FIRM-SPECIFIC DETERMINANTS OF INSURANCE FIRM PERFORMANCE IN NIGERIA

PRECIOUS BLESSING AWEDOHOMA
MGS2104951

DEPARTMENT OF ACTUARIAL SCIENCE AND INSURANCE
FACULTY OF MANAGEMENT SCIENCES
UNIVERSITY OF BENIN, BENIN CITY

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BY

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BEING A PROJECT WORK SUBMITTED TO THE DEPARTMENT OF ACTUARIAL SCIENCE AND INSURANCE, FACULTY OF MANAGEMENT SCIENCE, UNIVERSITY OF BENIN, BENIN CITY. IN PARTIAL FULFILLMENT OF THE REQUIREMENTS FOR THE AWARD OF BACHELOR OF SCIENCE (B. SC) DEGREE IN ACTUARIAL SCIENCE AND INSURANCE

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DECLARATION

I, **Precious Blessing Awedohoma**, do hereby declare that this project is entirely my work and composition. I further authenticate that the work contained in the report is original and has been done by me under the general supervision of **Dr. Osariemen I. Omoruyi-Aigbovo**

The work embodied in this project has not been submitted by any other candidate for any degree and is not being currently submitted for any other degree. All references made to the work of other person's have been duly acknowledged.

_____ _____

Precious Blessing Awedohoma **DATE**
(Declarant)

CERTIFICATION

We, the undersigned certify that this research work was submitted by Precious Blessing AWEDOHOMA with matriculation number MGS2104951 in the department of Actuarial Science and Insurance, Faculty of Management Sciences and it is here by approved for the partial fulfillment of the requirement for the award of Bachelor of Science (B.sc) degree in Actuarial Science and Insurance, University of Benin, Benin City.

_____	_____
Dr. Osariemen I. Omoruyi-Aigbovo	**DATE**
(Project Supervisor)	
_____	_____
Miss I.M. Izedomi	**DATE**
(Project Coordinator)	
_____	_____
Dr. Osariemen I. Omoruyi-Aigbovo	**DATE**
(Head of Department)	

DEDICATION

I dedicate this work to God Almighty, The Alpha and Omega who saw me through my journey as an undergraduate in the University of Benin. I also dedicate this work to my amazing parents, Mr. Israel Awedohoma and Mrs. Catherine Uwomano Awedohoma for their encouragement, prayers and financial support, and to my siblings for the unconditional love and care they showed me during my course of study.

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TABLE OF CONTENT

ABSTRACT

The study examines the firm specific determinants of the performance of insurance firms in Nigeria over the period 2019 – 2023, using descriptive statistics, correlation analysis and panel least squares regression techniques. A causal research design was adopted for the study. The firm specific factors considered in this study include firm size, capital adequacy, leverage, liquidity and firm age while insurance firm performance was proxy by return on asset. It adopts a multivariate panel least squares analysis for the estimation process. The finding of the study reveals that firm size, liquidity and firm age has a positive and insignificant effect on performance of insurance companies while capital adequacy and leverage has a negative and insignificant influence on performance of insurance firms. The study recommends among others that management of insurance firms should focus less on growing the size of insurance firms in Nigeria. Also, regulatory authorities should ensure that insurance firms comply strictly with capital adequacy set by the regulatory authorities.

CHAPTER ONE

INTRODUCTION

1.1 Background to the Study

In today's highly competitive and dynamic financial services sector, insurance firms play a critical role in fostering economic stability, promoting risk management, and mobilizing long-term savings. Globally, the insurance industry contributes approximately 7.4% to the world's GDP, emphasizing its strategic importance in economic development (Swiss Re Institute, 2023). Insurance companies, particularly in developing economies, act as financial intermediaries, offering protection to individuals and businesses while also channeling funds into productive investments (Obasi, 2021). In Nigeria, the insurance sector continues to evolve, albeit at a gradual pace, experiencing moderate growth influenced by a mix of internal firm characteristics and external macroeconomic conditions (National Insurance Commission [NAICOM], 2022; Okoye & Eze, 2020).

Despite accounting for only 0.3% of Nigeria's GDP as of 2023, the Nigerian insurance sector holds significant untapped potential (National Bureau of Statistics, 2023). This performance is relatively low when compared to other African countries such as South Africa (8.5%) and Kenya (3.4%) in terms of insurance penetration (Allianz Global Insurance Report, 2023). This stark contrast underscores the underutilization of insurance services in Nigeria and calls for a critical evaluation of factors hindering growth and performance. A key area of interest lies in firm-specific determinants internal characteristics that may explain the performance disparities among insurance companies

operating under the same regulatory and economic environment (Akinlo & Apanisile, 2021; Yusuf & Dansu, 2022).

Firm-specific characteristics such as firm size, leverage, liquidity, capital adequacy, investment capability, and firm age have been widely recognized in literature as influential to corporate performance. Larger firms often benefit from economies of scale, better access to financial markets, and superior risk management frameworks. Similarly, firms with stronger liquidity positions can better withstand economic shocks, while capital adequacy determines the ability of firms to underwrite risks and remain solvent during market downturns. Leverage, though potentially a growth catalyst, may also increase financial vulnerability if poorly managed (Okafor, Uwuigbe & Uwuigbe, 2022).

In the Nigerian context, despite efforts by the National Insurance Commission (NAICOM) to restructure the industry through recapitalization initiatives, risk-based supervision, and technology adoption, many insurance firms still struggle with issues related to profitability, operational efficiency, and market penetration. According to NAICOM's 2023 Annual Report, only 12 out of over 50 licensed insurance firms consistently reported a return on equity (ROE) above the industry average of 5%, while return on assets (ROA) averaged 2.7% across the sector a figure significantly lower than the banking sector's average ROA of 5.1% (CBN Financial Stability Report, 2023). These figures point to structural inefficiencies that could be linked to internal firm characteristics rather than external macroeconomic constraints alone.

Past empirical studies have attempted to identify the key drivers of insurance firm performance in Nigeria, with varying conclusions. For example, Adegbite and Olayemi (2022) found that firm size and capital adequacy had a significant positive effect on profitability, suggesting that well-capitalized and larger firms are better positioned to leverage market opportunities. On the other hand, Akinyomi and Olagunju (2021) highlighted liquidity and investment income as major contributors to firm efficiency, especially in volatile market conditions. However, other studies, such as Olalekan and Ogundipe (2022), observed that excessive leverage and poor asset management practices dampen profitability, particularly in smaller firms lacking adequate risk governance frameworks.

Nevertheless, consensus remains elusive, especially in the wake of the COVID-19 pandemic which disrupted global economic activities, including Nigeria's insurance landscape. The pandemic exposed vulnerabilities in operational resilience and underscored the importance of firm-specific strategies such as digital transformation, capital reinvestment, and cost containment. In response, NAICOM launched the Risk-Based Supervision Framework in 2021, compelling firms to align capital requirements with risk exposure levels. While this reform is expected to enhance stability, it also raises questions about how individual firms can adapt based on their structural and operational attributes.

Moreover, Nigeria’s low insurance density approximately $6 per capita compared to the global average of $680 per capita (Swiss Re Institute, 2023) further emphasizes the need

for firm-level innovation, strategic agility, and performance optimization. These dynamics necessitate a deeper investigation into the internal characteristics that drive or hinder financial performance in Nigeria's insurance sector, beyond the influence of macroeconomic or regulatory forces. In summary, this study is timely and essential in contributing to the growing body of literature on performance determinants within the Nigerian insurance industry. It builds on existing research while incorporating contemporary challenges and regulatory developments, offering a more comprehensive perspective on how firm-specific factors shape financial outcomes in the sector.

1.2 Statement of the Problem

Despite concerted regulatory reforms, increased capitalization thresholds, and policy efforts aimed at revitalizing the Nigerian insurance industry, many firms continue to exhibit underwhelming financial performance. The sector is plagued by persistently low returns on assets and equity, limited insurance penetration, and eroding public trust. For instance, the National Bureau of Statistics (2023) reports that insurance contributed only 0.3% to Nigeria's GDP in 2023, which is significantly below the African average of 2.8% (Allianz, 2023). This underperformance raises pertinent questions about the role of internal firm-specific attributes such as firm size, liquidity, leverage, capital adequacy, and asset composition in shaping financial outcomes.

Several scholars have attempted to examine these relationships, but their findings remain inconclusive. For example, Adegbite and Olayemi (2022) found that firm size and capital adequacy positively influence profitability among Nigerian insurance firms. However,

their study was limited by a narrow time frame and did not account for post-COVID-19 realities or inflationary shocks. In another study, Akinyomi and Olagunju (2021) emphasized the relevance of liquidity and investment capability but failed to incorporate recent regulatory changes such as NAICOM's risk-based supervision framework. Additionally, Okafor, Uwuigbe, and Uwuigbe (2022) explored leverage and performance in the Nigerian insurance sector but did not examine the mediating role of firm age or ownership structure, factors that could significantly impact strategic decision-making and performance trajectories.

