FIRMS PECIFIC FACTORS AND OTHER DETERMINANTS OF PERFORMANCE OF LISTED INSURANCE COMPANIES IN NIGERIA

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DECEMBER, 2020

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BEING A THESIS PRESENTED TO THE DEPARTMENT OF ACCOUNTING AND FINANCE, FACULTY OF HUMANITIES, MANAGEMENT AND SOCIAL SCIENCES, KWARA STATE UNIVERSITY, MALETE, NIGERIA

IN PARTIAL FULFILMENT OF THE REQUIREMENTS FOR THE AWARD OF DOCTOR OF PHILOSOPHY DEGREE (Ph.D) IN FINANCE

DECEMBER, 2020

CERTIFICATION

This is to certify that this dissertation titled "**Firm Specific Factors and Other Determinants of Performance of Listed Insurance Companies in Nigeria**" was carried out by ADEJARE Rukayat Bukola. The project has been read and approved as meeting the requirements of the Department of Accounting and Finance, Faculty of Humanities, Management and Social Sciences, Kwara State University, Malete, Nigeria for the award of Doctor of Philosophy (Ph.D) degree in Finance.

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DECLARATION

I, ADEJARE Rukayat Bukola (Matriculation Number: 14/27/PFI002), hereby declare that this thesis titled: **Firm Specific Factors and Other Determinants of Performance of Listed Insurance Companies in Nigeria** submitted to the Department of Accounting and Finance, Faculty of Humanities, Management and Social Science, Kwara State University, Malete, Kwara State, Nigeria is my personal work and it has not been presented nor submitted by me or any other person for any academic qualification in any institutions.

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DEDICATION

This thesis is dedicated to the Almighty God

ACKNOWLEDMENTS

First and foremost, all praises and glory are due to Almighty Allah for wisdom, health, strength, and provisions for this programme.I willlike to expressmy sincere gratitude to my supervisor, Professor Kenneth Adeyemi,for his support, motivation, and guidance towardsthe completion of this thesis.

I equally appreciate the Head of Department of Accounting and Finance, Dr.Sanni Mubarak and the Postgraduate Coordinator, Dr.OyedeleOladele,for his encouragement. To all other lecturers in the Departmentin the likes of Dr.Mustapha Rasaq, Dr.LukmanOke, Dr.AdekunleAhmed and Dr.AladeAdemokoya among others, I thank you all.I will also like to appreciate my beloved parents,Alhaji and AlhajaAdejare,who are the source of inspiration and strength when I thought of giving up. They provided me moral, spiritual, emotional and financial support. Other entities worthy of appreciation are my dearchildren Habeebah and Ahmed respectivelyfor their sacrifice and commitment towards the achievement of my academic career, I pray to Almighty Allah to grant them long life and prosperity

I will not have completed this thesis without the support of some special people, namely Prof.MuftauIjaiya, Dr.MrsAbdulQodirRaihanatandDr. I. B. Abdullahi.They are always ready to help and give their best suggestion.Lastly, other fantastic people have helped me in many ways and I will like to present my sincere and profound gratitude to them Dr.OlusegunOni, and Dr.Daudu Ismail for their support.

TABLE OF CONTENTS

LIST OF TABLES

LIST OF FIGURES

ABSTRACT

The insurance sub-sector in any economy is expected to play a pivotal role in the financial system with respect toreduction of business risks, facilitation of economics of scale, and diversification of financial risk. However, the overall performance of Nigerian insurance sub-sector is weak evidence with inappropriate response to economic challengesand less than 1% contribution to the GDP of Nigerian economy.This study examines the impact of firmspecific factors and other determinants of performance of listed insurance companies in Nigeria. The main objective was achieved by examining the impact of demographic factors, socio-cultural factors, firm specific factors, board member characteristics and selected macroeconomic variables on performance of listed Insurance companies in Nigeria. The performance was achieved with demand for insurance products by customers and CARAMELS financial indicators(Capital adequacy, Asset quality, Reinsurance and Actuarial, Management efficiency, Earnings/Profitability, Liquidity and Sensitivity to market risk) of the listed insurance companies. The population of the study includes all listed insurance companies in Nigeria and their customers Data were sourcedfroma structured questionnaire, annual reports of Insurance companies and Central Bank of Nigeria statistical-bulletinbetween 2012 and 2018. Primary data were analysed using descriptive and Ordinal logistic regression, while secondary data wereanalyzed using serially correlated disturbance random effects. The results of this study revealed that on demographic factors age (α=0.461, P<0.013), single marital status (α=2.031, P<0.030), married marital status (α=1.936, P<0.030), divorced marital status (α=2.196, P<0.020), and type of work of customers (α=-0.260, P<0.034) had a statistically significant influence on demand for insurance policy by customers. Among the socio-cultural factors, Islamic Religious belief (β =0.478, P<0.006), Christianity Religious belief (β=0.685, P<0.000), language (β=0.296, P<0.012), trust (β=1.552, P<0.000)and level of awareness of customers (β=-1.209, P<0.000) significantly affectdemand for insurance product. On firm specific characteristics, the findings depict that age(α=0.00187, P<0.015) and leverage (α=1.773, p<0.038) significantly influence asset quality, while size significantly affect capital adequacy(α=-0.29, P<0.000), management efficiency (α=-0.084, P<0.021) and solvency (α=-0.29, P<0.000) of listed insurance companies. On board characteristics, management efficiency hassignificant relationship with board size (α=-0.0154, p<0.046) and board gender diversity (α=0.224, p<0.078) while board independence significantly affects asset quality (α=0.0787, p<0.086), management efficiency (α=0.518, p<0.002), earnings and profitability (α=0.569, p<0.090) of listed insurance companies. The result further revealed that exchange ratesignificantly influencescapital adequacy and solvency (α=0.00195, p<0.016), growth rate (α=0.0153, p<0.070)and inflation rate (α=0.0165, p<0.037)significantly related to reinsurance and actuarial of listed insurance companies. The study concludes that the level of education, age, trust, level of awareness ofcustomers affect the demand for insurance products. Besides, it shows that age, size, leverage, and board characteristics of insurance companies influence their performance.Inflation, exchange and growth rates also influence the performance of listed insurance companies in Nigeria. The study recommends that management of insurance companies should strengthen their sensitization among customers regardless of age, marital status and working class.An experience sharing among the listed insurance companies should be practiced and at least an independent membershould be on the board.

CHAPTER ONE

INTRODUCTION

1.1 Background to the Study

The financial services industry serves as the backbone of economic growth and industrialization of any country based on its intermediating role of mobilizing and directing resources from surplus units to deficit units of the economy (Emeka, NenuBari&Chidinma, 2019). The insurance sub-sector plays a pivotal role in the financial system in all countries with respect to the reduction of business risks, facilitation of economics of scale in investment, and spread of financial risk which cannot be overemphasized (Haiss&Sümegi, 2008; Mazviona, Dube&Sakahuhwa, 2017). However, the overall financial performance of the insurance sub-sector in Nigeria appears weak due to inappropriate response to financial and economic challenges as well ascrisis within the sector (International Monitoring Fund (IMF), 2013). Emeka, *et al* (2019) added that the sector was characterized byinadequate resources which would have facilitated the growth of any economy.

According toPant and Bahadur (2017),many insurance businesses face complex challenges that severely threaten their survival and existence they also added that the challenges were due tothe uncertainty the world faced as a result of globalization, liberalization, and innovation in the economy. Therefore, the development of insurance business is a must for economic development of any country. Feyen, Lester and Rocha(2011) argued that insurance companies would helpminimize uncertainties and promote long term investment. United Nations Conference on Trade and Development (UNCTAD) (2005) also formally acknowledged that sound insurance businesses constituted a solid foundation for global economic growth. Chandrapal (2017) agreed

that insurance companies as risk indemnifiers and financial intermediaries promote economic growth by managing risk in a more effective way and mobilize domestic savings for long-term investment in every economy.

The insurance sub-sector provides financial hedges against from unpredictable losses, which are often beyond management control. Although insurance companies cannot prevent losses, they provide financial hedge by way of compensation to the risk bearer (Pant &Bahadur, 2017). Soekarno and Azhari (2009) opined that individuals and businesses transfer their uncertainties to insurance firms upon payment of relatively small premiums compared to the contingent losses faced by the firms. This supports Anne (2016) that an insurance product legally binds insurance companies to pay losses to policy holder whenever a specific risk crystallizes. The author added that the inability of businesses to contain all types of potential risks during periods of uncertainties may hamper such businesses and the economy. The implication of this argument is that insurance is an important tool through which disaster to individual or entity is shared and or minimized. Furthermore, it protectsa large part of anycountry's wealth. Therefore, the performance of the sector could lead tothe growth of other sectors, and ultimately the overall prosperity of an economy.

Mall (2016) noted that there has been a remarkable contribution ofinsurance sub-sector to the gross domestic product (GDP) of any country in the past few years. According to Price Waterhouse Coopers (PWC) (2018) and Mall (2016), the contribution of the sector to GDP on annual basishas exceeded that of banks since 2015. The US Department of Commerce (2019) reported that the sector contributed 3.1 percent GDP compared with 2.9 percent of the banking industry. Some developed countries like Japan, the European

nations and emerging Asian economies experienced an upward performance than the United States, United Kingdom among others. Sub-Saharan African countries have shown a welcome sign of improved performance in the sector contributing to 2.6% to GDP in 2017 and 3.4% in 2018 (PWC, 2018).

Despite the contributions of the insurance industry in developed countries, the performance of the sector was not as expected in the developing countries of Africa, Asia, Caribbean, and the Latin America where socio-economic systems are yet to crystallize (Anne, 2016). Africa's insurance industry is largely underdeveloped and the penetration level is low compared with the global standards. The African insurance business, particularly, that of Nigeria, has been in a state of continuous disruption since the 2008 global financial crisis(PWC, 2018). The penetration rate (measured as a percentage of GDP) of the Nigerian insurance industry stood at 0.3 percent in 2018, compared with 14.7 percent for South Africa, 2.8 percent for Kenya, 1.1 percent for Ghana, 0.6 percent for Angola and 0.6 percent for Egypt (Agusto& Co, 2019). Also, the density of the Nigerian insurance sector (i.e. a measure of industry gross premium per capita) is currently at $6.2. Nigeria lags behind African counterparts, such as South Africa ($762.5), Egypt ($22.8), Kenya ($40.5) and Angola ($30.5) (Agusto& Co, 2019).

Nigeria's insurance sub-sector currently adds a meagre 0.4% to the nation's gross domestic product (GDP)(Fadeyi, 2017; Wadami, 2017). Thisis low when compared with South Africa which account for 80% of Africa's total premium and 13% of the country's GDP while Kenya's insurance sector accounts for 3% of its GDP (Fadeyi, 2017; Wadami, 2017). However, Agusto& Co (2019) also stated that the asset base of the Nigerian insurance industry was at N1.3 trillion as at December 31, 2018, indicating a

compounded annual growth rate of 17 percent over the last three years. The report added that Gross Premium Income (GPI) generated during the period was estimated at N448.6 billion, reflecting a 12 percent growth year-on-year. Whilst these data signify vast growth impending for the Nigerian insurance industry, many licensed insurers are still largely under-capitalized, thus hindering their ability to seize on big ticket in-country risks, as may be seen in other sectors of the economy (Seyi, &Oluwatoba, 2019).

1.2 Statement of the Problem

There are evidences of improved performance of other sub-sectors of the financial services industry sector globally, particularly the banking sub-sector (IMF, 2013). The performance of insurance firms in Nigeria is weak given its low penetration, minimal growth in written premium over the last decade and less than 1% contribution to the GDP of the country (Fadeyi, 2017; Wadami, 2017). In spite of the various measures such as the recapitalization of the industry, the Market Development and Restructuring Initiative (MDRI), and the introduction of risk-based supervision for insurance companies, the insurance business continued to remain significantly lowin Nigeria (Gonga&Sasaka, 2017). The potential of insurance industry in emerging market like Nigeria might be hampered by the lack of trust and awareness of the benefits of insurance. For large segments of the population, insurance policy is often unaffordable (Mahdjour&Benhabib, 2017).

Generally, it could be argued that lack of trust and confidence in insurance companies might constitute the foremost factor for inadequate patronage of insurance policies in Nigeria coupled with lack of knowledge and information (Omar, 2007). One of the primary factors affecting consumer attitude and decision towards insurance products in Nigeria is arguably, the socio-cultural factor. This could come in various dimensions

such as language, education, ethnic background and religion differences (Odemba, 2013). Thesesocio-cultural factors were further highlighted by Bull (2009); Bawa (2011) to include erosion of confidence, lack of willingness, ethnic and religious belief, inappropriate marketing language used by intermediaries, lack of reliability and accessibility to the services. These socio-cultural factors tend to influencepropensity to demand for insurance policies by customers which inadvertently lead to poor penetration and consequently affect the performance of insurance sector.

Mahdjour and Benhabib (2017) opined that demographic characteristics of customers may be among the factors influencing decision and expenditureon the demand for insurance policy.This may includeincome level, age, gender, education level, job sector and marital status among others. According to Mahdjour and Benhabib (2017), demand for insurance policy depends on income level, educational background and working experience of the customers. Gender may be considered because of the general belief that men demand for insurance policy than women. MahdjourandBenhabib (2017) addedfurther that customer demographic' characteristics change over time as a result of economic, cultural, and political circumstances. Therefore, the changes tend to affect the levelof decision on demand for insurance policy by customers.

Company's related factoris another essential determinant of performance of insurance companies. Firms' specific factors, according to Duompos, Gaganis, and Pasiouras, (2012), include but not limited to size, age, liquidity, ownership structure, leverage, managerial competence and capital structure. They added that firms with small resources find it difficult in achieving economies of scale. Shiu (2004) asserted that the more age of a company, the more it attains required capabilities, experiences and skills to protect

against any risk and liabilities that may arise. Wrong financing decision on capital structure of insurance companies might lead to devastating consequences such as financial distress, bankruptcy, or even liquidation which in turn affect the overall performance (Najjar&Petrov, 2011). Lasisi (2018) and Cucinelli (2013) added that lack of high-quality forecasting models by insurance companies to handle liquidity risk may also result to liquidity problem and deterioration of financial performance. This might affect the ability of insurance companies to meet payouts from policies surrender, expenses, maturities among others (Kamau&Njeru, 2016).

Another important company's related factor that affects the performance of insurance company is the corporate governance practices. Non-compliance with corporate governance practises by insurance companies in terms of board characteristics show the inability of achieving the demands and expectations of all stakeholders (Imade, 2019). This is highly deleterious to the efficiency of managementof insurance company in maximising optimum return of investment(Garba&Abubakar, 2014)**.** Boardcomposition in terms of board size, independence, genderdiversity, ownership and remuneration may encourage entrenchment.Zakaria, Purhanudin andPalanimally (2014) argued that insurance company with a large board size and more female would be able to provide more influences on sensitive matters and decisions that affect performance. However, small sized board members may accelerate decision making processes.

Absence of board independence in most cases usually made the board to be less effectivewhich may influence the performance (Yermack, 1996). Presence of female in the board allows companies to have access to varied personal characteristics and physical differences and is assumed to be very good in exerting intensive monitoring and more

effective in proffering wider range of solutions(Ujunwa, Nwakoby&Ugbam, 2012; Imade, 2019). Inability to tapped these personal quality from female may indirectly affect the performance of the sector. Ownership structure of the firm, especially with respect to concentration of ownership by majority shareholders, maygive room for domineering decision which may affect the performance (Arif, 2019). Besides, the performance of insurance company may be affected due to lack of compliance with corporate governance structure and unfavourable arrangement regarding ownership and remuneration among the board members.

Macroeconomic factors are the essential drivers of the economy, therefore, there is possibility that changes in these macroeconomic may affect the performance insurance industry in Nigeria. Agu, Idike, Okwor and Ugwunta (2014) supported this argument that Nigerian economy has shown high level of volatility in exchange rate, inflation, interest rate, amongseveral others, thereby influencing the financial performance of all entities. The exchange rate in Nigeria is unpredictableand it influences on the external competitiveness of all entities, including insurance sub-sector, cannot determined(Chinedu&Chinedu, 2018). Analysts like Rasheed (2010) added that performance of insurance sub-sector may be affected with high lending rates andincrease in general price level. This is evident with the problem of having a stable rate faced by Monetary policy authority in Nigeria in order to improve the purchasing power, economic growth rate and interest rate in consonance with other macro-economic fundamentals.

Previous studies like Shiu (2004); Agabi(2009); Duompos*et al* (2012);Yegon, Gekara and Wanjau (2014); Cucinelli(2013); Kamauand Njeru (2016); Angima (2018) have

examined somefirm specific characteristics and macroeconomic variables on performance of insurance companies but reported mixed findings which created more confusion. Also, studies like Clarke (2004); Fernando (2012); Arif (2019); Imade(2019); Gideon, Odunayo, and Bamikole, (2019); Samuel, Mudzamir and Mohammad (2017);Garba andAbubakar (2014); Ujunwa*et al* (2012) on the impact of corporate governance mechanisms, particularly board characteristic to achieve optimal performance in the insurance industry but also revealed contradictory findings.Thus, the present study intends to incorporate all these factors from the insured (Socio-cultural and Demographic factors) and from insurer (Firms' specific characteristics, board characteristics and selected macro-economic factors) to assess their influence on performance of listed insurance companies in Nigeria.

1.3 Research Questions

The following research questions were raised from the problem identified by the study:

i. To what extent do demographic factors of consumers' influence performance of listed insurance companies in Nigeria?
ii. To what extent do socio-cultural factors affectperformance of listed insurance companies in Nigeria?
iii. What is the effect of firms-specific characteristics on performance of listed insurance companies in Nigeria?
iv. Do board dynamics affectperformance of listed insurance companies in Nigeria?
v. To what extent do some selected macro-economic variables affect performance of listed insurance companies in Nigeria?

1.4 Objectives of the Study

The main objective of the study is to investigate the effect of firm's specific factors and other determinants on performance of Insurance companies in Nigeria while the specific objectives are to:

i. investigate the extent to which demographic factors of consumers influence the performance of listed insurance companies in Nigeria.
ii. examine the effect of socio-cultural factors on the performance of listed insurance companies in Nigeria.
iii. examine the effect of firm specific characteristics onthe performance of listed insurance companies in Nigeria;
iv. determine the effect of board characteristics onthe performance of listed insurance companies in Nigeria; and,
v. evaluate the effect of selected macro-economic variables on the performance of listed insurance companies in Nigeria.

1.5 Research Hypotheses

The following hypotheses was developed and tested:

H_{01}: There is no significant influence ondemographic factors of consumers on the performance of insurance companies in Nigeria.

H_{02}: Socio-cultural factors do not significantly affectthe performance of listed insurance companies in Nigeria.

H_{03}: Firm specific characteristics do not signific1qantly affectthe performance of listed insurance companies in Nigeria.

H_{04}: Board characteristics do not have significant effect on the performance of listed insurance companies in Nigeria.

H_{05}: There is no significant effect of selected macro-economic variables on the performance of insurance companies in Nigeria.

1.6 Justification of the Study

The present study is considered with respect to its contribution toknowledge, practices andpolicy making. Previous studies like Saeed and Khurram (2015),Ebere, Ibanichuka and Ogbonna (2016), Ibe, Ugwuanyi, and Okanya (2017), Abdelkader and Lamia (2018),Ghimire and Kumar (2014),Ali, Chanar, Ghauri, and Obaid (2019), Kozak (2011),Chen-Ying (2014),Jibran*et al* (2016),Mwangi (2017),Alali, Boyabes, and Alfailakawi (2018),Chizoba, Eze, and Nwite (2018),Deyganto and Alemu (2019),Wang, Jenga, and Peng (2007),Eling and Marek (2011),Najjar and Salman (2013),Getachew (2014),Fekadu (2015),Deev and Khazalia (2017),Kariuki (2017), Solomon and Obah (2018),Abdoush, Wolfe, and Marshall (2016),Arif (2019),Markonah, Sudiro, Surachman, and Rahayu (2019),Qawariri (2019) have examined the impact of firm factors, soft governance, social responsibility among others on performance of insurance companies using performance measurement like return on asset (ROA), return on equity (ROE), return on investment, market share, new policies issued, premium income, claim settlement ratio, underwriting profit, EPS etc to determine the performance of insurance companies.However, there is a little familiarity with CARAMELS financial indicators as identified by IMF. The present study contributes to the knowledge by exposing the readers to the concept of CARAMELS financial performance indicator in Nigerian insurance companies.

With respect to determinant of performance of insurance companies, Omondi and Muturi (2013);Kočović, Paunović and Jovović (2014) and Chen-Ying (2014) have examined the effects of firm-specific factors on performance of insurance industry. The current study

incorporates important factors like socio-cultural, demographic, macro-economic and corporate governance as determinants of performance of insurance companies. Therefore, this study will provide useful information about determinants that enhancefinancialdiscipline, deepening wealth creation and bridging gap in knowledge of insurance business.The study will be of great reference to insurance companies and regulators in drawing policies and programmesto restore customers' confidence and increase insurance penetration.

The result of this study will help the managers to take the financing decision for their firms and the creditors can also take the benefit to minimize their risk in funding insurance industry. The study will assist regulators and government in developing policies which will enhance the performance of insurance companies in Nigeria. The study will also benefit government. The government will be able to come up with appropriate legislation with respect to determinants that will ensure harmony between policyholders and insurance companies. Insurance companies will find this study useful in its suggestions about those factors that have contributed to the inefficiency of the industry and its consequent low life insurance penetration.

Lastly, the results of this investigation will expose policy maker and government to the benefits to attain with improved performance of insurance companies. First, the importance of a more developed insurance sector is underlined by the fact that it relates directly to economic growth (and therefore prosperity) of a country. Second, the eminence of insurance sector within the economic system of a country will act as inducement to promote and enhance the nation's activities. Third, the development of insurance sector could also lead to an increase in the living standards of Nigerians.

Fourth, with the growth of insurance sector and development in the living standards, there is possibility of reduction in unemployment levels in the economy.

1.7 Scope of the Study

The study focuses on the impact of selected firm specific factors and other determinants of performance of listed insurance companies in Nigeria. The study covers financial accounting period of 2012 to 2018. The choice of 2012was based on the regulation that mandated the adoption of IFRS for recognition, measurement and presentation of financial information in Nigeria by listed companies including insurance companies. On the other hand, the choice of 2018 was based on recent published data by listed insurance companies. All the listed insurance companies on the floor of Nigeria Stock Market as at 31st December 2018 were considered in this study.

The determinants of performance of insurance companies were considered from demand side which referred to the customer and from supply side which referred to the insurance companies. The customers factor that influence demand for insurance product or policies employed in this study are demographic factors and socio-cultural factors of the customers. These factors were selected because their influence on decision of customers to take up insurance products or policies will in turn affect the overall performance of listed insurance companies in Nigeria. The supply related factors of the listed insurance companies considered in this study are firm specific factors, board member characteristics and selected macroeconomic variables. The firm specific factors and board member characteristics are internal related factors of listed insurance companies while the selected macroeconomic variables such as exchange, inflation, growth rate are general factors related to all listed companies in Nigeria.

The performance of insurance companies was considered from the demand and supply side. The demand side focused on customers and this was achieved by decision of customers to take up insurance policies or product which in turn related to overall performance of listed insurance companies. In an attempt to make an accurate representative picture and insights of the performance of listed insurance companiesfrom supply side, the performance was determined by using CARAMELS framework (Capital adequacy, Asset quality, Reinsurance and Actuarial issues, Management soundness, Earnings/Profitability, Liquidity and Sensitivity to market risk). The framework was endorsed by IMF for adoption of regulatory and supervisory body as individual parameters of listed insurance companies.

1.8 Organization of the Study

This thesis is divided into five chapters. The first chapter is the introduction. It contains the background to the study, statement of the problem, research questions, research objectives, research hypotheses, significance and scope of the study. Chapter two shows literature review. It deals with conceptual framework, theoretical and empirical review. The third chapter focuses on the methodology of the study research. The chapter presentsresearch design, population, sources of data, the chosen samples and methods of data analysis. Chapter four presents the result of the research and discussion of the findings. Chapter five contains the summary, conclusion and recommendations of the study.

CHAPTER TWO

LITERATURE REVIEW

2.1 Conceptual Review

Concepts reviewed in this sub-chapter include definition and importance of insurance businesses, the performance of insurance company and determinants of the performance of insurance company.These determinants include the socio-cultural factors of customers, demographic characteristic of customers, firm's specific factors of insurance company, board members' characteristics of insurance company and selected macroeconomic factors in Nigeria.

2.1.1 Definition and Importance of Insurance Businesses

Insurance is a financial service widely used primarily to diversify and pool risks so that the consequences of random occurrences do not cripple individuals and or businesses(Kazeem, 2015). According to Chemonics International and International Insurance Foundation (2006), insurance also facilitates long-term funds through savings and investment products, reduces losses through risk management expertise, and transmits information about risks throughout society so that economic actors can make more informed risk baseddecisions.Another important concept in insurance industry is reinsurance. Reinsurance, according to Domenichini and Crugnola (2007) is the transfer of insurance risk from one insurer to another through a contractual agreement under which one insurer (the reinsurer) agrees, in return for a reinsurance premium, to indemnify another insurer (direct insurer, primary insurer or Cedant) for some or all of the financial consequences of certain loss exposures covered by the primary insurer's policies.

Generally, insuranceinvolves pooling of fortuitous losses through the transfer of risks to insurer(s) who agree to indemnify the insured for such losses or to provide other pecuniary benefits on their occurrence, or to render services connected with the risk. Soekarno and Azhari (2009) noted that individual and businesses transfer their uncertainties to insurance companies upon payment of small amounts of premiums. Isimoya (2007) said that insurance is a unique product in that the ultimate cost is often unknown until long after the coverage period. He added that while the revenue from premium payments by policy holders are received before or during the coverage period, the accumulation of premium paid by individual and businesses is use to provide financial compensation for the financial effects of the misfortune.

Insurance business is highly regulated at the highest level anddistinctionshave been made between insurance policies (Inseta, 2014). He categorized short term insurance business to include Property, Transportation, Motor, Accident & Health, Guarantee, Liability and Engineering while Life policies cover Investments, Risk, Annuities and Universal Life (FSB, 2014). Inseta (2014) further identified two classes of insurance business namely general and life. General insurance business refers to non-life business with primary role of protecting insurers against losses which may result from occurrence of specified events within specific periods. Life assurance business, on the other hand, refers to long term business in which the benefits is due for payment when the policy holder dies or on the occurrence of a specified event. A company who decided to undertake two or more insurance businesses is otherwise known as composite insurance company.

Boadi, AntwiandLartey (2003)opinedthat a resilient and well regulated insurance industry can significantly contribute to economic growth and efficient resource

allocation through transfer of risk and mobilization of savings. They added that it can enhance financial system efficiency by reducing transaction costs, creating liquidity and facilitating economies of scale in investment. These benefits were aggregated by Mwangiand Angima (2016) whoasserted that insurance companies contribute to economic growth through lowering of total risk, facilitating efficient resource allocation, reducing transaction costs, reducing liquidity problem, facilitating economies of scale and spreading financial losses to provides a sense of stability to most economic entities.

Kazeem (2015) opined that insurance industry also provides employment opportunities for thousands of Nigerians through different forms of insurance covers. He said further that no industrialist would like to establish multi-million-naira worth of industry without insurance protection in one way or the other.In their own contribution, Choi and Elyasiani (2011) explained that reinsurance significantly improves diversification of risk among the policyholder pool, and that reinsurance activities may reduce price, consistent with a view of reinsurance as an alternative to other risk diversification devices.

2.1.2 Performance of Insurance Companies

Performance, according to Mazviona*et al* (2017), is the capability of an entity to expand and deal with its available resources in several different ways to maintain competitive advantage. They said that high performance implies that management is effective and efficient in the utilization of entity's resources which in turn improve the economy at large. What they implied is that performance cannot be restricted to financial performance alone. The issue of performance of corporate organizations, according them, has been one of the major concerns of management, experts, investors as well as researchers. Ahmed, Ahmedand Usman (2011) opined that performance of a firm can be measured using different indices, financial or otherwise, through different methods. They

lamented that attention is usually place on the ability of the organization to lift up their income level. Chen and Wong (2004) asserted that financial performance can be estimated in term of profitability, which is a relative measure of success for a business because one of the objectives when managing insurance companies is to attain profit.

One of the proxies of financial performance indicators is profitability. Malik (2011) opined that profitabilityassists the entities to maximize owner's wealth.He explained further that profits insurers cannot attract outside capital to meet their set objectives in this ever changing and competitive globalized environment. However, Abate (2012) cautioned that profits alone cannot be used to compare performance between different companies, hence that profitability is suitably measured by financial ratios.Gasbarro, Sadguna and Zumwalt (2002) observed that assessing performance of an entity has been an inexhaustible subject that has drawn the attention of several researchers. They, however, noted that the procedures varied from country-to-country, and designed to generate financial performance. Some of the financial performance indicators used to measure performance of organization, specifically, insurance companies include return on assets (ROA) and return on equity (ROE), investment income, market share, new policies issued, premium income, claim settlement ratio, underwriting profit, EPS among others (Mazviona*et al*, 2017, Nagaraja, 2014, Shawar&Sidiqqi, 2019, Ibrahim, 2016).

In an attempt to make an accurate representative picture and insights of the financial performance of insurance companies, Das, Davies and Podpiera (2003) had proposed CARAMELS model to evaluate the financial soundness and performance of insurance companies. CARAMELSstands for capital adequacy, asset quality, reinsurance, adequacy of claims and actuarial, management soundness, earnings and profitability,

liquidity and sensitivity to market risk. This framework was endorsed by IMF for adoption of regulatory and supervisory body as individual parameters. The framework is analogous to the CAMEL framework for the banking sector. Basically, this CARAMELS adds "Reinsurance" and "Actuarial issues" to CAMELS framework (Monterio& John, 2017). Each of the components of CARAMELS framework is explain as follows:

i. Capital Adequacy

Insurance companies are expected to maintain adequate capital to meet their financial obligations operate profitably and contribute to promoting a sound financial system. It is for these reasons that NAICOM prescribed minimum capital requirements. The regulators of capital requirements seek to guarantee that risk exposure of financial institutions and insurance companies are supported by an adequate amount of capital which bears unexpected losses arising in the future. Capital Adequacy ensures that insurance companies further promote their cushion of assets that can be utilized for liquidation claims (Ansari &Fola, 2014). For any insurer, capital is necessary to ensure that its policyholder obligations will be honoured. Because of the risks inherent in the insurance business, there will always be a chance of insurer default, i.e. insurer's liabilities exceeding its assets. Thus required capital is generally defined as the capital necessary to reduce the probability of insurer default to some target level.

Capital adequacy is usually measure with ratio which indicates the capacity of the insurance companies to absorb losses relative to risk exposures, exposures measured by asset size and reserves. There is no international standard for measuring capital adequacy of insurance companies but a set of two indicators are proposed by IMF (2003). They are

share capital/mathematical reserves and share capital/total assets based on availability of information.

ii. Asset Quality

Asset quality of insurers is the measure of reliance on equity to build sound and quality asset portfolio of a company. It is a measure of the likelihood of default of a loan or lease, combined with a measure of its marketability. According to Ali *et al* (2019), asset quality is a measure of the price at which a bank or other financial institution can sell a loan or lease to a third party. It is one of the most critical areas in determining the overall condition of a financial industry. The indicator does not only affect financial and operating performance of insurance companies but further impinges on the soundness of the overall financial system (Ansari &Fola, 2014). Asset quality is usually expressed as relationship between equity shareholders' funds and total assets. Example of asset quality ratio includes (Real estate + unquoted equities + debtors)/total assets, Receivables/ (Gross premium + reinsurance recoveries), Equities/total assets and NPLs to total gross loans (IMF, 2003).

iii. Reinsurance and Actuarial Issues

Reinsurance is insurance that is purchased by an insurance company, in which some part of its own insurance liabilities is passed on to another insurance company (Ansari &Fola, 2014). According to IMF (2003), reinsurance and actuarial issues can be observed through risk retention ratio and the ratio of Net Mathematical Reserves to Average of Net Premium Received. The retention ratio depicts the overall underwriting strategy and what portion of risk passed by the insurer to the reinsurers. This is used to examine financial health of its reinsurer, whether insurers rely on it to a considerable level. The

ratio is expressed as relationship between net premium and gross premium. Gross premium is simply the premium received where as Net premium is calculated by adding gross premium, reinsurance accepted and subtracting reinsurance ceded out of it (Das *et al*., 2003).While calculating, average of net premium received, net premium is taken as sum total of premium received, reinsurance accepted and deducting reinsurance ceded out of it. As the ratio is the indicator of adequacy of mathematical reserves, therefore, higher ratio is considered better (Ansari &Fola, 2014).

iv. Management Efficiency

The efficiency concept is basically used to evaluate the performance of a firm. A sound management is crucial for financial performance and stability of any industry. However, finding direct quantitative gauge of management soundness is very difficult (Ansari &Fola, 2014). They added that ideally, financial ratios such as return on assets, return on equity, expense to premium ratios,etc, are used to measure performance, but that management soundness is usually qualitative. IMF (2003) opined that management efficiency can be understood through the subjective evaluation of management systems, organization culture and control mechanisms and so on. Thus, IMF (2003) proposed the use of two indicators of management efficiency which was further evaluated by Ali *et al* (2019). These included gross premium divided by number of employees and total asset divided by number of employees.However, Ansari and Fola (2014) asserted that these formula as indirect indications of management soundness because gross premiums could be proxied for overall volume of business activity.

v. Earnings and Profitability

Earnings and profitability are the major parameter employed to access performance of an entity towards investment in long term project because the main aim of businesses is to earn profits(Anasri&Fola, 2014). Therefore, businesses must be able to earn adequate profits in relation to the risk and capital invested in it because inadequate profitis a warning sign of fundamental problems in the company.Therefore, considerable attention must be given to profit as it is considered as a leading indicator for solvency problems.The efficiency and the success of a business can be measured with the help of different profitability ratios such as Expense ratio (Expenses/Net Premium), Return on Investment (Investment Income/Investment Assets) and Return on Equity (Net Profit after interest, tax and dividend/Share Capital). Expenses ratio is further segregated and calculated as Operating Expense to Net Premium Ratio, Commission to Net Premium Ratio and Other Expenses to Net Premium Ratio (Ali *et al*., 2019) Therefore, to arrive at CARAMELS ratings in terms of Earning and Profitability, composite ratio for expenses to net premium and return on investment was used.

vi. Liquidity

According to Ali *et al* (2019), the term liquidity is the ability of insurance companies to meet its short term obligations that mature within one accounting period. They also referred liquidity as ability to convert assets to cash. Liquidity is very vital to insurance companies because inadequate level of liquidity could interrupt meeting commitments of companies with respects to clearance of entitlements demand by policy holders(Naveed, Zulfqar& Usman, 2011). Das *et al.*, (2003) statedthat the link between illiquidity and insolvency, through the loss of confidence and runs, is less marked in insurance. According to Olashore (1990), failure to manage their liquid assets effectively is like "throwing good money after bad". Insurance companies which consistently failed in

meeting its obligations to customers can be said to be a sick insurance companies (Crowe, 2009). Therefore, it is imperative for insurance companies to maintain certain degree of liquidity. As such, the ratio is calculated by dividing liquid assets by current liabilities (Ali *et al,* 2019).

vii. Sensitivity or Solvency

Ansari andFola (2014) defined solvency as the ability of a company to pay its obligations when they become due and able to continue its business. The term is used to measures the extent to which assets covers commitments for future payments and the liabilities. The amount of premium written is a better measure than the total amount insured because the level of premiums is linked to the likelihood of claims. Solvency ratio is a measure of risk an insurer faces of claims that it cannot absorb (Ansari &Fola, 2014). Generally,solvency is calculated by dividing the net assets with net premium underwritten or dividing net open foreign position by capital (Ali *et al*., 2019).

