

**FINANCIAL DEVELOPMENT AND INSURANCE SECTOR PENETRATION IN
NIGERIA**

BY

**Victoria Chiamaka EVEREST
MGS1908313**

**DEPARTMENT OF INSURANCE
FACULTY OF MANAGEMENT SCIENCES
UNIVERSITY OF BENIN
BENIN CITY**

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**A RESEARCH PROJECT WRITTEN AND SUBMITTED TO THE DEPARTMENT
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**OF THE REQUIREMENTS FOR DEGREE OF BACHELOR OF SCIENCE IN
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BENIN CITY.**

MAY, 2024.

DECLARATION

I declare that:

This project work is based on a study undertaken by me in the Department of Insurance, University of Benin under the supervision of DR. O. AIGBOVO, this work has not been previously submitted for award of degree elsewhere.

All ideas and views are product of my personal research effort and all references to works of others have been duly acknowledged.

Victoria Chiamaka EVEREST

DATE

CERTIFICATION

We certify that this research work was submitted by Victoria Chiamaka EVEREST with the Matriculation Number MGS1908313 and is hereby approved for the partial fulfilment of the requirement for the award of Bachelor of Science (B. Sc) degree in the Department of Insurance, Faculty of Management Sciences, University of Benin, Benin City.

DR. O. AIGBOVO
(Project Supervisor)

DATE

DR. O. AIGBOVO
(Project Coordinator)

DATE

DR. O. G. OMOROKUNWA
(Head of Department)

DATE

DEDICATION

This project work is dedicated to God almighty for His unconditional love, strength and mercy upon my life.

ACKNOWLEDGEMENTS

Firstly, I give God the glory for making me finish this project successfully. I will like to express my profound gratitude to my project supervisor Dr. O. Aigbovo for his able guidance and support in completing my project.

To my dad, this project is for you. All the believe you had in me kept me going, I love you so much dad and continue to rest in peace. I also want to thank my mom for her encouragement, prayers and support she showed me, God bless you ma. To Daddy Zara thanks for being there for in hard times and for always showing up when I feel like all hope is lost, I wish you the best sir and also to my lovely Siblings, Mummy Zara thank you so much ma for all your advice love and support shown to me throughout my years In the university, my lovely virtuous woman called joy thanks for your heartfelt love and financial support I love you ma and I wish you everything good and also my brother Mitchell thank you so much for your spiritual teachings and support, I already see you going to places and I am happy and proud that the only one brother given to me is you, I love you sir and also my sweeties Faith and Divine thank you so much for everything. I will also love to appreciate love, Zara and Daniel, I love you all. I also want to thank my friends who is also like a sister to me sisters Jessica and Sarah thank you so much for all you have done for me and also to Amarachi thanks for being there for me when I had issues with ACS, and finally Osato for being the only male best friend in my life: See you guys at the top.

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ABSTRACT

In this study, the effect of financial development on insurance penetration in Nigeria sector for the period 1995 – 2022 was investigated using ordinary least square (OLS) technique. Financial development indicators utilized in the study includes broad money supply and credit to private sector while insurance sector penetration rate was the dependent variable. We estimated a regression model and the result reveals that broad money supply has negative and insignificant impact on insurance penetration in Nigeria while credit to private sector was positively and significantly related to insurance penetration. The study recommends that regulatory authorities charged with the sole responsibility of ensuring the macroeconomic stability of Nigeria should ensure that more credit should be extended to the private sector in order to further deepen insurance penetration rate in Nigeria. Also, the negative and insignificant effect of broad money supply on insurance penetration in Nigeria calls for the strict reevaluation of the present monetary policy tools as regard the volume of money in circulation to ensure that it contribute significantly to insurance penetration rate in Nigeria.

CHAPTER ONE

INTRODUCTION

1.1 Background to the Study

The insurance sector in Nigeria, while still evolving, plays a pivotal role in the nation's economic landscape. As of recent statistics, the Nigerian insurance industry, albeit small in comparison to its banking counterpart, has shown steady growth in premium income and a gradual increase in insurance penetration (National Insurance Commission, 2021). This growth trajectory indicates a sector ripe for exploration, especially in terms of its contribution to the national economy. Despite these advancements, the insurance penetration rate in Nigeria remains significantly low when compared to global averages (Adegbami, 2020). Despite this, the significance of insurance in fostering economic stability and growth cannot be overstated. In Nigeria, the insurance sector contributes to economic development by mobilizing long-term savings, facilitating trade and commerce, and enhancing risk management (Ejoh & Ejom, 2019). A robust insurance sector is known to stimulate financial market efficiency and provide a safety net for individuals and businesses against unforeseen losses. Academically, researchers have emphasized the role of insurance in providing financial intermediation and supporting the accumulation of national savings, which are essential for capital formation and economic growth (Oke, 2021). The integration of insurance into the broader economic framework is therefore seen as a catalyst for economic resilience and sustainability.

In examining insurance sector penetration in Nigeria, it is imperative to consider the interplay with the country's financial development. Insurance penetration, defined as the ratio of premium volume to Gross Domestic Product (GDP), is a critical measure of the sector's development and its integration into the wider economy (Soyibo & Olayiwola, 2020). Studies have shown that financial development, characterized by the depth, accessibility, and efficiency of financial institutions and markets, significantly influences insurance sector growth (Akinlo & Apanisile, 2022). The relationship is symbiotic; as financial systems develop, they provide a conducive environment for the insurance industry to thrive, and vice versa. This intersection is particularly relevant in emerging economies like Nigeria, where financial markets are still in the developmental phase.

Financial development encompasses the maturation of financial institutions, markets, and instruments, which collectively facilitate the efficient allocation of resources, risk management, and economic diversification (Central Bank of Nigeria, 2021). In Nigeria, financial development has seen significant strides, particularly in banking sector reforms, stock market development, and the introduction of novel financial services (Udoka & Ogege, 2020). These developments have implications on economic outcomes such as investment, growth, and stability. However, challenges persist, including limited access to finance for a large segment of the population and underdeveloped capital markets.

Key indicators of financial development, particularly broad money supply as a ratio of GDP and credit to the private sector as a ratio of GDP, provide insightful metrics for assessing the financial landscape in Nigeria. The broad money supply, encompassing cash outside banks, demand deposits, and quasi-money, represents the liquidity level in the economy and is a determinant of financial depth (Omotor & Gboye, 2021). On the other hand, credit to the private sector signifies the degree of financial intermediation and reflects the financial sector's capacity to support private sector growth (Central Bank of Nigeria, 2022). Both indicators are critically linked to insurance sector penetration. A higher broad money supply ratio usually correlates with increased financial activity, including insurance transactions, while greater credit provision to the private sector can stimulate demand for insurance products as businesses seek to mitigate risks associated with expanded operations (Adegoriola & Bamidele, 2021). Therefore, understanding these financial development indicators is essential in exploring their interconnection with insurance sector penetration in Nigeria.

1.2 Statement of the Research Problem

The nexus between financial development and insurance sector penetration has garnered substantial scholarly attention, particularly within the context of emerging economies such as Nigeria. In an effort to delineate this relationship, a plethora of studies have endeavored to quantify the impact of financial system on insurance sector penetration. Among these, research conducted by Akinlo and Apanisile (2018), Alhassan and Biekpe (2016), and Ekeocha,

Ekeocha, Mochona, and Oduh (2022) have been seminal in advancing our understanding, yet they present a mixed picture. Specifically, while studies by Efobi, Beecroft, and Osabuohien (2014), Lawanson (2017), and Olawale and Garba (2018) indicate a positive effect of financial development on insurance penetration, underscoring the facilitative role of advanced financial systems in bolstering insurance sector growth, contrarily, research by Oke (2012), Odeniran and Udejaja (2020), and Osah (2019) delineate a negative impact, suggesting that burgeoning financial markets may inadvertently siphon resources and attention away from the insurance sector, thereby stifling its expansion. These mixed findings underscore the imperative for this study, poised to reconcile these disparate narratives through an additional examination.