These scholarly works provide useful insights but reveal notable gaps. First, most existing studies are either outdated or fail to integrate recent economic developments such as naira depreciation, rising inflation, and capital restructuring policies. Second, there is a lack of sector-specific, comprehensive models that assess the combined effect of multiple firm-level determinants in the context of Nigeria's evolving financial environment. Third, many studies treat insurance firms as homogenous entities without accounting for heterogeneity in firm size, age, or asset base, which could lead to skewed interpretations of performance drivers.

This current research seeks to fill these gaps by empirically examining the influence of a broader set of firm-specific variables namely firm size, capital adequacy, leverage, liquidity, investment capability, and firm age on the financial performance of Nigerian insurance firms from 2019 to 2023.

1.3 Research Questions

To guide the study, the following research questions will be addressed:

1. How does firm size influence the financial performance of insurance firms in Nigeria?
2. What is the impact of capital adequacy on the profitability of insurance firms?
3. How does leverage affect the performance of insurance firms in Nigeria?
4. How does liquidity influence the financial performance of insurance firms in Nigeria
5. What is the effect of firm age on insurance firm performance in Nigeria?

1.4 Objectives of the Study

The primary objective of this study is to examine the firm-specific determinants of insurance firm performance in Nigeria. The specific objectives include to:

1. Investigate the impact of firm size on the financial performance of insurance firms in Nigeria;
2. Determine the influence of capital adequacy on the profitability of insurance firms;
3. Examine the effect of leverage on the performance of insurance firms;
4. Ascertain the effect of liquidity in determining the financial performance of insurance companies;and
5. Examine the influence of firm age on insurance firm performance.

1.5 Research Hypotheses

The study will test the following hypotheses:

- H_{01}: Firm size has no significant impact on the financial performance of insurance firms in Nigeria.
- H_{02}: Capital adequacy does not significantly influence the profitability of insurance firms.
- H_{03}: Leverage has no significant effect on the performance of insurance firms in Nigeria.
- H_{04}: Liquidity does not significantly affect the financial performance of insurance firms.
- H_{05}: Firm age has no significant influence on the performance of insurance firms in Nigeria.

1.6 Scope of the Study

This study is confined to insurance companies operating within Nigeria and specifically focuses on ten firms that are listed on the Nigerian Exchange Group (NGX) as of the year 2023. The decision to limit the study to these ten firms is based on the availability of complete financial data, regulatory compliance, and their consistent participation in the Nigerian capital market. These companies provide a meaningful representation of the insurance sector, allowing for a balanced and manageable analysis of firm-specific characteristics in relation to performance outcomes.

The period under review spans five years, from 2019 to 2023. This timeline was deliberately chosen to capture varying economic conditions, including the period before the outbreak of COVID-19, the disruptions caused during the pandemic, and the subsequent economic recovery. By analyzing data across these distinct periods, the study seeks to understand how internal firm dynamics have influenced performance during both stable and turbulent times.

Firm-specific variables examined in this research include firm size, capital adequacy, leverage, liquidity, and firm age. These variables have been widely identified in previous literature as important determinants of firm performance, particularly in emerging markets. In this study, firm size is assessed using total assets, capital adequacy is evaluated based on the equity-to-asset ratio, leverage is measured through the debt-to-equity ratio, liquidity is gauged by current ratios, and firm age is determined by the number of years since incorporation or listing.

To measure performance, the study relies on three key financial indicators: return on assets (ROA), return on equity (ROE), and net profit margin (NPM). These metrics provide a holistic view of the firms' profitability, operational efficiency, and value creation for shareholders.

1.7 Significance of the Study

This study offers significant contributions to multiple stakeholders within and beyond the Nigerian insurance industry. For policymakers and regulators, particularly the National Insurance Commission (NAICOM), the research provides robust empirical evidence on

the internal factors that drive or hinder firm performance. This insight is crucial for developing targeted regulatory frameworks, such as capital adequacy guidelines, risk-based supervision, and performance monitoring mechanisms. With the Nigerian government aiming to deepen insurance penetration and boost financial inclusion—as outlined in the Financial Sector Development Plan (FSDP, 2022)—evidence-based policy formulation becomes increasingly vital. The findings of this study can therefore guide ongoing reforms to enhance sectoral stability, resilience, and competitiveness.

For investors, shareholders, and financial analysts, this research is equally beneficial. By uncovering which firm-specific variables such as leverage, liquidity, or firm age most significantly influence profitability and asset efficiency, the study equips these actors with the analytical tools needed for more informed investment and portfolio decisions. In an environment where insurance firms often exhibit heterogeneous performance patterns, such nuanced understanding can improve risk assessment and capital allocation decisions.

Corporate managers and board executives of insurance companies can also benefit from the study's findings. By identifying the internal attributes that correlate with improved financial outcomes, the research highlights strategic areas for operational and structural improvements. For instance, understanding that capital adequacy or liquidity management has a significant impact on firm performance can prompt targeted internal audits, better investment strategies, or more prudent capital restructuring. These insights can also inform the development of key performance indicators (KPIs) for firm benchmarking and performance appraisal.

From an academic and research perspective, this study makes a valuable contribution by filling a gap in the literature concerning firm-specific determinants of performance within Nigeria's insurance industry. Existing studies have predominantly concentrated on the banking or manufacturing sectors, often neglecting the distinct operational realities of insurance firms (Okafor et al., 2022; Akinyomi & Olagunju, 2021). By focusing on insurance companies specifically and within the context of recent economic shocks, regulatory reforms, and post-pandemic recovery this study provides fresh, context-sensitive insights that are both relevant and timely.Finally, for future researchers and postgraduate students, this study offers a solid foundation upon which more granular or comparative investigations can be conducted. It opens up avenues for extended research into other emerging markets or comparative analyses between sectors and economies. It also encourages interdisciplinary studies that may combine finance, regulation, and behavioral economics to further dissect performance dynamics in the financial services industry.

CHAPTER TWO

LITERATURE REVIEW

2.1 Introduction

This chapter presents a comprehensive review of relevant literature on the firm-specific determinants of insurance firm performance in Nigeria. It begins with the conceptual clarification of key terms, followed by the theoretical framework underpinning the study. It then reviews empirical literature and identifies research gaps. The review is aimed at building a solid foundation for the current study by synthesizing existing knowledge and highlighting the areas needing further exploration.

2.2 Conceptual Review

2.2.1 Insurance Firm Performance

Insurance firm performance refers to the extent to which an insurance company achieves its set financial and non-financial goals, including profitability, solvency, market share growth, customer satisfaction, and operational efficiency. Performance measurement in the insurance industry is particularly complex due to the service-oriented and risk-bearing nature of the business, which combines long-term contract obligations with fluctuating claims and regulatory compliance(Ujuwan, 2023).

Financial performance is typically assessed using metrics such as Return on Assets (ROA), which measures how efficiently a company utilizes its assets to generate profit; Return on Equity (ROE), which gauges the return to shareholders' equity; and Net Profit Margin (NPM), which reflects the firm's ability to convert revenue into profit after

expenses (Olowokure et al., 2022; Salawu & Agbaje, 2021). These indicators provide insight into the firm's capacity to generate earnings relative to its resources.

Beyond profitability, solvency and liquidity ratios are also critical in assessing insurance firm performance, as they demonstrate the firm's ability to meet policyholder claims and obligations as they fall due. According to NAICOM (2023), insurers in Nigeria are mandated to maintain minimum solvency margins to protect policyholders and ensure market stability.

In addition, non-financial performance indicators such as claims settlement speed, customer retention rates, innovation in policy offerings, digital transformation, and regulatory compliance are becoming increasingly important. These indicators reflect customer experience, service delivery efficiency, and the strategic direction of the firm (Okonkwo et al., 2023).

Insurance firms must also contend with external factors like macroeconomic instability, inflation, exchange rate fluctuations, and regulatory changes that directly impact performance. For instance, Ibrahim and Salami (2022) note that the COVID-19 pandemic and subsequent economic downturn reshaped operational priorities and highlighted the importance of resilience and digital agility in sustaining performance.

Moreover, the adoption of Enterprise Risk Management (ERM) practices has been identified as a contributor to improved firm performance, as it enhances decision-making, controls risk exposure, and boosts investor confidence (Adeyemi & Okoro, 2021). As such, performance is increasingly viewed as a multidimensional construct that includes

financial strength, operational excellence, strategic adaptability, and customer-centric outcomes.

In the Nigerian context, the National Insurance Commission (NAICOM) continues to implement reforms such as the recapitalization directive, digital policy enforcement, and risk-based supervision to enhance firm performance and competitiveness (NAICOM, 2023). These reforms reflect a shift toward stronger corporate governance and transparency in performance measurement within the industry.

Therefore, evaluating insurance firm performance involves a holistic consideration of both quantitative (e.g., ROA, ROE, and NPM) and qualitative factors (e.g., innovation, risk management, and customer service), which together define the firm's effectiveness, stability, and sustainability in a competitive and regulated environment.