2.1.3 Determinants of Performance of Insurance Companies

A firm's high performance reflects its effectiveness and efficiency in the management of its resources for operational, investment and financing activities (Naser& Mokhtar, 2004). According to Lee (2014), there are many factors related to performance of insurance companies. Assessment of a firm's performance should take into account many different factors such as asset base, leverage, loan record, corporate governance practises, quality of staff and regulations in the industry among others (Gonga&Sasaka, 2017). A strong understanding of these factors and their impacts on business operations like that of insurance companies are essential. These factors are categorized differently but for the purpose of this study, they includesocio-cultural and demographic factors of

customers and internal and corporate governance practices of insurance companies as well as the external or macroeconomic variables of the country:

i. Socio-cultural Factors

The concept of culture is usually invoked to understand the behaviour and thought patterns of groups, only individuals can discover culture, and individuals are the only source of cultural data (Sociology group, 2018). They are rules and laws which are passed from one generation to the next. Culture is a task learned primarily through other people in form of social interaction and so is shared collectively by members of groups (Matthews, Brown & Kennedy, 2018). Culture, according to Yusuf, Gbadamosi and Hamadu (2009), referred to that learned complex whole of knowledge, belief, art, morals,law, custom and any other capabilities and habits acquired by man as a member of society.

Long-Crowell and Pisano (2019) identified four elements of culture: symbols, language, values, and norms. While sociology group (2018) extended the classification to include belief and cognitive element.Every culture has language. Thus, clients are likely to have more trust on insurance companies if they communicated in the language of the culture they are much familiar with (Swartz, 1997). This also applies to norms, the set of rules and expectations by which a society directs the conducts of its members. Familiar norms increase trust, likewise other elements such as beliefs, symbols, values, and cognitive behaviours (Swidler, 1986). In fact, cultural elements influence the decision of customers to take up insurance policy. It influences the extent to which they should belief the policy and the type of policy needed to be taken. Culture is considered an important construct influencing performance of insurance companies.

ii. Demographic Factors

Demographic notions traced back to olden days, and were present in many civilizations and cultures, like Ancient Greece, Ancient Rome, China, India and Africa (Srivastava, 2005). He added that demographic is the collection and study of general characteristics of a specific population. This type of information is use to build a profile for the organization's customer base and to make certain generalizations about groups to identify customers. Chappelow (2019) asserted that demographic information is frequently used as a business marketing tool to determine the best way to reach customers and assess their behavior as well as determine the size of a potential market. He said further that it helps to determine whether its products and services are being demanded by the company's most important consumers.

The common demographic information usually gathered include but not limited to age, sex, income level, race, employment, location, homeownership, and level of education. Other demographic information includes data on preferences, hobbies, lifestyle and more(Srivastava, 2005). He opined further that governmental agencies collect demographic data through national census to forecast economic patterns, population growth and better management of resources. Studying demographic trends is very important, since the size of different demographic groups' changes over time as a result of economic, cultural, and political circumstances. Srivastava(2005) said that differences in demographic groups influence their expenditure and the method of communicating. Therefore, it relevance's on decision to take up of insurance policy cannot be underrated.

iii. Internal Factors

Internal factors can be simply put as company's related factors which include firm specific characteristic and corporate governance practises. Firm's characteristic wasdefined by Zou and Stan (1998) as firm's demographic and managerialvariables. McKnight and Weir (2008) identified some elements of firm characteristics to include ownership structure, boardcharacteristics, age of the firm, dividend pay-out, profitability, access to capital markets and growth opportunities. Kogan and Tian (2012) explainedfurther that firm size, leverage, liquidity, salesgrowth, asset growth and turnover are also part of firm characteristics. This study consideredonly four of thesecharacteristics which are size, age, leverage, and asset tangibility. Other characteristics such as profitability, liquidity, management efficiencyetc were excluded because they form part of the dependent variables.

Company size was considered differently in previous studies using variable such as revenue (Hodgdon, Rasoul, Adhikari, &Harless,2009), total assets (Juhmani, 2017), firm value (Glaum& Street, 2003), number of employees, and number of shareholdings. This is because large companies have the resources and expertise to perform better than small companies. The belief was that old companies are expected to have improved over time because of their exposure than new companies (Al-Mutawaa, 2010). Thus, old companies are more likely to perform better than new companies because of well-organized staff and motive to maintain their growth rate, enhance their reputation and image in the market (Demir&Bahadir, 2014).

Company age was typically measured in terms of number of years since listing or commencement of operation (Al-Shammari, Brown &Tarca, 2008; Glaum& Street, 2003). Long-term persistence of a firm might indicate its ability to successfully adapt to

changing market conditions, thus suggesting above-average efficiency and productivity. Leverage is the strength of the relationship between external and internal sources of fund and usually measured by the ratio of debt to total assets or debt to equity (Al-Shammari*et al.,* 2008; Demir&Bahadir, 2014). High leverage companies are more likely subjected to higher equity risk. Therefore, shareholders require more information on whether the company can meet its debt obligations and that make highly geared company exhibit higher performance.

Another important firm-specific characteristic is asset tangibility. Tangibility of assets was defined by Paul, Peter and Dang (2014) as the proportion of non-current assets to total assets.A high ratio indicates a lot of fixed assets and relatively little working capital. Companies with large capital invest much of the funds on non-current assets to enhance their operations. Therefore, tangibility of assetsare considered to have impact on financial performance because a firm with large portion of fixed assets can easily raise funds at nominal rate of interest and utilize these funds to raise more new business (Ahmed*et al.,* 2011).

iv. External or Macroeconomic Factors

The term “macroeconomics” is a combination of two words “Makro” which was derived from the Greek meaning “large” while “economics” simply referred to a branch of economics (Sullivan &Sheffrin, 2003). According to Davis and Powell (2012), macroeconomic factors areexternal forces surrounding a firm that potentially affect the way it operates. They are those conditions that influence the financial performance, structure, behaviour, anddecision-making of industry rather than individual companies (Mwangi, 2017). Macroeconomic factors drive the overall economic performance and

stability of the business. Therefore, changes in them may likely affect the financial performance an entity. In line with observation of Fosu, Bondzie andOkyere (2014), macroeconomic factors include but not limited to inflation rate, exchange rate, interest rates, GDP, money supply, unemployment rate, and dividends yields.

For the purpose of this study, the following selected macroeconomic variables like interest rate, inflation, exchange rate, and GDP growth are considered.Starting with GDP growth, according to Mwangi (2013),growth rate of GDP mirrors the state of an economic cycle. GDP is the total market value of goods and services produced by a country's economy during a specified period of time. It is used throughout the world as the main measure of output and economic activity. Second macroeconomic variable considered in this study is inflation. Jhingan(2002) defined inflationas the persistent increase in general price level of goods and services in an economy up to a certain extent when a unit of currency buys fewer goods and services. Akers (2014) added that inflation rate measures changes in the average price level based on a price index and the two commonly used measures are the GDP deflator or a Consumer Price Index (CPI) indicator.

Interest rate on the other hand is like a service charge paid by the borrower of an asset to its owner against the use of such assets. Ngugi(2001)definedit as the return paid against the borrowed money. Therefore, itcan simply be described as a price of money that reflects market information regarding expected change in the purchasing power of money or future inflation. Chinedu and Chinedu(2018) asserted that interest rate controls the flow of money in the economy. They said that high interest rates curb inflation but also slow down the economy. Low interest rates stimulate the economy, but could lead to

inflation. The last macroeconomic variable is exchange rate. Harvey (2012) described exchange rate as the value of two currencies relative to each other. It is the price of one currency expressed in terms of another currency. It was further described by Chinedu and Chinedu(2018) as the price at which the currency of one country can be converted to the currency of another which may be fixed or varies. The fixed and varies exchange rates are regulated by central banks of a country and mechanism of market demand respectively.

v. Corporate Governance Practises and Board Members' Characteristics

According to Cadbury (1992), corporate governance is the system by which companies are directed and controlled. A good corporate governance practices enhance firm performance through better management and prudent allocation of firms' resources.Corporate governance allocates and assigns responsibilities among corporate participants and establishes systematic approach for making decisions on affairs of the companies (Gideon*et al.*, 2019). The board establishes an audit committee and delegates financial reporting responsibilities to ensure that the qualities of financial information to assess performance (Akinkoye&Olasanmi, 2014). Company's board of directors is the custodian of corporate governance in term of high quality, transparent reporting in annual reports.

Feng (2014) explained that the presence of board does not necessarily indicate their efficient or effectiveness. He noted that efficiency and effectiveness is mainly determined by their characteristics which include the board size, independence, gender diversity, foreign board member among others. Board size is total number of members in a board. Firms with larger board size are more likely to enhance the financial

performance of the entity (Laksmana, 2008). However, larger boards can be less effective due potential for free-riding, poor communication and inefficient decision making. According to Masulis, Wang andXie(2012), presence of board members, who received training abroad, usually affects companies' financial performance especially if the training is conducted in countries with stricter accounting rules.

Foreign board members are members of the board who are not indigene of the country. Presence of foreign members on the board signals the company's ability to diversify and harmonize diverse experiences (Ujunwa*et al*, 2012). This type of insurance companies possesses higher intercultural competence required to improve financial performance. Board independence was described by Birjadin and Hakemi (2015) as the quality of board member to act objectively without any influence within or outside the company. They added that existence of a fairly high percentage of outside directors will act as a substitute for corporate governance factors. The Company and Allied Matter Act (CAMA) (2004) stated that both executive and non-executive directors are in a company to question, examine and assess the executive directors' management of their company by providing objective, impartial views on the executive directors' decisions and strategies. Thepresence of independent directors enhances reliance of external auditors on client accounting systems to evaluate financial performance.

Important corporate governance practises that likely influences performance of company is board diligent. Mbobo and Umoren (2016) defined diligent board as quality of board to have a greater dedication to the company in order to discover financial irregularity and resolve financial problems. This quality is likely to enhance the level of oversight of the financial reporting process directly and indirectly. However, difficulty in the measurement of diligence prompted previous study like DeZoort, Hermanson,

Archambeault and Reed(2002) to use the number of meeting per annum.Gender diversity is described as proportion of female member presence on a board. Adegbite and Fofah(2016) further explained that diversity with regards to gender is a pertinent heterogeneity factor which is considered for promoting good corporate governance in terms of cohesiveness and effectiveness. Zango, Kamardin andIshak (2015) added that the practice of gender diversity allows the company to benefit more from excellent monitoring imposed by female board members than their counterpart

2.3 Theoretical Review

Various theories have been employed to assess and justify determinants of performance of insurance industry. These theories incorporate factors that enhance performance. The present study reviewedGibrat's law, resource-based view theory, resource dependency theory and agency theory.

i. The Gibrat's law

Gibrat's law,also called Gibrat's rule of proportionate growth or the law of proportionate effect, is a rule defined by Robert Gibrat in 1931. *Gibrat's Law* is the first attempt to explain in stochastic terms the systematically skewed pattern of distributions of firms' size within an industry. It is one of the most recognized and empirically tested theory of firm performance (Aitchison & Brown, 1957). The law stated that the proportional rate of growth of a firm is independent of its absolute size (Eeckhout, 2004). In other words, the size of a firm at any given point in time is the product of a series of random growth rates in the history of the firm(Piergiovanni, Santarelli, Klomp&Thurik, 2003). Empirical evidence in support or rejection of Gibrat's law is not yet conclusive, as reflect in the reviewed literatures.

Numerous authors have empirically tested the validity of Gibrat's Law albeit with mixed reactions. Studies that supported Gibrat's Law include Choi (2010), Farinas and Moreno (2000), Audretsch, Klomp, and Thurik (2004), Lensink, Van Steen and Sterken (2005) while Coad (2008), **(Hoxha, 2008),**Daunfeldt, Elert and Lang (2011) against the law. Those in support argued that the growth rate of each firm was independent of the individual firm's size at the beginning of the study. Choi (2010) investigated the relationship between firm sizes, age and growth rate in the U.S insurance market using 823 firms during the period of 1992 and 2001. From the data collected from this sample, he revealed that growth and firm size were independent. **Leitao, Serrasqueiro, and Nunes (2010)** used quintile regressions to examine Gibrat's Law in the context of 39 listed Portuguese companies for the period of 1998-2004. They showed that the growth of listed Portuguese companies was independent of their size.

In contrast, those against Gibrat's law showed that smaller companies had highest growth rate (Hoxha, 2008). Similarly, Daunfeldt, Elert and Lang (2011) also rejected Gibrat's law against a large majority of retail industries as small retail companies seem to grow faster than large ones. It is essential to hint that Gibrat (1931) originally measured size of a company with the number of employees, however, other studies have employed variety of different measures of size such as sales revenue, net assets, value added among others. Gibrat's Law did not specify time-span for the applicability of the law. Therefore, different time periods and length of period used might have effectedresults. Majority of the studies thatemployed Gibrat's Law as theoretical background focused on manufacturing sector or service sector because of the importance of size. However, the issue of size is not limited to these sectors. Size of insurance companies might have impact on their performance.

Recent studies that built on Gibrat's Law include but not limited toGrudtner and Marques (2020), Stachurski (2019), Fiala and Hedija (2019), Mirralles-Quiros, Mirralles-Quiros and Daza-Izquirerdo(2017), Almsafir, Nassar, Al-Mahrouq and Hayajneh(2015). In view of this, thepresent study therefore employsGibrat's Law to assess impact of size on performance of listed insurance companies in Nigeria. This assist the study whether to support or against the Gibrat law.

ii. Resource-based theory

This theory was postulated by Penrose (1959) and has gained respect as a potential contemporary theory that combines strategic insights on competitive advantage and organizational insights on firm existence. The resource-based theory focuses on firm's resources as the primary factors of competitive benefit and performance (Ibrahim, 2016). The theory visualizes firmsas collection of physical and human productive resources. The central idea of the resource-based view theory is that firms compete based on the level of their resources and capabilities. This explains the profit and value of organization (Peteraf& Bergen, 2003). The rise of the resource-based approach shift attention on the sources of sustainable competitive advantage of an entity from industry to firm specific factors (Spanos&Lioukas, 2001).

The theory further emphasised that differences in performance happen when a vibrant organization possess important resources that it competitor do not have, which gives the former some advantage (Ibrahim, 2016). These differences were viewed in terms of resources and capabilities which are the important factors of sustainable competitive advantage. Therefore, resource based view of a company is a strategic line of reflection that analyses the organization's strengths and weaknesses and the organization's attributes that allow it to conceive of and implement value-creating strategies are

resources. In line with Barney (1991) and Ibrahim (2016), firm resources can be categorized into physical capital resources, human capital resources and organizational capital resources.

Some authors such as Spanos and Lioukas (2001), Mathews (2003) classify resources into tangible or intangible. Regardless of the classification, resources generate economic returns for the firm which in turn influence the overall performance (Amit &Schoemaker, 1993). Most resource-based view researchers usually pay attention toresources, like market conditions, that the firm must vie with in order to maintain sustainable competitive advantages and improve performance(Peteraf& Barney, 2003). The assessment of these resources has proven to be useful for the analysis of performance of an organisation. However, the use of resource based view theory has been extensively criticized due to some lapses. Polemical authors critiquing the theory include Barney (2001); Foss and Knudsen (2003); Priem and Butler (2001).

According to Barney (2001), the theory may be tautological while Priem and Butler (2001) thought that the reasoning behind the theory may be circular and therefore operationally invalid. Barney (2001) further providedarguments that any theory that appeared tautological could be rephrased to be applicable in static (equilibrium) environments not to dynamic environments. Priem and Butler (2001) further criticised that Barney's perspective does not constitute a theory of the firm. The conditions of law like generalizations of empirical content, comic necessity and generalized conditionals are not met. The critics are helpful in identifying the exact contribution of the theory and to provide insight on the relationship between a firm’s resources and sustainable competitive advantage (Ibrahim, 2016).

The resource-based view was also for this study based on the perspective that performance of an organisation is a result of resources and capabilities. These resources which include but not limited to firm-specific resources such as size, age, leverage and asset tangibility, qualified and vibrant board members to institute good corporate practises were employed as determinant of performance of in the insurance companies in this study. Therefore, resource-based view theory is employed to provide theoretical background for this study in order to assess the effect of firm-specific characteristics and other determinants of performance of listed insurance companies in Nigeria. This will be in line with Chahal, Gupta,Bhan and Cheng (2020), Justin, Sanders and Wong (2020), Safari and Saleh (2020), Yang, Jia, and Xu(2019), Mishra, Rolland, Satpathy, and Moore (2019), Bayer, Schorr and Hvam (2019), Geraldes (2019) that also employed resource based view theory as theoretical background for their studies.

iii. Resource Dependence Theory

The resource dependency theory (RDT) was developed in 1978 by Pfeffer and Salancik (Delke, 2015). The theory focuses on the effect of external resources of organizations on the performance of the organization. It recognizes the fact that the success of an organization is hinged on resources availability, access to power and control. Resource dependence theory proposed thatboard of directors is essential link between firm and resources which are crucial for the firm's growth (Ibrahim, 2016).

> This is because "*Organizations are not self-contained or self-sufficient, they rely on their environment for existence, and the core of the [resource dependence] theory focuses on how organizations gain access to vital resources for survival and growth*" (Chen & Roberts, 2010).

Resources of a company can be in form of materials, workers and finance. Resources dependency theory, according to Hillman, Canella and Paetzold (2002), is influenced with the importance, abundance and control of resources. Theycontend that resource dependency theory focuses on the role that directors play in providing or securing essential resources to an organization through their linkages to external environment. Advocates of this theory such as Daily *et al* (2003) provide focus on the appointment of representatives of independent organizations as a means of gaining access to resources crucial to performance of a company. They buttressed their point with example that outside directors who are partners to a law firm could provide legal advice, either in board meetings or inprivate communication with a firm executive that may otherwise be costlier for the firm to secure. This, therefore, enhances functioning, performance and survival of the firm.

According to Hillman and Dalzel (2003), resource dependence theory rests on two fundamental assumptions. The first assumption is that board of directors offers essential and crucial resources which include business contacts and contracts, knowledge, experience and expertise couple with monitoring role that they perform. While the second assumption is that board of directors has the ability to protect the interests of heterogeneous stakeholders such as local communities, government, employees, suppliers, customers, creditors, regulators and policy-makers. These assumptions consequently enhance maximization of shareholder's wealth and improve overall performance of an organisation. The theory was supported by Chen and Roberts (2010) who added that board of directors help firm to achieve competitive advantage by serving as a direct link between firm and environment within which it operates.

Other authors that have used this theory include Celtekligil (2020), Alfredo (2020), Celik and Buyukbalci (2020), Kim, Lee and Hwang (2020), Cuervo-Cazurra, Mudambi and

Pedersen (2019) and Cui and Xu (2019). With regards to the explanation on theory above, it could be deduced that board of directors playimportant role in securing financial resources and maintaining performance of an organisation. In line with the argument of this theory, the present study employed board member characteristics among the determinants of performance of listed insurance companies in Nigeria. The quality of board members in term of independence, ownership, diligence, size among others may have impact on the performance as claimed by the author of the theory. Therefore, the resource dependency theory was also reviewed to provide a theoretical support to this study.

iv. Agency Theory

Potential agency conflicts have long been identified by Adam Smith often embedded in the separation of ownership (shareholding) and control (management) in modern corporations.

> Smith (1776) specifically describes the agency problem as *"The directors of such [joint-stock] companies, however, being the managers rather of other people's money than of their own, it cannot well be expected that they should watch over it with the same anxious vigilance with which the partners in a private co-partnership frequently watch over their own.... Negligence and profusion, therefore, must always prevail, more or less, in the management of the affairs of such a company".*

Jensen and Meckling (1976) employed smith's view to explicitly develop agency theory. The main objective of agency theory is to reduce agency problems between shareholders and managers through allying the interests of managers (agents) and shareholders (principals). Agency contract which has been described by Jensen and Meckling (1976) as a contractual agreement between owners (principals) and managers (agents) to operate

the firm in the interests of shareholders is one of the most important theories in the context of corporate governance. According to Haniffa and Hudaib (2006), Solomon and Obah (2018), agency theory provides that corporate governance mechanisms can be initiated to lessen managerial opportunism to minimise agency costs through reduction in the number of executive board members and also to enhance the board's independence. This was further buttressed by Allegrini and Greco(2013) that establishment of board sub-committees, such as risk, audit, corporate governance, nomination and remuneration committees are important instruments to monitor managerial behaviour.

Fama and Jensen (1983), Aguilera and Jackson(2003), Siddiqui *et al* (2013) opined generally that agency theory emphasis that effective corporate governance mechanisms can lead to a net decrease in agency costs such as monitoring and bonding costs, thereby leading to overall improvement in financial performance of a company. From the foregoing, it can be deduced that stream of literature reflects the growing concern for the use of agency theory as primary theoretical foundation for corporate governance. However, empirical studies of corporate governance practices and performance using agency theory have been generally mixed and inconclusive. In his own view, Christopher (2010) argued that the use of agency theory as theoretical foundation is limited in recognizing the impact of some dimensions of wider influencing forces on governance paradigm of organizations. Baydoun*et al* (2013) raised issue of capacity of agency theory to deal with all of socioeconomic perspectives and aspects of corporate governance. Their argument tailored to the point that agency theory could create adverse effect which may resulted to an adverse impact on financial performance.

The present study reviewed agency theory because the theory provides that corporate governance mechanisms can be initiated to lessen managerial opportunism to minimise agency costs and to monitor managerial behaviour which could later impact on the overall performance of the insurance companies. This implies that a corporate governance mechanism through board member characteristics is an important instrument to performance. Agency theory has been employed as theoretical basis for studies of Payne and Petrenko (2019), Bendickson, Muldoon, Liguori and Davis (2016), Kivistö and Zalyevska (2015), Muhammad, (2013). In order to provide theoretical underpinning for this study with respect to board member characteristics and performance of listed insurance companies in Nigeria, agency theory was also reviewed. However, this study finally built upon resource-based view theory among all of the theories reviewed because it is the only theory that encompasses all the determinants of performance of listed insurance companies employed in this study.

2.4 Empirical Review

Previous studies on the nexus between firm specific factors and other determinants on performance of insurance industry were reviewed in line with factors that influence it both from customer and insurance companies. Factors reviewed from customer perspective include socio-cultural and demographic factors. Insurance company's factors were categorized into firm-specific, macroeconomics and corporate governance factors. Empirical studies on the role of these factors were classified into studies from developed and developing economies including Nigerian economy.

2.4.1 Studies from Developed Countries

I. Socio -Cultural Factors and Performances of Insurance companies

Park, Borde and Choi (2002) assessed the impact of culture on insurance pervasiveness. The study employed the four of Hofstede's (1980) cultural dimensions in addition with GDP, socio-political stability, and economic freedom. Using panel regression analysis, the study found that all variables employed were positively related with insurance pervasiveness. This finding was contrasted with the study of Chui and Kwok (2009)that only masculinity was positively correlated with insurance pervasiveness. The conflicting results of these studies may be due to the aggregation of life and non-life insurance. Park *et al* (2002) did not include life or non-life-specific control factors in their regression model but reported that cultural dimension influence insurance pervasiveness. The low number of control factors might be the reason for the conflicting results.

However, Park *et al* (2002) and Chui & Kwok (2009) rested on Hofstede's cultural dimensions but ignored other socio-cultural variables like ethnic background, trust and level of awareness. Wasaw (2006) examined the effect of Islam on life insurance consumption using international data set. The study considered a country to be predominantly Islamic if more than half of the population follows Islam. Islamic nations sampled were Egypt 94%, Iran 98%, Morocco 99%, Pakistan 97%, Tunisia 99.5%, Turkey 99%. The results of the study revealed that, all things being equal, consumers in Islamic nations purchased less life insurance than those in non- Islamic nations.

Sugirtha (2007) examined the determinants of demand for Insurance in Indian. The study gathered both primary and secondary data through questionnaire and annual reports respectively. The result of probit regression analysis showed that age, income and value of property emerged significantly as determinants of demand for insurance. The study also found that social and regulatory factors played crucial role in the consumer's

decision in purchasing insurance. However, it said that the public at large was unaware about the benefits of insurance, and various types of insurance products. The findings from Sugaritha (2007) was further buttressed by Jain (2019) who also found that, in purchase decision process of insurance products, demographic factor got the maximum of its effect. Her study added other factors like economic, social, political and legal factors which positively influence purchase decision of consumers to a maximum degree. To be specific, some of the important variables among the factors are occupational factor (service/business), age factor, gender, and marital status factor and income level. However, the study only used primary data.

Park and Lemaire (2011) explored factors that affect demand for non-life insurance across nations. The study employed applied regression techniques to an unbalanced panel data obtained from 82 countries over a ten-year period. The study revealed that non-life insurance consumption was adversely impacted in countries where a large fraction of the population had Islamic beliefs. The study also found that three of the cultural scores (i.e power distance, individualism, and uncertainty avoidance) developed by Hofstede (1980) were highly significant. An inference that culture impacts non-life insurance more in affluent countries received ample statistical support, with an adjusted R-square coefficient increasing by 20%. However, the general problem with previous studies on the effect of socio-cultural factors on performance of insurance company was that they only employed Hofstede cultural dimension variables.

The general problem with these studies on the effect of socio-cultural factors on performance of insurance company is that they only employ Hofstede cultural dimension

variables ignoring other socio-cultural variables like ethnic background, trust and level of awareness, thereby creating social cultural gap from developed countries.

II. Demographic Variables and Performances of Insurance companies

Gandolfi and Miners (1996) determined influence of gender on life insurance consumption. Using data obtained through questionnaire, the study found that insurance demand was increasing with probability of death. They added that men live shorter than women tend to demand insurance more. Thus, the study found that demand for insurance policies could vary among men and women based on differences in lifetime. Athma and Kumar (2007) conducted an explorative study of life insurance purchase decision making. The study was to indentify the influence of product and non-product factors on demand for insurance. The study was conducted on 200 sampled clients from both rural and urban markets. The various product and non-product related factors were identified and their impact on life insurance purchase decision-making was analyzed. The result of the analyses showed that urban market was more influenced with product based factors like risk coverage, tax benefits, return etc. The study also found that rural population was influenced by non-product related factors such as: credibility of agent, company's reputation, trust and customer services.

Considering the effect of social and demographic factors on demand for life insurance in Croatia, Curak, Dzaja and Pepur (2013) based their study on survey data gathered from selected 95 respondents. The data was analyzed using Chi-Square test. The result showed that age, education and employment impacted demand for life insurance while gender, marital status and number of family members did not have statistically significant influence. The statistical tool used in the study only compared expected and outcome of

the data. The study however did not present the strength and the direction of the relationship. Few studies reviewed from developed countries further buttressed that the research gap in this area. There are few studies on the effect of demographic factors on performance of insurance companies in the developed countries.

III. Firm-specific Characteristics and Performances of Insurance companies

Previous studies on performance of insurance companies with regards to firm-specific characteristics were reviewed from United Kingdom, European countries, etc. Starting with Hussels and Ward (2006) who investigated the efficiency of 78 German and U.K. life insurers over the period 1991 to 2002, the study applied data envelopment analysis (DEA) and distribution free approach (DFA) to compute the efficiency scores. It was discovered that insurers of German markets were more efficient as compared to U.K. insurers. Moreover, the study found that administrative expenses and size of insurer had negative relationship with efficiency scores, whereas claims and younger life insurers have a positive association with efficiency scores. The level of efficiency and productivity of Swiss insurance companies in the life, property/casualty, and reinsurance sectors from 1997–2013 was also examined by Biener, Eling and Wirfs (2015). However, their findings revealed that that internationalization of the Swiss insurance industry and increasing the size of operation had positive impact on insurers' efficiency.

Also on efficiency scores of insurance companies, Eling and Luhnen (2008) investigated the efficiency of 3,555 insurers from 34 developed countries around the world over the period of 2002 to 2006 using DEA and SFA. This study found that the highest average efficiency level in the insurance markets is Denmark and Japan while the Philippines were found to have the least efficient insurance markets. Moreover, the results also

indicated that capitalization and efficiency have a positive relationship for life and negative relationship for non-life insurers. Furthermore, the results also revealed that size of the firm has a positive relationship with non-life and negative relationship with life insurers.

Pervan and Kramarić (2010) investigated determinants (which include insurance-specific, industry-specific, and macroeconomic variables) of Croatian non-life insurance companies' profitability during the period from 2003 to 2009. The results of the study showed that ownership, expense ratio, and inflation have a negative and significant influence on profitability. Doğan (2013) examined influence of firm-specific factors (loss ratio, leverage ratio, liquidity, size of the company, and age of the company) on profitability of insurance companies listed on the Istanbul Stock Exchange for the period 2005–2011. According to the results of multiple regression and correlation methods used in the study, there is positive and significant relationship between size and profitability of insurance companies. However, profitability was significantly and negatively influenced by loss ratio, leverage ratio, current ratio, and age of the company.

The findings from Pervan and Kramarić (2010) slightly differed from the conclusion of Cekrezi (2015) who investigated determinants of financial performance of insurance companies in Albania in United Kingdom using microeconomic and specific characteristics of the company. The study used 5 insurance companies with private capital, during the period 2008-2013 with a total of 30 data as population. Cross-sectional time series approach was employed to analyse the data collected from the Balance Sheet Annual Reports submitted to the State Tax Office and from the web sites of the insurance companies. The results revealed that leverage (total debt to total assets)

and risk (standard deviation of sales to average value of sales) had negative impact and tangibility (fixed assets to total assets) had positive impact on the financial performance (ROA) of these companies.

The performance of insurance companies was considered in terms of customer motivation by Felício and Rodrigues (2015). They examined organizational factors such as age, size, and type of products of insurance companies and customers' motivation with insurance companies' performance. The study sampled 202 insurance companies from Portuguese and Spanish markets between 2005 and 2007 (before international financial crisis) and between 2010 and 2012 (after international financial crisis) were employed. Using factor analysis and structural equation modelling methodology, the study found that customers' necessities and confidence strongly affect organizational factors which in turn affected insurance companies' performance.

All the studies reviewed from developed countries use different financial performance measurement such as ROA, DEA and SFA. CARAMELS financial performance indicators had not been use. This therefore creates a performance measurement gap. CARAMELS financial performance indicators is all encompassing considering the specific focus of the measurement in term of effectiveness and efficiency of performance of insurance companies compared with other individual measurement parameters that either focus on effectiveness of efficiency separately.

IV. Board Members' Characteristics and Performances of Insurance companies

Eling and Marek (2011) examined corporate governance and risk taking with evidence from the U.K. and German Insurance Markets. The study considered factors related to corporate governance such as compensation, monitoring, and ownership structure) on risk taking in the insurance industry. The study also measured asset, product, and financial risk in insurance companies and employs a structural equation model in which corporate governance was modelled as latent factor. The data was tested using panel data regression. The empirical findings of the study provided link between corporate governance and risk taking. The study also showed that higher levels of compensation, increased monitoring (more independent boards with more meetings), and more block holders were associated with lower risk taking.

Abdoush*et al* (2016) determined whether corporate governance influence performance of insurance companies in UK during 2004 to 2013. Secondary data for the study were gathered from annual reports of 67 UK insurance firms, both listed and non-listed companies were analysed using panel data regression analysis. The study depicted that corporate governance in UK insurance companies had mixed performance effects. More specifically, higher proportion of independent non-executive directors with short tenure length, higher board ownership and block shareholders' rations helped to influence firm performance. The study further found that most corporate governance mechanisms were more effective in driving firm performance within life and composite insurance companies while board remuneration and ownership were effective only in non-life insurance companies. The study also showed that CEO quality, Independent NED Ratio, and board remuneration had effect on firm performance during the global financial crisis

of 2007-2009 and the Euro-zone crisis of 2010-12. However, board ownership had enhanced performance during both financial crisis, while its effect had begun to take place again after Euro-zone crisis.

Venuti and Alfiero (2016) examined impact of corporate governance on risk taking in European insurance industry. The study analysed effect of public ownership on risk taking with respect to privately held insurance companies and also analyzed the effects on risk taking attitude of different degrees of ownership concentration, directors' compensation, and dimension/diversity of Board of directors. Regression analysis was conducted on the basis of 396 observations coming from 126 insurance companies from 27 EU Countries (Croatia was not included as it entered the EU in July 2013) from 2009 to 2013. The study found that there was negative significant correlation for variable of private/public ownership as companies with larger and stronger owners takes less risk than companies with lower level of ownership concentration. Also, companies with bigger Boards take less risk than smaller ones.

Abdoush (2017) assessed whether newly built UK corporate governance index (UKCGI) and performance of insurance companies correlated during 2004-2013. The main findings showed longer tenure length and extra bonus ratio with higher ownership ratio for executives, but shorter tenure length for independent non-executives, improves firm performance in insurance companies. The result from sub-samples found relationship between corporate governance and firm performance in non-life and listed insurance companies, during the financial crisis of (2007-2009), and even more afterwards, as well as during soft phases of underwriting insurance cycle, rather than the hard phases. The study further showed that significant association existed between new corporate

governance indexes (UKCGI) and firm performance, and that governance and performance relationship was fully intervened by agency costs. Finally, the study showed that multi-channel insurers had higher scale efficiency compared to other single strategies. However, the results also showed that independent agency strategy did play vital role as complementary corporate governance system, with strong evidence for stock companies, but weaker evidence for mutual.

