS	2015	1.783	0.273	1.188	**0.615**
CONOIL PLC	OIL AND GAS	2015	0.992	0.130	1.182	**0.060**
ETERNA PLC.	OIL AND GAS	2015	0.753	0.124	3.298	**0.093**
FORTE/ARDOVA OIL PLC.	OIL AND GAS	2015	4.150	0.123	1.018	**0.254**
MRS OIL NIGERIA PLC.	OIL AND GAS	2015	0.875	0.045	1.302	**0.205**
OANDO PLC	OIL AND GAS	2015	0.990	-0.615	0.208	**0.868**
TOTAL NIGERIA PLC.	OIL AND GAS	2015	1.409	0.253	2.506	**0.200**
ACADEMY PRESS PLC.	SERVICES	2015	0.893	-0.034	0.619	**0.744**
AFROMEDIA PLC	SERVICES	2015	3.817	0.646	0.178	**-0.068**
C & I LEASING PLC.	SERVICES	2015	0.835	0.026	0.495	**0.637**
CAPITAL HOTEL PLC[BLS]	SERVICES	2015	1.516	0.179	0.742	**0.384**
LEARN AFRICA PLC	SERVICES	2015	0.388	-0.234	0.525	**0.004**
NIGERIAN AVIATION HANDLING COMPANY PLC	SERVICES	2015	1.005	0.087	0.564	**0.455**
R T BRISCOE PLC.	SERVICES	2015	1.045	-82.500	0.857	**1.077**
RED STAR EXPRESS PLC	SERVICES	2015	1.049	0.174	1.682	**0.076**
TOURIST COMPANY OF NIGERIA PLC.	SERVICES	2015	1.897	3.874	0.308	**1.152**
TRANS -NATIONAL EXPRESS	SERVICES	2015	0.690	0.117	1.216	**0.036**
UNIVERSITY PRESS PLC.	SERVICES	2015	1.065	0.073	0.579	**0.040**
	AVERAGE		**1.594**	**-1.094**	**0.852**	**0.331**

Appendix 15: Financial Proxies of the Sample Firms 2012-2019 (Continued)