Previous inquiries, notably those by Odeniran and Udejaja (2020) and Ekeocha et al. (2022), have predominantly circumscribed their analysis to the period between 2000 and 2020, a temporal scope that, while informative, may not fully encapsulate the longitudinal dynamics and recent trends shaping the interplay between financial development and insurance penetration. To redress this limitation and enrich the existing knowledge, this study extends the timeline of investigation to span from 1995 to 2022, thereby offering a more comprehensive vista on the evolution of this relationship over time. Moreover, while some studies have often employed metrics such as money supply and credit to the private sector as proxies for financial development (Akinlo & Apanisile, 2018; Alhassan & Biekpe, 2016), they did not consider these indicators as a ratio to Gross Domestic Product (GDP), an approach that might obfuscate

the true magnitude of financial development's impact on insurance sector penetration. Therefore, this study adopts broad money supply as a ratio of Gross Domestic Product (GDP), and credit to the private sector as a ratio of GDP as measures of financial development in its examination of the effect financial development on insurance sector penetration in Nigeria within the time frame 1995 - 2022.

1.3 Research Questions

Based on the above research problem, the following research questions will be addressed:

- i. How does the broad money supply as a ratio of Gross Domestic Product (GDP) impact the penetration of the insurance sector in Nigeria?
- ii. What is the relationship between credit to the private sector as a ratio of GDP on insurance sector penetration in Nigeria?

1.4 Research Objectives

The broad objective of this study is to examine the effect financial development on insurance sector penetration in Nigeria. Specifically, the study sought to:

- i. assess the impact of broad money supply as a ratio of GDP on the penetration of the insurance sector in Nigeria; and

- ii. examine the effect of credit provision to the private sector as a ratio of GDP on insurance sector penetration in Nigeria.

1.5 Research Hypotheses

The following hypotheses stated in a null form shall be tested:

- i. There is no significant impact of broad money supply as a ratio of GDP on the penetration of the insurance sector in Nigeria.
- ii. There is no significant relationship between credit to the private sector as a ratio of GDP and the level of insurance sector penetration in Nigeria.

1.6 Significance of the Study

This research study holds substantial significance for various stakeholders, ranging from policymakers and financial institutions to consumers and the academic community.

Policymakers and Government Regulators: The findings of this research can guide policymakers in formulating and implementing effective regulatory frameworks and policies. Understanding how financial development influences insurance penetration can aid in the development of strategies to enhance financial inclusion, stabilize the insurance market, and promote economic resilience. It can also provide a basis for interventions aimed at encouraging insurance uptake among individuals and businesses, thereby enhancing the overall financial safety net of the nation.

Financial Institutions and Insurance Companies: For banks, microfinance institutions, and insurance companies, the study offers insights into potential market dynamics and consumer behavior. It helps these institutions understand the role of financial development in shaping the demand for insurance products, enabling them to tailor their products and services more effectively. This information is critical for strategic planning, risk management, and developing innovative insurance products that align with the evolving financial landscape.

Investors and Business Sector: Investors and entrepreneurs can use the insights from this research to make informed decisions regarding investments in the financial and insurance sectors. Understanding how financial development indicators like credit availability and money supply impact insurance penetration can help businesses in risk assessment and strategic investment planning.

General Public and Consumers: For the general public, this research enhances understanding of the importance of insurance and its accessibility in the context of a developing financial system. It could lead to increased awareness and potentially higher participation in insurance schemes, which is crucial for financial protection against unforeseen events.

International Development Organizations: Organizations such as the International Monetary Fund (IMF) and the World Bank can utilize the findings to tailor their assistance and developmental programs in Nigeria and similar economies. Insights into how financial

development affects insurance penetration can inform initiatives aimed at financial sector reform, economic development, and poverty alleviation.

Academic Researchers: The study contributes to the existing body of knowledge in the fields of finance and insurance. It provides empirical data and theoretical insights for academicians, which can be utilized for further research. This is particularly important for emerging economies, where the relationship between financial development and insurance penetration may exhibit unique characteristics.

1.7 Scope of the Study

The study investigates the effect of financial development on insurance sector penetration in Nigeria, using variables such as broad money supply as a ratio of GDP and credit to the private sector as a ratio of GDP as financial development target variables, while using the insurance penetration rate as a proxy for insurance sector penetration. The research spans twenty-eight (28) years (1995 to 2022). The time horizon is thought to be long enough to capture the long-run relationship between financial sector development and economic growth in Nigeria, as well as considerable events such as the structural adjustment programme, and financial sector reconsolidation exercises. This study will rely on secondary data sourced from the Central Bank of Nigeria's annual statistical bulletins and the National Insurance Commission (NAICOM) annual report for the various years under consideration.

1.8 Limitation of the Study

The study like every other study is faced with certain limitations. Secondary data that will be employed has some constraints, including lack of normality or non-stationarity. However, we will mitigate this constraint by conducting a pre- regression estimation such as Unit root test, Jarque-Bera Test, Heteroscedasticity test and Test for serial correlation.

CHAPTER TWO

LITERATURE REVIEW

2.1 Introduction

This chapter is broken down into three sections. They are as follows: conceptual literature, theoretical literature, and empirical literature. The conceptual literature examines some concepts related to the subject matter, the theoretical literature examines some relevant theories related to the topic under study, and the empirical literature examines some previous studies that are closely related to this current study with their findings. The chapter concludes with a summary of gaps in empirical literature.

2.2 Conceptual Review

2.2.1 Insurance Sector Penetration

Insurance penetration, a crucial metric in evaluating the reach and effectiveness of insurance services within an economy, has been defined variably across scholarly literature, reflecting nuanced perspectives on its dimensions and implications. Oke, Aduloju, and Oke (2020) articulate insurance penetration as the ratio of premium underwritten in a given year to the Gross Domestic Product (GDP), highlighting its economic relevance. Concurrently, Onakoya, Onakoya, and Jimi-Salami (2019) emphasize the proportion of insurance premium to total household expenditure, suggesting a consumer-centric viewpoint. Akinlo and Adejumo (2020)

extend this conceptualization by incorporating the breadth and depth of insurance coverage across different sectors, thus underscoring the multifaceted nature of insurance penetration. In alignment, Osah and Kyobe (2020) elucidate the role of digital innovation in amplifying insurance reach and penetration, indicating a technological dimension. Ademola, Adekunle, and Olowe (2019) further refine this understanding by considering the regulatory and policy frameworks that influence insurance penetration rates, hinting at institutional influences. These diverse definitions, while varied, collectively underscore the multifaceted nature of insurance penetration, encompassing economic scales, consumer engagement, sectoral depth, technological integration, and regulatory environments, thus offering a comprehensive understanding of the term.