Deev and Khazalia (2017) conducted study corporate governance, social responsibility and financial performance of European insurers. The study focused on European companies that disclosed corporate governance and social responsibility information in Bloomberg within the period of 2000 – 2015. The study found that corporate governance and social responsibility factors significantly influence financial performance in European insurance sector. Specifically, the study revealed that market-based performance ratios were more vulnerable in comparison with their accounting-based counterparts if judged according to number of affecting corporate governance or corporate social responsibility (CSR) dimensions. Board independence proxied by percentage of independent directors was a strong determinant of improved market performance. This means that unbiased and objective boards protect investors and shareholder value. The study also showed that increased number of board members on average was associated with improved market performance.

Studies reviewed from developed countries present a research gap on the effect of board member's dynamics on performance of insurance companies measured with CARAMELS financial indicator. This indicator has not been used in the developed countries based on the extent of the research knowledge.

V. Macroeconomic Factors and Performances of Insurance Companies

Studies on macroeconomic variables are very scanty due to nature of econometrics analysis involved in methodology. The current study reviews some: Dorofti and Jakubik (2012) examined the link between macroeconomic environment and insurers' profitability using cross-country European aggregate data. The macroeconomic variables used as explanatory variables were real gross domestic product, long term interest rates (Maastricht criterion), inflation, unemployment rates and stock market index. Panel data consisting of 25 countries for non-life insurance and 24 countries for life insurance for the period 2005-2012 was used to estimate coefficients and significance of each input factor. The results of the study suggested that low interest rates along with limited economic growth, poor equity market performance and high inflation had negative impact on insurance profitability.

Kozak (2011) studied determinants of profitability of non-life insurance companies in Poland during integration with European financial system. Data on the macroeconomic conditions of Polish economy was taken from database of Central Statistical Office (GUS). The study was based on panel data of 25 non-life insurance companies operating in Poland between 2002 and 2009. The results indicated that reduction in the share of motor insurance in portfolio with simultaneous increase of other types of insurance had positive impact on profitability and cost-efficiency of insurance companies. However, offering too broad spectrum of classes of insurance negatively impacts its profitability and cost efficiency. Companies improved profitability and cost efficiency with increase of gross premiums and decrease of total operating expenses. Additionally, increases of GDP growth and market share of foreign owned companies positively impact profitability of non-life insurance companies during the integration period. Studies from

developed countries were reviewed and the performance was considered differently from CARAMELS financial indicators. In addition, other studies from developed countries that could be have been reviewed use variables that were not relevant to this study.

2.4.2 Studies from Developing Countries

1. Socio -Cultural Factors and Performances of Insurance companies

Abdullah (2012) investigated key factors that influence demand for family takaful and compares with conventional system. The study analysed primary data obtained through questionnaire with regression. The findings of the study indicated that GDP per capita, education, saving and religion were significantly related to the demand for family takaful. On the other hand, the demand for life insurance was significantly influenced by GDP per capita, saving and religion. However, the study showed customer price index and saving negatively influenced demand for family takaful. Meanwhile, age, saving and religion were said to be negative influence on life insurance. The findings of the study also reflected higher public receptive to takaful as compared to the conventional insurance in the Malaysian market. However, the study relies on influence of religion alone neglecting the effect of other socio-cultural factors.

Odemba (2013) assessed life insurance as an important aspect of social-economic development of society. The study adopted descriptive and cross-sectional survey research designs. The population of the study constituted all registered 13 life insurance companies in Kenya. Primary data were obtained using questionnaire. The study revealed that most of customers preferred life insurance products with both risk and saving components. The study also revealed that high cost of premiums and inefficiency

in claims settlement was major factors hindering penetration of life insurance in Kenya. They study however focused only on supply side of insurance take up. The demand side was not considered.

Gitau and Sile (2016), however, examined effect of cultural factors on insurance uptake of the Nairobi Central Business Districts. The study employed descriptive research design and gathered primary data through questionnaire. The target population for the study were 160 respondents from which a sample size of 100 respondents were chosen through stratified random sampling. Based on the result of the data analysis, the study found that religion had negative effect on uptake of insurance in Nairobi Central Business Districts. The study revealed that cultural taboos and beliefs, cultural attitudes and values language used by insurance sales agents, education had negative effect on uptake of insurance in Kenya. The result of the study, however, study may not be generalized for the whole of Kenya because of peculiarity of Nairobi central business district used in the study.

Also in Kenya but in 2017, Langat, Naibei and Getare (2017) investigated influence of consumer behaviour on uptake of insurance service in Kericho branch of Cooperative Insurance Company (CIC). The study used descriptive research design on a targeted population of 300 customers. 171 customers were sampled for the study, which used structured self-administered questionnaires. It was analysed through OLS regression. The study depicted that there was significant relationship between consumer behaviour and insurance uptake. The study also showed that economic factors, demographic factors and insurance product awareness greatly influence the uptake of insurance services. It added

that social factors were less significant on insurance uptake. However, the findings of the study are arguable in comparison to Gitau and Sile (2016).

Also in 2017 but in Algeria, Mahdjour and Benhabib (2017) examined effect of socio-cultural factors on Algerian consumers' attitude towards Insurance products. The study used survey method to collect primary data from 260 users of insurance products. The data of the study was analyzed using (SPSS) V21, (AMOS) V22 through Structural Equation modelling. The result of the study indicated that religious factor negatively affect attitude of Algerian consumer towards insurance products. The result also found that insurance products conflict with religious values and beliefs of Algerian consumer. However, reference of family/friends factor did not have much influence on attitude towards insurance services.

However, some these studies like Abdullahi (2012) relies on influence of religion alone neglecting the effect of other socio-cultural factors. Odemba (2013) who considered socio-economic development focused only on life insurance in Nairobi central business district. Therefore, the findings of the study may not be generalized for the whole of Kenya. Besides, most of these studies focused on supply side of insurance product while neglecting the demand for insurance products. Thus, it may be difficult to conclude from these studies reviewed that particularly socio-cultural factor has greater influence on demand for take up of insurance products. All efforts to review studies on Nigeria economic prove abortive because there no study on the effect of socio-cultural factors on performance of insurance company. Therefore, these create a research gap on the effect of socio-cultural factors on performance of insurance companies in Nigeria.

II. Demographic Variables and Performances of Insurance companies

Kirigia (2005) assessed determinants of health insurance ownership among South African women. This was achieved by examining the relationship between health insurance ownership and demographic, economic and educational characteristics of South African women. Based on the primary data gathered and analysis using OLS regression, the study found that coefficients of covariates for area of residence, income, education, environment rating, age, smoking and marital status were significantly positive. The study focused only on women, the findings of the study might change if male gender was incorporated. In Jabalpur districts of Romania, Yadav and Tiwari (2012) examined the factors affecting customers' investment towards life insurance policies. The study gathered data from both primary and secondary sources. The study sampled 150 policyholders of Life Insurance Company through a stratified and purposive sampling method. Responses from questionnaire were analysed using chi-square, correlation and weighted average method. The study found that market share of private insurers was gradually increasing with people trust and better services offered by them. However, the study considered responses from supply side alone ignoring demand side, which may have influenced the findings of the study.

Singh, Sirohi and Chaudhary (2014) conducted a study on customer perception towards service quality of Life Insurance companies in Delhi NCR Region. Primary data was for the study was collected from 139 respondents, and analysed using factor analysis and correlation. The reliability test was checked using Cronbach's Alpha Value. Both Bartlett's test of spherecity and measure of sampling adequacy (MSA) were also conducted to ensure that the requirements of factor analysis were met. The study found four major factors responsiveness and assurance, convenience, tangible and empathy as

influences on customer perception of service quality. Only age of respondents has been found to be significantly related with customer perception, and that other demographic factors have no significant impact. Certain regions of the country were covered in the study so conclusion of the study may change if the whole country is employed.

Abaidoo (2015) investigated effect of customer satisfaction factors on growth of life insurance in Ghana. Twelve life insurance companies' leaders working in the Accra-Tema geographic area participated in the face-to-face interviews. Responses for the study were analysed through compiling, disassembling, reassembling, interpreting, and concluding the data. Member checking and methodological triangulation augmented the creditability of participants' responses and confirmed research findings. The study accentuated 29 themes that coalesced into 4 major themes namely quality service delivery, public perception of insurance, education and awareness creation, and business growth and sustainability. The findings of the study indicated that feedback on life insurance policy, understanding of life insurance function and benefits, responsiveness, and operational efficiency influence customer satisfaction.

Panda, Dror, Koehlmoos, Hossain, John, Khan and Dror (2016) carried out a systematic review of factors that affect take up of voluntary and Community Based Health Insurance (CBHI) programmes in low and middle income countries. The study employed online databases related to thematic areas such as EconLit, MEDLINE, GOODGLE, Global Health, ProQuest, Scopus and Cochrane. The study uses PROGRESS-Plus framework. Findings of the study revealed that enrolment in CBHI was positively associated with household income, education of the head of household, age of the head of household, household size, female headed household, and married head of the

household and presence of chronic illness episodes in the household. Presence of acute illness episodes and presence of elderly persons in the household has a negative association with enrolment in CBHI.

Using the same methodology employed by Panda *et al* (2016) in 2018, Fadlallah, El-Jardali, Hemadi, Morsi, Samra, Ahmad, Arif, Hishi, Honein-Abou Haidar, and Akl (2018) investigated barriers and facilitators to implementation, uptake and sustainability of community based health insurance (CBHI) schemes in low and middle income countries. Six electronic databases were used and synthesized. Based on the result of thematic analysis, the study revealed that out of 15,510 citations, 51 met the eligibility criteria. Individual factors include awareness and understanding of the concept of CBHI, trust in scheme and scheme managers, perceived service quality, and demographic characteristics influenced enrolment and sustainability.

The study also revealed that interpersonal factors such as household dynamics, other family members enrolled in the scheme, and social solidarity influenced enrolment and renewal of membership. Community-level factors such as culture and community involvement in scheme development also influenced enrolment and sustainability of the scheme. Systems-level factors encompassed governance, financial and delivery arrangement. The study also finds that government involvement, accountability of scheme management, and strong policymaker-implementer relation facilitated implementation and sustainability of the scheme. Amount and timing of premium collection was reported to negatively influence enrolment while factors reported as threats to sustainability included facility bankruptcy, operating on small budgets, rising

healthcare costs, small risk pool, irregular contributions, and overutilization of services. However, these studies focused on CBHI.

Wielen, Falkingham and Channon (2018) assessed the determinants of National Health Insurance enrolment in Ghana across life course to confirm if results were consistent between surveys. Using data from the 2007-2008 study on Global Ageing and Adult Health (SAGE) and the 2012-2013 Ghanaian Living Standards Survey (GLSS), determinants of NHIS enrolment among younger adults (aged 18-49) and older adults (aged 50 and over) were compared. Logistic regression was employed. The findings of the study revealed that people aged 18-49 and people aged 50 plus had a slightly lower probability of dropping out of insurance coverage compared to younger adults. Both surveys confirmed that education and wealth increase the likelihood of NHIS affiliation. Age of customers was the focused of the study, other important demographic factors such as marital status were not considered.

Badu, Agyei-Baffour, Acheampong, Opokuand Addai-Donkor (2018) conducted a cross sectional study on the effect of household socio-demographic profile on health insurance uptake and service utilization in a municipality of Ghana. A cross-sectional design with quantitative methods was conducted among a total of 380 respondents, selected through a multistage cluster sampling. Data were collected using a semi-structured questionnaire. Data were analysed using descriptive and multiple logistic regressions. The overall result revealed that households' profiles such as age, gender, education, marital status, ethnicity, and religion were key predictors of NHIS active membership. The study also found that age groups between 38–47 years (AOR 0.06) and 58 years and above (AOR = 0.01), widow, divorced families, Muslims, and minority ethnic groups were less likely to

have NHIS active membership. However, females (AOR= 3.92), married couples (AOR = 48.9), and people educated at tertiary level consistently had their NHIS active. Proximate factors such as education, marital status, place of residence, and NHIS status were predictors of healthcare utilization.

Paposa, Ukinbar and Paposa (2019) evaluated variation in customer perception across demographic profiles on Life Insurance based on Service Quality and Customer Satisfaction of Durg, Chhattisgarh region. The study used various attributes such as tangibility, reliability, assurance/safety, empathy, responsiveness stated in the SERVPERF model along with additional component of technology to evaluate perception of policy holders in relation to service quality. Based on the result of multiple regression analysis, the study depicted that quality of services had significant impact on satisfaction of customers in life insurance industry. Age and occupation had significant effect on overall service quality perception.

Al-Rjoub (2020) investigated factors and issues affecting adoption of E-Insurance in Jordan. The study sampled 175 respondents using convenience sampling technique. Data analysis was conducted using cross tabulation, percentages and mean among others. SPSS Version 25 was used to analyze variances and significances. The finding of the study revealed that E-insurance promoted sustainability, reduced costs, saved time, and held in beneath some operational benefits. Results of ANOVA indicated that age does not affect customers' perceptions toward E-insurance adoption while Gender and Income level were important factors that shaped respondents' perception to E-insurance in Jordan. The finding of this study was also supported by Gautam and Kumar (2020) that socio, demographic and economic variables had significant impact on Indian consumers

towards insurance services. The age, gender, marital status, level of education, household monthly income, mode of employment, professional inclination and mortgage property ownership were found to be significant in measuring attitude of consumers with varying degrees.

However, some of the study reviewed like Kirigia (2005) focused only on women, the findings of the study might change if male gender was incorporated. Singh, Sirohi and Chaudhary (2014) that considered both gender employed certain regions of the country in the study, so the conclusion may change if the whole country is considered. Panda *et al* (2016) that also considered demographic only focused on customer of Community Based Health Insurance (CBHI) programmes alone. Wielen*et al* (2018) ignored other important demographic factors such as marital status in their study. This has created a research gap to consider the effect of broad components of demographic factors of customers on performance of insurance companies in developing countries like Nigeria.

III. Firm-specific Characteristics and Performances of Insurance companies

Adams and Buckle (2003) examined determinants of corporate financial performance among insurance/reinsurance companies operating in Bermuda. Using panel data collected from 1993 to 1997, results of the study revealed that financial performance was positively and significantly influenced by leverage, type of company, and underwriting risk. In contrast, the study showed that liquidity had negative and significant impact on financial performance but company size and scope of operations were not significantly correlated with financial performance. Ahmed (2007) assessed impact of firm level characteristics (size, leverage, tangibility, risk, growth, liquidity and age) on performance of listed life insurance companies of Pakistan over seven years from 2001 to 2007. The study indicated that size, risk and leverage are important determinants of performance of

life insurance companies of Pakistan while ROA had statistically insignificant relationship with growth, profitability, age and liquidity. This was contrary to the findings of Liebenberg and Sommer (2008) who claimed that undiversified insurers consistently outperformed diversified insurers.

Pervan, Ćurak and Marijanović (2010) examined factors that influenced insurance companies' profitability in Bosnia and Herzegovina during the period from 2005 to 2010. The results of the dynamic panel analysis revealed significant positive influence of age, market share and past performance on current profitability, but significant negative influence of claims ratio on profitability. Additionally, foreign owned firms performed better than domestically owned firms, while level of insurers' diversification had no significant role in determining profitability. Their finding was in line with Najjar and Petrov (2011) who analyzed the impact of firm characteristics on capital structure of insurance industry in Bahrain for the period of 2005 to 2009. The study revealed that strong relationship exists between tangibility of assets, profitability, firm Size, revenue growth, and liquidity. However, the study found that capital structure, profitability and revenue growth were not statistically significant and required further research.

Ahmed *et al* (2011) also investigated the impact of firm level characteristics on performance of the life insurance sector of Pakistan from 2001 to 2007. The results of the OLS regression analysis revealed that leverage was negatively and significantly related to performance of life insurance companies. Firm size was positively and significantly related to performance of insurance companies while Growth of written premium and age of a firm had also negative but insignificant relationship. Also in 2011, Malik (2011) examined the determinants (age of company, size of company, volume of

capital, leverage ratio and loss ratio) of profitability in insurance companies of Pakistan. Return on assets (ROA) was used as key indicator of insurance companies' profitability. The sample of the study included 35 listed life and non-life insurance companies of 2005-2009. Secondary data were obtained from financial statements. The findings showed that size of company and volume of capital had significant positive association with profitability while age of company Loss ratio and leverage ratio showed negative but significant relationship with profitability.

Daniel and Tilahun (2012) determined the impact of firm level characteristics (size, leverage, tangibility, Loss ratio (risk), growth in written premium, liquidity and age) on performance of insurance companies in Ethiopia. Return on total assets (ROA) was used as key indicator of insurance company's performance. The study usedsecondary data from a sample of 9 insurance companies over the period 2005-2010. The results of the regression analysis revealed that insurers‟ size, tangibility and leverage were statistically significant and positively related with return on total asset. However, loss ratio (risk) was statistically significant and negatively related with ROA. Performance of insurance companies was considered in the study with regards to reinsurance and efficiency scores carried out by Hsu-Hua and Chen-Ying (2012) and Afza and Asghar (2012) respectively. Hsu-Hua and Chen-Ying (2012) found that insurers with higher return on assets (ROA) tend to purchase less reinsurance, and those with higher reinsurance tend to have a lower level of firm performance. Afza and Asghar (2012) on the other hand found that investment, profitability and financial reforms were positively related, whereas claim was found to be negatively related with efficiency scores

Yuvaraj and Gashaw (2013) assessed performance of insurance companies in Ethiopia taking into account effect of firm specific factors (age of company, size of company, volume of capital, leverage ratio, liquidity ratio, growth and tangibility of assets). Secondary data was obtained from financial statements of all the nine listed insurance companies for nine years (2003-2011). The regression result revealed that growth, leverage, volume of capital, size, and liquidity were the most important determinant factors of profitability while liquidity ratio and leverage ratio were negatively but significantly related with profitability. The age of companies and tangibility of assets were not significantly related with profitability. This was in line with findings of Mehari and Aemiro (2013) who also found that insurers' size, tangibility and leverage were statistically significant and positively related with return on total asset; however, loss ratio (risk) was statistically significant and negatively related with ROA.

Also in Ghana, Boadi*et al* (2013) conducted a study on determinants of profitability of insurance firms. Secondary data were collected from sixteen insurance firms for the period 2005 to 2010. The study adopted panel method and ordinary least square regression and foundthat, apart from tangibility which had negative relationship, there was positive relationship between leverage, liquidity and profitability of insurance firms in Ghana. However, negative relationship was found with leverage in Kenya by Omondi and Muturi (2013) who examined the factors affecting financial performance of listed companies at Nairobi Securities Exchange. The study adopted explanatory research design and 29 listed firms (excluding listed banks and insurance companies) during the period 2006-2012. Based on descriptive and inferential statistics employed, the study showed that leverage had significant negative effect on financial performance but

showed that liquidity, company size and age had significant positive effect on financial performance.

Kočović*et al* (2014) assessed performance of companies engaged in non-life and composite insurance business in Serbia using financial statements during the period 2006-2013. The study used CARMEL indicators and panel least square. The estimated model with individual fixed effects indicate significant and negative influence of combined ratio, financial leverage and retention rate on profitability of non-life insurers, as measured by return on assets (ROA); while influence of written premium growth rate, return on investment and company size was significant and positive. Also with the use of CARAMELS framework, Ghimire and Kumar (2014) conducted a testing of Financial Performance of Nepalese Life Insurance Companies from 2007 to 2012. Secondary Data was obtained from the annual reports 8 life insurance companies. The results of the study were mixed but the explanations were not enough to obtain the true and fair picture of financial health of insurers. This was attributed to neglect of qualitative factors which also play vital role on financial soundness of insurance companies.

Valeed and Wubshet (2014) investigated financial Soundness and Performance of Life Insurance Companies in India using CARAMEL model. The seven registered life insurers were sampled and data collected for five years from 2008-09 to 2012-13. The study revealed that there was significance difference between capital adequacy, asset quality, management efficiency, earnings and profitability and liquidity position of private and public life insurance companies. However, the study did not find enough evidence for differences between ROA and New Business Premiums (NBP) in private and public life insurance companies. However, strange weaknesses in risk management

were identified due to excessive attention on marketing divisions to grow premiums without proportionate earmarking of resources towards risk management of their investment portfolios.

Using the same performance measurement as Valeed and Wubshet (2014), Mwangi and Iraya (2014) examined the relationship between selected factors (growth of premiums; size of insurer; retention ratio; earning assets; investment yield; loss ratio; and expense ratio) and financial performance of general insurance underwriters in Kenya. The study used multiple linear regression analysis with data for 22, 23 and 25 underwriters for 2010, 2011 and 2012 years respectively. The results were that financial performance was positively related to earning assets and investment yield. Financial performance was negatively related to loss ratio and expense ratio. Growth of premiums, size of underwriter and retention ratio were not significantly related to financial performance. This was contrary with findings of Kaya (2015) who investigated firm-specific factors affecting profitability of 24 non-life insurance companies operating in Turkey from the period 2006–2013. The study revealed that profitability of Turkish non-life insurance companies was influenced by size of company, age of company, loss ratio, current ratio, and premium growth rate.

Dar and Thaku (2015) conducted a comparative analysis of financial performance of public and private Non-Life Insurers in India using three parameters from CARAMEL framework (Earnings and Profitability, Management Soundness and Liquidity). The study revealed that, in terms of management soundness, both set of companies seem to have breached a standard benchmark of 20 percent (ratio of management expenses to premium), but at the same time managed to control the management expenses to a

significant level. The liquidity ratio of the study revealed that both public and private insurers lack high degree of liquidity due to inability to follow the benchmark of 100 percent liquidity ratio.

Saeed and Khurram (2015) studied factors impacting on financial performance of 24 non-life insurance companies in Pakistan. They considered size of firm, loss ratio, expense ratio, debt ratio, growth of premium and age of firm on performance measured with return on assets. The study collected secondary data from the period 2005-2013. Based on result of Hausman test, the study employed fixed effect model and found that age and loss ratio were significant in determining performance of non-life insurance companies in Pakistan. However, growth of premium, size of firm, debt and expense ratio were insignificant. The findings do not tally with Ayako (2015) because of different factors and geographical environment. He studies factors affecting performance (using both ROA and ROE) of 41 non-financial companies listed on the Nairobi Securities Exchange (NSE). The study found that corporate governance was significantly positive in determining performance of firms but leverage was significant negative in explaining performance of companies.

Using ROE only as measure of performance, Nikhil, Kingshuk and Bardhan (2015) examined firm specific factors (underwriting risk, liquidity, leverage, volume of capital, tangibility and size) affecting overall financial performance of life insurance companies in India. The study selected ten (10) life insurance companies which were fully in operation from 2003 to 2013. The study found that underwritten risk and size had significant positive relationship with financial performance of life insurance but significant negative relationship between volume of capital and leverage with financial performance. The findings were close to Berteji and Hammami (2016) who assessed

effect of characteristics like size, leverage, tangibility, risk, growth, liquidity and age) on performance of 8 life insurance companies in Tunisia from 2005 to 2014. Using ROA as a measure of insurance companies' performance, the study revealed that performance of insurance companies was not statistically significant with such variables as leverage, tangibility, liquidity and risk.

Mwangi and Angima (2016) conducted a study to identify moderating variable of actuarial risk management practices and financial performance of property and casualty insurance firms. The study reviewed three theories (expected utility theory, credibility theory and ruin theory or collective risk theory) to identify possible moderating variables. It revealed that various firm specific factors such as growth rate, size, and age of firms and soundness of company management moderate this relationship. The finding of the study was further buttressed by Monteiro and John (2017) who study financial performance of private and public general insurance companies in India by considering major sources of income and expenses to see its impact on its operating efficiency. They confirmed that public insurance companies have better management soundness and profitability than private insurance companies. Also, variables such as commission expenses, operating expenses, investment income and net premium do not have impact on net profit.

Chakraborty and Harper (2017)studied effect of firm-specific and macroeconomic characteristics on dynamic productivity for life and non-life insurance. The study employed eight-year panel of data ending in 2016 for 14 life and 18 non-life insurance companies. The study assessed Malmquist productivity indexes using data envelopment analysis (DEA) and found that total factor productivity for life insurers decreased by

11.8 percent and for non-life insurers by 0.4 percent during the study period. Tobit regression analysis revealed that distribution ratio, claims ratio, and input cost ratio have generally the same effect for life and non-life insurance companies with respect to their significance and direction of change. The study further revealed that macroeconomic variables had expected sign and significant effect for life insurance firms but no effect for non-life firms.

In India, Chandrapal (2017) evaluated financial soundness indicators of Indian life insurance industry (LIC of India and Private Life Insurance Companies (PLIC)) with CARAMEL framework. The study gathered secondary data on financial performance of LIC and PLIC from 2005 to 2015 and was analysed using Paired Samples t test to test null hypothesis which assumes that means of two paired samples were equal. The study revealed that LIC of India was found sounder than PLIC in respect of CARAMEL framework. However, the study found that there was slower growth and that some indicators such as Management Efficiency showed decreasing trend in respect of financial soundness of LIC of India while PLIC had improved their position in area of cost effectiveness. The study also found that PLIC was improved and increased in trend in key areas of financial soundness specifically Asset Quality and Capital adequacy.

Gonga and Sasaka (2017) studied determinants of financial performance of selected insurance firms in Nairobi County. They collected both primary and secondary data form 55 licensed insurance firms. The data was analyzed using percentages, means and frequency distribution and Bivariate – ANOVA technique. The study found that insurance companies had liquid investments which helped them to settle claims especially if their underwriting income cannot cover claims but sell off their investments if they lacked money to settle claims. Mazviona*et al* (2017) analysed factors affecting

performance of insurance companies in Zimbabwe. The study sought to examine factors affecting the performance of insurance companies in Zimbabwe. They used secondary data from twenty short-term insurance companies from period of 2010 to 2014. The data were analysed using multiple linear regression models to determine factors affecting performance and identifying their impact. The study found that expense ratio, claims ratio and size of company significantly affect insurance companies' performance negatively, whilst leverage and liquidity affect performance positively.

In 2018, Abdelkader and Lamia (2018) investigated effect of firm-specific characteristics such as size, leverage, tangibility, risk, growth, liquidity and age on the profitability of eight Tunisian insurance companies from 2005 to 2015. Secondary data collected were analysed using descriptive and statistical correlation as well as regression on panel data. The choice of estimate of fixed effects or random effects was justified by probability of Hausman test. The study revealed that size, age and growth were the most important determinants of performance, while leverage, tangibility, liquidity and risk did not influence performance of Tunisian insurance companies. In Kenya, Too and Simiyu (2018) studied effect of firm characteristics such as firm size, ownership structure, firm age and capital structure on financial performance of general Insurance companies in Kenya. Secondary panel data was obtained from financial statements of 47 general insurance businesses. The data was also analyzed using descriptive and inferential statistics. The study revealed that capital structure and firm age had positive and significant influence on financial performance but firm size had inverse influence on financial performance while firm ownership had no significant influence.

Ali *et al* (2019) examined effect of firm-specific factors on financial soundness of non-life insurance industry in Pakistan using CARAMELS framework. The study used panel data from records of 22 non-life insurance companies from 2007 to 2016. The study used fixed effect model based on result of Hausman test. The findings of the study revealed that age of company, management competence index and operating ratios have significant relations with the CARAMELS financial soundness indicators. However, size of the company, equity capital, leverage, market share, investment ratio, premium growth and solvency margin had insignificant relation with CARAMELS financial soundness indicators.

Angima (2019) determined whether size and age influence performance of general insurance in east African region, particularly, in Uganda, Kenya and Tanzania. Secondary data from 2011 to 2015 was obtained from firms' annual financial reports while primary data on non-financial performance was collected through a questionnaire. The secondary data was analysed using regression analysis. The findings revealed that a statistically significant and positive relationship exists between size and age of financial performance but were statistically insignificant with respect to non-financial performance. The finding implied that larger firms in terms of asset base were able to perform better financially due to economies of scale, operate with less constraints and were more flexible and would offer adequate security to their clients compared to smaller firms. However, age was found to have an insignificant relationship on performance, implying that there may be other relevant factors in play that were not considered in this study.

Shawar and Siddiqui (2019) explored the indicators of financial performance of insurance companies in Pakistan. Gross written premium (GWP), Claim (CLM), Reinsurance (Rei), Management expenditure (MGE), Interest rate (IR), Size (SIZ), Leverage (LEV), Real GDP (RGDP) were taken as factors (independent variables), whereas Sales Profitability (SAP), Investment Income (INP), and Underwriting profit (UWP) were taken as proxy of financial performance. Data of five 5 insurance companies were chosen covering 2013-2017. Data was analyzed using panel regression. In order to investigate the financial performance and impact of financial ratios on profitability of Pakistani insurance companies, regression analysis was used as a form of statistical technique along with the Hausman test. Findings showed that the gross written premium had significant impact on all three measure of profitability. The further said that size of the company had negative impact on sales and investment profit. In addition, claims, reinsurance, GDP, interest rate and management expenses had insignificant relationship with all three profitability measures.

These studies have considered the effect of most of the important firm characteristics on performance of insurance companies. However, most of these studies focused on financial performance ignoring the non-financial performance of insurance companies. This has created research gap on the effect of firm specific factors on non-financial performance of insurance companies that was incorporated in CARAMEL.

IV. Board Members' Characteristics and Performances of Insurance companies

Huang, Hsiao, And Lai (2007) assessed the relationship between corporate governance, ownership structure and performance in Taiwanese life insurance industry using Data

Envelopment Analysis (DEA) as a measure performance. The study sampled life insurance companies in Taiwan from 1996 to 2003 given a total of 24 firms. Secondary data were analysed using maximum likelihood Tobit regression. The study revealed that proportion of management shareholding, family-controlled insurers, foreign branch insurers, and insurer age was generally significantly positive related to technical efficiency. The relationship between the above variables, allocation efficiency and cost efficiency was similar but very weak. The two most consistent variables that have a positive impact on efficiency were family controlled insurer and insurer age.

Wang*et al* (2007) studied effect of corporate governance structure on the efficiency performance of insurance companies in Taiwan. The study employed a unique panel data collected insurers' shareholder data from annual statements insurers provided to regulators. They included three years of panel data, from 2000 to 2002, pertaining to 35 insurance providers from Taiwan to assess whether corporate governance variables like insider ownership, voting rights, cash-flow rights, and board composition influence efficiency performance of insurance companies. The analysis revealed that high concentration of voting rights and cash-flow rights in controlling shareholders' ownership has prevailed in Taiwan's insurance industry. Specifically, the study found that insider ownership, cash-flow rights, and presence of outside directors had positive impacts, whereas concentrated ownership, deviation between voting rights and cash-flow rights, board size, and presence of CEO duality had negative impact on insurers' efficiency.

Tornyeva and Wereko (2012) examined impact of soft governance and firm performance of Ghanaian insurance firms. Panel data methodology was used in the study to analysis

the data gathered from 2005 to 2009. The study revealed that soft governance factors of recruitment policy, staff training and development, communication policy and performance evaluation had statistically significant positive relationship with performance of companies. Also in Bahrain, Najjar and Salman (2013) assessed effect of corporate governance on the insurance firm's performance. The study used e-views programme of regress and pooled data obtained from five insurance companies listed in BSE for 2005-2010. The study revealed that there was no statistically significant impact of corporate governance expressed by CEO status, ownership concentration, the number of employees, industry performance, and number of shares traded on firm's performance in the insurance industry measured with return on equity (ROE). On the other hand, board size, firm size, numbers of block-holders were found to have statistically significant impact on firm's performance in the insurance industry.

Getachew (2014) investigated the relationship between corporate governance and the firm performance of selected Ethiopian insurance firms. The study collected data from a sample of 10 insurance companies for the financial year 2008 to 2012. Secondary data were collected using documentary information from company annual financial statements and the data were analysed using STATA 11. The study found that board gender diversity, firm size and leverage positively influenced the financial performance of selected insurance firms in Ethiopia and that these factors were significant based on return on equity (ROE). Conversely, board size and board composition had statistically insignificant impact on financial performance, but board size influence negatively and board composition influence positively the financial performance of selected insurance firms in Ethiopia.

Yemane, Raju and Raju (2015) studied the impact of corporate governance on firm's performance of Ethiopian insurance companies using a panel data model for the period covering from 2009 to 2013.Both descriptive and regression analyses were conducted on the selected samples of 10 insurance companies out of 15 operating in the market. The findings of the study indicated that board meeting and board compensation had statistically significant positive impact on return on equity (ROE) of Ethiopian insurance industry. But the results failed to show any significant impact of board size, audit committee, and gender diversity on the proxy of companies' performance. Moreover, size of companies had significant positive impact on ROE, but that age of firm did not have any significant impact on ROE.

Maxwell, Nigel and Roy (2015) examined whether board characteristics influence business performance of non-life insurance firms in Zimbabwe. The study used quantitative research approach. Respondents were selected through a stratified random sampling. From these strata board 170 members were randomly selected. Self-administered questionnaires were sent through email or drop-off method. The study used correlation and regression analysis to analyse the data. The results of the study confirmed that board composition, diversity, and size had a statistically significant positive predictive relationship on performance of non-life insurance firms measured by gross premium written and customer retention. However, CEO/Chairman duality revealed negative relationship with business performance.

Demeke (2015) examined corporate governance's impact of performance of Insurance industry in Ethiopia. Specifically, he investigated the effects of board characteristics with regards to proportion of outsiders in the board, board size, CEO-Chairman duality, and

board meeting frequency, debt policy, and dividend policy. The financial performance was proxied with return on assets and return on equity. The study used panel data and pooled OLS regression to analyse the relationship between corporate governance mechanisms and firm performance using a data set of 8 insurance companies of Ethiopia over 2008-2012. The results showed that proportion of outside directors, board size, debt ratio, and ownership had significant negative effect on performance of insurance companies. However, the study revealed that boards meeting frequency, firm size and firm age had significant positive influence on firm performance.

Fekadu (2015) determined impact of corporate governance on financial performance of insurance industry of closely regulated Ethiopian Insurance Industry. The study employed secondary data obtained from audited annual financial statements of 10 insurance companies and from the website of National bank of Ethiopia for the period of 2007 to 2014. Based on the quantitative analysis which involved descriptive and inferential statistical analysis employed, the study found that board size, board independence and board diversity had negative and insignificant impact on performance while size and independence of audit committee and frequency of board meetings had positive but insignificant influence on the performance of insurance companies in Ethiopia.

Huicong, Hongliang, Sang-Bing and Aichao (2017) assessed China's insurance regulatory reform, corporate governance behaviour and insurers' governance effectiveness. The study tested hypotheses using a sample of 85 firms during 2010–2011 via a questionnaire. The study found that China's insurance governance effectiveness has significantly improved through strict regulation. The study found that insurance

corporate governance can improve business acumen and risk-control ability. But no significant evidence was found to prove its influence on profitability, as a result of focusing less attention on governance than on management. State ownership was associated with higher corporate governance effectiveness than non-state ownership. Listed companies tend to outperform non-listed firms, and life insurance corporate governance was more effective than that of property insurers.