FIRM	INDUSTRY	DATA YEAR	TOBIN Q	ROE	NAT	DE RATIO
FTN COCOA PROCESSORS PLC	AGRICULTURE	2016	0.981	0.113	0.161	**0.619**
LIVESTOCK FEEDS PLC	AGRICULTURE	2016	0.942	0.072	1.507	**0.045**
OKOMU OIL PALM PLC.	AGRICULTURE	2016	1.870	0.294	0.398	**0.209**
PRESCO PLC	AGRICULTURE	2016	1.664	0.399	0.464	**0.336**
CHELLARAM	CONGLOMERATES	2016	1.078	0.107	1.476	**0.625**
JOHN HOLT PLC.	CONGLOMERATES	2016	0.814	0.042	0.242	**0.688**
TRANSNATIONAL CORPORATION OF NIGERIA PLC	CONGLOMERATES	2016	0.803	0.077	0.169	**0.311**
U A C N PLC.	CONGLOMERATES	2016	0.680	0.074	0.612	**0.117**
ARBICO PLC.	CONSTRUCTION/REAL ESTATE	2016	1.163	-1.099	0.865	**0.969**
JULIUS BERGER NIG. PLC.	CONSTRUCTION/REAL ESTATE	2016	1.099	0.119	0.536	**0.838**
UACN PROPERTY DEVELOPMENT CO. LIMITED	CONSTRUCTION/REAL ESTATE	2016	0.591	-0.047	0.091	**0.110**
CADBURY NIGERIA PLC.	CONSUMER GOODS	2016	1.291	0.624	1.055	**0.291**
CHAMPION BREW. PLC.	CONSUMER GOODS	2016	2.156	0.072	0.382	**0.012**
DANGOTE SUGAR REFINERY PLC	CONSUMER GOODS	2016	1.040	0.217	0.951	**0.148**
FLOUR MILLS NIG. PLC.	CONSUMER GOODS	2016	0.671	0.089	0.992	**0.418**
GUINNESS NIG PLC	CONSUMER GOODS	2016	1.610	0.048	0.744	**0.404**
HONEYWELL FLOUR MILL PLC	CONSUMER GOODS	2016	0.920	0.196	0.669	**0.484**
INTERNATIONAL BREWERIES PLC.	CONSUMER GOODS	2016	2.408	0.187	0.695	**0.206**
NASCON ALLIED INDUSTRIES PLC	CONSUMER GOODS	2016	1.588	0.298	0.743	**0.153**
NESTLE NIGERIA PLC.	CONSUMER GOODS	2016	4.606	0.256	1.073	**0.365**
NIGERIAN BREW. PLC.	CONSUMER GOODS	2016	3.744	0.171	0.855	**0.256**
NIGERIAN ENAMELWARE PLC.	CONSUMER GOODS	2016	1.097	0.092	0.604	**0.170**
P Z CUSSONS NIGERIA PLC.	CONSUMER GOODS	2016	1.190	0.049	0.934	**0.138**
UNILEVER NIGERIA PLC.	CONSUMER GOODS	2016	2.654	0.256	0.958	**0.378**
VITAFOAM NIG PLC.	CONSUMER GOODS	2016	1.006	-0.013	1.100	**0.434**
FIDSON HEALTHCARE PLC	HEALTHCARE	2016	0.673	0.145	0.440	**0.264**
GLAXO SMITHKLINE CONSUMER NIG. PLC.	HEALTHCARE	2016	1.066	0.028	0.545	**0.000**
MORISON INDUSTRIES PLC.	HEALTHCARE	2016	1.262	-1.266	0.320	**0.319**
NEIMETH INTERNATIONAL PHARMACEUTICALS PLC	HEALTHCARE	2016	0.962	0.138	0.715	**0.174**
PHARMA-DEKO PLC.	HEALTHCARE	2016	0.427	-0.007	0.480	**0.085**
UNION DIAGNOSTIC & CLINICAL SERVICES PLC[MRF]	HEALTHCARE	2016	0.423	0.070	0.344	**0.000**
CHAMS PLC	ICT	2016	1.084	-0.821	0.246	**0.000**
COURTEVILLE BUSINESS SOLUTIONS PLC	ICT	2016	0.651	0.169	0.332	**0.010**
E-TRANZACT INTERNATIONAL PLC[BLS]	ICT	2016	3.536	0.128	1.507	**0.003**
BERGER PAINTS PLC	INDUSTRIAL GOODS	2016	0.818	0.086	0.634	**0.068**
BETA GLASS CO PLC.	INDUSTRIAL GOODS	2016	0.809	0.191	0.575	**0.183**
CAP PLC	INDUSTRIAL GOODS	2016	5.108	0.705	1.390	**0.058**
CUTIX PLC.	INDUSTRIAL GOODS	2016	1.421	0.219	1.497	**0.228**
DANGOTE CEMENT PLC	INDUSTRIAL GOODS	2016	2.784	0.304	0.463	**0.267**
GREIF NIGERIA PLC	INDUSTRIAL GOODS	2016	1.099	0.079	1.384	**0.000**
LAFARGE AFRICA PLC.	INDUSTRIAL GOODS	2016	0.950	0.068	0.437	**0.238**
MEYER PLC.	INDUSTRIAL GOODS	2016	0.901	0.438	0.495	**0.653**
PORTLAND PAINTS & PRODUCTS NIGERIA PLC	INDUSTRIAL GOODS	2016	1.008	0.011	1.122	**0.175**
B.O.C. GASES PLC.	NATURAL RESOURCES	2016	0.805	0.350	0.546	**0.148**
THOMAS WYATT NIG. PLC.[MRS]	NATURAL RESOURCES	2016	1.505	-0.455	0.824	**21.714**
11 Plc (MOBIL OIL NIG PLC.)	OIL AND GAS	2016	2.283	0.404	1.525	**0.500**
CONOIL PLC	OIL AND GAS	2016	1.108	0.154	1.217	**0.055**
ETERNA PLC.	OIL AND GAS	2016	0.788	0.137	3.354	**0.192**
FORTE/ARDOVA OIL PLC.	OIL AND GAS	2016	1.473	0.067	1.052	**0.388**
MRS OIL NIGERIA PLC.	OIL AND GAS	2016	0.863	0.063	1.316	**0.187**
OANDO PLC	OIL AND GAS	2016	0.863	0.018	0.460	**0.672**
TOTAL NIGERIA PLC.	OIL AND GAS	2016	1.577	0.642	2.132	**0.000**
ACADEMY PRESS PLC.	SERVICES	2016	0.907	-0.244	0.592	**0.559**
AFROMEDIA PLC	SERVICES	2016	4.824	0.295	0.229	**-0.054**
C & I LEASING PLC.	SERVICES	2016	0.814	0.114	0.443	**0.627**
CAPITAL HOTEL PLC[BLS]	SERVICES	2016	1.285	0.374	0.761	**0.321**
LEARN AFRICA PLC	SERVICES	2016	0.486	-0.077	0.562	**0.000**
NIGERIAN AVIATION HANDLING COMPANY PLC	SERVICES	2016	0.906	0.092	0.627	**0.258**
R T BRISCOE PLC.	SERVICES	2016	1.398	0.980	1.101	**-0.180**
RED STAR EXPRESS PLC	SERVICES	2016	1.143	0.185	1.699	**0.064**
TOURIST COMPANY OF NIGERIA PLC.	SERVICES	2016	2.409	0.460	0.274	**1.758**
TRANS -NATIONAL EXPRESS	SERVICES	2016	0.595	0.047	1.424	**0.030**
UNIVERSITY PRESS PLC.	SERVICES	2016	0.923	0.065	0.623	**0.134**
	AVERAGE		**1.422**	**0.112**	**0.825**	**0.616**

Appendix 15: Financial Proxies of the Sample Firms 2012-2019 (Continued)

