

IMPACT OF AUDIT CLIENT ATTRIBUTES ON FIRM PERFORMANCE

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**BEING A PROJECT SUBMITTED TO THE DEPARTMENT OF
ACCOUNTING, FACULTY OF MANAGEMENT SCIENCES, UNIVERSITY OF
BENIN, BENIN CITY IN PARTIAL FUFILLMENT OF THE REQUIREMENTS
FOR THE AWARD OF BACHELOR OF SCIENCE (B.Sc.) DEGREE IN
ACCOUNTING.**

APRIL, 2024.

CERTIFICATION

This is to certify that this project titled **“IMPACT OF AUDIT CLIENT ATTRIBUTES ON FIRM PERFORMANCE”** was carried out by **EBUTE DESTINY FAVOUR** with matriculation number **MGS1907630**. It has been read and recommended for acceptance in partial fulfilment of the requirement for the award of Bachelor of Science (B.Sc.) Degree in Accounting.

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DEDICATION

This work is dedicated to the almighty God who made me all I am and granted me the required strength, wisdom and knowledge needed in carrying out this work. I also specially dedicate this work to my amazing parents, Mr Christopher Ebute and Mrs. Veronica Marayen and my siblings for always believing in me and pushing me to be my best in my academic pursuit.

DECLARATION

IEBUTE DESTINY FAVOUR hereby declare that;

1. This project is based on a study undertaken by me in the department of Accounting, University of Benin, under the supervision of Dr. (Mrs.) B.A. Akadakpo.
2. This work has not been previously submitted for the award of degree elsewhere.
3. All ideas and views are products of my personal research and where the views are others have been expressed, they have been duly acknowledged.
4. Any litigation or liability arising from the work is wholly borne by me and not the supervisor.

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TABLE OF CONTENTS

| | |
|--|-----|
| COVER PAGE..... | i |
| TITLE PAGE | ii |
| CERTIFICATION | iii |
| DEDICATION | iv |
| DECLARATION | v |
| ACKNOWLEDGEMENTS..... | vi |
| ABSTRACT..... | xi |
| CHAPTER ONE | 1 |
| INTRODUCTION..... | 1 |
| 1.1 Background of the Study..... | 1 |
| 1.2 Statement of Research Problem..... | 3 |
| 1.3 Research questions | 5 |
| 1.4 Research objectives | 6 |
| 1.5 Research hypothesis | 6 |
| 1.6 Scope of the study | 7 |
| 1.7 Significance of the study | 8 |

| | |
|---|----|
| CHAPTER TWO..... | 9 |
| LITERATURE REVIEW | 9 |
| 2.1 Introduction | 9 |
| 2.2.1 Concept of audit client attributes | 9 |
| 2.1.2 Concept of Firm Performance | 14 |
| 2.2 Empirical Review | 15 |
| 2.2.1 Empirical findings of the effect of firm age on firm performance. | 15 |
| 2.2.2 Empirical findings of the effect of firm leverage on firm performance. | 17 |
| 2.2.3 Empirical findings of the effect of firm size on firm performance..... | 21 |
| 2.2.4 Empirical findings of the effect of board size on firm performance. | 23 |
| 2.3 Theoretical framework | 26 |
| 2.3.1 Agency theory | 26 |
| 2.3.2 Firm Life-cycle theory..... | 28 |
| 2.3.3 Pecking order theory..... | 30 |
| 2.4.4 Growth of the firm theory..... | 31 |
| CHAPTER THREE..... | 33 |
| METHODOLOGY | 33 |
| 3.1 Introduction | 33 |

| | |
|--|----|
| 3.2 Design..... | 33 |
| 3.3 Population of the study | 33 |
| 3.4 Sample Size | 33 |
| 3.5 Sources of Data..... | 35 |
| 3.6 Model Specification | 35 |
| 3.7 Variable Description and operationalization..... | 36 |
| 3.8 Method of Analysis..... | 37 |
| CHAPTER FOUR | 39 |
| DATA PRESENTATION, ANALYSIS AND INTERPRETATION | 39 |
| 4.1 Introduction | 39 |
| 4.2 Descriptive Statistics | 39 |
| 4.3 Correlation Analysis..... | 44 |
| 4.4 Regression Diagnostics..... | 46 |
| 4.4.1 Test of Heteroskedasticity | 46 |
| 4.4.2 Test of Serial Correlation..... | 48 |
| 4.4.3 Ramsey Reset Test | 50 |
| 4.4 Analysis of the Regression Result Table 7: Results of the Regression Analysis..... | 52 |
| 4.5 Test of Hypotheses | 53 |

| | |
|---|----|
| Hypothesis two: There is no significant relationship between firm age and firm performance. | 54 |
| 4.6 Discussion of Findings | 55 |
| CHAPTER FIVE..... | 57 |
| SUMMARY OF FINDINGS, RECOMMENDATION AND CONCLUSION | 57 |
| 5.1 Summary of Findings..... | 57 |
| 5.2 Conclusion | 59 |
| 5.3 Recommendations | 60 |
| BIBLIOGRAPHY | 61 |
| APPENDIX I | 67 |
| APPENDIX II..... | 71 |
| APPENDIX III | 72 |
| APPENDIX IV | 74 |
| APPENDIX V | 75 |
| APPENDIX VI | 76 |
| APPENDIX VII..... | 78 |
| APPENDIX VIII | 79 |

ABSTRACT

This study investigated the effect of audit client attributes on firm performance using panel data of twelve banks for the period 2015 – 2022. The variables considered were firm performance proxied by return on assets, firm size, firm age, firm leverage, and board size.

The study carried out a histogram normality test, Breusch-Pagan-Godfrey test of heteroskedasticity, Ramsey RESET model specification test, Serial correlation test, correlation analysis and regression analysis. The F-statistics indicated that all the explanatory variables taken together are statistically significant.

The regression result revealed that board size and firm age have a negative and insignificant influence on firm performance. The firm leverage maintains a positive and significant relationship with firm performance firms considered. The study recommended that firm managers should focus on optimizing firm leverage to improve their firm performance and the firm should ensure that the board size is well regulated.

CHAPTER ONE

INTRODUCTION

1.1 Background of the Study

All users of financial reports believe that firm performance is their top priority. According to Badriyah et al. (2015), firm performance is the best indicator of a company's sustainability, demonstrates the accomplishment of a company's objectives, and should be consistently maintained and improved to draw in investors and preserve positive relationships with other stakeholders. A company's performance in relation to the top players in the global market is crucial to its continued existence, survival, and ability to fend off serious competition. Lawal (2012) defined company performance as the capacity of the firms to provide results that are deemed acceptable. It is difficult to come up with a consensus definition of what constitutes a "good" firm performance when it comes to factors like staff count, sales growth, profitability, survival, and return on investment. In order to expand a firm's capacity to lower costs and raise overall profitability, it is crucial to develop cost-effective solutions to improve standards while simultaneously eliminating restraints on innovation, product refinement, and current initiatives (Uchida, 2014). The assessment of firm performance has gained increased importance in accounting literature due to its ability to distinguish a brand, maximise

shareholder wealth, and raise the market value of individual firms. Additionally, a company's performance raises its worth and that of the economy overall. Making the proper judgements to support economic business activity depends on a company's performance. Research on corporate financial performance has been conducted in the fields of accounting and business research in general. In turn, it serves as an implicit gauge for the survival of the organisation, since business practitioners view it as a critical indicator of efficacy and efficiency (Naser & Mokhtar, 2004).

The difficulty in defining and assessing company performance stems from the fact that it varies according on the kind of organisation, its goals, and the market in which it competes. According to one definition (Business Dictionary, 2013), it represents the financial effects of an organization's operations and policies, including value added, return on investment (ROI), return on assets (ROA), return on equity (ROE), and so on. Multiple criterion analysis is one of the many models for evaluating firm performance that have been established in the accounting literature. Accounting-based metrics like Return on Investment (ROI), Return on Assets (ROA), and Return on Equity (ROE) or market-based metrics like Tobin's Q and market return can be used to assess the performance of a company. According to researchers, market-based metrics represent long- term financial performance, whereas accounting-based metrics reflect short-term

financial performance. Both metrics are generally acknowledged as reliable markers of business performance. Both internal and external factors might have an impact on a company's performance. The management-controllable internal elements are what explain the variations in business performance amongst firms. These variables, which are also known as the "firm specific determinants," include things like the size, age, liquidity, leverage, asset classes, and listing status on foreign stock markets, in addition to corporate governance tools like the audit committee, board size, composition, and quality of the external and internal auditors. Conversely, external factors are those beyond of management's control that have an impact on business decisions. These external environmental elements, which include things like the economy and industry type, could have an impact on the firm's financial success. This study solely takes internal factors into account.

1.2 Statement of Research Problem

There is a need for audit client firms to choose appropriate firm attributes in order to improve their firm performance (Burja, 2011). The extant literature has evidenced the influence of audit client attributes (firm characteristics) on firm financial performance (Karuna, 2009). Audit client attributes are those incentive variables that may affect the firm's financial decisions. They play important role in determining the capital structure of

a firm and also enhance improvement in financial performance (Shehu, 2012), Managers can improve corporate financial performance by identifying those firm attributes that have a positive relationship with financial performance. Assessing audit client attributes that affect financial performance help in the allocation of the fund to appropriate firm attributes which can improve financial performance. Choosing appropriate firm attributes will enable managements to pay more attention to those firm attributes that play a major role in improving the firm's financial performance (Sinthupundaja & Chaladamrong, 2015).

Several studies have been carried out by scholar and researchers on the effect of audit client attributes on firm performance this study include: Egbuhuzor & Wokeh (2022); Susanna (2023); Dona et al., (2021); and Adegboyega et al., (2019). Most of this work focused on the effect of audit firm attributes on performance of firms in the financial sectors. But little or no attention has been given by researchers to the impact of audit client attributes on performance of firm in the consumer goods sector. Therefore, this study will focus mainly on the impact of audit client attributes on firm performance in consumer goods sector Nigeria.

1.3 Research Questions

As a result of the above statement of problem, the following research questions were formulated:

- i. To what extent does audit client size affect firm performance?
- ii. Is there a significant relationship between audit client age and the firm performance?
- iii. What is the relationship between audit client leverage and firm performance?
- iv. To what extent does audit client board size affect the firm performance?

1.4 Research Objectives

The main objective of this study is to explore the relationship between Audit Client Attributes and firm performance in Nigeria. The specific objectives are to:

- v. ascertain the effect of firm size on firm performance;
- vi. investigate the relationship between firm age and firm performance;
- vii. determine the relationship between firm leverage and firm performance; and
- viii. ascertain the effect of firm board size of firm performance.

1.5 Research Hypothesis

This study investigates the impact of audit client attributes on firm performance. Therefore, the research hypothesis for this study stated in null form are as follows:

- ix. H₀: Firm size has no significant influence on firm performance.
- x. H₀: There is no significant relationship between firm age and firm performance.
- xi. H₀: There is no significant relationship between firm leverage and firm performance.
- xii. H₀: firm board size has no significant influence on firm performance.

1.6 Scope of the study

This study focuses on the impact of audit client attributes on firm performance. This study focuses mainly on the 21 firms in consumer goods sector of the Nigeria Exchange Group which serve as the population of the study. The purposive sampling technique was used to select 14 consumer goods firms from the total population. The 14 firms are selected base on the availability of their annual report for the year considered by the study. This study covers a period of 9 years between 2015 to 2023. The panel data will be used for the purpose of the study, and the data was derived from the audited annual report of the selected firms, which is a statutory requirement of all listed companies in Nigeria.

1.7 Significance of the study

This study is highly relevant and significant as it seeks to critically analyze the impact of audit client attributes on the successful performance of the firm. This study considers audit client attributes such as firm size, firm age, firm leverage, and firm board size, which are unique features of firms in Nigeria. This study is relevant as it covers a period of eight years compared to previous studies that covered fewer years. It equally seeks to contribute to the already existing body of knowledge on the impact of audit client attributes on firm performance. Hence, this study aims to serve as resource material for future researchers, students or scholars who intend to delve into research on similar subject topic or field. Useful information and policy recommendations that will assist managers and firm boards in decision making process are made available due to the rigorous research work carried out in this study.