2.2.2 Firm-Specific Determinants

Firm-specific determinants are internal characteristics or attributes inherent to an organization that directly affect its financial performance. These factors are controllable by management and vary from one firm to another, thereby explaining the differences in performance outcomes even within the same industry. In the insurance sector, these determinants play a crucial role in shaping profitability, risk exposure, efficiency, and strategic direction.

Firm Size:

Firm size, often measured by total assets or market share, has been widely recognized as a key driver of insurance firm performance. Larger firms typically benefit from

economies of scale, operational diversification, better access to financial markets, and higher brand recognition (Akinlo & Apanisile, 2021). In Nigeria, larger insurance firms are more likely to attract bigger clients, secure reinsurance partnerships, and absorb operational shocks. However, overly large firms may face diseconomies of scale and bureaucratic inefficiencies that hamper decision-making (Nwosu & Okolo, 2022).

Capital Adequacy:

Capital adequacy reflects a firm's financial strength and ability to absorb unexpected losses or fulfill liabilities, particularly during economic downturns. A well-capitalized insurance firm is perceived as more stable and credible, enhancing policyholder and investor confidence (Okoye & Eze, 2020). With recent recapitalization directives by NAICOM, capital adequacy has gained prominence as a critical performance determinant. Firms with strong capital structures are better positioned to expand underwriting capacity, invest in innovation, and comply with solvency regulations (Adeyemi & Ayodele, 2023).

Leverage:

Leverage denotes the proportion of debt in a firm's capital structure. While moderate leverage can enhance return on equity by utilizing borrowed funds for profitable ventures, excessive debt levels increase financial risk and reduce operational flexibility. In the insurance industry, high leverage may compromise claim settlement ability, escalate insolvency risk, and strain regulatory compliance (Afolabi & Ojo, 2021). Hence, maintaining an optimal debt-equity ratio is essential for sustaining long-term performance and managing stakeholder trust.

Liquidity:

Liquidity refers to a firm's capacity to meet short-term obligations and policyholder claims as they arise. Insurance firms with high liquidity are better able to honor claims promptly, which enhances customer satisfaction and reputational strength. Liquidity is particularly important in times of unexpected catastrophes or claims surges, where delayed settlements can erode client trust and lead to regulatory sanctions (Usman & Okafor, 2022). Common liquidity ratios used include the current ratio and quick ratio, which indicate the firm's ability to convert assets to cash in the short term.

Firm Age:

The age of an insurance firm can influence its market reputation, institutional experience, and operational maturity. Older firms often benefit from accumulated knowledge, a robust client base, and long-standing relationships with regulators and reinsurers (Chukwu & Ibrahim, 2022). However, age can also be associated with organizational rigidity, resistance to change, and outdated systems, which may hinder innovation and adaptability. Younger firms, while more agile and tech-driven, may lack the institutional credibility and stability required to attract premium clients or manage large claims effectively. These firm-specific determinants interact with each other and the external environment to shape overall performance. Strategic management of these internal attributes, therefore, becomes a vital part of sustaining competitive advantage in Nigeria's evolving insurance landscape.

2.2.3 Nigerian Insurance Industry Overview

The Nigerian insurance industry represents a vital component of the financial services sector, although it remains significantly underdeveloped when compared to global and even regional standards. As of 2023, the industry's contribution to Nigeria's Gross Domestic Product (GDP) stood at less than 1%, reflecting low insurance penetration and limited consumer engagement (NAICOM, 2023). Despite its immense potential in a country with over 200 million people, structural inefficiencies, low public awareness, and trust issues continue to inhibit the growth and performance of the sector.

The industry is regulated by the National Insurance Commission (NAICOM), which is tasked with overseeing insurance operations, ensuring compliance with statutory requirements, and protecting policyholders' interests. Over the past decade, NAICOM has introduced several reform measures aimed at revitalizing the sector. Notable among these are risk-based supervision, recapitalization directives, and the enforcement of corporate governance codes designed to enhance financial stability and transparency (NAICOM, 2023; Adeyemi & Omodunbi, 2022).

The recapitalization policy, for instance, aims to increase the financial capacity of insurance firms, enabling them to underwrite larger and more complex risks. Under this framework, life insurance firms are required to raise their minimum capital to ₦8 billion, general business firms to ₦10 billion, and composite firms to ₦18 billion. While implementation has faced delays due to legal and economic hurdles, the policy remains critical for deepening market resilience (CBN, 2023).

Furthermore, NAICOM's push for digital transformation has seen the introduction of electronic platforms for policy underwriting, claim processing, and compliance reporting. The commission has encouraged insurers to adopt insurtech solutions to enhance operational efficiency, improve customer experience, and broaden coverage, especially in underserved areas (Oyetunji & Akinlade, 2023). However, technology adoption remains slow due to infrastructural challenges, regulatory bottlenecks, and cybersecurity concerns. The Nigerian insurance industry is segmented into life, non-life (general), takaful (Islamic insurance), and microinsurance categories. While general insurance still dominates in terms of gross premium income, there is a growing interest in microinsurance and takaful as inclusive tools for reaching the informal sector and religious-sensitive consumers (NIA, 2023). Nonetheless, the industry still grapples with issues such as low premium retention rates, underwriting losses, and poor claims management, which weaken its attractiveness to investors and consumers alike.

Despite these challenges, the sector holds significant growth prospects. The rising middle class, increasing urbanization, the mandatory insurance laws for businesses, and government initiatives like the National Financial Inclusion Strategy (NFIS) all signal potential for expansion. Insurance penetration is projected to improve with continued regulatory reforms, improved public awareness campaigns, and increased collaboration between insurers and fintech companies. In conclusion, while the Nigerian insurance industry continues to face performance-related constraints stemming from both internal and external factors, the ongoing policy reforms and modernization efforts by NAICOM

are expected to improve performance, competitiveness, and contribution to national economic development in the coming years.

2.3 Theoretical Review

The theoretical foundation of this study draws upon several key theories that explain how firm-specific factors influence the performance of insurance firms in Nigeria. These include the Resource-Based View (RBV), Signaling Theory, Pecking Order Theory, and Trade-Off Theory. Each provides valuable insights into the internal mechanisms and financial behaviors that underpin firm performance.

2.3.1 Resource-Based View (RBV)

The Resource-Based View (RBV) theory, first formally articulated by Barney (1991), posits that a firm's sustainable competitive advantage arises from its unique bundle of valuable, rare, inimitable, and non-substitutable resources. In the context of insurance firms, internal resources such as financial capability, managerial expertise, advanced technology, and operational efficiency are critical determinants of performance. These resources enable firms to innovate, respond effectively to market demands, and maintain superior profitability compared to competitors (Barney, 1991; Peteraf & Barney, 2023).

Recent empirical studies reinforce RBV's relevance in emerging markets like Nigeria, showing that insurance companies with strong capital bases and skilled management teams tend to perform better financially (Oladele & Ajibola, 2022). Furthermore, RBV underscores the importance of intangible assets such as brand reputation and customer

relationships, which are increasingly vital in the insurance sector's competitive landscape (Nwankwo et al., 2024).

2.3.2 Signaling Theory

Signaling Theory, introduced by Spence (1973), explains how firms convey credible information to stakeholders to reduce information asymmetry. In insurance, firms signal their quality and reliability to customers, investors, and regulators through observable financial indicators such as profitability, capital adequacy, and solvency ratios (Spence, 1973; Connelly et al., 2011).

Given the inherent uncertainty and trust issues in insurance, signaling becomes crucial. Firms with strong financial performance and capital strength send positive signals that enhance stakeholder confidence and market reputation (Abdullahi & Hassan, 2023). For Nigerian insurance firms, signaling through compliance with NAICOM's recapitalization policies and maintaining robust solvency margins serves as an important mechanism for competitive positioning (Eze & Obi, 2023).

2.3.3 Pecking Order Theory

Pecking Order Theory (Myers & Majluf, 1984) posits that firms prioritize internal financing (retained earnings) over external sources such as debt or equity to avoid the costs associated with asymmetric information. This hierarchy of financing preference is particularly relevant in explaining the capital structure decisions of insurance firms in Nigeria, where external capital markets are less developed and costly.

The theory suggests that firms with adequate internal funds rely less on debt, thereby impacting leverage ratios and capital adequacy. Studies have shown that Nigerian insurance firms tend to rely heavily on retained earnings for growth, reflecting a cautious approach to leverage to mitigate financial distress risks (Adegboye & Olusanya, 2022). This preference aligns with regulatory encouragement for capital sufficiency and prudent financial management (NAICOM, 2023).

2.3.4 Trade-Off Theory

Trade-Off Theory, as proposed by Kraus and Litzenberger (1973), posits that firms balance the tax benefits of debt financing against the expected costs of financial distress and bankruptcy risk. This balancing act influences decisions regarding the optimal capital structure to maximize firm value.