FIRM	INDUSTRY	DATA YEAR	TOBIN Q	ROE	NAT	DE RATIO
FTN COCOA PROCESSORS PLC	AGRICULTURE	2017	1.152	-0.784	0.004	**0.864**
LIVESTOCK FEEDS PLC	AGRICULTURE	2017	1.074	-0.371	1.935	**0.071**
OKOMU OIL PALM PLC.	AGRICULTURE	2017	2.324	0.388	0.459	**0.118**
PRESCO PLC	AGRICULTURE	2017	2.017	0.257	0.486	**0.301**
CHELLARAM	CONGLOMERATES	2017	1.040	0.194	0.939	**0.679**
JOHN HOLT PLC.	CONGLOMERATES	2017	0.497	-0.029	0.206	**0.343**
TRANSNATIONAL CORPORATION OF NIGERIA PLC	CONGLOMERATES	2017	0.874	0.111	0.282	**0.474**
U A C N PLC.	CONGLOMERATES	2017	0.691	0.013	0.685	**0.089**
ARBICO PLC.	CONSTRUCTION/REAL ESTATE	2017	1.095	0.305	0.906	**0.905**
JULIUS BERGER NIG. PLC.	CONSTRUCTION/REAL ESTATE	2017	1.026	0.161	0.515	**0.826**
UACN PROPERTY DEVELOPMENT CO. LIMITED	CONSTRUCTION/REAL ESTATE	2017	0.591	-0.088	0.062	**0.038**
CADBURY NIGERIA PLC.	CONSUMER GOODS	2017	1.624	0.037	1.164	**0.263**
CHAMPION BREW. PLC.	CONSUMER GOODS	2017	1.805	0.056	0.472	**0.038**
DANGOTE SUGAR REFINERY PLC	CONSUMER GOODS	2017	1.755	0.429	1.046	**0.067**
FLOUR MILLS NIG. PLC.	CONSUMER GOODS	2017	0.795	0.397	1.087	**0.573**
GUINNESS NIG PLC	CONSUMER GOODS	2017	2.116	0.045	0.862	**0.479**
HONEYWELL FLOUR MILL PLC	CONSUMER GOODS	2017	0.685	0.075	0.471	**0.400**
INTERNATIONAL BREWERIES PLC.	CONSUMER GOODS	2017	2.850	0.022	0.157	**0.388**
NASCON ALLIED INDUSTRIES PLC	CONSUMER GOODS	2017	2.244	0.459	0.896	**0.146**
NESTLE NIGERIA PLC.	CONSUMER GOODS	2017	9.096	0.751	1.663	**0.332**
NIGERIAN BREW. PLC.	CONSUMER GOODS	2017	3.332	0.189	0.901	**0.212**
NIGERIAN ENAMELWARE PLC.	CONSUMER GOODS	2017	1.058	0.315	0.434	**0.169**
P Z CUSSONS NIGERIA PLC.	CONSUMER GOODS	2017	1.407	0.082	0.884	**0.054**
UNILEVER NIGERIA PLC.	CONSUMER GOODS	2017	2.319	0.089	0.704	**0.100**
VITAFOAM NIG PLC.	CONSUMER GOODS	2017	0.982	-0.038	1.320	**0.299**
FIDSON HEALTHCARE PLC	HEALTHCARE	2017	0.921	-0.095	0.686	**0.314**
GLAXO SMITHKLINE CONSUMER NIG. PLC.	HEALTHCARE	2017	1.232	0.031	0.607	**0.005**
MORISON INDUSTRIES PLC.	HEALTHCARE	2017	0.692	-0.779	0.285	**0.200**
NEIMETH INTERNATIONAL PHARMACEUTICALS PLC	HEALTHCARE	2017	1.099	-0.388	0.645	**0.197**
PHARMA-DEKO PLC.	HEALTHCARE	2017	0.535	0.008	0.686	**0.107**
UNION DIAGNOSTIC & CLINICAL SERVICES PLC[MRF]	HEALTHCARE	2017	0.419	0.069	0.338	**0.000**
CHAMS PLC	ICT	2017	1.378	-2.649	0.415	**0.000**
COURTEVILLE BUSINESS SOLUTIONS PLC	ICT	2017	0.656	0.012	0.275	**0.003**
E-TRANZACT INTERNATIONAL PLC[BLS]	ICT	2017	3.838	0.063	1.872	**0.018**
BERGER PAINTS PLC	INDUSTRIAL GOODS	2017	0.958	0.100	0.699	**0.183**
BETA GLASS CO PLC.	INDUSTRIAL GOODS	2017	1.013	0.163	0.581	**0.002**
CAP PLC	INDUSTRIAL GOODS	2017	5.303	0.665	1.419	**0.043**
CUTIX PLC.	INDUSTRIAL GOODS	2017	1.166	0.338	1.783	**0.120**
DANGOTE CEMENT PLC	INDUSTRIAL GOODS	2017	2.993	0.283	0.502	**0.310**
GREIF NIGERIA PLC	INDUSTRIAL GOODS	2017	1.027	1.339	0.178	**0.000**
LAFARGE AFRICA PLC.	INDUSTRIAL GOODS	2017	1.162	-0.220	0.518	**0.684**
MEYER PLC.	INDUSTRIAL GOODS	2017	0.579	0.172	0.382	**0.000**
PORTLAND PAINTS & PRODUCTS NIGERIA PLC	INDUSTRIAL GOODS	2017	1.193	0.426	1.150	**0.014**
B.O.C. GASES PLC.	NATURAL RESOURCES	2017	0.884	0.098	0.598	**0.158**
THOMAS WYATT NIG. PLC.[MRS]	NATURAL RESOURCES	2017	1.608	-0.223	0.131	**2.160**
11 Plc (MOBIL OIL NIG PLC.)	OIL AND GAS	2017	1.574	0.321	1.679	**0.412**
CONOIL PLC	OIL AND GAS	2017	1.024	0.086	1.845	**0.025**
ETERNA PLC.	OIL AND GAS	2017	0.852	0.161	3.604	**0.139**
FORTE/ARDOVA OIL PLC.	OIL AND GAS	2017	1.009	0.221	0.585	**0.297**
MRS OIL NIGERIA PLC.	OIL AND GAS	2017	0.741	0.060	1.722	**0.087**
OANDO PLC	OIL AND GAS	2017	0.818	0.075	0.478	**0.587**
TOTAL NIGERIA PLC.	OIL AND GAS	2017	1.613	0.673	2.669	**0.627**
ACADEMY PRESS PLC.	SERVICES	2017	1.030	-2.944	0.734	**0.811**
AFROMEDIA PLC	SERVICES	2017	5.119	-0.117	0.023	**-0.059**
C & I LEASING PLC.	SERVICES	2017	0.853	0.122	0.474	**0.663**
CAPITAL HOTEL PLC[BLS]	SERVICES	2017	0.865	0.151	0.512	**0.173**
LEARN AFRICA PLC	SERVICES	2017	0.433	0.084	0.567	**0.006**
NIGERIAN AVIATION HANDLING COMPANY PLC	SERVICES	2017	0.980	0.115	0.649	**0.201**
R T BRISCOE PLC.	SERVICES	2017	1.864	-0.367	0.574	**0.000**
RED STAR EXPRESS PLC	SERVICES	2017	1.071	0.121	1.578	**0.032**
TOURIST COMPANY OF NIGERIA PLC.	SERVICES	2017	2.823	-2.245	0.504	**2.190**
TRANS -NATIONAL EXPRESS	SERVICES	2017	0.702	0.005	0.935	**0.023**
UNIVERSITY PRESS PLC.	SERVICES	2017	0.645	0.066	0.510	**0.151**
	AVERAGE		**1.542**	**-0.015**	**0.824**	**0.303**