CHAPTER TWO

LITERATURE REVIEW

2.1 Introduction

This section seeks to explain key concepts used in the study, particularly Audit client attributes and Firm Performance.

2.2.1 Concept of Audit Client Attributes

The majority of the attributes of an audit client are directly controlled by audit client management. According to Nkundabanyanga et al. (2019), these are firm features that set one audit client apart from another in terms of its operations and functions. According to Irom et al. (2018), audit client qualities are specific firm characteristics that either positively or negatively affect a firm's operations. Among these traits are capital, dividends, age, size, market share, leverage, liquidity, and firm age. Similar to this, Siyanbola et al. (2020) described audit customer characteristics as those that correspond with a business firm's size, age, and profitability. Firm characteristics that affect the performance and success of the business firm include internal structure, unique organisational profiles, and resource-based strategies, according to Oluwatayo et al. (2019). The study employed many firm characteristics factors, such as firm size, firm age, firm leverage, and firm board size.

According to Riyanto (2008), firm size refers to the total number of employees, revenue, or market share of a firm. Brigham and Houston (2012) define company size as the average net sales generated by the company over several years. The size of a firm can vary widely, from small businesses with only a few employees to large corporations with thousands of employees and billions of naira revenue. However, small businesses may be more nimble and able to respond more swiftly to market developments. Firm size influences audit quality (Dechow & Ge, 2006).

Firm size is typically measured by the firm's asset size (Saheed, 2013). A major firm is required to have a well-structured accounting and internal control department, as well as the ability to hire professionals to provide credibility to the financial reporting process (Chalaki, Didar, & Riahezhad, 2012). A company's size can be determined by a number of factors, such as sales, assets, personnel, and perks, among others. For this study, the natural logarithm of the firm's total assets is used to calculate the firm's size.

The amount of time a firm has been in business since its founding is known as its "firm age." It's a crucial component to take into account while assessing the success of the company. A company's reputation, experience, and industry understanding can all be impacted by its age. Older businesses could have a history of success, well-established networks, and customer bases. Over time, they might have developed insightful contacts

in the sector. New businesses could provide new insights, creative ideas, and the flexibility to adjust to shifting market conditions.

Any strategy that involves borrowing money to make investments or purchases with the expectation that future returns would exceed the cost of borrowing—also known as gearing or firm leverage—is referred to as gearing (Kat, 2023). Firm leverage, according to Masturah & Keshnimder (2021), is the degree to which a company depends on debt. The extent to which a business employs fixed-income assets, such debt and preferred equity, is another definition of firm leverage. In the financial markets, leverage happens when a borrower buys an asset with borrowed money in the hopes of earning a higher return than the loan's initial cost (Adenugba et al., 2016). As a result, financial leverage is an investment strategy that encourages business growth and expansion. Financial leverage is the process of borrowing debt to increase one's asset base. Leverage is a means of obtaining a higher rate of return on invested capital (Demiraj et al., 2023). Using too much financial leverage increases the risk of failure because it becomes more difficult to service the loan. Leverage ratios are financial ratios that indicate the amount of debt that a business entity or business has issued.

The leverage ratio, sometimes referred to as the solvency ratio, is a financial metric that assesses a company's capacity to pay down its debt or long-term

commitments. A liability or debt having a duration of more than a year is referred to as long-term debt. The leverage ratio shows how much debt the company has overall compared to its equity or assets. In other words, this ratio illustrates the proportion of the company's assets held by shareholders as opposed to creditors. If a company's total asset value is less than the total asset value of its creditors, it is considered to have a high level of leverage. The ratio of debt to assets is a commonly used measure of financial leverage.

Gains can be doubled through leverage (Brigham, 2018). However, losses are also compounded, so there's a chance that using leverage may cost you money if financing expenses end up being more than asset income or if the asset loses value. The balance between debt and equity agency expenses (Jensen & Meckling, 1976). Leverage, on the other hand, describes the percentage of debt financing in a company's overall capital structure. It is thought that a company's value rises when its debt and equity capital are properly balanced. Agency theory makes this connection clear. Conventional financial statements provide highly leveraged companies with an incentive to voluntarily raise the extent of corporate reporting to stakeholders (Jensen & Meckling, 1976).

An executive committee known as the board of directors, or simply the "board," is responsible for jointly supervising the operations of an organisation. This kind of organisation can be a government agency, a business, or another nonprofit. The

organization's bylaws and constitution, as well as any applicable government regulations (such as the corporate law of the jurisdiction), specify the authority, responsibility, and powers of the board of directors. These authorities may specify the number of members of the board, how they are to be chosen, and how often they are to meet.

Kandudu and Samaila (2017) define board size as the total number of directors on the board; Cheng (2018) states that the ideal board size should comprise both executive and non- executive directors.

It is generally accepted that limiting board size to a certain extent enhances a company's performance because larger boards' superior monitoring benefits are mostly offset by their larger groups' worse decision-making and communication capabilities. For the purpose of running the business, the board's composition must be effective. Because every country has a unique culture, it has been observed that board sizes range between them. This implies that there isn't a universally accepted ideal or standard board size. In their research on corporate governance in European companies, Farooq et al. (2018) discovered that companies in the UK, Switzerland, and Holland typically have small boards, whereas companies in Belgium, France, Spain, and Germany typically have large boards (thirteen to nineteen members). While Kantudu and Samaila (2017) favoured

having eight to eleven people on the board, Bansal and Sharma (2016) argued that the number of board members should be between eight and nine. According to Andreou, Antoniou, Horton, and Louca (2016), boards with more than seven or eight members are unlikely to be productive; these opinions go counter to theirs. In actuality, there isn't a perfect board size that works for every organisation; instead, the right board size should be determined by how well the board functions as a unit.

2.1.2 Concept of Firm Performance

The term "firm performance" refers to the overall performance of an organization, which includes the production of goods and services, the operation of the firm's various units, the performance of its employees, and the outcomes of their work. It can have a variety of meanings depending on the context. Simultaneously, the company's success can be seen in a wider light as a component of the company's business development (UKessay, 2018). The ability of a company to efficiently use its resources to produce financial and operational results is known as firm performance. It serves as an indicator of how well the business is doing in reaching its targets (Scispace, 2023).

Erikie and Osagie (2017) define firm performance as the assessment of the results of an organization's actions and strategies. Performance of the company is primarily assessed based on how well its operations run. Positive organisational performance is correlated

with the effectiveness of the firm's operations; conversely, low employee performance and operational efficiency translate into subpar firm performance (Petros et al., 2020). Consequently, as human resources are a valuable marketing tool for any company in the modern business world, employee performance plays a crucial role in the success of the company. As a result, the effectiveness of employee performance continuously influences the performance of the company.

2.2 Empirical Review

2.2.1 Empirical findings of the effect of firm age on firm performance.

Rwakihembo et al. (2023) evaluated the association between company age and the financial performance of private limited enterprises in Uganda. The study used a positivist paradigm with a cross-sectional design. A structured self-administered questionnaire was used to collect quantitative data from accountants, auditors, CEOs, and board members who were purposefully chosen. Three hundred ninety-four private companies from Central and Western Uganda were sampled. The study found a positive correlation between firm age and financial performance, with firm age accounting for 14% of the variation in financial performance among Ugandan private limited companies. Pearson correlation and standard regression analysis were used to assess the relationship. In order to validate the findings of the

preceding study, Kurniawan et al. (2022) investigated the variations in business performances depending on company size, company age, and the generation of the leaders of the organisations. 213 businesses of varying sizes provided the data that were assembled. There were four types of firms: small, big, big-medium, small, and micro. The Analysis of Variances (ANOVA) was used to examine the potential existence of significant changes in business performance based on the size of the company, the age, and the generation of the leaders. The firm's age, size, and leadership generation do not significantly affect how well the company performs, according to the ANOVA test. The study makes sense of earlier research that claimed there were notable variations in those three independent factors in relation to company success. Additionally, the study finds no discernible differences between the CEOs' generations with regard to the size of the organisation. Al Nawaiseh (2020) used the financial information of twenty-two Jordanian insurance companies that are listed on the Amman Security Exchange (ASE) during the years 2008–2017 to investigate the impact of a firm's age, size, and growth on its profitability. They stand for 95.2% of insurance companies. The study made use of secondary data from insurance companies that was posted on both the ASE and the company's website. Standard deviations and the mean were employed in the study to characterise the attributes of the variables. The study employed simple regression

analysis to test its hypotheses. Easy. To find out if any variable has a normal distribution, run the skewness test on it. According to the study, the size, growth, and age of the insurance company have no discernible impact on its profitability.

Pervan et al. (2017) investigated how age affects business performance in the Croatian food industry. The study conducted a dynamic panel analysis on a sample of 956 enterprises active in the Croatian food industry between 2005 and 2014. The results of the investigation revealed that ageing has a detrimental impact on company performance. As companies age, the benefits of their accumulated knowledge in all critical aspects of the business (technology, supply channels, customer relations, human capital, and financing costs) are outweighed by their inertia, inflexibility, and osseous accumulation of rules, routines, and organisational structure. In addition to business age, size, liquidity, and solvency are firm-specific factors influencing profitability in the Croatian food industry.

2.2.2 Empirical findings of the effect of firm leverage on firm performance.

In 2023, Wiyarni et al. looked on how financial leverage affected business performance. This study uses real estate companies that registered on the Jakarta Stock Exchange in 2018 and 2019 as samples. Purposive sampling was used in this investigation to get 40 samples. Two measures of leverage are the debt-to-asset ratio and

the debt-to-equity ratio. While business size is determined by using the logarithm natural (Ln) of total assets as a moderating variable, return on assets (ROA) is employed to quantify firm performance. The results of this study showed that neither DAR nor DER, either used together or separately, significantly affected corporate performance.

Hassan (2022) looked at the nature of the connection between the financial performance of a few selected Nigerian listed consumer goods companies and their financial leverage. The overall profitability, return on equity, and return on assets of Nigerian consumer products companies explain the degree of financial leverage. The experimental research design was the one employed for this investigation. The companies listed on the Nigeria Stock Exchange between 2010 and 2020 are the main subject of the study. The study used both inferential and descriptive statistics as data analysis methodologies. The study discovered that a company's return on assets is adversely affected by any rise in leverage in its debt capital mix. The study revealed that while a greater debt to equity mix had a substantial negative influence on the firms' returns on equity, debt to finance of the chosen firms produced a favourable return on assets for the firms. Anifowose et al. (2020) investigated the impact of financial leverage on business performance in a study of listed pharmaceutical enterprises in Nigeria. Using annual panel data for a 16-year period spanning 2003 to 2018, econometric approaches are

applied. The empirical data reveal that the Debt Equity Ratio (DER) has a positive association, whilst the Debt Ratio (DR) and Interest Coverage Ratio (ICR) have a negative relationship with the Return on Assets (ROA) and Return on Equity (ROE). This research shows that financial leverage has a major impact on the profitability and efficiency of corporate performance.

Edore and Ujuju (2020) researched the effect of financial leverage on business value in Nigeria, attempting to discover if debt as a component of capital structure has a positive or negative impact on firm value in Nigeria. The study's independent variables include long-term debts, medium-term debts, and short-term debts, with the firm's worth as the dependent variable. Three

(3) hypotheses were developed for the investigation. The first hypothesis tried to determine whether there are substantial correlations between enterprises' long-term loans and total organisational value. The second step is to determine whether medium-term borrowing has a substantial effect on the value of the selected firms, and finally, whether short-term indebtedness affect the value of Nigerian firms. The hypotheses were tested using the Pearson correlation coefficient and an Ordinary Least Squares (OLS) regression analysis. The study used secondary sources of information to carry out the analysis. The findings of the study revealed that long-term debt has a considerable

beneficial effect on the value of our sampled companies' performance. Medium-term and short-term indebtedness had a statistically significant favourable impact on the value of our sampled quoted companies. The data from this study corroborated this. Positive effect suggests that improvements in the value of one variable are generally associated with increases in the value of the selected firms. The researcher also discovered that using leverage increases the worth of a corporation.