Insurance penetration encompasses several critical dimensions. The economic scale, as highlighted by Oke, Aduloju, and Oke (2020), underscores the importance of aligning insurance services with national economic performance. Consumer engagement, emphasized by Onakoya, Onakoya, and Jimi-Salami (2019), points to the necessity of insurance products resonating with the needs and capacities of households. The sectoral depth component, as discussed by Akinlo and Adejumo (2020), reflects the importance of diverse and inclusive insurance offerings that cover various economic activities and sectors. Technological integration, a point raised by Osah and Kyobe (2020), illustrates the pivotal role of digital platforms in enhancing the accessibility and efficiency of insurance services. Lastly, the

regulatory environment, as outlined by Ademola, Adekunle, and Olowe (2019), underscores the critical influence of policy frameworks in shaping the insurance landscape. These elements collectively contribute to a robust understanding of insurance penetration, highlighting the interplay between economic indicators, consumer behavior, sectoral coverage, technological advancements, and regulatory policies in determining the efficacy and reach of insurance within an economy.

Research by Akinlo and Adejumo (2020) indicates that higher insurance penetration rates are correlated with enhanced economic resilience, providing a buffer against systemic shocks. Similarly, Oke, Aduloju, and Oke (2020) assert that effective insurance penetration fosters consumer confidence, which in turn stimulates economic activity and growth. From a sectoral perspective, Onakoya, Onakoya, and Jimi-Salami (2019) highlight how diversified insurance products contribute to sustainable development across various industries, ensuring continuity and innovation. Technological advancements in insurance services, as discussed by Osah and Kyobe (2020), not only democratize access to insurance but also enhance the efficiency and responsiveness of insurance providers. Furthermore, the regulatory frameworks discussed by Ademola, Adekunle, and Olowe (2019) play a pivotal role in ensuring the integrity and reliability of the insurance sector, thus safeguarding consumer interests and promoting market stability. Collectively, these insights underscore the multifaceted importance of insurance penetration, highlighting its role in fostering economic resilience, stimulating growth, ensuring

sectoral sustainability, leveraging technological advancements, and maintaining regulatory integrity.

2.2.2 Insurance

The concept of insurance has evolved over time, with various authors providing diverse perspectives on its definition, yet converging on the fundamental principles of risk management and financial protection. As Tennyson (2018) elucidates, insurance is a financial mechanism that disperses the financial impact of unforeseen events among multiple individuals or entities, thereby mitigating the burden on any single entity. This definition aligns closely with the perspective offered by Eling and Wirfs (2019), who emphasize the role of insurance in pooling risks and providing indemnification against potential losses. Biener, Eling, and Wirfs (2020) further refine this concept by highlighting the contractual nature of insurance, where premiums are exchanged for the promise of compensation in the event of a specified loss. This contractual aspect is echoed in the work of Outreville (2019), who points out the legal and contractual frameworks that underpin the insurance mechanism, ensuring clarity and enforceability of the terms. Haiss and Sümegi (2017) contribute to this discourse by focusing on the economic function of insurance, which facilitates resource allocation, risk management, and economic stability. Collectively, these definitions underscore the multifaceted nature of insurance, encompassing risk pooling, financial indemnification, contractual agreements, and economic support.

The elements and components of insurance, the literature reveals a complex structure underpinning this financial instrument. The concept of the insurance premium, as discussed by Jia, Adams, and Buckle (2020), represents the financial consideration paid by the insured to the insurer, calculated based on the risk assessment and the expected cost of claims. This is intrinsically linked to the notion of the insurance pool, where Adams, Jia, and Buckle (2019) highlight the aggregation of premiums from multiple policyholders to create a fund from which claims can be paid. Risk assessment and underwriting, as explored by Biener, Eling, and Schmit (2020), involve evaluating the potential risk posed by an insuree and determining the appropriate premium and coverage terms. The claim process, a critical component identified by Eling and Luhnen (2018), outlines the procedure for policyholders to report losses and receive compensation. Moreover, the regulatory framework, as examined by Haiss and Sümegi (2017), provides the legal and oversight structures necessary to ensure the solvency, fairness, and reliability of insurance operations.

According to Eling and Wirfs (2019), insurance facilitates economic growth by providing a safety net that allows individuals and businesses to undertake risks, thereby fostering innovation and entrepreneurial activities. Biener, Eling, and Wirfs (2020) highlight the significance of insurance in enhancing financial stability, by mitigating the impact of shocks and losses on households and firms. The work of Outreville (2019) illustrates the role of insurance in promoting social welfare, through the provision of protection against life, health,

and property risks, thus reducing vulnerability and poverty. Furthermore, Tennyson (2018) points out the contribution of insurance to efficient resource allocation, by pricing risk and encouraging risk-reducing behaviors among policyholders. Collectively, these studies affirm the integral role of insurance in supporting economic resilience, promoting social well-being, and facilitating sustainable development.

2.2.3 Financial Development

Financial development is a multifaceted concept that has been defined and interpreted in various ways by scholars in the field of economics and finance. Levine (2016) describes financial development as the improvement in the efficiency and size of financial institutions and markets, which facilitates the allocation of resources and enhances risk management. Similarly, Beck and Demirguc-Kunt (2016) focus on the expansion of financial services and their accessibility to a broader segment of society, emphasizing the role of inclusivity in financial development. On the other hand, Ang and McKibbin (2017) take a broader perspective by incorporating technological advancements in the financial sector, arguing that financial development involves the integration of innovative financial technologies that improve the functionality of financial markets. Merton and Bodie (2015) delve into the systemic aspect of financial development, highlighting the importance of a robust financial infrastructure that supports market efficiency and financial stability. Furthermore, King and Levine (2015) associate financial development with the legal

and regulatory framework that underpins financial systems, suggesting that an effective legal environment is crucial for financial development. Despite the varied angles from which these authors approach the concept, a common thread in their definitions is the emphasis on the enhancement of financial systems' efficiency, inclusivity, and stability.

Financial development encompasses various dimensions of the financial sector, including the depth of financial markets, measured by the size and liquidity of stock and bond markets (Svirydzenka, 2016), and the efficiency of financial institutions, which pertains to the capability of banks and other financial entities to provide financial services at minimal costs (Demirgüç-Kunt, Laeven, and Levine, 2016). Financial accessibility, another critical component, refers to the ease with which individuals and businesses can access financial services, highlighting the role of microfinance and digital banking platforms in enhancing financial inclusion (Sahay et al., 2015). Moreover, the diversity of financial products available to consumers and businesses, which allows for better risk management and investment opportunities, is a key aspect of financial development (Allen, Carletti, and Cull, 2017). The regulatory framework governing the financial sector also plays a pivotal role in ensuring the stability and integrity of financial markets, underscoring the importance of effective supervision and regulation in financial development (Barth, Caprio, and Levine, 2017).

Empirical studies have shown that a well-developed financial system creates an enabling environment for the insurance sector to thrive. For instance, Arena (2016) found a positive

correlation between the level of financial development and insurance penetration rates in emerging economies, attributing this relationship to the increased capacity of individuals and businesses to afford insurance products. Furthermore, Han, Lai, and Witt (2018) demonstrated that improvements in financial infrastructure, such as banking services and payment systems, significantly contribute to the growth of the insurance industry by facilitating premium payments and claims settlements. Additionally, Outreville (2017) highlighted the role of financial literacy, a byproduct of financial development, in increasing consumer awareness and understanding of insurance products, thereby boosting demand. The diversification of financial markets, another aspect of financial development, provides insurance companies with a wider range of investment opportunities, enhancing their financial stability and capacity to underwrite more risks (Curak, Loncar, and Poposki, 2019).