Delima and Ragel (2017) evaluated impact of corporate governance on organizational performance. The study used board size, corporate governance mechanism, communication strategies, and code of conduct as the measurement variables of corporate governance while customer satisfaction, employee commitment and corporate reputation were considered as the measurement variable of organizational performance. The study sampled115 management respondents and 115 customers from whole financial institutions in Batticaloa district. The data gathered through questionnaire was analyzed and evaluated by Univariate and Bivariate techniques. The findings of the study showed that corporate governance and organizational performance were at high level with a strong positive relationship. The finding implied that corporate governance significantly impacts organizational performance of financial institutions.

Adebanjo, Rasak and Uthsu (2017) determined how directors' compensation influences insurance firms' performance in Nigeria. The judgmental sampling technique was used in selecting 14 general insurance companies listed on the Nigerian Stock Exchange. Secondary data were collected from audited financial statement and were analysed using the regression analysis. The findings from study depicted that relationship between ROA and DC was negatively significant, while result reveals that directors' compensation had

significant and positive impact on net claims paid. The finding implied that net claims paid to contributors depict a measure of productivity as perceived by the insured, while returns on assets depict productivity from the shareholders' perspective.

Kariuki (2017) examined effects of corporate governance on organizational financial performance in Kenya, particularly insurance companies listed in the Nairobi Securities Exchange (NSE) as at December 2014. The sample size includes secondary data published from audited annual reports and websites for four insurance companies for the year 2008 to 2014.The data was analyzed via regression analysis to establish the relationship between financial performance and corporate governance for insurance firms listed on the NSE. The study found that all the companies had zero CEO duality. The study further revealed that there was inverse relationship between ROA and company board size, but with positive relationship between ROA and board independence. There was also positive relationship between ROA and gender diversity of board.

Markonah, Sudiro, Surachman and Rahayu (2017) evaluated effect of good corporate governance and premium growth on the performance of insurance companies. The samples used in this study include insurance companies listed on the Indonesia Stock Exchange between 2011 and 2015. The data used in the study was derived from the Indonesian Stock Exchange Corner. The method of analysis used was descriptive statistics and linear regression on data obtained from 9 commercial insurance sampled through purposive sampling method. The study found that corporate governance was significantly and positively related to ROA whereas Insurance Premiums are not significantly related to ROA.

Buallay, Hamdan and Zureigat (2017) assessed effect of corporate governance on firm performance of listed companies in Saudi Stock Exchange. The methodology employed was pooled data from 2012 to 2014. The study samples 171 listed companies. The study employed ROA, ROE and Tobin's Q as measure of performance and corporate governance as independent variables. The study revealed that governance level was 61.4% in Saudi stock exchange which was considered high compared to previous studies. The results of the study also found that there was no significant impact for corporate governance adoption on firm's operational and financial performance in the listed companies in Saudi stock exchange. By testing the Tobin's Q model the study revealed that no significant impact existed between ownership of largest shareholder and independency of Board of Directors on firm's market performance. However, significant impact was found for ownership and size of Board of Directors on firm's performance.

Datta (2018) studied the impact of corporate governance on financial performance of DSE listed insurance companies in Bangladesh. The corporate governance mechanisms employed in the study include board size, board composition, board meetings and board audit committee. The study sampled 10 listed insurance companies and collected secondary data from 2010 to 2016 which was analyzed using descriptive analysis, multiple linear regression, Pearson correlation and collinearity statistics. The study found that corporate governance had impact on performance of insurance sector in Bangladesh. The independent variables of corporate governance of board size, board composition, board meetings and board audit committee determine 38.20 percent of performance (ROE) variance. Using Pearson correlation, results provided evidence of a positive relationship between board sizes and ROE as well as board meetings. The result further revealed that negative relationship between ROE and board composition. However, the

studied could not support association between performances of the insurance (ROE) and board audit committee.

Munga (2018) conducted a study in Kenya on corporate governance and financial performance of insurance companies. The study aimed to determine if board's ownership, committees, dependency, and size of the board influence the financial performance of insurance firms in Kenya. It used quantitative research method (secondary data)from the annual reports of all insurance firms registered in Kenya. It was analysed using correlations and hierarchical multiple regression. The study found that there was weak connection exist between corporate governance practices and firms' financial performance. The number of board ownership and the number of board subcommittees were found to a significant positive relationship with the financial performance of insurance firms. The financial performance was however affected negatively by the board size and the number of dependent directors. There was positive significant correlation between the return on assets and the number of sub-committees of the board, the ownership of the board, and the enterprise value. The study also found that risk management did not intervene on relationship between corporate governance and the financial performance of insurance firms.

Arif (2019) examined effect of corporate governance on financial performance of insurance industry in Pakistan. Return on assets and return on equity was employed as accounting measures of financial performance while market to book ratio and price earnings ratio as marketing measures of financial performance. Board composition and ownership structure was used as measure of corporate governance of which board composition comprises board size, chairman/CEO duality, and independent directors on

the board. Meanwhile ownership structure encompassed institutional shareholding. The study used all 32 insurance companies including life, non-life/general, and reinsurance in Pakistan from 2005-2017 making up 351 observations. Secondary data obtained was analysed using ordinary least square. The study revealed that institutional shareholding ratio, board size, independent directors' ratio, and leverage affect return on assets and return on equity positively whereas, CEO duality and firm size affect the same inversely. There was different nature of relationship between marketing measures of performance and board size, firm size and institutional shareholding.

Markonah*et al* (2019) determined effect of corporate governance and premium growth on the performance of insurance companies in Indonesia. The study compared different studies to come to a conclusion regarding the effect of corporate governance and premium growth on performance of insurance companies. Some previous research stated that corporate governance does not positively affect the performance of companies while others had found that growth in premiums, capital growth, returns, claims ratios, and types of capital affected the growth of life insurance company assets. The ratio of acquisition costs, administrative cost ratios, and capital did not significantly affect growth of life insurance company assets in Indonesia. The findings of the study followed the research framework that effect of corporate governance and premium growth on the performance of insurance companies in Indonesia with company growth as mediation.

Qawariri (2019) carried out a comparative study on corporate governance practices in banking and insurance companies listed on Tadawul Stock Exchange. The purpose of the study was to reduce past research gap and also update performance of banks and insurance companies on current scenarios. This was achieved through a review of

literatures and corporate governance practices of insurance companies and nationalized banks in Saudi Arabia. The study used mean, standard deviation and ANOVA statistical method to analyse data which were collected through survey questionnaire on corporate governance practices and secondary data was gathered from banks and insurance companies' websites from 2013 to 2017.

In line with observations on the studies from developed countries, most of the studies from developing countries have also assessed the relationship between board member characteristics and performance of insurance companies. The performance was assessed using performance measurement like ROA, ROE, ROI among others, but the performance has not been measured with CARAMELS financial indicator, thereby creating a research gap in this area.

V. Macroeconomic Factors and Performances of Insurance Companies

Jibran*et al* (2016) determined how profitability of non-life insurance companies in Pakistan was prejudiced by firm's specific variables coupled with macroeconomic variables such as inflation and GDP. The results were generated by running balanced panel data. The current ratio was taken as demonstrative of working capital management. The results showed that current ratio, premium growth and firm size were key factors in determining profitability of firms. The results also showed that ROA and ROE of firms were not influenced by the same variables. The macroeconomic variables also proved significant in determining profitability of the firms.

Alali*et al* (2018) assessed the effect of macroeconomic factors such as gross domestic product, growth in gross domestic product, inflation rate, interest rate, and GDP per

capita on the profitability of general insurance companies listed at the Kuwait stock exchange over the period 2011-2017. A panel secondary data obtained from the annual reports of the six general insurance companies listed at the stock market were analyzed with ordinary least squares (OLS) multiple regression method. The study found that macroeconomic factors did not have any significant effect on profitability of Kuwaiti insurance companies during the study period.

Chen-Ying (2014) carried out a study on the relationship between firm specific factors and macroeconomics on profitability in Taiwanese property-liability insurance industry using panel data of 1999 through 2009-time period using operating ratio and ROA for the two kinds of profitability indicators to measure insurers' profitability. OLS regression was employed in the study. The results showed that underwriting risk, reinsurance usage, input cost, return on investment (ROI) and financial holding group had significant influence on profitability in both operating ratio and ROA models.

Rashid and Kemal (2018) investigated effect of internal and external factors on profitability of insurance companies by taking into consideration three measures of profitability such as ROA, underwriting profit (UP), and investment income (INI). Panel data regression was employed for analysis of life insurance companies in Pakistan for a period of 2006-2016. The study revealed that gross written premium, expense on management, size, and interest rate had significant effect on profitability of insurance companies. The results found that underwriting losses that have been incurred by life insurance companies required separate and actuary departments for proper validation of policies.

Deyganto and Alemu (2019) examined factors affecting financial performance of insurance companies operating in Hawassa city Administration, Ethiopia. 17 insurance companies operating in Ethopia made up the population of the study, but only six general insurance companies that had 10 year audited financial statements from 2008 to 2018 were proxied. Secondary data were collected and analysed using ordinary least square model. The result showed that underwriting, premium growth, solvency ratio, growth rate of GDP, and inflation rate had significant effect on financial performance. Meanwhile reinsurance dependence, company size and interest rate had no significant effect on financial performance. The study finally informed policymakers about factors affecting performance of insurance companies operating in the city in particular and in Ethiopia in general, supports to formulate constructive policy to enhance financial performance goal of insurance firms in one hand and to promote economic development of country on other hand.

Mwangi (2017) assessed effects of macroeconomic variables on financial performance of insurance companies in Kenya. The study used longitudinal design to analyse performance of insurance companies over four-year period of 2012 to 2015. The study also used descriptive analysis of means, standard deviations, frequencies and inferential statistics of regression analysis to assess the relationship between dependent variable and independent factors. The study revealed that all performance indicators were negatively correlated to inflation and were negatively correlated to average interest rates. Also, all performance indicators were negatively correlated to average exchange rates. The study concludes that inflation rates had negative effect on firm's performance, in terms of ROA, Debt Ratio, Equity Ratio and Debt to Equity Ratio; while interest rates was

volatile and had negative impact on ROA. However, these studies create measurement research gap with regards to the use of CARAMELS financial performance indicator.

2.4.3 Studies on Nigerian Economy

1. Demographic Variables and Performances of Insurance companies

Aregbeshola and Khan (2018) assessed the level of enrolment in National Health Insurance Scheme among women of reproductive age in Nigeria. The study gathered secondary data from the 2013 Nigeria Demographic and Health Survey (NDHS). The survey reported total participants of 38,948 in Nigeria. Demographic and socio-economic characteristics of women were determined using univariate, bivariate and multivariate analyses. The finding of the study depicted that 97.9% of women were not covered by health insurance. Multivariate analysis indicated that factors such as age, education, geo-political zone, socio-economic status (SES), and employment status were significant predictors of enrolment in NHIS among women of reproductive age. The study used demographic factors of women but in NDHS. The study may have more findings if male gender was included in the study.

The only study reviewed from Nigeria economy evidenced that previous studies in this area are very scanty. This was attributed to the fact that the performance of insurance company is usually measured from the supply side of the company while the demand side and the related factors such as demographic factors were not frequently considered.

II. Firm-specific Characteristics and Performances of Insurance companies

The following studies are reviewed from Nigeria based on their currency. The first is Olaosebikan (2012). He evaluated determinants of profitability of micro-life insurers in Nigeria using aid of dynamic panel data covering 2004 to 2009. The results of the study indicated that profitability of micro-life insurers was not influenced by ownership structure, leverage and size of firms. However, profitability was found to be negatively related to level of reinsurance suggesting that reinsurance in the micro-life insurance sector of Nigerian market may be highly priced to reflect the increased risk associated with insuring lives of low income groups. Furthermore, profitability of micro-life insurers operating in Nigeria was found to be positively influenced by level of interest rates in the economy.

Mathur and Tripathi (2014) examined factors that influence customer's choice for insurance companies. A survey of 120 respondents were taken and analyzed. The study relied on 29 factors using mean and factor analysis. The findings revealed that computerization and online transactions, connectivity with bank, speed and efficiency in transactions, clear communication and influential marketing campaign, free gifts for customers, peer group impression, etc. in this order influence customers' decision. Other studies in this area are Afolabi (2018); Lasisi (2018); Patrick (2018) and Rafiu, Quadril, Ajani and Ofe (2018).Afolabi (2018) studied effect of claims payments on profitability of insurance companies in Nigeria. The study used secondary data collected from annual reports of two insurance companies from 2011 to 2016. Descriptive statistics and multiple regression techniques were used to analyse the data. The result showed that ROA (profitability) had indirect relationship with LR (loss ratio) and NC (net claims),

but direct relationship with ER (expense ratio). It further revealed that net claims had significantly positive impact on loss ratio.

The findings of Afolabi (2018) is in line with Lasisi (2018) who assessed impact of liquidity risk on performance of 12 out of 25 listed insurance companies in Nigeria from 2011-2015. The study found that leverage had significant negative impact on return on assets and that claim loss ratio had insignificant negative influence on return on assets while premium growth had positive and insignificant impact on performance of listed insurance companies in Nigeria. Specifically,on liquidity management, Patrick (2018) studied impact of liquidity management on performance of insurance companies in Nigeria between 2003 and 2012. Panel regression analysis was adopted to estimate the model. The study found that liquidity management had no significant impact on insurance company's performance like equity management which affected long term stability. The study also found that both investment and working capital had significant positive impact on financial performance of insurance companies in Nigeria.

Rafiu*et al* (2018) investigated patterns of debt and equity on financial performance of twenty-nine (29) listed insurance companies in Nigeria from 2006 to 2014. Data were collected on return on assets, leverage (capital structure) and other control variables from the Nigerian Stock Exchange Fact book and audited annual report of the selected insurance companies. The data were analysed using graphs, percentage, trend analysis and random effect model based on the outcome of LM-test and Hausman test. The empirical results borrowed some support to the pecking order and static trade-off theories of capital structure. The study found that capital structure had significant negative impact on the financial performance of insurance companies in Nigeria.

From the forgoing, despite the existence of numerous studies on firm specific factors and performance of insurance companies, it is observed that there is no study in Nigeria that have examine the effect of firm specific factors and performance measured with CARAMELS financial performance indicator. This evidence the research gap in Nigeria.

III. Board Members' Characteristics and Performances of Insurance companies

Dandago and Gugong (2013) assessed effect of corporate governance mechanisms on the financial performance of listed insurance firms in Nigeria. The study specifically determined whether CEO status, board size and board composition had impact on financial performance as measured by Return on Asset (ROA) and Return on Equity (ROE). Secondary data used in the study were obtained from annual reports and accounts of selected insurance companies and other statistical documents/records maintained by the Nigeria stock Exchange. Regression analysis was used to estimate the data. The study reported that there was positive significant relationship between board composition and ROE and ROA. The study also found the relationship between board size and ROA was significantly negative, while no relationship exists between board size and ROE. The result of the relationship between CEO status and ROA was negative, while no relationship existed between CEO status and ROE.

Gugong, Arugu and Dandago (2014) examined the impact of ownership structure on the financial performance of listed insurance firms in Nigeria. The study used panel data for seventeen (17) firms 2001 – 2010. There are several aspects and dimensions of corporate governance, which may influence a firm's performance but this study focused on two

aspects of ownership structure: namely managerial and institutional shareholding. Firm's performance has been measured through Return on Asset (ROA) and Return on Equity (ROE). The study revealed that there was positive significant relationship between ownership structure and firm's performance as measured by ROA and ROE.

Garba and Abubakar (2014) determined relationship between board diversity and financial performance of insurance companies in Nigeria. This study selected 12 listed insurance companies using non-probability sampling method in the form of availability sampling technique for 6 years i.e. 2004 to 2009. Using ROA, ROE and TOBIN's Q as measures of firm performance and applying Feasible Generalised Least Squares (FGLS) and random effects estimators, the findings of the study revealed that gender diversity and foreign directors had positive influence on insurance companies' performance. But the findings indicated negative and significant relationship between board composition and performance of insurance companies in Nigeria.

Akeem, Terer, Temitope and Feyitimi (2014) examined the impact of corporate governance on performance of Nigerian insurance companies. Board size and composition was used as corporate governance and return on equity (ROE) was used as performance. The study sampled three Nigerian listed insurance firms between 2002 and 2008 through which secondary data gathered from the financial statements, annual reports and journals presented. Multiple regression analysis employed as a method of estimation and the results revealed that there was no significant impact of board size, and board composition on ROE. Ebere*et al* (2016) evaluated corporate governance system and financial performance in order to determine the relationship that exist between board size, board composition, earnings per share (EPS) and ROA of quoted insurance

companies in Nigeria from 2008 to 2015. Secondary data from 14 insurance companies in Nigeria were analysed using Pearson correlation and multiple regression analyses. The findings of the study revealed that board size and composition had a positive and statistically significant relationship with ROA and EPS.

Ibe*et al* (2017) evaluated effect of corporate governance mechanisms on financial performance of insurance companies in Nigeria. The study used *ex-post facto* research design and panel data covering 2011-2015 of twenty insurance companies. Board size, board independence, executive directors' remuneration, non-executive directors' remuneration, directors' ownership, institutional ownership, foreign ownership was proxied for corporate governance practices. The study controlled the effect of firm size using log of total assets. Fixed effects model was used to evaluate effect of these corporate governance mechanisms on financial performance of Nigerian insurance companies. The study found that board size and non-executive directors' remuneration had negative and significant effect on financial performance. Board independence and institutional ownership, on the other hand, show positive and significant impact on financial performance. However, executive directors' remuneration, directors' ownership, and foreign ownership did not show significant relationship on financial performance of Nigerian insurance companies.

Solomon and Obah (2018) studied corporate governance and Nigerian insurance industry. The study collected secondary data from Mutual Benefits, FBN Life, and Zentih Life Insurance Annual Financial Reports from 2005 to 2015. The hypotheses were tested using multiple regressions with the aid of E-view version 9 to determine the relationship between corporate governance which was proxied by board size, leverage

and audit committee and performance of Nigerian insurance industry which was also proxied by Profit before Tax. The study revealed that board size and audit committee had significant effect on profit before tax. Meanwhile leverage did not have significant influence on profit before tax of insurance companies in Nigeria.

Imade (2019) investigated the nexus between board gender diversity, non-executive director's composition and corporate performance (return on asset) of listed firms on the Nigerian Stock Exchange. The study used ex-post facto research design and employed agency theory as theoretical framework. Data gathered on board gender diversity, non-executive director's composition and return on asset for seventy-two listed firms during 2006 to 2016 were analysed by means of Ordinary Least Square (OLS) estimation technique. The study found that board gender diversity had significant effect on corporate performance (return on asset) of listed firms on the Nigerian Stock Exchange. However, non-executive director's composition had no substantial effect.

Gideon *et al* (2019) examined the effect of corporate governance and performance of selected Nigerian multinational firms from 2012 to 2016. They focused on the effect of board size, activism and committee activism on return on asset and firm growth rate. Secondary data collected from four multinational firms were analyzed via static panel estimation techniques. Board size and board activism showed significant negative impact on return on asset while committee activism showed insignificant impact. The results of the study further showed that board size and board activism exerted insignificant negative impact on firm's growth rate, while committee activism insignificantly impelled firm's growth rate. The findings implied that corporate governance had significant

negative impact on return on asset, but had insignificant influence on growth rate of Nigerian multinational firms.

Despite the existence of numbers of studies on the relationship between board member characteristics and performance of insurance companies, it is observed that these studies employed ROA, ROE, EPS and TOBIN's Qamong others. There is no study in Nigeria context that have examine the effect of board member characteristics on performance of insurance companies measured with CARAMELS financial performance indicator. This has created geographical gap in Nigeria.

IV. Macroeconomic Factors and Performances of Insurance Companies

Iheanacho (2018) evaluated impact of selected regulatory instrument on the insurance sector performance in Nigeria. Classical linear square technique was used for analysis of the data obtained from CBN Statistical bulletin from 1981 to 2015. The results revealed that liquidity ratio exacted insignificant negative effect on total insurance income. Loan to depositors' ratio was found to exact significant negative impact on total insurance income. Minimum rediscount rate was found to exact significant impact on total insurance income. Using more updated data from 1985 to 2016, Chizoba*et al* (2018) studied effect of inflation rate on insurance penetration of Nigerian insurance industry. The study employs regression analysis to analyse secondary data collected from Central Bank of Nigeria Statistical Bulletin and World Bank data website for the period of 1985 to 2016. The study revealed that inflation rate had positive but insignificant effect on insurance penetration of the Nigerian insurance industry.

However, studies on corporate governance mechanisms and financial performance of insurance company are just emerging, particularly, in Nigeria. This accounts for few empirical studies reviewed in this area, thereby creating geographical and measurement research gap for the use of CARAMELS financial performance indicators and Nigeria environment.

2.5 Summary of Gap Identified in the literatures

This study has reviewed conceptual issues, theories and empirical literatures on performance of insurance companies from developed countries, developing countries and Nigeria. Despite numerous studies that have been conducted in this area, there are numbers of gaps to be filled by the present study. For instance, studies were very few regardingthe demand for insurance products which may perhaps be as a result of related factors such as social-cultural factors and demographic factors. Although, few studies such as Odemba (2013),Curak*et al* (2013), Singh*et al* (2014),Panda*et al* (2016),Gitau and Sile (2016), Langat*et al* (2017),Mahdjour and Benhabib (2017),Badu*et al*(2018), Paposa*et al* (2019) considered socio-cultural and demographic factors separately. The present study investigates socio-cultural and demographic factors together in a single study.

Meanwhile, most of the aforementioned studies were conducted in developed and developing countries. Studies on socio-cultural and demographic factors are scarce in Nigeria, except for Aregbeshola and Khan (2018) who concentrated on National Health Insurance Scheme among women of reproductive age in Nigeria. Therefore, this study bridges the gap of both literature and empirical studies by considering the effect of on socio-cultural and demographic factors on performance of insurance companies in

Nigeria. This will assist to know the actual factors that influence level of insurance uptake by customers.

Most previous empirical studies on financial performance of insurance companiessuch as Ebere*et al* (2016), Mwangi and Angima (2016),Mwangi (2017),Monteiro and John (2017),Ibe*et al* (2017),Abdelkader and Lamia (2018),Munga (2018), Datta (2018),Too and Simiyu (2018),Angima (2019),Shawar and Siddiqui (2019),Markonah*et al* (2019),Arif (2019),Deyganto and Alemu (2019) among others used different performance parameters like ROA, ROE, Gross premium etc. These are mainly financial performance measurement. The use of CARAMELS framework which incorporate both the financial and non-financial performance was very scanty and unpopular except in the studies of Ghimire and Kumar (2014),Valeed and Wubshet (2014),Dar and Thaku (2015),Chandrapal (2017),Ali*et al*(2019)that employed some of the components of CARAMELS financial indicator. Hence, this studyuses all the components of CARAMELS financial indicator.

Regarding the factors influencing performance of insurance industry, several studies such as Gonga and Sasaka (2017),Mazviona*et al* (2017),Monteiro and John (2017),Ibe*et al* (2017),Abdelkader and Lamia (2018),Too and Simiyu (2018), Angima (2019),Shawar and Siddiqui (2019),Angima (2019),Ghimire and Kumar (2014),Valeed and Wubshet (2014),Dar and Thaku (2015),Chandrapal (2017),Ali *et al* (2019) among recent studies that examine effects of firm specific factors on performance of insurance industry using variables such as underwriting risk, reinsurance dependence, solvency ratio, premium growth, company size, age, liquidity, leverage among others. The present study incorporates asset tangibility,which shows the level of investment on non-current asset, as part of firm-specific characteristics that influence performance of insurance companies.

Furthermore, previous studies such as Dorofti and Jakubik (2012),Kozak (2011),Chen-Ying (2014),Jibran*et al* (2016),Mwangi (2017),Alali*et al* (2018),Chizoba*et al* (2018),Rashid and Kemal (2018),and Deyganto and Alemu (2019) examined the impact of macro variables like growth rate of GDP, inflation rate and interest rate on performance of insurance companies. To the knowledge of this researcher, the effect of exchange rate has not been considered empirically. This study will assess the impact interest, GDP growth, inflation and exchange rates on performance of insurance industry.

Most studies use firm-specific characteristics and macroeconomic factors as determinants of performance of insurance companies. Previous studies such as Huang *et al* (2007),Wang *et al* (2007),Eling and Marek (2011),Najjar and Salman (2013),Getachew (2014),Yemane*et al* (2015),Demeke (2015),Fekadu (2015),Dandago and Gugong (2013),Gugong*et al* (2014),Garba and Abubakar (2014),Akeem *et al* (2014),Ebere*et al* (2016),Ibe*et al* (2017),Solomon and Obah (2018),Abdoush*et al* (2016),Venuti and Alfiero (2016),Deev and Khazalia (2017),Kariuki (2017),Markonah*et al* (2017),Datta (2018),Munga (2018),Arif (2019),Markonah*et al* (2019), andQawariri (2019) examine impact of corporate governance mechanisms on performance of insurance industry. However, they have not assessed performance of insurance companies using CARAMELS framework.

In addition, corporate governance mechanisms such as board size, gender diversity, board independence, board ownership, ethnic diversity, and foreign directorship have used by the aforementioned studies. The effects of board ownership and board compensation on performance of insurance industry have not been thoroughly examined. Hence the present study fills the gap by evaluating the effect of board diligencewhich has to do with the ability of the board to discover financial irregularities and board compensation as well as other corporate governance mechanisms such as board size,

board independence, board gender diversity, presence of foreign board members, and board ownership on performance of insurance companies.

Previous studies such as Gugong*et al* (2014),Garba and Abubakar (2014),Akeem *et al* (2014),Ebere*et al* (2016),Ibe*et al* (2017),Solomon and Obah (2018),Abdoush*et al* (2016),Venuti and Alfiero (2016),Deev and Khazalia (2017),Kariuki (2017),Markonah*et al* (2017),Datta (2018),Munga (2018),Arif (2019),Markonah*et al* (2019), andQawariri (2019) among others that have been reviewed examine effect of firm-specific characteristics, macroeconomics variables and corporate governance mechanisms separately on the performance of insurance industry. However, this study will incorporate all these major determinants such as firm specific factors, board member characteristics and selected macro-economic variables, in a single study. The present study will also consider all insurance businesses concurrently.

Nigerian insurance industry has witness numbers of recapitalization exercisesin 2003, 2005 and then in 2007. Previous studies, particularly in Nigeria such as Olaosebikan (2012),Gugong*et al* (2014),Garba and Abubakar (2014), Akeem *et al* (2014), Solomon and Obah (2018), andPatrick (2018) used 2003 or 2002 as for their research of which their findings may not be relevant and useful for the present period when the capitalization have changed. Some recent studies like Ibe *et al* (2017),Ebere*et al* (2016),Afolabi (2018),Lasisi (2018),Rafiu*et al* (2018) used 2007 as base. The current study covers from 2012 to 2018 to provide updated findings on determinants of performance of insurance industry in Nigeria.

Theoretically, most of the aforementioned studies on performance of insurance companies from developed and developing countries including Nigeria frequently

employed Credibility theory, Utility theory, Ruin theory, adverse selection theory, Moral Hazard Theory, trade-off and the pecking order theory**.** These theories focus mainly on combine or individual risk associated with performance of an insurance company but performances vary because of differences in resource endowments as against risk alone. However, the theory that provides insight on the relationship between firm's resources and performance is resource-based view theory. This study deviates from previous studies by introducing resource-based view theory to explain the differences in performance between firms and factors influencing such performance.

Methodologically, previous studies such as Datta (2018),Munga (2018),Arif (2019),Markonah*et al* (2019),Qawariri (2019),Mwangi (2017), Monteiro and John (2017), Ibe*et al* (2017),Abdelkader and Lamia (2018),Munga (2018),Datta (2018),Too and Simiyu (2018),Angima (2019),Shawar and Siddiqui (2019),Markonah*et al* (2019),Arif (2019), andDeyganto and Alemu (2019) used either quantitative analysis or qualitative analysis. Based on the extent of literatures reviewed, none of these studies have use mixed method of research approach. These approaches broaden the understanding of determinants of performance of insurance companies particularly in Nigeria. This study uses mixed method research design to collect secondary and primary data separately, analysed them separately but merged them during discussion of findings. The present study contributes to the methodology gap in insurance industry research.

2.6 Theoretical Framework

This study is built upon resource-based view theory. The study examines determinant of performance of insurance companies in Nigeria. Performance varies because of differences in resource endowments. Resources include physical capital resources,

human capital resources and organizational capital resources. These define different determinant of performance of insurance companies. The theory emphasises that differences in performance happen when vibrant organizations possess important factors that competitors do not have which makes the firm to suppress others (Ibrahim, 2016). Thus, the theory favours resources and capabilities as the important factors of sustainable competitive advantage. Resources associated with the resource-based view theory include cultural values of customers, individual personal traits of customers, firm-specific characteristics, macroeconomic factors and corporate governance arrangement of insurance companies.

The assessment of these factors has proven to be useful for the analysis of performance of an organisation. Resource based view theory is helpful in identifying the exact effect of these factors to provide insight on the performance of an entity. The resource-based view theory is the theoretical underpinning to assess determinants of performance of insurance companies. Some of the factors considered in this study include firm-specific characteristics, macroeconomic variables and board members' characteristics, figure 2.1 explains these diagrammatically.

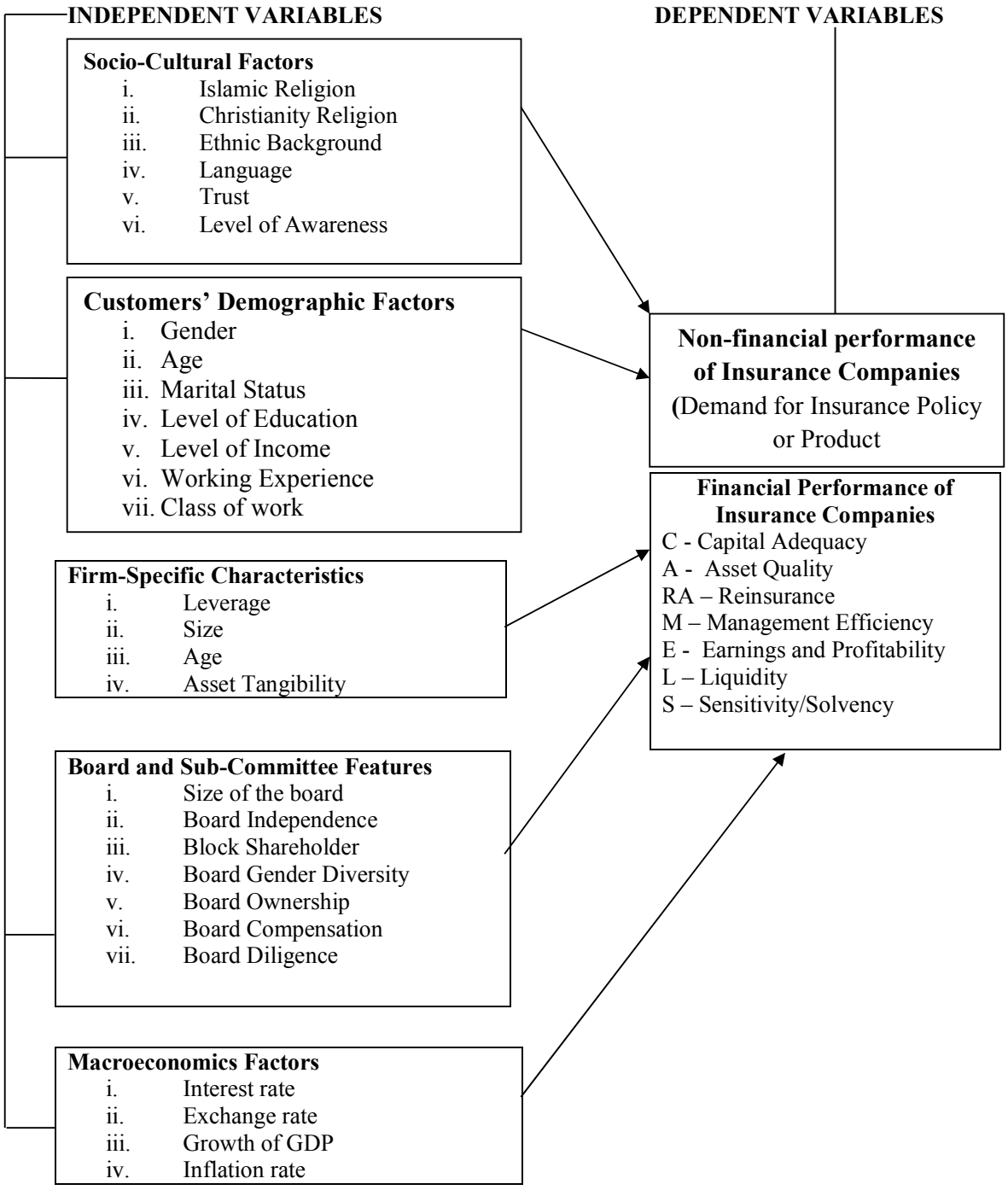

Figure 2.1 Conceptual framework ofthe determinants of the performance of Insurance companies.

Source: Author's conceptualization (2019)

The above conceptual framework elucidates the relationship between factors that influence performance of insurance companies in Nigeria. The factors which are the independent variables were divided into three main categories. The first category is the firm-specific characteristics which comprise of age, size, liquidity, leverage, external auditors' quality, international listing status, among others. The second category is macroeconomic factors, which incorporates interest, foreign domestic investment, exchange rate, tax rate, and inflation rate. The last category is corporate governance mechanism particularly board and board sub-committee characteristics. The effect of these three main independent variables on the performance of insurance was studied. The performance will be proxied with CARAMELS framework. The framework is an advancement of CARMEL in the banking insurance. The CARAMELS framework adopted for performance measurement is the financial soundness indicator encouraged by IMF and World Bank in 2003.

CHAPTER THREE

METHODOLOGY

3.1 Research Design

This study adoptedan expost-facto method and survey research design. The expost-facto method involves investigation of facts which have occurred using existing data. The survey research design involves enquiring from large numbers of people regarding their opinions about a particular phenomenon (Geoffrey, David & David, 2005). The method avails the researcher an opportunity to obtain candid, valid and confidential responses which were completely confidential (Mugenda, 2003). The two research design results using two sets of data (primary and secondary data)wereanalysed separately but interpreted conjointly.