Chen (2020) investigated the effects of financial leverage on corporate performance. The study employed a sample of Chinese listed companies from 2010 to 2019 to investigate the influence of financial leverage on firm performance, as measured by return on assets (ROA). Using OLS and 2SLS methods for linear regression, the study discovered that the association between financial leverage and company performance is considerably unfavourable, but operating leverage positively moderates this relationship. Furthermore, additional research revealed that the moderating influence of operating leverage may be minor in the real estate market.

Ogiriki et al. (2018) investigated the influence of financial leverage on the corporate performance of Nigerian enterprises from 1999 to 2016. Secondary data were sourced and gathered from annual reports and accounts for various topics. The study employed long-term debt as the dependent variable to assess financial leverage, while

return on asset and return on equity were used as explanatory variables to measure corporate performance of Nigerian enterprises. Hypotheses were developed and tested using the Ordinary Least Squares (OLS) econometric approach. The study found that return on assets had a favourable and significant effect on long- term debt of Nigerian enterprises. Return on equity had a positive and considerable effect on Nigerian enterprises' long-term debt. According to the coefficient of determination, changes in corporate performance indicators in Nigeria account for around 36% of the variation in long-term debt. The study also found that financial leverage has a major impact on Nigerian enterprises' corporate performance.

2.2.3 Empirical findings of the effect of firm size on firm performance.

Okunbo and Oghuvwu (2019) examined the impact of business age and size on entrepreneurial performance. The study used descriptive methods. The assumptions were tested using the ordinary least square regression approach, which was based on primary data from a purposive sampling of 100 small and medium businesses. The study discovered a positive and significant correlation between firm age, size, and entrepreneurial performance. Based on these findings, we conclude that entrepreneurial business age and size have a favourable and significant impact on firm performance.

Oyelade (2019) investigated the impact of firm size on business performance in

Nigeria through a comparative study of selected enterprises in Nigeria's building industry using annual data from 2004 to 2017. The study technique used was panel analysis. Based on the financial measurement of performance using both return on assets (ROA) and return on equity (ROE), two of the four variables used as indicators of size were statistically significant in determining return on assets, namely total sales and age of firm since incorporation. Total sales has a positive effect on return on assets, whereas age of firm since incorporation has a negative effect on return. Moreover, it was shown that the single factor influencing return on equity was leverage. Two of the four variables used as indicators of size—total sales and the age of the firm since incorporation—were statistically significant in determining output per labour. These two variables have a positive impact on output per labour, while leverage has a significant negative impact on output per labour. These findings are based on productivity measurement of performance of the selected firms in the building industry in Nigeria using both output per labour and output per capital.

Bukit et al. (2017) investigated the effects of business performance, firm size, and debt monitoring on firm value under two conditions: high earnings management and low earnings management. A sample of manufacturing businesses was collected from the Indonesia Stock Exchange list between 2014 and 2016. Multiple regression analysis

reveals that high earnings management methods may reduce a firm's value, even if the company claimed strong performance. This study also discovered that earnings management techniques moderated the favourable relationship between business size and firm value.

2.2.4 Empirical findings of the effect of board size on firm performance.

Egiyi (2022) investigates the association between board size and business performance in Nigeria's publicly traded companies. The study conducted ex post facto research on data from 20 publicly traded industrial businesses. The data, which spans the years 2010 to 2020, was analysed with System GMM. Profit margins and return on assets were utilised to assess company performance. The study found that board size has a considerable impact on a company's profitability. The impact of board size on the financial performance of companies listed on the Indonesian Stock Exchange between 2014 and 2018 was examined by Juanda & Jalaluddin (2021). Multiple linear regression is used in the research methodology. Return on assets (ROA) is a metric used to assess a company's performance. The study's findings indicate that the size of the board has no bearing on how well a company performs.

The impact of board size on the financial performance of listed firms in the East African Community (EAC) was investigated by Namanya et al. in 2021. The study used

non-probability sampling in a quantitative analysis under the positivist paradigm to choose 42 businesses listed between 2008 and 2014 that were part of the EAC's stock markets. The development of the hypothesis was based on secondary data from websites, public yearly reports by the corporation, and databases. To produce, organise, and analyse the data used in the descriptive statistics, correlation, and regression outputs, Microsoft Excel and SPSS were utilised. The regression analysis's findings were not conclusive. As a result, the association between board size and firm performance—which is influenced by market capitalization and total assets—could not be generalised by the study.

Lakatos (2020) examined how a company's board size affected its operational and market performance at the biggest listed non-financial, non-public utility companies in East and Central Europe. The effects of board size are a topic of controversy in the literature. The agency theory supports a negative influence on company value, whereas the resource dependency hypothesis supports a favourable benefit. Rarely is this subject examined in two-tiered corporate governance frameworks. The size of the supervisory and management boards was evaluated in the study between 2007 and 2016. According to the findings, the size of the observed company has a significant impact on the management board's impact. An expansion of the management board has a significant

positive effect on firm performance in both fixed effects and GMM-type dynamic panel regression models that use Tobin's Q, market-to-book ratio, total shareholder value, and ROA as firm performance measures. For larger firms, however, the effect is significantly negative. Furthermore, in all dynamic panel regression models, the ratio of outside directors increases positively with the firm's success; in Tobin's Q and market-to-book ratio models, this effect is much more pronounced.

The impact of corporate governance on the performance of Nigerian firms was studied by Ogunsanwo (2019). This study aims to determine the impact of ownership structure on firm performance, the extent to which board size affects performance, the relationship between board independence and performance, and the relationship between board gender diversity and performance for a five-year period, from 2013 to 2017. The chosen companies' annual reports and statements of financial accounts served as the source of the data. The least squares dummy variable (LSDV), random effect model, and Hausman tests were used in the panel data econometric approach. In order to represent corporate governance, the model included ownership structure (OWNSTR), board independence (BIND), board size (BSIZE), and board gender diversity (BGD) as explanatory factors. Return on asset (ROA) and return on equity (ROE) were used as the dependent variables. According to the study, return on asset is positively impacted by

board independence (BIND), negatively by ownership structure (OWNSTR), board size (BSIZE), and board gender diversity (BGD). The study also showed that return on equity is significantly and favourably impacted by all of the explanatory factors, including ownership structure (OWNSTR), board gender diversity (BGD), board size (BSIZE), and board independence (BIND).

2.3 Theoretical Framework

Several theories have been proposed in the accounting and finance literature to explain the relationship between Audit Client Attributes and Firm Performance. Agency theory, Pecking Order theory, Firm Life Cycle Theory, and Growth of the Firm Theory are a few of these theories.

2.3.1 Agency Theory

In 1976, Jensen and Meckling provided a clear explanation of this idea. This idea clarified how the size of the board of directors influences the performance of the firm as an audit client attribute. According to this notion, a board comprising a greater number of directors leads to

improved corporate performance. A significant conclusion of the agency theory is that as large organisations expand in size, shareholders lose their effective control over them (Muth & Donaldson, 1998). The first leaders' retirement is to blame for this. When the company's original leaders retire, their shareholdings are distributed, and insiders take over as the company's daily managers. Professional managers progressively acquire effective control because they are the only ones with the knowledge required to run the business (Muth & Donaldson, 1998). This procedure creates a division between ownership and control, giving managers more authority and possibly more freedom to follow their own objectives. The board of directors is in charge of representing shareholders' interests when they are unable to participate in management (Rens, 2019). When managers prioritise their personal goals over the success of the company, the interests of shareholders may be jeopardised. As a result, it is frequently maintained that the board of directors may be viewed as speaking for the company's numerous stakeholders and shareholders when it comes to overseeing management behaviour and performance (Kalsie & Shrivastav, 2016). As a representation, the board of directors' job is to lessen issues arising from the division of ownership and control by making sure that management' decisions are in the best interests of shareholders. Directors are supposed to take action, such as removing managers, to improve business performance, if necessary,

for example, when the strategies of the current managers are ineffective (Rens, 2019). A larger board of directors results in lower agency expenses since it has more members who are dedicated to overseeing and regulating managers' performance (Rens, 2019). Thus, agency theory suggests that board size, a property of audit clients, has a beneficial impact on firm performance (Kalsie & Shrivastav, 2016).

2.3.2 Firm Life-Cycle Theory

Mueller D. came up with the firm life-cycle theory in 1972 (Can et al., 2023). This idea clarified how firm performance is determined by firm age as an audit firm attribute. According to the theory, organisations go through four life-cycle stages: start-up, growth, maturity, and stagnation. Each stage has unique features. This theory is similar to that of products (Ryu & Won, 2022). According to the hypothesis, small businesses that are just getting started or are having trouble because of their high cost of capital (Matemilola et al., 2019).. Compared to companies in the birth stage, those in the growth stage are bigger and older, they invest heavily and for an extended period of time, and their sales growth rates are higher than those of mature and declining companies. Compared to those at the birth stage, they have reduced expenses associated with raising outside financing (Akbar et al., 2019). In this stage, businesses create formal structures, diversify and innovate, build unique competences, focus on quick sales development,

give middle managers considerable responsibility, and increase the range of products they offer (Habib & Hasan, 2019). On the other hand, established companies see consistent growth in the market and sales and invest less than expanding companies. The hypothesis goes on to say that older businesses can generate higher returns since they have more expertise and networks of connections (da Silva Roma et al., 2020). Conversely, because of outside obstacles, businesses face stagnation and diminishing returns during the decline period. When profitability drops, they attempt to increase their short-term performance by reviving or shutting down business lines (Yang et al., 2022). Furthermore, due to their more bureaucratic organisational structure, older businesses are less able to react quickly to adverse market conditions that could have a detrimental impact on returns (Matemilola et al., 2019). Since innovation is currently waning, the company would rather keep its prices competitive and avoid making big changes in order to maximise earnings.

At this point, businesses are cautious and want to hold onto their accomplishments. Compared to earlier phases, managers now take less risks and exhibit a less inventive and proactive mindset (Akbar et al., 2019). It's unclear if the various stages of the business life cycle are covered by the firm life-cycle theory, even though it doesn't apply to Nigerian firms. As a result, the study examines the impact of audit client

age as a characteristic on audit client performance and company performance.

2.3.3 Pecking Order Theory

This hypothesis is used to describe how a firm's performance is impacted by its financial leverage. This hypothesis, which was first put forth by Donaldson in 1961 and then revised by Myers in 1984, contends that businesses evaluate financing sources according to a hierarchy. The Corporate Finance Institute (CFI, 2021) states that the theory attempts to quantify the expenses associated with asymmetric information. It claims that businesses follow the law of least effort when allocating their funding, giving internal financing priority over stock and raising equity as a last resort (Ashok, 2010). Thus, internal funding is used first, followed by the issuance of debt when it runs out, then equity when it makes no sense to issue debt at all. According to the notion, businesses would rather finance new investment internally first because it is thought to be the least expensive option. Debt is considered the second most expensive option, and issuing new equity is the most expensive option overall. As per this idea, firms follow a hierarchy of funding sources and favour debt over equity when it comes to external financing (equity would imply issuing shares which means 'bringing external ownership' into the company). When internal financing is available, it is favoured. Thus, a company's choice of loan instrument may indicate that it requires outside funding (Zhao et al., 2008).

According to Abubakar (2017), a corporation would prefer to raise money internally first, then raise money through external debt, and lastly raise money through external equity. The idea clarified why, in the event of adverse selection regarding a company's worth, debt is regarded as the best alternative. Because of its flexibility, debt financing has been claimed to be more affordable, appealing, and profitable. Because of this, the pecking theory predicts that leverage and company performance will be inversely correlated.

