

**Intangible Asset Reporting and Sustainable Performance of Listed Non-Financial Firms
in Nigeria**

**Precious Bolanle, AWOGBE
PG/ACC/120460**

**Department of Accounting
Faculty of Social and Management Sciences
Benson Idahosa University
Benin City, Edo State.**

March, 2024.

**Intangible Asset Reporting and Sustainable Performance of Listed Non-Financial Firms
in Nigeria**

**Precious Bolanle, AWOGBE
PG/ACC/120460**

**A Dissertation Written in the Department of Accounting, Faculty of Social and
Management Sciences, and Submitted to the School of Postgraduate Studies in Partial
Fulfillment of the Requirements for the Award of Masters of Science (M.Sc.) Degree in
Accounting, Benson Idahosa University, Benin City, Nigeria.**

March, 2024

DECLARATION

I, Precious Bolanle, AWOGBE do hereby declare that this dissertation titled” Intangible Asset Reporting and Sustainable Performance of Listed Non-financial Firms in Nigeria” is a product of my own research work and has not been presented wholly or partially, currently or previously for any degree in any Institution of learning. All sources have been dully acknowledged.

Precious Bolanle Awogbe

Date

CERTIFICATION

This is to certify that this Dissertation was carried out by **Precious Bolanle, AWOGBE** with Matriculation Number: PG/ACC/120460 of Department of Accounting, Faculty of Social and Management Sciences, Benson Idahosa University, Benin City, Edo State, Nigeria.

Dr. (Mrs.) Osemwegie-Ero, Joy .O
Supervisor

Date

Dr. (Mrs.) Beauty E. Jackson-Akhigbe
Ag. Head of Department

Date

External Examiner

Date

DEDICATION

I dedicate this research work to my ever supportive mother, for her relentless support and compassion towards me throughout my pursuit for education. I hope this achievement will fulfill the dream she envisioned for me.

ACKNOWLEDGEMENTS

I sincerely appreciate the Almighty God for His grace, strength, sustenance and above all, His faithfulness and love from the beginning of my academic life up to this Masters level. His benevolence has made me excel and successful in all my academic pursuits. My unalloyed appreciation goes to my amiable, ever supportive and humble supervisor, Dr. (Mrs.) Osemwegie-Ero Joy, I treasure every aspect of your contributions. Special appreciation goes to my delectable Head of Department, Dr. (Mrs.) Beauty E. Jackson-Akhigbe. Thank you for all the assistance.

I cannot quantify the contributions and supports of my amiable Professors, Doctors and Lecturers in the Department of Accounting, who have also contributed to this research work and the academic programmes generally, persons like Prof. (Mrs.) R.O. Obasi, who is presently the Director of Academic Planning, Dr. (Mrs.) R. E. Abusomwan, who is the Departmental Post Graduate School Coordinator, Prof. (Mrs.) Ruth Urhoghide, Prof. A. E. Akhidime, Prof. A.R. Anao, Prof. Pius E. Ebhomielen, Dr. Sunday N. Ugbogbo, Dr. (Mrs.) R. Uagable-Ekatah, Dr. D. Oziegbe, Miss Nse Daniel, Dr. Philip Ogbole, Mr. Daniel D. Monday, Prof. John O. Ohioyenoya (Dean FSMS) and others who have contributed immensely to my studies and this research work.

My unreserved appreciation to my mother, Mrs. Maria Awogbe; her words of hope and encouragement were extremely invaluable, especially during the seemingly challenging times. I am most grateful to her - she would continue to be my salient strength to push further and do more.

TABLE OF CONTENTS

Cover Page	i
Title Page	ii
Declaration	iii
Certification	iv
Dedication	v
Acknowledgements	vi
Table of Contents	vii
List of Tables	xii
List of Figure	xiii
Abstract	xiv

CHAPTER ONE: INTRODUCTION

1.1	Background to the Study	1
1.2	Statement of the Research Problem	3
1.3	Research Questions	5
1.4	Objectives of the Study	5
1.5	Research Hypotheses	6
1.6	Scope of Study	6
1.7	Limitations of the study	7
1.8	Significance of the Study	7
1.9	Operational Definition of Terms	8

CHAPTER TWO: LITERATURE REVIEW

2.1	Introduction	10
2.2	Conceptual Review	10
2.2.1	Sustainable Performance	10
2.3	Intangible Asset Reporting	12

2.3.1	Research and Development Reporting	14
2.3.2	Information Technology (IT) Program Reporting	15
2.3.3	Patent and Trademark Reporting	16
2.3.4	Financial Investment Reporting	16
2.4	Control Variables	17
2.4.1	Financial Leverage	17
2.4.2	Firm Size	18
2.4.3	Ownership Structure	19
2.5	Empirical Reviews	20
2.5.1	Research and Development Reporting and Sustainable Performance	20
2.5.2	IT Program Reporting and Sustainable Performance	22
2.5.3	Patent and Trademark Reporting and Sustainable Performance	23
2.5.4	Financial Investment Reporting and Sustainable Performance	24
2.5.5	Financial Leverage and Sustainable Performance	25
2.5.6	Firm Size and Sustainable Performance	26
2.5.7	Ownership Structure and Sustainable Performance	27
2.6	Summary of Empirical Studies	29
2.7	Summary and Gap(s) Identification	34
2.8	Reviews of Theories and Theoretical Framework	34
2.8.1	Growth of the Fitter Theory	34
2.8.2	Stakeholder Theory	35
2.9	Conceptual Framework	36
CHPATER THREE: METHODOLOGY		
3.1	Introduction	37
3.2	Research Design	37

3.3	Population of the Study	37
3.4	Sample Size and Sampling Techniques	37
3.5	Sources of Data	38
3.6	Data Collection Method	38
3.7	Method of Data Analysis	39
3.7.1	Descriptive Statistics	39
3.7.2	Correlation Analysis	39
3.7.3	Panel Data Analysis Technique	39
3.8	Model Specification	41
3.9	Measurement of Variables	42

CHAPTER FOUR: DATA PRESENTATION, ANALYSIS AND INTERPRETATION OF RESULTS

4.1	Introduction	44
4.2	Descriptive Statistics	44
4.3	Correlation Analysis	45
4.4	Presentation and Interpretation of Panel data Regression Results	47
4.4.1	Redundant Fixed Effects Tests	48
4.4.2	Post Diagnostic Test	52
4.5	Test of Hypotheses	51
4.6	Discussion of Findings	55

CHAPTER FIVE: SUMMARY OF FINDINGS, CONCLUSION AND RECOMMENDATIONS

5.1	Introduction	57
5.2	Summary of Findings	57
5.3	Conclusion	58

5.4.	Recommendations.	58
5.5	Contribution to Knowledge	60
5.6	Suggestions for Further Studies	61
	References	62
	Appendix I	69
	Appendix II	86

List of Tables

Table 3.1:	Summarized Empirical Studies	31
Table 3.1:	Measurement of Variables	44
Table 4.1:	Descriptive Statistics	45
Table 4.2	Correlation Matrix	46
Table 4.3	Panel regression results	47
Table 4.4	Redundant fixed effect result	48

List of Figure

Figure 1: Conceptual framework

36

ABSTRACT

The study examined the relationship between intangible asset reporting and sustainable performance of listed non-financial firms in Nigeria for the period of 2013-2022 (10 years). Specifically, the study sought to determine the extent to which research and development reporting, information technology program reporting, patent and trademark reporting, financial investment reporting affect sustainable performance in non-financial listed Companies in Nigeria. The study employed secondary sources of data, which were sourced from their annual audited financial statements. This study adopted the *Ex-post facto* research design. The population of this study was made up of hundred and fifteen (115) listed non-financial companies in Nigerian Exchange Group as at 31st December, 2022. The sample size was based on quoted non-financial companies as at 31st December, 2022 on the Nigerian Exchange Group. The Burley's formula that was propounded and popularized by Taro Yamane (1967) and Z, the 5% error margin was applied on the population to get a sample size of 71 firms. The data collected were analyzed using panel data analysis after conducting the preliminary tests, descriptive statistics, and Pearson correlation matrix. The findings of the study revealed that, two out of the four intangible variables information technology program reporting and Patent and trademark reporting met the apriori sign, as such they were found to be positively related to sustainable performance, while the other two Research and development reporting and financial investment reporting did not meet the expected sign. They rather showed an inverse relationship between them and Sustainable performance. The study thereby recommend among others that firms should deliberately increase the amount of money budgeted for IT related operations and move away from manual operations as much as possible if they want to experience positive and significant effects of IT programs on their performance level.

CHAPTER ONE

INTRODUCTION

1.1 Background to the Study

The capital markets and global economy have become increasingly integrated by reporting intangible assets in financial statements of quoted companies. Sustainable performance (SP) of firms is an innovation driven economy through the development of a new product, process or service for meeting clients' needs (Wibawa, Widjanarko, Utomo, Suratna, & Wahyurini, 2020). The modern business organization is highly driven by technology, knowledge, expertise and relation with various stakeholders. Business organizations tend to grow its assets by placing additional assets to the existing ones thereby increasing the amount of assets as well as embracing new technologies for edging against competition to improve the future cash flow of benefits to the organization (Inyiama, Ugbor, Oluchukwu, & Nnenna, 2017). Sustainable performance is therefore germane in a company's quest to achieve improvements in all fronts.

Sustainable performance (SP) is the potential and ability of a business to efficiently utilize the available resources to achieve targets in line with the set plans of the company, keeping in mind their relevance to the users (Taoua & Issor, 2019). Most firms are constantly seeking ways to improve their performance; and the leading firms can be seen as those who constantly seek to innovate for better sustainable performance. Therefore, sustainable performance, growth and value creation of the economic and corporate system is determined by investment committed to intangible assets which are regarded as "glue" and "engine" of the firm (Nwaiwu & Nwaekpe, 2018). Urhoghide and Korolo (2022) added that performance is the umbrella that portrays the financial soundness of a business organization through the power of innovativeness. Therefore, the presence of innovation created by intangible assets is a fundamental strategic choice made available to organizations to sustain growth and search

for higher profits for optimum level of performance (Nwakoby & Ihediwa, 2018). Intangible assets reporting lends credence to technology advancement which in turn is an innovation process of skills, knowledge, resources, creativity and attitude needed to continuously generate more profitable gains to the organizations. Ionita and Dinu (2021) affirmed that the existence of intangible resources like research and development, information technology programme reporting, patent and trademark reporting, and financial investment reporting are the potential of sustainable performance in the global economy. However, some firms explore a solid patent and trademark protection for operating in an extensive outsourcing of manufacturing, distribution and other low-knowledge functions.

Al-Juboori, Singh, Mansor, Kakar, Zulfiga and Pitchy (2021) argued that innovational features of intangible assets reporting reflects the capability and ability of a firm to identify new ideas and knowledge, introduce new products or services, that will enhance and boost its sustainable performance over time. Intangible assets command a high risk due to the largely irreversible sunk-costs such that intangible assets may be non-existent to human resources or know-how or through the unlicensed use of technology. It is stressed by costs of innovation, which is an accounting information expressed through a firm's income statement, rather than to be recognised on the financial position as an asset. However, intangible assets reporting is making available in the financial statements the inventions, ideas, general knowledge, designed approaches, computer programs and publications. IAs themselves are regarded as knowledge and information which creates the value added efficiency to create wealth for sustainable development of the economy (Rehman, Rehman, Rehuman, & Zaliad, 2011).

Baima, Forliano, Santoro, and Vrontis (2021) opined that sustainable performance of firms are driven by the presence of intangibles and intellectual capital accounted for and recorded in the financial position of firms. Intangible assets reporting in the audited financial statement of a firm is the development of models that bridge how it enhances performance

and value creation process. Therefore, intangible assets reporting is quite clear and consistent over the years as assisting in the improvement in a fast growing economy and leads to positive contribution by policymakers, who can adopt some differentiated strategies to foster this trend. The value created by innovations is shown in new ways of doing things or new products and processes that contribute to wealth (Ogbeide & Akanji, 2016). Based on the foregoing, this study examined the impact of intangible assets reporting on sustainable performance in Nigeria listed companies.

1.2 Statement of the Research Problem

Intangible assets values are very difficult to measure and account for in the audited annual reports of quoted companies (Duho, 2022). Even the harmonization of accounting standards on intangible assets reporting, International Accounting Standards (IAS 38) and the Financial Accounting Standard Board only recognises a few of them while ignoring significant intangible resources that might enhance sustainable performance of firms. Sustainable performance brings about employee development which is the goal of the employee to upgrade the existing skills and knowledge of the employee, thus competency is enriched by research and development (Kenny, 2019).

Intangible assets such as goodwill, patents, licenses, research and development (R&D) represent assets not readily disclosed and therefore, not accounted for in the financial statements. Consequently, to the extent of the non-disclosure of these assets, the financial records will be unable to reflect the true values of companies (Van Crieckingen, Bloch & Eklund, 2022). According to OECD (2018), innovation based approaches mainly focus on R&D, training, design, purchase of intellectual property rights, and other related resources linked to the development, testing and implementation of product and process innovations. The quest to connect intangible assets reporting to sustainable performance is gaining attention in the area of contemporary interest in accounting in Nigeria but it has been

explored by researchers and scholars (Van Criekingen, et al, 2022; Garanina, Hussinki, & Dumay, 2021; Güleç, 2021) in developed economies of the world with little done in the developing climes of which Nigeria belong.

The literature in intangible assets reporting and sustainable performance showed that many researchers in developing countries (Okoye, Offor, & Juliana, 2019; Nwaiwu & Nwaekpe, 2018; Olarewaju & Msomi, 2021), and in the developed countries (Caesar, Chen, Udimal & Osei-Agyemang, 2018; Gamayuni, 2015; Ocak & Fındık, 2019; Sewchurran, Dekker & McDonogh, 2019; Ionita & Dinu, 2021) have examined its significant relationship both in the developed and developing countries. However, empirical literature (Akinleye & Dadebo, 2019; Olarewaju & Msomi, 2021; Ionita & Dinu, 2021) had indicated that sizeable evidence on the subject matter has not been proven satisfactorily in the Nigeria context.

In view of the mixed results, Okoye, et al. (2019) found out that employee benefit expense has no significant effect on performance, R&D cost has a significant effect on return on performance and goodwill has a significant effect on performance, Caesar, et al. (2018) established in China that R&D has a significant positive effect on GDP per capita, Nwaiwu and Nwaekpe (2018) documented that intellectual capital reporting and corporate financial performance were significantly related, Olarewaju and Msomi (2021) in Romania established that R&D and Patents had insignificant positive relationship with sustainable performance. Sewchurran, et al. (2019) empirically revealed that investment in intangible assets reporting has no significant relationship with sustainable growth and performance and in Turkey, Ocak and Fındık (2019) established that a significant positive relationship exist between patent, trademark reporting sustainable growth and performance. However, to the best of my knowledge, there are few or no empirical studies in Nigeria on the area of intangible assets reporting and sustainable performance. After reviewing literature, it is also found that a large number of prior studies focused on just one or two variables to capture intangible assets

within the context of non-financial firms. The above mentioned gap motivates us for a further study on this topic by looking at intangible assets more thoroughly than before in this context. The study will also fill the gap in knowledge by examining the influence of intangible assets parameters (research and development reporting, IT program reporting, patent and trademark reporting and financial investment reporting) on sustainable performance in Nigeria listed non-financial companies (knowledge gap). The extension of the period to 2022 will also form a period gap in this study.

1.3 Research Questions

Based on the research problem, the general question of the research study was: Does intangible assets reporting have an effect on sustainable performance of listed Non-financial firms in Nigeria. Below are the specifics questions:

- (i) To what extent does research and development reporting affect sustainable performance in Nigeria listed Companies?
- (iii) What is the effect of information technology program reporting on sustainable performance in Nigeria listed Companies?
- (iv) What is the impact of patent and trademark reporting on sustainable performance in Nigeria listed Companies?
- (v) To what extent does financial investment reporting affect sustainable performance in Nigeria listed Companies?

1.4 Objectives of the Study

The broad objective of this study was to examine the effect of intangible asset reporting on sustainable performance in Nigeria Listed Companies. Therefore, the specific objectives are to:

- (i) examine the effect of research and development reporting on sustainable performance in Nigeria Listed Companies.

- (ii) determine the effect of information technology program reporting on sustainable performance in Nigeria Listed Companies.
- (iii) investigate the effect of patent and trademark reporting on sustainable performance in Nigeria Listed Companies.
- (iv) assess the effect of financial investment reporting on sustainable performance in Nigeria Listed Companies.

1.5 Research Hypotheses

Based on the research objectives, the following null hypotheses were formulated in the study:

- H₀₁: Research and development reporting has no significant effect on sustainable performance in Nigeria Listed Companies.
- H₀₂: Information technology program reporting has no significant effect on sustainable performance in Nigeria Listed Companies.
- H₀₃: Patent and trademark reporting has no significant effect on sustainable performance in Nigeria Listed Companies.
- H₀₄: Financial investment reporting has no significant effect on sustainable performance in Nigeria Listed Companies.

1.6 Scope of the Study

This study examined intangible assets reporting and sustainable performance of listed non-financial firms in Nigeria. The period under investigation was from 2013 to 2022. Geographically, the scope of study is limited to listed non-financial firms on the Nigerian Exchange Group (NGX). Therefore, the period under investigation was from 2013 to 2022. Presently, there are a total of one-hundred and fifteen (115) non-financial firms listed on the Nigerian Exchange Group (NGX, 2022 Fact Book). The justification of the period (2013-2022) was predicated on the full compliance with IFRS of the quoted non-financial firms in

Nigeria Exchange Group (NGX). The 2023 financial statements were unavailable for use as at the time of this study.

1.7 Limitations to the Study

The study covered only listed non-financial quoted companies in Nigeria. Therefore, the sample size is limited due to inability to represent the entire 115 listed non-financial companies in NGX. Also, the inability to extend the time frame to 2023 is also a challenge due to the non-availability of data thereby reducing the comprehensiveness currency of the study's data set. However, to mitigate this limitation, effort was made to ensure that the number of years in the data set multiplied by the number of non-financial firms produced a relatively large number of observations (that is $n > 30$), in conformity with the law of large number, and the law of statistical regulation.

Finally, unidirectional measurement of hypothesized variables and the use of quantitative methodology to measure multi-dimensional variables like assets reporting and sustainable performance nexus, which is made of non-quantitative abilities, might pose some level of limitations on the study. Effort was however committed to as much as possible to be guided by some widely accepted measurements in this regard.

1.8 Significance of the Study

The following groups would benefit from the outcome of this study:

This study will be relevant to policy makers to take a proactive step towards the selection of the best policies in enhancing firm performance through intangible asset reporting, human resource investments and other decisions and management styles are now represented as a human resource condition precedent to the ultimate productivity or effectiveness of the organization.

The Central Bank of Nigeria (CBN) and Financial Reporting Council of Nigeria (FRCN) and other regulatory agencies will benefit from the outcome of this study. It also

helps them in accessing the level of IAs reporting for sustainable performance. This will enable the government to effectively engage in more investment in the area of intangible asset reporting that will improve the infrastructural base of the growing economy. The level of government commitment to innovation will help drive sustainable performance of public corporations.

The study will enable accounting practitioners to fully understand an organization and the effectiveness of its managers, it is therefore important that corporate reports adequately reflect all resources in terms of intangible assets used and developed to further the organization's achievement in the area of sustainable performance.

The study will also be of great importance to researchers in accounting and management related disciplines as it will help in disseminating vital information and empirical evidence for further research in this area. The study serves as a comprehensive reference for developing and emerging countries on the relationship between intangible asset reporting and sustainable performance in Nigeria.

1.9 Operational Definition of Terms

Intellectual property right: This is the right exercised and enjoyed by the creators of intellectual property by preventing others from copying, performing, or distributing their works without permission.

Financial investment: Financial investment is a green investment that is based on intangible innovation which enables firms to take proactive strategy to gain and maintain legitimacy and support stakeholders.

Trade mark: Trademark right is a continuous intangible asset used by business organizations to identify a given product in order to achieve its target goals.

Intangible asset reporting: Intangible asset reporting is the voluntary reporting of intangible assets to show the true profit of a firm and enhances growth rate of the company by increasing its cost of share capital in the market, drawing more shareholders to invest.

Patent: Patent is the invention carried out through the process of innovation to enable firms to change its product by introducing new lines to the product which give the customer maximum value.

Innovation: Innovation is the application of modern information technology programs, information and skills that would enhance new service rendering to clients to improve performance of the business organization.

Research and development: Research and development is an innovative capability for knowledge economy which is seen as investment which will generate revenues or profits margin in the future for the organizations.

Sustainable Performance: Sustainable performance is the sustainability of the firms' optimum goal in terms of sales growth and expansion of the firm and increase profit margin.

CHAPTER TWO

LITERATURE REVIEW

2.1 Introduction

Extensive theoretical and empirical reviews will be undertaken in this chapter, to examine intangible asset reporting and sustainable performance in Nigeria Listed Companies. This section seeks to review literature on sustainable performance, intangible asset reporting, research and development reporting, IT program reporting, patent reporting and financial investment reporting. The chapter also entails the survey of related empirical studies, the theoretical review, summary of the empirical literature review and gap identification.

2.2 Conceptual Review

In this section, we look at the definitions, description and discussion of the concepts that proxies the dependent and independent variables.

2.2.1 Sustainable Performance

The essence of sustainable performance (SP) hinges in the development of industrial and service industries. Sustainability reporting in the area of performance has gained tremendous expansion and growth in the financial market in terms of value of shares and stocks (Mohd, Rahman, & Yaacob, 2018). Martin (2012) stated that the firm's financial performance is driven by SP. Odusanya, Yinusa, and Ilo (2018) defined sustainable performance (SP) as the maximization of the optimum goal for a company to remain in business and to withstand competition from firms operating in similar industries. SP is the efficient and effective utilization of the human assets, material resources and capital resources in the attainment of the goals and objectives of the organization. Given the definition of Urhoghide and Korolo (2022), performance is the extent at which a firm utilizes its assets to earn revenues in the course of business operations.

The stock market is a dynamic and engaging entity where thousands of transactions occur simultaneously on the floor of trading to outbid and outsell each other (Mohammed, 2017). Safdar, Hazoor, Toheed, and Ammaral (2013) posited that available new information in the market for company developments and stock recommendations made public while papers are released on new and different ways in which the market can be exploited. Timothy, Izilin and Ndifreke (2020) opined that SP is how successful a firm is and how the managers of the firm were able to effectively explore the firm resources to generate wealth for the owners in terms of performance. The relevance of SP is revealed in determining the factors influencing share prices (Safa, 2018). Therefore, the investors use this trend to make investment and economic decision processes.

Armstrong (2017) argued that SP is an adopted tool explored for influencing detailed actions taken by the firm and the extent to which the firm intends to achieve its stated objectives and goals as defined in its corporate mission and strategies. Maduenyi, Oke, Fadeyi and Ajagbe (2015) affirmed that the essence of SP is to make the firms flexible in achieving the goals and objectives through survival and growth strategies. Jain and Winner (2016) added that sustainability is a prerequisite of corporate social responsibility (CSR) that enhances investment in intangible innovation in order to boost the firm's reputation and performance. Firms eventually tend to disclose sustainability information voluntarily to conform to social expectations and thereby ensure continuous access to resources and markets (i.e. customer support, labor and financial capital (De Villiers & Marques, 2016). However, SP draws the attention of stakeholders who are the owners of the firm through CSR disclosure.

Sustainability is a new paradigm shift that is not only related to disclosure, but also integrates with the communication process between companies and stakeholders (Frynas & Yamahaki, (2016). This process provides stakeholders with an opportunity to determine if the

company has taken their interests into account when making decisions. A sustainability report will disclose the ways in which non-financial issues such as; employee job satisfaction and performance, external stakeholder's position and climate change contribute towards SP. Therefore, the idea emerged that a firm's overall performance may be better analyzed when we consider both financial events and non-financial events side-by-side with the assumption that a correlation between the two helps the investor make better decisions. SR is to convey to the public both the transparency and accountability of the firm in the conduct of its affairs (Godha & Jain, 2015).

SP measurement is very fundamental in the sustainability of the firms in the area of sales growth and expansion of the firm and increased profit margin. This study will make use of return on asset which is the ratio of the profit to the total assets in measuring SP (Urhoghide & Korolo, 2022). This enables management to know the extent at which the assets can generate profits for the firm. In other words, an increase in ROA is associated with improved sustainable performance while a low ROA is a signal of poor sustainable performance. ROA reveals the performance of management in being able to utilize its assets. It is simply the return from effective and efficient use of a company's asset. Ibrahim and Abdul Samad (2011) maintained that firms with a higher ROA imply that the firm is able to effectively utilize its assets. ROA is commonly used by researchers as a measure of sustainable performance.

2.3 Intangible Asset Reporting

The voluntary intangible assets (IAs) reporting shows the true profit of a firm as this enhances growth rate of the companies by increasing its cost of share capital in the market, thereby attracting more shareholders to invest. Intangible assets refers to the capitalization of software and development cost incurred from the point of technological feasibility (Safa, 2018). Statement of Accounting Standard (SAS 31) views intangible assets as the identifiable

non-monetary asset without physical substance. Blaug and Lekki, (2009) affirmed that IAs are assets that cannot be touched, quantified. These include knowledge, technical know-how, human capital, information, data, reputation, and organizational practices. Collings (2011) argued that IAs are in the form of licenses and quotas, patents and copyrights, computer software, trademarks, franchises, and marketing rights. The other classes of IA are brand names, masthead and publishing, computer software, license and franchises, copyrights, patents and industrial property rights, services and operating rights, recipes, formulae, models, designs and prototypes, intangible assets under development (De Villiers& Marques, 2016).

Wyatt and Abenethy (2003) categorized intangible assets into four namely (1) acquired IAs made up of patents and trademarks, brands, and purchased goodwill that is acquired in business combinations, (2)research and development (R&D) which is made up of expenditures associated with R&D activities performed within the firm. Expenditures for exploration, evaluation and development costs in mining and other resource-based firms are usually accounted for separately to R&D because of the specific risk profile of these expenditures, (3) internally generated intangible assets (IGI) which includes identifiable intangible assets produced by the firm, and internal goodwill that is not easily attributable as to its source of value. Identifiable intangible assets and internal goodwill which relate to firm's information systems, administrative structures and processes, market and technology knowledge, trade secrets, customer and supplier networks, (4) intellectual property which are a subset of acquired and internally generated intangible asset classifications that have legal or contractual rights (i.e. patents, trademarks, designs, licenses, copyrights, firm rights, and mastheads). Lee (2010) asserted that the measurement of IAs is aimed at improving financial reporting is the adoption of fair value estimates in the measurement of intangibles. The measurement and recognition of intangibles are essential for the understanding of financial

statements, as any incorrect treatment of these may have a significant effect on the reported result of the entity concerned.