Appendix 15: Financial Proxies of the Sample Firms 2012-2019 (Continued)

FIRM	INDUSTRY	DATA YEAR	TOBIN Q	ROE	NAT	DE RATIO
FTN COCOA PROCESSORS PLC	AGRICULTURE	2018	0.996	-0.457	0.050	**0.883**
LIVESTOCK FEEDS PLC	AGRICULTURE	2018	1.008	-0.431	1.987	**0.000**
OKOMU OIL PALM PLC.	AGRICULTURE	2018	2.150	0.289	0.617	**0.149**
PRESCO PLC	AGRICULTURE	2018	1.690	0.176	0.365	**0.343**
CHELLARAM	CONGLOMERATES	2018	1.171	0.400	0.861	**0.809**
JOHN HOLT PLC.	CONGLOMERATES	2018	0.518	0.142	0.219	**0.358**
TRANSNATIONAL CORPORATION OF NIGERIA PLC	CONGLOMERATES	2018	0.826	0.196	0.351	**0.388**
U A C N PLC.	CONGLOMERATES	2018	0.648	-0.128	0.600	**0.120**
ARBICO PLC.	CONSTRUCTION/REAL ESTATE	2018	1.311	0.748	0.606	**3.750**
JULIUS BERGER NIG. PLC.	CONSTRUCTION/REAL ESTATE	2018	0.969	0.198	0.675	**0.833**
UACN PROPERTY DEVELOPMENT CO. LIMITED	CONSTRUCTION/REAL ESTATE	2018	0.715	0.825	0.049	**0.222**
CADBURY NIGERIA PLC.	CONSUMER GOODS	2018	1.223	0.090	1.308	**0.274**
CHAMPION BREW. PLC.	CONSUMER GOODS	2018	1.728	-0.033	0.454	**0.029**
DANGOTE SUGAR REFINERY PLC	CONSUMER GOODS	2018	1.480	0.222	0.857	**0.063**
FLOUR MILLS NIG. PLC.	CONSUMER GOODS	2018	0.863	0.087	1.329	**0.278**
GUINNESS NIG PLC	CONSUMER GOODS	2018	1.456	0.076	0.932	**0.205**
HONEYWELL FLOUR MILL PLC	CONSUMER GOODS	2018	0.633	0.081	0.577	**0.420**
INTERNATIONAL BREWERIES PLC.	CONSUMER GOODS	2018	1.732	-0.116	0.389	**0.817**
NASCON ALLIED INDUSTRIES PLC	CONSUMER GOODS	2018	2.182	0.370	0.849	**0.166**
NESTLE NIGERIA PLC.	CONSUMER GOODS	2018	7.943	0.857	1.640	**0.285**
NIGERIAN BREW. PLC.	CONSUMER GOODS	2018	2.331	0.117	0.942	**0.329**
NIGERIAN ENAMELWARE PLC.	CONSUMER GOODS	2018	1.066	-0.022	0.360	**0.174**
P Z CUSSONS NIGERIA PLC.	CONSUMER GOODS	2018	0.948	0.036	0.839	**0.054**
UNILEVER NIGERIA PLC.	CONSUMER GOODS	2018	1.984	0.129	0.705	**0.066**
VITAFOAM NIG PLC.	CONSUMER GOODS	2018	1.043	0.155	1.218	**0.463**
FIDSON HEALTHCARE PLC	HEALTHCARE	2018	0.851	0.262	0.744	**0.133**
GLAXO SMITHKLINE CONSUMER NIG. PLC.	HEALTHCARE	2018	1.418	-0.007	1.172	**0.154**
MORISON INDUSTRIES PLC.	HEALTHCARE	2018	0.570	-0.330	0.046	**0.096**
NEIMETH INTERNATIONAL PHARMACEUTICALS PLC	HEALTHCARE	2018	1.211	0.174	0.983	**0.225**
PHARMA-DEKO PLC.	HEALTHCARE	2018	0.175	-0.060	0.205	**0.000**