2.4.4 Growth of the Firm Theory

This notion was put forth by Penrose (1959), who provided enduring guidelines for how quickly businesses might expand profitably and efficiently. A theory of efficient resource management, prospects for productivity, and diversification strategy is offered by Penrose (1959). In support of a resource-based theory of competitive advantage, he offers an explanatory logic to disentangle the causal relationships between resources, capabilities, and competitive advantage. He goes on to say that businesses can generate economic value through resource management that is creative and productive rather than just having resources. This suggests that a company with vast resources does not always have greater profitability than a company with limited resources. Differential uses of resources lead to variations in financial performance and productive prospects. Managers' perceptions of the special productive potential available for their firms are influenced by

their interactions with one another and other resources within the company. Managers play a pivotal role in transforming a company's resources into capabilities and novel applications for its products. New resource combinations foster innovation and the production of economic value in the spirit of dynamic capacities. The factors that influence a firm's growth rate and direction are explained by Penrose (1959). He thinks that the traits of a corporation propel its expansion. The availability of business attributes, such as highly skilled technical and management personnel, acts as a growth rate bottleneck for a company at a given moment. The direction of the company's growth is determined by its current knowledge bases and underutilised resources. In addition to explaining why and how these drivers affect the pace and direction of growth, Penrose (1959) also points out that disregarding these elements can result in inefficiencies and a loss of competitive advantage. A thorough description of the relationship between firm characteristics and firm level performance may be found in Penrose (1959). The decisions that result in the best development pattern have an immediate impact on economic rents. According to the growth of the firm hypothesis, firms with characteristics like appropriate size, moderate board size, and effective leverage level should consequently outperform their rivals. The study's concepts—audit client qualities and financial performance—are explained by this idea.

CHAPTER THREE

METHODOLOGY

3.1 Introduction

Effective design is built on accurate information. Therefore, the quality of each decision is determined by the quality of the data gathered. In keeping with this, this chapter focuses on the process of data gathering and collection. Attempts are made to discuss the procedures used.

3.2 Design

An ex post facto research design was chosen for this investigation. Research of this kind is done after the fact, using data that has already been collected (Saunders, 2012). This is because the 13 listed banks' annual reports on the Nigeria Stock Exchange will provide secondary data that is uncontrollable and unmanageable.

3.3 Population of the study

The population of the study consist of 21 firms in the consumer goods sector of the Nigeria Exchange Group (NGX, 2024).

3.4 Sample Size

The purposive sampling technique was used to select 14 consumer goods firms from the total population. The study focuses on consumer goods sector because this sector

has received little or no attention by researchers on the impact of audit client attributes on performance of firm. The 14 firm was selected base on the availability of their annual report for the nine years considered (2015-22) in this study. The selected firms are:

| S/N | Name of Companies |
|-----|-------------------------------|
| 1. | Cadbury Nigeria PLC |
| 2. | Champion Brew. PLC. |
| 3. | Dangote Sugar Refinery PLC |
| 4. | Guinness Nig. PLC |
| 5. | Honey Well Mill PLC |
| 6. | Nestle Nigeria PLC |
| 7. | PZ Cussons Nig. PLC |
| 8. | Unilever Nig. PLC |
| 9. | Vitaform Nig. PLC |
| 10. | Nigerian Brew. PLC. |
| 11. | N NIG. Flour Mills PLC. |
| 12. | Nascon Allied Industries PLC. |
| 13. | MCNICHOLS PLC. |
| 14. | Union Dicon Salt OLC. |

Source: Researcher’s compilation (2024)

3.5 Sources of Data

The study uses quantitative data obtained from secondary sources in order to meet the stated research objectives. The information will be gathered from the yearly reports of 14 companies that are listed on the Nigerian Exchange Group as consumer products. Thus, during the study period (2015-2022), the necessary data was taken from the audited financial reports of the chosen banks.

3.6 Model Specification

The econometric model of Hasan and Hussainey (2022) was adapted for this study. Therefore, this model was modified with the variables considered in this study which are firm size, firm age, firm leverage and firm board size as the independent variables and return on assets as the dependent variable. The model to be used is explicitly stated as follows:

The model is described as follows:

$$ROA_{it} = \beta_0 + \beta_1 Fsize_{it} + \beta_2 Fage_{it} + \beta_3 Flev_{it} + \beta_4 Bsize_{it} + \mu_{it} \text{-----}(1)$$

Where:

ROA – Return on Assets Fsize – Firm Size

Fage – Firm age Flev – Firm Leverage B-size – Board size μ - Error Terms

t – time (2015 – 2022)

$\beta_0, \beta_1, \beta_2, \beta_3, \beta_4$ are parameters of the variables which are to be estimated through regression technique.

Apriori Expectations:

The following out comes are expected to occur after running the regression analysis: $B1-4 > 0$: It is expected that all firm attributes proxies should have a positive relationship with firm performance.

3.7 Variable Description and Operationalization

The descriptions alongside measurement of studied variables are as given in the table below:

Table 3.1

| Variables | Symbol | Type | Operationalized | Source |
|------------------|---------------|-------------|--|------------------------------------|
| Return on Assets | ROA | Dependent | Ratio of net income (profit) to total assets at the end of the year. | Alhadab and Clacher, 2017 |
| Firm Size | Fsize | Independent | Natural logarithm of the firm total assets. | Kartikasari and Merianti (2016) |
| Firm Age | Fage | Independent | Year of analyze - Year of establishment | Yameen, at.al (2019) |
| Firm Leverage | Flev | Independent | $\frac{Total Liabilities}{Total Assets}$ | Abdulazeez, Ndibe and Mercy (2016) |
| Board size | Bsize | Independent | Number of Board members | Gitman (2015), Lasisi et al (2018) |

Source: Researcher's Compilation (2024)

3.8 Method of Analysis.

The need to estimate the effect of corporate governance on financial reporting quality form the specific objectives of this study. Consequently, the following estimation techniques are adopted with tests carried out to ensure that the key objectives are achieved. Preliminary tests and descriptive statistics, Autocorrelation Test, Heteroskedasticity Test, Normality Test, Correlation Analysis and Panel Data analysis.

Preliminary Tests and Descriptive Statistics: The analysis begins with a preliminary test to ascertain the normality of the data understudy. This is of essence in order to determine whether the data follows a normal distribution curve. Attention would be given to the Jacque Berra and Standard deviation as they can give a quick overview of the normality of the variables.

Autocorrelation Test: This test is employed to check that successive values of the error term are not autocorrelated, that is, they are independent from the values which was obtained in any previous period. The Durbin-Watson (DW) test for autocorrelation as well as the Breush-Godfrey Serial Correlation LM Test is employed in this study. The decision criteria would be to accept the null hypothesis of the absence of problem of autocorrelation if the p-value is greater than 5 percent level of significance otherwise the null hypotheses would be rejected.

Heteroskedasticity Test: This test is used to ascertain whether or not the disturbance term has equal variance or spread over time. The Breusch-Pagan-Godfrey test is employed for this purpose. The decision criteria would be to accept the null hypothesis of the presence of problem of multicollinearity if the p-value is less than 5 percent level of significance otherwise the null hypotheses would be rejected.

Normality Test: This test checks if the stochastic error term is normally distributed. the stochastic error term is normally distributed if it has a mean value of zero and a constant variance.

Correlation Analysis: The Pearson correlation was used to measure the linear relationship between dependent and independent variables under study.

Panel Data Analysis: Panel data analysis is employed by the study in order to estimate the relationships of the variables understudy. This method has been chosen as it has the ability to avoid multicollinearity problems, its use of a high degree of freedom results in least biased estimates. It allows for heterogeneity of the variables understudy. The analysis was conducted using the Eviews 10 econometrics software.

CHAPTER FOUR

DATA PRESENTATION, ANALYSIS AND INTERPRETATION

4.1 Introduction

In this section, the various variables employed in this study are tested, presented and interpreted in order to give meaningful results that can be used for decision purposes and policies. The section starts with descriptive statistics, followed by Histogram Normality Test, Correlation analysis, regression diagnostics which include: Breusch-Pagan-Godfrey Test of Heteroskedasticity, Breusch-Godfrey Test of Serial Correlation, Ramsey Reset Test and the regression analysis result.

4.2 Descriptive Statistics

In essence, descriptive statistics provide a descriptive coefficient that provides an overview of a particular set of variables. Both metrics of variability (spread) and central tendency are included. The mean, median, and mode are three metrics that represent central tendency. Standard deviation, variance, minimum and maximum variables, kurtosis, and skewness are among the metrics used to quantify variability. The study's variable's summary statistics are displayed in the table below:

DESCRIPTIVE ANALYSIS

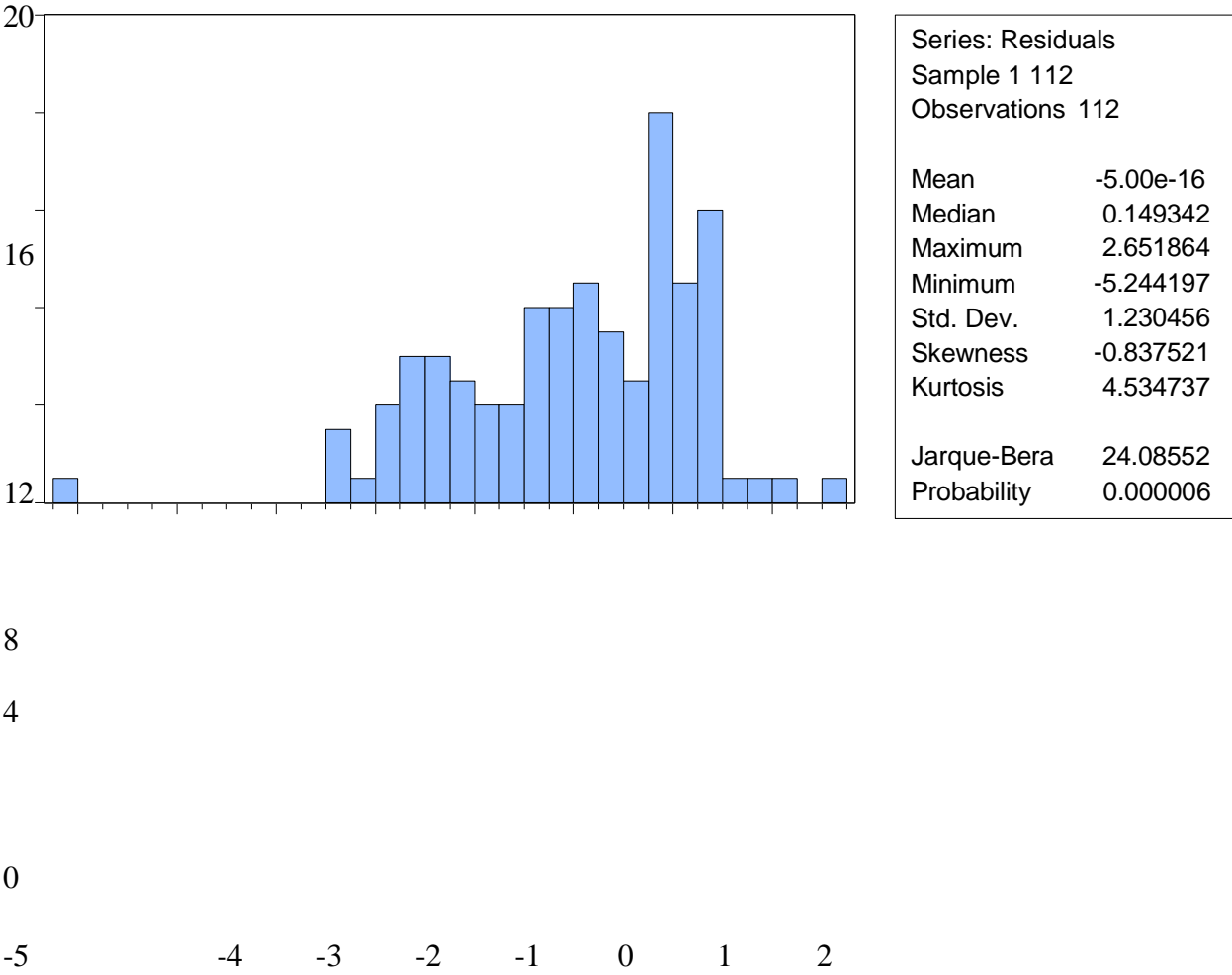
Table 1: Results of the Descriptive Analysis of the Regression Variables