Intangible assets are stocks of immaterial resources that enter into the production process and are necessary to the creation and sale of new or improved products and processes. The non-recognition of intangible assets (IAs) has affected the value-relevance of financial information in a going concern organization (Zeghal & Maaloul, 2011). Meanwhile, financial statements must become value relevant in companies these days so that the recognition of intangibles in the statements must be of great relevance. However, Kampanje (2012) noted that the increasing importance of IAs can be attributed to the information age, an age where information is what drives performance and not just the possession of physical assets. The dynamic nature of the business environment and rapid industrialization and globalization help to develop and acquire IAs as a survival strategy and means of gaining competitive advantage.

2.3.1 Research and Development Reporting

The Research and development (R&D) to sustainable performance should be given attention by business practitioners and production managers for efficient production techniques, production process and the creation of new and improved products for the satisfaction of the consumers. R&D is an aspect of intangible asset reporting is an emerging phenomenon and contemporary concept which enables firm gain competitive advantage within the operating environment (Ghaffar & Khan, 2014).Chao-Hung Wang (2011) maintained that investment in research and development (R&D) is a good driver of sustainable performance in a competitive business environment.

In other words, the expense of R&D incurred by a firm may be outweighed by the benefits it derives in terms of internal capability of innovation for sustainable performance. Donelson and Resutek (2012) added that the amount spent on R&D is an expense to the firm

but in reality, it is regarded as an investment which will generate revenues or profits margin in the future for the organizations. Sylwester (2001) asserted that a simultaneous increase in the amounts invested in R & D will boost economic growth thereby leading to sustainable performance. The advent of the R&D sector contributes to an immensely technologically advanced environment through well-motivated and sustained performance.

2.3.2 Information Technology (IT) Program Reporting

The effective use of intangible assets like information technology (IT) programs is very useful for the development of the overall business. Meanwhile, commitment to IT programs lead to increased rate of return in the area of competitive perspective as well as competitive advantage in the long run (Harasim, 2008). Makrominas (2017) and Tahat, Ahmed and Alhadab (2018) stated the high level of consideration given to intangible assets like IT programs is a pivot point for sustainable competitive advantage that brings about higher level of market performance. Its program is driven by the power of innovation. Afuah (2020) defined innovation as the application of modern IT programs and information and skills that would enhance new service rendering to clients.

Ionita and Dinu (2021) affirmed that the existence of intangible resources at real value in the annual audited report is a main issue considered by management. These days, most corporations are highly IT driven to have a competitive edge in the global economy. However, it has to be recognized in the financial statements of listed companies for shareholders and investors to take decisive action on it. In the opinion of Corrado and Hulten (2010), company's investment on intangibles like IT programs positively drive innovative growth which lead to SP in the long-run. Hence, more expenditure on intangible assets is a good driver of growth and performance for companies to compete in the global market. IT program is a potent IAs that enable business organizations to change opportunities into new

ideas and put them into practice with the rudiment of innovation (Bhatti, Santoro, Sarwar & Pellicelli, 2021b).

2.3.3 Patent and Trademark Reporting

Patent and trade mark is an intellectual property right that an author enjoys in Nigeria. Adekola and Eze (2015) stressed that patent rights in Nigeria under the intellectual property law assume the owners certain exclusive rights in form of intangible assets which include literary, and artistic works; discoveries and inventions; words, phrases, symbols, and designs. Intellectual property laws is regarded IAs reporting that might be enjoyed by the creators of intellectual property by preventing others from copying, performing, or distributing their works without permission. Trademark right is a continuous IA that a merchant uses to identify a given product for improving sustainable performance.

Patents are inventions which are the citadel of innovation. Foucart and Li (2021) affirmed that firms use innovation to change their product by introducing new lines to the product which gives the customer maximum value. The new lines to the product are created by the power and principles of patent and trademark for the firm. It is frequently used together with phrases like invention, creativity and design. The presence of patents and trademarks is very essential in the promotion of innovation through the creation of new and improved goods and services for society. This kind of IAs propels investment, economic growth, knowledge sharing through patent invention to be placed in the public domain in return for the exclusive right to exploit the invention and the efficient use of resources

2.3.4 Financial Investment Reporting

Financial investment reporting (FIR) is a form of CSR investment; it is a kind of investment which is based on intangible assets like innovation, human resources, reputation, and culture (Indriastuti & Chariri, 2021). Ahmed, Pagell, Kristal and Gattiker (2019) argued that FIR is the combination of financial assets/technological capabilities usually for strategic

and long-term gains of the productive firms while strategic partnership is the buyer and supplier developing and implementing business strategy together for the sustainability of the corporate goals and objectives. General knowledge created through the advent of information technology that aids new product development and also helps in developing new capabilities and technologies and financial and technological support. Kumarasiri and Jubb (2016) opined that sustainable investment is a kind of investments that are geared towards the minimization of carbon emissions, green energy and green technology in the operating business environment.

FIR is a green investment that is based on intangible innovation that enables firms to take proactive strategy to gain and maintain legitimacy and support stakeholders. Testa, Gusmerottia, Corsini, Passetti, and Iraldo (2015) stressed that firms can manage the negative effect of operational activities on the environment by minimizing energy usage and carbon emissions. The firm's concern is the disclosure of Financial investment stated in the audited annual report in the area of responsibility for the environment.

2.4 Control Variables

2.4.1 Financial Leverage

Financial leverage ratio is an indication of short-term and long-term solvency of a company which is a strong factor that determines the stock market price. This means that the financial health of a company is also a signal to the movement of the stock price of a highly leveraged firm in the capital market (Gitman & Zutter, 2012 cited in Al Qaisi, Tahtamouni & AL-Qudah, 2016). Onyeka, Nnado and Iroegbu (2018) asserted that business organizations should have an effective short term cash planning that may be in alignment with the firm's working capital for creating the needed value for the relevant stakeholders. Leverage is the proportion of debt in business organizations financing decisions. However, the higher the

debt, the higher the stock market returns (Mohammed, 2017). The debt policy of corporate organizations may create an expected market value but it relies on the expansion of the firm.

Aharon and Yagil (2019) argued in their study that highly leveraged firms positively influence variance of stock returns which in turn increases stock market returns. In other words, a unit change in firm leverage might significantly lead to an increase in sustainable performance. Firm leverage is the amount of money borrowed for business expansion, to increase production level and to maintain production volume and sales as well as aiming for higher earnings for better performance. The higher the amount of debt is a signal of a highly leveraged firm. However, high leverage may be beneficial to the business organization in the period of windfalls and cause serious cash flow problems in the period of economic recession which may be able to cover sales revenue and interest payment (Tudose, 2012).

2.4.2 Firm Size

Firm size (FS) has been explored by the extant literature as total assets, revenue, scale of operations and number of employees etc. More importantly, larger firms may have enough resources at their disposal to make huge commitments to different kinds of investment opportunities without financial wavering. Manoel, Costa Santos and Neves (2018) argued that the smaller the company size, the need to hold more cash for safety, liquidity and illiquidity problems that may arise in the future.

Firms with larger size may have enough resources at their disposal to make huge commitment to different kinds of investment opportunities without financial wavering (Akrawah, Anichebe, & Okunrobo, 2020). The costs borne by the firm depends on its size. Smaller firms are less important and hence are less subject to political wealth distribution. Firms that are larger in size have more cash to invest in modern technology and expertise to generate in time financial information to the public. Therefore, the large sized firms manage their cash balances less as compared to small sized firms by keeping in view its reputation

and cost in the existence of financial analysts. However, some of the firms with better financial positions are subject to strict policies imposed by the government or other legislative authorities and bear great costs.

FS is usually considered to be of importance in the context of value creation and performance. More importantly, firm size is seen as one of the varieties of information disclosed in the financial statement of business organizations that predicts the firm's quality of accounting information and value creation of the business. Larger companies have better growth opportunities and access to additional financing opportunities, more information available which reduces information asymmetry, and have wider share ownership and a more extensive ownership profile (Abdussalam, 2006). Shuaibu, Ali and Amin (2019) posited that FS cannot be over emphasized in determining the value creation of the firm because bigger firms create more value to the firm than smaller firms. Pervan and Visic (2012) asserted that some companies might continue to expand the size of the company business operation in order to create value in terms of revenue, number of employees and size of facilities.

2.4.3 Ownership Structure

Ownership structure (OS) is a process where shareholders target the long-term survival of a firm and maintain their own reputation which aims at maximizing the firm's market value and economic behavior (Nosa, Akrawah & Oseghale, 2018). The issue of ownership structure has remained a major pillar in the implementation of best practice corporate governance. Ownership of companies and the crisis associated with the style of ownership has also become a center of agenda for both business leaders and regulators all over the world. Abdullah, Ali and Haron, (2018) argued that OS is the rudiment principle of corporate governance for minimizing the conflicting interests between controlling shareholders and minority shareholders in order to influence sustainable performance. Cullinan, Wang, Wang and Zhang (2012) added OS is one of the corporate governance

structures that reflect the various rights associated with different types of owners. There is clear evidence that the structure of company ownership can significantly influence the sustainable performance of the company through, for example, its impact on incentive mechanisms, decision-making procedures as well as performance-monitoring systems.

According to the agency theory perspective, ownership structure is one of the most powerful tools that influence firms' sustainable performance. Ownership structure has been investigated in both developed and developing countries as a factor that affects both on stakeholders' benefits and firms' success. ownership structure is classified as one of the most effective tools employed to assist the board of directors in enhancing the Firm's performance. Additionally, (Nikoskelainen & Wright, 2007a) argued that because there is a separation between control and ownership in the firms, the performance or value of firms is frequently driven by ownership structure.

2.5 Empirical Review

The empirical review will be carried according to the objectives of the study.

2.5.1 Research and Development Reporting and Sustainable Performance

Okoye, Offor and Juliana (2019) used an ex-post facto research design to examine the effect of IAs on performance of quoted companies in Nigeria for the period of 2008 to 2017. The study used employee benefit expenses, R&D cost and goodwill as independent variables and performance measured by ROCE, and descriptive statistics, correlation analysis and ordinary least square regression in testing the hypotheses. The results show that an employee benefit expense has no significant effect on performance, R&D cost has a significant effect on return on performance and goodwill has a significant effect on performance. This implies that IAs significantly affect performance of quoted companies in Nigeria.

Caesar, *et al.* (2018) employed the Generalised Least Squares (GLS) technique in China to examine the effect of R&D (capital, labor and human capital) on economic development (performance) in the West African sub-region. Secondary data were collected across 15 member-states of ECOWAS for the period of 2001-2014 while descriptive statistics also employ to describe the data. The empirical evidence revealed that R&D has a significant positive effect on GDP per capita. This implies that more investment in R&D in the area of capital, labor and human capital would contribute significantly to sustainable performance.

Sardo, Serrasqueiro, and Alves (2018) sample of 934 medium and large-sized Portuguese tourism firms to examine the effect of intellectual capital (R&D) on financial performance for the period of 2007 to 2015. They made use of descriptive statistics, correlation and regression techniques to test the formulated hypotheses. The results showed that intellectual capital has a significant positive impact on firm financial performance.

In Pakistan, Ghaffar and Khan (2014) sampled some selected pharmaceutical industries covering the period of 2007 to 2012 to investigate the influence of R&D on firm performance. They made use of ROA, ROE and EPS to proxied firm performance while descriptive statistics, correlation and simple regression were used to analyze the data with SPSS 16.0. The empirical evidence showed that R&D exerts a significant positive influence on firm performance. This indicates that the presence of R&D would significantly lead to improved sustainable performance.

Nwaiwu and Nwaekpe (2018) used a sample of 12 quoted manufacturing firms in Nigeria for the period of 2011 to 2015 to empirically examine the effect of webometric investigation of “intellectual capital reporting” on corporate financial performance. The time series data were analyzed using descriptive statistics, Augmented Dickey – Fuller and Multiple Linear regression analysis with EView8.0. The results revealed that intellectual

capital reporting and corporate financial performance was significantly related while human capital proxy by R&D has a significant effect on financial performance.

In Korea, Lee and Choi (2015) sampled some selected lists to analyze the time-lag effect of R&D investment in the pharmaceutical industry. They used secondary data collected from annual reports of the companies and descriptive, correlation and regression techniques for the data analysis. The results revealed that R&D reporting exerted a significant positive effect SP measured by Tobin's Q.

In the same vein, Zhu and Huang (2012) sampled some selected IT firms in China to examine the effect of R&D investment on SP. They made use of secondary data collected from audited annual reports of IT firms and OLS regression for the analysis of data. The empirical evidence revealed that R&D reporting has a significant effect on SP. This implies that increase in R&D reporting in the audited annual report of the companies significantly lead to increase in SP.

2.5.2 IT Program Reporting and Sustainable Performance

Olaewaju and Msomi (2021) conducted an empirical study on the relationship between IT program reporting (intangible assets) and performance of firms. They made use of secondary data for the collection of data and employed descriptive statistics, Pearson correlation and regression analysis to test the formulated hypotheses. They documented that IT program reporting exert a significant positive effect on performance. This indicates that increased IT program reporting in the area of intangible assets simultaneously leads to a higher level of SP.

Similarly, Adebawojo, Enyi and Adebawo (2015) used some selected quoted companies in Nigeria to examine the relationship between intangible asset, value creation and corporate performance in Nigeria and found out that intangible assets (IT program) are positively and significantly related.

Gamayuni (2015) conducted a study in Indonesia on the effect of intangible assets (IT program) reporting on financial performance. The secondary data collected were analyzed using descriptive statistics, Pearson correlation and regression analysis. The empirical findings reveal that patents and R&D reporting has a significant positive effect on SP.

2.5.3 Patent and Trademark Reporting and Sustainable Performance

Ionita and Dinu (2021) sampled 42 companies out of the 78 listed at Bucharest Stock Exchange (BSE) for the period 2016–2019 to investigate the impact of impact of intangible assets on the firm value (FV) and its sustainable growth rate (SGR) in Romania. The aim of the study is to investigate the impact of R&D, IT programs and patents' sustainable growth rate. They made use of Secondary data and ordinary least squares (OLS) models for the analysis of data. The results show that R&D and Patents had an insignificant positive impact on SGR and FV as well as SP. R&D has a significant negative impact on FV and SP while IT Programs had a significant positive impact on FV and SP. Also, the results revealed that brands, Shares held in associates and jointly controlled entities, leverage had a significant impact on SGR and FV. The study recommended that companies should create awareness and invest in intangible assets in order to sustain competitive advantage. It is suggested that managers should develop investment strategies in profitable intangibles by committing their limited resources so as to sustainable growth and increase performance.

Tahat, Ahmed, and Alhadab (2018) sampled 150 non-financial firms in the UK to investigate the effect of intangibles (patent and trademark) reporting on financial and market performance of firms. The secondary data collected were analyzed using descriptive statistics, correlation and regression techniques. The results revealed that patent and trademark exert a significant positive effect on financial and market performance of firms in the UK. This indicates that intangible asset reporting is very paramount for increasing financial and market performance.

In Turkey, Ocak and Fındık (2019) sampled some selected listed companies to examine the effect of intangible assets and patent reporting on sustainable growth and performance. They made use of Secondary data and ordinary least squares (OLS) models for the analysis of data. The result showed that a significant positive relationship exists between patent, trademark reporting sustainable growth and performance. This means that unit changes in patent reporting in the annual reports of listed Turkish companies would significantly lead to higher levels of sustainable growth and performance.

2.5.4 Financial Investment Reporting and Sustainable Performance

Indriastuti and Chariri (2021) sampled 132 manufacturing companies listed in the Indonesia Stock Exchange for the period of 2016 to 2019 to examine the relationship between green investment, CSR investment and SP. The study employed descriptive statistics, and Structural Equation Modeling based on Partial Least Squares for the analysis of data. The results reveal that green investment exerts a significant positive effect on SP, and CSR investment is positively and significantly related with SP.

Sewchurran, *et al.* (2019) sampled South-African companies to examine the relationship between investment in intangible assets and sustainable growth and performance. The data collected was analyzed using correlation and least square regression technique. The empirical results reveal that investment in intangible asset reporting has no significant relationship with and sustainable growth and performance.

In Columbia, Garcia, Ramirez and Escobar (2021) conducted a study on the relationship between investment in intellectual capital (intangible assets) and financial performance. Secondary data were collected from some selected listed money deposit banks and least square regression techniques in the analysis of data. They established that investment in intangible asset reporting and SP is not significantly related.

Similarly, Micha, Ofurun and Ihendinihu (2012) documented that an inverse relationship exists between the performance metrics (ROA) of a firm and its intangible assets growth rate reporting. This means intangible assets growth rate in forms of human resources cost investment need to be recognized and reported in the statement of financial position rather than expenditure to be reported as expense in the statement of comprehensive income.

2.5.5 Financial Leverage and Sustainable Performance

In West Africa, Duho (2022) used a sample of 59 companies selected from Ghana (10), Nigeria (30) and Cote d'Ivoire (19) to examine the impact of intangible value on the performance of listed non-financial firms for the period of 2007 to 2018. Descriptive analyses, pairwise correlation and regression results used in the analysis of data. It empirical findings reveal that that value-Added Intellectual Coefficient (VAIC), intellectual capital efficiency (ICE), human capital efficiency (HCE) and structural capital efficiency (SCE) measures of intellectual capital, asset tangibility and foreign direct investment and economic development exert a significant effect on performance of firms while investment in intangible fixed assets and human development exert a positive and insignificant effect on performance. The control variables, firm size exert a positive effect on performance while financial leverage exerts a negative effect on performance.

Akinleye and Dadebo (2019) sampled ten quoted in Nigeria Stock Exchange for the period of 2012 to 2016 to empirically examine the effect of assets utilization on performance of selected manufacturing firms in Nigeria and regression results showed that asset turnover and current ratio impacted positively and significantly on performance measured by return on assets (ROA) while debt assets ratio was negatively and insignificantly related to performance.

Al Qaisi, Tahtamouni and AL-Qudah (2016), “carried out a study on the effect of some factors on market stock price such as Return on Asset (ROA), Return on Equity (ROE),

debt ratio, the age of the company, and the size of the company”. The study used longitudinal research design whereby twenty (20) insurance companies listed in Amman stock exchange during the period 2011 to 2015 formed the sample size. The multiple linear regression results showed that profitability proxy by ROA, debt ratio, the age of the company, and the size of the company had a significant effect on market stock price in insurance companies listed in Amman stock exchange while there is no significant effect between profitability proxy by ROE and market stock price in these insurance companies.

In the same vein, Akinlo and Asaolu (2012) conducted a study on the relationship between profitability and leverage in Nigerian listed firms. The study sampled some selected listed firms in Nigeria where regression techniques were used in the analysis of data. The empirical findings show that financial leverage has a positive relationship on the firm's return on equity.

2.5.6 Firm Size and Sustainable Performance

Akenroye, Adegbe, and Owolabi (2022) used the ex-post facto research design to examine the effect of firms' attributes on SP of quoted companies in Nigeria. The aim of the study is to examine the effect of company size, asset tangibility investment and firm age on SP proxied by Net Profit Margin and return on capital employed. A purposive sampling technique is adopted to sample 111 out of the population of 161 quoted companies in Nigeria for the period of 2011 to 2020 while descriptive, correlation matrix and multiple regressions technique used in the analysis of data. The results showed company size had a significant positive effect on SP.

Mustapha, Rashid, Bala and Musa (2020, p. 5), used a “sample of fifteen (15) banks listed in the Nigeria Stock Exchange for the period of 2013 to 2015 to examine the relationship between corporate governance and performance measured by ROA”. “The

results of random effect regression revealed firm size had a significant positive relationship with performance”.

Khaghaany, Kbelah and Almagtome (2019) sampled 9 tourism companies in Iraq to investigate the value relevance of sustainability reporting practices. They employed secondary data from the annual reports of the tourism companies for the period of 2013 to 2018, descriptive statistics, correlation analysis and OLS regression for the analysis of data. They established a significant positive relationship between sustainability reporting and size of the firm measured by share price while insignificant relationship between sustainability reporting and size of the firm measured by traded shares.

Olawale, Ilo, and Lawal (2017) in Nigeria that sample the use of 12 non-financial quoted firms in Nigeria Stock Exchange (NSE) within the time frame of 2005 to 2013 documented that panel data are analyzed using a pooled regression model, fixed effects model and random effects model to identify the relationship between firm size and value creation through the performance of the firms. They also found out that firm size in terms of total assets has a negative effect on performance, while in terms of total sales; firm size has a positive effect on the performance of Nigerian non-financial companies.

2.5.7 Ownership Structure and Sustainable Performance

Bazhair and Alshareef (2022) in Saudi Arabia examine the dynamic relationship between OS and FP. They used a sample of 100 non-financial companies for the period of 2010 to 2019 in the collection of secondary data. The aim of the study is to examine the relationship between managerial ownership, government ownership and foreign ownership and sustainable performance. Sustainable performance measured by ROA, ROE, ROCE, and ROS, and used descriptive statistics and panel regression analysis in verifying the formulated hypotheses. The results showed that managerial ownership is negatively related to sustainable

performance while government ownership and foreign ownership is positively related to sustainable performance.

Ali, Tahira, Amir, Ullah, Tahir, Shah, Khan and Tariq (2022) sampled 70 listed for the period of 2010–2016 in Pakistan to investigate the effect of leverage, OS and sustainable performance. Sustainable performance was measured by ROA and ROE, descriptive statistics, correlation and panel regression to analyze the data. The results show that leverage, managerial ownership, institutional ownership and family owned ownership has significant negative effects on sustainable performance.

Ogabo, Ogar and Nuipoko (2021) did an empirical study in the UK on the relationship between OS and FP. They used panel research to sample 48 listed firms IN UK for the period of 2008 to 2018, and FP measured by ROA, ROE and Tobin's Q. Descriptive statistics, correlation matrix, and panel regression analysis employed to test the formulated hypotheses. The results reveal that MO has a significant positive impact on FV while board gender has a significant negative impact on FP.

Kao, Hodgkinson and Jaafar (2019) sampled selected lists for the period of 1997–2015 in Taiwan to examine the relationship between OS, BOD and FP. The study proxy FP with Tobin Q, ROA, market-to-book ratio and ROE while using the 2SLS regression technique to test the formulated hypothesis. The results showed that OS, block-holders' ownership, IO, FO and family ownership had a significant positive relationship with FP while independent directors and BS had positive relationship with FP.

In the same vein, Alkurdi, Hamad, Thneibat and Elmarzouky (2021) conducted a study in Jordan to examine the effect of OS on sustainable performance. They used a sample of 61 listed firms for the period of 2012 to 2018 to collect secondary data for the empirical analysis and sustainable performance measured by Tobin Q and ROA using descriptive

statistics, correlation and regression techniques. The findings revealed that OS of concentration has a positive effect on ROA.

Shah and Hussain (2012) sampled some selected listed non-financial firms in Pakistan for the period of 2008 to 2010 to examine the relationship between OS and sustainable performance. The aim of the study is to examine the relationship between managerial ownership, ownership concentration and sustainable performance. Sustainable performance was measured by Tobin-Q as a market based proxy and descriptive statistics, correlation and panel regression technique. The results revealed that managerial had a negative relationship with sustainable performance while ownership concentration had no significant relationship with sustainable performance.

2.6 Summary of Empirical Studies

This subsection presents a summary of reviewed empirical studies by the researcher in the course of the study. This is represented in the table shown below.

Table 2.1: Summary of Empirical Studies

SN	Author(s)	Country of the Study	Topic/ Objective(s)	Methodology/ Data	Major finding(s)
1	Ali, <i>et al.</i> (2022)	Pakistan	To investigate the effect of leverage, OS and sustainable performance	Secondary data, descriptive statistics, correlation and panel regression to analyze	The results show that leverage, managerial ownership, institutional ownership and family owned ownership has significant negative effect on sustainable performance
2	Bazhair and Alshareef (2022)	Saudi Arabia	To examine the dynamic relationship between OS and firm performance	Secondary data, descriptive statistics and panel regression analysis	The results showed that managerial ownership is negatively related to sustainable performance while government ownership and foreign ownership is positively related to sustainable performance.