3.2 Population of the Study

Based on the research design, the study population wasgrouped into two on the basis of the data. The population for primary data included all the clients of listed insurance companies in Nigeria. Due to frequent changes in the existing and potential customers of listed insurance companies in Nigeria coupled with the problem of data unavailability, the study population for primary data is indeterminate. The population for the secondary data comprises of all the listed insurance companies from 2012 to 2018. According to Riche (2019), there are twenty-two (22) listed insurance companies in Nigeria as at 31st December 2018 and all the 22 constitute the study population for secondary data.

3.3 Sample Size and Sampling Techniques

The sample size of this study wasuniquely considered because of the type of data-set used. The study uses the mathematical model developed by Cochran (1963) to determine the sample size for primary data. The Cochran formula is as follows:

$$SS = \frac{Z^2 \times \rho(1-\rho)}{M^2}$$

Where:

SS = Sample Size for Infinite population (More than 50,000).

Z = Z value (confidence level).

ρ = Population proportion (expressed as decimal) (assumed to be 0.5 (50%)

M = Margin of Error at 5% (0.05)

This formula was used to arrive at appropriate representative for primary data (Godden, 2004). In order to determine the appropriate sample size, there are some important criteria which must beconsidered. These include the level of precision, the level of confidence or risk and the degree of variability in the attributes being measured. These are the participants from which socio-cultural and demographic factors affecting the performance of insurance companies can be obtained in Nigeria.

For the purpose of this study, the appropriate sample size is calculated as follows.

$$SS = \frac{Z^2 \times \rho(1-\rho)}{M^2}$$

$$SS = \frac{1.96^2 \text{ X } 0.5 \text{ (1- } 0.5)}{0.05^2} = 384.16 \text{ (Approximately 384)}$$

Thesample size for the survey is therefore 384 respondents to whom the questionnaires were administered. The study used convenience sampling techniques to distribute the questionnaires among respondents. Meanwhile, the sample size for secondary data wasdetermined based on the following criteria:

i. The company must be listed on the Nigerian Stock Exchange from January, 2012 up to December, 2018.

ii. The company must have adopted IFRS and have been publishing IFRS financial statement from December 2012 up to December 2018.

iii. The company should have continuous data from December, 2012 up to December, 2018.

The number of listed insurance companies that met the above criteria wastaken as the sample size in the study for the expost-facto analysis.

3.4 Sources of Data

This study employed both primary and secondary sources of data. The primary data were collected using a structured questionnaire while secondary data wereobtained from audited annual accounts of the insurance companies quoted on the Nigerian Stock Exchange from 2012 to 2018. Other secondary data were gathered from insurance companies' websites, NAICOM and Nigerian Insurance Association (NIA) and CBN bulletin for relevant years.This data set were used to validate and complimentthe finding of this study.

3.5 Method of Data Analysis

The study assessed the data by evaluating the response rate and demographic profile of the respondents. The research instrument used for primary data was also subjected to reliability test using Cronbach Alphas. This was to determine the internal consistency of the instrument. After these, the two data sets were analysed using descriptive and inferential statistics. The descriptive statistics of the data was conducted using mean, range of scores, standard deviation, skewness and kurtosis, and normality test. Preliminary test such as multicollinearity and model mis-specification test wasconducted before evaluating the impact of selected firm's specific factors, macroeconomic and behavioural variables on performance of listed insurance companies in

Nigeria.Correlation analysis was carried out to determine the direction and the strength of the relationship that existed among the variables. The study usedordinal logistic regression to analyse primary data obtained from the questionnaire due to the nature of the data, while serially correlated disturbance random effect estimator was used for secondary datadue to the nature of the data (two-dimensional) and the existence of autocorrelation.

3.6 Methods for Test of Hypotheses

The hypotheses in this study were tested using the specified method of analysis in Table 3.1.

Table 3.1: ***Method of Test of Hypotheses***

S/N	HYPOTHESES	METHOD OF ANALYSIS
I	There is no significant relationship between demographic factors of consumers and performance of insurance companies in Nigeria.	Ordinal Logistic Regression
Ii	Socio-cultural factors do not significantly affect the performance of listed insurance companies in Nigeria.	Ordinal Logistic Regression
Iii	Firms' specific characteristics do not significantly effect on the performance of insurance companies in Nigeria.	Serially Correlated Disturbance Random Effects
Iv	Board characteristics do not have significant effect on the performance of insurance companies in Nigeria.	Serially Correlated Disturbance Random Effects
V	There is no significant effect of selected macro-economic variables on the performance of insurance companies in Nigeria.	Serially Correlated Disturbance Random Effects

Source: Author's complication (2020)

3.7 Operational Definition/Measurement of Dependent/Independent Variables

Operational variables include the dependent and independent variables. The dependent variables include CARAMELS components, while the independent variables include firm-specific characteristics, selected macroeconomic factors and board characteristics. Operational definitions of CARAMELS are presented in Table 3.2, while that of

independent variables is presented in Table 3.3. The tables show acronyms for each variable, definitions, variable type; measurements approach and construct validity sources.

Table 3.2: ***Operational Definition and Measurement of Dependent Variables***

S/N	DEFINITION	TYPE OF VARIABLES	SYMBOL	MEASUREMENT	CONSTRUCT VALIDITY SOURCE
1	Capital Adequacy	Dependent variable	C	Capital/Total Assets	Das *et al.* (2003); IMF (2003); Chandrapal (2017); Ali (2018); Ali *et al* (2019)
2	Asset Quality	Dependent variable	A	Receivables/ Gross premium + re-insurance recoveries	Das *et al.* (2003); IMF (2003); Ali (2018); Ali *et al* (2019)
3	Reinsurance and Actuarial	Dependent variable	RA	Net Premium/Gross Premium	Das*et al.* (2003); IMF (2003); Chandrapal (2017); Ali (2018); Ali *et al* (2019)
4	Management Efficiency	Dependent variable	M	Operating Expenses/ Gross Premiums	Das *et al.* (2003); IMF (2003); Chandrapal (2017); Ali *et al* (2019)
5	Earnings and Profitability	Dependent variable	E	Investment income /Net premium	Das*et al.* (2003); IMF (2003); Ali (2018); Ali*et al* (2019)
6	Liquidity	Dependent variable	L	Current Asset/ Current Liability	Das*et al.* (2003); IMF (2003); Chandrapal (2017); Ali (2018); Ali *et al* (2019)
7	Market Sensitivity/ Solvency	Dependent variable	S	Net open foreign exchange position/Capital	Das*et al.* (2003); IMF (2003); Ali (2018); Ali *et al* (2019)

Source: Author's conceptualization (2020)

Table 3.3: ***Operational Definition and Measurement of Independent Variables***

S/N	DEFINITION	TYPE OF VARIABLES	SYMBOL	MEASUREMENT	CONSTRUCT VALIDITY SOURCE
1	Leverage	Independent variable	LEV	Total debt / total assets.	Mehari&Aemiro (2013);Berteji&Hamsmami (2016);Derbali& Jamel (2018)
2	Size	Independent variable	SIZ	Log of Total Assets	Najjar&Petrov (2011); Mehari&Aemiro (2013); Verma (2014);Berteji&Hammami (2016);Angima (2018)
3	Age	Independent variable	AGE	Number of years since firm was established	Mehari&Aemiro (2013); Verma (2014); Angima (2018)
4	Asset Tangibility	Independent variable	ASST	Property, Plant and Equipment/ Total Assets	Najjar&Petrov (2011); Mehari&Aemiro (2013); Verma (2014)Berteji&Hammami (2016)
5	Board Size	Independent variable	BDSZ	Number of Board Members	Laksmana, 2008); Deev and Khazalia (2017); Najjar and Salman (2013); Bushman *et al* (2004); Wang *et al* (2007); Venuti and Alfiero (2016); Masulis*et al (*2012); Maxwell *et al* (2015)
6	Board Independence	Independent variable	BDINDP	Proportion of independent directors on the board	Deev and Khazalia (2017); Birjadin&Hakemi (2015); Wang *et al* (2007); Demeke (2015); Fekadu (2015)
7	Block Shareholder	Independent variable	FBM	Number of shares owned by the block shareholder as a proportion of total shares of the firm	Ujunwa*et al* (2012); Garba and Abubakar (2014)
8	Board Member Gender Diversity	Independent variable	BDGD	The proportion of Women on the board to total board members.	Adegbite&Fofah (2016); Zango*et al* (2015); Getachew (2014); Maxwell *et al* (2015); Garba and Abubakar (2014)
9	Board Diligence	Independent variable	BDDEL	Absolute number of meeting held in a year	Mbobo&Umoren(2016); DeZoort*et al* (2002); Yemane*et al* (2015)
10	Board's ownership	Independent	BOW	Number of shares owned by the directors of the firm as a	Mehran (1995) ; Mehran (1995) Garba and Abubakar (2014);Vo & Phan (2013)Abdoush*et al* (2016); Venuti and

		variable		proportion of total shares of the firm.	Alfiero (2016); Najjar and Salman (2013); Demeke (2015); Huicong*et al* (2017);Munga (2018) ; Arif (2019)
11	Board Compensation	Independent variable	BCC	Log of total compensation of all directors on the board plus 1 to control for non-payment	Jensen and Meckling (1976); Mehran, (1995); Venuti and Alfiero (2016); Abdoush*et al* (2016); Ibe*et al* (2017);Adebanjo*et al* (2017)
12	Interest Rate	Independent variable	INTR	The rate of the one year treasury security	Akotey*et al* (2012); Alali*et al* (2018);Munib&Atiya, (2013); Kartheeswari&Rajeswari (2012); Rashid & Kemal (2018); Datu (2016); Deyganto&Alemu (2019)
13	Exchange Rate	Independent variable	EXHR	Average exchange rate for the year	Datu (2016); Alali*et al* (2018);Kartheeswari&Rajeswari (2012); Rashid & Kemal (2018); Mwangi (2017)
14	GDP Growth	Independent variable	GDPg	(GDPt − GDPt−1) ÷ GDPt−1,where GDP respects real gross domestic product	Alali*et al* (2018); Jibran*et al* (2016); Datu (2016); Kartheeswari&Rajeswari (2012); Rashid & Kemal (2018);Deyganto&Alemu (2019); Dorofti and Jakubik (2012)
15	Inflation Rate	Independent variable	INFR	(CPIt − CPIt− 1) ÷ CPIt−1, where CPI respect consumer price index	Alali*et al* (2018); Datu (2016); Jibran*et al* (2016); Kartheeswari&Rajeswari (2012); Rashid & Kemal (2018); Munib&Atiya, 2013);Deyganto&Alemu (2019)

Source: Author's Conceptualization (2020)

3.8 Model Specification

The study focuses on impact of selected firm's specific factors, macroeconomic and behavioural variables on performance of listed insurance companies in Nigeria. Firm's specific factors and macroeconomic variables emanated from insurance companies while behavioural variables emanated from clients of insurance companies. This explains the reason for different models specified in the study.

3.8.1 Firm-Specific Characteristics, Macroeconomic Factors and Board Members' Characteristics.

The determinants of financial performance of insurance companies investigated include firm-specific characteristics, macroeconomic factors and board members' characteristics. Studies on firm-characteristics included Saeed and Khurram (2015),Ebere*et al* (2016),Ibe*et al* (2017),Abdelkader and Lamia (2018),Ghimire and Kumar (2014),Ali *et al* (2019). Those on macroeconomics factors includedKozak (2011),Chen-Ying (2014),Jibran*et al* (2016),Mwangi (2017),Alali*et al* (2018),Chizoba*et al* (2018),Deyganto and Alemu (2019) while those that considered corporate governance include Wang *et al* (2007),Eling and Marek (2011),Najjar and Salman (2013),Getachew (2014),Fekadu (2015),Ebere*et al* (2016),Deev and Khazalia (2017),Kariuki (2017), Solomon and Obah (2018),Abdoush*et al* (2016),Munga (2018),Arif (2019),Markonah*et al* (2019),Qawariri (2019) among others.

All the above studies have used different performance measurements such as return on assets (ROA), return on equity (ROE), ROI, market share, premium income, claim settlement ratio, underwriting profit, earning per share among othersto assess the performance of insurance companies. However, all these measurement approaches are financial measurement parameters. CARAMELS financial indicator which incorporate

both financial and non-financial performance measurement of insurance companies was not considered. The present study used CARAMELS framework in line with previous studies such as Kočović*et al* (2014),Ghimire and Kumar (2014),Valeed and Wubshet (2014),Dar and Thaku (2015),Chandrapal (2017), and Ali *et al* (2019). The level of performance based on CARAMELS framework is a function of resources and capabilities of insurance companies as proposed in the resources-basedview theory.Consequently, this study will adopt and modify previous studies (Ibe*et al,* 2017,Abdelkader&Lamia, 2018,Ali *et al,* 2019,Mwangi, 2017, Alali*et al,* 2018,Chizoba*et al,* 2018,Deyganto and Alemu, 2019,Munga, 2018,Arif, 2019,Markonah*et al,* 2019,Qawariri, 2019) to arrive at a modified model.

Performance was considered in terms of CARAMELS framework while determinants were considered under firm-specific characteristics, macroeconomic factors, and board members' dynamics. This resulted into equation 3.7 as follow:

CARAMELS = f (Firm-Specific Characteristics, Macroeconomic Factors, Board Members' characteristics) …… (3.7)

Equation 3.7 was further expanded with regards to each components of CARAMELS framework and the components of each determinant.

For capital adequacy:

$$C = f(AGE, SIZ, ASST, LEV, BDSZ, BDGD, BDINDP, BS, BDDEL, BOW, BCC, INTR, EXHR, GDPg, INFR) \ldots\ldots (3.8)$$

This was transformed into the following linear equation:

$$C_{it} = \alpha_{0it} + \alpha_1 AGE_{it} + \alpha_2 SIZ_{it} + \alpha_3 ASST_{it} + \alpha_4 LEV_{it} + \alpha_5 BDSZ_{it} + \alpha_6 BDGD_{it} + \alpha_7 BDINDP_{it} + \alpha_8 BS_{it} + \alpha_9 BDDEL_{it} + \alpha_{10} BOW_{it} + \alpha_{11} BCC_{it} + \alpha_{12} INTR_{it} + \alpha_{13} EXHR_{it} + \alpha_{14} GDP_{it} + \alpha_{15} INFR_{it} + e_{jt} \ldots\ldots (3.9)$$

For asset quality:

$A = f(AGE, SIZ, ASST, LEV, BDSZ, BDGD, BDINDP, BS, BDDEL, BOW, BCC, INTR, EXHR, GDPg, INFR)$ ..... *(3.10)*

This was transformed into the following linear equation:

$$A_{it} = \alpha_{0it} + \alpha_1 AGE_{it} + \alpha_2 SIZ_{it} + \alpha_3 ASST_{it} + \alpha_4 LEV_{it} + \alpha_5 BDSZ_{it} + \alpha_6 BDGD_{it} + \alpha_7 BDINDP_{it} + \alpha_8 BS_{it} + \alpha_9 BDDEL_{it} + \alpha_{10} BOW_{it} + \alpha_{11} BCC_{it} + \alpha_{12} INTR_{it} + \alpha_{13} EXHR_{it} + \alpha_{14} GDP_{it} + \alpha_{15} INFR_{it} + e_{jt} \quad \text{..... (3.11)}$$

For reinsurance and actuarial

$RA = f(AGE, SIZ, ASST, LEV, BDSZ, BDGD, BDINDP, BS, BDDEL, BOW, BCC, INTR, EXHR, GDPg, INFR)$ ..... *(3.12)*

This was transformed into the following linear equation:

$$RA_{it} = \alpha_{0it} + \alpha_1 AGE_{it} + \alpha_2 SIZ_{it} + \alpha_3 ASST_{it} + \alpha_4 LEV_{it} + \alpha_5 BDSZ_{it} + \alpha_6 BDGD_{it} + \alpha_7 BDINDP_{it} + \alpha_8 BS_{it} + \alpha_9 BDDEL_{it} + \alpha_{10} BOW_{it} + \alpha_{11} BCC_{it} + \alpha_{12} INTR_{it} + \alpha_{13} EXHR_{it} + \alpha_{14} GDP_{it} + \alpha_{15} INFR_{it} + e_{jt} \quad \text{..... (3.13)}$$

For management efficiency

$M = f(AGE, SIZ, ASST, LEV, BDSZ, BDGD, BDINDP, BS, BDDEL, BOW, BCC, INTR, EXHR, GDPg, INFR)$ ..... *(3.14)*

This was transformed into the following linear equation:

$$M_{it} = \alpha_{0it} + \alpha_1 AGE_{it} + \alpha_2 SIZ_{it} + \alpha_3 ASST_{it} + \alpha_4 LEV_{it} + \alpha_5 BDSZ_{it} + \alpha_6 BDGD_{it} + \alpha_7 BDINDP_{it} + \alpha_8 BS_{it} + \alpha_9 BDDEL_{it} + \alpha_{10} BOW_{it} + \alpha_{11} BCC_{it} + \alpha_{12} INTR_{it} + \alpha_{13} EXHR_{it} + \alpha_{14} GDP_{it} + \alpha_{15} INFR_{it} + e_{jt} \quad \text{..... (3.15)}$$

For earnings and profitability

$E = f(AGE, SIZ, ASST, LEV, BDSZ, BDGD, BDINDP, BS, BDDEL, BOW, BCC, INTR, EXHR, GDPg, INFR)$ ..... *(3.16)*

This was transformed into the following linear equation:

$$E_{it} = \alpha_{0it}\alpha_1 AGE_{it} + \alpha_2 SIZ_{it} + \alpha_3 ASST_{it} + \alpha_4 LEV_{it} + \alpha_5 BDSZ_{it} + \alpha_6 BDGD_{it} +$$

$\alpha_7 BDINDP_{it} + \alpha_8 BS_{it} + \alpha_9 BDDEL_{it} + \alpha_{10} BOW_{it} + \alpha_{11} BCC_{it} + \alpha_{12} INTR_{it} + \alpha_{13} EXHR_{it} + \alpha_{14} GDP_{it} + \alpha_{15} INFR_{it} + e_{jt}$ …………………………………. (3.17)

For liquidity

$L = f(AGE, SIZ, ASST, LEV, BDSZ, BDGD, BDINDP, BS, BDDEL, BOW, BCC, INTR, EXHR, GDPg, INFR)$ …………………………………………………...... (3.18)

This was transformed into the following linear equation:

$L_{it} = \alpha_{0it} + \alpha_1 AGE_{it} + \alpha_2 SIZ_{it} + \alpha_3 ASST_{it} + \alpha_4 LEV_{it} + \alpha_5 BDSZ_{it} + \alpha_6 BDGD_{it} + \alpha_7 BDINDP_{it} + \alpha_8 BS_{it} + \alpha_9 BDDEL_{it} + \alpha_{10} BOW_{it} + \alpha_{11} BCC_{it} + \alpha_{12} INTR_{it} + \alpha_{13} EXHR_{it} + \alpha_{14} GDP_{it} + \alpha_{15} INFR_{it} + e_{jt}$ …………………………………….…. (3.19)

For Sensitivity or Solvency

$S = f(AGE, SIZ, ASST, LEV, BDSZ, BDGD, BDINDP, BS, BDDEL, BOW, BCC, INTR, EXHR, GDPg, INFR)$ ……………….……………………………………. (3.20)

This was transformed into the following linear equation:

$S_{it} = \alpha_{0it} + \alpha_1 AGE_{it} + \alpha_2 SIZ_{it} + \alpha_3 ASST_{it} + \alpha_4 LEV_{it} + \alpha_5 BDSZ_{it} + \alpha_6 BDGD_{it} + \alpha_7 BDINDP_{it} + \alpha_8 BS_{it} + \alpha_9 BDDEL_{it} + \alpha_{10} BOW_{it} + \alpha_{11} BCC_{it} + \alpha_{12} INTR_{it} + \alpha_{13} EXHR_{it} + \alpha_{14} GDP_{it} + \alpha_{15} INFR_{it} + e_{it}$…………………………………….…. (3.21)

Where:

C_{it}	Capital adequacy of firm i in year t
A_{it}	Asset quality of firm i in year t
RA_{it}	Reinsurance and actuarial of firm i in year t
M_{it}	Management efficiency of firm i in year t
E_{it}	Investment income /Net premium
L_{it}	Liquidity of firm i in year t
S_{it}	Sensitivity to market risk of firm i in year t
AGE_{it}	Age of firm i in year t
SIZ_{it}	Size of firm i in year t
$ASST_{it}$	Auditor quality of firm i in year t
LEV_{it}	Leverage status of firm i in year t
$BDSZ_{it}$	Board Member of firm i in year t

$BDGD_{it}$	Board gender diversity of firm i in year t
$BDINDP_{it}$	Board independence of firm i in year t
BS_{it}	Block Shareholder of firm i in year t
$BDDEL_{it}$	Board Member Diligence (meeting) by firm i in year t
BOW_{it}	Board ownership of firm i in year t
BCC_{it}	Board compensation and remuneration of firm i in year t
$INTR_t$	Interest rate of the country in year t
$EXHR_t$	Average exchange rate of the country in year t
GDP_t	Growth in GDP of the country in year t
$INFR_t$	Inflation rate of the country in year t
$\alpha_{1-}\alpha_{15}$	Coefficients
e_{it}	Error term

The a-prior expectation of the model shows positive relationship between dependent variables (CARAMELS framework) and independent variables (Selected firm's specific factors, macroeconomic factors and Board members' characteristics). This implies that$\alpha: >0$ $V_i=1, 2, 3, \ldots 15$while *e* represents the error term.

3.8.2 Socio-Cultural factors and Performance of Insurance Companies in Nigeria

Resource-based view theory rests on the view that different heterogeneous characteristics of customers such as socio-cultural factors influence their decision to take up insurance policy which in turn affects performance of a company. From the empirical studies reviewed across the globe such as Sugirtha (2007),Curak*et al* (2013),Abaidoo (2015), Gitau and Sile (2016), Mahdjour and Benhabib (2017), it was observed that religious belief, ethnic background, language and level of awareness were not considered in the developing and Nigeria. These socio-cultural are very critical in the developing nations. Therefore, creating a lacuna in socio-economic variables in literature. In this model, performance of insurance business was considered in terms of demand or decision by consumers to take up insurance products while the socio-cultural factors were expanded

to include religious belief, ethnic background, language, trust of the customer and level of awareness to bridge the gap in literature.

Based on resource-based view theory and previous studies like Mahdjour and Benhabib (2017); Curak*et al*(2013) and Abaidoo (2015), their models were adapted and modified by this study to give the following model:

Performance of Insurance companies = f (Religious belief, ethnic background, language, trust of the customer, level of awareness,)……..*3.1*

In transforming the above generalized function, it becomes:

Perf = f (ISR, CRB, ETB, LAN, TRT, AWA,)……..*3.2*

This was further transformed into the following equation:

$Perf_{it} = \beta_{0it} + \beta_1 ISR_{it} + \beta_2 CRB_{it} + \beta_3 ETB_{it} + \beta_4 LAN_{it} + \beta_5 TRT_{it} + \beta_6 AWA_{it} + e_{jt}$.. *(3.3)*

Where:

$Perf_{it}$	Take up of Insurance of products bycustomer at time t.
ISR_{it}	Islamic Religious Belief of the customer at time t.
CRB_{it}	Christianity religious Belief of the customer at time t.
ETB_{it}	Ethnic Background of the customer at time t.
LAN_{it}	Language of the customer at time t.
TRT_{it}	Trust of the customer at time t.
AWA_{it}	Awareness Level of$_i$the customer at time t.
β_0 - β_6	Coefficients
e_{it}	Error term

The a-prior expectation of the model was a positive relationship between the dependent variables and the independent variables. This implies that;$\beta_0 > 0$; $\beta_1 > 0$; $\beta_2 > 0$; $\beta_3 > 0$; $\beta_4 > 0$; $\beta_5 > 0$;$\beta_6 > 0$;while *e* represents the error term.

3.8.3 Demographic factors of Customers and Performance of Insurance Companies

The resource-based theory focuses on collection of physical and human productive resources as the primary factors of competitive benefit and performance. Each of the customers is heterogeneous in nature and the heterogeneous characteristics of customers in this contest include demographic differences. This was also supported with previous studies like Kirigia (2005); Langat*et al* (2017); Aregbeshola and Khan (2018); Badu*et al* (2018) that demographic factors influence consumers' behaviour and decision to take up insurance products.

The models developed by the previous studies such as Kirigia (2005); Langat*et al* (2017); Aregbeshola and Khan (2018); Badu*et al* (2018) and the postulation in resource-based view theory were employed to develop a new model on the impact of demographic characteristics of consumers on performance of insurance companies. Consequently, in this study, the model was now defined as:

Performance of Insurance companies = f (Gender, Age, Marital Status, income level, Academic qualification, work experience, type ofwork)……3.4

In transforming the above generalized function, it becomes:

Perf = f(GN, AGE, MS, INC, AQ, EX, CW)……..3.5

This was mathematically transformed into the following equation:

$Perf_{it} = \beta_{0it} + \beta_1 GN_{it} + \beta_2 AGE_{it} + \beta_3 MS_{it} + \beta_4 INC_{it} + \beta_5 AQ_{it} + \beta_6 EX_{it} + \beta_7 CW_{it} + \mu_{jt}$…… *(3.6)*

Where:

$Perf_{it}$	Take up of insurance products by the customer at time t.
GN_{it}	Gender of the customer at time t.
AGE_{it}	Age of thecustomer at time t.
MS_{it}	Marital Status of the customer at time t.
INC_{it}	Income Level of the customer at time t.
AQ_{it}	Academic Qualification of the customer at time t.
EX_{it}	Experience of the customer at time t.
CW_{it}	Type of Work of the customer at time t.
β_0 - β_7	Coefficients
μ_{it}	Error term

The a-prior expectation of the model was a positive relationship between *Performance*and *Age*, *Income level*, *Academic qualification* and customer experience. Therefore, the coefficients β_2*;* β_4*;* β_5 *and* $\beta_6 > 0$ while β_1*;* β_3 *and* $\beta_7 < 0$. The μ represents the error term.

3.8.4 Limitation of methodology

The followinglimitations were identified which of course do not affect the findings of the study.

i. The study focused on Nigeria listed insurance companies financial report from 2012 to 2018 However, the study couldnot focus on period earlier and period after the stated years within the scope of the study due to availability of data
ii. Listed insurance companies in Nigeria were the main target of the study. However, the study could not focus on all African countries listed insurance companies.
iii. The researcher focuses only on data from insurance companies, CBN bulletin and questionnaires. However, the methodology could not be expanded to includeothermeasurementsparameters and usage of other variables from customers',company specific variables and corporate governance factor.

CHAPTER FOUR

THE RESULT OF THE RESEARCH AND DISCUSSION OF THE FINDINGS

4.1 Preliminary Assessment of data from Questionnaire

This section presents the preliminary assessment of the study data. This includes the response rate and demographic information from the respondents. The data collected was also examined to ascertain the completeness, accuracy, consistency and eligibility ofthe responses in line with the proposition by Cooper and Schindler (2007). Table 4.1 summarizes the response rate for the data.

Table 4.1: ***Questionnaires' Response Rate***

Questionnaire	Frequency	Percentage (%)
Number Distributed	384	100
Number returned	333	87
Number not returned	49	13
Number not Valid (Outliers, double ticking and	33	9
Number Valid	300	78
Valid response rate		78

Source: Author's computation (2020)

From Table 4.1, it was revealed that out of the 384 questionnaires (Hardcopy and Online Questionnaires), 333 were retrieved representing a response rate of 87%. 33 questionnaires were discarded due to incompleteness and missing values. This brought down the valid responses to 300 which represented a response rate to 78% which is still adequate and above the 30% considered sufficient for surveys (Sekaran&Bougie, 2003).

4.1.2 Demographic Profile of Respondents to Questionnaire

The profile of respondents was presented using their demographic characteristics such as grade level, gender, work place, age, academic qualification and the length of service with their respective employers. The details are presented in Table 4.2.

Table 4.2: ***Respondents Demographic Profile***

VARIABLES	RESPODENTS	FREQUENC	PERCENTAG	CUMULATIV

	PROFILE	Y	E (%)	E (%)
AGE	30yrs and below	114	38	38.0
	31 – 40yrs	84	28	66.0
	41 – 50yrs	78	26	92.0
	51 – 60yrs	24	8.0	100.0
	61yrs and Above	00	0.0	100.0
GENDER	MALE	192	64	64.0
	FEMALE	108	36	100.0
MARITAL STATUS	SINGLE	114	38	38
	MARRIED	147	49	87
	DIVORCE	33	11	98
	OTHERS	6	2	100.0
TYPE OF WORKING CLASS	Civil Servant	171	57	57
	Business	60	20	77
	Professional Services	54	18	95
	Others	15	5	100.0
ACADEMIC QUALIFICATION	Diploma/NCE	24	8	8
	HND/Degree	186	62	70
	Master	75	25	95
	PhD	6	2	97
	Others	9	3	100.0
ANNUAL INCLOME	Below 216,000	72	24	24
	216,000-450,000	24	8	32
	451,000-750,000	54	18	50
	751,000-999,000	48	16	66
	Above 1,000,000	102	34	100.0
WORKING EXPERIENCE	Below 5 years	129	43	43
	6-10years	42	14	57
	11-15years	69	23	80
	16-20years	27	9	89
	Above 20years	33	11	100.0
TYPE OF INSURANCE	Life Insurance	42	14	14
	Non-life Insurance	258	86	100.0

Source: Author Computation (2020)

Table 4.2 showed the general demographic profile ofthe respondents. It depicted that 114 (38%) of the respondents were below 30 years of age, between age 31-40 years are 84 (28%), 41-50 years were 78 representing 26% while 24 (8%) were 51-60 years old. In tandem with by-law of must organized employers, none of the respondentswas above the age of 60 years. This implied that all the respondents were in active period of their life. By gender, 192 (64%) were males while the remaining 108 (36%) were females, a

reflection of staff distribution gender bias. Besides, the responsibility of taking up of insurance policies rests on male than female.On marital status, 114 (38%) were single which represent the age brackets below 30 years. The number of married respondents were 147 representing 49% while 33 (11%) accounted for divorcee respondents and 6 (2%) wereno single, married or divorced. This showed that more than 50% of respondents have responsibility to hedge against post retirement financial vulnerability through effective demand for insurance policies.

Based ontype of work, more than 50% of the respondents were civil servants. This shows that civil servants patronize insurance companies more than other working class. Respondents in business were 60 (20%) while those in professional services were 54 (18%). Fifteen (15) representing 5% of the respondents are categorized as self-employed or dependents. Table 4.2 also reveals that 24 (8%) of the respondents possessed Diploma/NCE certificates, 186 (62%) of the respondents were HND/Degree holder, 75 (25%) were Master's degree holders while 6 (2%) had Doctorate degree. Numbers of respondents with other professional certificates which cannot be categorized under the above are just nine (9) equivalents to 3%. More than 90% of the respondents possessed at least B.sc/HND educational certificates.

Annual income of the respondents are distributed as follows: 72 (24%) received annual income below N216,000; 24 (8%) received annual income between N216,000 and N450,000; 54 (18%) received annual income between 451,000 and N750,000, 48 (16%) received annual income between N751,000 and N999,000 while 102 (34%) received annual income of NI,000,000 and above. This impliedthat more than 50% of the respondents received annual income of N451,000 to N750,000 which represent average annual income for all category of workers. Working experience showed that the highest number of the respondents 129 (43%) had work experience below 5years, 42 (14%) had

6-10 years, 69 (23%) had 11 -15 years, 27 (9%) had 16-20 years while only 33 (11%) had over 20 years work experience. This implied that 40% and above had spent more than 10 years in service and may have wealth of experience.

In terms of type of insurance tookup by clients, 42 (14%) of the respondents subscribed for life insurance while 258 (86%) of the respondents subscribe to other types of insurance. This showed that Nigerians subscribed for other type of insurance than life insurance. Generally, the demographic information indicated that all the respondents were versatile and possessed pre-requisites to provide the required answers to the questions in the questionnaires.

4.1.2 Reliability Test of Instrument for Socio-Cultural Factors

Prior to the analysis of the data collected through questionnaire, the instrument was subjected to reliability test using Cronbach Alphas. The theoretical value of alpha varies from zero to 1, meaning that estimates of alpha can take on any value less than or equal to 1, including negative values, although only positive values made sense but higher values of alpha were more desirable (Ritter, 2010). Table 2 shows the Cronbach's Alpha for all variables.

Table 4.3: ***Reliability Statistics***

S/N	Variables	No of Items Before	Cronbach's Alpha	No of Items After
1	Perf	6	0.876	6
2	ISR	5	0.799	4
3	CRB	4	0.795	3
4	ETB	5	0.807	4
5	LAN	4	0.862	3
6	TRT	5	0.877	4
7	AWA	4	0.766	4

Source: Authors' computation (2020)

From Table 4.3, the initial numbers of statements were considered in order to obtain a reliable Cronbach alpha coefficient. Some statements were removed toachieve an

acceptable Cronbach Alpha coefficient. Number of statements for variables like Islam religion belief, Christianity religion belief, ethnicity of the customers, language of insurance of policy and trust of the customer were reduced after a thorough analysis to obtain an acceptable alpha value. Demand for insurance policies and level of awareness were not reduced as it gives an acceptable alpha value. Meanwhile, the statistics show that all variables exhibited values ranging 0.795 to 0.877 which suggested that the instruments were reliable and consistent within acceptable research standards. This implied that Cronbach's Alpha was considered acceptable which suggests that data were reliable and consistent with acceptable research standards.

4.2 Descriptive Statistics

This section presents summary of descriptive analysis of data from questionnaire and other secondary data collected for each of the variables employed in this study. This entails a statistical summary of mean, minimum, maximum and standard deviation. Both the mean and the standard deviation were fundamental descriptive statistics for interval and ratio scale. Assessment of data normal distribution was also conducted with Shapiro-Wilk normality (z) statistic, skewness and kurtosis. The results of descriptive statistics for each of the major factors are presented separately as follows:

4.2.1 Descriptive Statistics for CARAMELS Indicators

The dependent variable of this study is CARAMELS financial soundness indicator. The data for each of the CARAMELS was obtained from all the 22 listed insurance companies that meet up with the criteria set in the methodology. The study covered seven years of 22 listed insurance companies. This gives rise to One fifty-four (154) observations in the study. The result of descriptive statistics such as mean, standard deviation, minimum, maximum and normality test are presented in Table 4.4.