UNION DIAGNOSTIC & CLINICAL SERVICES PLC[MRF]	HEALTHCARE	2018	0.365	0.023	0.239	**0.000**
CHAMS PLC	ICT	2018	0.965	0.848	0.590	**0.761**
COURTEVILLE BUSINESS SOLUTIONS PLC	ICT	2018	0.391	0.024	0.344	**0.020**
E-TRANZACT INTERNATIONAL PLC[BLS]	ICT	2018	3.758	-20.497	3.148	**0.536**
BERGER PAINTS PLC	INDUSTRIAL GOODS	2018	0.930	0.114	0.744	**0.135**
BETA GLASS CO PLC.	INDUSTRIAL GOODS	2018	1.098	0.170	0.571	**0.085**
CAP PLC	INDUSTRIAL GOODS	2018	4.430	0.734	1.215	**0.065**
CUTIX PLC.	INDUSTRIAL GOODS	2018	1.446	0.296	1.936	**0.118**
DANGOTE CEMENT PLC	INDUSTRIAL GOODS	2018	2.326	0.395	0.532	**0.177**
GREIF NIGERIA PLC	INDUSTRIAL GOODS	2018	1.596	-2.476	1.147	**0.000**
LAFARGE AFRICA PLC.	INDUSTRIAL GOODS	2018	0.951	-0.065	0.570	**0.590**
MEYER PLC.	INDUSTRIAL GOODS	2018	0.533	0.216	0.388	**0.000**
PORTLAND PAINTS & PRODUCTS NIGERIA PLC	INDUSTRIAL GOODS	2018	1.232	0.134	1.282	**0.007**
B.O.C. GASES PLC.	NATURAL RESOURCES	2018	0.795	0.134	0.637	**0.166**
THOMAS WYATT NIG. PLC.[MRS]	NATURAL RESOURCES	2018	1.781	0.341	0.208	**2.329**
11 Plc (MOBIL OIL NIG PLC.)	OIL AND GAS	2018	1.469	0.276	2.330	**0.342**
CONOIL PLC	OIL AND GAS	2018	0.963	0.098	2.007	**0.047**
ETERNA PLC.	OIL AND GAS	2018	0.872	0.084	4.742	**0.223**
FORTE/ARDOVA OIL PLC.	OIL AND GAS	2018	0.956	0.190	0.952	**0.384**
MRS OIL NIGERIA PLC.	OIL AND GAS	2018	0.866	-0.068	1.651	**0.281**
OANDO PLC	OIL AND GAS	2018	0.799	0.104	0.632	**0.557**
TOTAL NIGERIA PLC.	OIL AND GAS	2018	1.301	0.275	2.310	**0.217**
ACADEMY PRESS PLC.	SERVICES	2018	0.990	1.970	0.797	**0.616**
AFROMEDIA PLC	SERVICES	2018	4.125	-0.085	0.417	**-0.084**
C & I LEASING PLC.	SERVICES	2018	0.839	0.096	0.534	**0.616**
CAPITAL HOTEL PLC[BLS]	SERVICES	2018	0.523	0.030	0.367	**0.074**
LEARN AFRICA PLC	SERVICES	2018	0.475	0.064	0.785	**0.012**
NIGERIAN AVIATION HANDLING COMPANY PLC	SERVICES	2018	0.968	0.030	0.796	**0.162**
R T BRISCOE PLC.	SERVICES	2018	2.117	0.267	0.670	**-0.007**
RED STAR EXPRESS PLC	SERVICES	2018	0.895	0.140	1.583	**0.088**
TOURIST COMPANY OF NIGERIA PLC.	SERVICES	2018	0.858	0.097	0.106	**0.608**
TRANS -NATIONAL EXPRESS	SERVICES	2018	1.068	0.094	1.828	**0.000**
UNIVERSITY PRESS PLC.	SERVICES	2018	0.501	0.051	0.784	**0.037**
	AVERAGE		**1.365**	**-0.188**	**0.933**	**0.337**

Appendix 15: Financial Proxies of the Sample Firms 2012-2019 (Continued)