SN	Author(s)	Country of the Study	Topic/ Objective(s)	Methodology/ Data	Major finding(s)
3	Duho (2022)	West Africa	To examine the impact of intangible value on the performance of listed non-financial firms for the period of 2007 to 2018	Descriptive analyses, pairwise correlation and regression results	The empirical findings reveal that that value-added intellectual coefficient, intellectual capital efficiency, human capital efficiency and structural capital efficiency measures of intellectual capital, asset tangibility and foreign direct investment and economic development exert a significant effect on performance of firms while investment in intangible fixed assets and human development exert a positive and insignificant effect on performance. The control variables, firm size exert a positive effect on performance while financial leverage exerts a negative effect on performance
4	Ionita and Dinu (2021)	Romania	The aim is to test the impact of intangible assets on the firm value and its sustainable growth	Secondary data and ordinary least squares (OLS) model	The results show that intangibles assets had insignificant positive impact on firm value and sustainable growth
5	Olarewaju and Msomi (2021)	Nigeria	The relationship between IT program reporting (intangible assets) and performance of firm	Secondary data, descriptive statistics, Pearson correlation and regression analysis	The results show that IT program reporting exert a significant positive effect on performance
6	Alkurdi, et al (2021)	Jordan	To examine the effect of OS on sustainable performance	Secondary data, descriptive statistics, correlation and regression technique	The findings revealed that OS of concentration has a positive effect on ROA.
7	Indriastuti and Chariri (2021)	Indonesia	To examine the relationship between green investment, CSR investment and SP	Secondary data, descriptive statistics, and Structural Equation Modeling based on Partial Least Squares for the analysis of data	The results reveal that green investment exerts a significant positive effect on SP, and CSR investment is positively and significantly related with SP
8	Garcia, et al (2021)	Colombia	Relationship between investment in intellectual capital (intangible assets) and SP	Secondary data and least square regression technique	The empirical findings reveal that investment in intangible asset reporting and SP is not significantly related

SN	Author(s)	Country of the Study	Topic/ Objective(s)	Methodology/ Data	Major finding(s)
9	Ogabo, et al (2021)	UK	To examine the relationship between OS and performance	Secondary data, descriptive statistics, correlation matrix, and panel regression analysis	The results reveal that OS has a significant positive impact on performance
10	Okoye et al (2019)	Nigeria	To examine the effect of IAs on performance of quoted companies in Nigeria for the period of 2008 to 2017	Secondary data, descriptive statistics, correlation analysis and ordinary least square regression	The results show that an employee benefit expense has no significant effect on performance, R&D cost has a significant effect on return on performance and goodwill has a significant effect on performance
11	Akinleye and Dadebo (2019)	Nigeria	Effect of assets utilization on performance of selected manufacturing firms.	Secondary data, descriptive statistics, correlation and regression analyses	The regression results showed that asset turnover and current ratio impacted positively and significantly on return on assets while debt assets ratio was negatively and insignificantly related to performance
12	Khaghaan y, et al (2019)	Iraq	To investigate the value relevance of sustainability reporting practices	They employed secondary data from the annual reports of the tourism companies for the period of 2013 to 2018, descriptive statistics, correlation analysis and OLS regression	The results reveal that a significant positive relationship between sustainability reporting and size of the firm measured by share price while insignificant relationship between sustainability reporting and size of the firm measured by traded shares
13	Kao, et al (2019)	Taiwan	To examine the relationship between OS and performance	Secondary data and 2SLS regression technique	The results showed that OS had a significant positive relationship with performance
14	Sewchurran, et al (2019)	South-African	To examine the relationship between investment in intangible assets and sustainable growth and performance.	Secondary data, correlation and least square regression technique	The empirical results reveal that investment in intangible asset reporting has no significant relationship with and sustainable growth and performance
15	Ocak and Fındık (2019)	Turkey	To examine the effect of intangible assets and patent reporting on sustainable growth and performance	Secondary data and ordinary least squares (OLS) model for the analysis of data	The result showed that a significant positive relationship exist between patent, trademark reporting, sustainable growth and performance

SN	Author(s)	Country of the Study	Topic/ Objective(s)	Methodology/ Data	Major finding(s)
16	Caesar, et al (2018)	China	To examine the effect of R&D (capital, labor and human capital) on economic development (performance) in the West African sub-region	Secondary data and descriptive statistics	The empirical evidence revealed that R&D has significant positive effect on GDP per capita
17	Sardo, et al (2018)	Portugal	To examine the effect of intellectual capital (R&D) on financial performance for the period of 2007 to 2015	Secondary data, descriptive statistics, correlation and regression technique	The results showed that intellectual capital has a significant positive impact on firm financial performance
18	Nwaiwu and Nwaekpe (2018)	Nigeria	To examine the effect webometric investigation of “intellectual capital reporting” on corporate financial performance	The time series data on were analyzed using descriptive statistics, Augmented Dickey – Fuller and Multiple Linear regression	The results revealed that intellectual capital reporting and corporate financial performance was significantly related while human capital proxy by R&D has significant effect on financial performance
19	Xu and Sim (2018)	China and South Korea	To investigate the effect of corporate R&D and patent investment.	Secondary data, descriptive statistics, Pearson correlation and regression analysis	The empirical findings reveal that patents and R&D reporting has a significant positive effect on SP
20	Tahat et al. (2018)	UK	To investigate the effect of intangibles (patent and trademark) reporting on financial and market performance of firm	Secondary data, descriptive statistics, correlation and regression technique.	The results revealed that patent and trademark exert a significant positive effect on financial and market performance of firms in UK
21	Olawale, et al (2017)	Nigeria	To identify the relationship between firm size and value creation through the performance of the firms	Panel data, pooled regression model, fixed effects model and random effects model	The results show that firm size in terms of total assets has a negative effect on performance, while in terms of total sales, firm size has a positive effect on the performance of Nigerian non-financial companies

SN	Author(s)	Country of the Study	Topic/ Objective(s)	Methodology/ Data	Major finding(s)
22	Al Qaisi, et al (2016)		To investigate the effect of some factors on market stock price such as Return on Asset (ROA), Return on Equity (ROE), debt ratio, the age of the company, and the size of the company	Secondary data and multiple linear regression	The results show that profitability proxy by ROA, debt ratio, the age of the company, and the size of the company had a significant effect on market stock price in insurance companies listed in Amman stock exchange while there is no significant effect between profitability proxy by ROE and market stock price in these insurance companies
23	Adebawojo, et al (2015)	Nigeria	Relationship between human asset accounting, value creation and corporate performance in Nigeria	Ex-post facto research design, secondary data, least square regression technique	The regression results that human asset accounting (intangible assets) has a significantly on value creation and corporate performance of listed of firms in Nigeria
24	Lee and Choi (2015)	Korea	To analyze the time-lag effect of R&D investment in the pharmaceutical industry	Secondary data, descriptive, correlation and regression technique	The results revealed that R&D reporting exert a significant positive effect SP measured by Tobin's Q
25	Gamayuni (2015)	Indonesia	To examine the effect of intangible assets (IT program) reporting on financial performance	Secondary data, descriptive statistics, Pearson correlation and regression analysis	The empirical findings reveal that patents and R&D reporting has a significant positive effect on SP
26	Ghaffar and Khan (2014)	Pakistan	To investigate the influence of R&D on firm performance	Secondary data, descriptive statistics, correlation simple regression	The empirical evidence showed that R&D exerts a significant positive influence on firm performance
27	Rahko (2014)	Finland	To examine the relationship between R&D, patents, and SP measured by market value	Secondary data, descriptive statistics, Pearson correlation and regression analysis	The results show that R&D and patents witness a significant positive effect on the SP
28	Zhu and Huang (2012)	China	To examine the effect of R&D investment on SP	Secondary data and OLS regression	The empirical evidence revealed that R&D reporting has a significant effect on SP
29	Shah and Hussain (2012)	Pakistan	To examine the relationship between OS and sustainable performance	Secondary data, descriptive statistics, correlation and panel regression technique	The results revealed that managerial had a negative relationship with sustainable performance while ownership concentration had no significant relationship with sustainable performance

SN	Author(s)	Country of the Study	Topic/ Objective(s)	Methodology/ Data	Major finding(s)
30	Akinlo and Asaolu (2012)	Nigeria	To examine the relationship between profitability and leverage in Nigerian listed firms	Secondary data and regression technique	The empirical findings show that financial leverage has a positive relationship on the firm's return on equity

Source: Researcher's Compilation (2022)

2.7 Summary and Gap(s) Identification

There has been lack of research in the area of intangible asset (IA) reporting and sustainable performance (SP) in Nigeria but it has been explored by researchers and scholars in advanced economies of the world, which this studies will provide an eclectic understanding of the issues in Nigeria context (Van Crieking, Bloch & Eklund, 2022; Garanina, Hussinki, & Dumay, 2021; Güleç, 2021). The sampling of non-financial listed firms will also provide a unique gap in the literature that needs to be addressed in this study because non-financial firms are less leveraged compare to financial services firms. This study will intend to fill the gap in the extant literature on understanding the impact of IA reporting on SP in Nigeria listed firms for the period of 2013 to 2022. The extension of the sample period of data collection to 2022 will also form a period gap in this study.

2.8 Review of Theories and Theoretical Framework

In this study, relevant theories were developed, which help explain the relevance of intangible asset reporting and sustainable performance. However, this study was anchored on growth of the fitter theory. The choice of the theory is based on the effective utilization of intangibles for improving sustainable performance.

2.8.1 Growth of the Fitter Theory

The growth of the fitter theory was developed by Alchian in the year 1950. The theory is based and premised on the growth of the profit of the company driven by the presence of

tangible asset reporting. In the view of Kouser, Bano and Azeem (2012), fitness of the theory buttressed the profit level of the company. This indicates that profitable companies sustain its growth and survival in the market while the other competing companies exit due to low levels of performance which are attributed to poor utilization of their assets. Alchian (1950) states that fitter companies may sustain their growth and survival while less vigorous companies lose their market share and exit through the evolutionary selection mechanism.

The theory has its premise on the sustainability of the firm growth and performance through the integration of intangible assets reporting. The intangible assets are the innovative process that enhances the growth of the firm. Mukhopadhyay and Amir Khalkhali (2010) argued that profit provides the funds for growth when taking advantage of technological opportunities to grow through research and development through innovative assets that will create value for the company. This study adopted the growth fitter theory because of the strong relationship between intangible assets reporting and sustainable performance.

2.8.2 Stakeholder Theory

The stakeholder theory was developed by Freeman, Ohlson and Penman in the year (1984). The essence of the theory is that stakeholders will mount pressure on firms on the need to always satisfy their interest in the area of performance. This implied that powers to the stakeholders are not relevant. Stakeholder theory contends that the pressures exercised on organizations by different stakeholders' condition firm behavior. Chenhall (2003) argued that organizations are facing intense pressure and there is a need to develop structures for effective control mechanisms and hence adopt an organic system.

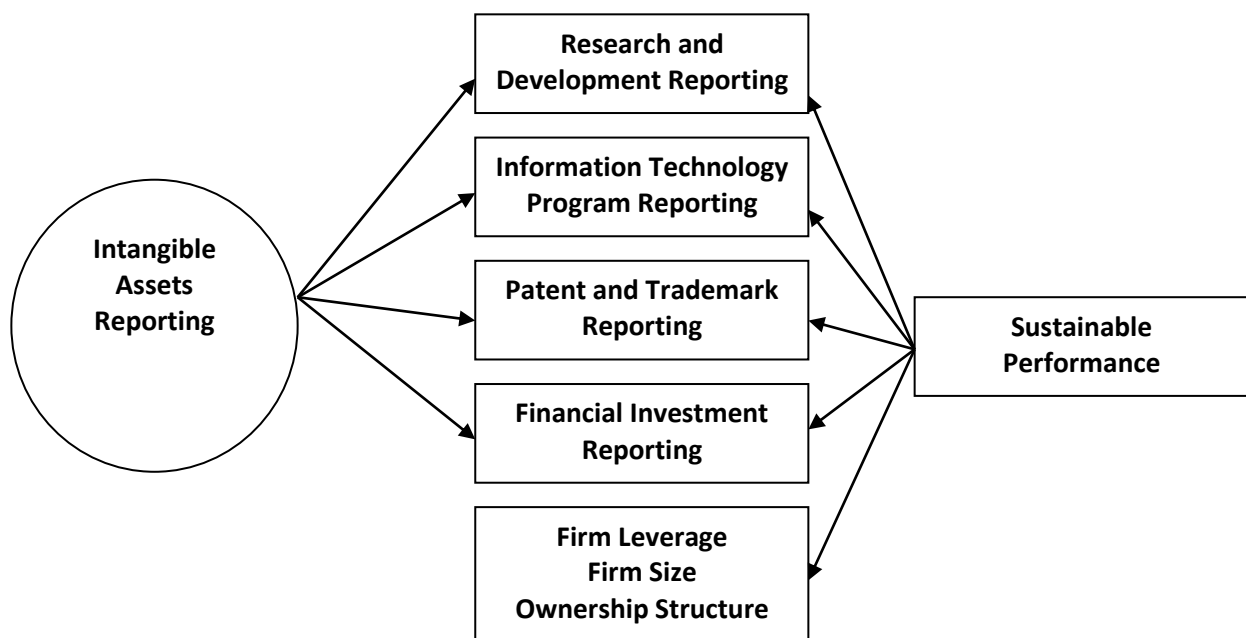
Adeyemi and Fagbemi (2010) added that stakeholders' theory takes account of a wider group of constituents rather than focusing on shareholders". There is increasing pressure on corporate executives to measure, manage and report the creation of shareholder value on a regular basis. In the view of Fernández-Guadano and Sarria-Pedroza (2018),

stakeholder theory is regarded as a positive theory which sees corporate social responsibility as a concept that is used to understand and maximize the interest of stakeholders”. Park, Chidlow and Choi (2014) deposited that the concept of stakeholder emphasizes that organizational growth, stability and survival builds not only on meeting the needs of the owners of the business organizations but must revolve round all relevant corporate stakeholders of the business.

2.9 Conceptual Framework

This is represented in the diagram below:

Figure 1: conceptual framework



Source: Researchers’ Conceptual framework, (2023)

CHAPTER THREE

METHODOLOGY

3.1 Introduction

This chapter describes the procedures that serve as a guide to achieving the core objectives of this study. It covers the research design, the characteristics of the target population, sample size determination and technique, sources of data, model specification, and measurement of the variables and method of data analysis that will be used for testing the hypotheses.

3.2 Research Design

The *ex-post facto* research design research design is employed in this study. The research design enables the researcher to observe one or more variables over a given period of 2013 to 2022. This research approach is relevant in testing the formulated null hypotheses as well as finding possible solutions to the research questions raised on the impact of Intangible asset reporting on sustainable performance of listed non-financial firms in Nigeria. However, the research design was adopted for this research based on the fact that the researcher does not have the intention of manipulating the variables of interest in this research work.

3.3 Population of the Study

The population of this study was made up of hundred and fifteen (115) listed non-financial companies in Nigerian Exchange Group as at 31st December, 2022.

3.4 Sample size and Sampling Techniques

The study made use of a simple random sampling technique to select a sample from the entire population, after which the sample size was determined for the study. The justification for this method was primarily to ensure that each company had the chance of being selected.

The sample size was based on quoted non-financial companies as at 31st December, 2022 on the Nigerian Exchange Group. The Burley's formula that was propounded and popularized by Taro Yamane (1967) and Z, the 5% error margin was applied on the population.

$$n = \frac{N}{1 + N(e)^2}$$

Where:

n = sample size;

N = population size (i.e. 115);

e = desired level of significance, (in this case is 5%).

Incorporating the relevant statistics into equation 3.1, we have:

$$\begin{aligned} n &= \frac{115}{1 + 115(0.05)^2} \\ &= 89.32 \end{aligned}$$

Following the sample derived from the above method employed it was realized that some firms had insufficient data as well as several missing observations, the sample was further subjected to the convenience sampling technique by data filtering which further reduced it to 71 firms. Data filtering further reduced the number of firms by removing delisted firms and those with considerable missing data particularly for the dependent variable.

3.5 Sources of Data

Secondary data were employed for this study and it was obtained from annual reports and publications of the selected publicly listed non-financial companies in the Nigerian Exchange Group (NGX).

3.6 Data Collection Method

The data were collected by extracting them from the audited annual reports of the selected listed non-financial companies in Nigeria.

3.7 Method of Data Analysis

The obtained longitudinal dataset was analyzed using the panel data analysis shortly after the preliminary tests, such as descriptive statistics, and Pearson correlation matrix, were conducted.

3.7.1 Descriptive Statistics

The descriptive statistics test which includes test results for the mean, median, Maximum, minimum, standard deviation, skewness and kurtosis as well as the Jarque-Bera statistics was carried out as the preliminary analysis to ascertain the measures of the variables in use.

3.7.2 Correlation Analysis

Pearson correlation was conducted to establish the degree of association that exists between any two variables. With this test, should any two variables be found to be highly correlated one of them will be removed from the equation. This is required to insulate the model from multicollinearity problems should it be present in the model. Correlation coefficients ranging from -0.85 to -0.99 and 0.85 to 0.99 will be viewed as very high and could disrupt the result from any regression should such variables be retained in the model.

3.7.3 Panel Data Analysis Technique

The obtained longitudinal dataset was analyzed using the panel data analysis shortly after the preliminary tests described above.

A panel model approach is most appropriate in this study because the dataset has a combination of both time series and cross sections. This model considered time and individual dimensions, so it is assumed that the behavior of corporate data is heterogeneous for the various periods and groups.

This model assumes that differences between individuals can be accommodated from different intercepts. The study went through the route of pooled OLS, fixed effect model and

random effect model. After conducting the pooled OLS and fixed effect model, the Panel likelihood ratio test (Redundant fixed effect test) was conducted to determine the appropriate method between the Pooled OLS and the fixed effect model. The decision rule is based on the probability values of the cross section F-statistics. The Redundant fixed effect test is based on a null hypothesis (H_0) which states that the Pooled OLS model is more appropriate than the FE/RE. The decision rule is based on the probability values. If the P-value is greater than 0.05 ($p\text{-value} > 0.05$), the null hypothesis is accepted and the Pooled OLS effect result is adopted but, if the p-value is less than 0.05 ($P\text{-value} < 0.05$) the null hypothesis is rejected and then go with the fixed effect result. Being that the data employed in this study was a balanced panel data after the choice between Pooled OLS and Fixed effect the study proceeded to estimating the random effect (RE). When using a balanced data after estimating the random effect, the next step will be to conduct the Hausman Test to choose the most appropriate model between the random and fixed effect models. The Hausman test is based on a null hypothesis (H_0) which states that the random effect model is more appropriate. The decision rule is based on the probability values. If the P-value is greater than 0.05 ($p\text{-value} > 0.05$), the null hypothesis is accepted and interpret the random effect result but, if the p-value is less than 0.05 ($P\text{-value} < 0.05$) the null hypothesis is rejected and then interpret the fixed effect results.

The final choice for this study was the fixed effect model. To estimate Fixed Effects model panel data using a dummy variable technique to capture the differences between intercept companies, different intercepts can occur due to differences in factors in the various firms under study. The Fixed effect model differs from the common effect, but still uses the ordinary least square principle. Fixed effects assume that differences between individuals (cross section) can be accommodated from different intercepts. In order to estimate the Fixed Effects Model with different intercept between individuals, the dummy variable technique is

used. This is followed by the Random Effect Model (RE). Diagnostic tests are carried out such as the Variance Inflation Factor (VIF) to test the possibility of its existence of multicollinearity in the results and the F-statistics test was employed to test for linearity and the misspecification of the model specification. The analysis in this study is conducted using E-Views 10.0 econometric software.

For this study the one way or individual specific fixed effect panel model was adopted and its generalized FE model is given as;

$$Y_{it} = \beta X_{it} + \gamma Z_i + \epsilon_{it} \text{-----} (3.0a)$$

Where; β denotes the vector of the coefficients of the observed independent variables, X_{it} represents the vector of the observed characteristics such as the independent variables that may be constant for an individual across all time observations. Z represents the unobserved characteristics lie the specific variables that are responsible for heterogeneity in the model among the firms. ϵ_{it} represents the stochastic error term.

While the one way FE with individual specific effect model look thus;

$$Y_{it} = \alpha_i + \beta X_{it} + \epsilon_{it} \text{-----} (3.0b)$$

Where; α_i is a combination of the constant intercept term and the individual specific error terms. Note: α_i varies across individuals but it's constant across time for the case of individual specific fixed effect models.

3.8 Model Specification

The study made use of panel data analysis techniques. The model helps to explain the variation in the value of the outcome variable (sustainable performance) on the basis of changes in the explanatory variables (research and development, IT program reporting, patent reporting and financial investment reporting). Also prior to this study previous authors in developed and other developing countries had used the regression model (see, Duho, 2022; Akinleye & Dadebo, 2019; Okoye, et al, 2019; Ocak & Fındık, 2019).

Specifically, the study adopted the model of Okoye, et al, (2019) which is presented in equation 3.1 below:

$$ROCE_{it} = \alpha_0 + \beta_1 LEBE_{it} + \beta_2 RDC_{it} + \beta_3 GW_{it} + \epsilon_{it} \dots \dots \dots (3.1)$$

Where

α = Constant Term

β = Beta coefficients

ROCE = Return on Capital Employed

EBE = Employee Benefit Expenses

RDC = Research and Development Cost

GW = Goodwill

ϵ = Error Term

The regression model of Okoye, et al, (2019) was extended in this study by using ROA to capture firm performance and inclusion of other intangible assets and further re-specified in equation 3.2 as follows:

$$SP_{it} = \beta_0 + \beta_1 RDR_{it} + \beta_2 ITPR_{it} + \beta_3 PTR_{it} + \beta_4 FIR_{it} + \beta_5 FL_{it} + \beta_6 FS_{it} + \beta_7 OWS_{it} + \epsilon_{it} \dots \dots \dots (3.2)$$

Where:

SP =Sustainable performance RDR=Research and development reporting ITPR = IT program reporting PTR= Patent reporting FIR = Financial investment reporting FL = Financial leverage

FS = Firm size OWS = Ownership structure

β_0 = Constant ϵ_t = Error term

3.9 Measurement of Variables

The measurement of the dependent variable and independent variables is presented in table 3.1 below:

Table 3.1: Measurement of Variables

Acronym	Variables	Measurement	Sources	Apriori sign
SPF	Sustainable performance (dependent variable)	measured by return on assets (ROA) which is net income divided by its total assets.	Ghaffar and Khan (2014); Urhoghide & Korolo (2022)	
RDR	Research and development reporting (Independent variable)	measured by ratio of the amount of money spent on R&D reported in the annual reports to total asset	Demirkan (2018).	+
ITPR	IT program reporting (Independent variable)	measured by the amount of money spent on IT program reported in the annual financial reports for the periods	Gamayuni (2015)	+
PTR	Patent and trademark reporting (Independent variable)	measured by the ratio of patent and trademark to sales revenue reported in the annual reports	Rothaermel and Hess, 2007).	+
FIR	Financial investment reporting (Independent variable)	measured by the ratio of financial investment to total assets	Duho (2022)	+
FL	Financial leverage (Control variable)	measured by ratio of total debt to total asset	Duho (2022)	+/-
FS	Firm size (Control variable)	measured by the natural logarithms of total asset	Demirkan (2018).	+
OWS	Ownership structure (Control variable)	measured by the proportion of shares held by shareholders above 5%.	Azizi, Bidgoli and Taheri (2021). Alves (2020)	+

Source: Researcher's Compilation (2023)

CHAPTER FOUR

DATA PRESENTATION, ANALYSIS AND INTERPRETATION OF RESULTS

4.1 Introduction

This chapter focused on the presentation and interpretation/discussion of the relevant findings. The chapter also included the testing of the hypotheses formulated as outlined in the chapter one of the study as well as the discussion of findings vis-à-vis previous studies.

4.2 Descriptive Statistics

Descriptive statistics are used to describe the basic features of the data in a study. They provide summaries about the sample and the measures. They form the basis of virtually every quantitative analysis of data. The descriptive statistics of variables estimated in this study are therefore presented Table 4.1:

Table 4.1: Descriptive Statistics

	SPF	RDR	ITPR	PTR	FL	FS	FIR	OWS
Mean	2.349597	0.033829	0.484507	0.004965	65.32797	7.172347	0.027766	55.60088
Median	2.793150	0.000000	0.000000	0.000000	59.92315	7.100204	0.000000	60.00000
Maximum	176.2669	2.597893	1.000000	0.712711	395.4504	9.417580	0.876738	98.00000
Minimum	-119.6330	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
Std. Dev.	15.02142	0.241083	0.500112	0.034782	42.06812	0.904215	0.095411	21.35792
Skewness	0.696263	8.097608	0.062002	17.38023	3.229203	-1.209561	5.746711	-0.357718
Kurtosis	37.07045	70.13876	1.003844	327.5093	19.52791	12.80584	41.39008	2.495516
Jarque-Bera	34397.58	141109.5	118.3338	3151057.	9315.281	3017.695	47507.79	22.67131
Probability	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000012
Sum	1668.214	24.01858	344.0000	3.525376	46382.86	5092.366	19.71408	39476.63
SumSq. dev.	159980.9	41.20779	177.3296	0.857724	1254736.	579.6816	6.454151	323417.8
Observations	710	710	710	710	710	710	710	710

Source: Authors compilation (2023) extracted From E-views 10 output.

Table 4.1 shows a summary of the Mean, Median, Maximum, and Minimum data as well as the Standard Deviation and the Jarque-Bera statistics of the variables used in the study. The mean values for SPF, RDR, ITPR, PTR, FL FS FIR and OWS are as follows: 2.349, 0.033, 0.484, 0.004, 65.327, 7.172, 0.027 and 55.600 respectively. The standard deviation values for ITPR, PTR, FL and FIR which stood at 0.500, 0.034, 42.068, and 0.095 suggested that there was a low variation from the mean of these variables. Whereas for SPF, RDR, FS and

OWS their standard deviation values which are 15.021, 0.241, 0.904 and 21.357 respectively revealed that there was a high or variation from their mean values. The skewness result for SPF, RDR, ITPR, PTR, FL, and FIR given as 0.695, 8.097, 0.062, 17.380 and 5.746 respectively indicated that they are skewed to the right while firm size and ownership structure with skewness values of -1.209 and -0.357 showed that they are negatively skewed. Going by the kurtosis values also, some variables appeared to be leptokurtic as their values were higher than the value for an appropriate kurtosis they include SPF, RDR, PTR, FL whereas FIR, ITPR, FS and OWS distributions happened to be platykurtic in nature as they fell below the mesokurtic range. The Jarque-Bera statistics of all the variables had probability values of less than 0.05 showing that they are significant at the 5 percent level. This implies that the variables in use are not normally distributed.

The Jarque-Bera result was not unexpected and as such could be attributed to first the large sample size which in all case erodes the need for normality of the distribution, second the dataset in use appeared to be with large variability, third most of the variables had substantial numbers of zero and near zero values which cannot be normally distributed and lastly it is not possible for a categorical variable to be normally distributed. Bearing in mind the result of the normality test this study employed the panel Fixed and Random effect panel data techniques whose assumption does not border on normal distribution of the dataset.

4.3 Correlation Analysis

Correlation analysis, also known as bivariate analysis is primarily concerned with finding out whether a relationship exists between variables and then determining the magnitude and action of that relationship. The correlation analysis of this study is thus presented in Table 4.2.

Table 4.2 Correlation Matrix

	SPF	RDR	ITPR	PTR	FL	FS	FIR	OWS
SPF	1.000000							
RDR	0.016523	1.000000						
ITPR	-0.012706	0.137377	1.000000					
PTR	0.017960	-0.015780	0.049723	1.000000				
FL	-0.306097	0.041499	0.016338	-0.042345	1.000000			
FS	0.171128	0.120309	0.019339	0.009399	-0.050793	1.000000		
FIR	-0.086579	-0.039318	-0.036218	7.12E-06	-0.056022	0.007416	1.000000	
OWS	0.080828	0.059102	-0.043850	-0.075374	-0.065785	0.258755	-0.038068	1.000000

Source: Authors compilation (2023) extracted From E-views 10 output.

Table 4.2 presented the correlation matrix of the variables in the model. The results showed that Pearson's correlation coefficients between the variables ranged from -0.1127 to 0.2587. This indicated that all the pairwise Pearson's correlation coefficients were very low, less than 0.8. The implication is to expect an absence of multicollinearity among regressors in the estimated regression model. This supports the assumption of no multicollinearity in the estimated regression results. The results also indicated that a weak and positive relationship exists between dependent variable which is Sustainable performance (SPF) and the following independent variables; Research and development reporting (RDR), patent and trademark reporting (PTR), firm size (FS) and Ownership structure (OWS) based on their respective correlation coefficients which stood at 0.0165, 0.0179, 0.1711 and 0.0808. On the contrary, IT program reporting (ITPR), Financial investment reporting (FIR) and Firm leverage (FL) were found to have a negative and weak relationship with the firms' sustainable performance (SPF). This is obvious from their correlation coefficient values of -0.0127, -0.3060 and -0.0808 respectively.