Table 4.4: ***Summary of Descriptive Statistics Results for CARAMELS Indicators***

Variable	N	Mean	Std. Dev.	Min	Max	Normality	p-value
C	154	0.62279	0.567617	0.011663	3.630031	8.173	0.000
A	154	0.055205	0.080063	0.000121	0.622827	8.487	0.000
RA	154	0.511643	0.183267	0.11325	0.903424	4.397	0.000
M	154	0.36679	0.216537	0.022853	1.009325	4.558	0.000
E	154	0.214588	0.300553	-2.08044	1.875289	7.98	0.000
L	154	0.22455	0.82597	0.123552	1.026706	9.698	0.000
S	154	0.62279	0.567617	0.011663	3.630031	8.173	0.000

Source: Author's Computation (2020)

The result of the summary statistics conducted for the dependent variables of this study - that is the CARAMELS performance indicators - are presented in Table 4.4. The mean, standard deviation minimum and maximum values are presented as well as the Shapiro-Wilk normality (z) statistic and p-value. These are employed to reveal the average performance of listed insurance firms, the dispersion of performance around this average, the lowest performance and highest performance, respectively. Capital adequacy (C) had a mean of 0.6228, standard deviation of 0.5676, minimum of 0.0117 and maximum of 3.6300. This indicated that average capital adequacy in the insurance sector is about 62.3 percent of capital in total assets. It also indicated that average capital adequacy had a dispersion of about 56.8 percent. The least capital adequacy experienced among these firms during the period under consideration was approximately 1.17 percent while the highest was approximately 363 percent.

Asset quality (A) has a mean of 0.0552, standard deviation of 0.0801, minimum of 0.0001 and maximum of 0.6228. This indicated that average asset quality in the

insurance sector was about 5.5 percent, with a dispersion of about 8.0 percent. The least asset quality experienced among these firms during the period under consideration was approximately 0.012 percent while the highest was approximately 62.3 percent.Reassurance and accruals (RA) has a mean of 0.5116, standard deviation of 0.1833, minimum of 0.1133 and maximum of 0.9034. This indicated that average reassurance and accruals in the insurance sector during the period of study is about 51.2 percent of net premium in gross premium and this has a dispersion of about 18.3 percent. The least reassurance and accruals experienced among these firms during the period under consideration was approximately 11.3 percent while the highest was approximately 90.3 percent.

Management efficiency (M), measured by the ratio of operating expenses to gross premium has a mean of 0.3668, standard deviation of 0.2165, minimum of 0.0229 and maximum of 1.0093. This indicated that average management efficiency in the insurance sector was about 36.7 percent of operating expenses in gross premium. And this had a dispersion of about 21.7 percent. The least management efficiency experienced among these firms during the period under consideration was approximately 2.3 percent while the highest was approximately 100.9 percent of operating expenses in gross premium.

Earnings and profitability (E) has a mean of 0.2146, standard deviation of 0.3006, minimum of -2.0804 and maximum of 1.8752. This indicated that average management efficiency in the insurance sector was about 21.5 percent of investment income in net premium and this had a dispersion of about 30.05 percent. The least earnings and profitability experienced among these firms during the period under consideration was approximately -208.04 percent while the highest was approximately 187.5 percent of investment income in net premium.Liquidity (L) has a mean of 0.2246, standard

deviation of 0.8259, minimum of 0.1236 and maximum of 1.0267. This indicated that average liquidity in the insurance sector was about 22.5 percent of current assets over current liabilities. This had a wide dispersion of about 82.6 percent. The least liquidity experienced among these firms during the period under consideration was approximately 12.3 percent while the highest was approximately 102.7 percent of current assets over current liabilities.

Solvency (S) ratio has a mean of 0.6228, standard deviation of 0.5676, minimum of 0.0117 and maximum of 3.6300. This indicates that average solvency in the insurance sector was about 62.3 percent of capital in total assets of the firms. This had a dispersion of about 56.8 percent. The least solvency experienced among these firms during the period under consideration was approximately 1.17 percent while the highest was approximately 363 percent.Examining the normality nature of these variables, it was observed that all of them were not normally distributed. This is shown by their respective high z-statistic value and very low p-value which suggest rejection of the test hypothesis that they were normally distributed. This therefore, indicated that these variables were not normally distributed. The implication of this is that it becomes more important to check the normality of the residuals of the models in which these variables were employed in order not to violate the normality assumption of the Classical Linear Regression Model (CLRM).

4.2.2 Descriptive Statistics of Demographic factors

The summary of descriptive statistics of demographic factors of customers used in this study is presented in Table 4.5.

Table 4.5: ***Summary of Descriptive Statistics Result for Customers' Demographic factors***

		GN	MS	AQ	AGE	CW	INC	EX
N	Valid	300	300	300	300	300	300	300
	Missing	0	0	0	0	0	0	0
Mean		1.36	1.77	2.30	2.04	1.71	3.28	2.31
Std. Deviation		0.481	0.720	0.769	0.981	0.932	1.578	1.386
Skewness		0.586	0.700	1.291	0.434	0.983	-0.315	0.638
Std. Error of Skewness		0.141	0.141	0.141	0.141	0.141	0.141	0.141
Kurtosis		-1.667	0.321	2.972	-0.987	-0.291	-1.425	-0.861
Std. Error of Kurtosis		0.281	0.281	0.281	0.281	0.281	0.281	0.281
Minimum		1	1	1	1	1	1	1
Maximum		2	4	5	4	4	5	5

Source: Authors' computation (2020)

The result of descriptive statistics in Table 4.5 shows the mean value between 1.36 and 3.28. The lowest mean value of 1.36 with standard deviation of 0.481 is attributed to gender. The attribution is because the range of value for gender is between 1 and 2. The value of the mean is close to 2 than 1. The attribution is also applicable to type of working class of the respondent which ranges from 1 to 3 with a mean value of 1.76 which is also above average. Other variables reported mean and standard deviation as follow: Marital status (M=1.77, SD=0.720); Academic Qualification (M=2.30, SD=0.769); Age (M=2.04, SD=0.981) and Working experience (M=2.31, SD=1.386). The results implied that the mean value presented for all the variables are moderate and high level of mean score. The minimum and maximum means that each of the variable showed the range of value from which the respondents should choose. The result of descriptive statistics showed mean values that is moderate and high level of mean score.

In addition, Table 4.4 also showedthe skewness and kurtosis statistics which were employed to determine if variables were normally distributed. The coefficients for skewness and kurtosis indicated that the data were normally distributed as these values were within the cut of point of -3 and 3 (Peck, Olsen & Devore, 2008). The coefficients for skewness revealed values between -0.315 and 1.291 while the coefficient of kurtosis reported is between -1.667 and 2.972. Therefore, the result obtained from Table 4.5 showed that all the variables observed were normally distributed. Therefore, analysis can be conducted with parametric statistics. The number of observationshows that all the values for each of the variable are valid and there is no missing value.

4.2.3 Descriptive Statistics of Socio-Cultural Factors

This section presents summary of descriptive statistics of social cultural factors of customers collected for this study.

Table 4.6: ***Summary of Descriptive Statistics Result for Socio-Cultural Factors***

		PERF	ISR	CRB	ETN	LAN	TRT	AWA
N	Valid	300	300	300	300	300	300	300
	Missing	0	0	0	0	0	0	0
Mean		4.01	3.35	3.43	2.88	2.76	3.68	3.38
Std. Deviation		0.740	0.874	0.902	1.001	1.138	0.957	0.867
Skewness		-0.781	-0.292	-0.420	0.950	0.051	-0.720	-0.184
Std. Error of Skewness		0.141	0.141	0.141	0.141	0.141	0.141	0.141
Kurtosis		0.357	-0.527	-0.327	3.062	-1.151	0.034	-0.902
Std. Error of Kurtosis		0.281	0.281	0.281	0.281	0.281	0.281	0.281
Minimum		2	1	1	1	1	1	2
Maximum		5	5	5	5	5	5	5

Source: Authors' computation (2020)

The descriptive statistics in Table 4.6 showed that the maximum value of 5 and minimum of 1 for all the variables except for take up of insurance product and level of

awareness with minimum value of 2. This implied that respondents do not strongly disagree with some of the statements use for these constructs. The result of the mean which is the average score of responses from respondents ranged from 2.76 to 4.01. This represents an acceptable value for the data obtained for the variable as the value of 2.76 is close to 3 than 2. This value was in line with recommended scores by Nik, Jantan and Taib (2010) who opined that value less than 2.33 are low level, 2.33 to 3.67 are moderate level, and 3.67 and above are regarded as high level. The result of descriptive statistics showed mean values that were moderate and high level of mean score.

Table 4.6 also showed that insurance uptake recorded the highest mean (M = 4.01, SD = 0.740) and that language of insurance policy has the lowest mean (M = 2.76, SD = 1.138). Except for ethnicity of the customer and language of insurance policy, the means of all the other variables are above the average of three (3) implying that they are in the high level range. In addition, descriptive statistics such as skewness and kurtosis were used to determine if variables were normally distributed. The coefficients for skewness and kurtosis indicated that the data were normally distributed as these values were within the cut of point of -3 and 3 (Peck*et al.*, 2008). Therefore, the result obtained from Table 4.6 showed that all the variables observed are normally distributed. Therefore, analysis can be conducted with parametric statistics.

4.2.4 Descriptive Statistics of Other Explanatory Variables

Other explanatory data employed in this study include firms' specific characteristics, corporate governance mechanisms and some selected macro-economic variables. The summary of descriptive statistics of these variables are presented in Table 4.7

Table 4.7: ***Summary of Descriptive Statistics Results for Other Explanatory Variables***

Variable	Mean	Std. Dev.	Min	Max	Normality	p-value
AGE	39.41	12.93	23.00	60.00	5.05	0.00
SIZ	19.2bn	17.7bn	1.75bn	110.0bn	1.71	0.04
ASST	0.15	0.13	0.00	0.84	6.59	0.00
LEV	3.66	8.29	0.28	85.74	9.40	0.00
BDSZ	8.94	2.18	4.00	15.00	-1.50	0.93
BDGD	0.17	0.13	0.00	0.50	2.85	0.00
BDINDP	0.74	0.10	0.40	0.90	3.08	0.00
BS	0.09	0.19	0.00	0.78	5.71	0.00
BDDEL	4.82	1.48	3.00	15.00	6.53	0.00
BOW	0.28	0.24	0.00	0.74	5.93	0.00
BCC	75.5mln	69.5mln	8.17mln	348.0mln	8.18	0.00
INTR	16.89	0.29	16.55	17.55	7.03	0.00
EXHR	218.74	63.72	157.31	306.08	6.43	0.00
GDPg	3.00	2.77	-1.62	6.67	2.96	0.00
INFR	11.72	3.18	8.06	16.52	5.23	0.00

Source: Author's Computation, 2020.

The result of the summary statistics conducted for the explanatory variables of this study are presented in Table 4.7. The mean, standard deviation minimum and maximum values are presented as well as the Shapiro-Wilk normality (z) statistic and p-value. These are employed to reveal the average behaviour of these variables, their dispersion around these averages, the lowest and highest behaviour during this period, respectively. Firm age (AGE) has a mean of 39.41, standard deviation of 12.93, minimum of 23 and maximum of 60. This indicated that average firm age of insurance companies is about 39 years, with a dispersion of about 13 years. The youngest insurance firm has been established since 23 years while the oldest insurance firm has been established since 60 years ago.

Firm size (SIZ), measured by the total assets has a mean of 19.2 billion naira, standard deviation of 17.7 billion naira, minimum of 1.75 billion naira and maximum of 110 billion naira. This indicated that an average insurance firm in Nigeria has total assets worth of 19.2 billion naira. While the insurance that has the lowest total assets has 1.75

billion, the firm that has the largest total assets has a worth of 110 billion naira. Asset tangibility (ASST) has a mean of 0.15, standard deviation of 0.13, minimum of 0.00 and maximum of 0.84. This indicated that average asset tangibility in the insurance sector is about 15 percent of property, plant and equipment over total assets, and this has a dispersion of about 13 percent. The least asset tangibility experienced among these firms during the period under consideration was zero percent, while the highest was approximately 84 percent of property, plant and equipment over total assets.

Leverage (LEV) has a mean of 3.66, standard deviation of 8.29, minimum of 0.28 and maximum of 85.74. This indicated that average leverage in the insurance sector is about 3.66, with a dispersion of about 8.29 percent. The least leverage experienced among these firms during the period under consideration was 0.28 percent, while the highest was approximately 85.74 percent.In terms of board dynamics, board size (BDSZ) has a mean of 8.94, standard deviation of 2.18, minimum of 4.0 and maximum of 15.0. This indicated that average number of directors serving on the board in the insurance sector is about 9 individuals, with a dispersion of about 2 individuals. The least number of directors serving on the board experienced among these firms during the period under consideration was 4 individuals, while the highest was 9 individuals.

Board gender diversity (BDGD) has a mean of 0.17, standard deviation of 0.13, minimum of 0.0 and maximum of 0.5. This indicated that average proportion of female directors to total directors serving on the board in the insurance sector is about 17 percent, with a dispersion of about 13 percent. The lowest proportion of female directors to total directors serving on the board experienced among these firms during the period under consideration was zero percent, while the highest proportion was 50 percent.Board independence (BDINDP) has a mean of 0.74, standard deviation of 0.10, minimum of

0.40 and maximum of 0.90. This indicated that average proportion of independent directors to total directors serving on the board in the insurance sector is about 74 percent, with a dispersion of about 40 percent. The lowest proportion of independent directors to total directors serving on the board experienced among these firms during the period under consideration was 10 percent, while the highest proportion was 90 percent.

Block shareholder (BS) has a mean of 0.09, standard deviation of 0.19, minimum of 0.00 and maximum of 0.78. This indicated that average proportion of shares owned by block shareholder to total shares of the insurance sector is about 9 percent, with a dispersion of about 19 percent. The lowest proportion of block-holding among these firms during the period under consideration was zero percent, while the highest proportion was 78 percent.Board diligence (BDDEL) has a mean of 4.82, standard deviation of 1.48, minimum of 3.0 and maximum of 15.0. This indicated that average number of meetings held by the board of directors in the insurance sector is about 5 meetings, with a dispersion of about 1 meeting. The least number of meetings held by the board of directors experienced among these firms during the period under consideration was 3 meetings, while the highest was 15 meetings.

Board's ownership (BOW) has a mean of 0.28, standard deviation of 0.24, minimum of 0.00 and maximum of 0.74. This indicated that average share of board ownership in the insurance sector is about 28 percent, with a dispersion of about 24 percent. The lowest share of board ownership experienced among these firms during the period under consideration was zero percent, while the highest proportion was 74 percent.Board compensation (BCC) has a mean of 75.5 million naira, standard deviation of 69.5 million naira, minimum of 8.17 million naira and maximum of 348 million naira. This indicated that an average insurance firm in Nigeria pays a board compensation of 75.5 million

naira. While the insurance that pays the lowest board compensation pays69.5 million naira, the firm that pays the highest board compensation pays348 million naira.

In terms of macroeconomic factors, interest rate (INTR) has a mean of 16.89, standard deviation of 0.29, minimum of 16.55 and maximum of 17.55. This indicated that average interest rate in Nigeria during the period under study was about 16.9 percent, with a dispersion of about 0.29 percent. The least interest rate experienced in the Nigerian economy during the period under consideration was 16.55 percent, while the highest interest rate experienced was 17.55 percent.Exchange rate (EXHR) has a mean of 218.74, standard deviation of 63.72, minimum of 157.31 and maximum of 306.08. This indicated that average exchange rate of the Nigerian naira to U.S. dollars during the period under study was about 218.7 naira per dollar, with a dispersion of about 63.7 naira to a dollar. The least exchange rate experienced in the Nigerian economy during the period under consideration was 157.31 naira to a dollar, while the highest exchange rate experienced was 306.08 naira to a dollar.

Economic growth (GDPg) has a mean of 3.0, standard deviation of 2.77, minimum of -1.62 and maximum of 6.67. This indicated that average economic growth in Nigeria during the period under study was about 3 percent, with a dispersion of about 2.77 percent. The least economic growth experienced in the Nigerian economy during the period under consideration was a negative growth of 1.62 percent, while the highest economic growth experienced was 6.67 percent.Inflation rate (INFR) has a mean of 11.72, standard deviation of 3.18, minimum of 8.06 and maximum of 16.52. This indicated that average inflation rate in Nigeria during the period under study was about 11.7 percent, with a dispersion of about 3.18 percent. The least inflation rate experienced

in the Nigerian economy during the period under consideration was 8.06 percent, while the highest inflation rate experienced was 16.52 percent.

Examining the normality nature of this set of explanatory variables, it was observed that all of them are not normally distributed except board size. This is shown by their respective high z-statistic value and very low p-value which suggest rejection of the test hypothesis that they are normally distributed. The z-statistic value of board size is low and its p-value is greater than 0.1 level of significance which suggest failure to reject the test hypothesis that it is normally distributed. This, therefore, indicates that these variables except board size are not normally distributed. The implication of this is that it becomes more important to check the normality of the residuals of the models in which these variables are employed in order not to violate the normality assumption of the Classical Linear Regression Model (CLRM).

4.3 Result of Inter-Item Correlation Matrix

Following the result of descriptive statistics, the study conducts inter-item correlation analysis.The result of correlation analysis conducted to examine the linear relationship that exists among the dependent and explanatory variables are presented in this section. Correlation analysis is useful in determining the direction and strength of relationship that exists among variables and if any two relationships is as high to lead to the presence of multicollinearity in the models. The results were also presented separately for each of the variable.

Table 4.8: ***Results of Correlation Analysis of CARAMELS Indicators***

	C	A	RA	M	E	L	S
C	1.00						
A	-0.02	1.00					
	(0.82)						
RA	0.02	0.13	1.00				
	(0.77)	(0.09)					
M	0.21	0.45	0.08	1.00			
	(0.01)	(0.00)	(0.32)				
E	0.02	0.16	-0.06	0.12	1.00		
	(0.77)	(0.04)	(0.43)	(0.13)			
L	-0.10	-0.12	-0.04	-0.02	-0.06	1.00	
	(0.22)	(0.12)	(0.65)	(0.83)	(0.47)		
S	0.22	-0.02	0.02	0.21	0.02	-0.10	1.00
	(0.01)	(0.82)	(0.77)	(0.01)	(0.77)	(0.22)	

Source: Author's Computation, 2020.

Table 4.8 presented the results of the correlation analysis of the relationship that exists among the set of dependent variables employed in this study. The CARAMELS indicators are examined in a correlation matrix presented in Table 4.8 to investigate their direction of movement as performance indicators.The result of the correlation analysis showed that Capital Adequacy is only significantly related to Management Efficiency and Solvency and its relationship with them is positive. The positive relationship indicated that Capital Adequacy is moving in the same direction with each of Management Efficiency and Solvency. Capital Adequacy is however, not significantly related to other performance indicators.

The result of correlation analysis also showed that Asset quality is only significantly related to Reinsurance and Actuarial, Management Efficiency and Earnings and Profitability. The relationship among them is positive. This indicated that Asset quality is moving in the same direction with each of Reinsurance and Actuarial, Management Efficiency and Earnings and Profitability. Asset quality is however, not significantly related to liquidity and solvency. Reinsurance and Actuarial is not significantly related to

performance metrics such as Management Efficiency, Earnings and Profitability, Liquidity and Solvency. This implied that Reinsurance and Actuarial is not related to each of these indicators.

Management Efficiency is only significantly related to Solvency and its relationship with the latter is positive. This indicated that Management Efficiency is moving in the same direction with Solvency. Management Efficiency is however, not significantly related to Earnings and Profitability and liquidity. Earnings and Profitability is not significantly related to both Liquidity and Solvency, and Liquidity is not also significantly related to Solvency. This implied that these variables do not have significant relationships.

Table 4.9: ***Result of Correlation Analysis for Customers' Demographic Factors***

	PERF	GN	MS	AQ	AGE	CW	INC	EX
PERF	1.000							
GN	-0.084	1.000						
MS	0.163	0.182	1.000					
AQ	0.357	-0.130	0.089	1.000				
AGE	0.304	-0.031	0.567	0.290	1.000			
CW	-0.016	-0.035	0.199	0.136	0.177	1.000		
INC	0.147	-0.107	0.260	0.352	0.466	0.062	1.000	
EX	0.259	0.043	0.574	0.355	0.737	0.280	0.391	1.000

Source: Authors' computation (2020)

The result of inter-item correlation analysis presented in Table 4.9 showed that the demand for insurance policy is positively related to marital status, academic qualification, age of the respondent, annual income and working experience but negatively related gender and type of working class. Gender of the respondents is positively related to marital status and working experience but negatively associated with academic qualification, age of the respondents, type of working class and annual income. This implied that gender does not determine the level of annual income. The result also revealed that positive relationships exist among marital status, age of the respondents,

type of working class, annual income and working experience. The academic qualification of the respondents is positively associated with age of the respondents, type of working class, annual income and working experience. Finally, the correlation result also reveals that positive relationship exists age of the respondent and type of working class, annual income and working experience as well as annual income and age of the respondents.

The results generally showed that the coefficients correlations of the relationships among the variables are well below the rule of thumb threshold of 0.7. The results from the correlation analysis revealed that there was no multicollinearity problems as all the independent variables show a value of less than the proposed cut-off point of 0.7.

Table 4.10: ***Result of Correlation Analysis of Social Cultural Factors***

VARIABLES	PERF	ISR	CRB	ETN	LAN	TRT	AWA
PERF	1.000						
ISR	0.044	1.000					
CRB	0.426	0.114	1.000				
ETN	0.012	0.538	0.067	1.000			
LAN	0.082	0.332	-0.046	0.353	1.000		
TRT	0.465	-0.059	0.515	-0.114	-0.114	1.000	
AWA	0.118	-0.171	0.297	-0.006	-0.189	0.642	1.000

Source: Authors' computation (2020)

From Table 4.10, the analysis was conducted for only the continuous explanatory variables. The result showed that take up of insurance product is positively related to Islamic beliefs, Christianity beliefs, the ethnicity of customer, language of the insurance policy, trust from customers and level of awareness. This indicated that religious beliefs, ethnicity of customer, language of insurance policy, trust from customers and level of awareness necessarily and positively influence insurance uptake of customer but the extent and the significant of the relationship cannot be established with these analyses.

Islamic religious belief is positively related to Christianity religion belief, ethnicity of customer, language of the insurance policy but negatively associated with the trust from the customer and level of awareness of insurance policy.

Christianity religion belief is also positively associated with ethnicity of customer, trust from the customer and level of awareness of insurance policy but negatively related with language of the insurance policy. Ethnicity of customer positively related with language of the insurance policy, but has a negative relationship with the trust from the customer and level of awareness of insurance policy. Language of the insurance policy also related negatively with trust of customers and level of awareness of insurance policy. The analysis of the correlation revealed a positive relationship between trust from customers and level of awareness of insurance policy. Generally, the results from the correlation analysis revealed that there was no multicollinearity problems as all independent variables show a value of less than the proposed cut-off point of 0.7.

Table 4.11: ***Results of Correlation Analysis of Other Explanatory Variables***

	AGE	SIZ	ASST	LEV	BDSZ	BDGD	BDINDP	BS	BDDEL	BOW	logBCC	INTR	EXHR	GDPg	INFR
AGE	1.00														
SIZ	0.09	1.00													
	(0.27)														
ASST	-0.10	-0.45	1.00												
	(0.21)	(0.00)													
LEV	0.19	0.27	-0.10	1.00											
	(0.02)	(0.00)	(0.21)												
BDSZ	-0.21	0.28	-0.31	-0.14	1.00										
	(0.01)	(0.00)	(0.00)	(0.08)											
BDGD	0.19	-0.04	-0.12	0.12	-0.26	1.00									
	(0.02)	(0.65)	(0.14)	(0.14)	(0.00)										
BDINDP	-0.17	-0.06	-0.05	-0.33	0.26	-0.13	1.00								
	(0.04)	(0.45)	(0.52)	(0.00)	(0.00)	(0.11)									
BS	-0.03	0.31	-0.23	-0.04	0.12	-0.15	0.11	1.00							
	(0.70)	(0.00)	(0.00)	(0.58)	(0.13)	(0.06)	(0.15)								
BDDEL	-0.04	-0.04	0.00	-0.04	0.23	0.08	0.03	-0.07	1.00						
	(0.63)	(0.67)	(0.95)	(0.66)	(0.00)	(0.34)	(0.72)	(0.39)							
BOW	0.21	-0.28	0.06	-0.03	-0.13	-0.03	0.00	-0.06	0.03	1.00					
	(0.01)	(0.00)	(0.43)	(0.69)	(0.11)	(0.75)	(0.99)	(0.46)	(0.75)						
logBCC	-0.13	0.11	-0.19	0.03	0.07	0.20	0.02	-0.14	-0.07	0.01	1.00				
	(0.12)	(0.18)	(0.01)	(0.67)	(0.41)	(0.01)	(0.78)	(0.09)	(0.38)	(0.92)					
INTR	0.00	0.10	0.03	0.11	-0.06	0.18	-0.14	-0.01	0.07	-0.04	0.03	1.00			
	(1.00)	(0.19)	(0.72)	(0.16)	(0.43)	(0.02)	(0.09)	(0.89)	(0.36)	(0.64)	(0.75)				
EXHR	0.00	0.17	0.11	0.05	-0.05	0.24	-0.19	0.00	0.21	0.03	0.06	0.64	1.00		
	(1.00)	(0.03)	(0.18)	(0.49)	(0.53)	(0.00)	(0.01)	(1.00)	(0.01)	(0.76)	(0.44)	(0.00)			
GDPg	0.00	-0.11	-0.06	-0.06	0.00	-0.21	0.12	0.00	-0.23	0.03	-0.04	-0.57	-0.66	1.00	
	(1.00)	(0.15)	(0.47)	(0.43)	(0.97)	(0.01)	(0.12)	(0.96)	(0.00)	(0.69)	(0.57)	(0.00)	(0.00)		
INFR	0.00	0.09	0.04	0.07	-0.04	0.21	-0.11	-0.01	0.19	-0.04	0.01	0.67	0.64	-0.64	1.00
	(1.00)	(0.28)	(0.59)	(0.36)	(0.64)	(0.01)	(0.17)	(0.94)	(0.02)	(0.63)	(0.88)	(0.00)	(0.00)	(0.00)	

Source: Author's Computation, 2020.

Note: p-values in parenthesis

Presented in Table 4.11 is a correlation analysis result to examine the relationship that exists among explanatory (independent) variables. This is primarily to check the strength of these relationships and verify if none of them exceeds the 0.8 benchmark as a correlation coefficient beyond which there will be a problem of severe multicollinearity. The result showed that none of these relationships have correlation coefficients greater than 0.8. The strongest relationships exist among the macro economic variables. And as seen from the Table, the strength of the relationship among the variables is around 0.6. This means that the correlation coefficients of all the variables are well below 0.8. This implied that these variables can be included in the same model without any fear of severe multicollinearity.

4.4 Inferential Statistics

This section presented the results of the analysis of data from the inferential approach. In order to test the hypotheses developed for this study, inferential statistics mainly regression tools were used. Ordinallogistic regression analysis was conducted to test sub-hypotheses of hypothesis one and two. Other hypotheses were tested using random effects model with auto-correlated disturbances in order to correct for the identified presence of autocorrelation in the regular random effects model. The random effects model was selected based on the outcome of the Hausman test and second, to prevent the omission of time-specific variables in the model. The results are presented using each of the research questions of this study.

4.4.1 Impact of Customers' Demographic Factors on the Performance of Insurance Companies in Nigeria

Prior to presentation of result of the regression analysis for the impact of customers' demographic variables on performance of insurance companies in Nigeria, the study carried out three diagnostic test which includemodel fit, Goodness-of-Fit and Pseudo R-

Statistic to assess the overall goodness of fit of ordinal logistic regression. These are presented as follows:

4.4.1.1 Model Fit

This study determines whether the model improves ability to predict the outcome by comparing a model without any explanatory variables against the model with all the explanatory variables. The result of Model Fitting Information presented in Table 4.12a shows the -2 log-likelihood values for the baseline and the final model. This was achieved computing a chi-square to test the difference between the -2LL for the two models.

Table 4.12a: ***Model Fitting Information***

Model	-2 Log Likelihood	Chi-Square	df	Sig.
Intercept Only	1463.345			
Final	1383.840	79.504	13	.000

Link function: Logit.

Source: Author's Computation (2020)

Assessing the fitness of the model, the Table 4.12a shows the result of the model fitness, with Chi-squared value of 79.504 and p-value of 0.000. This suggests a rejection of the test's null hypothesis that the model is not in good fit and hence, accepting the alternative that the model is in good fit.

4.4.1.2 Goodness of Fit

The goodness of fit statistic was determined to test whether the observed data are consistent with the fitted model. This is assist the author to decide whether the data and the model predictions are similar and that the model is a good model. The result of goodness of fit was presented in Table 4.12b which contained Pearson's chi-square statistic for the model as well as another chi-square statistic based on the deviance.

Table 4.12b: ***Goodness of Fit Statistic***

	Chi-Square	df	Sig.
Pearson	4323.684	1109	.000
Deviance	1372.424	1109	.000

Link function: Logit.

Source: Author's Computation (2020)

Both the Pearson and Deviance tests of goodness-of-Fit presented in Table 4.12b also confirm the Chi-squared result. With Pearson and Deviance Chi-squared value of 4323.684 and 1372.424, each with p-value of 0.000, the test's null hypothesis can safely be rejected in favour of the alternative that the model if in good fit. More importantly, although the chi-square can be very useful for models with a small number of categorical explanatory variables, they are very sensitive to empty cells. When estimating models with a large number of categorical (nominal or ordinal) predictors or with continuous covariates, there are often many empty cells. Therefore, the present study did not rely solely on this statistic, other methods of indexing the goodness of fit like the pseudo R-square statistic was also employed.

4.4.1.3 Pseudo R-Statistic

In linear regression, R^2 (the coefficient of determination) summarizes the proportion of variance in the outcome that can be accounted for by the explanatory variables, with larger R^2 values indicating that more of the variation in the outcome can be explained up to a maximum of 1. For logistic and ordinal regression models it not possible to compute the same R^2 statistic as in linear regression, so three approximations (the Cox and Snell, Nagelkerke and McFadden) are computed to measure R^2. However, what constitutes a goodR^2 value depends upon the nature of the outcome and the explanatory variables. The result of Pseudo R-Statistic is presented in Table 4.12c

Table 4.12c: ***Pseudo R-Statistic***

Pseudo R-Square	
Cox and Snell	.233
Nagelkerke	.234
McFadden	.052

Link function: Logit.

Source: Author's Computation (2020)

Table 4.12c shown that the result of Pseudo R-squared values based on Cox and Snell, Nagekerke and McFadden procedures are 0.233, 0.234 and 0.052 respectively. With these values significantly farther from zero, it can safely be concluded that the model has some degrees of explanatory power on the demand for insurance products.

4.4.1.4 Parameter Estimates

The Parameter estimates presented in Table 4.12d is the core of the output which specifically revealing the relationship between the explanatory variables (Demographic Characteristic of Customers) and the outcome.

Table 4.12d: ***Parameter Estimates***

Parameter Estimates										
						95% Confidence Interval				
Explanatory Variables	Estimate	Std. Error	Wald	df	Sig.	Lower Bound	Upper Bound	Exp_B	Lower	Upper
AGE	0.461	0.185	6.213	1	0.013	.098	.823	1.58	1.10	2.28
WORKINGCLASS	-0.260	0.123	4.519	1	0.034	-.501	-.020	0.77	0.61	0.98
ANNUALINCOME	-0.029	0.081	0.125	1	0.723	-.188	.130	0.97	0.83	1.14
WKEXP	0.130	0.125	1.095	1	0.295	-.114	.375	1.14	0.89	1.45
TYPEINSUR	0.175	0.143	1.490	1	0.222	-.106	.456	1.19	0.90	1.58
[GENDER=1]	0.163	0.232	0.496	1	0.481	-.291	.617	1.18	0.75	1.85
[GENDER=2]	0[a]	.	.	0	.	.	.	1.00		
[MARITAL=1]	2.031	0.935	4.718	1	0.030	.198	3.864	7.62	1.22	47.66
[MARITAL=2]	1.936	0.895	4.683	1	0.030	.183	3.689	6.93	1.20	40.02
[MARITAL=3]	2.196	0.942	5.429	1	0.020	.349	4.043	8.99	1.42	57.01
[MARITAL=4]	0[a]	.	.	0	.	.	.	1.00		
[ACDEQUA=1]	-0.642	0.823	0.609	1	0.435	-2.255	.970	0.53	0.10	2.64
[ACDEQUA=2]	-0.954	0.698	1.867	1	0.172	-2.322	.414	0.39	0.10	1.51
[ACDEQUA=3]	0.473	0.711	0.443	1	0.506	-.920	1.866	1.61	0.40	6.47
[ACDEQUA=4]	0.674	1.095	0.379	1	0.538	-1.472	2.819	1.96	0.23	16.77
[ACDEQUA=5]	0[a]	.	.	0	.	.	.	1.00		

Link function: Logit.

a. This parameter is set to zero because it is redundant.

Source: Author's Computation (2020)

The results presented in the Table 4.12d are those of the performance of each of the demographic explanatory variables included in the model. These variables include age of respondent, working class, annual income, work experience, type of insurance policy, gender (equals 1 if male and 2 if female), marital status (equals 1 if single, 2 if married, 3 if divorced and 4 if others) and academic qualification (equals 1 if Diploma/NCE, 2 if HND/Degree, 3 if Masters, 4 if Doctoral degree and 5 if others). Each of the last categories of gender, marital status and academic qualification (i.e. female, other marital status and other academic qualification) were removed to avoid multicollinearity problems in the result.

The results show that age, work experience, type of insurance policy, male gender, all marital status and academic qualifications of Master's and Doctoral degree have positive coefficients while the coefficients of working class, annual income and academic qualifications of Diploma/NCE and HND/Degree are negative. However, only the coefficients of age, working class and all categories of marital status are statistically significant while the coefficients of other variables are not significant. This is evident from the fact that the former variables have p-values less than 0.05 significance level while the latter variables have p-values greater than 0.05.

The significant positive coefficient of age signifies that increase in age of an individual will increase the odds of take up insurance products with an odds ratio of 1.58 (95% Confidence Interval (CI), 1.10 to 2.28), Wald X^2 (1) of 6.213 with $p<0.013$. As for marital status, the significant positive coefficient of single marital status signifies that individuals that are still single have the odds of higher tendency of taking up insurance products with an odds ratio of 7.62 (95% CI, 1.22 to 47.66), Wald X^2 (1) of 4.718 with $p<0.030$. Also, the significant positive coefficient of married marital status signifies that individuals that are married have higher tendency of taking up insurance products with

an odds ratio of 6.93 (95% Confidence Interval (CI), 1.20 to 40.02), Wald X^2 (1) of 4.683 with p<0.030.Similarly, the significant positive coefficient of divorced marital status signifies that individuals that are divorced have higher tendency of taking up insurance products with an odds ratio of 8.99 (95% Confidence Interval (CI), 1.42 to 57.01), Wald X^2 (1) of 5.429 with p<0.020. On the other hand, increase in the working class of an individual will decrease the tendency that such individual will take up insurance products with an odds ratio of 0.77 (95% Confidence Interval (CI), 0.61 to 0.98), Wald X^2 (1) of 4.519 with p<0.034.