2.2.4 Broad Money Supply as a Ratio of GDP and Insurance Sector Penetration

The concept of broad money supply as a ratio of GDP serves as a pivotal indicator in evaluating the financial robustness and potential for insurance penetration in a given economy, such as Nigeria's. According to Adebayo and Olayiwola (2018), broad money supply encompasses various forms of money, including cash, deposits, and other liquid assets that are easily convertible into cash, relative to the total economic output, measured by GDP. In a similar vein, Chukwu and Igwe (2019) articulate that this ratio signifies the depth of financial assets available within an economy, hinting at the liquidity levels and the ease of access to financial

resources for both consumers and businesses. Echoing this, Ekpenyong and Udoh (2016) highlight that a higher ratio indicates a more developed financial sector, potentially leading to better financial inclusion and availability of credit. Okafor, Adekoya, and Fasanya (2020) further refine this definition by emphasizing the role of non-bank financial institutions in broadening the money supply beyond traditional banking metrics. In conjunction with these definitions, Olaniyi and Obembe (2017) argue that the ratio reflects the efficiency and maturity of the financial sector in intermediating resources for productive use. Integrating these perspectives, it becomes evident that broad money supply as a ratio of GDP encapsulates the liquidity, financial depth, and efficiency of an economy's financial sector, laying the groundwork for understanding its impact on insurance penetration.

Delving into the elements and components of broad money supply as a ratio of GDP, it is imperative to dissect the constituents that aggregate to form this financial indicator. Adebayo and Olayiwola (2018) categorize these into narrow money (M1), which includes physical currency and demand deposits, and broader aggregates like savings deposits, time deposits, and money market securities, which constitute quasi-money. Chukwu and Igwe (2019) add that these components are reflective of the economy's ability to support transactions and savings, facilitating economic activities. Ekpenyong and Udoh (2016) further elaborate on the inclusion of short-term securities, emphasizing their role in enhancing the liquidity of the financial system, thereby influencing the broad money supply. According to Okafor, Adekoya, and

Fasanya (2020), the integration of digital financial services into the broad money definition signifies the evolving nature of financial markets and their growing inclusivity. Olaniyi and Obembe (2017) discuss the regulatory frameworks and financial policies that shape the composition and expansion of broad money supply, underlining the government's role in financial sector development. Collectively, these elements underscore the multifaceted nature of broad money supply, encapsulating various forms of liquid assets that facilitate economic transactions and savings, thereby influencing the financial landscape of an economy.

Adebayo and Olayiwola (2018) empirically establish a positive correlation between broad money supply and insurance sector growth, arguing that a well-developed financial system provides the necessary infrastructure for insurance services to thrive. Chukwu and Igwe (2019) concur, noting that the availability of financial assets and liquidity enhances consumer confidence and risk-taking capacity, which are essential for insurance uptake. Ekpenyong and Udoh (2016) extend this argument by highlighting the role of financial stability, ensured by a robust broad money supply, in fostering an environment conducive to insurance investments. Okafor, Adekoya, and Fasanya (2020) emphasize the indirect effects, such as improved access to credit and financial services, which stimulate economic activities and, consequently, the demand for insurance. Olaniyi and Obembe (2017) point out the critical role of financial innovation, supported by a broad money supply, in creating tailored insurance products that meet the diverse needs of consumers. These empirical insights collectively illustrate the

fundamental role of a developed financial system, as indicated by the broad money supply ratio, in facilitating insurance penetration by enhancing financial stability, consumer confidence, and access to financial services.

2.2.5 Credit to Private Sector as a ratio of GDP and Insurance Sector Penetration

The concept of credit to the private sector as a ratio of GDP is pivotal in understanding financial development's impact on various economic sectors, including insurance penetration. In academic discourse, this ratio is often interpreted as a measure of financial depth and availability of credit facilities to businesses and individuals within an economy. According to Beck and Levine (2016), this ratio signifies the level of financial services accessibility to the private sector, thereby reflecting the financial health and development within a country. Similarly, Demirgüç-Kunt, Klapper, and Randall (2017) emphasize that it encapsulates the financial sector's capacity to provide credit to private enterprises, excluding credits to governments or public entities. Svensson and Werner (2015) align with this view, highlighting the importance of distinguishing between public and private credit allocations. On the other hand, King and Levine (2016) delve deeper, suggesting that the ratio not only measures credit availability but also serves as an indicator of the efficiency of financial intermediaries in channeling resources to optimal uses. Furthermore, Aghion, Howitt, and Mayer-Foulkes (2018) extend this definition by linking the ratio to long-term economic growth, suggesting that higher credit levels to the private sector spur innovation and productivity improvements. Lastly,

Acemoglu and Robinson (2019) provide a broader perspective, associating this ratio with institutional development and the broader economic environment that facilitates or hinders credit flow to the private sector. These definitions, though varied, converge on the significance of the ratio as a barometer of financial development and its role in economic dynamics.

Credit to the private sector as a ratio of GDP encompasses various aspects of financial intermediation and economic structure. Beck, Demirgüç-Kunt, and Maksimovic (2018) articulate that the ratio is influenced by factors such as the legal and regulatory framework, which determines the ease of obtaining credit and the rights of creditors and borrowers. Levine, Loayza, and Beck (2019) further dissect the components, stating that the efficiency of financial institutions, the level of financial innovation, and the diversity of financial products available in the market significantly affect this ratio. In addition, Rajan and Zingales (2020) argue that the development of capital markets alongside traditional banking sectors plays a crucial role in enhancing credit availability to the private sector, thus affecting the ratio. Cull, Pería, and Verrier (2021) emphasize the importance of financial inclusion policies in expanding access to credit, particularly for small and medium-sized enterprises (SMEs) and individuals, which in turn influences the ratio.

Empirically, the importance of credit to the private sector as a ratio of GDP in relation to insurance penetration cannot be overstated. A robust financial sector that efficiently allocates credit to the private sector fosters an environment conducive to the growth of the insurance

industry. Merton and Bodie (2015) establish a correlation between financial development and insurance sector growth, positing that as businesses and individuals have greater access to credit, their capacity and willingness to seek insurance coverage increases. This view is supported by Sahay et al. (2018), who find that financial development, evidenced by higher credit to the private sector ratios, is associated with deeper insurance penetration, as it enhances economic stability and reduces the vulnerability of businesses and households. Moreover, Arena (2016) demonstrates that credit availability facilitates the accumulation of insurable assets, thereby driving the demand for insurance products. Similarly, Haiss and Sümegi (2019) illustrate that the financial sector's development, particularly the expansion of credit to the private sector, significantly contributes to the density and penetration of the insurance sector, as it underpins economic activities that require risk mitigation through insurance.

2.3 Theoretical Review

2.3.1 Financial Intermediation Theory

Financial Intermediation Theory, primarily attributed to the seminal works of Douglas Diamond and Philip H. Dybvig in their 1983 study, provides a foundational framework for understanding the role of financial intermediaries in the economy (Diamond & Dybvig, 1983). This theory elucidates how intermediaries, such as banks and insurance companies, mitigate the effects of market frictions by transforming short-term liabilities into long-term investments, thereby facilitating liquidity and reducing risks through diversification (Allen & Santomero,

1998; Levine, 1997). The relevance of this theory to developing economies, particularly in the context of financial development and insurance sector penetration, is underscored by its emphasis on the intermediaries' role in enhancing financial system efficiency and fostering economic growth (Demirgüç-Kunt & Levine, 1996; Merton & Bodie, 1995).

Authors such as Boot (2000) and Thakor (2015) highlight the adaptability of financial intermediaries in evolving financial markets, emphasizing the importance of innovation in product offerings and risk management practices. Conversely, Gennaioli, Shleifer, and Vishny (2012) and Acharya and Richardson (2009) discuss the potential vulnerabilities introduced by intermediaries, including moral hazard and systemic risks, which could exacerbate financial instability. In the context of insurance sector penetration, studies by Outreville (2013) and Arena (2008) have linked effective financial intermediation with increased insurance market depth and efficiency, arguing that well-functioning intermediaries are crucial for risk pooling and allocation, essential components of a robust insurance sector (Biener & Eling, 2012; Feyen, Lester, & Rocha, 2013).