4.4 Presentation and Interpretation of Panel data Regression Results

Table 4.3 Panel Regression results with sustainable performance as a dependent variable.

Variables	Pooled OLS	FIXED EFFECT	RANDOM EFFECT
C	-8.641556 (0.0515)	5.421152 (0.6826)	-7.720124 (0.0887)
RDR	0.494821 (0.8250)	-0.615503 (0.8745)	-0.175949 (0.9396)
ITPR	-0.453375 (0.6723)	2.030174 (0.2682)	0.205140 (0.8453)
PTR	2.535719 (0.8684)	6.058890 (0.7205)	8.492964 (0.5532)
FIR	-0.108179* (0.0000)	-9.896271 (0.2966)	-9.348289*** (0.0776)
FL	2.514775* (0.0000)	-0.093971* (0.0008)	-0.055032* (0.0000)
FS	-16.41445* (0.0033)	0.145478 (0.9353)	1.675355* (0.0084)
OWS	0.012006 (0.6423)	0.010797 (0.8765)	0.010114 (0.6926)
SPF(-1)		0.169157* (0.0001)	0.398354* (0.0000)
R-squared	0.129475	0.373910	0.260284
Adjusted R-squared	0.120795	0.286705	0.250890
Durbin-Watson stat	1.198031	1.989601	2.144062
F-statistic/Prob.	14.91 (0.0000)	4.28 (0.0000)	(0.0000) 27.70
Hausman Test:		97.104	
Chi.stas/Probability		(0.0000)	

Source: Authors compilation (2023) Extracted From E-views 10 output.

Coefficients are reported with probability values in parenthesis. NOTE: *, ** &*** denotes significance at 1%, 5% and 10% respectively).

The results of the panel data regression analysis which is contained on Table 4.3 above presents the pooled OLS, Fixed effect model and the Random effect model results.

In order to ascertain the appropriateness of the pooled OLS model and the fixed effect model, the redundant likelihood ratio test was carried out. The result of the test is displayed below;

4.4.1 Redundant Fixed Effects Tests

Table 4.4 Redundant fixed effect result

Test cross-section and period fixed effect			
Effects Test	Statistic	d.f.	Prob.
Cross-section F	1.437075	(70,552)	0.0153
Cross-section Chi-square	106.974359	70	0.0029
Period F	1.280167	(8,552)	0.2511
Period Chi-square	11.746819	8	0.1629
Cross-Section/Period F	1.439496	(78,552)	0.0116
Cross-Section/Period Chi-square	118.315160	78	0.0022

Source: Authors compilation (2023) extracted From E-views 10 output.

Table 4.4 presents the redundant likelihood ratio test results which compared the pooled OLS and the fixed effect results. The null hypothesis is that the pooled OLS is better while the alternative hypothesis is that the fixed effect estimate is a preferred method. From the likelihood ratio test, the cross-section F-statistic of 1.43 as well as the cross section chi-square of 106.97 along their respective probability values of 0.0153 and 0.0029 is less than the 5 percent level of significance (0.05). The study therefore rejects the null hypothesis and accepts the alternative hypothesis. This implies that the fixed effect estimate is better than the pooled OLS and there is possibility of heterogeneity among the individual groups even though they are in a group of non-financial firms. Consequently, the study proceeded to conduct a one way or cross section Random effect test. Note that in this study both the FE and RE models are the one-way or the cross section effect. The choice of the one-way FE/RE was based on the result of the period/time F and period Chi test statistics results with probability values of 0.2511 and 0.1129 respectively which happen to be greater than 0.05 and suggests that the period effects for both models are not significant.

The decision from the redundant fixed effect test gave credence to the furthering of the analysis to conducting both fixed and random effects. After conducting the FE/RE

models the next step was to choose between the fixed effect and random effect results using the Hausman Test result.

The result of the Hausman statistics as presented on Table 4.3 under the fixed effect column gave a probability value of 0.0000 and a Chi. Sq. value of 97.104. Judging from the probability value of the Hausman test which happens to be less than 0.05 and based on the decision rule there is not enough evidence to accept the null hypothesis that states that the random effect model is more appropriate we therefore accept the alternative hypothesis which implies that the fixed effect result is more adequate for this study.

Following the Hausman test decision, the interpretation will be based strictly on the fixed effect results for both discussion of findings and test of hypotheses for the purpose of consistency and accuracy in the inferences to be drawn from this study.

From the fixed effect estimate contained above; the coefficient of determination is 0.37 while the adjusted R-squared is 0.28 when adjustments were made for the degree of freedom. This implies that 37 percent of the variations in sustainable performance of the non-financial firms in Nigeria were explained by all the explanatory variables. The remaining 63 percent are therefore unexplained in the model. This figure is attributed to the fact that the study is area specific (intangible assets on performance) which limited the inclusion of so many other control variables bearing in mind the degree of freedom. This unexplained variation was characterized to variables not explicitly included in the model and measurement errors, both of which effects are captured by the stochastic error term.

The value of the F-statistic is 4.28 with a statistically significant probability value of 0.000, which is less than 0.05. Consequently, the F-statistic shows that the model is linear and statistically significant at the 5% level of significance. This implies that the overall model has a good fit and it's significant in explaining the variations in the sustainable performance

model. A Durbin Watson statistic of 1.98 which is approximately 2 indicates the absence of autocorrelation in the model. Hence we could rely on the estimated parameters of the variables.

The result thus showed that the estimated coefficients of Research and Development (RDR) and FIR were negative and not statistically significant in driving the sustainable performance of the firms under study. The negative coefficient values of -0.6155 and -9.8962 are against the apriori expectations as it implies that an increase in the amount of money spent on research and development in relation to total asset as well as the increase in the financial investment of the firm will result to a decline in the return on asset of the firm (SPF) by 0.6155 and 9.8962 units respectively. Their probability values of 0.8745 and 0.2966 were far beyond 0.05, hence statistically not- significant. This negative and insignificant relationship between RDR and SP could be attributed to little or no research culture among many firms which leads them to have little or no budget for R&D as seen from the raw data as well as poor management and lack of implementation of feedbacks on the parts of those firm that embarks on R&D.

The other two variables that were employed to proxy intangible assets were both found to be positively related with sustainable performance of the firms under study for the period. However, they were also found to be statistically insignificant in driving sustainable performance of the firms. This finding is in tandem with the apriori sign expectation. The positive coefficient value of 2.0301 and 6.0505 indicates that holding other variable constant, a rise in the amount of money spent on IT program in relation to total asset will lead to a rise in the performance of the firm by 2.0301 units while for the PTR, the result showed that the more the firms acquire patent and trademark for their products, the more value they will acquire and the will lead to a rise in SPF by 6.050 units. The fact that they were found to be statistically insignificant even though they met the expected sign is an indication that their

volume fell below required amount and the presence of ITPR and PTR is infinitesimal in driving firms' performance. This result is in tandem with the raw data and the correlation results as the values of RDR, ITPR, and PTR were found to be weakly correlated with SPF.

A cursory look at the results of these variables for both the pooled OLS and random effect revealed the same outcome for all the variables used to capture intangible assets as that of the fixed effect.

From the strands of the control variables, the result revealed that Firm Leverage which was measured as the total debt to total asset ratio was found to be negative and statistically significant in explaining the firm performance. Its coefficient value of -0.0935 showed that a rise in the debt ratio of the firm will bring about a drop in the firms' performance by 0.0935 units all things being equal. FL was also found to be statistically significant at a 1% level of significance judging by the probability value of 0.0008 that is less than 0.05. This is in line with expected signs according to laid down theory. The other two control variables, Firm size and ownership structure (FS and OWS) were positive but insignificant in promoting sustainable performance of firms. Their coefficient and probability values are as follows: 0.1454 (0.9353) and 0.070 (0.8765) respectively. They both met the a-priori expectations as well.

Lastly, the one period lag of sustainable performance was found to be positive and statistically significant at 1% level in driving the current years' sustainable performance. The inclusion of the lag dependent variable was necessitated for the correction of any serial correlation problem that may be present in the model. The result shows that a rise in the immediate past year's profitability will result in an increase in the current year's profitability and hence improve the sustainability of the performance.

4.4.2 Post Diagnostic Test

Apart from the Durbin-Watson test earlier explained, Variance Inflation Factor test was carried out to ascertain the level of correlation among the variables and to test for the presence of multicollinearity. The Variance inflation Factor test is presented in Table 4.5.

Table 4.5 Variance inflation Factor test

Table 4.5 Variance inflation Factor test

Variable	Centered VIF
C	NA
RDR	1.038568
ITPR	1.027896
PTR	1.013122
FL	1.132400
FS	1.081187
FIR	1.015783
OWS	1.056951
SPF(-1)	1.150676

Source: Authors computation (2023) From E-views 10 output.

From the VIF Table the centered VIF values for the variables used in this study ranges between 1.0131 and 1.1506, it can be said that they fall within the tolerance level which is also far below 10 and as such we conclude that the estimated results from this model is free from any form of multicollinearity problem. This implies that the variables in use are not highly correlated. The VIF result further corroborated the correlation analysis result.

4.5 Test of Hypotheses

The four (4) null hypotheses formulated for this study in chapter one, were tested in this subsection. The outcome of the fixed effect model results (see Table 4.3) as interpreted above was employed to either confirm or disaffirm the hypotheses using the t-statistics and probability values. The study adopts the typical level of significance which is 5% (0.05). The decision rule, therefore, is to reject the null hypothesis if the p-value is lower than the typical

significance test value of 0.05. Alternatively, if the p-value is greater than the typical level of significance of 0.05, the null hypothesis is accepted.

4.5.1 Hypothesis One

H₀₁: Research and development reporting has no significant effect on sustainable performance in Nigeria Listed Companies.

The above hypothesis implies that there is no significant relationship between Research and Development and sustainable performance of the companies.

From the result of the fixed effect model, the results shows that RDR has a negative coefficient and probability value of 0.8745 which is greater than 0.05 which means that RDR was statistically insignificant thus, going by the decision rule there is not enough evidence to reject the null hypothesis for the panel analysis. It is therefore concluded that research and development do not have any significant effect on sustainable performance of the non-financial firms in Nigeria.

4.5.2. Hypothesis Two

H₀₂: Information technology program reporting has no significant effect on sustainable performance in Nigeria Listed Companies.

The above hypothesis states that there is no significant relationship between Information technology program reporting and sustainable performance of the listed companies.

From the result of the fixed effect model, the results shows that ITPR has a positive coefficient and probability value of 0.2682 which is greater than 0.05 which means that ITPR was statistically insignificant thus, going by the decision rule there is not enough evidence to reject the null hypothesis for the panel analysis. It is therefore concluded that IT program reporting does not have any significant effect on sustainable performance of the non-financial firms in Nigeria even though it met the right sign showing a correct relationship.

4.5.3. Hypothesis Three

H₀₃: Patent and trademark reporting has no significant effect on sustainable performance in Nigeria Listed Companies.

The above hypothesis implies that there is no significant relationship between Patent and trademark reporting and sustainable performance of the firms under study.

The fixed effect model results shows that PTR has a positive coefficient and probability value of 0.7205 which is greater than 0.05 which means that PTR was statistically insignificant thus, going by the decision rule there is not enough evidence to reject the null hypothesis for the panel analysis. It is therefore concluded that patent and trademark reporting do not have any significant effect on sustainable performance of the non-financial firms in Nigeria. Although it met the right sign showing a correct relationship but the relationship is not significant in driving sustainable performance.

4.5.4 Hypothesis Four

H₀₄: Financial investment reporting has no significant effect on sustainable performance in Nigeria Listed Companies

The above hypothesis implies that there is no significant relationship between financial investment reporting and sustainable performance of the firms under study.

The fixed effect model results shows that FIR has a negative coefficient and probability value of 0.2966 which is greater than 0.05 which means that FIR was statistically insignificant thus, going by the decision rule there is not enough evidence to reject the null hypothesis for the panel analysis. It is therefore concluded that patent and trademark reporting do not have any significant effect on sustainable performance of the non-financial firms in Nigeria. It was found not to have met the right sign as well as statistically not significant in explaining the performance of the non-financial firms in the country.

In sum, only firm leverage and the lag dependent variables were seen to be significant in driving sustainable performance of the firms under consideration.

4.6 Discussion of Findings

From the test of hypotheses it is obvious that none of the proxies used for capturing intangible assets was statistically significant in driving firms' sustainable performance although some of them were found to have the right relationship with SPF. The study found some significant variables among the control variables.

From the result of the fixed effect and the test of hypothesis one, revealed that research and development reporting has a negative relationship and insignificant effect on sustainable performance. The obtained negative relationship is against the apriori expectations of the study because, considering the relevance of the research and development in any economy or corporate organization, the study expected that R&D will boost productivity which will further boost the firm's sustainable performance. Also, the non-significance of the variable was found to negate some previous studies' findings (Gracia et al 2021; Caesar et al 2018; Sardo et al 2018; Lee and Choi 2015; Gamayuni 2015 Ghaffar and Han 2014 and Rahko 2014). These studies which were mostly conducted using firms from other developed and developing countries found research and development to be positive and highly significant in driving sustainable performance. Be that as it may, the insignificance obtained in the non-financial firm in Nigeria sample cannot be unconnected to the poor research culture as well as insignificant budget that is devoted for research and development both in the country and the corporate environment.

Furthermore, the result of the second hypothesis showed that information technology programme reporting has a positive but insignificant impact on sustainable performance. This implies that, holding other variables constant, greater amounts spent on information

technology programmes by the firm will yield a positive increase, but not on a significant scale, in sustainable performance. However, the variable failed the significance test (5%) going by the t-statistics and the p-value that is greater than 0.05. Firstly, the positive coefficient is in line with the projections of the study. The insignificance of the information technology programme reporting could be attributed to low budget on information technology related materials by the firms even though technology has the ability to promote and fast track the productivity and growth level of companies when properly harnessed.

The result from this study also disclaimed those of Olarewaju and Msomi (2021) and corroborates the findings of Ionita and Dinu (2021) which revealed that intangible assets have a positive relationship with but insignificant impact on sustainable performance of firms.

The result for patent and trademark is similar to that of information technology programme reporting as it revealed that information technology programme reporting exerted a positive relationship with and insignificant effect on sustainable performance. This result is not in line with apriori expectation as PTR ought to increase the sales revenue of the firm and further boost their profitability. This finding is not in tandem with the position of Ocak and Findik (2019) whose result revealed that patent and trademark exert a significant positive effect on financial and market performance of firms in the UK.

The result of financial investment reporting is the same as that of research and development reporting as it showed both negative and statistically insignificant effects with SP.

CHAPTER FIVE

SUMMARY OF FINDINGS, CONCLUSION AND RECOMMENDATIONS

5.1 Introduction

This chapter comprised five sections. The first section was a summary of the findings of this study. In the second section policy recommendations were made in line with the findings of the study. The third section discussed the contributions made by this study to the body of knowledge while the fourth section highlighted some areas for further research work. The study was concluded in the fifth section.

5.2 Summary of Findings

The following were the major findings of the study:

1. Research and Development reporting and financial investments reporting of firms have negative relationship with and insignificant effects on firm sustainable performance in Nigeria. This means that, in the context of this study and holding other variables constant, the higher the amount of money spent on R&D as well as other intangible financial investment by firms the lower the performance of the firm. This is not in line with theory.
2. IT program reporting as well as patent and trademark reporting were found to be positive but statistically insignificant in driving sustainable performance of the non-financial firms. The result implies that as firms increase the amount of money they spend on IT programs in relation to total assets, and the more they acquire patents and trademarks for their products, the more sustainable profit they will acquire. The result passed the theoretical test but failed the statistical test.
3. Information technology program was found to be positive but statistically insignificant. This means that there is no significant relationship between Information technology program reporting and sustainable performance of the listed companies.

4. Lastly, financial investment reporting was found negative and statistically insignificant in driving sustainable performance of the firms under consideration.

5.3 Conclusion

1. This study examined the relationship between intangible assets (proxied by research and development reporting, IT program reporting, patent and trademark reporting, and financial investment reporting) and sustainable performance of the non-financial listed firms in Nigeria for the period of 2013 to 2022. The study employed Panel data analysis (Pooled OLS, Fixed Effect and Random Effect methods). Based on the normal transition and decision rules the fixed effect regression result was adopted. Generally, the regression result revealed that two out of the four intangible variables (ITPR and PTR) met the apriori sign, as such they were found to be positively related to sustainable performance, while the other two, RDR and FIR did not meet the expected signs. They rather showed an inverse relationship between them and SP. They were however not statistically significant, a situation that could be attributed to the infinitesimal amount of investment in those intangible assets and inadequate research and development culture among the firms. Firm leverage was found to be both negative and statistically significant in explaining sustainable performance of the companies under study. This thereby shows that the more indebted firms are, the less profit they will make and of course the lower their performance level. The lag dependent variable which is $SP(-1)$ was found to be positive and statistically significant in promoting sustainable performance. This implies that previous year's profit will have a strong positive effect on the current year's performance of the firm.

5.4. Recommendations

Based on the findings from the regression analysis and the raw data used for this study the following recommendations were proffered:

1. This study recommends that companies should endeavor to monitor their areas of interest with regards to research and development because poor management and lack of implementation of feedback could have been the reason for the negative and insignificant relationship that was found between research and development reporting and sustainable performance.
2. The positive relationship between information technology program reporting (ITPR) and sustainable performance implies that when non-financial companies incorporate higher IT programs into their activities they are likely to have improved profitability which will translate to sustainable performance. As such, it is recommended that companies should increase their IT operations and move away from manual operations as much as possible if they want to experience positive and significant effects of IT programs on their performance level. This can be visible by deliberately increasing the amount budgeted for IT related items because from the data generated it was observed that most firms had little or no amount expended on IT programs, thus its impact was seen to be statistically insignificant.
3. Also, the positive relationship between firms' patent and trademark reporting (PTR) and sustainable performance implies that non-financial companies with higher patent and trademark are likely to have improved profitability which will translate to sustainable performance. It is therefore suggested that firms should indulge in acquiring patent rights for their products as this will further help to insulate their products from unauthorized sellers and this will earn them more money and sustain their profitability.
4. The negative and significant relationship that was found between firm leverage and sustainable performance is a pointer that the higher debts will deplete the profit of firms significantly. Based on this it is suggested that firms should ensure that they get

loans up to the extent to which it can boost profitability and never go beyond the threshold for which it can start reducing it. Again companies to ensure they channel any acquired loans into productive and judicious areas that will yield returns.

5. Going by the positive and significant result of the one period lag of the dependent variable being one of the independent variables, it is therefore recommended that firms should ensure that they engage in plough back of some proportion of previous years' profit as it has high implication for boosting that of the current year.

5.5 Contribution to knowledge

Firstly, the study distinguished itself from prior-related studies by the inclusion of four variables to capture intangible assets within the context of the non-financial firms in Nigerian. To the best of my knowledge, this is among the first studies to use that number of variables at once as it appeared to be more encompassing in judging rather than using one or two. The result of the study has proved the possibility of carrying out a holistic research.

Secondly, this study add to the stock of existing literature within the context of Nigeria as most of the studies in this area were found to be domiciled in other developing countries as well as the developed world and their results pointed to the true picture going by their level of development in research and development, information technology program and even patent and trademarks matters. Consequently, this study was able to provide empirical evidence to support some of the extant empirical literature as regards the relationships of variables used to measure intangible assets using Nigerian firms.

Lastly, evidence in the literature indicated that there was no sufficient work on the subject matter in non-financial companies in Nigeria therefore; this study was able to fill this gap by providing additional empirical evidence in the case of developing countries like Nigeria with focus on the non-financial companies.

5.6 Suggestions for further studies

1. The study covered only the non-financial firms in Nigerian, based on its defined scope; future researchers can attempt covering the entire listed firms in order to boost the generalization of the findings.
2. A future study could attempt to embark on a comparative study between listed financial and listed non-financial firms to ascertain the group whose investment in intangible assets is more and transcends to higher performance.
3. Future research should employ other dimensions of firm valuation that may not be financial, such as company's efficiency, quality and performance staff.
4. Another point is that the result could be generalized to listed non-financial companies in the NGX, thereby boycotting the non-quoted firms. There is need for further research to replicate this work using listed non-financial companies in Nigeria.

REFERENCES

- Abdullah, N.A.I.N., Ali, M.M., & Haron, N.H. (2018). Ownership structure, firm value and growth opportunities: Malaysian Evidence. *Advanced Science Letters*, 23(8), 7378–7382.
- Abdussalam, M.A. (2006). Good corporate governance mechanism and firms' operating and financial performance: Insight from the perspective of Jordanian industrial companies. *Journal of King Saud University*, 2, 101-121.
- Adekola, T.A., & Eze, S.C. (2015). Intellectual property rights in Nigeria: A critical examination of the activities of the Nigerian Copyright Commission. *Journal of Law, Policy and Globalization*, 35, 56-61.
- Adeyemi, S.B., & Fagbemi, T.O. (2010). Audit quality, corporate governance and firm characteristics in Nigeria. *International Journal of Business and Management*, 5(5), 169-179.
- Afuah, A. (2020). *Innovation management-strategies, implementation, and profits*, 2nd edn ed. Oxford University Press, Oxford.
- Aharon, D.Y., & Yagil, Y. (2019). The impact of financial leverage on the variance of stock returns. *International Journal of Financial Studies*, 7(14), 1-18.
- Akenroye, C.T., Adegbie, F.F., & Owolabi, S.A. (2022). Firms' attributes and financial performance of quoted companies: Evidence from Nigeria. *Caleb International Journal of Development Studies*, 5(1), 7-32.
- Ali, J., Tahira, Y., Amir, M., Ullah, F., Tahir, M., Shah, W., Khan, I., & Tariq, S. (2022). Leverage, ownership structure and firm performance. *Journal of Financial Risk Management*, 11, 41-65.
- Al-Juboori, Z.M.A., Singh, H., Mansor, N.N.A., Kakar, A.S., Zulfiga, U., & Pitchy, A.L.A. (2021). The impact of organisational learning on firm performance in the context of manufacturing SMEs in Malaysia, mediating role of innovation capability. *International Journal of Academic Research in Business and Social Sciences*, 11 (5), 796-813.
- Alkurdi, A., Hamad, A., Thneibat, H., & Elmarzouky, M. (2021). Ownership structure's effect on financial performance: An empirical analysis of Jordanian listed firms. *Cogent Business & Management*, 8(1), 1-21.
- Alves, S. (2020). Ownership structure and accounting conservatism: evidence from Portuguese and Spanish listed companies. *Academy of Accounting and Financial Studies Journal* 24(6), 21-34.
- Akinleye, G.T., & Dadebo, A.O. (2019). Assets utilization and performance of manufacturing firms in Nigeria. *International Journal of Business and Management*, 14(4), 107-115.
- Akinlo, O., & Asaolu, T. (2012). Profitability and leverage: Evidence from Nigerian firms. *Global Journal of Business Research*, 6(1), 12-32.

- Akrawah, O.D., Anichebe A.S., & Okunrobo, O.S. (2020). Determinants of auditor switching behaviour in Nigeria. *Global Journal of Accounting and Economy Research*, 1(2),119-144.
- Armstrong, M. (2017). *A handbook of human resource management practice*, 14th edition, London: Kogan Page.
- Azizi, M., Bidgoli, M.S., & Taheri, A. (2021). The effect of ownership and management structure on family businesses performance. *Cogent Business and Management*, 8(1),1-15.
- Baima, G., Forliano, C., Santoro, G., & Vrontis, D. (2021). Intellectual capital and business model: A systematic literature review to explore their linkages. *Journal of Intellectual Capital*, 22, 653–679.
- Bazhair, A., & Alshareef, M.N. (2022). Dynamic relationship between ownership structure and financial performance: A Saudi experience. *Cogent Business & Management*, 9(1), 1-15.
- Bhatti, S.H., Santoro, G., Sarwar, A., & Pellicelli, (2021b). Internal and external antecedents of open innovation adoption in IT organisations: insights from an emerging market. *Journal of Knowledge Management*, 25, 1726–1744.
- Blaug & Lekki, (2009). *Accounting for intangibles: Financial reporting and value creation of the knowledge economy*. In: A research report for the work foundation's Knowledge Economy Programme, 5-10.
- Caesar, A., Chen, H., Udimal, T., & Osei-Agyemang, A. (2018). The influence of R&D on economic development in the West African Sub-Region. *Open Journal of Social Sciences*, 6, 215-228.
- Chao-Hung, W. (2011). Clarifying the effects of R&D on performance: Evidence from the high technology industries, *Asia Pacific Management Review*,16(1),51-64.
- Chenhall, R.H. (2003). Management control systems design within its organisational context: Findings from contingency-based research and directions for the future. *Accounting, Organisation and Society*, 28(3),127-168.
- Collings, S. (2011). Accounting for intangible assets. *Global Accountant Magazine*, 22-25.
- Corrado, C.A., & Hulten, C.R. (2010). Measuring intangible capital. How do you measure a 'technological revolution. *American Economic Review, Papers and Proceedings*, 100,99-104.
- Cullinan, C.P., Wang, F., Wang, P., & Zhang, J. (2012). Ownership structure and accounting conservatism in China. *Journal of International Accounting, Auditing and Taxation*, 21, 1-16.
- Demirkan, I. (2018). The impact of firm resources on innovation. *European Journal of Innovation Management*, 21(4), 672-694.