In the insurance sector, where solvency and risk management are paramount, firms weigh the benefits of debt such as tax deductibility of interest against potential costs like increased default risk and regulatory penalties (Myers, 2023). Empirical evidence from Nigerian insurance firms indicates that while debt financing can enhance performance by providing leverage, excessive leverage raises the probability of financial distress, thereby negatively impacting firm performance (Onyema & Umeh, 2024).

Together, these theories provide a comprehensive framework to understand the complex interplay between firm-specific financial characteristics and insurance firm performance in Nigeria. They highlight the importance of leveraging internal resources, signaling

financial health to the market, managing financing choices prudently, and optimizing capital structure to sustain long-term competitiveness.

2.4 Empirical Reviews

2.4.1 Firm Size and Performance

The relationship between firm size and performance has been a focal point in empirical literature. Adegbite and Olayemi (2022), in a study spanning from 2015 to 2020 involving 15 Nigerian insurance firms, employed panel data regression using a fixed effects model. Their findings revealed that larger insurance firms tended to perform better due to operational efficiencies and economies of scale. They suggested that insurance companies invest in scalable business processes to enhance performance. However, Olalekan and Ogundipe (2022), who studied 12 insurance firms listed on the Nigerian Exchange between 2016 and 2021 using the Generalized Method of Moments (GMM), cautioned that beyond a certain threshold, increasing firm size could lead to diseconomies of scale and reduced efficiency. They recommended that firms monitor growth carefully to avoid bureaucratic inefficiencies.

Chukwu and Eze (2023), using OLS regression over the 2014–2019 period for a sample of 10 insurance firms, found that firm size positively influenced Return on Assets (ROA), though its impact on Return on Equity (ROE) was minimal. They advised that large firms adopt diversification strategies to improve equity returns. Similarly, Ibrahim and Musa (2021), who used fixed effects panel regression on data from 8 firms between 2013 and 2018, observed that larger firms enjoyed better market penetration and improved

customer retention. They recommended that smaller firms form strategic alliances to compete effectively.

Bello and Ojo (2022), analyzing 20 insurance companies from 2015 to 2020 using the dynamic panel GMM approach, confirmed a positive relationship between firm size and operational efficiency. However, they noted that increased size sometimes stifled innovation. Their recommendation emphasized balancing size with adaptability and innovation. Emeka and Udo (2020), covering 14 firms from 2012 to 2017 using random effects regression, concluded that larger firms were more resilient during financial downturns due to their broader asset base. They encouraged smaller firms to concentrate on niche markets to strengthen their competitiveness.

2.4.2 Capital Adequacy and Performance

Capital adequacy plays a vital role in determining the financial soundness of insurance firms. Akinyomi and Olagunju (2021) conducted a study from 2016 to 2020 using fixed effects panel regression on 13 insurance firms. Their results showed that strong capital adequacy ratios positively influenced both profitability and firm solvency. They advocated for maintaining healthy capital buffers to improve financial stability and investor confidence. Contrastingly, Ajayi and Ogunleye (2020), who examined 10 insurance firms from 2014 to 2019 using multiple regression analysis, found that excessively high capital levels often led to underutilization of financial resources and diminished returns on equity. They recommended optimizing capital levels to strike a balance between adequacy and asset efficiency.

Furthering this discourse, Ikenna and Ifeoma (2023), in a study spanning 2017 to 2022 and involving 15 insurance firms, adopted the System GMM approach. Their findings indicated that higher capital adequacy enhanced firms' capacity to absorb risks, thereby improving resilience during economic shocks. They suggested that regulators should avoid excessively rigid capital requirements to allow firms operational flexibility. Oke and Afolabi (2022) analyzed data from 12 firms between 2015 and 2020 using both fixed and random effects models. Their results affirmed a strong positive relationship between capital adequacy and key performance indicators such as ROA and ROE. They recommended improved capital management strategies.

Nwankwo and Okeke (2021), focusing on 11 firms between 2013 and 2018, used correlation and regression analyses to establish that capital adequacy strengthened firms' ability to withstand external shocks and maintain financial integrity. Their suggestion emphasized integrating capital management into broader strategic planning. Similarly, Olufemi and Anibaba (2020), using panel data regression on 9 firms from 2012 to 2017, found that adequate capital levels fostered customer trust and improved overall profitability. They recommended sustained capital levels to reinforce brand credibility in the insurance market.

2.4.3 Leverage and Performance

Empirical studies have yielded mixed outcomes on the influence of leverage on insurance firm performance. Yusuf and Dansu (2022), in a study covering 13 firms from 2015 to 2021 using the System GMM approach, discovered that moderate levels of leverage

improved profitability by taking advantage of tax shields. However, they noted that excessive leverage heightened financial risk. They recommended firms adopt optimal debt strategies to manage this trade-off. In contrast, Okafor et al. (2022), using a fixed effects panel regression on 12 firms between 2014 and 2019, reported that high leverage negatively impacted performance due to the burden of interest payments and debt servicing. Their advice was for firms to limit external borrowing unless absolutely necessary.

Eze and Ugwu (2023), who applied dynamic panel data analysis to 14 firms over the 2016–2022 period, observed that firms with moderate leverage outperformed those with very low or very high debt ratios. They advocated for prudent leverage strategies that balance risk and return. Similarly, Ibrahim and Bello (2021), using OLS regression for 10 insurance firms between 2013 and 2018, found that during economic downturns, leveraged firms experienced reduced performance due to inflexible financial obligations. They suggested incorporating flexibility into debt management plans.

Musa and Adewale (2022), analyzing data from 11 firms between 2015 and 2020 through panel regression with random effects, discovered an inverted U-shaped relationship between leverage and firm performance, indicating that both low and high levels of debt were suboptimal. They recommended targeting an optimal leverage threshold. Finally, Okoro and Chukwu (2020), who studied 9 firms between 2012 and 2017 using correlation and regression methods, concluded that excessive debt increased default risk and adversely affected the market value of firms. Their recommendation was that

insurance firms should maintain a balanced capital structure to ensure long-term financial sustainability.

2.4.4 Liquidity and Performance

Liquidity, which reflects a firm's ability to meet short-term obligations, is crucial in the insurance industry where timely claims settlement determines customer trust and operational credibility. Akpan and Ibanichuka (2021), in their study of 15 insurance firms between 2014 and 2020 using fixed effects regression, found a positive and significant relationship between liquidity and firm performance. However, they also warned that excessive liquidity could signal underutilization of resources and recommended efficient cash management strategies. In a similar vein, Okoye and Umeojiako (2022) examined 12 insurance companies listed on the Nigerian Exchange from 2015 to 2021 using the Generalized Least Squares (GLS) method. They concluded that liquidity positively influenced profitability, particularly during economic uncertainty. The authors suggested regular liquidity stress testing to maintain optimal balance.

Meanwhile, Ibrahim and Adeyemi (2023) analyzed data from 10 firms between 2016 and 2022 using dynamic panel data analysis. They found that although liquidity enhances performance in the short run, its effect diminishes if not reinvested productively. Their recommendation emphasized channeling excess cash into high-yielding investments. Similarly, Chukwuma and Nwankwo (2020) investigated 11 firms from 2013 to 2018 through panel data regression. Their findings indicated that high liquidity improved ROA

but had no significant effect on ROE, implying that liquidity's impact varies depending on the metric used.

Adegoke and Olamide (2021) utilized the Ordinary Least Squares (OLS) method on a five-year dataset (2015–2019) from 9 insurance firms. They reported that moderate liquidity levels contribute significantly to financial performance by minimizing claim default risk. They advised firms to monitor liquidity ratios closely, especially during claim-intensive periods. Furthermore, Bello and Adetunji (2022), who analyzed 14 firms between 2016 and 2021 using a random effects model, found that firms with prudent liquidity policies had better customer satisfaction ratings, which in turn translated into higher premium income. They recommended a liquidity policy that aligns financial stability with customer-centric goals.

2.4.5 Firm Age and Performance

Firm age, which denotes the number of years a company has been in operation, is often considered an indicator of accumulated experience, brand loyalty, and operational stability. Akinlo and Apanisile (2021) studied 13 Nigerian insurance firms from 2014 to 2020 using panel regression analysis. Their results confirmed that older firms tend to perform better due to well-established internal processes and stronger brand equity. However, they also observed that some mature firms showed resistance to technological innovation. They recommended ongoing organizational renewal practices. In support of this, Eze and Eneh (2022) examined the performance of 10 insurance companies over the 2015–2021 period using fixed effects estimation. They concluded that while firm age

enhanced profitability, there was a diminishing return beyond a certain maturity level. Their advice included maintaining agility and embracing digital transformation.

Similarly, Okafor and Sunday (2023), who used dynamic panel data for 12 firms between 2016 and 2022, found that older firms had a more stable client base, which contributed to higher net premium income. They suggested that younger firms should leverage technology and innovation to bridge the performance gap. In contrast, Musa and Ojo (2020), who assessed 11 firms from 2013 to 2018 using regression analysis, argued that older firms might become too rigid, leading to declining competitiveness. They emphasized a need for process reengineering in legacy firms.

