

Chapter One

Introduction

1.1 Background to the Study

The housing loan performance has a connection with the ability of the primary mortgage banks (PMBs) to provide efficient mortgage financing system that guarantee the mortgage loan applicants access to finance for homeownership and develop the innovation capability to deliver quality service. Traditionally, housing refers to shelter, building or a structure that serves as the protective cover for every household. It is one of the important requirements that makes life of a households meaningful and has a connection with the economy development of a country. The creation of mortgages particularly for low-income earners either for direct construction, purchase of house or renovation of existing property, is one of primary functions of mortgage banks. The availability of easy access to finance for the realization of homeownership dream has always been a major concern for average individuals. It was because of this challenge that the mortgage banks were established by the federal government of countries across the globe, to provide the housing finance needs for their citizens at affordable interest rate.

The financial institutions saddled with the provisions of mortgage financing services all over the world, plays a vital role in every economy. It has been established in developed economies like Canada, China, United Kingdom, Italy, France, Germany, United State of America, Russia, Denmark, among others, that the road to homeownership for their citizens is through an effective and efficient mortgage finance system that provides easy access to finance at affordable interest rate¹. The mortgage market in Europe is dominated by the United Kingdom by almost 25% while in Mexico, the housing finance market is having a challenge due to the macro-economic environments which has not been to the advantage of

the primary mortgage market development. The Mexican mortgage is really fragmented with various mortgage programs initiated for different sectors².

Preceding 1970s in Malaysia, many housing loans was financed by the building societies established as a form of government's initiative that guarantee the accessibility of funds for the housing sector and to encourage homeownership especially, the low-and-medium-cost houses but now, the role has been taken over by the commercial banks³. As mentioned earlier that many countries over the world in a quest to improve access to affordable housing finance, have encouraged mortgages as the best path to homeownership in the sense that high mortgage usage leads to high homeownership levels. For instance, in United States the portion of households that owners occupied is over 65.1% whereas the homeownership rate in United Kingdom is above 67.69%. Also, Singapore and Indonesia have homeownership rate of 90% and 84% respectively⁴.

In developing countries particularly in Africa, Kenya has the highest homeownership rate of 73%, Benin Republic 63% and South Africa 56%⁴. The challenge of access to mortgage financing is predominant where extensive urban poverty and low incomes, coupled with inefficient housing finance systems that restrict most households to access homeownership loans. The enormous population of most of the developing countries unable to qualify for formal mortgage loan to buy even the least expensive economically built house. The non-existence of a viable credit markets in developing countries most especially in Africa, is a serious hindrance to finding solution to housing challenges in this part of the world. In addition, the poor in most African countries cannot access normal mortgage finance since they lack formal titles to land, they possess, and no regular income required to access traditional mortgage. As opposed to the developed economies where improvement can be witnessed in the size of residential mortgage markets relative to the overall economy, the

magnitude of the mortgage market in most emerging economies is still very low, often less than 10% of GDP.

In Africa, apart from South Africa that has 31%, most other countries have low ratios, with Ghana and Botswana recorded 2% and Tanzania posts 0.36% of the GDP⁵. In Ghana, shortage of housing finance produces poor and insufficient housing consumption. Virtually, most of household finance their home purchase through personal savings. In similar vein, in Uganda only small fraction of households can access conventional mortgages because of insufficient housing finance. South Africa case is indifference in the sense that substantial progress has been recorded in deepening mortgage financing especially to the black population and the bottom end of the mortgage market even though the improvement was negatively affected by high interest rate⁵.

Generally, the emerging economies fall distant behind developed economies in the provision of mortgage financing. It is evidenced that the scarcity of housing finance in Nigeria has denied a small percentage of citizens from having access to homeownership loans through conventional institutions because of low patronage culminating in the institutions' difficult loan requirements, affordability, and repayment criteria. The low-income households in most cases result in using informal channel to finance homeownership due to low accessibility of mortgage financing⁵. However, the homeownership rate in Nigeria is 25% and this call for concern. Given the low income and in addition to high cost of living, prevented many millions of Nigerians to save towards construction of their own homes or acquire through mortgages. For Nigerian Government to adequately house its citizens, greater efforts should be geared to ensure the sustainability and access to affordable mortgage finance to enable them to own their homes⁴.