- Donelson., D.C., & Resutek., R.J. (2012). The effect of R&D on future returns and earnings Forecasts. *Springer Science+Business Media, LLC*
- Duho, K.C.T. (2022). Intangibles, intellectual capital, and the performance of listed non-financial services firms in West Africa: A Cross-Country Analysis. *Merits*, 2, 101-125.
- De Villiers, R.& Marques, O.(2016).The implication of organization legitimacy for corporate social performance and disclosure. *Critical perspectives on accounting conference papers, New York*.
- Fernández-Guadaño, J., & Sarria-Pedroza, J.H. (2018). Impact of corporate social responsibility on value creation from a stakeholder perspective. *Sustainability*, 2-10.
- Foucart, R., & Li, Q.C. (2021). The role of technology standards in product innovation: Theory and evidence from UK manufacturing firms. *Research Policy*, 50(2), 104-157.
- Freeman, R.E. (1984). Strategic management: A stakeholder approach. Boston, MA: Pitman.
- Gamayuni, R.R. (2015).The effect of intangible asset, financial performance and financial policies on the firm value. *International Journal of Science and Technology Research*, 4,202-212.
- Garcia, C.J.B., Ramirez, D.D.F., & Escobar, J.M. (2021). The relationship between intellectual capital and financial performance in Colombian listed banking entities. *Asia Pacific Management Review*, corrected proof, doi: 10.1016/j.apmr.2021.03.002.
- Garanina, T., Hussinki, H., & Dumay, J. (2021). Accounting for intangibles and intellectual capital: A literature review from 2000 to 2020. *Account and Finance*, 5111–5140.
- Ghaffar, A., & Khan, W.A. (2014).Impact of research and development on firm performance. *International Journal of Accounting and Financial Reporting*, 4(1),357-367.
- Güleç, Ö.F. (2021). Value relevance of intangibles: A literature review. Accounting, finance, sustainability, governance and fraud: Theory and application. In ethics and sustainability in accounting and finance; Çalıyurt, K.T., Ed.; Springer: Singapore, 2,12-28.
- Harasim, J. (2008). The role of intangible assets in bank's competitiveness and effectiveness. *Journal of Economics and Management*, 4(1), 41-57.
- Ibrahim, H., & Abdulsammad, F.A. (2011).Corporate governance and performance of public-listed family ownership in Malaysia. *International Journal of Economics and Finance*, 3(1), 105-115.
- Indriastuti, M., & Chariri, A. (2021). The role of green investment and corporate social responsibility investment on sustainable performance. *Cogent Business & Management*, 8(1), 1-21.

- Ionita, C., & Dinu, E. (2021). The effect of intangible assets on sustainable growth and firm value: Evidence on intellectual capital investment in companies listed on Bucharest Stock Exchange. *Kybernetes Emerald Publishing Limited*, 0368-492X DOI 10.1108/K-05-2020-0325.
- Jain, R., & Winner, L.H. (2016). CSR and sustainability reporting practices of top companies in India. *Corporate Communications: An International Journal*, 21(1), 36–55.
- Kenny, S.V. (2019). Employee productivity and organizational performance: A theoretical perspective. *Munich Personal RePEc Archive*, 1-10.
- Khaghaany, M., Kbelah, S., & Almagtome, A. (2019). Value relevance of sustainability reporting under an accounting information system: Evidence from the tourism industry. *African Journal of Hospitality, Tourism and Leisure*, 8, 1-12.
- Kouser, R., Bano, T., Azeem, M., & Hassan, M. (2012). Inter-relationship between profitability, growth and size: A case of non-financial companies from Pakistan. *Pakistan Journal of Commerce and Science*, 6(2), 405-419.
- Lee, M., & Choi, M. (2015). Analysis on time-lag effect of research and development investment in the pharmaceutical industry in Korea. *Osong Public Health and Research Perspectives*, 6, 241-248.
- Lee, C. (2010). The effect of SFAS 142 on the ability of goodwill to predict future cash flows. *Journal of Accounting and Public Policy*, 30(3), 236-255.
- Kampanje, B.P. (2012). Accounting for intangible assets in public limited companies in Malawi. Available from <http://ssrn.com/abstract=2027713>.
- Kumarasiri, J., & Jubb, C. (2016). Carbon emission risks and management accounting: Australian evidence. *Accounting Research Journal*, 29(2), 137–153.
- Maduenyi, P.O., Oke, D.E., Fadeyi, A.K. & Ajagbe, A.A. (2015). A stakeholder approach to triple bottom line accounting: Nigerian experience. *International Journal of Academic Research in Business and Social Sciences*, 5(6), 1-19.
- Manoel, A.A.S., da Costa M.M.B., Santos, D.F.L., & Neves, M.F. (2018). Determinants of corporate cash holdings in times of crisis: insights from Brazilian sugarcane industry private firms. *International Food and Agribusiness Management Review*, 21(2), 201-218.
- Makrominas, M. (2017). Recognized intangibles and the present value of growth options. *Review of Quantitative Finance Accounting*, 48(2), 311-329.
- Martin, P. (2012). Corporate social responsibility and managerial reporting. In *Working Paper*.

- Mohammed, G.T. (2017). Impact of firm characteristics on firm value of listed healthcare firms in Nigeria. A Dissertation submitted to the School of Postgraduate Studies, Ahmadu Bello University, Zaria in Partial Fulfilment of the requirements for the award of a Master Degree in Accounting and Finance, 1-81.
- Mohd, N. A., Rahman, A. A. & Yaacob, M. H. (2018). The impact of asymmetric information on foreign portfolio investment flows. *International Journal of Business & Management Science*, 8(2),475-494.
- Mukhopadhyay, A., & Amir Khalkhali, S. (2010). Profitability performance and firm size-growth relationship. *Journal of Business and Economics Research*, 8(9), 121-126.
- Mustapha, U. A., Rashid, N., Bala, H., & Musa, H. (2020).Corporate governance and financial performance of Nigeria Listed Banks. *Journal of Advance Research in Dynamical and Control Systems*, 12(1), 5-10.
- Nikoskelainen, E., & Wright, M. (2007a). The impact of corporate governance mechanisms on value increase in leveraged buyouts. *Journal of corporate finance*, 13(4), 511-537.
- Nosa, O., Akrawah, O.D., & Oseghale, O.E. (2018).Wealth creation and firm specific characteristics. *International Journal of Governance and Development*, 5 (2), 92-97.
- Nwakoby, N.P., & Ihediwa, A. (2018). Effect of diversification on the financial performance of selected firms in Nigeria. *International Journal of Advanced Academic Research/Social and Management Sciences*, 4(12), 1-16.
- Nwaiwu, J. N., & Nwaekpe, U.C. (2018). Webometric analysis of intellectual capital reporting and corporate financial performance in Nigeria. *International Journal of Innovative Finance and Economics Research* 6(1),75-98.
- Ocak, M., & Fındık, D. (2019). The impact of intangible assets and sub-components of intangible assets on sustainable growth and firm value: evidence from Turkish listed firms. *Sustainability*, 11, 5359.
- Odusanya, I.A., Yinusa, O.G., & Ilo, B.M. (2018). Determinants of firm profitability in Nigeria: Evidence from dynamic panel models. *SPOUDAI Journal of Economics and Business*, 68(1),43-58.
- OECD (2018).Oslo manual: Guidelines for collecting, reporting and using data on innovation, 4th edition; OECD: Paris, France, 2018.
- Ogbeide, S., & Akanji, B. (2016). Executive remuneration and the financial performance of quoted firms. The Nigerian experience. *Management and Economics Review*, 1 (2),230-241.
- Okoye, P.V.C., Offor, N., & Juliana, M.N. (2019). Effect of intangible assets on performance of quoted companies in Nigeria. *International Journal of Innovative Finance and Economics Research*, 7(3), 58-66.

- Olawale, L.S., Ilo, B.M., & Lawal, F.K. (2017). The effect of firm size on performance of firms in Nigeria. *Aestimatio, TheIeb International Journal of Finance*, 15, 2-21.
- Onyeka, V.N., Nnado, I.C., & Iroegbu, F.N. (2018). Effect of cash and liquid substitutes on profitability of selected quoted manufacturing firms in Nigeria. *European Journal of Business, Economics and Accountancy*, 6(2), 1-12.
- Pervan, M., & Visic, J. (2012). Influence of firm size on its business success. *Croatian Operational Research Review*, 3, 235-248.
- Rehman, W.U., Rehman, C.A., Rehuman, H.U., & Zaliad, A. (2011). Intellectual capital performance and its implication on corporate performance: An empirical evidence from modaraba sector of Pakistan. *Australian Journal of Business and Management Research*, 1(5), 8-16.
- Rothaermel, F.T., & Hess, A.M. (2007). Building dynamic capabilities: innovation driven by individual-, firm-, and network-level effects. *Organization Science*, 18(6), 898-921.
- Safa, M. (2018). Cost efficiency and liquidity risk in banking: New evidence from OIC countries. *International Journal of Business & Management Science*, 8(2), 255-276.
- Safdar, H.T., Hazoor, M.S., Toheed, A., & Ammara, I. (2013). Impact of firms characteristics on stock value: A case of Non financial listed companies in Pakistan. *Asian Economic and Financial Review*, 3(1), 51-61.
- Sardo, F., Serrasqueiro, Z. & Alves, H. (2018). On the relationship between intellectual capital and financial performance: A panel data analysis on SME hotels. *International Journal of Hospitality Management*, 75, 67-74.
- Sewchurran, K., Dekker, J., & McDonogh, J. (2019). Experiences of embedding long-term thinking Inan environment of short-termism and sub-par business performance: investing in intangibles for sustainable growth. *Journal of Business Ethics*, 157(4), 997-1041.
- Shah, S.Z.A., & Hussain, Z. (2012). Impact of ownership structure on firm performance evidence from non-financial listed companies at Karachi Stock Exchange. *International Research Journal of Finance and Economics*, 84, 6-13.
- Shuaibu, K., Ali, I., & Amin, I.M. (2019). Company attributes and firm value of listed Consumer Goods Companies in Nigeria. *Journal of Research in Humanities and Social Science*, 7(5), 40-49.
- Sylwester, K. (2001). R&D and economic growth. *Knowledge. Technology & Policy*, 13, 71-84.
- Tahat, Y.A., Ahmed, A.H., & Alhadab, M.M. (2018). The impact of intangibles on firms' financial and market performance: UK evidence. *Review of Quantitative Finance Account*, 50, 1147-1168.

- Testa, F., Gusmerottia, N. M., Corsini, F., Passetti, E., & Iraldo, F. (2015). Factors affecting environmental management by small and micro firms: The importance of entrepreneurs' attitudes and environmental investment. *Corporate Social Responsibility and Environmental Management*, 23(6), 373–385.
- Timothy, P.E., Izilin, A.D. & Ndifreke, Y.O. (2020). Integrated reporting and sustainable performance of deposit money banks in Nigeria. *Journal of Innovations*, 4(3), 52-71.
- Tudose, M. B. (2012). Capital structure and firm performance. *Economy Trans disciplinary cognition*, 15(2), 76-82.
- Urhoghide, O.R., & Korolo, S.A. (2022). Working capital management and corporate performance of quoted Nigerian companies. *JETMASE*, 4(1), 48–54.
- Van Crieckingen, K., Bloch, C., & Eklund, C. (2022). Measuring intangible assets: A Review of the State of the Art. *Journal of Economy and Survey*, 1-12.
- Wibawa, T., Widjanarko, H., Utomo, H.S, Suratna & Wahyurini (2020). Technopreneurship based product innovation: A case study on small entrepreneur. Proceeding of LPPM UPN “Veteran” Yogyakarta Conference Series 2020. *Engineering and Science Series*, 1(1), 439–444).
- Wyatt, A., & M.A. Abenethy, (2003). Framework for measurement and reporting on intangible assets. *Intellectual Property Research Institute of Australian*. Available from www.ipria.org.
- Zeghal, D., & Maaloul, A (2011). The accounting treatment of intangibles: A critical review of literature. *Accounting Forum*, 34(4), 262-274.
- Zhu, Z. & Huang, F. (2012). The effect of R&D investment on firms' financial performance: evidence from the Chinese listed IT firms. *Modern Economy*, 3, 915-919.

Appendix 1

Data of Selected Non-Financial Companies in Nigeria Used for the Study

F_ID	COMPANIES	YEAR	SPF	RDR	ITPR	PTR	FIR	FL	FS	OWS
1	11 /Mobil Oil Plc	2013	8.5463	0.0000	0	0.0000	0.0033	76.5824	7.6099	60
1	11 /Mobil Oil Plc	2014	12.9865	0.0000	0	0.0000	0.0025	72.4753	7.6922	60
1	11 /Mobil Oil Plc	2015	9.0119	0.0000	0	0.0000	0.0019	71.5872	7.7330	60
1	11 /Mobil Oil Plc	2016	13.2157	0.0000	0	0.0000	0.4761	65.2236	7.7903	60
1	11 /Mobil Oil Plc	2017	10.0721	0.0000	0	0.0000	0.3476	63.3500	7.8730	74
1	11 /Mobil Oil Plc	2018	13.2024	0.0000	0	0.0000	0.3308	52.2044	7.8492	75
1	11 /Mobil Oil Plc	2019	9.7410	0.0000	0	0.0000	0.1909	56.4891	7.9600	78
1	11 /Mobil Oil Plc	2020	3.1639	0.0000	0	0.0000	0.1958	57.3903	7.9687	78
1	11 /Mobil Oil Plc	2021	4.9348	0.0000	0	0.0000	0.0147	65.3737	8.0907	78
1	12 /Mobil Oil Plc	2022	12.8765	0.0000	0	0.0000	0.0911	59.1974	8.1517	78
2	Arbico	2013	6.7012	0.0000	0	0.0000	0.0214	98.6221	6.1705	80
2	Arbico	2014	-5.8337	0.0000	0	0.0000	0.0004	104.4431	6.6484	80
2	Arbico	2015	5.9846	0.0000	0	0.0000	0.0004	98.3852	6.6563	80
2	Arbico	2016	-0.1959	0.0000	0	0.0000	0.0005	98.3326	6.5941	80
2	Arbico	2017	1.1521	0.0000	0	0.0000	0.0000	97.6242	6.7285	80
2	Arbico	2018	-15.6728	0.0000	0	0.0000	0.0000	120.7794	6.8374	80
2	Arbico	2019	6.7863	0.0000	0	0.0000	0.0000	111.5929	6.8907	80
2	Arbico	2020	5.0209	0.0000	0	0.0000	0.0000	101.8951	6.9160	80
2	Arbico	2021	-8.9520	0.0000	0	0.0000	0.0000	97.6892	7.0495	80
2	Arbico	2022	5.5364	0.0000	0	0.0000	0.0000	98.5085	7.2319	80
3	Academy	2013	1.5516	0.0000	0	0.0000	0.0000	78.7828	6.5500	34
3	Academy	2014	2.3807	0.0000	0	0.0000	0.0000	78.8757	6.5789	34
3	Academy	2015	-0.6836	0.0000	0	0.0000	0.0000	80.8682	6.5721	34
3	Academy	2016	-4.3128	0.0000	0	0.0000	0.0000	83.4847	6.5651	34
3	Academy	2017	-17.2313	0.0000	0	0.0000	0.0000	92.4337	6.4736	34
3	Academy	2018	2.3288	0.0000	1	0.0000	0.0000	88.7077	6.4363	34
3	Academy	2019	1.3054	0.0000	1	0.0000	0.0000	88.3578	6.4245	34
3	Academy	2020	-1.8315	0.0000	0	0.0000	0.0000	91.6267	6.4179	34
3	Academy	2021	-9.0156	0.0089	0	0.0000	0.0000	99.5205	6.3577	34
3	Academy	2022	7.0819	0.0132	0	0.0000	0.0000	92.4505	6.3907	34
4	Afromedia	2013	-20.2708	0.0041	1	0.0000	0.0074	102.2388	6.6232	55
4	Afromedia	2014	-39.6149	0.0263	1	0.0000	0.0065	141.7516	6.5574	55
4	Afromedia	2015	119.6330	0.0478	1	0.0000	0.0103	286.1373	6.3617	55
4	Afromedia	2016	-82.7570	0.0496	1	0.0000	0.0103	380.7665	6.3332	56
4	Afromedia	2017	34.2530	0.0339	1	0.0000	0.0124	395.4504	6.2639	56
4	Afromedia	2018	17.7069	0.0213	1	0.0000	0.0048	292.7292	6.3329	56

4	Afromedia	2019	27.8048	0.0119	1	0.0000	0.0096	285.8485	6.3243	59
4	Afromedia	2020	26.0554	0.0007	1	0.0000	0.0097	260.7834	6.3204	59
4	Afromedia	2021	8.2714	0.0873	1	0.0000	0.0119	284.5626	6.2415	59
4	Afromedia	2022	0.0000	0.0000	1	0.0000	0.0059	289.6614	6.2402	59
5	Aluminium Extrusion Indus	2013	8.0387	0.0000	0	0.0000	0.0000	43.1897	6.2266	79
5	Aluminium Extrusion Indus	2014	9.7013	0.0000	0	0.0000	0.0000	36.6346	6.2438	85
5	Aluminium Extrusion Indus	2015	4.5076	0.0000	0	0.0000	0.0000	38.3217	6.2649	82
5	Aluminium Extrusion Indus	2016	2.3027	0.0000	0	0.0000	0.0000	18.5266	6.3502	82
5	Aluminium Extrusion Indus	2017	3.6932	0.0000	0	0.0000	0.0000	29.3320	6.3537	82
5	Aluminium Extrusion Indus	2018	3.4766	0.0000	1	0.0000	0.0000	27.6069	6.3979	82
5	Aluminium Extrusion Indus	2019	2.5826	0.0000	1	0.0000	0.0000	25.0918	6.3938	82
5	Aluminium Extrusion Indus	2020	1.7720	0.0000	1	0.0000	0.0000	21.5967	6.4094	82
5	Aluminium Extrusion Indus	2021	2.3703	0.0000	0	0.0000	0.0000	15.0699	6.4509	82
5	Aluminium Extrusion Indus	2022	1.5817	0.0000	1	0.0000	0.0000	20.2421	6.4869	82
6	ArdovaPlc (Forte Oil)	2013	4.7808	0.0000	1	0.0013	0.0193	59.5433	8.0199	62
6	ArdovaPlc (Forte Oil)	2014	3.2007	0.0000	1	0.0009	0.0139	68.1591	8.1438	78
6	ArdovaPlc (Forte Oil)	2015	4.7587	0.0000	1	0.0007	0.0150	89.2553	8.0855	77
6	ArdovaPlc (Forte Oil)	2016	2.0535	0.0000	1	0.0012	0.0128	69.2138	8.1485	77
6	ArdovaPlc (Forte Oil)	2017	8.3039	0.5165	1	0.0013	0.0106	62.4558	8.1680	78
6	ArdovaPlc (Forte Oil)	2018	0.2554	0.8717	1	0.0011	0.0108	55.0872	8.1509	78
6	ArdovaPlc (Forte Oil)	2019	8.3267	0.0000	1	0.0008	0.0320	65.6238	7.6723	74
6	ArdovaPlc (Forte Oil)	2020	2.8652	0.0000	1	0.0013	0.0228	72.2093	7.8119	74
6	ArdovaPlc (Forte Oil)	2021	-3.0331	0.0000	1	0.0009	0.0117	86.5196	8.1034	74
6	ArdovaPlc (Forte Oil)	2022	-5.6587	0.0000	1	0.0016	0.0121	93.1009	8.1285	74
7	Associated Bus Company	2013	5.4166	0.0000	0	0.0000	0.0003	59.5312	6.7507	54
7	Associated Bus Company	2014	-5.7991	0.0000	0	0.0000	0.0003	71.0734	6.8091	54
7	Associated Bus Company	2015	2.1956	0.0000	0	0.0000	0.0003	67.9032	6.7766	54
7	Associated Bus Company	2016	-13.8660	0.0000	0	0.0000	0.0004	67.1303	6.6361	54
7	Associated Bus Company	2017	11.4807	0.0000	0	0.0000	0.0004	56.5702	6.6504	54
7	Associated Bus Company	2018	-2.4840	0.0000	0	0.0000	0.0004	69.7417	6.6596	54
7	Associated Bus Company	2019	3.8578	0.0027	0	0.0049	0.0004	70.0494	6.7108	54
7	Associated Bus Company	2020	-8.1512	0.0013	0	0.0039	0.0003	80.2235	6.7690	54
7	Associated Bus Company	2021	-1.3084	0.0005	0	0.0086	0.0003	80.5062	6.7470	54
7	Associated Bus Company	2022	-0.8228	0.0005	0	0.0053	0.0003	83.7044	6.7996	54
8	Austin Laz& Co	2013	0.3179	0.0013	1	0.0000	0.0000	13.7823	6.3764	29
8	Austin Laz& Co	2014	-7.7864	0.0000	1	0.0000	0.0000	12.3161	6.3099	29
8	Austin Laz& Co	2015	-3.1634	0.0000	1	0.0000	0.0000	7.3447	6.2714	29
8	Austin Laz& Co	2016	-8.2990	0.0000	1	0.0000	0.0000	10.0019	6.2457	29
8	Austin Laz& Co	2017	0.0185	0.0000	1	0.0000	0.0000	6.7162	6.2302	29
8	Austin Laz& Co	2018	-0.9785	0.0000	1	0.0000	0.0000	5.4230	6.2198	29
8	Austin Laz& Co	2019	-5.5004	0.0000	1	0.0000	0.0000	3.2253	6.1858	29
8	Austin Laz& Co	2020	-10.2132	0.0000	1	0.0000	0.0000	3.5548	6.1435	29
8	Austin Laz& Co	2021	-3.3083	0.0000	1	0.0000	0.0000	3.6724	6.1294	29

8	Austin Laz& Co	2022	-3.4215	0.0000	0	0.0000	0.0000	3.7980	6.1148	29
9	Industrial and Medical Gases									
9	(B.O.C Gases Nig)	2013	9.1005	0.0000	1	0.0000	0.0000	36.8462	6.4605	72
9	Industrial and Medical Gases									
9	(B.O.C Gases Nig)	2014	6.5993	0.0000	1	0.0000	0.0000	41.0071	6.5338	72
9	Industrial and Medical Gases									
9	(B.O.C Gases Nig)	2015	3.7701	0.0000	1	0.0000	0.0000	34.3191	6.5071	72
9	Industrial and Medical Gases									
9	(B.O.C Gases Nig)	2016	2.1011	0.0001	1	0.0000	0.0000	40.1617	6.5600	72
9	Industrial and Medical Gases									
9	(B.O.C Gases Nig)	2017	5.5065	0.0000	1	0.0000	0.0000	43.6941	6.6282	72
9	Industrial and Medical Gases									
9	(B.O.C Gases Nig)	2018	7.9622	0.0005	1	0.0000	0.0000	40.7173	6.3262	72
9	Industrial and Medical Gases									
9	(B.O.C Gases Nig)	2019	4.2896	0.0002	1	0.0000	0.0000	46.1328	6.7020	72
9	Industrial and Medical Gases									
9	(B.O.C Gases Nig)	2020	5.3915	0.0001	1	0.0000	0.0000	46.8486	6.7338	72
9	Industrial and Medical Gases									
9	(B.O.C Gases Nig)	2021	6.6479	0.0001	1	0.0000	0.0000	45.4419	6.7479	72
9	Industrial and Medical Gases									
9	(B.O.C Gases Nig)	2022	6.6089	0.0001	1	0.0000	0.0000	48.3863	6.8315	72
10	Berger Paints Nig	2013	7.1069	0.0000	0	0.0000	0.0000	31.1295	6.5596	11
10	Berger Paints Nig	2014	4.0880	0.0031	0	0.0024	0.1467	32.4249	6.5611	11
10	Berger Paints Nig	2015	8.4786	0.0024	0	0.0034	0.1307	33.5879	6.5906	23
10	Berger Paints Nig	2016	5.4606	0.0021	0	0.0011	0.6196	36.5185	6.6130	23
10	Berger Paints Nig	2017	5.7122	0.0034	0	0.0051	0.1082	38.7408	6.6346	23
10	Berger Paints Nig	2018	7.0670	0.0031	0	0.0051	0.0982	37.9743	6.6566	23
10	Berger Paints Nig	2019	8.8570	0.0025	0	0.0067	0.0837	39.3382	6.7047	23
10	Berger Paints Nig	2020	2.9371	0.0013	0	0.0056	0.0811	36.7045	6.6965	23
10	Berger Paints Nig	2021	2.6540	0.0008	0	0.0049	0.0748	36.7851	6.7085	23
10	Berger Paints Nig	2022	3.7744	0.0002	0	0.0046	0.0655	39.8855	6.7426	23
11	Beta Glass Company	2013	5.4013	0.0000	1	0.0000	0.0000	49.3745	7.4340	74
11	Beta Glass Company	2014	8.8762	0.0000	1	0.0000	0.0000	40.7578	7.4302	74
11	Beta Glass Company	2015	7.3281	0.0000	1	0.0000	0.0000	35.3057	7.4341	74
11	Beta Glass Company	2016	11.4494	0.0000	1	0.0000	0.0000	35.2854	7.5820	76
11	Beta Glass Company	2017	10.7693	0.0000	1	0.0000	0.0000	34.1951	7.5822	76
11	Beta Glass Company	2018	10.9654	0.0000	1	0.0000	0.0000	35.7035	7.6635	76
11	Beta Glass Company	2019	10.7146	0.0000	1	0.0000	0.0000	33.6449	7.7167	76
11	Beta Glass Company	2020	6.4241	0.0000	1	0.0000	0.0000	31.0837	7.7321	76
11	Beta Glass Company	2021	8.6475	0.0000	1	0.0000	0.0000	33.2502	7.8001	76
11	Beta Glass Company	2022	6.1695	0.0000	1	0.0000	0.0000	39.0827	7.8805	76
12	Cadbury Nig	2013	13.9515	0.0000	0	0.0484	0.0000	44.4210	7.6352	75
12	Cadbury Nig	2014	5.2487	0.0000	0	0.0338	0.0000	59.9515	7.4596	75
12	Cadbury Nig	2015	4.0585	0.0050	0	0.0000	0.0000	56.7678	7.4536	75
12	Cadbury Nig	2016	-1.0439	0.0017	0	0.0000	0.0000	61.0582	7.4535	75
12	Cadbury Nig	2017	1.0555	0.0000	0	0.0174	0.0000	58.6858	7.4537	75
12	Cadbury Nig	2018	2.9900	0.0000	0	0.0184	0.0000	53.9519	7.4398	75
12	Cadbury Nig	2019	3.7180	0.0000	0	0.0403	0.0000	52.8982	7.4594	75
12	Cadbury Nig	2020	2.8058	0.0000	0	0.0198	0.0000	59.2013	7.5213	75
12	Cadbury Nig	2021	1.0294	0.0000	0	0.0205	0.0000	68.7872	7.6404	75