Ibrahim and Oladipo (2021) used OLS regression on data from 9 insurance companies between 2015 and 2020. Their findings indicated a non-linear relationship between firm age and performance, with mid-aged firms performing the best. Their recommendation was for firms to periodically review strategy in line with industry evolution. Lastly, Nwachukwu and Ibe (2022) analyzed 14 firms from 2014 to 2021 using a fixed effects model. They found that older firms had better risk assessment capabilities and underwriting standards. However, they warned that long-established firms could become complacent. Their suggestion emphasized continual investment in employee training and strategic foresight.

2.5 Research Gap

Despite the growing body of literature on insurance firm performance in Nigeria, several critical gaps persist that limit the applicability and relevance of prior findings. First, many

existing studies have focused predominantly on data predating the COVID-19 pandemic, thereby neglecting the impact of recent economic shocks, inflationary pressures, and disruptions in global financial markets that have reshaped operational realities in the insurance sector. This omission reduces the timeliness and policy relevance of earlier conclusions.

Second, much of the empirical research adopts a univariate or bivariate analytical lens, analyzing each firm-specific determinant in isolation. Such approaches fail to capture the potential joint or interactive effects of internal variables like firm size, capital adequacy, leverage, liquidity, and age on performance. This limits our understanding of how these factors concurrently shape the operational and financial outcomes of insurance firms.

Third, there remains a noticeable lack of consideration for the influence of regulatory reforms such as NAICOM's recapitalization mandate and the shift toward risk-based supervision which have significantly altered the operational framework for insurers in Nigeria. Omitting these contextual dynamics undermines the explanatory power of prior models.

Finally, many studies have applied general corporate finance theories and models without tailoring them to the unique characteristics and regulatory complexities of the insurance industry. As such, they may not accurately reflect the operational logic or performance drivers of insurance firms.

This study aims to address these limitations by utilizing updated post-pandemic data covering the period from 2019 to 2023. It employs a multivariate analytical framework

that is specific to the insurance industry, thereby offering a more comprehensive and contextually grounded understanding of the firm-specific determinants influencing performance in the Nigerian insurance sector.

CHAPTER THREE

METHODOLOGY

3.1 Introduction

This chapter outlines the methodology adopted for this study, which investigates the firm-specific determinants of insurance firm performance in Nigeria. It presents the research design, population, sample size, data collection method, measurement of variables, and the method of data analysis.

3.2 Research Design

The study employs a logitudinal research design, using a correlational and explanatory approach to examine the relationship between firm-specific variables and the performance of insurance firms in Nigeria. The study makes use of panel data derived from the annual financial statements of selected firms between 2018 and 2023.

3.3 Population of the Study

The population of the study consists of all registered insurance companies operating in Nigeria as recognized by the National Insurance Commission (NAICOM). As of the latest available records, over 60 firms are licensed in the industry, encompassing both life and non-life insurance operators.

3.4 Sample Size and Sampling Technique

The sample size for this study is limited to 10 insurance firms. These firms are purposively selected based on the availability and consistency of complete financial records for the six-year period (2018–2023). The purposive sampling technique ensures that only firms with credible and publicly accessible financial data are included in the analysis.

3.5 Data Sources and Collection

The study relies exclusively on secondary data. Financial data for the 10 selected insurance companies will be obtained from their audited annual reports, official publications by the Nigerian Exchange group (NXG) and other regulatory filings

available on NAICOM's website. Supplementary industry reports and statistics from the Central Bank of Nigeria (CBN) will also be consulted as needed.

3.6 Model Specification

To examine the influence of firm-specific factors on the financial performance of insurance firms in Nigeria, this study adopts a multiple linear regression model adapted from Chen and Wong (2004). The model is specified as follows:

$$ROA = \beta_0 + \beta_1 FS + \beta_2 CA + \beta_3 LEV + \beta_4 LIQ + \beta_5 FA + \varepsilon$$

Where:

ROA = Return on Assets of firm i in year t, used as a proxy for financial performance

FS = Firm Size, measured as the natural logarithm of total assets

CA = Capital Adequacy, measured as total capital ÷ total risk-weighted assets

LEV = Leverage, measured as total debt ÷ total equity

LIQ = Liquidity, measured as current assets ÷ current liabilities

FA = Firm Age, measured as the number of years since establishment

$\beta 0$ = Intercept of the model

ε = Error term

This model is adapted to the Nigerian insurance context to determine how firm-specific characteristics influence performance over time.

3.7 Operationalization of Variables

Variable	Type	Measurement/Proxy	A Priori Expectation

Financial Performance (ROA)	Dependent	ROA = Net Income ÷ Total Assets	Positive – performance improves with favourable firm-specific factors.
Firm Size (FS)	Independent	Natural Logarithm of Total Assets: ln(Total Assets)	Positive – larger firms are expected to perform better due to economies of scale.
Capital Adequacy (CA)	Independent	Total Capital ÷ Total Risk-Weighted Assets	Positive – higher capital adequacy enhances stability and profitability.
Leverage (LEV)	Independent	Total Debt ÷ Total Equity	Negative – higher leverage increases financial risk and may reduce performance.
Liquidity (LIQ)	Independent	Current Assets ÷ Current Liabilities	Positive – stronger liquidity improves the ability to meet short-term obligations.
Firm Age (FA)	Independent	Number of years since establishment	Positive – older firms may have better market experience and

			reputation, improving performance.

Authors compilation 2025

3.8 Method of Data Analysis

The data collected for this study will be analysed using the panel data regression technique to account for both time-series and cross-sectional variations across the 20 insurance firms over the six-year period. Descriptive statistics will first be used to summarize the key characteristics of the variables, including their means, standard deviations, minimum and maximum values.

Thereafter, diagnostic tests such as the correlation matrix will be conducted to check for multicollinearity among the independent variables. Panel unit root tests will be applied to confirm the stationarity of the data series. The main analytical techniques will include Fixed Effects Model (FEM) and Random Effects Model (REM), and the Hausman test will be employed to determine the most appropriate model for interpretation.

Additional robustness checks, such as heteroskedasticity and serial correlation tests, will be performed to validate the reliability of the results. The final regression output will guide the interpretation of the influence of firm-specific variables on insurance firm performance in Nigeria.

CHAPTER FOUR

DATA PRESENTATION AND ANALYSIS OF RESULTS

4.1 Introduction

In this chapter, the analysis and interpretation of the data is carried out based on the empirical approach adopted and the panel data regression technique is used for the analysis. In order to present a robust investigation and analysis of the study, two general methods are used in the empirical analysis, namely statistical and econometric methodologies. The statistical method involves the use of descriptive statistics as well as correlation analysis to examine the initial characterization and relationship among the variables of interest; while the panel data methodology is used to estimate the empirical model drawn from the time series-cross sectional data in order to succinctly determine

the effect of independent variables on performance (ROA) of insurance firms performance.

4.2 Descriptive Statistics

The summary statistics of performance and the independent variables for the 20 sampled insurance companies is presented in Table 4.1.

Table 4.1: Descriptive Statistics

	ROA	FS	CA	LEV	LIQ	FA
Mean	0.082616	11.35294	1.127400	0.093804	0.350400	17.45000
Median	0.050000	11.59005	0.060000	0.068950	0.360000	16.00000
Maximum	0.664000	13.34564	4.540000	1.204900	0.700000	33.00000
Minimum	0.000600	7.372063	0.020000	-0.505100	0.060000	5.000000
Std. Dev.	0.107563	0.957350	1.754721	0.174224	0.148643	8.254016
Skewness	2.977654	-1.277356	1.346606	2.639090	0.204721	0.474804
Kurtosis	12.92062	5.142330	3.011112	20.18711	2.392038	2.019283
Jarque-Bera	557.8515	46.31722	30.22299	1346.899	2.238581	7.764846
Probability	0.000000	0.000000	0.000000	0.000000	0.326511	0.020601
Sum	8.261600	1135.294	112.7400	9.380410	35.04000	1745.000
Sum Sq. Dev.	1.145411	90.73539	304.8255	3.005048	2.187384	6744.750

Observations	100	100	100	100	100	100

Source: Researcher's Computation, (2025) from E-view 9.0 Software

The descriptive statistics in Table 4.1 reveals that the average return on asset (mean value) for insurance firms performance is 0.08 which is relatively low. The median value of 0.05 is lower than the mean value and suggests that ROA values are not similar across the insurance firms in our sample. This is further buttressed by the low (positive) minimum value of 0.0006 while the maximum value of 0.66 is not too high. The standard deviation of 0.10 is higher than the mean value and therefore indicates high variability in performance (ROA) values for the selected insurance firms. The skewness value of 2.97 is also not too high, its positive value indicates positive skewness. The Kurtosis value of 12.92 is low while the J-B value of 557.85 pass the significance test and clearly indicates that ROA values across the insurance firms are not normally distributed. The independent variables have similar characteristics with ROA namely, low variability. However, J-B values for all the independent variables except liquidity were significant and not normally distributed. Also, the skewness for the independent variables was positive.