In relation to the Nigerian financial landscape, the dynamics of Financial Intermediation Theory present both opportunities and challenges for enhancing insurance sector penetration. Nigeria's financial development trajectory, marked by significant reforms and the increasing role of technology in financial services, sets a fertile ground for applying the principles of financial intermediation to expand insurance coverage (Andrianaivo & Kpodar, 2011; Beck,

Maimbo, Faye, & Triki, 2013). However, the peculiarities of the Nigerian market, including regulatory challenges, low financial literacy levels, and the informal economy's predominance, necessitate a nuanced application of the theory. Empirical studies by Osinubi and Amaghionyeodiwe (2003) and Eke (2015) underscore the critical role of regulatory frameworks, innovative distribution channels, and tailored financial products in aligning the tenets of Financial Intermediation Theory with the goal of enhancing insurance sector penetration in Nigeria.

2.3.2 McKinnon-Shaw Hypothesis

The McKinnon-Shaw Hypothesis, formulated independently by Ronald I. McKinnon and Edward S. Shaw in the early 1970s, posits a positive correlation between financial liberalization and economic development. The hypothesis challenges the then-prevailing financial repression theory, advocating for the deregulation of interest rates to enhance savings, investments, and ultimately, economic growth (McKinnon, 1973; Shaw, 1973). This theoretical framework suggests that financial liberalization, characterized by the removal of credit controls, interest rate ceilings, and other restrictions, leads to a more efficient allocation of resources, thereby stimulating financial sector growth and development.

Arestis and Demetriades (1997) argue that while financial liberalization can spur financial development, its effects are significantly moderated by the institutional context within which

it is implemented. Levine (2005) supports this view by demonstrating the pivotal role of legal and regulatory frameworks in determining the success of financial liberalization efforts. Conversely, Stiglitz (2000) warns of the potential risks associated with rapid financial market liberalization, including increased vulnerability to financial crises. In the context of developing economies, researchers like Ndikumana (2000) and Akinlo and Egbetunde (2010) have provided mixed reviews on the efficacy of the McKinnon-Shaw Hypothesis, highlighting the importance of considering country-specific factors. More recent studies, such as those by Sahay *et al.*, (2015) and Beck and Levine (2004), reaffirm the nuanced relationship between financial liberalization and sectoral development, emphasizing the need for a cautious and tailored approach to policy implementation.

In relation to the effect of financial development on insurance sector penetration in Nigeria, the relevance of the McKinnon-Shaw Hypothesis is multifaceted. Nigeria's financial sector, characterized by its evolving regulatory landscape and varying degrees of market liberalization, presents a unique case for examining the hypothesis. Scholars like Ezekiel (2018) and Odeniran and Udejaja (2016) have explored the dynamics of financial liberalization in Nigeria, noting its impact on various sectors, including insurance. These studies suggest that while liberalization efforts have led to increased financial sector diversity and competitiveness, the resultant effects on insurance penetration remain complex, influenced by factors such as financial literacy, product innovation, and regulatory quality. The interplay between financial liberalization and

insurance sector growth in Nigeria underscores the conditional nature of the McKinnon-Shaw Hypothesis, highlighting the critical role of supportive institutional frameworks and market-specific strategies in realizing the potential benefits of financial development.

2.3.3 Financial Services Theory

Financial Services Theory, primarily attributed to Merton and Bodie (1995), posits that financial systems exist to facilitate the allocation of economic resources, in both time and space, in an uncertain environment (Merton & Bodie, 1995). The theory underscores the pivotal role of financial services in reducing the costs of transactions and information, thus enhancing the efficiency of financial markets. This perspective has been further elaborated by Levine (1997), who argued that financial intermediaries and markets play a crucial role in economic growth by providing liquidity, mitigating risk, and mobilizing savings. In the context of insurance sector penetration, particularly in emerging economies like Nigeria, the theory suggests that a well-developed financial system can substantially contribute to the growth and depth of the insurance market by improving access to financial services and fostering a culture of risk management among individuals and businesses.

Authors such as Demirgüç-Kunt and Levine (2018) have highlighted the importance of a robust legal and regulatory environment in fostering financial sector development, which in turn can lead to higher insurance penetration. Moreover, the role of technological advancements in

financial services, as discussed by Thakor (2019), has significantly altered the landscape by improving accessibility and reducing transaction costs, thereby potentially increasing insurance coverage. However, challenges remain, as indicated by Beck and Webb (2018), who point out that in many developing countries, including Nigeria, the lack of financial literacy and trust in financial institutions can hinder the growth of the insurance sector. Other scholars like Osotimehin et al. (2019) and Olayungbo and Akinlo (2020) have specifically focused on the Nigerian context, examining the interplay between financial development and insurance sector growth, and have found that while there is potential, the actual impact is often mitigated by macroeconomic instability and regulatory issues.

The relevance and dynamics of Financial Services Theory in relation to the effect of financial development on insurance sector penetration in Nigeria are complex and multifaceted. The theory provides a useful framework for understanding the potential mechanisms through which financial development could enhance insurance penetration. However, the Nigerian context presents unique challenges, including regulatory bottlenecks, infrastructural deficits, and socio-economic factors that may impede the direct application of the theory. Studies by Eke (2020) and Uche and Ephraim (2019) have emphasized the critical role of government policy in creating an enabling environment for financial services to thrive, which in turn can support the growth of the insurance sector. The theory, therefore, while providing a foundational understanding, must be adapted to the specificities of the Nigerian financial landscape, taking

into consideration the role of government, the impact of digital finance, and the need for consumer education and trust-building initiatives to fully realize the potential of financial development in enhancing insurance sector penetration.

2.3.4 Institutional Theory

Institutional theory, initially articulated by Meyer and Rowan (1977), posits that organizations are profoundly influenced by the wider institutional contexts in which they operate, leading them to adopt structures and practices that are legitimized externally, rather than by efficiency criteria alone (Scott, 2014). This perspective emphasizes the role of cultural norms, regulatory frameworks, and cognitive beliefs in shaping organizational behavior (DiMaggio & Powell, 1983). Recent scholarship has extended this theory, examining its applicability across diverse contexts, including emerging economies where institutional frameworks differ markedly from those in more developed countries (Peng, Sun, Pinkham, & Chen, 2009).

DiMaggio and Powell's (1983) concept of isomorphism provide a crucial lens, suggesting organizations evolve similarly due to coercive, mimetic, and normative pressures within their institutional environments. This has been further nuanced by scholars such as Scott (2014), who delineates the regulative, normative, and cultural-cognitive pillars of institutions, each exerting distinct influences on organizational behavior. Oliver (1991) critiques this deterministic view, arguing for agency within organizations to resist, compromise, or

manipulate institutional pressures. The theory's applicability to diverse settings has been explored, with authors like Peng et al. (2009) highlighting its relevance in transitional economies. However, critics such as Greenwood et al. (2011) caution against overemphasizing homogeneity, pointing to the dynamic and contested nature of institutional fields.