| | ROA | BSIZE | FAGE | FLEV | LNFSIZE |
|--------------|----------|----------|----------|----------|----------|
| Mean | 0.1857 | 10.134 | 49.500 | 1.4919 | 17.6257 |
| Median | 0.0486 | 10.000 | 49.000 | 0.5927 | 18.1027 |
| Maximum | 5.9937 | 17.000 | 99.000 | 19.5570 | 20.5317 |
| Minimum | 0.0002 | 4.000 | 10.000 | 0.0428 | 10.9558 |
| Std. Dev. | 0.6777 | 2.6149 | 22.2864 | 3.5556 | 2.1841 |
| Skewness | 6.8418 | 0.4939 | 0.1410 | 3.8646 | -1.4166 |
| Kurtosis | 53.761 | 2.9538 | 2.5885 | 17.1153 | 4.9394 |
| | | | | | |
| Jarque-Bera | 12898.28 | 4.5628 | 1.1612 | 1208.584 | 55.0107 |
| Probability | 0.0000 | 0.1021 | 0.5596 | 0.0000 | 0.0000 |
| | | | | | |
| Sum | 20.8027 | 1135.000 | 5544.000 | 167.0947 | 1974.073 |
| Sum Sq. Dev. | 50.9855 | 758.9911 | 55132.00 | 1403.291 | 529.5058 |
| | | | | | |
| Observations | 112 | 112 | 112 | 112 | 112 |

Source: Researcher's Compilation (2024)

Table 1 above shows that the mean values of ROA, BSIZE, FAGE, FLEV and LNFSIZE are 0.1857, 10.134, 49.50, 1.4919, and 17.6257 respectively. The median values which are the middle values of each variable are 0.0486, 10.0, 49.0, 0.5927 and 18.1027 for ROA, BSIZE, FAGE, FLEV and LNFSIZE respectively. The maximum and minimum values show the highest and the lowest values for each of the variables in the table below. The standard deviation which is the deviation from the sample mean of each variable are given above as 0.6777, 2.6149, 22.2864, 3.5556 and 2.1841 for ROA, BSIZE, FAGE, FLEV and LNFSIZE respectively. ROA, BSIZE, FAGE and FLEV are all positively skewed, while LNFSIZE is negatively skewed. The mean skewness, kurtosis and Jarque-Bera statistics are reported in the result of the histogram normality test in Table 2.

Table 2: Result of the Histogram Normality Test



Source: Researcher’s Compilation (2024)

The result of the histogram normality test reported a negative mean skewness of -0.837521, which means leftward-tailed distribution. The mean kurtosis is 4.534737 which is in excess of the benchmark of three (3) and indicates a leptokurtic distribution. The mean standard deviation of 1.230456 shows a deviation from the mean. The mean Jarque-Bera statistic of 24.08552 and the probability value of 0.000006 is relatively large and indicates that the data do follow the Gaussian normal distribution.

4.3 Correlation Analysis

Table 3: Result of the Correlation Analysis

Covariance Analysis: Ordinary

Date: 04/01/24 Time: 02:24

Sample: 1 112

Included observations: 112

| Correlation t-Statistic Probability | ROA | BSIZE | FAGE | FLEV | LNFSIZE |
|---|----------------------------------|----------------------------------|----------------------------------|----------------------------------|----------------------------|
| ROA | 1.000000 | | | | |
| | ----- | | | | |
| | ----- | | | | |
| BSIZE | -0.238553 -2.576343 0.0113 | 1.000000 ----- ----- | | | |
| FAGE | -0.190555 -2.035863 0.0442 | 0.403401 4.623824 0.0000 | 1.000000 ----- ----- | | |
| FLEV | 0.622012 8.331604 0.0000 | -0.299055 -3.286941 0.0014 | -0.257857 -2.799086 0.0061 | 1.000000 ----- ----- | |
| LNFSIZE | -0.492081 -5.928420 0.0000 | 0.198436 2.123442 0.0360 | 0.148862 1.578866 0.1172 | -0.741682 -11.59717 0.0000 | 1.000000 ----- ----- |

Source: Researcher's Compilation (2024)

The findings of the correlation study are displayed in Table 3. There is variation in the correlation coefficient; some variables reveal negative correlations while other variables exhibit positive correlations. The findings indicate that there is a weakly negative association (-0.238553) between board size and return on assets. Board size and firm age have a positive correlation and a mild negative link, respectively, with return on assets. Firm age and board size have a negative correlation with firm leverage, while there is a large positive correlation between the two. There is a slight positive correlation between firm age and board size, a strong negative correlation with firm leverage, and a weak negative correlation with return on assets when it comes to business size. The correlation coefficient between business leverage and return on assets is the greatest at 0.622012. This is not indicative of the problem of multicollinearity in the regression variables because it is less than the bench mark of 0.7.

4.4 Regression Diagnostics
4.4.1 Test of Heteroskedasticity

Table 4: Results of the Breusch-Pagan-Godfrey Test of Heteroskedasticity

| Heteroskedasticity Test: Breusch-Pagan-Godfrey | | | | |
|--|-------------|-----------------------|-------------|--------|
| F-statistic | 1.161119 | Prob. F(4,107) | 0.3322 | |
| Obs*R-squared | 4.659267 | Prob. Chi-Square(4) | 0.3241 | |
| Scaled explained SS | 7.515818 | Prob. Chi-Square(4) | 0.1110 | |
| Test Equation: | | | | |
| Dependent Variable: RESID^2 | | | | |
| Method: Least Squares | | | | |
| Date: 04/01/24 Time: 02:50 | | | | |
| Sample: 1 112 | | | | |
| Included observations: | | | | |
| 112 | | | | |
| Variable | Coefficient | Std. Error | t-Statistic | Prob. |
| C | 2.910063 | 4.037060 | 0.720837 | 0.4726 |
| LNFSIZE | -0.144356 | 0.167581 | -0.861411 | 0.3909 |
| LNFLEV | 0.312856 | 0.415874 | 0.752286 | 0.4535 |
| LNFAGE | -0.520582 | 0.553465 | -0.940586 | 0.3490 |
| LNBSIZE | 1.413031 | 1.245776 | 1.134258 | 0.2592 |
| R-squared | 0.041601 | Mean dependent var | 1.500505 | |
| Adjusted R-squared | 0.005773 | S.D. dependent var | 2.833762 | |
| S.E. of regression | 2.825571 | Akaike info criterion | 4.958914 | |
| Sum squared resid | 854.2723 | Schwarz criterion | 5.080275 | |
| Log likelihood | -272.6992 | Hannan-Quinn criter. | 5.008154 | |
| F-statistic | 1.161119 | Durbin-Watson stat | 1.819230 | |
| Prob(F-statistic) | 0.332165 | | | |

Source: Researcher's Compilation (2024)

Table 4 presented the result of the Breusch-Pagan-Godfrey test of heteroskedasticity. The result revealed a probability value of $0.3322 > 0.05$. This indicates the absence of problem of multicollinearity. The alternative hypothesis of homoskedasticity residual is accepted for the null hypothesis, which signifies that the variance of the residual of the regression model is constant.

4.4.2 Test of Serial Correlation

Table 5: Results of the Breusch-Godfrey Test of Serial Correlation

Breusch-Godfrey Serial Correlation LM Test:

| | | | |
|---------------|----------|---------------------|--------|
| F-statistic | 27.79534 | Prob. F(2,105) | 0.0000 |
| Obs*R-squared | 38.77034 | Prob. Chi-Square(2) | 0.0000 |

Test Equation:

Dependent Variable: RESID

Method: Least Squares

Date: 04/01/24 Time: 03:00

Sample: 1 112

Included observations: 112

Presample missing value lagged residuals set to zero.

| Variable | Coefficient | Std. Error | t-Statistic | Prob. |
|--------------------|-------------|-----------------------|-------------|----------|
| FSIZE | 1.01E-10 | 2.40E-10 | 0.421730 | 0.6741 |
| FLEV | 0.029537 | 0.013749 | 2.148315 | 0.0340 |
| FAGE | 0.000510 | 0.002137 | 0.238711 | 0.8118 |
| BSIZE | 0.007638 | 0.018034 | 0.423546 | 0.6728 |
| C | -0.146650 | 0.205785 | -0.712637 | 0.4777 |
| RESID(-1) | -0.736198 | 0.098769 | -7.453762 | 0.0000 |
| RESID(-2) | -0.442839 | 0.101100 | -4.380204 | 0.0000 |
| R-squared | 0.346164 | Mean dependent var | | 5.65E-17 |
| Adjusted R-squared | 0.308802 | S.D. dependent var | | 0.529116 |
| S.E. of regression | 0.439898 | Akaike info criterion | | 1.255914 |
| Sum squared resid | 20.31859 | Schwarz criterion | | 1.425820 |
| Log likelihood | -63.33120 | Hannan-Quinn criter. | | 1.324851 |
| F-statistic | 9.265112 | Durbin-Watson stat | | 2.375574 |
| Prob(F-statistic) | 0.000000 | | | |

Source: Researcher's Compilation (2024)

Table 5 presents the result of the Breusch-Godfrey test of serial correlation of the variables of regression. The significant probability value of $P=0.0000 < 0.05$ shows the presence of serial correlation in the variables of regression. However, the results of the variance inflation factor and the correlation analysis did not pose any serious problem of multicollinearity, which validates the outcome of absence of the problem of serial correlation on the average.

4.4.3 Ramsey Reset Test

Table 6: Results of the Ramsey RESET of Model Specification

Ramsey RESET Test

Equation: UNTITLED

Specification: ROA FSIZE FLEV FAGE BSIZE C

Omitted Variables: Squares of fitted values

| | Value | df | Probability |
|-------------------|------------|----------|--------------|
| t-statistic | 1.858866 | 106 | 0.0658 |
| F-statistic | 3.455384 | (1, 106) | 0.0658 |
| Likelihood ratio | 3.592727 | 1 | 0.0580 |
| F-test summary: | | | |
| | Sum of Sq. | df | Mean Squares |
| Test SSR | 0.981033 | 1 | 0.981033 |
| Restricted SSR | 31.07596 | 107 | 0.290430 |
| Unrestricted SSR | 30.09492 | 106 | 0.283914 |
| LR test summary: | | | |
| | Value | | |
| Restricted LogL | -87.12551 | | |
| Unrestricted LogL | -85.32914 | | |

Unrestricted Test Equation:

Dependent Variable: ROA

Method: Least Squares

Date: 04/01/24 Time: 02:56

Sample: 1 112

Included observations: 112

| Variable | Coefficient | Std. Error | t-Statistic | Prob. |
|----------|-------------|------------|-------------|--------|
| FSIZE | -2.83E-11 | 2.92E-10 | -0.097034 | 0.9229 |
| FLEV | 0.245198 | 0.072539 | 3.380211 | 0.0010 |
| FAGE | -0.000437 | 0.002588 | -0.168993 | 0.8661 |
| BSIZE | -0.009562 | 0.021956 | -0.435497 | 0.6641 |
| C | 0.060117 | 0.259631 | 0.231549 | 0.8173 |

| | | | | |
|--------------------|-----------|-----------------------|-----------|----------|
| FITTED^2 | -0.553343 | 0.297678 | -1.858866 | 0.0658 |
| R-squared | 0.409736 | Mean dependent var | | 0.185738 |
| Adjusted R-squared | 0.381893 | S.D. dependent var | | 0.677738 |
| S.E. of regression | 0.532836 | Akaike info criterion | | 1.630878 |
| Sum squared resid | 30.09492 | Schwarz criterion | | 1.776511 |
| Log likelihood | -85.32914 | Hannan-Quinn criter. | | 1.689966 |
| F-statistic | 14.71614 | Durbin-Watson stat | | 2.810017 |
| Prob(F-statistic) | 0.000000 | | | |

Source: Researcher's Compilation (2024)

The results of the Ramsey RESET model specification test reported a probability value of $0.0658 > 0.05$ which could not sustain the null hypothesis of mis specified model of regression. Therefore, the alternate hypothesis of a well specified model is accepted for the study.