FIRM	INDUSTRY	DATA YEAR	TOBIN Q	ROE	NAT	DE RATIO
FTN COCOA PROCESSORS PLC	AGRICULTURE	2019	1.258	-1.053	0.144	**1.216**
LIVESTOCK FEEDS PLC	AGRICULTURE	2019	0.907	0.056	2.314	**0.000**
OKOMU OIL PALM PLC.	AGRICULTURE	2019	1.547	0.184	0.491	**0.272**
PRESCO PLC	AGRICULTURE	2019	1.276	0.138	0.277	**0.378**
CHELLARAM	CONGLOMERATES	2019	1.104	-2.957	0.892	**0.694**
JOHN HOLT PLC.	CONGLOMERATES	2019	0.756	0.079	0.160	**0.650**
TRANSNATIONAL CORPORATION OF NIGERIA PLC	CONGLOMERATES	2019	0.781	0.034	0.244	**0.490**
U A C N PLC.	CONGLOMERATES	2019	0.668	-0.153	0.737	**0.230**
ARBICO PLC.	CONSTRUCTION/REAL ESTATE	2019	1.183	-0.578	0.782	**1.865**
JULIUS BERGER NIG. PLC.	CONSTRUCTION/REAL ESTATE	2019	0.957	0.191	0.851	**0.843**
UACN PROPERTY DEVELOPMENT CO. LIMITED	CONSTRUCTION/REAL ESTATE	2019	1.016	-7.407	0.074	**0.706**
CADBURY NIGERIA PLC.	CONSUMER GOODS	2019	1.217	0.079	1.365	**0.282**
CHAMPION BREW. PLC.	CONSUMER GOODS	2019	0.946	0.021	0.628	**0.046**
DANGOTE SUGAR REFINERY PLC	CONSUMER GOODS	2019	1.284	0.207	0.835	**0.069**
FLOUR MILLS NIG. PLC.	CONSUMER GOODS	2019	0.832	0.028	1.265	**0.350**
GUINNESS NIG PLC	CONSUMER GOODS	2019	0.855	0.062	0.817	**0.206**
HONEYWELL FLOUR MILL PLC	CONSUMER GOODS	2019	0.645	0.001	0.029	**0.405**
INTERNATIONAL BREWERIES PLC.	CONSUMER GOODS	2019	1.203	3.705	0.362	**0.953**
NASCON ALLIED INDUSTRIES PLC	CONSUMER GOODS	2019	1.603	0.167	0.699	**0.446**
NESTLE NIGERIA PLC.	CONSUMER GOODS	2019	6.773	0.947	1.469	**0.273**
NIGERIAN BREW. PLC.	CONSUMER GOODS	2019	1.793	0.095	0.843	**0.309**
NIGERIAN ENAMELWARE PLC.	CONSUMER GOODS	2019	1.114	-0.203	0.169	**0.175**
P Z CUSSONS NIGERIA PLC.	CONSUMER GOODS	2019	0.717	0.042	0.937	**0.070**
UNILEVER NIGERIA PLC.	CONSUMER GOODS	2019	1.577	-0.111	0.584	**0.034**
VITAFOAM NIG PLC.	CONSUMER GOODS	2019	1.239	0.053	2.067	**0.479**
FIDSON HEALTHCARE PLC	HEALTHCARE	2019	0.845	0.043	0.688	**0.325**
GLAXO SMITHKLINE CONSUMER NIG. PLC.	HEALTHCARE	2019	0.915	0.047	0.749	**0.029**
MORISON INDUSTRIES PLC.	HEALTHCARE	2019	1.766	-0.667	0.200	**0.286**
NEIMETH INTERNATIONAL PHARMACEUTICALS PLC	HEALTHCARE	2019	1.039	0.206	0.862	**0.183**
PHARMA-DEKO PLC.	HEALTHCARE	2019	0.552	-0.214	0.218	**0.160**
UNION DIAGNOSTIC & CLINICAL SERVICES PLC[MRF]	HEALTHCARE	2019	0.193	-0.062	0.290	**0.000**
CHAMS PLC	ICT	2019	0.617	0.064	0.367	**0.000**
COURTEVILLE BUSINESS SOLUTIONS PLC	ICT	2019	0.355	0.047	0.489	**0.050**
E-TRANZACT INTERNATIONAL PLC[BLS]	ICT	2019	2.573	0.484	3.722	**0.587**
BERGER PAINTS PLC	INDUSTRIAL GOODS	2019	0.774	0.145	0.702	**0.139**
BETA GLASS CO PLC.	INDUSTRIAL GOODS	2019	0.852	0.161	0.564	**0.067**
CAP PLC	INDUSTRIAL GOODS	2019	3.112	0.690	1.243	**0.063**
CUTIX PLC.	INDUSTRIAL GOODS	2019	1.256	0.298	1.888	**0.120**
DANGOTE CEMENT PLC	INDUSTRIAL GOODS	2019	1.874	0.223	0.512	**0.192**
GREIF NIGERIA PLC	INDUSTRIAL GOODS	2019	4.471	-1.435	5.230	**0.000**
LAFARGE AFRICA PLC.	INDUSTRIAL GOODS	2019	0.802	0.334	0.429	**0.164**
MEYER PLC.	INDUSTRIAL GOODS	2019	0.946	0.020	0.293	**0.380**
PORTLAND PAINTS & PRODUCTS NIGERIA PLC	INDUSTRIAL GOODS	2019	1.061	0.049	1.130	**0.006**
B.O.C. GASES PLC.	NATURAL RESOURCES	2019	0.916	0.081	0.610	**0.186**
THOMAS WYATT NIG. PLC.[MRS]	NATURAL RESOURCES	2019	2.011	1.662	0.142	**3.144**
11 Plc (MOBIL OIL NIG PLC.)	OIL AND GAS	2019	1.150	0.222	2.101	**0.291**
CONOIL PLC	OIL AND GAS	2019	0.894	0.097	2.197	**0.085**
ETERNA PLC.	OIL AND GAS	2019	0.730	-0.009	8.034	**0.139**
FORTE/ARDOVA OIL PLC.	OIL AND GAS	2019	1.159	0.242	3.755	**0.208**
MRS OIL NIGERIA PLC.	OIL AND GAS	2019	0.673	-0.089	1.468	**0.069**
OANDO PLC	OIL AND GAS	2019	0.811	0.071	0.525	**0.604**
TOTAL NIGERIA PLC.	OIL AND GAS	2019	1.069	0.098	2.183	**0.163**
ACADEMY PRESS PLC.	SERVICES	2019	0.986	1.308	0.935	**0.698**
AFROMEDIA PLC	SERVICES	2019	3.568	-0.150	0.164	**-0.062**
C & I LEASING PLC.	SERVICES	2019	0.833	0.080	0.579	**0.662**
CAPITAL HOTEL PLC[BLS]	SERVICES	2019	1.339	4.633	0.523	**0.868**
LEARN AFRICA PLC	SERVICES	2019	0.591	0.051	0.632	**0.000**
NIGERIAN AVIATION HANDLING COMPANY PLC	SERVICES	2019	0.813	0.108	0.680	**0.230**
R T BRISCOE PLC.	SERVICES	2019	2.093	0.136	0.774	**-0.001**
RED STAR EXPRESS PLC	SERVICES	2019	0.959	0.140	1.802	**0.066**
TOURIST COMPANY OF NIGERIA PLC.	SERVICES	2019	0.891	-0.047	0.058	**0.632**
TRANS -NATIONAL EXPRESS	SERVICES	2019	0.802	-0.044	1.006	**0.000**
UNIVERSITY PRESS PLC.	SERVICES	2019	0.419	0.710	1.056	**0.051**
	AVERAGE		**1.269**	**0.053**	**1.077**	**0.353**