In the context of Nigeria's financial development and insurance sector penetration, institutional theory offers a compelling framework to understand the interplay between regulatory frameworks, cultural norms, and market practices. Nigeria's unique institutional context, characterized by rapid economic transitions and regulatory changes, provides a fertile ground for applying institutional theory to examine how these factors shape the insurance sector's development and penetration (Efobi, Tanankem, & Asongu, 2018). For instance, the adoption of international financial reporting standards (IFRS) in Nigeria, driven by coercive isomorphism, has implications for transparency and accountability in the insurance sector (Ofoegbu & Akanbi, 2017). Furthermore, the normative pressures from global and regional insurance bodies, as well as mimetic processes in adopting digital technologies, significantly impact the strategic decisions of insurance firms in Nigeria (Adeusi, Sulaimon, & Oke, 2015). Thus, institutional theory not only elucidates the mechanisms through which external pressures influence organizational practices but also highlights the potential for strategic agency within the Nigerian insurance sector to navigate these institutional pressures.

2.4 Empirical Review

Adebayo and Olayemi (2020) explored the relationship between financial development and the insurance sector's growth in Nigeria, covering the period from 2000 to 2018. Utilizing the Autoregressive Distributed Lag (ARDL) approach to cointegration, the researchers analyzed annual data sourced from the World Bank's World Development Indicators and the Nigerian Insurance Commission. Their findings indicate a significant positive impact of financial development on insurance penetration in Nigeria, suggesting that improvements in the financial sector's infrastructure and services contribute to the growth of the insurance industry. Recommendations include the need for policy reforms to enhance financial sector efficiency to further boost insurance sector development.

Oke, Adeusi and Agboola (2021) examined how the development of the financial sector influences insurance penetration in Nigeria from 1999 to 2019. The study employs the Generalized Method of Moments (GMM) to analyze time-series data collected from the Central Bank of Nigeria and the National Insurance Commission. The results reveal that financial sector development, measured through indicators like banking sector depth and capital market growth, significantly enhances insurance penetration. The paper calls for policies that strengthen financial market infrastructures to sustain and increase insurance sector growth.

Eze and Okoye (2020) focused on the impact of financial liberalization policies on the growth of Nigeria's insurance market, covering the years 2001-2018. By employing Vector Error

Correction Model (VECM) analysis on data obtained from the Central Bank of Nigeria and the Nigerian Insurance Commission, the study finds that financial liberalization has a positive and significant effect on the insurance market's development. The authors suggest that further liberalization of the financial sector could be a viable strategy to enhance insurance market penetration.

Chukwu and Amadi (2021) analyzed the relationship between banking sector development and insurance penetration in Nigeria from 2000 to 2020. Utilizing Panel Data Analysis with data sourced from the Central Bank of Nigeria and the Nigerian Insurance Commission, the study uncovers that the growth and stability of the banking sector are crucial determinants of insurance market penetration in Nigeria. The findings underscore the importance of a robust banking sector as a facilitator of insurance growth, recommending regulatory measures to ensure banking sector stability and efficiency.

Udeh and Ezeabasili (2020) investigated the influence of financial innovation on insurance penetration in Nigeria, with a focus on the period between 2002 and 2019. Employing the Johansen Cointegration Test and the Vector Error Correction Model (VECM) for data analysis, which was obtained from the Central Bank of Nigeria and Nigerian Insurance Commission, the research finds a significant positive relationship between financial innovation and insurance penetration. It highlights the critical role of innovative financial products and services in

enhancing the insurance sector's growth, recommending the adoption of more financial innovations to boost insurance coverage.

Balogun and Okodua (2020) explored the nexus between capital market development and the growth of the insurance sector in Nigeria, spanning from 1998 to 2019. Using the Dynamic Ordinary Least Squares (DOLS) model for analysis, the study finds a significant positive relationship between capital market development, as measured by stock market capitalization and turnover ratio, and insurance sector growth. The findings suggest that a vibrant capital market contributes significantly to the insurance sector's expansion, with policy implications for capital market reforms to support insurance industry growth.

Ibiwoye and Adeleke (2021) examined the impact of financial technology (FinTech) on insurance penetration in Nigeria, focusing on the period from 2005 to 2020. Utilizing Structural Equation Modeling (SEM) to analyze data sourced from the Nigerian Insurance Commission and FinTech firms, the study reveals that FinTech adoption significantly enhances insurance penetration in Nigeria. The research underscores the potential of FinTech to revolutionize the insurance sector by making insurance products more accessible and appealing to a broader population.

Adenuga and Oladejo (2020) assessed how macroeconomic variables affect the performance of the insurance sector in Nigeria, covering the years 1999-2018. Employing the Fully

Modified Ordinary Least Squares (FMOLS) approach, the study analyzes data from the Central Bank of Nigeria and the Nigerian Insurance Commission. The findings indicate that macroeconomic variables such as inflation rate, exchange rate, and GDP growth have significant impacts on insurance sector performance, suggesting that a stable macroeconomic environment is conducive to the growth of the insurance industry.

Ajibola and Awolaja (2021) delved into the relationship between institutional quality and the development of the insurance sector in Nigeria, with a study period from 2000 to 2020. Using the Error Correction Model (ECM) for data analysis, collected from the World Bank Governance Indicators and the Nigerian Insurance Commission, the study finds that institutional quality, reflected in governance indicators like regulatory quality and rule of law, significantly influences insurance sector development. The authors advocate for the enhancement of institutional frameworks to foster a conducive environment for insurance sector growth.

Oluwatobi and Ogunrinola (2020) investigated the impact of infrastructure development on the growth of the insurance sector in Nigeria, focusing on the period 2001-2019. Employing the Granger Causality Test and the Co-integration Test to analyze data sourced from the Nigerian National Bureau of Statistics and the Nigerian Insurance Commission, the research establishes a causal relationship between infrastructure development and insurance sector growth. It suggests that improvements in infrastructure, such as transportation and telecommunications,

significantly contribute to the expansion of the insurance industry, recommending increased investment in infrastructure to support insurance sector development.

2.5 Gaps in Empirical Literature

Based on the above empirical review, it is evident that previous inquiries have predominantly circumscribed their analysis to the period between 2000 and 2020, a temporal scope that, while informative, may not fully encapsulate the longitudinal dynamics and recent trends shaping the interplay between financial development and insurance penetration. To redress this limitation and enrich the existing knowledge, this study extends the timeline of investigation to span from 1995 to 2022, thereby offering a more comprehensive vista on the evolution of this relationship over time. Moreover, while some studies have often employed metrics such as money supply and credit to the private sector as proxies for financial development, they did not consider these indicators as a ratio to Gross Domestic Product (GDP), an approach that might obfuscate the true magnitude of financial development's impact on insurance sector penetration. Therefore, this study adopts broad money supply as a ratio of Gross Domestic Product (GDP), and credit to the private sector as a ratio of GDP as measures of financial development in its examination of the effect financial development on insurance sector penetration in Nigeria within the time frame 1995 to 2022.

CHAPTER THREE

METHODOLOGY

3.1 Introduction

This chapter focuses on the methodology of the study. Specifically, the chapter presents the study's research design, the population and sample, data sources, theoretical framework, and model specifications, as well as the process of measuring and defining variables. Additionally, it outlines the intended method for analysing the gathered data.

3.2 Research Design

The Ex-Post-facto and longitudinal research designs will be used in this study, which are very applicable in management and social sciences. The researcher does not have the ability or opportunity to vary or manipulate the independent variables in an Ex-Post-facto study that uses secondary data and studies responses in the nature of a factor and its effects on individuals. This inability to manipulate the independent variables stems from either the variables being inherently non-manipulable or their manifestations having already occurred (Agbonifoh & Yomere, 1999).

3.3 Population of the Study

As a result of the macro-nature of this study, the population of this study restricted to financial sector development and insurance sector penetration in Nigeria.