4.2 Correlation Analysis

It is necessary to scrutinise, in a preliminary manner, the associations among the variables in the study. The correlation analysis is used to conduct these investigations. The result of the correlation tests are reported in table 4.2.

Table 4.2: Correlation Results

	ROA	FS	CA	LEV	LIQ	FA

ROA	1.000000					
FS	0.214994	1.000000				
CA	-0.037594	0.005409	1.000000			
LEV	-0.065708	-0.078191	-0.056121	1.000000		
LIQ	0.127892	0.229696	-0.053100	-0.057761	1.000000	
FA	0.018305	-0.507847	0.037005	-0.010423	-0.129652	1.000000

Source: Researcher's Computation, (2025) from E-view 9.0 Software

Table 4.2 shows the Pearson's correlation coefficient between all the independent variables as well as the dependent variable employed in the study. The correlation coefficient between each pair of independent variables should not exceed 0.80 values; otherwise the independent variables with a coefficient in excess of 0.80 between them may be suspected of exhibiting multicolinearity. The correlation matrix shows that the correlation between the independent variables is either low degree or moderate degree, i.e. the correlation coefficient between all the independent variables is less than 0.80, which suggests that there is absence of multicolinearity.

4.3 Empirical Results on the Panel Least Squares Analysis

The multivariate ordinary least squares (OLS) results are presented in Table 4.3. The OLS result shows that the serial correlation in the OLS result was corrected using the Concrate-Ocult Autoregressive (AR) (1). Convergence was achieved after 7 iterations with 80 observation included after adjustment.

Table 4.3: Panel Least Squares Results

Dependent Variable: ROA

Variable	*Coefficient*	*t-Statistics*	*Prob.*
C	-0.110005	-0.547123	0.5860
FS	0.016352	1.303433	0.1965
CA	-0.003805	-1.078938	0.2842
LEV	-0.030493	-0.620469	0.5369
LIQ	0.069279	0.682635	0.4970
FA	0.001218	0.222429	0.8246
AR(1)	0.770605	6.780446	0.0000
	$R^2 = 0.43$; Adjusted $R^2 = 0.38$; F = 9.14; D.W = 1.58		

Source: Researcher's Computation, (2025) from E-view 9.0 Software

From the result in Table 4.3, the goodness of fit statistics was below average. The R^2 squared value of 0.43 shows that the five explanatory variables (firm size, capital adequacy, leverage, liquidity and firm age) explained about 43 percent of the systematic variation of ROA for the sampled insurance firms. After adjusting for degree of freedom the explanatory variables were able to explain about 38 percent of the systematic variation of ROA for the sampled insurance firms. This indicates that the explanatory variables are not too good predictive factor in the ROA of the insurance firms in Nigeria. The F-value is significant and shows that a significant linear relationship exist between ROA and the independent variables. Thus, the hypothesis of the existence of a significant linear relationship between the combined explanatory variables and ROA which is the dependent variable is validated. The D.W. statistic value of 1.58 suggests that autocorrelation is not a strong factor in the estimated model and the estimates are therefore reliable for policy directions.

The specific contribution of each of the explanatory variables to the behavior of ROA is determined by observing the individual coefficients of the variables in terms of size, signs and significance. The results in Table 4.3 show that firm size, liquidity and firm age exhibit positive sign, indicating that firm size, liquidity and firm age have positive relationship with performance (ROA) in line with a priori expectation. Capital adequacy and leverage exhibits a positive sign, indicating that these variables have a negative relationship with ROA of the insurance firms, hence the link between capital adequacy and performance is contrary to a priori expectation while that of leverage and performance is in line with a priori expectation. More importantly, we focus on the significance of the coefficients in the model. The coefficients of all the independent variables (firm size, capital adequacy, leverage, liquidity and firm age) exert an insignificant impact on ROA, thus fail the significant test at the 5 percent level.

4.4 Hypotheses Testing

In this section, the hypotheses of the study are tested based on the outcome of the results from the estimated models of the study. The hypotheses are tested using the coefficients estimated in the random effect estimation in the empirical analysis.

Hypothesis One

H_{01}: *Firm size has no significant effect on* the performance *of insurance firms in Nigeria*

Decision Rule: with t value below 2 and probability value > 0.05, as shown in table 4.3. This rejects alternative hypothesis which states that firm size has significant effect on the performance of insurance firms in Nigeria. Therefore, the null hypothesis which states

that firm size has no significant effect on the performance of insurance firms in Nigeria is accepted.

Hypothesis Two

H_{02}: *Capital adequacy has no significant effect on* the performance *of insurance firms in Nigeria*

Decision Rule: with t value below 2 and probability value > 0.05, as shown in table 4.3. This rejects alternative hypothesis which states that capital adequacy has significant effect on the performance of insurance firms in Nigeria. Therefore, the null hypothesis which states that capital adequacy has no significant effect on the performance of insurance firms in Nigeria is accepted.

Hypothesis Three

H_{03}: *Leverage has no significant effect on* the performance *of insurance firms in Nigeria*

Decision Rule: with t value below 2 and probability value > 0.05, as shown in table 4.3. This rejects alternative hypothesis which states that leverage has significant effect on the performance of insurance firms in Nigeria. Therefore, the null hypothesis which states that leverage has no significant effect on the performance of insurance firms in Nigeria is accepted.

Hypothesis Four

H_{04}: *Liquidity has no significant effect on* the performance *of insurance firms in Nigeria*

Decision Rule: with t value below 2 and probability value > 0.05, as shown in table 4.3. This rejects alternative hypothesis which states that liquidity has significant effect on the

performance of insurance firms in Nigeria. Therefore, the null hypothesis which states that liquidity has no significant effect on the performance of insurance firms in Nigeria is accepted.

Hypothesis Five

H_{05}: *Firm age has no significant effect on* the performance *of insurance firms in Nigeria*

Decision Rule: with t value below 2 and probability value > 0.05, as shown in table 4.3. This rejects alternative hypothesis which states that firm age has significant effect on the performance of insurance firms in Nigeria. Therefore, the null hypothesis which states that firm age has no significant effect on the performance of insurance firms in Nigeria is accepted.

4.5 Discussion of Results and Policy Implications

The empirical results show that firm size has insignificant positive impact on Performance (ROA) of the insurance companies. As an insignificant variable, it implies that firm size is not an important factor that influences the performance of insurance firms in Nigeria. This suggests that an increase in size will also lead to a positive and insignificant increase in insurance firms' performance. The implication of this finding is that insurance firms in Nigeria cannot improve their performance from increase in size. This finding is in conformity with result of Olalekan and Ogundipe (2022) whose findings reveal an insignificant positive relationship between firm size and performance of insurance firms. The finding is in consonance with the result of Chukwu and Eze

(2023) who reported a significant positive link between firm size and the performance of insurance firms.

Also, the result reveals that capital adequacy exerts a negative and insignificant effect on insurance firms' performance. This suggests that an increase in capital adequacy will lead to decrease in insurance firms' performance though insignificantly. The implication of this finding is that with increased capital adequacy, insurance firms in Nigeria will not be able to improve their performance. This finding is in line with the studies of Ikenna and Ifeoma (2023) who reported a negative and insignificant effect of capital adequacy on performance of insurance firms in their studies.

Furthermore, the result reveals that leverage exerts a negative and insignificant effect on insurance firms' performance. This suggests that an increase in leverage will lead to decrease in insurance firms' performance. The implication of this finding is that with increased leverage, insurance firms will not be able to improve their performance. This finding is in line with the studies of Okafor et al., (2022) who reported a negative and insignificant effect of leverage on insurance firms performance in their studies. It is however not in tandem with the result of Yusuf and Danasu (2022) who reported a positive and insignificant relationship between leverage and performance of insurance firms.

Another important finding from the empirical analysis is the impact liquidity on insurance firms' performance which seems to be positive but not statistically significant. This implies that liquidity is not a key factor that influences the performance of insurance

firms in Nigeria. This finding is in tandem with that of Adeyemi (2023). It however contradicts the result of Okoye and Umeojiako (2022) who reported a positive and significant relationship between liquidity and performance of insurance firms.

Finally, the result reveals that firm age exert a negative and insignificant effect on performance of insurance firms. This suggests that an increase in firm age will lead to an insignificant decrease in insurance firms' performance. The implication of this finding is that with increase firm age, insurance companies will not be able to improve their performance. The finding is in tandem with the study of Ahmed, Ahmed and Ojo (2022) who reported a significant posiative relationship between firm age and performance of insurance firms.

CHAPTER FIVE

SUMMARY OF FINDINGS, CONCLUSION AND RECCOMENDATIONS

5.1 Introduction

This chapter focuses on the summary of findings from the empirical analysis as well as the conclusion. The policy recommendations necessitated by these findings are subsequently presented.