12	Cadbury Nig	2022	0.9765	0.0000	0	0.0211	0.0000	77.7226	7.7761	75
13	Capital Hotel	2013	2.6172	0.0000	0	0.0255	0.0000	49.5077	6.8057	93
13	Capital Hotel	2014	3.4825	0.0000	0	0.0256	0.0000	50.6201	5.8491	88
13	Capital Hotel	2015	6.5078	0.0000	0	0.0250	0.0000	47.5574	6.8788	88
13	Capital Hotel	2016	14.0932	0.0000	0	0.0250	0.0000	42.0406	6.9563	88
13	Capital Hotel	2017	9.5101	0.0000	0	0.0250	0.0000	37.2308	6.9930	88
13	Capital Hotel	2018	3.7705	0.0000	0	0.0250	0.0000	36.3194	7.0033	88
13	Capital Hotel	2019	4.0580	0.0000	0	0.0259	0.0000	31.9109	6.9957	88
13	Capital Hotel	2020	-1.3357	0.0000	0	0.0000	0.0000	31.9109	7.2579	88
13	Capital Hotel	2021	-1.7775	0.0000	0	0.0000	0.0000	20.8866	7.2560	88
13	Capital Hotel	2022	-0.5420	0.0000	0	0.0000	0.0000	15.3121	7.4699	88
14	Champion Breweries	2013	-12.8919	0.0000	0	0.0000	0.0000	150.4326	6.9608	57
14	Champion Breweries	2014	-7.8659	0.0011	0	0.0000	0.0000	38.8011	6.9819	57
14	Champion Breweries	2015	0.7468	0.0021	0	0.0000	0.0000	31.0531	7.0141	82
14	Champion Breweries	2016	5.3245	0.0000	1	0.0000	0.0000	22.9929	6.9983	82
14	Champion Breweries	2017	5.1300	0.0000	1	0.0000	0.0000	19.3620	7.0038	83
14	Champion Breweries	2018	-2.5156	0.0000	1	0.0000	0.0000	24.3299	7.0207	83
14	Champion Breweries	2019	1.5345	0.0000	1	0.0000	0.0000	26.8599	7.0407	83
14	Champion Breweries	2020	1.3968	0.0000	1	0.0068	0.0000	29.2520	7.0557	95
14	Champion Breweries	2021	7.2977	0.0000	1	0.0057	0.0000	31.6396	7.1299	95
14	Champion Breweries	2022	10.2628	0.0000	1	0.0000	0.0000	28.0466	7.1890	96
15	Chemical & Allied Product	2013	46.6817	0.0000	1	0.0000	0.0000	58.2160	6.4822	50
15	Chemical & Allied Product	2014	53.9594	0.0000	1	0.0000	0.0000	61.6807	6.4887	50
15	Chemical & Allied Product	2015	51.0239	0.0000	1	0.0000	0.0000	55.4122	6.5327	50
15	Chemical & Allied Product	2016	32.6151	0.0000	1	0.0000	0.0000	53.5498	6.6916	50
15	Chemical & Allied Product	2017	29.8910	0.0000	1	0.0000	0.0000	55.2807	6.7002	50
15	Chemical & Allied Product	2018	32.1544	0.0000	1	0.0000	0.0000	55.4931	6.8001	50
15	Chemical & Allied Product	2019	25.7669	0.0000	1	0.0000	0.0000	62.7023	6.8300	50
15	Chemical & Allied Product	2020	14.3457	0.0000	1	0.0000	0.0000	56.0782	6.9307	50
15	Chemical & Allied Product	2021	9.2654	0.0000	1	0.0000	0.0000	63.6034	7.0834	50
15	Chemical & Allied Product	2022	17.7247	0.0000	1	0.0000	0.0000	50.7720	7.1273	50
16	Chellarams	2013	0.5865	0.0000	0	0.0000	0.0618	70.5968	7.1880	83
16	Chellarams	2014	-0.4443	0.0000	1	0.0000	0.0586	74.1509	7.2250	82
16	Chellarams	2015	-17.1751	0.0000	1	0.0000	0.0532	93.5973	7.2649	82
16	Chellarams	2016	1.1338	0.0000	0	0.0000	0.0000	89.6661	7.1414	82
16	Chellarams	2017	2.5732	0.0000	1	0.0000	0.0823	86.7980	7.1260	82
16	Chellarams	2018	1.5223	0.0000	1	0.0000	0.0834	74.1706	7.1201	82
16	Chellarams	2019	-21.8134	0.0000	1	0.0000	0.0909	94.8866	7.1020	82
16	Chellarams	2020	-41.1432	0.0000	1	0.0000	0.0942	134.3729	6.9801	82
16	Chellarams	2021	-58.6878	0.0000	1	0.0000	0.0000	206.8211	6.8179	82
16	Chellarams	2022	4.1816	0.0000	1	0.0024	0.0000	134.2877	7.0463	72
17	Ci Leasing	2013	0.7366	0.0000	0	0.0000	0.0000	76.6686	7.2512	27
17	Ci Leasing	2014	0.7631	0.0000	0	0.0010	0.0000	75.1237	7.3680	27
17	Ci Leasing	2015	0.5081	0.0000	0	0.0031	0.0000	80.5691	7.4665	9

17	Ci Leasing	2016	2.3999	0.0000	0	0.0000	0.0005	78.9089	7.5840	9
17	Ci Leasing	2017	2.4439	0.0000	0	0.0000	0.0006	79.7678	7.6530	22
17	Ci Leasing	2018	2.2766	0.0000	0	0.0000	0.0005	77.5194	7.7211	28
17	Ci Leasing	2019	1.6705	0.0000	1	0.0000	0.0001	79.0557	7.7500	28
17	Ci Leasing	2020	0.5742	0.0000	1	0.0000	0.0001	75.9968	7.7478	28
17	Ci Leasing	2021	-0.1775	0.0000	0	0.0000	0.0636	76.3057	7.7644	28
17	Ci Leasing	2022	0.3658	0.0000	0	0.0000	0.0495	75.8043	7.7596	28
18	Conoil	2013	3.7271	0.0000	0	0.0000	0.0073	78.1025	7.8452	74
18	Conoil	2014	0.9636	0.0003	1	0.0000	0.0052	81.4119	7.9375	74
18	Conoil	2015	3.3256	0.0002	1	0.0000	0.0043	74.4771	7.9823	74
18	Conoil	2016	4.0638	0.0033	0	0.0000	0.0050	73.5575	7.8441	74
18	Conoil	2017	2.5113	0.0004	0	0.0000	0.0047	71.5330	7.7983	74
18	Conoil	2018	2.9493	0.0006	0	0.0000	0.0041	69.9476	7.7846	74
18	Conoil	2019	4.4546	0.0005	0	0.0000	0.0031	69.3831	7.8034	74
18	Conoil	2020	4.3907	0.0006	0	0.0000	0.0030	60.0529	7.6890	74
18	Conoil	2021	5.7107	0.0005	0	0.0000	0.0018	59.6354	7.7322	74
18	Conoil	2022	7.5221	0.0004	0	0.0000	0.0008	62.0505	7.8189	74
19	Courtville Investment	2013	7.0550	0.0000	0	0.0000	0.0000	32.0318	6.0746	73
19	Courtville Investment	2014	6.7269	0.0000	0	0.0000	0.0000	31.8009	6.0228	73
19	Courtville Investment	2015	1.4926	0.0000	0	0.0000	0.0000	29.0016	6.6431	64
19	Courtville Investment	2016	0.9284	0.0000	0	0.0000	0.0000	21.8533	6.5982	64
19	Courtville Investment	2017	0.8994	0.0047	0	0.0000	0.0000	22.0135	6.6110	64
19	Courtville Investment	2018	1.8717	0.0018	0	0.0000	0.0000	22.2897	6.6223	64
19	Courtville Investment	2019	3.9450	0.0000	0	0.0000	0.1754	15.3455	6.6073	64
19	Courtville Investment	2020	3.5629	0.0000	0	0.0000	0.1647	16.9296	6.6345	71
19	Courtville Investment	2021	4.2955	0.0000	0	0.0000	0.0000	21.9286	6.6730	71
19	Courtville Investment	2022	1.1686	0.0000	0	0.0000	0.0000	22.2207	6.6640	71
20	Cutix	2013	14.1007	0.0000	0	0.0000	0.0000	44.3548	6.0309	39
20	Cutix	2014	29.6006	0.0000	0	0.0000	0.0000	59.8948	6.2417	39
20	Cutix	2015	20.0628	0.0000	0	0.0000	0.0000	62.2254	6.2942	38
20	Cutix	2016	21.8970	0.0000	0	0.0000	0.0000	53.9986	6.2769	38
20	Cutix	2017	25.3950	0.0000	0	0.0000	0.0000	56.4781	6.3673	38
20	Cutix	2018	33.8873	0.0000	0	0.0000	0.0000	54.1900	6.4527	40
20	Cutix	2019	29.5749	0.0026	0	0.0000	0.0000	43.6246	6.4566	40
20	Cutix	2020	10.8339	0.0014	1	0.0000	0.0000	50.2303	6.5597	39
20	Cutix	2021	12.3956	0.0027	1	0.0014	0.0000	55.0145	6.6805	39
20	Cutix	2022	15.3693	0.0031	1	0.0012	0.0000	47.1383	6.7089	40
21	Dangote Cement	2013	23.8612	0.0000	0	0.0012	0.0000	34.7615	8.9259	93
21	Dangote Cement	2014	26.9480	0.0000	0	0.0012	0.0000	39.8930	8.9933	93
21	Dangote Cement	2015	28.1243	0.0000	0	0.0023	0.0014	41.9664	9.0457	93
21	Dangote Cement	2016	23.4057	0.0000	0	0.0022	0.0010	47.8146	9.1844	92
21	Dangote Cement	2017	26.1401	0.0000	0	0.0014	0.0023	53.0963	9.2216	92
21	Dangote Cement	2018	39.5621	0.0000	0	0.0020	0.0025	41.7743	9.2290	92
21	Dangote Cement	2019	22.3313	0.0000	0	0.0020	0.0028	48.4345	9.2412	92

21	Dangote Cement	2020	13.6502	0.0000	0	0.0012	0.0028	55.9460	9.3059	92
21	Dangote Cement	2021	15.2356	0.0000	0	0.0012	0.0027	58.8770	9.3788	92
21	Dangote Cement	2022	14.6163	0.0000	0	0.0015	0.0010	58.7504	9.4176	92
22	Dangote Sugar Refinery	2013	13.0423	0.0000	0	0.0000	0.0000	43.5089	7.9199	73
22	Dangote Sugar Refinery	2014	22.6317	0.0003	1	0.0000	0.0000	44.5981	7.9676	73
22	Dangote Sugar Refinery	2015	19.8372	0.0001	1	0.0000	0.0000	43.3385	8.0113	73
22	Dangote Sugar Refinery	2016	21.7619	0.0001	1	0.0000	0.0000	62.9154	8.2360	68
22	Dangote Sugar Refinery	2017	42.9000	0.0002	1	0.0000	0.0000	52.4629	8.2902	68
22	Dangote Sugar Refinery	2018	22.2040	0.0002	1	0.0000	0.0000	43.4804	8.2433	68
22	Dangote Sugar Refinery	2019	20.6788	0.0002	0	0.0000	0.0000	44.1749	8.2871	68
22	Dangote Sugar Refinery	2020	10.7093	0.0001	0	0.0000	0.0000	55.1449	8.4441	67
22	Dangote Sugar Refinery	2021	6.1341	0.0001	0	0.0000	0.0000	64.2200	8.5557	67
22	Dangote Sugar Refinery	2022	11.1166	0.0001	0	0.0000	0.0000	65.2286	8.6923	67
23	Eternaoil	2013	3.8525	0.0000	0	0.0002	0.0000	61.0439	7.2613	52
23	Eternaoil	2014	7.4782	0.0000	1	0.0001	0.0089	77.8758	7.2687	52
23	Eternaoil	2015	4.4742	0.0000	1	0.0003	0.0086	66.0978	7.4558	43
23	Eternaoil	2016	4.6625	0.0000	1	0.0005	0.0085	65.8309	7.5009	44
23	Eternaoil	2017	4.1667	0.0000	1	0.0001	0.0119	74.1558	7.6817	44
23	Eternaoil	2018	1.8989	0.0030	1	0.0003	0.0104	75.7639	7.7255	44
23	Eternaoil	2019	-0.5057	0.0056	1	0.0004	0.0196	56.5145	7.4554	44
23	Eternaoil	2020	2.6310	0.0005	1	0.0011	0.0159	62.6787	7.5535	62
23	Eternaoil	2021	-2.3873	0.0031	1	0.0023	0.0136	73.7028	7.6635	47
23	Eternaoil	2022	1.8749	0.0021	1	0.0017	0.0107	75.6801	7.7323	47
24	EtranzactInterntional	2013	5.3586	0.0000	0	0.0000	0.2442	6.5558	6.5558	94
24	EtranzactInterntional	2014	8.7451	0.0000	0	0.0000	0.1884	6.6684	6.6684	94
24	EtranzactInterntional	2015	12.0795	0.0000	0	0.0000	0.1505	6.7660	6.7660	50
24	EtranzactInterntional	2016	6.5037	0.0000	0	0.0000	0.0000	6.8396	6.8396	50
24	EtranzactInterntional	2017	3.3382	0.0000	0	0.0000	0.1454	6.7954	6.7954	50
24	EtranzactInterntional	2018	-52.5597	0.0000	0	0.0000	0.1848	6.7758	6.7758	50
24	EtranzactInterntional	2019	2.1361	0.0000	0	0.0000	0.1602	6.8304	6.8378	82
24	EtranzactInterntional	2020	-27.8787	0.0000	0	0.0000	0.1120	6.8310	6.8310	72
24	EtranzactInterntional	2021	4.1768	0.0000	0	0.0000	0.0544	77.8793	7.0379	72
24	EtranzactInterntional	2022	6.6431	0.0000	0	0.0000	0.0336	47.5560	7.2477	84
25	Fidson Healthcare	2013	1.2659	0.0000	0	0.0000	0.0035	57.1568	7.0879	18
25	Fidson Healthcare	2014	4.0059	0.0016	0	0.0000	0.0026	63.4472	7.1979	18
25	Fidson Healthcare	2015	4.4653	0.0001	0	0.0000	0.0024	62.0654	7.2219	18
25	Fidson Healthcare	2016	1.9005	0.0001	0	0.0000	0.0024	60.4410	7.2219	27
25	Fidson Healthcare	2017	6.0802	0.0014	0	0.0000	0.0023	56.3074	7.2417	27
25	Fidson Healthcare	2018	-0.4757	0.0013	0	0.0031	0.0019	65.0751	7.3114	24
25	Fidson Healthcare	2019	1.9995	0.0004	0	0.0028	0.0018	52.7591	7.3089	24
25	Fidson Healthcare	2020	4.4234	0.0007	0	0.0016	0.0014	61.3125	7.4352	25
25	Fidson Healthcare	2021	11.2366	0.0012	0	0.0028	0.0011	58.4605	7.5199	25
25	Fidson Healthcare	2022	9.7418	0.0019	0	0.0013	0.0001	60.6357	7.6333	25
26	Flour Mills Of Nigeria	2013	2.7571	0.0000	0	0.0000	0.0073	70.0644	8.4475	52

26	Flour Mills Of Nigeria	2014	1.8058	0.0000	0	0.0000	0.0262	71.8891	8.4731	66
26	Flour Mills Of Nigeria	2015	2.4684	0.0007	0	0.0000	0.0001	75.3966	8.5356	62
26	Flour Mills Of Nigeria	2016	4.1756	0.0005	1	0.0000	0.0059	72.2697	8.5383	62
26	Flour Mills Of Nigeria	2017	1.8310	0.0000	1	0.0000	0.0040	78.7518	8.6836	62
26	Flour Mills Of Nigeria	2018	3.3344	0.0000	1	0.0000	0.0047	63.1156	8.6110	62
26	Flour Mills Of Nigeria	2019	0.9597	0.0000	1	0.0000	0.0043	63.7801	8.6200	62
26	Flour Mills Of Nigeria	2020	2.6307	0.0000	1	0.0000	0.0038	96.3852	8.6359	62
26	Flour Mills Of Nigeria	2021	4.7210	0.0000	1	0.0000	0.0029	67.9450	8.7362	62
26	Flour Mills Of Nigeria	2022	0.6131	0.0000	1	0.0000	0.0015	21.0923	8.9684	62
27	GlaxosmithklineNig	2013	11.1361	0.0000	1	0.0000	0.0000	52.9035	7.4185	57
27	GlaxosmithklineNig	2014	6.6047	0.0000	1	0.0000	0.0000	53.7445	7.4470	57
27	GlaxosmithklineNig	2015	3.0803	0.0000	1	0.0000	0.0000	57.9147	7.4960	56
27	GlaxosmithklineNig	2016	8.4364	0.0000	1	0.0000	0.0000	39.5354	7.4501	56
27	GlaxosmithklineNig	2017	1.8359	0.0000	1	0.0000	0.0000	35.1879	7.4232	63
27	GlaxosmithklineNig	2018	3.9339	0.0000	1	0.0000	0.0000	43.7404	7.1959	63
27	GlaxosmithklineNig	2019	4.9082	0.0000	1	0.0000	0.0085	51.0147	7.2715	52
27	GlaxosmithklineNig	2020	2.6215	0.0000	1	0.0000	0.0065	61.5811	7.3754	52
27	GlaxosmithklineNig	2021	3.8900	0.0000	1	0.0000	0.0223	64.5772	7.4192	52
27	GlaxosmithklineNig	2022	2.6242	0.0000	1	0.0000	0.0180	67.5615	7.4681	55
28	Ftn Cocoa Processors	2013	-6.2829	0.0002	1	0.0000	0.0000	62.7837	6.6583	32
28	Ftn Cocoa Processors	2014	-13.0547	0.0002	1	0.0000	0.0000	72.8910	6.6456	32
28	Ftn Cocoa Processors	2015	-4.2460	0.0001	1	0.0000	0.0000	77.6683	6.6756	32
28	Ftn Cocoa Processors	2016	-16.0562	0.0001	1	0.0000	0.0000	77.3729	6.7224	32
28	Ftn Cocoa Processors	2017	-15.8331	0.0000	1	0.0000	0.0000	91.9173	6.6826	32
28	Ftn Cocoa Processors	2018	-11.9041	0.0000	1	0.0000	0.0000	99.2429	6.6828	32
28	Ftn Cocoa Processors	2019	-17.2336	0.0001	1	0.0000	0.0000	116.4492	6.6674	32
28	Ftn Cocoa Processors	2020	-18.2053	0.0001	0	0.0000	0.0000	129.9719	6.6658	32
28	Ftn Cocoa Processors	2021	-19.8702	0.0000	1	0.0000	0.0000	110.1002	6.8717	32
28	Ftn Cocoa Processors	2022	-5.9256	0.0000	1	0.0000	0.0000	121.3632	6.8619	32
29	Guinness Nig	2013	9.7998	0.0000	0	0.0216	0.0000	61.9702	8.0830	54
29	Guinness Nig	2014	7.2346	0.0000	1	0.0207	0.0000	65.9470	8.1217	54
29	Guinness Nig	2015	6.3764	0.0000	1	0.0212	0.0000	60.4559	8.0872	54
29	Guinness Nig	2016	-1.4715	0.0000	1	0.0201	0.0000	69.5891	8.1367	54
29	Guinness Nig	2017	1.3173	0.0000	1	0.0109	0.0000	70.5947	8.1645	54
29	Guinness Nig	2018	4.3833	0.0000	1	0.0035	0.0000	4.2849	8.1854	58
29	Guinness Nig	2019	3.4104	0.0000	1	0.0278	0.0000	44.6116	8.2063	58
29	Guinness Nig	2020	-8.7265	0.0000	1	0.0054	0.0000	49.3303	8.1588	65
29	Guinness Nig	2021	0.7410	0.0000	1	0.0057	0.0000	56.1489	8.2289	64
29	Guinness Nig	2022	7.2574	0.0000	1	0.0061	0.0000	58.2772	8.3338	64
30	Honywell Flour Mill	2013	5.1292	0.0000	0	0.0000	0.0000	66.5333	7.7438	80
30	Honywell Flour Mill	2014	5.2507	0.0000	0	0.0000	0.0000	67.7188	7.8050	80
30	Honywell Flour Mill	2015	1.6488	0.0000	0	0.0000	0.0000	70.0989	7.8321	80
30	Honywell Flour Mill	2016	-3.9763	0.0000	0	0.0000	0.0000	78.4835	7.8811	80
30	Honywell Flour Mill	2017	3.8046	0.0000	0	0.0000	0.0000	53.7482	8.0537	80

30	Honywell Flour Mill	2018	3.5463	0.0000	0	0.0000	0.0000	54.8270	8.0963	80
30	Honywell Flour Mill	2019	0.0497	0.0000	0	0.0000	0.0000	58.7885	8.1382	80
30	Honywell Flour Mill	2020	0.4573	0.0000	0	0.0000	0.0000	59.7320	8.1531	80
30	Honywell Flour Mill	2021	0.7638	0.0000	0	0.0000	0.0000	60.6711	8.1685	80
30	Honywell Flour Mill	2022	-0.6564	0.0000	0	0.0000	0.0000	62.3473	8.1757	80
31	Ikeja Hotel	2013	5.6958	0.0000	0	0.0000	0.0000	67.0607	7.2422	39
31	Ikeja Hotel	2014	0.0149	0.0000	0	0.0000	0.0013	70.6548	7.2937	39
31	Ikeja Hotel	2015	2.6451	0.0000	1	0.0000	0.0013	69.6508	7.3263	39
31	Ikeja Hotel	2016	4.4842	0.0000	1	0.0000	0.0000	69.3378	7.3922	39
31	Ikeja Hotel	2017	1.6554	0.0000	1	0.0000	0.1295	49.2395	7.5533	57
31	Ikeja Hotel	2018	2.9229	0.0000	1	0.0000	0.1224	51.2128	7.5777	55
31	Ikeja Hotel	2019	2.1591	0.0000	1	0.0000	0.1197	49.9090	7.5874	55
31	Ikeja Hotel	2020	-16.1764	0.0000	1	0.0000	0.0000	49.9053	7.6186	55
31	Ikeja Hotel	2021	-0.4119	0.0000	1	0.0000	0.0000	52.6506	7.6420	55
31	Ikeja Hotel	2022	-13.1892	0.0003	1	0.0000	0.0000	73.9386	7.4751	55
32	Interlinked Technologies	2013	0.8250	0.0000	0	0.0000	0.0000	40.2942	5.6513	84
32	Interlinked Technologies	2014	1.2363	0.0000	0	0.0000	0.0000	42.8073	5.6794	84
32	Interlinked Technologies	2015	1.4417	0.0000	0	0.0000	0.0000	34.6780	5.6314	84
32	Interlinked Technologies	2016	0.2275	0.0000	1	0.0000	0.0000	41.0858	5.6651	84
32	Interlinked Technologies	2017	-1.8403	0.0000	1	0.0000	0.0000	47.4141	5.6995	84
32	Interlinked Technologies	2018	0.3697	0.0000	1	0.0000	0.0000	44.4275	5.6784	84
32	Interlinked Technologies	2019	-34.0567	0.0000	0	0.0000	0.0000	50.3001	5.5003	63
32	Interlinked Technologies	2020	-4.1504	0.0000	0	0.0000	0.0000	53.9325	5.4958	63
32	Interlinked Technologies	2021	2.2293	0.0001	1	0.0000	0.0000	72.0735	5.8137	63
32	Interlinked Technologies	2022	0.8431	0.0002	1	0.0000	0.0000	69.0139	5.7806	63
33	International Breweries	2013	10.8804	0.0052	1	0.0007	0.0000	59.2817	7.3624	19
33	International Breweries	2014	8.6395	0.0036	1	0.0006	0.0000	53.7560	7.3869	19
33	International Breweries	2015	6.4514	0.0030	1	0.0008	0.0000	59.6698	7.4796	19
33	International Breweries	2016	7.9229	0.0023	0	0.0009	0.0000	58.1944	7.5248	19
33	International Breweries	2017	2.3005	0.0023	0	0.0000	0.0000	69.1327	7.6391	10
33	International Breweries	2018	-1.2461	0.0007	0	0.0000	0.0000	88.6680	8.4918	10
33	International Breweries	2019	-7.6108	0.0006	0	0.0000	0.0000	97.9560	8.5625	6
33	International Breweries	2020	-3.3182	0.0002	0	0.0000	0.0000	59.2821	8.5713	6
33	International Breweries	2021	-3.7571	0.0003	0	0.0000	0.0000	71.2091	8.6721	87
33	International Breweries	2022	-4.4659	0.0002	0	0.0000	0.0000	75.7708	8.6851	87
34	Japaul Gold & Ventures Plc	2013	0.6183	0.0000	0	0.0151	0.0000	60.7044	7.5886	6
34	Japaul Gold & Ventures Plc	2014	-6.8202	0.0002	0	0.0300	0.0000	67.7788	7.5876	6
34	Japaul Gold & Ventures Plc	2015	-23.7150	0.0004	0	0.0287	0.0000	89.7063	7.5301	6
34	Japaul Gold & Ventures Plc	2016	-71.3574	0.0000	0	0.0265	0.0000	60.8716	7.4764	6
34	Japaul Gold & Ventures Plc	2017	-47.1715	0.0000	0	0.0634	0.0000	200.6167	7.4472	6
34	Japaul Gold & Ventures Plc	2018	-27.4296	0.0000	0	0.0317	0.0000	247.8466	7.3809	6
34	Japaul Gold & Ventures Plc	2019	176.2669	0.0000	0	0.0197	0.0000	73.9843	7.3687	6
34	Japaul Gold & Ventures Plc	2020	-7.5729	0.0000	0	0.0352	0.0000	81.8972	7.1933	6
34	Japaul Gold & Ventures Plc	2021	-23.7270	0.0000	0	0.0103	0.0000	102.1576	7.1169	6