4.4 Analysis of the Regression Result Table 7: Results of the Regression Analysis

Dependent Variable: ROA

Method: Panel Least Squares

Date: 04/01/24 Time: 02:34

Sample: 2015 2022

Periods included: 8

Cross-sections included: 14

Total panel (balanced) observations: 112

| Variable | Coefficient | Std. Error | t-Statistic | Prob. |
|--------------------|-------------|-----------------------|-------------|----------|
| C | 0.593642 | 0.688666 | 0.862017 | 0.3906 |
| BFSIZE | -0.013867 | 0.021885 | -0.633616 | 0.5277 |
| FAGE | -0.000514 | 0.002540 | -0.202525 | 0.8399 |
| FLEV | 0.104402 | 0.022255 | 4.691164 | 0.0000 |
| LNFSIZE | -0.022562 | 0.034938 | -0.645782 | 0.5198 |
| R-squared | 0.392455 | Mean dependent var | | 0.185738 |
| Adjusted R-squared | 0.369743 | S.D. dependent var | | 0.677738 |
| S.E. of regression | 0.538048 | Akaike info criterion | | 1.641877 |
| Sum squared resid | 30.97601 | Schwarz criterion | | 1.763238 |
| Log likelihood | -86.94510 | Hannan-Quinn criter. | | 1.691117 |
| F-statistic | 17.27966 | Durbin-Watson stat | | 3.146380 |
| Prob(F-statistic) | 0.000000 | | | |

Source: Researcher's Compilation (2024)

The result of the regression analysis is presented above. The preliminary analysis shows a coefficient of multiple determination of 0.392455 and an adjusted value of 0.369743, which simply explain that 39% of the variation in firm performance (return on assets) is explained by the independent variables considered in this study which include: firm age, firm board size, firm size, and firm leverage. While the remaining 61% are captured by the error term. The F statistics value of 17.27966 which is greater than 2, indicate that all the explanatory variables taken together are statistically significant.

4.5 Test of Hypotheses

Hypothesis one: Firm size has no significant influence on firm performance.

The aforementioned finding showed that there is no discernible relationship between firm size as determined by the natural log of total assets and the performance of consumer products companies. The results showed that there was a small but negative correlation between firm performance and firm size. According to the negative connection, a firm's performance will rise by 2.2% for every unit increase in size. As a result, the study's initial hypothesis is accepted at a 5% significance level.

Hypothesis two: There is no significant relationship between firm age and firm performance.

The aforementioned results demonstrate that, at the 5% level of significance, the link between firm age and company performance is statistically negligible and negative. This showed a t-value of 0.8399 and a negative coefficient of -0.000514. This suggests that there will be a negligible 0% drop in firm performance for every unit rise in firm age. As a result, it is agreed upon that there is no meaningful correlation between firm age and firm performance.

Hypothesis three: There is no significant relationship between firm leverage and firm performance.

At the 5% level of significance, the variable firm leverage is statistically significant and positive. A coefficient of 0.104402, a t-value of 4.691164, and a p-value of 0.0000 were found as a result. The outcome suggests that company leverage and the performance of the firms under examination are positively correlated, and that the capital structure of the firm has a major impact on the performance of the enterprises. A 10% statistically meaningful improvement in the firm's performance will follow a unit increase in leverage. Consequently, the null hypothesis was rejected since the results showed a statistically significant link between company leverage and business performance.

Hypothesis four: Firm board size has no significant influence on firm performance.

According to the aforementioned result, at the 5% level of significance, board size has a negative and statistically insignificant connection with business performance. The variable yielded a probability value of 0.5277 and a t-value of -0.633616. The coefficient of -0.013867 indicates that there will be a 1.38% decrease in company performance for every unit increase in the size of the board. But the outcome is hardly noteworthy. Consequently, it was not possible to rule out the null hypothesis that there is no meaningful relationship between board size and company performance.

4.6 Discussion of Findings

According to this analysis, there is a statistically negligible negative correlation between company performance and size. This result is in line with the research of Egbuhuzor & Wokeh (2022), who found no discernible relationship between total asset and net profit margin of Nigerian listed deposit money banks. Additionally, Olawale et al. (2017) found that while firm size has a beneficial impact on the performance of listed deposit money banks in Nigeria in terms of total income, it has a negative impact on performance in terms of total assets.

According to the study, company age in Nigeria has no discernible impact on

firm performance. Kurniawan et al., (2022) found that there is no significant difference in the firm performance between the age and size of the company, which is in line with the findings of this study. Furthermore, Al Nawaiseh (2020) discovered that the age of the insurance company has no discernible impact on its profitability.

Additionally, the study discovered that firm performance is favourably and significantly impacted by firm leverage. This result agrees with a number of earlier research findings. According to Anifowose et al. (2020), there is a positive correlation between return on asset and the debt equity ratio, however the debt ratio and interest coverage ratio have a negative correlation. It was determined that financial leverage significantly affects a firm's profitability and performance efficiency. Additionally, Edore & Ujuju (2020) found that long-term debt significantly raises the value of the company. It may be inferred that leverage increases a company's value because both short- and medium-term debt have a strong favourable impact on it. The results of this study showed a negative correlation between board size and company performance. Additionally, it little affects how well Nigerian firms do. Thus, a high board size lowers the performance of the company. This outcome is in line with Juanda & Jalaluddin's (2021) findings, which showed that board size has no discernible impact on the performance of the company.

CHAPTER FIVE

SUMMARY OF FINDINGS, RECOMMENDATION AND CONCLUSION

5.1 Summary of Findings

The study assesses the connection between business performance and audit client qualities. To provide a clear explanation for the variables' characteristics, the study carried out a descriptive analysis of the variables. To characterise the average skewness, kurtosis, standard deviation, and Jarque-Bera statistics of the variables, the study performs a histogram normality test. The distribution of all the variables is leptokurtic. Using correlation analysis, the study examines the link between the variables; some variables indicate a positive relationship among themselves, while others show a negative relationship. The association between company leverage and return on assets had the greatest correlation coefficient (0.62122) among the results. Because the maximum correlation coefficient is smaller than the benchmark of 0.7, this aids in the determination that there is no multicollinearity issue with the regression variables.

The absence of multicollinearity was further tested using the Breusch-Pagan-Godfrey test of heteroskedasticity. A probability value of $0.3322 > 0.05$ was found in the result. This demonstrated that there was no multicollinearity issue. For the null hypothesis, the homoskedasticity residual alternative hypothesis is accepted. To make

sure the model used for this investigation was correctly specified, a reset test of the model definition was also performed. One probability value that was provided by the Ramsey RESET model specification test was $0.0658 > 0.05$. As a result, the null hypothesis that the model was misspecified was rejected. As a result, the study's model was appropriately specified.

To determine whether there was a casual relationship between the dependent and independent variables, regression analysis was used. The link between each independent variable and the dependent variable is also displayed in the regression result. The investigation was unable to reject hypotheses two and four, however it did reject hypothesis one and three.

The dependent variable, the considered firm's return on assets, was found to have a coefficient of determination that explained approximately 39.24% of the systematic cross-sectional variation. Together, the explanatory factors are statistically significant and adequately explain the dependent variable, according to the F-statistics.

5.2 Conclusion

The study investigated the connection between business performance and audit client qualities. The information utilised, which spanned the years 2015 through 2022 on an annual basis, came from the company's annual report. There is a positive and negative relationship between audit client qualities and return on assets, as indicated by the various statistical and economic metrics and empirical outcomes. After a thorough research, the study concludes that there is no discernible negative association between the performance of consumer products enterprises and their size. Although age has a detrimental impact on a firm's performance, this impact is not statistically significant. Additionally, it was found that while firm board size marginally lowers firm performance, firm leverage dramatically boosts firm performance. This study came to the conclusion that a company's leverage has the greatest impact on its success in the consumer goods industry, whereas other firm characteristics like age, size, and board size had no discernible effect.

5.3 Recommendations

The following recommendations were made in line with the above findings:

1. It has been demonstrated that the degree of leverage has a substantial impact on performance, thus firm managers should discuss optimising leverage to increase their firm's performance.
2. When deciding on effective capital management and strategic growth strategies, managers should take firm leverage into account.
3. When making investment decisions in the consumer goods sector and evaluating a company's long-term potential, shareholders should consider its leverage as it has been proved to have a beneficial impact on performance.
4. Consumer products companies should make sure that board size is restricted because it has been found to have a detrimental impact on company performance.

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APPENDIX 1

SECONDARY DATA OF THE VARIABLES EMPLOYED IN THE STUDY

| i | t | ROA | Fsize | Fage | Flev | Bsize | lnFsize |
|----------|----------|------------|--------------|-------------|-------------|--------------|----------------|
| 1 | 2015 | 0.0406 | 28417005 | 50 | 0.5677 | 7 | 17.1625 |
| 1 | 2016 | 0.0104 | 28392951 | 51 | 0.6106 | 9 | 17.16165 |
| 1 | 2017 | 0.0105 | 28423121 | 52 | 0.5868 | 9 | 17.16271 |
| 1 | 2018 | 0.0299 | 27528040 | 53 | 0.5395 | 7 | 17.13072 |
| 1 | 2019 | 0.0372 | 28801938 | 54 | 0.5289 | 8 | 17.17595 |
| 1 | 2020 | 0.0281 | 33210684 | 55 | 0.592 | 10 | 17.31838 |
| 1 | 2021 | 0.0103 | 43688291 | 56 | 0.6878 | 9 | 17.59259 |
| 1 | 2022 | 0.0097 | 59713684 | 57 | 0.7772 | 7 | 17.90507 |
| 2 | 2015 | 0.0074 | 10329160 | 41 | 0.3105 | 9 | 16.15048 |
| 2 | 2016 | 0.0532 | 9961240 | 42 | 0.2299 | 11 | 16.11421 |
| 2 | 2017 | 0.0513 | 10088861 | 43 | 0.1936 | 11 | 16.12694 |
| 2 | 2018 | 0.0251 | 10487010 | 44 | 0.2433 | 12 | 16.16565 |
| 2 | 2019 | 0.0153 | 10981383 | 45 | 0.2685 | 14 | 16.21171 |
| 2 | 2020 | 0.0139 | 11368517 | 46 | 0.2925 | 11 | 16.24636 |
| 2 | 2021 | 0.0729 | 13486815 | 47 | 0.2912 | 9 | 16.41722 |
| 2 | 2022 | 0.1026 | 15453585 | 48 | 0.2805 | 9 | 16.55335 |
| 3 | 2015 | 0.1186 | 106671333 | 10 | 0.3776 | 9 | 18.48526 |
| 3 | 2016 | 0.0807 | 175936048 | 11 | 0.5761 | 9 | 18.98563 |
| 3 | 2017 | 0.1929 | 196064664 | 12 | 0.494 | 9 | 19.09396 |
| 3 | 2018 | 0.1446 | 178523711 | 13 | 0.3996 | 9 | 19.00023 |
| 3 | 2019 | 0.1216 | 198129122 | 14 | 0.404 | 8 | 19.10443 |
| 3 | 2020 | 0.1209 | 259280544 | 15 | 0.5167 | 9 | 19.37342 |
| 3 | 2021 | 0.0648 | 349382869 | 16 | 0.6284 | 9 | 19.67168 |
| 3 | 2022 | 0.1107 | 490969836 | 17 | 0.6496 | 8 | 20.01189 |
| 4 | 2015 | 0.0637 | 122246632 | 65 | 0.6045 | 14 | 18.62155 |
| 4 | 2016 | 0.0147 | 136992444 | 66 | 0.6958 | 14 | 18.73544 |
| 4 | 2017 | 0.0132 | 146038216 | 67 | 0.7059 | 14 | 18.79938 |
| 4 | 2018 | 0.0438 | 153254968 | 68 | 0.0428 | 14 | 18.84761 |
| 4 | 2019 | 0.0341 | 160792627 | 69 | 0.4461 | 13 | 18.89563 |