3.4 Sample of the Study

The census sampling technique is adopted restricting the sample size of this study to financial sector development and insurance sector penetration in Nigeria target variables such as; broad money supply as a ratio of GDP, and credit to private sector as a ratio of GDP within the time frame 1995-2022 (28 years).

3.5 Sources of Data

The secondary data for the study will be obtained directly from the National Insurance Commission (NAICOM) annual report and the Central Bank of Nigeria (CBN) statistical bulletin for the various years under review (1995-2022).

3.6 Theoretical Framework

This research is anchored on the financial intermediation theory. Financial Intermediation Theory, primarily attributed to the seminal works of Douglas Diamond and Philip H. Dybvig in their 1983 study, provides a foundational framework for understanding the role of financial intermediaries in the economy (Diamond & Dybvig, 1983). This theory elucidates how intermediaries, such as banks and insurance companies, mitigate the effects of market frictions by transforming short-term liabilities into long-term investments, thereby facilitating liquidity and reducing risks through diversification (Allen & Santomero, 1998; Levine, 1997). The relevance of this theory to developing economies, particularly in the context of financial development and insurance sector penetration, is underscored by its emphasis on the

intermediaries' role in enhancing financial system efficiency and fostering economic growth (Demirgüç-Kunt & Levine, 1996; Merton & Bodie, 1995).

3.7 Model Specification

This study modifies the model adopted by Balogun and Okodua (2020). The present research adapts their model by incorporating broad money supply as a ratio of GDP, and credit to private sector as a ratio of GDP. The model of Balogun and Okodua (2020) was specified as:

$$\text{INSG} = f(\text{MCAP}, \text{MTV}) \text{-----}$$

(3.1)

$$\text{INSG}_t = \beta_0 + \beta_1 \text{MCAP}_t + \beta_2 \text{MTV}_t + \mu_t \text{-----}$$

(3.2)

Where:

INSG = Insurance sector growth

MCAP = Market capitalisation

MTV = Market turnover

Considering the alterations made by this current study, below is the functional representation of the updated model:

$$IPR_t = f(M2/GDP_t, CPRIV/GDP_t) \text{ -----}$$

(3.3)

The multiple linear regression analysis model which would be used is given as follows;

$$IPR_t = \beta_0 + \beta_1 M2/GDP_t + \beta_2 CPRIV/GDP_t + \varepsilon_t \text{ -----}$$

(3.4)

Where;

IPR_t = Insurance penetration at time t

$M2/GDP_t$ = broad money supply as a ratio of GDP at time t

$CPRIV/GDP_t$ = credit to private sector as a ratio of GDP at time t

β_0 is the intercept

$\beta_1, \beta_2, \beta_3$ and β_4 are parameters to be estimated

ε_t = Error term

The a priori expectation is,

$\beta_1, \beta_2 > 0$

This implies that a positive relationship is expected between financial sector development variables and insurance sector penetration

3.8 Measurement of Variables

Table 3.1 Measurement of Variables

Item	Types of Variables	Measurement	Source
Insurance sector penetration	Dependent variable	The ratio of insurance premium to GDP	Oke, Aduloju and Oke (2020)
Broad money supply as a ratio of GDP	Independent variable	The ratio of broad money supply to GDP, that is broad money supply divided by GDP	Ekpenyong and Udoh (2016)
Credit to private sector as a ratio of GDP	Independent Variable	The ratio of credit to private sector to GDP, that is credit to private sector divided by GDP	Merton and Bodie (2015)

Source: Author's compilation, (2024)

3.9 Method of Data Analysis

The empirical model will be examined using the econometric technique known as Ordinary Least Squares (OLS). The benefits of OLS are because it is the Best Linear Unbiased Estimates (BLUE). The econometric analysis will cover the period from 1995 to 2022.

CHAPTER FOUR

DATA PRESENTATION AND ANALYSES

4.1 Introduction

The main goal of this study is to examine the effect of financial development on insurance penetration in Nigeria. This Chapter focuses on the empirical evaluations of the study on the basis of the data obtained from CBN Statistical Bulletin. The analysis in this Chapter involves the presentation of data as well as analysis of the estimated model and results based on the methodology outlined in Chapter Three. The goal is to estimate and analyse the models using appropriate techniques and draw valuable outcomes for testing the hypotheses of the study, and also to draw valid conclusions. In conducting the empirical analysis, both econometric and statistical methods are employed. The initial characterization of the data is done using the statistical techniques (descriptive statistics and correlation analysis), while the estimation of relationships and other parameters for testing the hypotheses is done using econometric technique (OLS regression).

4.2 Data Presentation

The data from 1995 to 2022 are presented in appendix 1.

4.3 Data Analysis

4.3.1 Descriptive Statistics

In Table 4.1 the basic characterisation of the datasets is performed using the descriptive statistics to summarise the data.

Table 4.1: Descriptive Statistics

	IPR	M2GDP	CPRIVGDP
Mean	2.562143	11.02286	18.90571
Median	2.700000	10.82000	21.86500
Maximum	5.900000	19.63000	27.38000
Minimum	0.280000	6.170000	9.060000
Std. Dev.	1.351823	3.381852	6.348518
Skewness	0.265729	0.748798	-0.259362
Kurtosis	2.865251	3.219668	1.367359
Jarque-Bera	0.350705	2.672889	3.423688
Probability	0.839161	0.262778	0.180533
Sum	71.74000	308.6400	529.3600
Sum Sq. Dev.	49.34047	308.7970	1088.199
Observations	28	28	28

Source: Author's computations, (2024) using Eviews 9.0.

The results in Table 4.1 show that there are 28 observations in total, for the period under review. The result revealed that the ratio between mean and median values is not too high, showing high level of consistency among variables. There is a meaningful difference between minimum and maximum value with high standard deviation. All the variables considered are skewed to the right with long tail as indicated by their positive values. Insurance penetration (IPR) have peaked properties with the kurtosis value that is less than three (3) that is, it is not normally distributed while M2GDP and CPRIVGDP has a normal distribution property as indicated by the kurtosis value that is less than three (3) which is a bench mark for normal distribution. The Jarque-Berra (J-B) statistic value for IPR is not significant at the 5% level or fail the significance test at the 5 percent level and same hold for M2GDP and CPRIVGDP in the light of their corresponding probability values that is greater ($>$) than 0.05, an indication that the three variables are normally distributed.

4.3.2 Correlation Analysis

It is essential to ensure that the explanatory variables in the model do not have extreme correlation patterns when carrying out econometric analysis. Furthermore, it is important to examine, in a preliminary manner, the relationships among the variables in the study. The Pearson correlation analysis is used to conduct these investigations. The Pearson correlation coefficient serves to measure the strength of linear relationship between the dependent variable

and the explanatory variables. By rule, the closer the coefficient is to 1, the stronger the relationship between the variables. The result of the correlation tests are reported in Table 4.2.

Table 4.2: Correlation Results

	IPR	M2GDP	CPRIVGDP
IPR	1.000000		
M2GDP	0.514988	1.000000	
CPRIVGDP	0.706828	0.792541	1.000000

Source: Author’s computations, (2024) using Eviews 9.0.

M2GDP and CPRIVGDP have positive correlation with IPR. This means increase in these variables increases IPR during the studied period while the correlation between CPRIVGDP and M2GDP is positive. This means increase in CPRIVGDP increases M2GDP during the studied period. The correlation results reveal that none of the independent variables is strongly correlated since they are all below 0.90 and this suggests the absence of multicollinearity. Hence, the variables are appropriate for conducting regression analysis.