Appendix 16: Average corporate governance score of sample firms 2012-2019

		Governance Mechanisms	2012	2013	2014	2015	2016	2017	2018	2019	Average
		Board Characterisitics				**Board of directors**					
1		At least one director is independent with not more than 0.1% share holding and does	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
2		Majority of directors are independent or non-executive	0.81	0.84	0.83	0.83	0.83	0.87	0.86	0.92	0.85
3		Chairperson is an independent or non-executive director	0.98	0.98	0.98	0.98	0.98	1.00	1.00	1.00	0.99
4		Proportion of non-executive outside directors is greater than fifty percent of the	0.73	0.74	0.74	0.73	0.73	0.72	0.75	0.75	0.74
5		Position of the chairman and CEO are separated	0.95	0.95	0.95	0.95	0.95	0.97	0.98	0.97	0.96
6		Board of directors' meetings are held at least 4 times a year	0.89	0.90	0.90	0.95	0.92	0.97	0.95	0.94	0.93
7		Directors attand board meetings at least 2/3 times	0.97	0.98	0.98	0.98	0.98	0.98	0.98	0.95	0.98
8		Board Size is 5 minimum	0.98	0.98	0.98	0.98	0.97	0.98	0.95	0.98	0.98
9		Presence of Audit Committee	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
10		Presence of Governance and Remuneration Committee	0.98	0.98	0.98	0.98	0.98	0.98	0.98	1.00	0.99
11		Presence of Risk Management Committe	0.76	0.78	0.79	0.79	0.79	0.81	0.81	0.84	0.80
12		Presence of other committees	0.46	0.46	0.44	0.44	0.48	0.48	0.48	0.33	0.45
13		Percentage of female number on board	0.10	0.11	0.12	0.12	0.13	0.14	0.17	0.10	0.13
14		Skills- Boards with mix of at least one accountant or financial analyst	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
15		Foreign board members	0.56	0.57	0.56	0.54	0.52	0.54	0.52	0.54	0.54
16		Process of board appointments is disclosed in the annual report	0.25	0.27	0.25	0.25	0.25	0.25	0.24	0.52	0.29
17		Roles of the board is clearly stated	0.44	0.46	0.46	0.49	0.49	0.49	0.46	0.70	0.50
18		Roles of the Management is clearly stated	0.40	0.41	0.43	0.44	0.44	0.44	0.41	0.41	0.42
19		Code of ethics and conduct is stated	0.65	0.63	0.62	0.63	0.63	0.63	0.60	0.67	0.63
20		Reaport contains directors responsibilities for the preparation of the financial	0.87	0.86	0.84	0.86	0.86	0.86	0.81	0.76	0.84
21		Executive directors' remunerations is disclosed in the report	0.25	0.25	0.25	0.25	0.25	0.25	0.21	0.22	0.24
22		Annual report containes the Chairman's statement	0.94	0.94	0.92	0.94	0.94	0.94	0.92	0.73	0.91
23		Annual report contains statement on the compliance level of the code	0.83	0.83	0.79	0.81	0.81	0.81	0.79	0.86	0.82
		Sub-total	**16.82**	**16.95**	**16.84**	**16.98**	**16.96**	**17.13**	**16.89**	**17.20**	**16.97**
		Percentage compliance rate based on 23 points	**73%**	**74%**	**73%**	**74%**	**74%**	**74%**	**73%**	**75%**	**74%**
						Audit Independence					
24		Audit Committee is composed of 2-6 members of equal directors and shareholders representatives	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
25		All members of the Audit Committee are nonexecutive independent directors	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
26		Chairman of Committee is non-exective director	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
27		Proportion of committee members with financial or accounting knowledge	0.18	0.17	0.17	0.17	0.17	0.17	0.17	0.17	0.17
28		Number of meetings held is four minimum	0.67	0.60	0.67	0.73	0.73	0.76	0.83	0.81	0.72
29		External Auditor does not handle other consulting for the firm	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
30		External auditors is either of PWC, KPMG, Deloitte, Ernst and Young	0.62	0.62	0.67	0.67	0.62	0.65	0.65	0.63	0.64
		Sub-total	**5.46**	**5.40**	**5.51**	**5.57**	**5.52**	**5.59**	**5.65**	**5.62**	**5.54**
		Percentage compliance rate out 7 points	**78%**	**77%**	**79%**	**80%**	**79%**	**80%**	**81%**	**80%**	**79%**