| | | | | | | | |
|----------|----------|------------|--------------|-------------|-------------|--------------|----------------|
| 4 | 2020 | 0.0872 | 144145581 | 70 | 0.4933 | 13 | 18.78633 |
| 4 | 2021 | 0.0074 | 169406525 | 71 | 0.5615 | 13 | 18.94781 |
| 4 | 2022 | 0.0726 | 215660208 | 72 | 0.5827 | 13 | 19.18921 |
| 5 | 2015 | 0.0165 | 67943444 | 30 | 0.7009 | 15 | 18.03419 |
| 5 | 2016 | 0.0397 | 76046576 | 31 | 0.7848 | 15 | 18.14686 |
| 5 | 2017 | 0.038 | 113151715 | 32 | 0.5375 | 15 | 18.54424 |
| 5 | 2018 | 0.0355 | 124835013 | 33 | 0.5483 | 15 | 18.6425 |
| 5 | 2019 | 0.0002 | 137472444 | 34 | 0.588 | 12 | 18.73893 |
| i | t | ROA | Fsize | Fage | Flev | Bsize | lnFsize |
| 5 | 2020 | 0.0046 | 142261292 | 35 | 0.5973 | 10 | 18.77318 |
| 5 | 2021 | 0.0076 | 147394656 | 36 | 0.6067 | 9 | 18.80862 |
| 5 | 2022 | 0.0065 | 149869159 | 37 | 0.6235 | 16 | 18.82527 |
| 6 | 2015 | 0.1991 | 119215053 | 46 | 0.6812 | 9 | 18.59644 |
| 6 | 2016 | 0.0467 | 169585932 | 47 | 0.8179 | 9 | 18.94887 |
| 6 | 2017 | 0.2297 | 146804128 | 48 | 0.6943 | 8 | 18.80461 |
| 6 | 2018 | 0.2649 | 162334422 | 49 | 0.6906 | 8 | 18.90517 |
| 6 | 2019 | 0.2362 | 193374314 | 50 | 0.7644 | 8 | 19.08014 |
| 6 | 2020 | 0.1593 | 246184996 | 51 | 0.8809 | 8 | 19.32159 |
| 6 | 2021 | 0.1291 | 310238504 | 52 | 0.9311 | 10 | 19.55285 |
| 6 | 2022 | 0.1179 | 415044031 | 53 | 0.927 | 10 | 19.8439 |
| 7 | 2015 | 0.0451 | 48106661 | 67 | 0.4473 | 11 | 17.68893 |
| 7 | 2016 | 0.0069 | 56261100 | 68 | 0.3994 | 11 | 17.84551 |
| 7 | 2017 | 0.0306 | 73039610 | 69 | 0.5334 | 11 | 18.10651 |
| 7 | 2018 | 0.0218 | 74576119 | 70 | 0.5474 | 11 | 18.12733 |
| 7 | 2019 | 0.0089 | 64315676 | 71 | 0.4742 | 12 | 17.97931 |
| 7 | 2020 | 0.1003 | 59486850 | 72 | 0.5983 | 12 | 17.90127 |
| 7 | 2021 | 0.0129 | 69368708 | 73 | 0.6999 | 11 | 18.05495 |
| 7 | 2022 | 0.0474 | 79875535 | 74 | 0.7011 | 9 | 18.19598 |
| 8 | 2015 | 0.0237 | 50172484 | 92 | 0.8405 | 9 | 17.73098 |
| 8 | 2016 | 0.0424 | 72491309 | 93 | 0.8387 | 9 | 18.09898 |
| 8 | 2017 | 0.0615 | 121084365 | 94 | 0.3731 | 10 | 18.612 |
| 8 | 2018 | 0.0802 | 131483373 | 95 | 0.3731 | 10 | 18.69439 |
| 8 | 2019 | 0.0715 | 103677519 | 96 | 0.3583 | 9 | 18.4568 |

| | | | | | | | |
|----------|----------|------------|--------------|-------------|-------------|--------------|----------------|
| 8 | 2020 | 0.0433 | 91517538 | 97 | 0.3211 | 10 | 18.33204 |
| 8 | 2021 | 0.0315 | 108288535 | 98 | 0.3927 | 10 | 18.50031 |
| 8 | 2022 | 0.0356 | 125389892 | 99 | 0.4612 | 10 | 18.64694 |
| 9 | 2015 | 0.0167 | 11734739 | 53 | 0.6759 | 8 | 16.27806 |
| 9 | 2016 | 0.0315 | 13098732 | 54 | 0.6659 | 8 | 16.38803 |
| 9 | 2017 | 0.0147 | 12974483 | 55 | 0.656 | 10 | 16.3785 |
| 9 | 2018 | 0.0321 | 15156727 | 56 | 0.6817 | 10 | 16.53396 |
| 9 | 2019 | 0.1274 | 12358342 | 57 | 0.5199 | 10 | 16.32984 |
| 9 | 2020 | 0.1745 | 19802249 | 58 | 0.5613 | 10 | 16.80131 |
| 9 | 2021 | 0.1476 | 29693840 | 59 | 0.5824 | 10 | 17.20645 |
| 9 | 2022 | 0.1195 | 36913111 | 60 | 0.5933 | 10 | 17.42408 |
| 10 | 2015 | 0.1066 | 356707123 | 69 | 0.5171 | 15 | 19.69243 |
| 10 | 2016 | 0.0772 | 367639915 | 70 | 0.549 | 15 | 19.72261 |
| 10 | 2017 | 0.0862 | 382726540 | 71 | 0.5345 | 17 | 19.76283 |
| 10 | 2018 | 0.0499 | 388766316 | 72 | 0.5713 | 17 | 19.77849 |
| 10 | 2019 | 0.0421 | 382503815 | 73 | 0.5619 | 10 | 19.76225 |
| 10 | 2020 | 0.1693 | 444437374 | 74 | 0.6374 | 10 | 19.91232 |
| 10 | 2021 | 0.0267 | 482639565 | 75 | 0.6433 | 12 | 19.99478 |
| i | t | ROA | Fsize | Fage | Flev | Bsize | lnFsize |
| 10 | 2022 | 0.0224 | 621318254 | 76 | 0.7088 | 14 | 20.24735 |
| 11 | 2015 | 0.0823 | 2423711 | 44 | 0.3893 | 12 | 14.70081 |
| 11 | 2016 | 0.1134 | 1739760 | 45 | 0.2809 | 12 | 14.36926 |
| 11 | 2017 | 0.0041 | 4337444 | 46 | 0.7142 | 12 | 15.2828 |
| 11 | 2018 | 0.0103 | 5917639 | 47 | 0.8015 | 12 | 15.59345 |
| 11 | 2019 | 0.0063 | 4992912 | 48 | 0.7695 | 11 | 15.42353 |
| 11 | 2020 | 0.0076 | 8491986 | 49 | 0.6739 | 13 | 15.95463 |
| 11 | 2021 | 0.0095 | 7365270 | 50 | 0.6215 | 10 | 15.81229 |
| 11 | 2022 | 0.0061 | 13315128 | 51 | 0.7856 | 12 | 16.40441 |
| 12 | 2015 | 0.1292 | 16294826 | 42 | 0.565 | 10 | 16.60636 |
| 12 | 2016 | 0.0982 | 24603267 | 43 | 0.6729 | 10 | 17.01839 |
| 12 | 2017 | 0.1774 | 30123247 | 44 | 0.6171 | 10 | 17.22081 |
| 12 | 2018 | 0.146 | 30270429 | 45 | 0.6071 | 10 | 17.22568 |
| 12 | 2019 | 0.0477 | 38668792 | 46 | 0.7132 | 10 | 17.47054 |

| | | | | | | | |
|----|------|--------|-----------|----|---------|----|----------|
| 12 | 2020 | 0.0607 | 44308991 | 47 | 0.7129 | 10 | 17.6067 |
| 12 | 2021 | 0.0733 | 40521398 | 48 | 0.6389 | 9 | 17.51734 |
| 12 | 2022 | 0.0985 | 55530771 | 49 | 0.6571 | 9 | 17.83245 |
| 13 | 2015 | 0.1173 | 420149791 | 11 | 0.3801 | 6 | 19.85612 |
| 13 | 2016 | 0.1177 | 475140932 | 12 | 0.3654 | 6 | 19.97912 |
| 13 | 2017 | 0.0631 | 539237536 | 13 | 0.3958 | 6 | 20.10567 |
| 13 | 2018 | 0.0495 | 825689552 | 14 | 0.5965 | 4 | 20.53173 |
| 13 | 2019 | 0.0279 | 722521934 | 15 | 0.5205 | 7 | 20.39826 |
| 13 | 2020 | 0.0226 | 711959366 | 16 | 0.5031 | 7 | 20.38353 |
| 13 | 2021 | 0.0205 | 692513155 | 17 | 0.4814 | 6 | 20.35584 |
| 13 | 2022 | 0.0524 | 653717275 | 18 | 0.418 | 7 | 20.29819 |
| 14 | 2015 | 0.0384 | 68477 | 24 | 14.5385 | 8 | 11.13425 |
| 14 | 2016 | 3.2371 | 119871 | 25 | 7.4613 | 6 | 11.69417 |
| 14 | 2017 | 0.9865 | 84923 | 26 | 11.8476 | 7 | 11.3495 |
| 14 | 2018 | 2.3599 | 57287 | 27 | 19.4405 | 8 | 10.95583 |
| 14 | 2019 | 0.9932 | 118322 | 28 | 19.557 | 7 | 11.68117 |
| 14 | 2020 | 5.9937 | 110761 | 29 | 14.4919 | 7 | 11.61513 |
| 14 | 2021 | 0.3435 | 112234 | 30 | 13.1117 | 7 | 11.62834 |
| 14 | 2022 | 0.0594 | 192669 | 31 | 8.1919 | 6 | 12.16873 |

APPENDIX II

Descriptive Analysis Result

| | ROA | BSIZE | FAGE | FLEV | LNFSIZE |
|--------------|----------|----------|----------|----------|----------|
| Mean | 0.1857 | 10.134 | 49.500 | 1.4919 | 17.6257 |
| Median | 0.0486 | 10.000 | 49.000 | 0.5927 | 18.1027 |
| Maximum | 5.9937 | 17.000 | 99.000 | 19.5570 | 20.5317 |
| Minimum | 0.0002 | 4.000 | 10.000 | 0.0428 | 10.9558 |
| Std. Dev. | 0.6777 | 2.6149 | 22.2864 | 3.5556 | 2.1841 |
| Skewness | 6.8418 | 0.4939 | 0.1410 | 3.8646 | -1.4166 |
| Kurtosis | 53.761 | 2.9538 | 2.5885 | 17.1153 | 4.9394 |
| | | | | | |
| Jarque-Bera | 12898.28 | 4.5628 | 1.1612 | 1208.584 | 55.0107 |
| Probability | 0.0000 | 0.1021 | 0.5596 | 0.0000 | 0.0000 |
| | | | | | |
| Sum | 20.8027 | 1135.000 | 5544.000 | 167.0947 | 1974.073 |
| Sum Sq. Dev. | 50.9855 | 758.9911 | 55132.00 | 1403.291 | 529.5058 |
| | | | | | |
| Observations | 112 | 112 | 112 | 112 | 112 |