4.4 Ordinary Least Square (OLS) Regression Estimation

This study examines the effect of financial development on insurance penetration in Nigeria. Specifically, it examines the impact of broad money supply (M2GDP) and credit to private sector (CPRIVGDP) on insurance penetration (ISP). The regressant, IPR, was regressed on the

regressors – broad money supply (M2GDP) and credit to private sector (CPRIVGDP) using EViews 9.0 econometric package, the ordinary least squares (OLS) regression equation on a 28-years’ time series data, 1995 to 2022. The result is shown in Table 4.3

Table 4.3: Ordinary Least Squares (OLS) Multivariate Regression of Financial Development and Insurance Penetration

Dependent Variable	Variables	Coefficient	t-statistic	Probability
IPR	C	-0.135568	-0.205697	0.8387
	M2GDP	-0.048588	-0.526835	0.6030
	CPRIVGDP	0.171022	3.481093	0.0019
R²	0.505101			
Adj. R²	0.465509			
F-statistic	12.75766			
Pro (F-statistic)	0.000152			
Durbin-Watson stat	1.527207			

Source: Data computation by the researcher (2024), using Eviews 9.0. Indicates statistical significance at 5% level.

From Table 4.1, the results indicate that R^2 statistic is 0.505101 and the adjusted R^2 statistic is 0.465509. The latter indicates that the independent variables of the model explain about 46% of systematic variations in the dependent variable which is below average. The remaining 54% of changes in the dependent variable is explained by the error term. The Durbin Watson statistic of 1.527207 (approx. = 2.0) shows the absence of autocorrelation. Thus, the regression model is a good fit and the results are reliable.

By examining the individual coefficients of the variables in terms of magnitude, signs, and significance, the results show that that broad money supply (M2GDP) is negatively related to (IPR) contrary to theoretical expectations while credit to private sector (CPRIVGDP) was positively related to insurance penetration (IPR) in line with theoretical expectations. Credit to private sector (CPRIVGDP) pass the significant test at the 1% level while broad money supply (M2GDP) fails the significant test at the 5% level.

4.3 Discussion of Findings

The fact that credit to private sector (CPRIVGDP) have a statistically significant relationship with insurance penetration (IPR) indicates that credit to private sector (CPRIVGDP) is a key financial development variable that influences insurance sector penetration in Nigeria within the period of study. The implication of this finding is that credit to private sector (CPRIVGDP) in Nigeria seems to have contributed positively and significantly to insurance penetration in Nigeria. This finding is in consonance with that of Oke, et al., (2021) who reported a significant

relationship between credit to private sector (CPRIVGDP) and insurance penetration. Also, broad money supply (M2GDP) was found not to be critical factors the influences insurance penetration rate in Nigeria within the reference period. The finding does not support the outcome of Adebajo and Olayemi (2020) who reported a positive and significant effect of broad money supply (M2GDP) on insurance penetration.

CHAPTER FIVE

SUMMARY OF FINDINGS, CONCLUSION AND POLICY RECOMMENDATIONS

5.1 Introduction

This chapter focuses on the summary of findings, conclusion and policy recommendations necessitated by the findings.

5.2 Summary of Findings

This study sought to empirically examine the impact of financial development on insurance penetration in Nigeria. To facilitate the study, various hypotheses were proposed on the relationship that seems to exist between financial development and insurance penetration in Nigeria. Using data covering the period 1995 to 2022, the Ordinary Least Square (OLS) econometric tools was employed to empirically examine the relationship. The empirical results reveal the existence of a positive and significant impact of credit to private sector on insurance penetration in Nigeria. In particular, the following specific findings were made from the empirical analysis:

- (i) Broad money supply has an insignificant negative relationship with on insurance penetration in Nigeria. Thus, broad money supply is not a critical variable that influences insurance penetration in Nigeria.

- (ii) Credit to private sector has a positive and significant effect on insurance penetration in Nigeria. This implies that increase in credit to private sector will not drive insurance penetration to higher level.

5.3 Conclusion

This study set out to investigate the impact of financial development on insurance penetration in Nigeria. The methodology employed in the study involved the estimation of a multivariate regression model relating broad money supply (M2GDP) and credit to private sector (CPRIVGDP) with insurance penetration (IPR) while holding other explanatory variables constant. Findings of the study indicate that credit to private sector (CPRIVGDP) has a positive and significant impact on insurance penetration in Nigeria while broad money supply (M2GDP) is negatively and insignificantly related to insurance penetration. Thus, credit to private sector is a critical financial sector development variable that influences insurance penetration in Nigeria.

5.4 Recommendations

Based on the results obtained, the following policy recommendations are made;

- (i) Regulatory authorities charged with the sole responsibility of ensuring the macroeconomic stability of Nigeria should ensure that more credit should be

extended to the private sector in order to further deepen insurance penetration in Nigeria

- (ii) Finally, the negative and insignificant effect of broad money supply on insurance penetration in Nigeria calls for the strict re-evaluation of the present monetary policy tools as regard the volume of money in circulation to ensure that it contribute significantly to insurance penetration rate in Nigeria.

DATA SET

YEAR	IPR	M2GDP	CPRIVGDP
1995	0.28	6.51	10.28
1996	0.72	6.17	9.06
1997	0.60	7.03	9.73
1998	1.10	7.62	10.94
1999	0.80	8.17	12.76
2000	0.90	8.25	14.67
2001	1.02	9.88	15.90
2002	2.50	8.08	13.53
2003	3.90	8.91	13.03
2004	3.20	8.46	11.76
2005	2.10	8.44	11.30
2006	1.90	8.12	11.73
2007	1.90	13.80	19.29
2008	2.90	18.63	23.81
2009	2.60	19.63	25.14
2010	2.60	13.49	21.36
2011	3.10	11.04	22.48
2012	4.80	10.60	24.93
2013	3.10	11.53	25.45
2014	4.40	13.30	22.69
2015	2.40	13.08	22.37
2016	5.90	14.61	27.38

2017	2.80	12.85	24.78
2018	3.17	10.25	25.36
2019	3.15	11.16	23.93
2020	2.90	12.13	25.22
2021	3.10	13.45	25.24
2022	3.90	13.45	25.24

Source;

	IPR	M2GDP	CPRIVGDP
Mean	2.562143	11.02286	18.90571
Median	2.700000	10.82000	21.86500
Maximum	5.900000	19.63000	27.38000
Minimum	0.280000	6.170000	9.060000
Std. Dev.	1.351823	3.381852	6.348518
Skewness	0.265729	0.748798	-0.259362
Kurtosis	2.865251	3.219668	1.367359
Jarque-Bera	0.350705	2.672889	3.423688
Probability	0.839161	0.262778	0.180533
Sum	71.74000	308.6400	529.3600
Sum Sq. Dev.	49.34047	308.7970	1088.199
Observations	28	28	28

Dependent Variable: IPR

Method: Least Squares

Date: 05/01/24 Time: 02:42

Sample: 1995 2022

Included observations: 28

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	-0.135568	0.659064	-0.205697	0.8387
M2GDP	-0.048588	0.092226	-0.526835	0.6030
CPRIVGDP	0.171022	0.049129	3.481093	0.0019
R-squared	0.505101	Mean dependent var	2.562143	
Adjusted R-squared	0.465509	S.D. dependent var	1.351823	
S.E. of regression	0.988303	Akaike info criterion	2.915302	
Sum squared resid	24.41857	Schwarz criterion	3.058038	
Log likelihood	-37.81423	Hannan-Quinn criter.	2.958938	
F-statistic	12.75766	Durbin-Watson stat	1.527207	
Prob(F-statistic)	0.000152			

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