34	Japaul Gold & Ventures Plc	2022	1.1820	0.0000	0	0.0047	0.0000	100.9580	7.1205	6
35	John Holt	2013	1.5388	0.0000	0	0.0000	0.1615	73.8031	6.9665	51
35	John Holt	2014	5.7356	0.0000	0	0.0000	0.5444	67.5951	7.0130	51
35	John Holt	2015	-2.2474	0.0000	0	0.0000	0.5340	71.7926	7.0543	51
35	John Holt	2016	0.8026	0.0000	1	0.0000	0.4484	72.8424	7.0822	51
35	John Holt	2017	-7.1059	0.0000	1	0.0000	0.4511	74.3777	7.0105	51
35	John Holt	2018	1.5967	0.0000	1	0.0000	0.4540	72.8372	7.0143	51
35	John Holt	2019	2.0508	0.0000	1	0.0000	0.4420	73.6500	7.0265	51
35	John Holt	2020	-3.2467	0.0000	1	0.0000	0.3113	76.5400	7.0213	51
35	John Holt	2021	-4.6486	0.0000	1	0.0000	0.3197	81.6160	7.0385	51
35	John Holt	2022	5.1246	0.0000	1	0.0000	0.3040	75.3528	7.0235	51
36	Julius Berger	2013	3.4556	0.0000	0	0.0000	0.0115	90.7444	7.8325	61
36	Julius Berger	2014	3.2182	0.0000	0	0.0000	0.0103	89.8081	8.4083	43
36	Julius Berger	2015	0.9956	0.0000	0	0.0000	0.0104	90.0884	8.3893	53
36	Julius Berger	2016	-1.4726	0.0000	0	0.0000	0.0094	90.2321	8.4136	53
36	Julius Berger	2017	0.9339	0.0000	0	0.0000	0.0085	89.0717	8.4400	53
36	Julius Berger	2018	2.1155	0.0000	0	0.0000	0.0078	87.7205	8.4600	53
36	Julius Berger	2019	2.7927	0.0000	0	0.0000	0.0057	87.1428	8.4965	53
36	Julius Berger	2020	0.3758	0.0000	0	0.0000	0.0070	86.3357	8.5171	53
36	Julius Berger	2021	1.7485	0.0000	0	0.0000	0.0050	88.8708	8.6787	53
36	Julius Berger	2022	1.5632	0.0000	0	0.0000	0.0032	88.7289	8.7044	53
37	Lafarge Cement WapcoNig	2013	17.5484	0.0000	0	0.0000	0.0000	42.2829	8.2070	80
37	Lafarge Cement WapcoNig	2014	11.3315	0.0000	0	0.0000	0.0001	44.2834	8.6190	80
37	Lafarge Cement WapcoNig	2015	5.9597	0.0000	0	0.0000	0.0001	61.1155	8.6561	73
37	Lafarge Cement WapcoNig	2016	3.3630	0.0007	0	0.0000	0.0002	50.4563	8.7002	73
37	Lafarge Cement WapcoNig	2017	-5.9892	0.0009	0	0.0000	0.0000	72.8268	8.7617	76
37	Lafarge Cement WapcoNig	2018	-1.6277	0.0001	0	0.0000	0.0000	75.1189	8.7330	76
37	Lafarge Cement WapcoNig	2019	3.1213	0.0002	0	0.0000	0.0000	30.6221	8.6965	84
37	Lafarge Cement WapcoNig	2020	6.0807	0.0004	0	0.0000	0.0007	29.0953	8.7052	84
37	Lafarge Cement WapcoNig	2021	9.6811	0.0006	0	0.0000	0.0000	28.1448	8.7217	84
37	Lafarge Cement WapcoNig	2022	8.9307	0.0006	0	0.0000	0.0000	30.7318	8.7787	84
38	Learn Africa (Longman)	2013	2.1612	0.0000	0	0.0000	0.0486	23.9831	6.6659	57
38	Learn Africa (Longman)	2014	1.4491	0.0000	0	0.0000	0.0562	13.8657	6.6075	57
38	Learn Africa (Longman)	2015	-17.9442	0.0000	0	0.0000	0.0661	23.4455	6.5546	26
38	Learn Africa (Longman)	2016	5.1115	0.0000	1	0.7127	0.0521	35.7277	6.6665	26
38	Learn Africa (Longman)	2017	6.0811	0.0000	1	0.5502	0.0677	27.7299	6.6423	26
38	Learn Africa (Longman)	2018	6.0811	0.0000	1	0.0000	0.0677	43.3617	6.6423	18
38	Learn Africa (Longman)	2019	2.9195	0.0000	1	0.0000	0.0953	38.0388	6.7441	18
38	Learn Africa (Longman)	2020	1.5956	0.0000	1	0.0601	0.1492	38.0388	6.7001	18
38	Learn Africa (Longman)	2021	3.6059	0.0000	1	0.0492	0.0722	27.7230	6.6500	18
38	Learn Africa (Longman)	2022	8.1216	0.0000	1	0.0575	0.0586	28.9196	6.6941	18
39	May & Baker Nig	2013	-1.2633	0.0000	0	0.0000	0.0301	62.8776	6.9117	38
39	May & Baker Nig	2014	0.7824	0.0000	0	0.0000	0.0303	61.8001	6.9083	38
39	May & Baker Nig	2015	0.8260	0.0000	0	0.0000	0.0298	62.2232	6.9158	36

39	May & Baker Nig	2016	-0.4767	0.0000	0	0.0000	0.0267	65.0605	6.9355	36
39	May & Baker Nig	2017	4.8391	0.0000	1	0.0007	0.1267	56.6311	6.8844	36
39	May & Baker Nig	2018	4.2296	0.0000	1	0.0002	0.1528	55.3522	6.9086	36
39	May & Baker Nig	2019	7.5464	0.0000	1	0.0009	0.1290	38.1398	6.9774	36
39	May & Baker Nig	2020	6.7201	0.0000	1	0.0010	0.0837	53.0249	7.1570	36
39	May & Baker Nig	2021	5.9562	0.0000	1	0.0017	0.0662	58.7361	7.2461	36
39	May & Baker Nig	2022	8.3007	0.0000	1	0.0030	0.0636	54.0882	7.2542	42
40	Meyer Plc	2013	1.7913	0.0000	0	0.0000	0.0000	73.6254	6.4196	52
40	Meyer Plc	2014	-1.4852	0.0000	1	0.0047	0.0000	73.6543	6.3884	52
40	Meyer Plc	2015	2.2703	0.0027	1	0.0032	0.0000	70.5674	6.3670	52
40	Meyer Plc	2016	-9.9385	0.0013	1	0.0024	0.0000	78.8669	6.3435	52
40	Meyer Plc	2017	-13.9664	0.0015	1	0.0040	0.0000	81.9969	6.2828	62
40	Meyer Plc	2018	17.1434	0.0010	1	0.0027	0.0000	64.4553	6.2709	62
40	Meyer Plc	2019	-0.3629	0.0027	1	0.0038	0.0000	82.6633	6.5737	62
40	Meyer Plc	2020	36.6357	0.0024	1	0.0115	0.0000	42.0762	6.4845	62
40	Meyer Plc	2021	1.6640	0.0015	1	0.0071	0.0000	47.8665	6.3061	62
40	Meyer Plc	2022	20.3041	0.0051	1	0.0047	0.0000	25.2837	6.2875	62
41	Nestle Nig	2013	20.5700	0.0396	0	0.0362	0.0000	62.4843	8.0343	60
41	Nestle Nig	2014	20.9647	0.0418	0	0.0367	0.0000	66.1145	8.0256	63
41	Nestle Nig	2015	19.9109	0.0234	0	0.0362	0.0000	68.1189	8.0763	63
41	Nestle Nig	2016	4.6731	0.0231	0	0.0377	0.0000	81.7921	8.2294	75
41	Nestle Nig	2017	22.9719	0.0824	0	0.0377	0.0000	69.4299	8.1667	75
41	Nestle Nig	2018	26.4935	0.0855	0	0.0373	0.0000	69.0636	8.2104	75
41	Nestle Nig	2019	23.6242	0.0492	0	0.0378	0.0000	76.4407	8.2864	75
41	Nestle Nig	2020	15.9279	0.0319	0	0.0389	0.0000	88.0996	8.3913	75
41	Nestle Nig	2021	12.9053	0.0462	0	0.0380	0.0000	88.0996	8.4917	75
41	Nestle Nig	2022	11.7977	0.0062	0	0.0376	0.0000	93.1091	8.6181	71
42	Nigeria Breweries	2013	17.0440	0.0083	0	0.0349	0.0006	92.7017	8.4027	68
42	Nigeria Breweries	2014	12.1755	0.0000	0	0.0000	0.0004	50.7589	8.5431	68
42	Nigeria Breweries	2015	10.6834	0.0062	1	0.0283	0.0004	51.6248	8.5517	65
42	Nigeria Breweries	2016	7.7400	0.0052	1	0.0287	0.0004	54.8099	8.5829	66
42	Nigeria Breweries	2017	8.6463	0.0058	1	0.0245	0.0004	53.3530	8.5823	66
42	Nigeria Breweries	2018	5.0064	0.0041	1	0.0218	0.0004	57.0321	8.5891	66
42	Nigeria Breweries	2019	4.2076	0.0027	1	0.0236	0.0004	56.1756	8.5829	66
42	Nigeria Breweries	2020	1.6526	0.0023	1	0.0226	0.0003	63.8496	8.6492	66
42	Nigeria Breweries	2021	2.6100	0.0028	1	0.0220	0.0003	90.7145	8.6862	66
42	Nigeria Breweries	2022	2.1273	0.0035	1	0.0225	0.0002	70.9764	8.7923	66
43	Nigerian Enamelware	2013	3.3571	0.0000	0	0.0000	0.0000	46.2674	6.3431	60
43	Nigerian Enamelware	2014	2.7936	0.0000	0	0.0000	0.0000	59.7415	6.4891	60
43	Nigerian Enamelware	2015	1.4805	0.0000	0	0.0000	0.0000	74.0052	6.7009	60
43	Nigerian Enamelware	2016	2.9402	0.0000	0	0.0000	0.0000	68.9281	6.6570	60
43	Nigerian Enamelware	2017	0.7733	0.0000	0	0.0000	0.0000	75.5068	6.7654	60
43	Nigerian Enamelware	2018	-0.0728	0.0000	0	0.0000	0.0000	68.8867	6.6605	60
43	Nigerian Enamelware	2019	-5.5147	0.0000	0	0.0000	0.0000	73.0204	6.6416	60

43	Nigerian Enamelware	2020	-7.0333	0.0000	0	0.0000	0.0000	83.3325	6.6979	60
43	Nigerian Enamelware	2021	-5.9648	0.0000	0	0.0000	0.0000	87.9679	6.6646	60
43	Nigerian Enamelware	2022	-9.7810	0.0000	0	0.0000	0.0000	96.7169	6.6443	60
44	Mrs (Texaco Chevron)	2013	0.9657	1.2533	1	0.0000	0.0000	70.1206	7.8175	70
44	Mrs (Texaco Chevron)	2014	1.2903	0.3898	1	0.0000	0.0000	65.0487	7.7623	70
44	Mrs (Texaco Chevron)	2015	1.3987	0.2913	1	0.0022	0.0000	68.6408	7.8254	70
44	Mrs (Texaco Chevron)	2016	1.8016	0.0000	1	0.0005	0.0000	72.7599	7.9104	70
44	Mrs (Texaco Chevron)	2017	2.2271	1.6974	1	0.0005	0.0000	62.8407	7.7674	71
44	Mrs (Texaco Chevron)	2018	-2.3303	1.5603	1	0.0003	0.0000	61.8285	7.7347	71
44	Mrs(Texaco Chevron)	2019	-3.8544	0.0007	1	0.0003	0.0000	56.7795	7.6455	75
44	Mrs(Texaco Chevron)	2020	-6.1762	0.0006	1	0.0010	0.0000	54.0538	7.5642	70
44	Mrs(Texaco Chevron)	2021	0.9135	0.0000	1	0.0013	0.0000	53.8148	7.5706	70
44	Mrs(Texaco Chevron)	2022	3.2475	0.0000	1	0.0006	0.0000	54.3518	7.6077	70
45	Multiverse	2013	-5.6309	0.0000	0	0.0000	0.0423	51.9985	6.7177	0
45	Multiverse	2014	-11.6528	0.0000	0	0.0000	0.0000	66.2547	6.6758	0
45	Multiverse	2015	-8.1683	0.0000	0	0.0000	0.0000	72.7735	6.6753	24
45	Multiverse	2016	-12.7071	0.0000	0	0.0000	0.0000	86.8765	6.6625	24
45	Multiverse	2017	9.5701	0.0001	1	0.0000	0.0000	74.2204	6.6558	24
45	Multiverse	2018	-7.0618	0.0001	1	0.0000	0.0000	80.6558	6.6453	24
45	Multiverse	2019	-6.7411	0.0001	1	0.0000	0.0000	87.3729	6.6398	24
45	Multiverse	2020	-4.5670	0.0001	1	0.0000	0.0000	0.0941	6.6359	24
45	Multiverse	2021	0.3249	0.0008	1	0.0000	0.0000	91.4913	6.6353	24
45	Multiverse	2022	4.4454	0.0021	1	0.0000	0.0000	86.9468	6.6303	24
46	Livestock Feeds	2013	5.7415	0.0000	0	0.0000	0.0000	52.8761	6.5647	64
46	Livestock Feeds	2014	4.4182	0.0000	1	0.0000	0.0000	65.5141	6.7599	64
46	Livestock Feeds	2015	4.1124	0.0018	1	0.0000	0.0000	57.3522	6.6599	62
46	Livestock Feeds	2016	2.0697	0.0008	1	0.0000	0.0000	71.6535	6.8667	62
46	Livestock Feeds	2017	-13.7982	0.0010	1	0.0000	0.0000	60.1162	6.7210	62
46	Livestock Feeds	2018	-15.7263	0.0007	1	0.0000	0.0000	62.9035	6.6445	62
46	Livestock Feeds	2019	2.6365	0.0020	1	0.0000	0.0000	61.0901	6.6057	62
46	Livestock Feeds	2020	7.7722	0.0007	1	0.0000	0.0000	67.9837	6.8112	62
46	Livestock Feeds	2021	3.9685	0.0046	1	0.0000	0.0000	76.8883	7.0345	62
46	Livestock Feeds	2022	-11.0251	0.0049	1	0.0000	0.0000	77.4695	6.8726	73
47	Mcnichols Consolidated	2013	7.2904	0.0000	0	0.0000	0.0202	40.9754	5.5066	55
47	Mcnichols Consolidated	2014	10.7166	0.0000	0	0.0000	0.0172	41.3260	5.5778	55
47	Mcnichols Consolidated	2015	14.3609	0.0000	0	0.0000	0.0155	38.0091	5.6234	55
47	Mcnichols Consolidated	2016	12.1749	0.0000	0	0.0000	0.0137	36.5381	5.6768	55
47	Mcnichols Consolidated	2017	7.0891	0.0000	0	0.0000	0.0121	39.5854	5.7318	55
47	Mcnichols Consolidated	2018	4.7524	0.0000	1	0.0033	0.0079	59.6515	5.9168	55
47	Mcnichols Consolidated	2019	2.3706	0.0000	1	0.0065	0.0088	52.0540	5.8589	55
47	Mcnichols Consolidated	2020	2.4976	0.0000	1	0.0029	0.0082	50.3159	5.8525	18
47	Mcnichols Consolidated	2021	21.2698	0.0000	1	0.0032	0.0084	48.1374	5.8404	18
47	Mcnichols Consolidated	2022	5.2425	0.0000	1	0.0031	0.0089	41.8043	5.8154	18
48	Morison Industries	2013	-4.1932	0.0000	0	0.0000	0.0000	21.5355	5.7212	46

48	Morison Industries	2014	-18.3346	0.0000	1	0.0113	0.0000	26.3861	5.6523	46
48	Morison Industries	2015	-25.6658	0.0000	1	0.0095	0.0000	47.4711	5.6261	46
48	Morison Industries	2016	-19.0326	0.0000	1	0.0162	0.0000	65.2513	5.6158	46
48	Morison Industries	2017	-33.3449	0.0000	1	0.0161	0.0000	106.9389	5.7351	46
48	Morison Industries	2018	-35.2087	0.0077	1	0.0193	0.0000	53.0086	5.7323	46
48	Morison Industries	2019	-23.3887	0.0004	1	0.0095	0.0000	66.7274	5.6510	46
48	Morison Industries	2020	-7.5334	0.0012	1	0.0155	0.0000	73.8352	5.6455	46
48	Morison Industries	2021	-2.4113	0.0003	1	0.0074	0.0000	33.9325	6.2081	46
48	Morison Industries	2022	-5.7933	0.0000	1	0.0034	0.0000	38.2667	6.1986	46
49	Nascon Allied	2013	23.6156	0.0000	0	0.0000	0.0000	39.7032	7.0581	62
49	Nascon Allied	2014	14.8698	0.0004	0	0.0000	0.0000	49.7661	7.0988	62
49	Nascon Allied	2015	12.9222	0.0004	0	0.0000	0.0000	56.5001	7.2120	62
49	Nascon Allied	2016	9.8165	0.0004	0	0.0000	0.0000	67.2961	7.3910	62
49	Nascon Allied	2017	17.7391	0.0006	0	0.0000	0.0000	61.7066	7.4789	69
49	Nascon Allied	2018	14.6024	0.0009	0	0.0000	0.0000	60.7092	7.4810	69
49	Nascon Allied	2019	4.7719	0.0006	0	0.0000	0.0000	71.3224	7.5874	69
49	Nascon Allied	2020	6.0717	0.0003	0	0.0000	0.0000	71.2929	7.6465	72
49	Nascon Allied	2021	7.3319	0.0007	0	0.0000	0.0000	63.8939	7.6077	72
49	Nascon Allied	2022	9.8490	0.0014	0	0.0000	0.0000	65.7084	7.7445	72
50	National Aviation Handling	2013	5.5857	0.0000	0	0.0000	0.0127	57.1134	7.0396	31
50	National Aviation Handling	2014	3.9676	0.0000	0	0.0000	0.0107	59.1488	7.1335	37
50	National Aviation Handling	2015	3.6023	0.0117	1	0.0000	0.0093	59.1641	7.1740	37
50	National Aviation Handling	2016	4.5963	0.0049	1	0.0000	0.0107	49.7227	7.1016	37
50	National Aviation Handling	2017	6.3266	0.0115	1	0.0000	0.0108	44.7828	7.0886	38
50	National Aviation Handling	2018	1.5940	0.0123	1	0.0325	0.0103	48.7777	7.1079	41
50	National Aviation Handling	2019	4.8758	0.0345	1	0.0378	0.0093	54.8932	7.1676	41
50	National Aviation Handling	2020	2.1969	0.0038	1	0.0502	0.0097	14.5247	7.1384	41
50	National Aviation Handling	2021	4.6931	0.0054	1	0.0000	0.0180	97.3559	7.2159	43
50	National Aviation Handling	2022	14.2772	0.0043	1	0.0000	0.0153	0.0000	7.2725	43
51	Ncr Nigeria	2013	-0.3495	0.0000	0	0.0000	0.0000	97.5052	0.0000	62
51	Ncr Nigeria	2014	2.3492	0.0000	0	0.0000	0.0000	96.1200	6.8260	62
51	Ncr Nigeria	2015	0.2350	0.0000	0	0.0000	0.0000	96.6709	6.8987	62
51	Ncr Nigeria	2016	0.5661	0.0000	1	0.0000	0.0000	97.2110	7.0699	62
51	Ncr Nigeria	2017	1.6798	0.0000	1	0.0000	0.0000	82.6255	6.9528	62
51	Ncr Nigeria	2018	0.2655	0.0000	1	0.0000	0.0000	95.3115	6.9894	62
51	Ncr Nigeria	2019	-11.2711	0.0000	1	0.0000	0.0000	106.3777	6.9256	62
51	Ncr Nigeria	2020	-4.5532	0.0000	1	0.0000	0.0000	113.2023	6.8058	62
51	Ncr Nigeria	2021	0.1473	0.0000	1	0.0000	0.0000	116.3570	6.7100	62
51	Ncr Nigeria	2022	-23.4456	0.0000	1	0.0000	0.0000	142.8104	6.6345	62
52	NeimethInt Pharm	2013	4.5166	0.0000	0	0.0000	0.0000	38.4241	6.4611	41
52	NeimethInt Pharm	2014	8.2133	0.0010	1	0.0048	0.0000	41.4039	6.4444	41
52	NeimethInt Pharm	2015	-15.2564	0.0002	1	0.0009	0.0000	47.4001	6.3425	41
52	NeimethInt Pharm	2016	2.4210	0.0000	1	0.0003	0.0000	54.5355	6.4295	45
52	NeimethInt Pharm	2017	-18.0447	0.0006	1	0.0011	0.0000	64.6823	6.3580	45

52	NeimethInt Pharm	2018	7.9727	0.0000	1	0.0013	0.0000	57.3064	6.3633	45
52	NeimethInt Pharm	2019	7.9943	0.0000	1	0.0015	0.0000	61.0713	6.4399	45
52	NeimethInt Pharm	2020	3.3186	0.0005	1	0.0049	0.0056	80.2113	6.8063	45
52	NeimethInt Pharm	2021	4.3308	0.0000	1	0.0006	0.0056	77.7987	6.7957	45
52	NeimethInt Pharm	2022	-1.7076	0.0000	1	0.0014	0.0053	82.9650	6.8077	45
53	Nigerian Northen Flour Mill	2013	6.2136	0.0020	0	0.0000	0.0000	55.6850	6.5591	72
53	Nigerian Northen Flour Mill	2014	7.1494	0.0023	0	0.0000	0.0000	45.6957	6.5141	72
53	Nigerian Northen Flour Mill	2015	-4.8522	0.0019	0	0.0000	0.0000	99.5096	6.3845	72
53	Nigerian Northen Flour Mill	2016	-5.0129	0.0000	0	0.0000	0.0000	12.4236	6.2405	72
53	Nigerian Northen Flour Mill	2017	-0.3743	0.0000	1	0.0000	0.0000	71.4215	6.6372	66
53	Nigerian Northen Flour Mill	2018	-1.0306	0.0000	1	0.0000	0.0010	80.1566	6.7721	66
53	Nigerian Northen Flour Mill	2019	-0.6348	0.0000	1	0.0000	0.0000	76.9531	6.6984	67
53	Nigerian Northen Flour Mill	2020	0.7611	0.0000	1	0.0000	0.0037	67.3929	6.9290	67
53	Nigerian Northen Flour Mill	2021	0.9493	0.0000	1	0.0000	0.0011	62.1498	6.8672	67
53	Nigerian Northen Flour Mill	2022	0.6058	0.0000	1	0.0000	0.0000	78.5622	7.1243	67
54	Okomu Oil Palm	2013	6.9622	0.0000	0	0.0000	0.0000	24.7365	7.4778	63
54	Okomu Oil Palm	2014	5.0119	0.0000	1	0.0000	0.0000	25.0429	7.2522	63
54	Okomu Oil Palm	2015	13.1208	0.0000	1	0.0000	0.0000	39.8420	7.3022	63
54	Okomu Oil Palm	2016	20.0357	0.0000	0	0.0000	0.0000	30.5848	7.4965	63
54	Okomu Oil Palm	2017	29.1591	0.0000	1	0.0000	0.0000	21.8833	7.4952	63
54	Okomu Oil Palm	2018	22.1299	0.0000	1	0.0000	0.0000	25.7791	7.5845	63
54	Okomu Oil Palm	2019	11.5829	0.0000	1	0.0000	0.0000	33.0663	7.6394	63
54	Okomu Oil Palm	2020	14.1434	0.0000	1	0.0000	0.0000	36.7813	7.7405	63
54	Okomu Oil Palm	2021	17.5438	0.0000	0	0.0000	0.0000	48.2276	7.8180	63
54	Okomu Oil Palm	2022	26.4191	0.0000	0	0.0000	0.0000	48.1677	7.8628	63
55	Pharma-Deko	2013	-4.8509	0.0000	0	0.0000	0.0000	66.7673	6.3976	43
55	Pharma-Deko	2014	3.5576	0.0000	0	0.0000	0.0000	67.2022	6.4532	43
55	Pharma-Deko	2015	25.6515	0.0000	0	0.0000	0.0000	30.5393	6.4099	43
55	Pharma-Deko	2016	-9.4104	0.0000	0	0.0000	0.0000	25.0971	6.3662	43
55	Pharma-Deko	2017	0.5552	0.0000	0	0.0000	0.0000	23.2564	6.3561	43
55	Pharma-Deko	2018	-11.4182	0.0000	0	0.0000	0.0000	31.5427	6.3661	43
55	Pharma-Deko	2019	-12.6915	0.0000	0	0.0000	0.0000	40.3171	6.3419	43
55	Pharma-Deko	2020	-16.1228	0.0000	0	0.0000	0.0000	51.1036	6.3047	43
55	Pharma-Deko	2021	0.5600	0.0000	0	0.0000	0.0000	43.9972	6.3683	43
55	Pharma-Deko	2022	-6.4644	0.0000	0	0.0000	0.0000	46.7621	6.3406	43
56	Presco	2013	4.0939	0.0000	0	0.0000	0.0000	46.7841	7.5141	68
56	Presco	2014	7.4554	0.0000	1	0.0011	0.0000	42.8844	7.5434	68
56	Presco	2015	4.1833	0.0000	1	0.0024	0.0000	45.2117	7.7441	69
56	Presco	2016	26.1363	0.0000	1	0.0030	0.0000	37.3282	7.9199	69
56	Presco	2017	25.8366	0.0000	1	0.0018	0.0000	92.2725	7.9927	69
56	Presco	2018	7.3011	0.0000	1	0.0025	0.0000	58.8022	7.7685	69
56	Presco	2019	5.4271	0.0000	1	0.0026	0.0000	60.5730	7.8513	69
56	Presco	2020	7.1330	0.0000	1	0.0019	0.0000	57.9072	7.8679	69
56	Presco	2021	13.7405	0.0000	1	0.0022	0.0000	78.8194	8.1480	69