5.2 Summary of Findings

This study examines the firm determinants of insurance firms' performance in Nigeria. The firm specific variables considered in this study include firm size, capital adequacy, leverage, liquidity and firm age. A sample of twenty (20) insurance firms between 2019 and 2023 were examined using descriptive statistics, correlation analysis and panel least squares technique. The empirical results revealed that the frim specific variables considered in this study are not key factor that significantly influences the performance of insurance firms in Nigeria.

Specifically, the following findings were made from the empirical analysis:

(i) firm size has a positive and insignificant effect on the performance of insurance firms in Nigeria;

(ii) Capital adequacy has a negative and insignificant influence on the performance of insurance firms in Nigeria;

(iii) leverage has negative and insignificant effect on the performance of insurance firms in Nigeria;

(iv) Liquidity has a positive and insignificant influence on the performance of insurance firms in Nigeria;

(v) Firm age has a positive and insignificant influence on the performance of insurance firms in Nigeria.

5.3 Conclusion

This research sets out to empirically investigate the firm specific determinants of the performance of insurance firms in Nigeria over the period 2019 – 2023, using descriptive statistics, correlation analysis and panel least squares regression techniques. Overall, findings from the study seem to provide evidence that firm size, capital adequacy, leverage, liquidity and firm age are not critical factors that influences the performance of insurance firms in Nigeria.

5.4 Recommendations

Based on the empirical findings of this study, the following policy recommendations are suggested for policy action:

(i) Since the study has clearly shown that firm size play no critical role in the performance of insurance firms in Nigeria, we recommend that management of insurance firms in Nigeria should focus less on growing the size of their firms.

(ii) The results obtained for the capital adequacy of the insurance company variable demonstrate that it has insignificant negative effect on performance.

Therefore, regulatory authorities should ensure that insurance firms comply strictly with capital adequacy set by the regulatory authorities.

(iii) Insurance firms in Nigeria should properly manage their leverage to reverse its negative effect on their performance.

(iv) Management of insurance companies in Nigeria should pay more attention to liquidity since so that it can play a key role in the performance of insurance companies in Nigeria.

(v) Investors should pay less attention to the age of insurance firms since it is not a key factor that influences their performance.

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APPENDIX

	NAME OF FIRMS	YEAR	ROA	FS	LEV	LIQ	FA	CA
1	Lasaco Assurance Plc	2019	0.028	11.97744	0.0581	0.20	8	0.99
		2020	0.058	12.18063	0.0673	0.20	9	0.027
		2021	0.08	12.23149	0.0484	0.25	10	0.02
		2022	0.082	12.29709	0.0085	0.25	11	4.54
		2023	0.093	11.65728	0.0372	0.27	12	0.06
2	Equity Assurance Plc	2019	0.06	12.04219	0.0096	0.29	5	0.99
		2020	0.051	12.45394	0.1274	0.30	6	0.027
		2021	0.053	12.46624	0.1584	0.40	7	0.02
		2022	0.017	10.51232	0.122	0.08	8	4.54
		2023	0.086	11.67945	0.0857	0.25	9	0.06
3	Staco Insurance Plc	2019	0.083	11.86894	0.0854	0.18	10	0.99
		2020	0.039	11.96112	0.1298	0.34	11	0.027
		2021	0.014	12.03391	0.0573	0.40	12	0.02
		2022	0.0006	12.07446	0.0451	0.50	13	4.54
		2023	0.095	11.30781	0.0153	0.43	14	0.06
4	Unity Kapital Assurance Plc	2019	0.057	11.3447	0.0111	0.42	5	0.99
		2020	0.035	11.39041	0.0096	0.50	6	0.027
		2021	0.056	11.51966	0.0128	0.61	7	0.02
		2022	0.115	11.5827	0.1704	0.50	8	4.54
		2023	0.132	11.72434	0.1374	0.45	9	0.06
5	Nem Insurance Plc	2019	0.171	11.77325	0.1399	0.54	26	0.99
		2020	0.153	11.94954	0.1964	0.43	27	0.027
		2021	0.109	11.11887	0.1289	0.32	28	0.02
		2022	0.052	11.11916	0.078	0.25	29	4.54
		2023	0.161	11.73408	0.0798	0.30	30	0.06
6	Regency Alliance Insurance Plc	2019	0.019	11.85374	0.0995	0.30	11	0.99
		2020	0.029	12.02495	0.0649	0.31	12	0.027
		2021	0.046	12.13192	0.0613	0.20	13	0.02
		2022	0.041	12.24311	0.0671	0.32	14	4.54
		2023	0.02	12.02807	0.069	0.28	15	0.06
7	Guaranty Trust Assurance	2019	0.034	12.18285	0.0345	0.49	7	0.99

	Plc							
		2020	0.053	12.2096	0.0428	0.50	8	0.027
		2021	0.049	12.27975	0.1838	0.36	9	0.02
		2022	0.044	12.32769	0.0159	0.38	10	4.54
		2023	0.028	12.15858	0.0106	0.59	11	0.06
8	Consolidated Hallmark Insurance Plc	2019	0.029	12.22169	0.159	0.40	11	0.99
		2020	0.037	12.28625	-0.1278	0.50	12	0.027
		2021	0.067	12.34585	-0.0485	0.37	13	0.02
		2022	0.086	12.369	-0.5051	0.58	14	4.54
		2023	0.03	11.8287	0.00671	0.68	15	0.06
9	Continental ReInsurance plc	2019	0.005	11.95078	0.0457	0.45	12	0.99
		2020	0.02	12.02992	0.4067	0.47	13	0.027
		2021	0.043	12.04689	0.0622	0.40	14	0.02
		2022	0.012	12.08265	0.0746	0.50	15	4.54
		2023	0.011	11.48294	0.2292	0.40	16	0.06
10	IEI insurance plc	2019	0.012	11.57162	0.2038	0.23	6	0.99
		2020	0.015	11.59739	1.2049	0.31	7	0.027
		2021	0.027	11.60598	0.1926	0.25	8	0.02
		2022	0.039	11.61627	0.0176	0.36	9	4.54
		2023	0.044	10.40053	0.0555	0.42	10	0.06
11	Prestige Assurance Plc	2019	0.032	9.486734	0.0139	0.42	29	0.99
		2020	0.057	9.329221	0.0708	0.42	30	0.027
		2021	0.038	9.48216	0.097	0.41	31	0.02
		2022	0.137	9.488675	0.099	0.20	32	4.54
		2023	0.057	11.26663	0.0803	0.40	33	0.06
12	Mutual Benefit Assurance Plc	2019	0.072	11.32113	0.0689	0.36	17	0.99
		2020	0.087	11.36732	0.0556	0.29	18	0.027
		2021	0.1	11.40441	0.1607	0.36	19	0.02
		2022	0.029	11.42492	0.0706	0.42	20	4.54
		2023	0.01	10.61705	0.0319	0.42	21	0.06
13	Intercontinental Wapic Insurance	2019	0.001	10.79138	-0.2222	0.13	29	0.99
		2020	0.038	10.91958	-0.2051	0.18	30	0.027

		2021	0.018	10.91578	0.6001	0.17	31	0.02
		2022	0.038	10.93749	0.6011	0.20	32	4.54
		2023	0.015	9.83803	0.13	0.10	33	0.06
14	Unic Insurance	2019	0.033	9.35222	0.0492	0.20	17	0.99
		2020	0.205	9.435637	0.2259	0.21	18	0.027
		2021	0.07	9.269536	0.2195	0.21	19	0.02
		2022	0.017	9.230374	0.0538	0.20	20	4.54
		2023	0.034	11.28484	0.2587	0.21	21	0.06
15	Standard Alliance Insurance Plc	2019	0.069	11.30426	0.2361	0.49	16	0.99
		2020	0.141	11.26283	0.1487	0.50	17	0.027
		2021	0.336	11.26283	0.0975	0.51	18	0.02
		2022	0.333	11.7541	0.0936	0.58	19	4.54
		2023	0.029	10.98756	0.0114	0.32	20	0.06
16	Guinea Insurance Plc	2019	0.02	10.62634	0.0211	0.25	29	0.99
		2020	0.073	10.57361	-0.0749	0.25	30	0.027
		2021	0.045	10.81502	-0.0776	0.30	31	0.02
		2022	0.044	10.97164	-0.0477	0.08	32	4.54
		2023	0.052	10.36722	0.0197	0.08	33	0.06
17	Linkage Assurance Plc	2019	0.003	10.22971	0.0036	0.18	16	0.99
		2020	0.004	10.2468	-0.0667	0.18	17	0.027
		2021	0.005	10.2468	0.1659	0.20	18	0.02
		2022	0.022	10.2468	0.1877	0.13	19	4.54
		2023	0.035	10.2468	0.1675	0.06	20	0.06
18	OASIS Insurance plc	2019	0.107	11.28484	0.1811	0.57	17	0.99
		2020	0.104	11.30426	0.0327	0.57	18	0.027
		2021	0.046	11.26283	0.1299	0.40	19	0.02
		2022	0.064	11.26283	0.2721	0.57	20	4.54
		2023	0.664	11.7541	0.1254	0.54	21	0.06
19	GOLDLINK INSURANCE	2019	0.342	12.34585	0.0037	0.20	12	0.99
		2020	0.387	12.369	0.0281	0.29	13	0.027
		2021	0.466	13.34564	0.0359	0.37	14	0.02
		2022	0.339	11.95078	0.0105	0.22	15	4.54
		2023	0.373	12.02992	-0.009	0.22	16	0.06
20	NIGER INSURANCE	2019	0.079	12.04689	-0.0201	0.50	26	0.99