Internal Governance Mechanisms

Appendix 16: Average corporate governance score of sample firms 2012-2019 (Continued)

				External Governance Mechanisms (EGM)								Average
				2012	2013	2014	2015	2016	2017	2018	2019	
31	Ext. Mech.		Proportion of equity holding by institutional shareholders	0.04	0.03599	0.03421	0.03569	0.036865	0.03807	0.039554	0.04	0.04
32			Proportionate share of the total industrial revenue	0.20	0.18115	0.16883	0.15275	0.14355	0.12923	0.121474	0.10	0.15
			Sub-total	**0.24**	**0.22**	**0.20**	**0.19**	**0.18**	**0.17**	**0.16**	**0.14**	**0.19**
			Percentage compliance rate out 2 points	**12%**	**11%**	**10%**	**9%**	**9%**	**8%**	**8%**	**7%**	**9%**
	Total NGCI		**TOTAL NGCI out of 32 points**	**22.52**	**22.56**	**22.55**	**22.74**	**22.66**	**22.88**	**22.70**	**22.96**	**22.70**
			Percentage compliance based on 32 points	**70%**	**70%**	**70%**	**71%**	**71%**	**72%**	**71%**	**72%**	**71%**
				Control Variables (CV)								
				2012	**2013**	**2014**	**2015**	**2016**	**2017**	**2018**	**2019**	**Average**
33	Control Var.		Capital structure (Debt and equity proportions)	0.47	0.39271	0.32072	0.28573	0.258053	0.22973	0.180387	0.122821	0.28
34			Firm using market capitalisation as proxy	0.00	0.00185	0.00176	0.00165	0.001635	0.00157	0.001466	0.001376	0.00
35			Porportion of firm age	0.812824698	0.81282	0.81282	0.81282	0.812825	0.81282	0.812825	0.812825	0.81
			Sub-total	**1.28**	**1.21**	**1.14**	**1.10**	**1.07**	**1.04**	**0.99**	**0.94**	**1.10**
			Percentage compliance rate out of 2 points	**64%**	**60%**	**57%**	**55%**	**54%**	**52%**	**50%**	**47%**	**55%**

Appendix 17: Ethical Clearance – Exemption from Ethics Review

UNIVERSITY OF KWAZULU-NATAL
INYUVESI YAKWAZULU-NATALI

11 October 2021

Mr Iwora Agara (213574527)
School Of Acc Economics&Fin
Westville

Dear Mr Iwora Agara,

Original application number: 00013447
Project title: Corporate governance and the firm value proposition: Evidence from Nigeria

Exemption from Ethics Review

In response to your application received on 5 October 2021 , your school has indicated that the protocol has been granted **EXEMPTION FROM ETHICS REVIEW.**

Any alteration/s to the exempted research protocol, e.g., Title of the Project, Location of the Study, Research Approach and Methods must be reviewed and approved through an amendment/modification prior to its implementation. The original exemption number must be cited.

For any changes that could result in potential risk, an ethics application including the proposed amendments must be submitted to the relevant UKZN Research Ethics Committee. The original exemption number must be cited.

In case you have further queries, please quote the above reference number.

PLEASE NOTE:
Research data should be securely stored in the discipline/department for a period of 5 years.

I take this opportunity of wishing you everything of the best with your study.

Yours sincerely,

[redacted]

Prof Josue Mbonigaba
Academic Leader Research
School Of Acc Economics&Fin