56	Presco	2022	9.8455	0.0000	1	0.0023	0.0000	74.1930	8.1218	69
57	Pz Cussons	2013	7.3602	0.0000	0	0.0000	0.0000	35.7688	7.8591	67
57	Pz Cussons	2014	7.1623	0.0000	0	0.0000	0.0000	36.4395	7.8510	67
57	Pz Cussons	2015	6.7828	0.0000	0	0.0000	0.0000	38.5101	7.8286	67
57	Pz Cussons	2016	2.8613	0.0000	0	0.0000	0.0000	41.6863	7.8717	73
57	Pz Cussons	2017	4.0922	0.0000	0	0.0000	0.0000	49.8958	7.9547	73
57	Pz Cussons	2018	2.1747	0.0000	0	0.0000	0.0000	49.0965	7.9475	73
57	Pz Cussons	2019	1.4460	0.0061	1	0.0031	0.0000	42.7644	7.9027	73
57	Pz Cussons	2020	-9.2281	0.0054	1	0.0032	0.0000	55.9472	7.8946	73
57	Pz Cussons	2021	2.0376	0.0000	0	0.0000	0.0000	63.6281	7.9412	73
57	Pz Cussons	2022	6.1196	0.0000	0	0.0000	0.0150	65.5258	8.0393	73
58	R.T Briscoe Nig	2013	-0.6006	0.0000	0	0.0000	0.0000	80.0925	7.1852	36
58	R.T Briscoe Nig	2014	-9.6157	0.0546	0	0.0000	0.0000	82.8093	7.2775	36
58	R.T Briscoe Nig	2015	-29.9986	0.0291	0	0.0000	0.0000	100.2922	7.1442	37
58	R.T Briscoe Nig	2016	-32.5765	0.0000	0	0.0000	0.0000	133.1051	6.9496	37
58	R.T Briscoe Nig	2017	-41.5179	0.0000	0	0.0000	0.0467	179.3925	6.8815	37
58	R.T Briscoe Nig	2018	-28.3288	0.0004	1	0.0000	0.0454	206.0804	6.8880	37
58	R.T Briscoe Nig	2019	-14.3203	0.0004	1	0.0000	0.0389	206.3758	6.9501	37
58	R.T Briscoe Nig	2020	-12.7120	0.0069	1	0.0000	0.0287	219.2009	6.9357	37
58	R.T Briscoe Nig	2021	-25.0008	0.0069	1	0.0000	0.0100	236.8325	6.9635	37
58	R.T Briscoe Nig	2022	-14.3160	0.0000	1	0.0000	0.0000	252.6292	6.9589	37
59	Redstar Express	2013	10.0254	0.0016	1	0.0000	0.0016	43.3302	6.4825	44
59	Redstar Express	2014	11.7099	0.0015	1	0.0000	0.0035	44.7998	6.5374	44
59	Redstar Express	2015	10.0439	0.0018	1	0.0000	0.0002	46.0444	6.5820	54
59	Redstar Express	2016	8.9034	0.0120	1	0.0000	0.0000	41.1094	6.5747	54
59	Redstar Express	2017	9.6299	0.0098	1	0.0000	0.0000	45.1190	6.6466	56
59	Redstar Express	2018	6.9595	0.0114	1	0.0000	0.0000	49.3875	6.6984	59
59	Redstar Express	2019	11.5957	0.0145	1	0.0000	0.0000	50.1999	6.6043	59
59	Redstar Express	2020	8.7235	0.0088	1	0.0000	0.0000	40.2777	6.7305	60
59	Redstar Express	2021	1.9905	0.0043	1	0.0000	0.0000	43.8530	6.8773	60
59	Redstar Express	2022	1.1327	0.0069	1	0.0000	0.0000	45.9040	6.8894	60
60	Tantalizer	2013	-9.8601	0.0000	0	0.0000	0.0000	53.4359	6.7580	65
60	Tantalizer	2014	-15.6453	0.0000	0	0.0000	0.0000	64.3364	0.0000	65
60	Tantalizer	2015	-13.8966	0.0000	0	0.0000	0.0000	65.5080	6.7066	65
60	Tantalizer	2016	-20.4992	0.0000	0	0.0000	0.0000	85.1078	6.6954	65
60	Tantalizer	2017	10.9719	0.0000	0	0.0000	0.0000	83.5303	6.6065	65
60	Tantalizer	2018	2.3797	0.0000	0	0.0000	0.0000	80.6905	6.5786	65
60	Tantalizer	2019	0.6648	0.0000	0	0.0000	0.2793	83.0431	6.5231	65
60	Tantalizer	2020	-14.7980	0.0000	0	0.0000	0.0175	89.8760	6.4552	65
60	Tantalizer	2021	-9.6110	0.0000	0	0.0000	0.0224	91.0590	6.3493	65
60	Tantalizer	2022	-10.3767	0.0000	0	0.0000	0.0157	74.3277	6.4057	65
61	Thomas Wyatt	2013	-1.0780	0.0004	0	0.0000	0.0009	106.1662	5.8056	37
61	Thomas Wyatt	2014	-3.4881	0.0002	0	0.0000	0.0009	109.6174	5.8093	37
61	Thomas Wyatt	2015	-2.1494	0.0003	0	0.0000	0.0009	85.0856	5.7849	37

61	Thomas Wyatt	2016	-12.7309	0.0003	0	0.0000	0.0011	127.9186	5.7177	37
61	Thomas Wyatt	2017	-8.5586	0.0003	0	0.0000	0.0011	138.2808	5.6906	37
61	Thomas Wyatt	2018	-22.7877	0.0004	0	0.0000	0.0013	166.2062	5.6359	38
61	Thomas Wyatt	2019	-13.4446	0.0004	0	0.0000	0.0013	181.2259	5.6257	38
61	Thomas Wyatt	2020	-12.7506	0.0005	0	0.0000	0.0014	196.9662	5.6100	38
61	Thomas Wyatt	2021	3.7726	0.0003	0	0.0000	0.0013	186.5525	5.6408	38
61	Thomas Wyatt	2022	17.4130	0.0000	0	0.0000	0.0014	177.8187	5.5993	38
62	Total Nigeria	2013	6.7177	2.5979	1	0.0005	0.0000	83.3247	7.8998	62
62	Total Nigeria	2014	4.6316	2.1871	1	0.0003	0.0000	85.4157	7.9801	62
62	Total Nigeria	2015	4.8379	2.1556	1	0.0000	0.0000	80.5836	7.9225	62
62	Total Nigeria	2016	10.8065	1.7338	1	0.0000	0.0000	82.7865	8.1365	62
62	Total Nigeria	2017	7.4265	2.3603	1	0.0000	0.0000	73.8608	8.0334	62
62	Total Nigeria	2018	6.0073	2.0318	1	0.0000	0.0000	76.8105	8.1223	62
62	Total Nigeria	2019	1.7034	1.8758	1	0.0000	0.0000	78.8323	8.1304	62
62	Total Nigeria	2020	1.4368	1.1919	1	0.0000	0.0000	80.9618	8.1572	62
62	Total Nigeria	2021	8.0785	0.0033	1	0.0000	0.0000	80.0606	8.3196	62
62	Total Nigeria	2022	5.2364	0.0045	1	0.0000	0.0000	83.6633	8.4883	62
63	Tourist Company Of Nigeria	2013	1.1278	0.0011	0	0.0008	0.0105	83.7087	8.1751	98
63	Tourist Company Of Nigeria	2014	-5.6855	0.0027	0	0.0006	0.0160	88.6406	8.2324	98
63	Tourist Company Of Nigeria	2015	-25.4407	0.0001	0	0.0014	0.0084	113.8498	8.3072	98
63	Tourist Company Of Nigeria	2016	-52.5973	0.0001	0	0.0010	0.0074	166.2369	8.3658	98
63	Tourist Company Of Nigeria	2017	-32.4815	0.0001	0	0.0017	0.0060	202.9867	8.4556	98
63	Tourist Company Of Nigeria	2018	-4.0462	0.0000	0	0.0052	0.0000	48.3623	8.0464	98
63	Tourist Company Of Nigeria	2019	-3.6270	0.0000	1	0.0054	0.0000	49.8520	8.0597	98
63	Tourist Company Of Nigeria	2020	-5.5521	0.0000	1	0.0061	0.0000	45.8899	8.0528	98
63	Tourist Company Of Nigeria	2021	0.9641	0.0000	1	0.0059	0.0000	46.3108	8.0640	87
63	Tourist Company Of Nigeria	2022	34.5789	0.0000	0	0.0000	0.0000	63.1430	7.7254	87
64	Trans-Nationwide Express	2013	11.6451	0.0000	0	0.0000	0.0000	42.6242	5.8228	34
64	Trans-Nationwide Express	2014	10.6415	0.0000	0	0.0000	0.0000	36.6496	5.7976	34
64	Trans-Nationwide Express	2015	7.7670	0.0000	0	0.0000	0.0000	34.7697	5.8171	28
64	Trans-Nationwide Express	2016	3.5754	0.0000	0	0.0000	0.0000	24.3004	5.7556	28
64	Trans-Nationwide Express	2017	0.4755	0.0000	0	0.0000	0.0000	21.2029	5.8804	44
64	Trans-Nationwide Express	2018	-3.6679	0.0000	0	0.0000	0.0000	20.6403	5.8577	53
64	Trans-Nationwide Express	2019	1.8987	0.0000	0	0.0000	0.0000	25.3029	5.8952	55
64	Trans-Nationwide Express	2020	-7.4313	0.0000	0	0.0000	0.0000	36.3103	5.9060	55
64	Trans-Nationwide Express	2021	-6.1133	0.0000	0	0.0000	0.0018	44.4836	5.8126	55
64	Trans-Nationwide Express	2022	3.6177	0.0000	0	0.0000	0.0000	44.6444	5.8432	49
65	TranscorpNig	2013	4.6552	0.0011	0	0.0008	0.0105	31.4796	8.1745	44
65	TranscorpNig	2014	1.9351	0.0027	0	0.0006	0.0160	47.4366	8.2324	44
65	TranscorpNig	2015	1.0013	0.0001	0	0.0014	0.0084	56.8693	8.3072	44
65	TranscorpNig	2016	-0.4854	0.0001	0	0.0010	0.0074	62.7635	8.3658	44
65	TranscorpNig	2017	3.7150	0.0001	0	0.0017	0.0060	66.4797	8.4556	95
65	TranscorpNig	2018	6.9417	0.0000	1	0.0052	0.0000	64.5444	8.0464	9
65	TranscorpNig	2019	1.1832	0.0000	1	0.0054	0.0000	65.2740	8.0597	9

65	TranscorpNig	2020	-5.5521	0.0000	1	0.0061	0.0000	45.8899	8.0528	9
65	TranscorpNig	2021	0.9641	0.0000	1	0.0059	0.0000	46.3108	8.0640	9
65	TranscorpNig	2022	2.1728	0.0000	1	0.0032	0.0025	47.8870	8.0809	87
66	Tripple Gee & Company	2013	1.1281	0.0000	0	0.0000	0.0974	100.0000	6.2313	38
66	Tripple Gee & Company	2014	0.8845	0.0000	0	0.0000	0.0947	100.0000	6.2432	38
66	Tripple Gee & Company	2015	2.2579	0.0000	0	0.0000	0.0919	100.0000	6.2565	27
66	Tripple Gee & Company	2016	1.4348	0.0000	0	0.0000	0.0860	100.0000	6.2851	27
66	Tripple Gee & Company	2017	0.5452	0.0000	0	0.0000	0.0888	39.7391	6.2711	27
66	Tripple Gee & Company	2018	1.3285	0.0000	0	0.0000	0.0955	100.0000	6.2396	52
66	Tripple Gee & Company	2019	1.5815	0.0000	0	0.0000	0.0417	100.0001	6.2420	52
66	Tripple Gee & Company	2020	2.0088	0.0000	0	0.0000	0.0479	100.0000	6.2715	52
66	Tripple Gee & Company	2021	3.1498	0.0000	0	0.0000	0.0608	100.0000	6.4356	52
66	Tripple Gee & Company	2022	1.5242	0.0000	0	0.0000	0.0382	100.0000	6.6381	52
67	Uac Of Nig	2013	8.0499	0.0000	0	0.0000	0.1459	42.0251	8.0786	15
67	Uac Of Nig	2014	8.2285	0.0000	1	0.0012	0.1528	42.8881	8.1151	15
67	Uac Of Nig	2015	4.0006	0.0000	1	0.0014	0.1557	42.3716	8.1094	8
67	Uac Of Nig	2016	4.0994	0.0000	1	0.0014	0.1437	44.6822	8.1406	8
67	Uac Of Nig	2017	1.0139	0.0000	1	0.0014	0.1032	44.0147	8.1160	8
67	Uac Of Nig	2018	-7.2257	0.0000	1	0.0020	0.0549	43.3929	8.1172	29
67	Uac Of Nig	2019	4.9680	0.0000	1	0.0014	0.0223	43.7323	8.0318	29
67	Uac Of Nig	2020	3.6952	0.0003	1	0.0005	0.0287	33.8313	7.9624	29
67	Uac Of Nig	2021	2.6296	0.0003	1	0.0008	0.0352	48.3683	7.9933	29
67	Uac Of Nig	2022	-4.2626	0.0011	0	0.0005	0.0260	51.7411	7.9723	29
68	Unilever Nig	2013	10.9862	0.0000	0	0.0000	0.0000	77.9685	7.6410	59
68	Unilever Nig	2014	5.2745	0.0103	1	0.0000	0.0000	83.6480	7.6603	59
68	Unilever Nig	2015	2.3765	0.0089	1	0.0000	0.0000	84.0485	7.7005	59
68	Unilever Nig	2016	4.2376	0.0063	1	0.0000	0.0000	83.8740	7.8603	67
68	Unilever Nig	2017	6.1528	0.0038	1	0.0000	0.0000	37.3095	8.0831	67
68	Unilever Nig	2018	6.9265	0.0030	1	0.0261	0.0000	37.2061	8.1201	72
68	Unilever Nig	2019	-7.1565	0.0034	1	0.0246	0.0000	35.8315	8.0157	72
68	Unilever Nig	2020	-4.1062	0.0028	1	0.0252	0.0000	32.1123	7.9615	76
68	Unilever Nig	2021	0.6356	0.0041	1	0.0265	0.0000	39.2718	8.0346	76
68	Unilever Nig	2022	3.5626	0.0029	1	0.0329	0.0000	46.1163	8.0983	76
69	University Press	2013	9.3494	0.0000	0	0.0000	0.0000	22.3355	6.4454	25
69	University Press	2014	7.8672	0.0000	0	0.0000	0.0000	24.5897	6.4733	25
69	University Press	2015	4.7932	0.0000	1	0.0000	0.0000	20.1668	6.4542	25
69	University Press	2016	2.3342	0.0000	1	0.0000	0.0000	24.8274	6.4968	27
69	University Press	2017	3.3656	0.0012	1	0.0000	0.0738	29.7386	6.5464	26
69	University Press	2018	6.0771	0.0021	1	0.0000	0.0819	24.8518	6.5331	28
69	University Press	2019	3.1280	0.0018	1	0.0000	0.0826	25.1272	6.5422	28
69	University Press	2020	3.6692	0.0017	1	0.0000	0.0831	22.9282	6.5399	28
69	University Press	2021	1.5087	0.0001	1	0.0000	0.0831	29.6182	6.5781	28
69	University Press	2022	4.8395	0.0009	1	0.0000	0.0826	26.0096	6.6322	28
70	Updc Property	2013	4.8136	0.0000	1	0.0000	0.2303	48.9050	7.8232	55

70	Updc Property	2014	5.2713	0.0000	1	0.0000	0.2430	47.0495	7.8331	55
70	Updc Property	2015	0.5291	0.0000	1	0.0000	0.2344	50.5644	7.8571	55
70	Updc Property	2016	-2.1861	0.0000	0	0.0000	0.7324	52.0137	7.5050	55
70	Updc Property	2017	-4.1098	0.0000	0	0.0000	0.7590	47.9104	7.4976	70
70	Updc Property	2018	-23.5394	0.0000	0	0.0000	0.8767	61.1446	7.5238	70
70	Updc Property	2019	-54.3955	0.0000	0	0.0000	0.8610	92.4944	7.4946	70
70	Updc Property	2020	6.0348	0.0028	1	0.0000	0.8283	3.4628	7.5054	70
70	Updc Property	2021	-9.5685	0.0055	1	0.0000	0.0066	59.0836	7.2922	70
70	Updc Property	2022	1.0322	0.0000	1	0.0000	0.0065	56.7816	7.2884	97
71	VitafoamNig	2013	4.1192	0.0000	0	0.0000	0.0012	68.7781	7.0060	34
71	VitafoamNig	2014	3.6357	0.0000	0	0.0000	0.0009	74.7176	7.0785	34
71	VitafoamNig	2015	1.7182	0.0006	1	0.0000	0.0278	68.0247	7.1204	40
71	VitafoamNig	2016	-0.2400	0.0004	1	0.0000	0.0266	73.7106	7.1229	40
71	VitafoamNig	2017	-0.9522	0.0010	1	0.0000	0.0253	74.8439	7.1275	40
71	VitafoamNig	2018	3.7536	0.0002	1	0.0000	0.0212	75.7875	7.2051	40
71	VitafoamNig	2019	17.8323	0.0000	1	0.0000	0.0001	56.8088	8.0562	40
71	VitafoamNig	2020	18.0991	0.0002	0	0.0000	0.0002	58.2156	7.3352	40
71	VitafoamNig	2021	14.4608	0.0002	0	0.0000	0.0018	59.3085	7.5023	40
71	VitafoamNig	2022	11.46709	0.0000	0	0.0000	0.0000	60.26951	7.5959	39

Appendix 2

Descriptive statistics_ Correlation and Regression Results

Descriptive Statistic Result

	SPF	RDR	ITPR	PTR	FL	FS	FIR	OWS
Mean	2.349597	0.033829	0.484507	0.004965	65.32797	7.172347	0.027766	55.60088
Median	2.793150	0.000000	0.000000	0.000000	59.92315	7.100204	0.000000	60.00000
Maximum	176.2669	2.597893	1.000000	0.712711	395.4504	9.417580	0.876738	98.00000
Minimum	-119.6330	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
Std. Dev.	15.02142	0.241083	0.500112	0.034782	42.06812	0.904215	0.095411	21.35792
Skewness	0.696263	8.097608	0.062002	17.38023	3.229203	-1.209561	5.746711	-0.357718
Kurtosis	37.07045	70.13876	1.003844	327.5093	19.52791	12.80584	41.39008	2.495516
Jarque-Bera	34397.58	141109.5	118.3338	3151057.	9315.281	3017.695	47507.79	22.67131
Probability	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000012
Sum	1668.214	24.01858	344.0000	3.525376	46382.86	5092.366	19.71408	39476.63
Sum Sq. Dev.	159980.9	41.20779	177.3296	0.857724	1254736.	579.6816	6.454151	323417.8
Observations	710	710	710	710	710	710	710	710

Correlation Matrix

	SPF	RDR	IPTR	PTR	FL	FS	FIR	OWS
SPF	1.000000	0.016523	-0.012706	0.017960	-0.306097	0.171128	-0.086579	0.080828
RDR	0.016523	1.000000	0.137377	-0.015780	0.041499	0.120309	-0.039318	0.059102
ITPR	-0.012706	0.137377	1.000000	0.049723	0.016338	0.019339	-0.036218	-0.043850
PTR	0.017960	-0.015780	0.049723	1.000000	-0.042345	0.009399	7.12E-06	-0.075374
FL	-0.306097	0.041499	0.016338	-0.042345	1.000000	-0.050793	-0.056022	-0.065785
FS	0.171128	0.120309	0.019339	0.009399	-0.050793	1.000000	0.007416	0.258755
FIR	-0.086579	-0.039318	-0.036218	7.12E-06	-0.056022	0.007416	1.000000	-0.038068
OWS	0.080828	0.059102	-0.043850	-0.075374	-0.065785	0.258755	-0.038068	1.000000

POOLED OLS

Dependent Variable: SPF

Method: Panel Least Squares

Date: 08/25/23 Time: 15:15

Sample: 2013 2022

Periods included: 10

Cross-sections included: 71

Total panel (balanced) observations: 710

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	-8.641556	4.430772	-1.950350	0.0515
RDR	0.494821	2.236563	0.221242	0.8250
ITPR	-0.453375	1.071335	-0.423188	0.6723
PTR	2.535719	15.29461	0.165792	0.8684
FL	-0.108179	0.012659	-8.545781	0.0000
FS	2.514775	0.610223	4.121074	0.0000
FIR	-16.41445	5.565310	-2.949421	0.0033
OWS	0.012006	0.025839	0.464648	0.6423

R-squared	0.129475	Mean dependent var	2.349597
Adjusted R-squared	0.120795	S.D. dependent var	15.02142
S.E. of regression	14.08498	Akaike info criterion	8.139298
Sum squared resid	139267.4	Schwarz criterion	8.190738
Log likelihood	-2881.451	Hannan-Quinn criter.	8.159170
F-statistic	14.91571	Durbin-Watson stat	1.198031
Prob(F-statistic)	0.000000		

REDUNDANT FIXED EFFECT TEST

Redundant Fixed Effects Tests

Equation: Untitled

Test cross-section and period fixed effects

Effects Test	Statistic	d.f.	Prob.
Cross-section F	1.437075	(70,552)	0.0153
Cross-section Chi-square	106.974359	70	0.0029
Period F	1.280167	(8,552)	0.2511
Period Chi-square	11.746819	8	0.1629
Cross-Section/Period F	1.439496	(78,552)	0.0116
Cross-Section/Period Chi-square	118.315160	78	0.0022

Fixed Effect Model result with AR(1)

Dependent Variable: SPF

Method: Panel Least Squares

Date: 08/25/23 Time: 15:25

Sample (adjusted): 2014 2022

Periods included: 9

Cross-sections included: 71

Total panel (balanced) observations: 639

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	5.421152	13.25082	0.409118	0.6826
RDR	-0.615503	3.895295	-0.158012	0.8745
ITPR	2.030174	1.831682	1.108366	0.2682
PTR	6.058890	16.92331	0.358020	0.7205
FIR	-9.896271	9.473051	-1.044676	0.2966
FL	-0.093971	0.027972	-3.359493	0.0008
FS	0.145478	1.790520	0.081249	0.9353
OWS	0.010797	0.069447	0.155470	0.8765
SPF(-1)	0.169157	0.043988	3.845535	0.0001

Effects Specification

Cross-section fixed (dummy variables)

R-squared	0.373910	Mean dependent var	2.006911
Adjusted R-squared	0.286705	S.D. dependent var	15.52502
S.E. of regression	13.11194	Akaike info criterion	8.100217
Sum squared resid	96276.81	Schwarz criterion	8.651598
Log likelihood	-2509.019	Hannan-Quinn criter.	8.314250
F-statistic	4.287703	Durbin-Watson stat	1.989601
Prob(F-statistic)	0.000000		

Random Effect model result

Dependent Variable: SPF
Method: Panel EGLS (Cross-section random effects)
Date: 08/25/23 Time: 15:27
Sample: 2013 2022
Periods included: 10
Cross-sections included: 71
Total panel (balanced) observations: 710
Swamy and Arora estimator of component variances

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	-2.126423	6.193088	-0.343354	0.7314
RDR	0.465841	2.784096	0.167322	0.8672
ITPR	0.122933	1.273275	0.096549	0.9231
PTR	3.623636	15.32129	0.236510	0.8131
FIR	-14.81113	6.927954	-2.137880	0.0329
FL	-0.111814	0.016642	-6.718964	0.0000
FS	1.581498	0.844250	1.873258	0.0614
OVS	0.013587	0.037403	0.363269	0.7165

Effects Specification		S.D.	Rho
Cross-section random		6.340986	0.1989
Idiosyncratic random		12.72666	0.8011

Weighted Statistics			
R-squared	0.071595	Mean dependent var	1.259069
Adjusted R-squared	0.062337	S.D. dependent var	13.13101
S.E. of regression	12.71515	Sum squared resid	113496.0
F-statistic	7.733597	Durbin-Watson stat	1.461632
Prob(F-statistic)	0.000000		

Unweighted Statistics			
-----------------------	--	--	--

R-squared	0.125909	Mean dependent var	2.349597
Sum squared resid	139837.9	Durbin-Watson stat	1.186298

Random Effect model result WITH AR(1)

Dependent Variable: SPF
Method: Panel EGLS (Cross-section random effects)
Date: 08/25/23 Time: 15:28
Sample (adjusted): 2014 2022
Periods included: 9
Cross-sections included: 71
Total panel (balanced) observations: 639
Swamy and Arora estimator of component variances

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	-7.720124	4.528165	-1.704912	0.0887
RDR	-0.175949	2.321217	-0.075801	0.9396
ITPR	0.205140	1.050885	0.195207	0.8453
PTR	8.492964	14.31476	0.593301	0.5532
FIR	-9.348289	5.287833	-1.767887	0.0776
FL	-0.055032	0.012921	-4.259176	0.0000
FS	1.675355	0.633517	2.644529	0.0084
OWS	0.010114	0.025574	0.395483	0.6926
SPF(-1)	0.398354	0.036707	10.85213	0.0000

Effects Specification		S.D.	Rho
Cross-section random		0.000000	0.0000
Idiosyncratic random		13.11194	1.0000

Weighted Statistics			
R-squared	0.260284	Mean dependent var	2.006911
Adjusted R-squared	0.250890	S.D. dependent var	15.52502
S.E. of regression	13.43708	Sum squared resid	113749.8
F-statistic	27.70971	Durbin-Watson stat	2.144062
Prob(F-statistic)	0.000000		

Unweighted Statistics			
R-squared	0.260284	Mean dependent var	2.006911
Sum squared resid	113749.8	Durbin-Watson stat	2.144062

HAUSMAN TEST

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	97.104949	8	0.0000

** WARNING: estimated cross-section random effects variance is zero.

Cross-section random effects test comparisons:

Variable	Fixed	Random	Var(Diff.)	Prob.
RDR	-0.615503	-0.175949	9.785273	0.8883
ITPR	2.030174	0.205140	2.250698	0.2238
PTR	6.058890	8.492964	81.486230	0.7874
FIR	-9.896271	-9.348289	61.777517	0.9444
FL	-0.093971	-0.055032	0.000615	0.1165
FS	0.145478	1.675355	2.804619	0.3610
OWS	0.010797	0.010114	0.004169	0.9916
SPF(-1)	0.169157	0.398354	0.000588	0.0000

Cross-section random effects test equation:

Dependent Variable: SPF

Method: Panel Least Squares

Date: 08/25/23 Time: 15:30

Sample (adjusted): 2014 2022

Periods included: 9

Cross-sections included: 71

Total panel (balanced) observations: 639

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	5.421152	13.25082	0.409118	0.6826
RDR	-0.615503	3.895295	-0.158012	0.8745
ITPR	2.030174	1.831682	1.108366	0.2682
PTR	6.058890	16.92331	0.358020	0.7205
FIR	-9.896271	9.473051	-1.044676	0.2966
FL	-0.093971	0.027972	-3.359493	0.0008
FS	0.145478	1.790520	0.081249	0.9353
OWS	0.010797	0.069447	0.155470	0.8765
SPF(-1)	0.169157	0.043988	3.845535	0.0001

Effects Specification

Cross-section fixed (dummy variables)

R-squared	0.373910	Mean dependent var	2.006911
Adjusted R-squared	0.286705	S.D. dependent var	15.52502
S.E. of regression	13.11194	Akaike info criterion	8.100217
Sum squared resid	96276.81	Schwarz criterion	8.651598

Variance Inflation Factors

Date: 08/25/23 Time: 15:32

Included observations: 710

Variable	Coefficient Variance	Uncentered VIF	Centered VIF
C	19.77257	65.56521	NA
RDR	5.873789	1.057440	1.038568
ITPR	1.243596	1.949979	1.027896
PTR	275.2568	1.032127	1.013122
FL	0.000198	4.008966	1.132400
FS	0.360101	61.77864	1.081187
FIR	33.46249	1.107556	1.015783
OWS	0.000705	8.538403	1.056951
SPF(-1)	0.001242	1.161836	1.150676