APPENDIX III

Ramsey Reset Test

Ramsey RESET Test

Equation: UNTITLED

Specification: ROA FSIZE FLEV FAGE BSIZE C

Omitted Variables: Squares of fitted values

| | Value | df | Probability |
|------------------|----------|----------|-------------|
| t-statistic | 1.858866 | 106 | 0.0658 |
| F-statistic | 3.455384 | (1, 106) | 0.0658 |
| Likelihood ratio | 3.592727 | 1 | 0.0580 |

F-test summary:

| | Sum of Sq. | df | Mean Squares |
|------------------|------------|-----|--------------|
| Test SSR | 0.981033 | 1 | 0.981033 |
| Restricted SSR | 31.07596 | 107 | 0.290430 |
| Unrestricted SSR | 30.09492 | 106 | 0.283914 |

LR test summary:

| | Value |
|-------------------|-----------|
| Restricted LogL | -87.12551 |
| Unrestricted LogL | -85.32914 |

Unrestricted Test Equation:

Dependent Variable: ROA

Method: Least Squares

Date: 04/01/24 Time: 02:56

Sample: 1 112

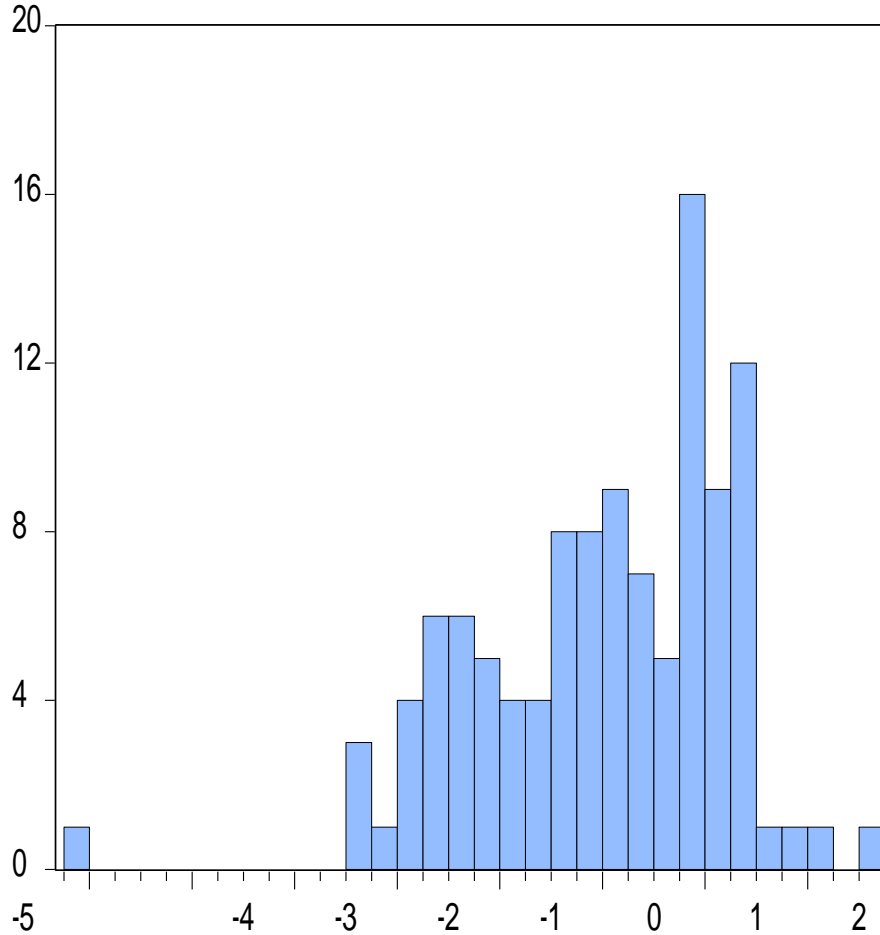
Included observations: 112

| Variable | Coefficient | Std. Error | t-Statistic | Prob. |
|----------|-------------|------------|-------------|--------|
| FSIZE | -2.83E-11 | 2.92E-10 | -0.097034 | 0.9229 |
| FLEV | 0.245198 | 0.072539 | 3.380211 | 0.0010 |
| FAGE | -0.000437 | 0.002588 | -0.168993 | 0.8661 |
| BSIZE | -0.009562 | 0.021956 | -0.435497 | 0.6641 |

| | | | | | |
|--------------------|---|-----------|-----------------------|-----------|----------|
| | C | 0.060117 | 0.259631 | 0.231549 | 0.8173 |
| FITTED^2 | | -0.553343 | 0.297678 | -1.858866 | 0.0658 |
| R-squared | | 0.409736 | Mean dependent var | | 0.185738 |
| Adjusted R-squared | | 0.381893 | S.D. dependent var | | 0.677738 |
| S.E. of regression | | 0.532836 | Akaike info criterion | | 1.630878 |
| Sum squared resid | | 30.09492 | Schwarz criterion | | 1.776511 |
| Log likelihood | | -85.32914 | Hannan-Quinn criter. | | 1.689966 |
| F-statistic | | 14.71614 | Durbin-Watson stat | 2.810017 | |
| Prob(F-statistic) | | 0.000000 | | | |

APPENDIX IV

Histogram Normality Test



Series: Residuals

Sample 1 112

Observations 112

Mean -5.00e-16

Median 0.149342

Maximum 2.651864

Minimum -5.244197

Std. Dev. 1.230456

Skewness -0.837521

Kurtosis 4.534737

Jarque-Bera 24.08552

Probability 0.000006

APPENDIX V

Heteroskedasticity Test

Heteroskedasticity Test: Breusch-Pagan-Godfrey

| | | |
|---------------------|------------------------------|--------|
| F-statistic | 1.161119 Prob. F(4,107) | 0.3322 |
| Obs*R-squared | 4.659267 Prob. Chi-Square(4) | 0.3241 |
| Scaled explained SS | 7.515818 Prob. Chi-Square(4) | 0.1110 |

Test Equation:

Dependent Variable: RESID^2

Method: Least Squares

Date: 04/01/24 Time: 02:50

Sample: 1 112

Included observations:

112

| Variable | Coefficient | Std. Error | t-Statistic | Prob. |
|----------|-------------|------------|-------------|--------|
| C | 2.910063 | 4.037060 | 0.720837 | 0.4726 |
| LNFSIZE | -0.144356 | 0.167581 | -0.861411 | 0.3909 |
| LNFLEV | 0.312856 | 0.415874 | 0.752286 | 0.4535 |
| LNFAGE | -0.520582 | 0.553465 | -0.940586 | 0.3490 |
| LNBSIZE | 1.413031 | 1.245776 | 1.134258 | 0.2592 |

| | | |
|--------------------|--------------------------------|----------|
| R-squared | 0.041601 Mean dependent var | 1.500505 |
| Adjusted R-squared | 0.005773 S.D. dependent var | 2.833762 |
| S.E. of regression | 2.825571 Akaike info criterion | 4.958914 |
| Sum squared resid | 854.2723 Schwarz criterion | 5.080275 |
| Log likelihood | -272.6992 Hannan-Quinn criter. | 5.008154 |
| F-statistic | 1.161119 Durbin-Watson stat | 1.819230 |
| Prob(F-statistic) | 0.332165 | |

APPENDIX VI

Serial Correlation

Breusch-Godfrey Serial Correlation LM Test:

| | | |
|---------------|------------------------------|--------|
| F-statistic | 27.79534 Prob. F(2,105) | 0.0000 |
| Obs*R-squared | 38.77034 Prob. Chi-Square(2) | 0.0000 |

Test Equation:

Dependent Variable: RESID

Method: Least Squares

Date: 04/01/24 Time: 03:00

Sample: 1 112

Included observations: 112

Presample missing value lagged residuals set to zero.

| Variable | Coefficient | Std. Error | t-Statistic | Prob. |
|----------|-------------|------------|-------------|--------|
| FSIZE | 1.01E-10 | 2.40E-10 | 0.421730 | 0.6741 |
| FLEV | 0.029537 | 0.013749 | 2.148315 | 0.0340 |
| FAGE | 0.000510 | 0.002137 | 0.238711 | 0.8118 |
| BSIZE | 0.007638 | 0.018034 | 0.423546 | 0.6728 |
| C | -0.146650 | 0.205785 | -0.712637 | 0.4777 |

| | | | |
|--------------------|--------------------|-----------------------|----------|
| RESID(-1) | -0.736198 0.098769 | -7.453762 | 0.0000 |
| RESID(-2) | -0.442839 0.101100 | -4.380204 | 0.0000 |
| <hr/> | | | |
| R-squared | 0.346164 | Mean dependent var | 5.65E-17 |
| Adjusted R-squared | 0.308802 | S.D. dependent var | 0.529116 |
| S.E. of regression | 0.439898 | Akaike info criterion | 1.255914 |
| Sum squared resid | 20.31859 | Schwarz criterion | 1.425820 |
| Log likelihood | -63.33120 | Hannan-Quinn criter. | 1.324851 |
| F-statistic | 9.265112 | Durbin-Watson stat | 2.375574 |
| Prob(F-statistic) | 0.000000 | | |
| <hr/> | | | |

APPENDIX VII

Correlation Analysis Result

Covariance Analysis: Ordinary

Date: 04/01/24 Time: 02:24

Sample: 1 112

Included observations: 112

| Correlation t-Statistic Probability | ROA | BSIZE | FAGE | FLEV | LNFSIZE |
|---|-----------|-----------|-----------|-----------|----------|
| ROA | 1.000000 | | | | |
| | ---- | | | | |
| | ---- | | | | |
| BSIZE | -0.238553 | 1.000000 | | | |
| | -2.576343 | ---- | | | |
| | 0.0113 | ---- | | | |
| FAGE | -0.190555 | 0.403401 | 1.000000 | | |
| | -2.035863 | 4.623824 | ---- | | |
| | 0.0442 | 0.0000 | ---- | | |
| FLEV | 0.622012 | -0.299055 | -0.257857 | 1.000000 | |
| | 8.331604 | -3.286941 | -2.799086 | ---- | |
| | 0.0000 | 0.0014 | 0.0061 | ---- | |
| LNFSIZE | -0.492081 | 0.198436 | 0.148862 | -0.741682 | 1.000000 |
| | -5.928420 | 2.123442 | 1.578866 | -11.59717 | ---- |
| | 0.0000 | 0.0360 | 0.1172 | 0.0000 | ---- |

APPENDIX VIII

Regression Analysis Result

Dependent Variable:

ROA

Method: Panel Least Squares

Date: 04/01/24 Time: 02:34

Sample: 2015 2022

Periods included: 8

Cross-sections included: 14

Total panel (balanced) observations: 112

| Variable | Coefficient | Std. Error | t-Statistic | Prob. |
|----------|-------------|------------|-------------|--------|
| C | 0.593642 | 0.688666 | 0.862017 | 0.3906 |
| BFSIZE | -0.013867 | 0.021885 | -0.633616 | 0.5277 |
| FAGE | -0.000514 | 0.002540 | -0.202525 | 0.8399 |
| FLEV | 0.104402 | 0.022255 | 4.691164 | 0.0000 |
| LNFSIZE | -0.022562 | 0.034938 | -0.645782 | 0.5198 |

| | | | |
|--------------------|-----------|-----------------------|----------|
| R-squared | 0.392455 | Mean dependent var | 0.185738 |
| Adjusted R-squared | 0.369743 | S.D. dependent var | 0.677738 |
| S.E. of regression | 0.538048 | Akaike info criterion | 1.641877 |
| Sum squared resid | 30.97601 | Schwarz criterion | 1.763238 |
| Log likelihood | -86.94510 | Hannan-Quinn criter. | 1.691117 |
| F-statistic | 17.27966 | Durbin-Watson stat | 3.146380 |
| Prob(F-statistic) | 0.000000 | | |