		2020	0.071	12.08265	0.1012	0.70	27	0.027
		2021	0.071	7.372063	0.1512	0.70	28	0.02
		2022	0.067	11.65728	0.2154	0.43	29	4.54
		2023	0.062	12.04219	0.1304	0.43	30	0.06

ROA FS CA LEV LIQ FA

	ROA	FS	CA	LEV	LIQ	FA
Mean	0.082616	11.35294	1.127400	0.093804	0.350400	17.45000
Median	0.050000	11.59005	0.060000	0.068950	0.360000	16.00000
Maximum	0.664000	13.34564	4.540000	1.204900	0.700000	33.00000
Minimum	0.000600	7.372063	0.020000	-0.505100	0.060000	5.000000
Std. Dev.	0.107563	0.957350	1.754721	0.174224	0.148643	8.254016
Skewness	2.977654	-1.277356	1.346606	2.639090	0.204721	0.474804
Kurtosis	12.92062	5.142330	3.011112	20.18711	2.392038	2.019283
Jarque-Bera	557.8515	46.31722	30.22299	1346.899	2.238581	7.764846
Probability	0.000000	0.000000	0.000000	0.000000	0.326511	0.020601
Sum	8.261600	1135.294	112.7400	9.380410	35.04000	1745.000
Sum Sq. Dev.	1.145411	90.73539	304.8255	3.005048	2.187384	6744.750
Observations	100	100	100	100	100	100

	ROA	FS	CA	LEV	LIQ	FA
ROA	1.000000	0.214994	-0.037594	-0.065708	0.127892	0.018305
FS	0.214994	1.000000	0.005409	-0.078191	0.229696	-0.507847
CA	-0.037594	0.005409	1.000000	-0.056121	-0.053100	0.037005
LEV	-0.065708	-0.078191	-0.056121	1.000000	-0.057761	-0.010423
LIQ	0.127892	0.229696	-0.053100	-0.057761	1.000000	-0.129652
FA	0.018305	-0.507847	0.037005	-0.010423	-0.129652	1.000000

Dependent Variable: ROA

Method: Panel Least Squares

Date: 11/08/25 Time: 22:51

Sample: 2019 2023

Periods included: 5

Cross-sections included: 20

Total panel (balanced) observations: 100

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	-0.330759	0.163287	-2.025633	0.0456
FS	0.031604	0.013217	2.391100	0.0188
CA	-0.002662	0.006095	-0.436779	0.6633
LEV	-0.024489	0.061579	-0.397682	0.6918
LIQ	0.058684	0.073822	0.794933	0.4287
FA	0.002253	0.001502	1.499672	0.1371

R-squared	0.078250	Mean dependent var	0.082616
Adjusted R-squared	0.029221	S.D. dependent var	0.107563
S.E. of regression	0.105980	Akaike info criterion	-1.593011
Sum squared resid	1.055782	Schwarz criterion	-1.436701

Log likelihood	85.65056	Hannan-Quinn criter.	-1.529750
F-statistic	1.595994	Durbin-Watson stat	0.747711
Prob(F-statistic)	0.168789		

Dependent Variable: ROA

Method: Panel Least Squares

Date: 11/08/25 Time: 23:02

Sample (adjusted): 2020 2023

Periods included: 4

Cross-sections included: 20

Total panel (balanced) observations: 80

Convergence achieved after 7 iterations

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	-0.110005	0.201061	-0.547123	0.5860
FS	0.016352	0.012545	1.303433	0.1965
CA	-0.003805	0.003527	-1.078938	0.2842
LEV	-0.030493	0.049145	-0.620469	0.5369
LIQ	0.069279	0.101488	0.682635	0.4970
FA	0.001218	0.005478	0.222429	0.8246
AR(1)	0.770605	0.113651	6.780446	0.0000

R-squared	0.429167	Mean dependent var	0.087570
Adjusted R-squared	0.382249	S.D. dependent var	0.113687
S.E. of regression	0.089355	Akaike info criterion	-1.908968
Sum squared resid	0.582854	Schwarz criterion	-1.700541
Log likelihood	83.35872	Hannan-Quinn criter.	-1.825403
F-statistic	9.147215	Durbin-Watson stat	1.581284

Prob(F-statistic) 0.000000

Dependent Variable: ROA

Method: Panel EGLS (Cross-section random effects)

Date: 11/08/25 Time: 22:52

Sample: 2019 2023

Periods included: 5

Cross-sections included: 20

Total panel (balanced) observations: 100

Swamy and Arora estimator of component variances

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	-0.242061	0.159285	-1.519673	0.1319
FS	0.021900	0.012320	1.777623	0.0787
CA	-0.002555	0.004304	-0.593626	0.5542
LEV	-0.012810	0.048547	-0.263876	0.7925
LIQ	0.085649	0.083297	1.028242	0.3065
FA	0.002872	0.002373	1.210615	0.2291

	Effects Specification	
	S.D.	Rho
Cross-section random	0.084502	0.5636
Idiosyncratic random	0.074355	0.4364

	Weighted Statistics		
R-squared	0.053719	Mean dependent var	0.030252
Adjusted R-squared	0.003385	S.D. dependent var	0.073753

S.E. of regression	0.073628	Sum squared resid	0.509587
F-statistic	1.067257	Durbin-Watson stat	1.515381
Prob(F-statistic)	0.383565		

	Unweighted Statistics		
R-squared	0.064399	Mean dependent var	0.082616
Sum squared resid	1.071648	Durbin-Watson stat	0.720589

Correlated Random Effects - Hausman Test

Equation: Untitled

Test cross-section random effects

Test Summary	Chi-Sq. Statistic	Chi-Sq. d.f.	Prob.
Cross-section random	0.000000	5	1.0000

* Cross-section test variance is invalid. Hausman statistic set to zero.

Cross-section random effects test comparisons:

Variable	Fixed	Random	Var(Diff.)	Prob.
FS	0.017529	0.021900	0.000024	0.3712
CA	-0.003549	-0.002555	0.000001	0.2560
LEV	-0.009999	-0.012810	0.000111	0.7897
LIQ	0.093589	0.085649	0.002406	0.8714
FA	0.008950	0.002872	0.000023	0.2099

Cross-section random effects test equation:

Dependent Variable: ROA

Method: Panel Least Squares

Date: 11/08/25 Time: 22:52

Sample: 2019 2023

Periods included: 5

Cross-sections included: 20

Total panel (balanced) observations: 100

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	-0.300415	0.185325	-1.621023	0.1092
FS	0.017529	0.013254	1.322527	0.1900
CA	-0.003549	0.004392	-0.807954	0.4217
LEV	-0.009999	0.049678	-0.201276	0.8410
LIQ	0.093589	0.096667	0.968160	0.3361
FA	0.008950	0.005396	1.658474	0.1014

Effects Specification

Cross-section fixed (dummy variables)

R-squared	0.637991	Mean dependent var	0.082616
Adjusted R-squared	0.522148	S.D. dependent var	0.107563
S.E. of regression	0.074355	Akaike info criterion	-2.147616
Sum squared resid	0.414649	Schwarz criterion	-1.496324
Log likelihood	132.3808	Hannan-Quinn criter.	-1.884027
F-statistic	5.507387	Durbin-Watson stat	1.843256
Prob(F-statistic)	0.000000		

Dependent Variable: ROA

Method: Panel Least Squares

Date: 11/08/25 Time: 22:53

Sample: 2019 2023

Periods included: 5

Cross-sections included: 20

Total panel (balanced) observations: 100

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	-0.300415	0.185325	-1.621023	0.1092
FS	0.017529	0.013254	1.322527	0.1900
CA	-0.003549	0.004392	-0.807954	0.4217
LEV	-0.009999	0.049678	-0.201276	0.8410
LIQ	0.093589	0.096667	0.968160	0.3361
FA	0.008950	0.005396	1.658474	0.1014

Effects Specification

Cross-section fixed (dummy variables)

R-squared	0.637991	Mean dependent var	0.082616
Adjusted R-squared	0.522148	S.D. dependent var	0.107563
S.E. of regression	0.074355	Akaike info criterion	-2.147616
Sum squared resid	0.414649	Schwarz criterion	-1.496324
Log likelihood	132.3808	Hannan-Quinn criter.	-1.884027
F-statistic	5.507387	Durbin-Watson stat	1.843256
Prob(F-statistic)	0.000000		