4.4.2 Impact of Social Cultural Factorson the Performance of Insurance Companies

The ordinal logistic regression analysis focuses on the impact of socio-cultural factors on performance of insurance companies, particularly on demand for insurance policy by customers in Nigeria. However, the study conducted three diagnostic test which include model fit, Goodness-of-Fit and Pseudo R-Statistic to assess the overall goodness of fit of the model prior to ordinal logistic regression estimation.

4.4.2.1 Model Fit

This study assessed whether the model improves ability to predict the outcome by examining a model without socio-cultural factors against the model with all the socio-cultural factors. The result of Model Fitting Information presented in Table 4.13a shows the -2 log-likelihood values for the baseline and the final model. This was achieved computing a chi-square to test the difference between the -2LL for the two models.

Table 4.13a:*Model Fitting Information*

Model	-2 Log Likelihood	Chi-Square	df	Sig.
Intercept Only	1530.341			
Final	1205.990	324.351	22	.000

Link function: Logit.

Source: Author's Computation (2020)

The result of Model fitting information is presented in Table 4.13a. The result shows the model fitness, with Chi-squared value of 324.351 and p-value of 0.000. This suggests a rejection of the test's null hypothesis that the model is not in good fit and hence, accepting the alternative that the model is in good fit.

4.4.2.2 Goodness of Fit

In order to examining whether the observed data are consistent with the fitted model, the study computed a goodness of fit statistic. The result of goodness of fit is presented in Table 4.13b depicting that Pearson's chi-square statistic for the model and chi-square statistic based on the deviance.

Table 4.13b:*Goodness of Fit Statistic*

	Chi-Square	df	Sig.
Pearson	30115.970	1202	.000
Deviance	1204.369	1202	.475

Link function: Logit.

Source: Author's Computation (2020)

Table 4.13b shows the result of goodness of fi statistic to determine whether the data and the model predictions are similar and that the model is a good model. The Pearson tests of goodness-of-Fit in the Table 4.13b also confirms the Chi-squared result. With Pearson Chi-squared value of 30115.970, with p-value of 0.000, the test's null hypothesis can safely be rejected in favour of the alternative that the model if in good fit. However, the

Deviance Chi-squared value of 1204.369 and p-value of 0.475 does not support the rejection of the test's null hypothesis. However, the study employed other methods of indexing the goodness of fit like the pseudo R-square statistic as result of discrepancy that may arise with Pearson tests of goodness-of-Fit.

4.4.2.3 Pseudo R-Statistic

The study employed three approximations such as Cox and Snell, Nagelkerke and McFadden to measures R^2 to check overall goodness fit of the model. The nature of the outcome will assist the author to determine if the R^2 value is good. The result of Pseudo R-Statistic is presented in Table 4.13c.

Table 4.13c: ***Pseudo R-Statistic***

Pseudo R-Square	
Cox and Snell	.661
Nagelkerke	.665
McFadden	.212

Link function: Logit.

Source: Author's Computation (2020)

The result of Pseudo R-Statistic presented in Table 4.13c shows that the result of Pseudo R-squared values based on Cox and Snell, Nagekerke and McFadden procedures are 0.233, 0.234 and 0.052 respectively. With these values significantly farther from zero, it can safely be concluded that the model has some degrees of explanatory power on the demand for insurance products.

4.4.2.4 Parameter Estimates of Socio-cultural Factors and Take up of Insurance Products

Ordinal logistic regression result is presented under in Table 4.13d. The Parameter estimates revealed the impact of socio-cultural factors on take up of insurance policy by customers.

Table 4.13d: ***Parameter Estimates***

Parameter Estimates										
Explanatory Variables	Estimates	Std. Error	Wald	df	Sig	95% Confidence Interval		Exp_B	Lower	Upper
						Lower Bound	Upper Bound			
ISLAM	0.478	0.174	7.564	1	0.006	.137	.818	1.61	1.15	2.27
CHRIST	0.685	0.156	19.330	1	0.000	.380	.991	1.98	1.46	2.69
LANG	0.296	0.117	6.369	1	0.012	.066	.525	1.34	1.07	1.69
TRUST	1.552	0.218	50.721	1	0.000	1.125	1.978	4.72	3.08	7.23
AWARE	-1.209	0.228	28.083	1	0.000	-1.657	-.762	0.30	0.19	0.47
EHTNIC	-2.794	1.194	5.479	1	0.190	-5.133	-.455	0.06	0.01	0.63

Link function: Logit.

a. This parameter is set to zero because it is redundant.

Source: Author's Computation (2020)

Table 4.13d presented the result of ordinal logistic regression analysis on effect of socio-cultural factors on performance of insurance companies in Nigeria. The results are those of the performance of each of the socio-cultural explanatory variables included in the model. These variables include Islamic religion, Christianity religion, language, trust, awareness and ethnicity. The results show that Islamic religion belief, Christianity religion belief, language of insurance policy and trust by customer have positive coefficients while the coefficients of awareness and ethnicity background are negative. All these coefficients are also seen from the results in Table 4.13d to be statistically significant. This is evident from the fact that they have p-values less than 0.05 significance level.

The significant positive coefficient of Islamic religion belief signifies that its increase will increase the tendency that individuals will take up insurance products with an odds ratio of 1.61 (95% CI, 1.15 to 2.27), Wald X^2 (1) of 7.564 with $p<0.006$. The significant positive coefficient of Christianity religion belief indicates that its increase will also increase the tendency that individuals will take up insurance products with an odds ratio of 1.98 (95% CI, 1.46 to 2.69), Wald X^2 (1) of 19.330 with $p<0.000$. As for language, its significant positive coefficient implies that its increase will increase the tendency that individuals will take up insurance products with an odds ratio of 1.34 (95% CI, 1.07 to 1.69), Wald X^2 (1) of 6.369 with $p<0.012$. Also, the significant positive coefficient of trust shows that increase in people's trust in insurance products will increase the tendency that people will take up insurance products with an odds ratio of 4.72 (95% CI, 3.08 to 7.23), Wald X^2 (1) of 50.721 with $p<0.000$. Surprisingly, increase in the awareness of individuals of insurance products will decrease the tendency that they will take up insurance products with an odds ratio of 0.30 (95% CI, 0.19 to 0.47), Wald X^2 (1) of 28.083 with $p<0.000$.

4.4.3 Impact of Firm-Specific Characteristics on Performance of Insurance Companies in Nigeria

Table 4.14: ***Results of Serially Correlated Disturbance Random Effects of Impact of Firm-Specific Characteristics on Performance of Insurance Companies in Nigeria***

	(1)		(2)		(3)		(4)		(5)		(6)		(7)	
VARIABLES	**C**	**p-val**	**A**	**p-val**	**RA**	**p-val**	**M**	**p-val**	**E**	**p-val**	**L**	**p-val**	**S**	**p-val**
AGE	-0.00203	0.748	0.00187**	0.015	0.00194	0.312	0.00236	0.363	-0.00109	0.667	0.194	0.801	-0.00203	0.748
	(0.0063)		(0.00077)		(0.0019)		(0.0027)		(0.0025)		(0.768)		(0.0063)	
SIZ	-0.29***	0.000	-0.0172	0.123	-0.0283	0.294	-0.084**	0.021	0.0325	0.447	-11.96	0.349	-0.29***	0.000
	(0.0810)		(0.0111)		(0.0270)		(0.0374)		(0.0427)		(12.76)		(0.0810)	
ASST	0.221	0.479	-0.0939	0.104	0.146	0.287	0.0640	0.708	-0.402	0.104	1.883	0.979	0.221	0.479
	(0.312)		(0.0577)		(0.137)		(0.127)		(0.247)		(71.68)		(0.312)	
LEV	-0.00386	0.158	2.04e-05	0.977	0.00180	0.265	-0.00052	0.491	-0.0003	0.921	1.773**	0.038	-0.00386	0.158
	(0.0027)		(0.00069)		(0.00162)		(0.0010)		(0.00305)		(0.855)		(0.00273)	
Constant	7.553***	0.000	0.391	0.136	1.266**	0.047	2.212***	0.009	-0.459	0.651	290.0	0.337	7.553***	0.000
	(1.904)		(0.263)		(0.637)		(0.887)		(1.013)		(302.0)		(1.904)	
R-squared	0.358		0.242		0.178		0.089		0.259		0.045		0.358	
Wald Chi-sq.	18.45***		10.17*		4.70		9.75**		4.89		4.94		18.45***	
F-test	5.73***	0.000	5.43***	0.000	5.65***	0.000	9.39***	0.000	1.87**	0.000	1.98**	0.000	5.73***	0.000
Hausman test	0.93	0.811	0.20	0.977	1.59	0.566	1.44	0.696	6.66	0.184	1.37	0.712	0.96	0.811

Source: Author's Computation, 2020.

*Note: Standard errors in parentheses; *** p<0.01, ** p<0.05, * p<0.1*

The results presented in Table 4.14 are those conducted to examine the impact of firm-specific characteristics on each of the CARAMELS performance indicators respectively. The models for CARAMELS are presented on the columns labelled 1, 2, 3, 4, 5, 6 and 7. The model diagnostics are in form of R-squared and Wald Chi-squared. The R-squared values for the models are 0.358, 0.242, 0.178, 0.089, 0.259, 0.045 and 0.358 respectively, indicating that 35.8 percent, 24.2 percent, 17.8 percent, 8.9 percent, 25.9 percent, 4.5 percent and 35.8 percent of variations in CARAMELS are explained by firm-specific factors respectively. The Wald Chi-squared statistic indicated that only the Capital Adequacy, Asset Quality, Management Efficiency and Solvency models are in good fit. The Wald Chi-squared coefficients for Capital Adequacy, Asset Quality, Management Efficiency and Solvency are 18.45 (with $p<0.01$), 10.17 (with $p<0.1$), 9.75 (with $p<0.05$) and 18.45 (with $p<0.01$) respectively. The models for Reinsurance and Actuarial,Earnings and Profitability and Liquidity are not well fitted given that their statistic values of 4.70, 4.89 and 4.94 have p-values greater than 0.1.

The results serially correlated disturbance random effects in Table 4.14 also showed that firm age is only statistically significant in the model for asset quality. It is insignificant in the models for other performance indicators. This is indicated by the p-value of age of insurance companies being less than 0.05 level of significance in the model for asset quality but greater than 0.1 in other models. The coefficient of firm age in the model for asset quality (0.00187) is positive, indicating that a year increase in the age of insurance firms will lead to an increase in their performance via asset quality by approximately 0.0019 percentage points.

As to the impact of firm size, the results in Table 4.14 showed that firm size is only statistically significant in the models for capital adequacy, management efficiency and solvency. It is insignificant in the models for other performance indicators. This is indicated

by the p-value of size of insurance companies being less than 0.01 in the model for capital adequacy, less than 0.05 in the model for management efficiency and less than 0.01 in the model for solvency. These values indicated that firm size is significant at 1%, 5% and 10% in these models respectively. The p-value of size of insurance companies is, however, greater than 0.1 in other models. The coefficient of firm size in the model is negative for capital adequacy (-0.29), for management efficiency (-0.084) and solvency (-0.29). The negativity indicates that a percent increase in the size (or total assets) of insurance firms will lead to a decline in their performance via reduction in capital adequacy, management efficiency and solvency by approximately 0.29, 0.08 and 0.29 percentage points, respectively.

The results of serially correlated disturbance random effects in Table 4.14 also revealedthat asset tangibility is not statistically significant in all the models for performance. Its insignificance is due to its p-values in all models being greater than 0.1. This indicated that it is not even significant at the slightest 10% significance level. This implied that asset tangibility is not among firm-specific factors that affect performance of insurance firms.Leverage is only statistically significant in the model for liquidity. It is insignificant in the models for other performance indicators. This is indicated by its p-value being less than 0.05 level of significance in the model for asset quality but greater than 0.1 in the other models. The coefficient of leverage of the firms in the model for liquidity (1.773) is positive. This indicated that a point increase in the leverage status of insurance firms will lead to an increase in their performance via liquidity by approximately 1.773 points.

4.4.4 Impact of Board Dynamics on Performance of Insurance Companies

Table 4.15: ***Results of Serially Correlated Disturbance Random Effects ofImpact of Board Dynamics on Performance of Insurance Companies in Nigeria***

	(1)		(2)		(3)		(4)		(5)		(6)		(7)	
VARIABLES	**C**	**p-val**	**A**	**p-val**	**RA**	**p-val**	**M**	**p-val**	**E**	**p-val**	**L**	**p-val**	**S**	**p-val**
BDSZ	-0.0118	0.592	-0.00166	0.417	-0.00132	0.884	-0.0154**	0.046	-0.0188	0.266	-1.655	0.205	-0.0118	0.592
	(0.0220)		(0.00210)		(0.00904)		(0.00769)		(0.0169)		(1.305)		(0.0220)	
BDGD	0.0678	0.869	0.0357	0.254	0.0916	0.525	0.224*	0.078	0.297	0.275	-23.91	0.247	0.0678	0.869
	(0.411)		(0.0333)		(0.144)		(0.127)		(0.272)		(20.65)		(0.411)	
BDINDP	0.402	0.426	0.0787*	0.086	-0.0661	0.728	0.518***	0.002	0.569*	0.090	32.73	0.210	0.402	0.426
	(0.505)		(0.0457)		(0.190)		(0.167)		(0.336)		(26.09)		(0.505)	
BS	-0.0645	0.868	-0.0398	0.254	-0.236*	0.051	-0.0270	0.827	0.485***	0.007	-0.986	0.944	-0.0645	0.868
	(0.387)		(0.0379)		(0.121)		(0.124)		(0.181)		(14.16)		(0.387)	
BDDEL	0.0192	0.323	0.00246	0.183	-0.00330	0.722	0.0220***	0.003	0.0248	0.193	0.438	0.773	0.0192	0.323
	(0.0194)		(0.00196)		(0.00928)		(0.00730)		(0.0191)		(1.518)		(0.0194)	
BOW	-0.0268	0.854	-0.034**	0.018	0.00586	0.928	-0.0241	0.643	-0.242*	0.055	4.077	0.684	-0.0268	0.854
	(0.145)		(0.0141)		(0.0645)		(0.0520)		(0.126)		(10.01)		(0.145)	
LogBCC	-0.0130	0.227	0.000015	0.823	-0.00566	0.105	0.00348	0.316	0.00964*	0.076	0.513	0.224	-0.0130	0.227
	(0.0108)		(0.00108)		(0.00349)		(0.00348)		(0.00544)		(0.422)		(0.0108)	
Constant	0.543	0.221	-0.00296	0.870	0.870***	0.000	-0.0896	0.550	-0.332	0.236	1.363	0.951	0.543	0.221
	(0.443)		(0.0428)		(0.166)		(0.150)		(0.280)		(22.04)		(0.443)	
R-squared	0.135		0.104		0.265		0.324		0.566		0.152		0.135	
Wald Chi-sq.	3.48		17.17**		6.63		22.14***		16.59**		5.19		3.48	
F-test	5.19***	0.000	10.93***	0.000	5.20***	0.000	12.05***	0.000	2.06**	0.011	2.20***	0.000	5.19***	0.000
Hausman test	8.48	0.292	4.67	0.700	9.23	0.236	4.77	0.659	7.49	0.379	1.53	0.902	8.48	0.292

Source: Author's Computation, 2020.

*Note: Standard errors in parentheses; *** p<0.01, ** p<0.05, * p<0.1*

The results of serially correlated disturbance random effectspresented in Table 4.15 are those conducted to examine the impact of board dynamics on each of the CARAMELS performance indicators. The models for CARAMELS arepresented on the columns labelled 1, 2, 3, 4, 5, 6 and 7 respectively. The model diagnostics are in form of R-squared and Wald Chi-squared. The R-squared values for the models are 0.135, 0.104, 0.265, 0.324, 0.566, 0.152 and 0.135 respectively. This indicated that 13.5, 10.4, 26.5, 32.4, 56.6, 15.2 and 13.5 percent of variations respectively of CARAMELS are explained by board dynamics. The Wald Chi-squared statistic indicated that only the Asset Quality, Management Efficiency and Earnings and Profitabilitymodels are in good fit and that the board dynamics indicators are jointly significant in affecting them. The effect is shown by their respective statistic values of 17.17 (with $p<0.05$), 22.14 (with $p<0.01$) and16.59 (with $p<0.05$). The models for Capital Adequacy,Reinsurance and Actuarial,Liquidity andSolvencyare not well fitted given their statistic values of 3.48, 6.63, 5.19 and 3.48 have p-values greater than 0.1 respectively.

The results of serially correlated disturbance random effectspresented in Table 4.15 revealed that board size is only statistically significant in the model for management efficiency. It is insignificant in the models for other performance indicators. This is indicated by its p-value being less than 0.05 level of significance in the model for management efficiency but greater than 0.1 in other models. The coefficient of board size in the model for management efficiency (-0.0154) is negative, indicating that increase in the number of directors serving on the board of insurance companies by an individual will lead to a decline in the performance of these companies via management efficiency by approximately 0.015 percentage points.

Board gender diversity is only statistically significant in the model for management efficiency. It is insignificant in the models for other performance indicators. This is indicated by its p-value being less than 0.1 level of significance in the model for management

efficiency but greater than 0.1 in other models. The coefficient of board gender diversity in the model for management efficiency (0.224) is positive, indicating that a percent point increase in the proportion of female directors in total directors serving on the board of insurance companies will lead to a rise in the performance of these companies via management efficiency by approximately 0.224 percentage points.

Board independence is only statistically significant in the models for asset quality, management efficiency and earnings and profitability. It is insignificant in the models for other performance indicators. This is indicated by its p-value being less than 0.01, 0.05 and 0.1 levels of significance in the models for asset quality, management efficiency and earnings and profitability, but greater than 0.1 in other models. The coefficient of board independence in the model for asset quality (0.0787) is positive for management efficiency (0.518) earnings and profitability (0.569). This indicatedthat a percent point increase in the proportion of independent directors in total directors serving on the board of insurance companies will lead to a rise in performance of these companies via asset quality, management efficiency and earnings and profitability by approximately 0.08, 0.52 and 0.57 percentage points respectively.

Block shareholder is only statistically significant in the models for reinsurance and actuarial and earnings and profitability. It is insignificant in the models for other performance indicators. This is indicated by its p-value being less than 0.1 and 0.01 levels of significance in the models for reinsurance and actuarial and earnings and profitability respectively, but greater than 0.1 in other models. The coefficient of foreign board member in the model for reinsurance and actuarial (-0.236) is negative, but for earnings and profitability (0.485). This implied that a percent point increase innumber of shares to total ordinary shares of insurance companies will lead to a decline in the performance of these companies via reinsurance and

actuarial by approximately 0.24 percentage points. It also means that a percent point increase in the block holding of insurance companies will lead to a rise in the performance of these companies via earnings and profitability by approximately 0.24 percentage points.

Board diligence is only statistically significant in the model for management efficiency. It is insignificant in the models for other performance indicators. This is indicated by its p-value being less than 0.01 level of significance in the model for management efficiency but greater than 0.1 in other models. The coefficient of board diligence in the model for management efficiency (0.0220) is positive, indicating that a percent point increase in the number of meetings held by board of directors of insurance companies will lead to a rise in the performance of these companies via management efficiency by approximately 0.02 percentage points.

Board ownership is only statistically significant in the models for asset quality and earnings and profitability. It is insignificant in the models for other performance indicators. This is indicated by its p-value being less than 0.05 and 0.1 levels of significance in the models for asset quality and earnings and profitability respectively, but greater than 0.1 in other models. The coefficient of board ownership in the model for asset quality (-0.034) is negative and for earnings and profitability (-0.242) is positive. This impliedthat a percent point increase in the proportion of shares owned by board of directors of insurance companies will lead to a decline in performance of these companies via asset quality and earnings and profitability by approximately 0.03 and 0.24 percentage points respectively.

Board compensation is only statistically significant in the model for earnings and profitability. It is insignificant in the models for other performance indicators. This is indicated by its p-value being less than 0.1 level of significance in the model for earnings and profitability, but greater than 0.1 in other models. The coefficient of board diligence in the

model for earnings and profitability (0.00964) is positive, indicating that a percent increase in the average compensation paid to the board of directors of insurance companies will lead to a rise in the performance of these companies via earnings and profitabilityby approximately 0.96 (i.e. 0.00964 x 100) percentage points.

4.4.5 Impact of Some Selected Macroeconomic Variables on Performance of Insurance Companies in Nigeria

Table 4.16: ***Results of Serially Correlated Disturbance Random Effects of Impact of Macroeconomic Factors on Performance of Insurance Companies in Nigeria***

	(1)		(2)		(3)		(4)		(5)		(6)		(7)	
VARIABLES	**C**	**p-val**	**A**	**p-val**	**RA**	**p-val**	**M**	**p-val**	**E**	**p-val**	**L**	**p-val**	**S**	**p-val**
INTR	0.0315	0.744	-0.00119	0.967	-0.0225	0.728	-0.0892	0.113	0.185	0.137	5.947	0.855	0.0315	0.744
	(0.0967)		(0.0293)		(0.0646)		(0.0562)		(0.124)		(32.60)		(0.0967)	
EXHR	0.00195**	0.016	-0.000182	0.214	-0.000212	0.499	5.05e-05	0.880	0.00043	0.537	-0.240	0.236	0.00195**	0.016
	(0.00081)		(0.00015)		(0.00031)		(0.00033)		(0.0007)		(0.203)		(0.000)	
GDPg	0.0171	0.330	0.00280	0.476	0.0153*	0.070	0.00274	0.759	0.0142	0.454	0.0432	0.994	0.0171	0.330
	(0.0175)		(0.00393)		(0.00843)		(0.00893)		(0.0190)		(5.332)		(0.0175)	
INFR	-0.00306	0.832	0.00263	0.473	0.0165**	0.037	0.0111	0.151	-0.0132	0.434	2.438	0.592	-0.00306	0.832
	(0.0144)		(0.00366)		(0.00793)		(0.00771)		(0.0168)		(4.553)		(0.0144)	
Constant	-0.349	0.810	0.0765	0.865	0.901	0.364	1.727**	0.044	-2.895	0.126	-51.93	0.916	-0.349	0.810
	(1.453)		(0.450)		(0.993)		(0.856)		(1.894)		(494.8)		(1.453)	
R-squared	0.069		0.049		0.034		0.013		0.044		0.015		0.069	
Wald Chi-sq.	8.98		5.82		6.89		4.44		6.60		1.88		8.98	
F-test	8.60***	0.000	6.54***	0.000	7.25***	0.000	10.96***	0.000	2.63***	0.000	2.90***	0.000	8.60***	0.000
Hausman test	0.01	1.00	0.05	0.999	0.87	0.929	0.14	0.998	0.08	0.999	0.02	0.999	0.01	1.00

Source: Author's Computation, 2020.

*Note: Standard errors in parentheses; *** p<0.01, ** p<0.05, * p<0.1*

The results presented in Table 4.16 are those conducted to examine the impact of macroeconomic factors on each of the CARAMELS performance indicators respectively, with models for each indicator presented on the columns labelled 1, 2, 3, 4, 5, 6 and 7. The model diagnostics are in form of R-squared and Wald Chi-squared. The R-squared values for the models are 0.069, 0.049, 0.034, 0.013, 0.044, 0.015 and 0.069 respectively, indicating that only6.9 percent, 4.9 percent, 3.4 percent, 1.3 percent, 4.4 percent, 1.5 percent and 6.9 percent of variations for each indicator are explained by macroeconomic factors respectively. The Wald Chi-squared statistic indicates that none of the models is in good fit and hence, macroeconomic factors are jointly not significant in affecting performance of insurance companies. This is shown by their respective statistic values of 8.98, 5.82, 6.89, 4.44, 6.60, 1.88 and 8.98,whichall have p-values greater than 0.1.

The results of serially correlated disturbance random effectspresented in Table 4.16 showed that interest rate is not statistically significant in all the models for performance. Its insignificance is due to its p-values in all the models being greater than 0.1. This means they are not even significant at the slightest 10% significance level. This implied that interest rate is not among the macroeconomic factors that affect performance of insurance firms.Exchange rate is only statistically significant in the models for capital adequacy and solvency. It is insignificant in the models for other performance indicators. This is indicated by its p-value being less than 0.05 levels of significance in the models for capital adequacy and solvency respectively, but greater than 0.1 in other models. The coefficient of exchange rate in the model for capital adequacy (0.00195) and solvency (0.00195) is positive, indicating that a naira increase in foreign exchange will lead to a rise in the performance of these companies via capital adequacy and solvency by approximately 0.0019 and 0.0019 percentage points respectively.

GDP growth (or economic growth) is only statistically significant in the model for reinsurance and actuarial. It is insignificant in the models for other performance indicators. This is indicated by its p-value being less than 0.1 levels of significance in the model for capital adequacy respectively, but greater than 0.1 in other models. The coefficient of GDP growth in the model for reinsurance and actuarial (0.0153) is positive, indicating that a percent point increase in the GDP growth will lead to a rise in the performance of these companies via capital adequacy by approximately 0.015 percentage points respectively.

Inflation rate is only statistically significant in the model for reinsurance and actuarial. It is insignificant in the models for other performance indicators. This is indicated by its p-value being less than 0.05 levels of significance in the model for reinsurance and actuarial, but greater than 0.1 in other models. The coefficient of inflation in the model for reinsurance and actuarial (0.0165) is positive, indicating that a percent point increase in inflation rate will lead to a rise in the performance of these companies via capital adequacy by approximately 0.017 percentage points respectively.

4.4.6 Summary of Hypotheses Testing

Based on the results of the finding presented earlier from the inferential statistics analysis, the summary of hypothesis testing is presented in Table 4.17.

Table 4.17: ***Summary of Hypothesis Testing***

S/N	Main Hypothesis	Sub-Hypothesis	Findings	Remarks
1	$H_{01:}$ There is no significant relationship between demographic factors of consumers and performance of insurance companies in Nigeria.	$H_{02:1}$ There is no significant relationship between educational background and the performance of insurance companies in Nigeria.	+/Significant	Null hypothesis rejected
		$H_{02:2:}$ There is no significant relationship between marital status and the performance of insurance companies in Nigeria.	+/Significant	Null hypothesis rejected
		$H_{02:3}$ There is no significant relationship between income level of consumer and the performance of insurance companies in Nigeria.	-/Not Significant	Null hypothesis accepted
		$H_{02:4}$ There is no significant relationship between age of the customers and the performance of insurance companies in Nigeria.	+/Significant	Null hypothesis rejected
		$H_{02:5}$ There is no significant relationship between working experience and the performance of insurance companies in Nigeria.	+/Significant	Null hypothesis rejected
		$H_{02:6}$ There is no significant relationship between gender of the	+/Not Significant	Null hypothesis

		consumer and the performance of insurance companies in Nigeria.		accepted
		$H_{02:7}$ There is no significant relationship between working class of the consumer and the performance of insurance companies in Nigeria.	-/Significant	Null hypothesis rejected
2	$H_{02:}$ Social-cultural factors do not significantly affect the performance of listed insurance companies in Nigeria.	$H_{01:1}$ Islamic Religion belief does not significantly influence the performance of insurance companies in Nigeria.	+/Significant	Null hypothesis rejected
		$H_{1:2:}$ Christianity belief does not significantly influence the performance of insurance companies in Nigeria.	+/Significant	Null hypothesis rejected
		$H_{01:3}$ Ethnic background of customer does not significantly influence the performance of insurance companies in Nigeria.	-/Not Significant	Null hypothesis accepted
		$H_{01:4}$ Language do not significantly influence the performance of insurance companies in Nigeria.	+/Significant	Null hypothesis rejected
		$H_{01:5}$ Trust by the customer do not significantly influence the performance of insurance companies in Nigeria.	+/Significant	Null hypothesis rejected
		$H_{01:6}$ Level of awareness of the customer do not significantly influence the performance of insurance companies in Nigeria.	-/Significant	Null hypothesis rejected
3	$H_{03:}$ Firms' specific characteristics do not significantly influence the financial performance of	$H_{03:1:}$Company's age does not significantly influence the financial performance of insurance companies in Nigeria.	+/Significant with Asset quality	Null hypothesis rejected
		$H_{03:2}$Company's size does not significantly influence the	-/Significant with	Null hypothesis

	insurance companies in Nigeria.	financial performance of insurance companies in Nigeria.	capital adequacy, management efficiency and Solvency	rejected
		$H_{03:3}$Asset Tangibility does not significantly influence the financial performance of insurance companies in Nigeria.	+/- Not Significant	Null hypothesis accepted
		$H_{03:4}$Leverage does not significantly influence the financial performance of insurance companies in Nigeria.	+/Significant	Null hypothesis rejected
	H_{04}: Board dynamics do not have significant effect on the financial performance of insurance companies in Nigeria.	$H_{04:1:}$ Size of board members does not have significant effect on the financial performance of insurance companies in Nigeria.	-/Significant with Management efficiency	Null hypothesis rejected
		$H_{04:2:}$Proportion of women to men on the board does not have significant effect on the financial performance of insurance companies in Nigeria	+/Significant with Management efficiency	Null hypothesis rejected
		$H_{04:3:}$ Independence of the board member does not have significant effect on the financial performance of insurance companies in Nigeria.	+/Significant with Asset quality, Management efficiency and earnings and	Null hypothesis

			profitability	rejected
		$H_{04:4}$:Block shareholder does not have significant effect on the financial performance of insurance companies in Nigeria.	-/Significant with Reinsurance and Actuarial	Null hypothesis rejected
			+/Significant with Earnings and Profitability	
		$H_{04:5}$: Board diligence (meetings) does not have significant effect on the financial performance of insurance companies in Nigeria.	+/Significant with Management efficiency	Null hypothesis rejected
		$H_{04:6}$: Board's ownership does not have significant effect on the financial performance of insurance companies in Nigeria.	-/Significant with Asset quality and Earning and Profitability	Null hypothesis rejected
		$H_{04:7}$: Board compensation does not have significant effect on the financial performance of insurance companies in Nigeria.	+/Significant with Earning and Profitability	Null hypothesis rejected
	H_{05}: There is no significant impact of some selected	$H_{05.1}$: There is no significant impact of interest rate on the performance of insurance companies in Nigeria.	-/+ Not Significant	Null hypothesis accepted

	macro-economic variables on the performance of insurance companies in Nigeria.	$H_{05.2}$: There is no significant impact of exchange rate on the performance of insurance companies in Nigeria. $H_{05.3}$: There is no significant impact of growth of GDP on the performance of insurance companies in Nigeria. $H_{05.4}$: There is no significant impact of inflation rate on the performance of insurance companies in Nigeria.	+/Significant with Asset quality and Solvency +/Significant with Reinsurance and Actuarial +/Significant with Reinsurance and Actuarial	Null hypothesis rejected Null hypothesis rejected Null hypothesis rejected

Sources: Author's Compilation (2020)

4.5 Discussion of Findings

The study employed different variables and inferential statistics to assess determinant of performance of insurance companies in Nigeria. The combination of these variables and statistical techniques enabled the current study to provide answersto the research questions.

4.5.1 The extents to which demographic factors of consumer influence performance of insurance companies in Nigeria

This research question was addressed by employing demographic factors of customers which included gender, marital status, academic qualification, age, type of work, annual income and working experience. Ordinal logistic Regression analysis was conducted to provide answers to the role of demographic characteristic of customers. The result of the ordinal regression analysis revealedage, working class and all categories of marital status have positive statistical significant influence on take up of insurance policy by customers while working class are statistically and significantly negative. However, all other variables are not significant.

The result of the demographic analysis showed a significant positive relationship betweenage of customers and demand for insurance policy (α=0.461, P<0.013). Thenull hypothesis restated that there was significant effect of age of customers regarding their decision on uptake of insurance products. The significant positive coefficient of age implies that increase in age of an individual will increase the tendency that such individual will take up insurance products by 0.461 points. This can be interpreted that an increase in the age of customer increases demand for insurance products. The finding was in line with a prior expectation developed for this study. This means that a rise in age of customers by one year will result to a rise in the demand for insurance services by

46.1 percent and vice versa. The finding was in accordance with Kirigia (2005),Curak*et al* (2013),Singh*et al* (2014), Panda*et al* (2016),Badu*et al* (2018) and Aregbeshola and Khan (2018) that age is one of the demographic variable of customers that influence demand for take up of insurance product.

As for marital status, the result of ordinal regression revealed a significant positive coefficient of single marital status (α=2.031, P<0.030)whichsignifies that individuals that are still single have higher tendency of taking up insurance products than individuals with other marital status by 2.031 pointsand vice versa. Also, the significant positive coefficient of married marital status (α=1.936, P<0.030)signifies that individuals that are married have higher tendency of taking up insurance products than individuals with other marital status by 1.936 points and vice versa. Similarly, the significant positive coefficient of divorced marital status (α=2.196, P<0.020) indicates that individuals that are divorced have higher tendency of taking up insurance products than individuals with other marital status by 2.196 points and vice versa. Therefore, the study rejected the null hypothesis which states that level of education of customer influence performance of insurance industry in Nigeria.

This finding concurred with a prior expectation of this study. The implication of this finding implied that all the categories ofmarital status of customers such as single, married and divorced influence the performance of insurance companies in Nigeria. This finding aligned with a prior expectation of the study and supported by Kirigia (2005), Panda *et al* (2016), Badu *et al* (2018) and Gautam and Kumar (2020). These studies agreed that marital status of customers influence the extent of demand for insurance services but contradict the finding of Curak*et al* (2013) and Singh *et al* (2014). The finding was also in line with the view of resource-based view theory that education was one of the resources at disposal of customers and positively contributes to level of

demand for insurance service by customers. The success of an entity (individual and organization) is hinged on resources available as shown by the current study.

The results of ordinal regression analysis showed that type of work of customers negatively influence the extent of demand for insurance services. Based on the negative coefficient (α=-0.260, P<0.034), it implied that a negative change of type of work will increase the percentage of demand for insurance service and vice versa. An increase in the working of an individual will decrease the tendency that such individual will take up insurance products by 0.260 points and vice versa. The study failed to reject the null hypothesis. The finding was against a prior expectation of this study. Thisimplied that type of work of consumers do not affect performance of insurance company with regards to decision to demand for insurance policy by customers. The finding was in line with the conclusion of Singh*et al* (2014). However, there are more studies having result contrary to this finding, such as Curak*et al* (2013); Aregbeshola and Khan (2018) . They found that type of employment influences the extent of demand for insurance services. The reason for contradiction in the case of Nigeria may be linked with the introduction of mandatory health insurance scheme for federal civil servants.

However, the overall result implied that demand for take up of insurance policies was not influence by gender, academic qualification, annual income and working experience of customers. Since the result on these variables was statistically significant, further discussion on it was limited. However, the finding was not in line with a-prior expectation of this study.Age, marital status and type of work of customers constitutes resources at the disposal of customers that can influence their decision on demand for insurance. That age was a determinant of insurance patronage was also in line with resource-based view theory.

4.5.2 The Effect of Socio-Cultural Factors on Performance of Listed Insurance Companies in Nigeria

To answer this research question, six hypotheses were developed reflecting some of the essential socio-cultural factors of customers. These included Islamic religion beliefs, Christianity religion beliefs, ethnicity, language, trust and level of awareness of customers. The effects of these factors were assessed using the result of the ordinal regression analysis. The findings revealed that Islamic religion beliefs,Christianity religion beliefs, language, trust and level of awareness of customers are statistically significant while ethnic background of the customers is not statistically significant. For Islamic religion beliefs, the result revealed a positive significant (β=0.478, P<0.006) relationship with demand for insurance services of insurance company in Nigeria. The null hypothesis that Islamic religious beliefs do not significantly influences performance of insurance companies in Nigeria was rejected. This implied that a significant positive change by a point in Islamic belief increase the demand for insurance policy by 47.8 percent and vice versa.

The result of ordinal regression revealed a significant positive relationship between Christianity religion beliefs and demand for insurance services of insurance company in Nigeria. (β=0.685, P<0.000). The null hypothesis that Christianity religious beliefs do not significantly influences performance of insurance companies in Nigeria was rejected. This implied that a significant positive change by a point in Christianity belief increase the demand for insurance policy by 68.5 percent and vice versa. This means that being a Christianpositively influences the decision to take up of insurance policy in Nigeria.The finding that Christianand Muslim demands for insurance policy was in line with a prior expectation of this study and supported by the following previous studies like Aregbeshola and Khan (2018) and Badu*et al* (2018).

Regarding language used in the insurance policy, the study found that a significant positive relationship existed between the language and demand for insurance services with (β=0.296, P<0.012). The finding of the study implied that language of insurance policy positively affects the demand for insurance service in Nigeria. This result signifies that its increase will increase the tendency that individuals will take up insurance products by 0.296 points and vice versa.The finding was supported by Mathur and Tripathi (2014) that language of insurance policy was one of the factors that have high influence on customer's choice of demand for insurance services.

The fourth variable showed a statistical significant result between demand for insurance policy and trust by the customer. The result of the analysis showed a significant positive coefficient (β=1.552, P<0.000) indicating that trust by the customers influence the extent to which the customer demand for insurance services. Therefore, the study failed to accept null hypothesis and restated the alternative hypothesis that level of trust by customers significantly influence the performance of insurance company in Nigeria. This impliedthat increase in people's trust in insurance products will increase the tendency that people will take up insurance products by 1.552 points and vice versa. The positive significant relationship achieved was in line with a prior expectation of this study and the study byFelício and Rodrigues (2015), who concluded that customers' necessities and confidence in insurance companies strongly affect the latter's performance.

Lastly, the finding on socio-cultural factors also revealed that level of awareness of customers regarding insurance policy wasnegatively significant with demand for insurance policy. The coefficient value of (β =-1.209, P<0.000) indicated that increase in the awareness of individuals of insurance products will decrease the tendency that they will take up insurance products by 1.209 pointsand vice versa. Therefore, the study rejected the null hypothesis that levels of awareness of customers do not influence

performance of insurance companies. The finding was in line with a prior expectation of this study and also supported by Felício and Rodrigues (2015) that level of awareness of insurance policy and benefits strongly affect insurance companies' performance.Socio-cultural factors as consider in this study are some of the customers' specific features which affect their insurance uptakes' decision. The findings of this study in term of socio-cultural factors that affect uptake of insurance policy can be seen with resources-based view theory.

4.5.3 Impact of Firm-Specific Characteristics on the Performance of Insurance Companies

The research questions three give rise to four sub-hypotheses regarding age, size, asset tangibility and leverage status of listed insurance companies in Nigeria.Serially Correlated Disturbance Random Effects was employed to assess the impact of firm-specific characteristics on the performance of insurance companies. Three out of the four firm-specific characteristics employed in this study were statistically significant with either of CARAMELS indicators.

The results of Serially Correlated Disturbance Random Effects revealed that age of listed insurance companies in Nigeria is statistically significant with asset quality of CARAMELS performance indicator. The study found a significant positive relationship between age of listed insurance and asset quality based on (α=0.00187, P<0.015). Therefore, this study failed to accept null hypothesis that age of listed insurance companies does not affect their financial performance. This implied that a year increase in the age of listed insurance companies in Nigeria will result to an increase in their performance via asset quality by approximately 0.0019 percentage points. This finding was in line with a prior expectation of the study that age of listed insurance companies in

Nigeria influence performance of the insurance companies. This position was also supported by previous studies such as Omondi and Muturi (2013),Kaya (2015),Saeed and Khurram (2015),Abdelkader and Lamia (2018),Too and Simiyu (2018), and Ali *et al* (2019). However, Malik (2011),Dogan (2013),and Yuvarajsambasivam and Gashaw (2013) reported a contrary finding.

On impact of firm size, the serially correlated disturbance random effects showed that firm size was statistically significant with capital adequacy, management efficiency and solvency of CARAMELS financial performance indicators. The result of the analysis showeda negative coefficient of (α=-0.29, P<0.000) (α=-0.084, P<0.021) (α=-0.29, P<0.000) for capital adequacy, management efficiency and solvency respectively. Consequently, the null hypothesis that firm size does not affect performance in terms of capital adequacy, management efficiency and solvencywas accepted. The implication of these findings was that a percent increase in the size (or total assets) of listed insurance companies in Nigeria lead to a decline in their performance with respect to capital adequacy, management efficiency and solvency by approximately 0.29, 0.08 and 0.29 percentage points, respectively.This finding againsta prior expectation developed for this study. Olaosebikan (2012),Mazviona*et al* (2017), and Too and Simiyu (2018)are some of the previous studies that supported the finding which said that firm size of the listed insurance companies negatively affects their performance.

However, numerous previous studies like Ahmed (2007),Pervan*et al* (2010),Najjar and Petrov (2011), Ahmed *et al* (2011), Malik (2011),Daniel and Tilahun (2012),Dogan (2013),Yuvarajsambasivam and Gashaw (2013),Mehari and Aemiro (2013),Omondi and Muturi (2013),Kaya (2015),Nikhil*et al* (2015),Abdelkader and Lamia (2018) and Angima (2019) held contrary findings that size of insurance companies influence

performance of listed insurance companies. The finding of this study wasalso supported by Gibrat's law of (1931) which stated that the size of a firm at any given point in time is the product of a series of random growth rates in the history of the firm. This has been empirically confirmed by some authors such as Piergiovanni*et al* (2003); Farinas and Moreno (2000), Audretsch*et al* (2004), Lensink*et al* (2005), and Fujiwara*et al* (2008).

Regarding the leverage of insurance companies and CARAMELS financial performance, leverage was only significant influence for liquidity. Other CARAMELS financial performance has insignificant relationship with leverage status of insurance companies in Nigeria. The positive coefficient of leverage for asset qualityof (α=1.773, $p<0.038$) implies that a point increase in the leverage status of insurance companies will lead to an increase in their performance via liquidity by approximately 1.773 percentage points. This was supported with a prior expectation of this study. The conclusion that leverage status influences the performance of insurance companies with specific interest on liquidity is supported by Daniel and Tilahun (2012),Mehari and Aemiro (2013),Boadi*et al* (2013),Mazviona*et al* (2017). However, the finding of this study that leverage significantly influence liquiditywasnot supported by Doğan (2013), Ahmed *et al* (2011), Malik (2011),Yuvarajsambasivam and Gashaw (2013),Omondi and Muturi (2013), Nikhil *et al* (2015),Berteji and Hammami (2016),Abdelkader and Lamia (2018),Rafiu*et al* (2018).The finding of this study was also supported by resource based view theory.

4.5.4 Impact of Board Members' Characteristics on the Performance of Insurance Companies

The fourth research question examined the impact of board members' characteristics of insurance companies on their performance based on CARAMELS financial performance indicators. Seven board characteristics were examined. The results of Serially Correlated

Disturbance Random Effects revealed that all the board characteristics used in the study have a significant relationship with at least a component of CARAMELS financial performance indicators.

Starting with board size, the results Serially Correlated Disturbance Random Effects showedthat board size was statistically significant only with management efficiency. A negative coefficient of (α=-0.0154, $p<0.046$) was reported. This indicated that an increase in the number of directors serving on the board of insurance companies by an individual will lead to a decline in the performance of insurance companies via management efficiency by approximately 0.015 percentage points. This was contrary to a prior expectation of the study. Meanwhile, the finding of this study concurred with Demeke (2015),Kariuki (2017),Ibe*et al* (2017),Munga (2018),and Dandago and Gugong (2013). This implied that large board size of listed insurance companies negatively affectslevel of performance regarding management efficiency. This conclusion is contrary with that of Ebere*et al* (2016),Deev and Khazalia (2017),Maxwell*et al* (2015),Buallay*et al* (2017), Datta (2018), Solomon and Obah (2018), and Arif (2019) who claimed that performance of insurance companies was positively influenced by larger board size.

The result of the analysis on board gender diversity revealed that board gender diversity was also statistically significant only with management efficiencyas in board size. Unlike board size, the analysis reported a positive coefficient of (α=0.224, $p<0.078$)**.** This implied that a percent point increase in the proportion of female directors in total directors serving on the board of insurance companies in Nigeria will lead to a rise in the performance of these companies via management efficiency by approximately 0.224 percentage points. This concurred with a prior expectation of the study and was also supported by previous studies such as Dandago and Gugong (2013),Garba and Abubakar

(2014), Akeem*et al* (2014),Maxwell*et al* (2015),Ebere*et al* (2016),Kariuki (2017), andImade (2019). However,Datta (2018) conclusion negated the finding of this study that board gender diversity influences the performance of insurance companies particularly in the area of management efficiency.

The result of Serially Correlated Disturbance Random Effects on board independence is better than board size and gender diversity. The result of analysis revealed that board independence was positively significant with asset quality, management efficiency and earnings and profitability of CARAMELS financial performance indicators. Other components of the indicators have insignificant relationship with board independence. The coefficient of board independence in the model for asset quality (α=0.0787, $p<0.086$), management efficiency (α=0.518, $p<0.002$), earnings and profitability (α=0.569, $p<0.090$) was positive. The implication of these results is that a percent point increase in the proportion of independent directors in total directors serving on the board of insurance companies will lead to a rise in the performance of these companies via asset quality, management efficiency and earnings and profitability by approximately 0.08, 0.52 and 0.57 percentage points respectively. The result of these findings was in line with a prior expectation of the study.The conclusion that board independence positively influences performance of insurance companies in the area of asset quality, management efficiency and earnings and profitability was supported by previous studies like Demeke (2015),Abdoush*et al* (2016),Deev and Khazalia (2017); Arif (2019) but negatively supported by Munga (2018).

Regarding the impact of block shareholder on performance of insurance companies in Nigeria, the result analysis indicated that block shareholder was statistically significant to reinsurance and actuarial and earnings and profitability among the CARAMELS

components. A negative significant relationship existed between block shareholding and reinsurance and actuarial (α=-236, p<0.051) while a positive significant relationship was reported with earning and profitability (α=0.485, p<0.007). This is an indication that a percent point increase in the block-holding of insurance companies will lead to a decline in the performance of these companies via reinsurance and actuarial by approximately 0.24 percentage points. Conversely, a percent point increase in the block holding of insurance companies will lead to a rise in the performance of these companies via earnings and profitability by approximately 0.49 percentage points.

The negative relationship that existed between block shareholder and reinsurance and actuarial proxied for performance was supported by previous research conducted by Datta (2018),Ibe*et al* (2017), and Akeem*et al* (2014). However, this was contrary with a prior expectation of the study. The positive significant relationship between block shareholder and earning and profitability was supported by previous studies such as Garba and Abubakar (2014),Qawariri (2019),Getachew (2014),Ebere*et al* (2016),Maxwell*et al* (2015) who opined that corporate governance practices help companies in gaining highest position in the markets, increasing their strength and enhancing performance levels. Such finding reflects the strong economy and wellbeing of insurance companies. This conclusion also concurred with a prior expectation of this study.

The result of serially correlated disturbance random effects on board diligence revealed that Board diligence was statistically significant related with management efficiency of CARAMELS financial performance indicator. The result reported a positive coefficient of (α=0.022, p<0.003) for relationship between board diligence and management efficiency. The implication of the result was that a percent point increase in the number

of meetings held by board of directors of insurance companies will lead to a rise in performance of these companies via management efficiency by approximately 0.02 percentage points. This tallied with a prior expectation of this study and wassupported by previous studies such as Yemane*et al* (2015),Demeke (2015),Datta (2018), Fekadu (2015), however, reported an insignificant relationship.

Board ownership revealed a negative significant relationship with asset quality and earnings and profitability of CARAMELS financial performance measure. Other component of CARAMELS financial performance measure revealedan insignificant relationship with board ownership. The negative significant coefficient of (α=-0.034, $p<0.018$)) reported for asset quality and (α=-0.242, $p<0.055$) for earning and profitability indicate that a percent point increase in the proportion of shares owned by board of directors of insurance companies in Nigeria will lead to a decline in the performance of the insurance companies via asset quality and earnings and profitability by approximately 0.03 and 0.24 percentage points respectively. These findings concurred with a prior expectation of this study. The findings are also in line with those of Najjar and Salman (2013),Gugong*et al* (2014),Abdoush*et al* (2016), Buallay*et al* (2017),Delima and Ragel (2017), andMunga (2018). However, Demeke (2015) saidthat board ownership negatively affects performance of insurance companies.

In terms of board compensation and performance of insurance companies in Nigeria, the result of inferential statistics revealed a positive significant relationship with earnings and profitability of CARAMELS financial performance indicators. The coefficient of board compensation for earnings and profitability (α=0.00964, $p<0.076$) was positive. This implied that an increase by a percent of average compensation paid to the board of director of insurance companies will result to a rise in the performance of these

companies via earnings and profitabilityby approximately 0.00964percentage points. This was in line with a prior expectation of this study and previous studies such as Eling and Marek (2011), Yemane*et al* (2015), and Abdoush*et al* (2016) supported the finding. The finding of the study was in line with resource view based theory.

Board members' characteristic was one of the corporate governance mechanisms used by an entity to direct and control operation of the board. Board characteristics employed in this study includedboard size, board independence, board gender diversity, board diligence, board ownership and board compensation are specific attributes of the entity to achieve better performance. These attributesare the defining features that the theory emphasised and building on these stocks of strategically valuable resources is the key to obtaining competitive victory of insurance companies in Nigeria.

4.4.5 Impact of Selected Macroeconomic Variables on Performance of Insurance Companies

The fifth research question ascertained the effect of some selected macro-economic variables on performance of insurance companies via CARAMELS financial performance indicators. Four commonest and impactful macro-economic variables such as interest rate, exchange rate, growth rate and inflation rate were investigated. Four sub-hypothesis were developed from them. The hypotheses were tested with the results of Serially Correlated Disturbance Random Effects. However, the result of the analysis did not reveal statistical significant relationship with all components of CARAMELS financial performance because the p-values is greater than 0.1. The increase in p-value indicated that it is not even significant at the slightest 10% significance level. This implied that interest rate is not among the macroeconomic factors that affect performance of insurance companies.

The result of Serially Correlated Disturbance Random Effects on exchange rate showed a positive significant relationship between exchange rate with capital adequacyand solvency (α=0.00195, $p<0.016$) of CARAMELS financial performance measure. Exchange rate has insignificant relationship with other CARAMELS components. The positive coefficient of exchange rate for capital adequacy was (α=0.00195, $p<0.016$),while for solvency is (α=0.00195, $p<0.016$). This means that a naira increase in foreign exchange will lead to a rise in performance of insurance companies in the area of capital adequacy and solvency by approximately 0.0019 and 0.0019 percentage points respectively. This finding supported a prior expectation of this study. However, previous studies reviewed did not support the study's conclusion. Meanwhile, Mwangi (2017),Alali*et al* (2018) concluded that exchange rate negatively influences performance of insurance companies.

The result of the analysis showed that GDP growth has significant relationship reinsurance and actuarial of CARAMELS financial performance measure(α=0.0153, $p<0.070$)and was significant at 10%. The study failed to accept the null hypothesis which states that there was no significant relationship between GDP growth and reinsurance and actuarial. This implied that a percent point increase in GDP growth will lead to a rise in performance of insurance companies in the area of capital adequacy by approximately 0.015 percentage points respectively. This was in line with a prior expectation and Kozak (2011) and Jibran*et al* (2016). However, the finding of this study was contradicted byDorofti and Jakubik (2012) and Alali*et al* (2018) who reported negative significant relationship between GDP growth and performance of insurance companies.

The result of serially correlated disturbance random effects on inflation rate and CARAMELS financial performance indicators was presented under this section.

Inflation rate was positively significant with only reinsurance and actuarial while other components of CARAMELS financial performance measure did not show significant relationship. The positive coefficient of inflation rate for reinsurance and actuarial was (α=0.0165, $p<0.037$) significant at 5% level of significance. Therefore, the null hypothesis was rejected. This means that a percent point increase in inflation rate will lead to a rise in the performance of insurance companies via capital adequacy by approximately 0.017 percentage points respectively. The study's finding was in line with a prior expectation. This was supported in previous studies such as Deyganto and Alemu (2019) and Jibran*et al* (2016), but not Dorofti and Jakubik (2012).

Exchange rate, GDP growth and inflation are macro-economic factors that influencedperformance of entities and sectors of a country. These factors are essential factors as postulated in the resource-based view theory. They also influencedstrategies entities want to develop and implement which resulted to differences in the performance of companies.

4.6 Summary of Major Findings and Implications

Based on the result of analysis and discussion of findings, the summary of major findings and implication are discussed as follows:

i. Age of customers significantly affect demand for insurance policy in Nigeria. This means that old age people protect themselves through various insurance policies
ii. All the categories of marital status of customers significantly influences decision or demand for insurance policy. This implies that the customers who single, married and divorced affect their decision on insurance product.

iii. Type of work of customersnegatively affects demand for insurance policy by Nigerians. This implies that the type of work of customers do not affect demand for insurance products.

iv. Muslim customer of insurance companies significantly demands for insurance policy in Nigeria. This implies that their religious belief does not deny them of taking up insurance policy.

v. Christianity beliefs of customer significantly influence demand for insurance policy in Nigeria. This implies that Christian patronize insurance policies more often.

vi. Language of insurance policy influence decision of customer to take up insurance products. This may be as result of technical language use in the industry which discourage customers to patronize the insurance product

vii. Trust is also a significant determining factor for insurance patronage in Nigeria. This means that the level of trust of customers positively influence their decision to take up insurance policies.

viii. Level of awareness of customers regarding insurance policy and benefits does not influence performance of insurance companies in Nigeria. This indicate that level of awareness by insurance companies does not encourage customers to patronize their product.

ix. Age of listed companies in Nigeria influences asset quality of listed companies in Nigeria. This implies that old generation insurance companies possess good asset quality than the new generation.

x. Size of insurance companies in term of total asset influence capital adequacy, management efficiency and solvency of CARAMELS financial performance indicator. This implies that total asset of listed insurance companies enhances their capital adequacy, management efficiency and solvency.

xi. The leverage status of listed companies in Nigeria influences their asset quality. This indicates that insurance companies with more debt than equity possess asset quality.

xii. Corporate governance mechanisms in term of board size and board gender diversity influence management efficiency of insurance companies in Nigeria. This implies that listed insurance companies with the required board size and a female member in the board positively influence their management efficiency.

xiii. Block shareholder positively influences earnings and profitability of insurance companies in Nigeria but negatively influences reinsurance and actuarial of listed insurance companies in Nigeria. This implies that shareholder with highest number of shares influence the profitability of listed insurance companies.

xiv. Number of meetings held by board of directors of listed insurance companies in Nigeria enhances their management efficiency. The implication of this finding is that the more the board member meet influence the management efficiency of listed insurance companies in Nigeria.

xv. With regards to board ownership of listed insurance companies, board ownership negatively affects the asset quality and earnings and profitability of listed insurance companies in Nigeria. This implies that the asset quality and earnings and profitability of listed insurance companies in Nigeria does not related with number of shares held by board members.

xvi. Compensation paid to board of director of insurance companies increase level of earnings and profitability of listed insurance companies in Nigeria. The implication of this finding means that board of director uses their power to influence earnings and profitability of listed insurance companies in Nigeria.

xvii. The study as well finds that exchange rate significantly influences the capital adequacy and solvency of listed insurance companies in Nigeria. This means that listed insurance companies in Nigeria were able to maintain their capital adequacy and solvency due to the level of exchange rate.

xviii. Likewise, GDP growth or economic growth and inflation rate of listed insurance companies enhances their reinsurance and actuarial. This implies that economic growth and inflation rate affect the reinsurance and actuarial of listed insurance companies in Nigeria.

CHAPTER FIVE

SUMMARY, CONCLUSION AND RECOMMENDATIONS

5.1 Summary

This study was motivated by poor responses of insurance sub-financial sector to economic challenges. The level of penetration, minimal growth in written premium over the last decade and less than 1% contribution to the GDP of the country are evidences of poor performance of insurance companies in Nigeria. The level of performance of insurance company remained significantly low coupled with apathy and cautiousness of customers to insurance policies. Lack of trust and awareness of benefits that insurance company could offers as well as socio-cultural factorslike language, education, ethnic background and religion differencescontributed to poor performance of insurance sub-sector. The role of companies' related factors such as firm-specific characteristics, board members' characteristics and macroeconomic variablesaggravated the performance of insurance companies in Nigeria.

Therefore, this study examined the impact of customers and insurance companies' related factors on the performance of insurance companies in Nigeria. The study used CARAMELS financial performance indicators of IMF and World Bank. Data were sourced through a structured questionnaire and annual reports of listed insurance companies as well as CBN statistical bulletin. The data from questionnaire were analysed using descriptive and ordinal logistic regression estimator techniques while data from annual reports of insurance companies and CBN statistical bulletin wereanalysed using serially correlated disturbance random effects

The results of the analysis of the first hypothesis revealed thatacademic qualification, age and type of work of customers have a statistically significant influence on demand for insurance policy by customers. However, gender, marital status, annual income and working experience of customers have no statistical significant influence on insurance uptake by customers. Hypothesis two showed that Christianity religion beliefs, language, trust and level of awareness of customers are statistically significant while Islamic religion beliefs and ethnicity of customers are not statistically significant. The third hypothesis on firm-specific characteristics showed that Age, Size and Leverage are statistically significant with either of CARAMELS indicators. The fourth hypothesis revealed that board members' characteristics have significant relationship with at least a component of CARAMELS financial performance indicator. Finally, the result on selected macroeconomic variables revealed statistically significant relationship with at least a component of CARAMELS financial performance measure.

5.2 Conclusion

Based on the findings of this study the following conclusions are drawn:

i. That demographic factor of customers, specifically the age and marital status of customers positively influence decision on demand for insurance policy or product which in turn affects performance of insurance companies in Nigeria. However, the type of work of customers negatively affects demand for take up of insurance policy by Nigerians which consequently reduces the overall performance of listed insurance companies in Nigeria.

ii. Furthermore, the socio-cultural factors, specifically Islamic religious belief, Christianity religious beliefs, language used to disseminate the policy and trust of customers of listed insurance companies in Nigeria influence their decision to take up insurance policy. However, the level of awareness of customers regarding

insurance policy and benefits does not influence demand for insurance policy among Nigerian, thus, reduces the performance of listed insurance companies in Nigeria.

iii. For firm specific characteristicsage and leverage status of listed insurance companies in Nigeria influences asset quality of listed companies in Nigeria. While the size of insurance companies in term of total asset influence capital adequacy, management efficiency and solvency of CARAMELS financial performance indicator.

iv. That board member characteristics, such as board size and board gender diversity influence management efficiency of insurance companies in Nigeria. While block shareholder and compensation paid to board of director positively influences earnings and profitability of insurance companies in Nigeria. However, block shareholder negatively influences reinsurance and actuarial of listed insurance companies in Nigeria,also number of meetings held by board of directors of listed insurance companies in Nigeria enhances their management efficiency. With regards to board ownership of listed insurance companies, the study concludes that board ownership negatively affects the asset quality and earnings and profitability of listed insurance companies in Nigeria.

v. Finally, the selected macroeconomic variables such as exchange rate,interest rate and GDP growth positively influence the capital adequacy, solvency andthe reinsurance of CARAMELS financial performance indicators of listed insurance companies in Nigeria.

5.3 Recommendations

With regards to findings of this study, the following recommendations are suggestedthat:

i. The management of insurance companies should sensitize their customers regardless of age bracket, marital status and working class on various insurance policies and the needs to uptake insurance policies in order to improve performance of insurance business in Nigeria,this will enable a remarkable contribution to the economy of the country as a whole.

ii. The management of insurance companies should train their marketing technical teams and front line officer employed in order to widen the scope of publicity which will in turn influence the demand for insurance policy.

iii. The management maintain a high level of trust between their agents and customers through adherenceto terms and conditions of insurance policies so has to encourage demand for more of the insurance products in Nigeria.

iv. Regulator and key players of the insurance industry should encourage and coordinate experience sharing among listed insurance companies in order to learn from others based on an adage that experience is best teacher. This will enhance the capital base, management efficiency, asset quality and solvency of listed insurance companies in Nigeria.

v. Regarding the corporate practises particularly board member characteristics, the Regulators and policies maker should strengthen effective compliance with corporate governance mechanisms relating to board size, board meetings and board member compensation to influence management efficiency of insurance companies in Nigeria. They should ensure that at least a female member should be appointed to the board structure in order to enhance management efficiency. Furthermore,recommends the regulators and policies maker should also strengthen the corporate governance procedure to reduce influences on earnings and profitability of listed insurance companies in Nigeria.

vi. Finally, the CBN should ensure proper management of exchange rate, inflation rate and review the economic growth plansin relation toprevailing economic situationat any point in time in order to enhance capital adequacy, solvency, reinsurance and actuarial capacity of listed insurance companies in Nigeria.

5.4 Contributions to Knowledge

The contribution of this study can be viewed from the research gap identified and bridged.

Conceptually, the study contributed by further exposing readers and researchers to theconcept of CARAMELS developed by IMF and World Bank for assessment of financial soundness of insurance sub-sector of the financial sector. Also, the study contributedby exposing readers to the fact that performance of insurance companies in Nigeria is being affected from both the demand side (customers) and the supply side (insurance companies). The study further contributed to the literature on other factors such as Christianity religion beliefs, language, trust, level of awareness of customersamong others that influencing performances of listed insurance companies in Nigeria.

Theoretically, the study contributed to the literature on the applicability of multiple-theoretical framework to understand the factors affecting the performance of listed insurance companies in Nigeria.Methodologically, the study has contributed to the argument that secondary data alone cannot provide sufficient explanation and interpretation to findings. The current study therefore contributes by integrating data from primary source. For practice and policy implication, the study focused on important aspects of insurance companies which require monitoring and control for better performance of the sector.

5.5 Suggestions for Future Studies

This study provides an opportunity for future research on assessment of financial performance of some selected listed insurance companies in African using different measurementparameters andinclusion of different variables with an increased numbers of yearsso that its findings and contribution could serve as benchmark for other African countries.It will also be worthwhile to conduct comparative analysis of CARAMELS measure of insurance companies in Sub-Sahara Africa.

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APPENDICES

APPENDIX I

NAME OF LISTED INSURANCE COMPANIES IN NIGERIA

S/N	NAME OF INSURANCE COMPANY	STATUS	REMARKS
1	African Alliance Insurance Co. Ltd	Listed	Included
2	AIICO Insurance Plc	Listed	Included
3	AXA Manxard Insurance	Listed	Excluded as result of data unavailability
4	Consolidated Hallmark Insurance Plc	Listed	Included
5	Continental Reinsurance Co. Plc	Listed	Included
6	Cornerstone Insurance Plc	Listed	Included
7	Custodian and Allied Insurance Plc	Listed	Included
8	Goldlink Insurance Plc	Listed	Included
9	Great Nigeria Insurance Plc	Listed	Included
10	Guinea Insurance Plc	Listed	Included
11	Industrial and General Insurance Plc	Listed	Included
12	Lasaco Assurance	Listed	Included
13	Linkage Assurance Plc	Listed	Included
14	Mutual Benefits Assurance Plc	Listed	Included
15	NEM Insurance Plc	Listed	Excluded as result of data unavailability
16	Niger Insurance Plc	Listed	Included
17	Prestige Assurance Plc	Listed	Included
18	Regency Alliance Insurance Plc	Listed	Included
19	Sovereign Trust Insurance Plc	Listed	Included
20	Staco Assurance Plc	Listed	Included
21	Standard Insurance Plc	Listed	Included
22	Standard Alliance Plc	Listed	Included
23	Universal Insurance Plc	Listed	Included
24	WAPIC Insurance Plc	Listed	Included

APPENDIX II

QUESTIONAIRE

ACADEMIC RESEARCH QUESTIONNAIRE
DEPARTMENT OF ACCOUNTING AND FINANCE
COLLEGE OF HUMANITIES, MANAGEMENT AND SOCIAL SCIENCES
KWARA STATE UNIVERSITY, MALETE

Dear Respondent,

I am a research student in the department of Accounting and Finance, Kwara State University Malete working on Assessment of performance of Listed Insurance Companies in Nigeria. I am sincerely assuring you that all information supplied shall be treated with utmost confidentiality and used solely for the study.
Thanks immensely for your anticipated cooperation

HAJIA ADEJARE RUKAYAT
(Researcher)
+2348060775221
111adejarerukayat@gmail.com

PART I: DEMOGRAPHIC INFORMATION

Please tick ☑ the option that correctly and accurately describes your profile:

1. Gender: ( ) Male ( ) Female

2. Marital Status: ( ) Single ( ) Married ( ) Divorce ( ) Others

3. Academic Qualification: ( ) Diploma/NCE ( ) HND/Degree
   ( ) Masters ( ) Doctoral degree
   ( ) Others (Please specify.....)

4. Age: ( ) 30yrs and below ( ) 31 – 40yrs ( ) 41 – 50yrs
   ( ) 51 – 60yrs ( ) 61yrs and above

5. Working Class: ( ) Civil Servant ( ) Businessmen ( )Professional Services

6. Level of Annual Income: ( ) Below N216,000 ( ) N216,000 – N450,000
   ( ) N451,000 – N750,000 ( ) N751,000 – N999,000
   ( ) Above N1,000,000

7. Year of Working Experience: ( ) Less than 5 years ( ) 6 – 10 years
   ( ) 11 – 15 years ( ) 16 – 20 years ( ) 20 and above

8. Type of Insurance policy:
   ( ) Life Insurance ( ) Non-Insurance ( ) General Insurance

PART II

SOCIAL –CULTURAL FACTORS AND INSURANCE UPTAKE OF CONSUMERS

GUIDELINES

Please rate your level of agreement with the following statements based with regards to the following options:

(1= Strongly Disagree (SD), 2 = Disagree (D), 3 = Neutral (N), 4 = Agree (A), 5 = Strongly Agree (SA)):

Decision to take up Insurance products		**SD**	**D**	**N**	**A**	**SA**
1	Insurance uptakes protect life and property of consumers					
2	Insurance uptake provides financial protection from unpredictable losses which are beyond human control.					
3	Insurance provides financial security and lessens the burden of loss arises from uncertainty					
4	Insurance companies contribute to the economic growth					
5	Insurance uptake facilitating efficient resource allocation among the consumers					
6	Insurance uptake facilitates economies of scale and spreading financial losses of the consumers					

Islamic Religion Belief on take up of insurance products		**SD**	**D**	**N**	**A**	**SA**
1	Islamic religion belief emphasizes that reliance on insurance to protect one's life or property results from distrust in God's protective care					
2	Religious antagonism to insurance is quite prevalent in many Islamic environments.					
3	Consumers in Islamic environments purchase less life insurance than those in non- Islamic nations.					

4	Islamic religion is against insurance products that pay interest on premium savings					
5	Islamic Religion Belief feel that taking insurance is the same as confessing that you expect bad things to happen to you					
Christianity Religion Belief on take up of insurance products		**SD**	**D**	**N**	**A**	**SA**
1	Christianity Religion belief favour insurance products that pay interest on premium savings					
2	Insurance uptake is very popular and quite accepted in many Christian environments					
3	The religious inclination of a population may affect its risk aversion					
4	Christian faith looks at insurance positively because it is allowed by their faith.					
Ethnic Background of customers		**SD**	**D**	**N**	**A**	**SA**
1	Some ethnic background favour insurance uptake for their protection					
2	Ethnic background of Consumers in influence the type of insurance policies uptake by the customers.					
3	Taking up an insurance cover is a taboo in some ethnics					
4	Taking up an insurance cover is considered to be related to witchcraft in some ethnic environment					
5	Taking up an insurance cover is considered a bad omen in some cultures.					
Language of insurance products and decision to take up insurance product		**SD**	**D**	**N**	**A**	**SA**
1	Speaking a different language makes it difficult to understand the insurance products by the consumers					
2	Official language used in the insurance documentation forms can be very technical and difficult to understand to the general public					
3	Insurance language used by insurance agents when describing the different products and benefits to the general public can be very confusing.					

4	Insurance companies may not be taking into consideration the different levels of financial language among the target customers when designing their promotional materials					
Trust by consumers on insurance products		**SD**	**D**	**N**	**A**	**SA**
1	Insurance companies fulfilled all promises made in an insurance policy to customer					
2	Insurance companies willingness accept to be vulnerable to the actions of their customer based on the expectation					
3	Insurance companies in Nigeria is reliable and maintain integrity with their customer					
4	Customer has confidence that the employee of insurance companies is honest, fair and responsible and his or her word can be relied on.					
5	There is no hidden conditions in the insurance policy to customer					
Level of awareness by consumers on Insurance products		**SD**	**D**	**N**	**A**	**SA**
1	There is high level of awareness of insurance policy among customers in Nigeria					
2	Customers always pay attentiveness to existing and new insurance policies in Nigeria					
3	Geographical location is not barrier to level of awareness to customer of Insurance companies in Nigeria.					
4	The official language of insurance policy does not affect level of awareness of insurance policy among the customer in the country					

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