The mortgage banking industry in Nigeria came to life in 1956 with the establishment of the Nigerian Building Society (NBS) now known as the Federal Mortgage Bank of Nigeria (FMBN) with sole purpose of mobilizing long-term credits for on-lending to Nigerians to construct, purchase or renovate their existing properties under the National Housing Fund (NHF) Scheme⁶. Importantly, the role of FMBN is to supply the Nigerian mortgage market with sustainable liquidity for the advancement of homeownership among citizens through mortgage financing⁷. The FMBN plays a vital role of advancing a robust mortgage finance system for the mortgage market in Nigeria. It has moved operational emphasis from only social housing on-lending under the NHF scheme to incorporate commercial on-lending for mass housing construction through Estate Development Loans (EDL)⁸.

The declaration of Mortgage Institutions Decree No. 53 of 1989 provided the regulatory framework for the establishment and operations of Primary Mortgage Banks (PMBs) to further improve private sector participation in housing delivery to Nigerians. The mortgage finance market in Nigeria is mainly two-tiered and majorly controlled by the FMBN and PMBs which act as intermediaries between the fund savers and users⁸. The PMBs are allowed to engage in mortgage finance, real estate construction finance within the permitted limits, drawing from mortgage funds e.g., National Housing Fund (NHF), acceptance of savings, demand, and time/term deposits among others⁹. Under the current dispensation, the Central Bank of Nigeria (CBN) is saddled with responsibility of licencing and supervision/regulation of the PMBs while the FMBN is to carry out periodic accreditation of PMBs operations with a view to accessing the NHF loan on behalf of NHF contributors.

As at December 2018, the current housing deficit in the country is estimated at overwhelming 20 million units in which about ₦21 trillion will be needed to finance the shortfall. Going by the population of almost 200 million, the present housing deficiency is very worrisome. The specialists are of the opinion that it is only 10% of those who wish to own a home in Nigeria

that can afford it either through purchase or direct construction. The possible future effect of this extremely high housing deficiency is that tenants in rented apartments will pay as high as 60% of their average disposable income which is far higher than 20-30% that United Nations recommended¹⁰.

Hence, the impact of the financial sector is hardly noticeable in the construction industry in Nigeria in the sense that housing finance via this sector has been insignificant. The abysmal performance of the housing finance system is incapacity of financial systems to make available low-cost finance that meets the need of low-and-medium income category. The existing facts indicates that the potentials of the mortgage industry remain unexploited as it is restricted by elements undermining the access and sustainability of mortgage finance by average poor people in Nigeria. The challenge of mortgage financing for housing delivery has become a major concern to many in Nigeria as it influences the well-being of the citizens in addition to growth and development of the economy¹¹.

One of the primary functions of mortgage banks in Nigeria is to gather long-term fund for the overall development of housing finance market to create homeownership loans for their customers that are qualified to access mortgage loans¹. The absence of long-term fund constitutes one of the constraints in the sense that mortgage banks are unwilling to use their short-term deposits to finance long-term housing loan requests¹¹. The PMBs are confronted with lack of longer-term resources because of the failure of FMBN to deliver on its operational responsibility to promote secondary mortgage market (SMM).

The expansion of the window for long-term fund to mortgage lenders is important for the growth of the market because Capital markets (CM) were not well linked to the mortgage market¹². It has been established that the decision to buy a property by potential house owners is subject to their financial standing and only few households can acquire a home with their

personal income without any recourse to primary mortgage banks for homeownership loans' facility¹³. High interest rate impedes the growth of homeownership and the housing sector¹⁵. The low interest rates have generated a difficult mortgage banking environment, increased competition in the mortgage industry and constitute a threat to the performance of the primary mortgage banks in Nigeria¹⁴. Management innovation is the capacity of an organization to introduce new understanding methods and procedures that will be adopted by management in performing their work to produce modifications in the administrative processes and organization's approach for efficient service delivery. The process innovation involves the capability of an organization to increase its efficiency and effectiveness of operations to enhance service performance at a reduce cost.

The Federal Government of Nigeria (FGN) over the years strive to ensure housing finance demands of its citizens via the establishment of mortgage institutions to mobilise and facilitate housing finance, delivery, and ownership, particularly for those that fall within low-and-medium income brackets. Regardless of the efforts of government to provide easy access to housing finance for low-and-medium income categories, the loan accessibility remained a major barrier to housing provision and ownership because of stringent conditions attached. Homeownership is a dream for every household in any society and its realization depends on the efficiency and effectiveness of the mortgage delivery system. Nevertheless, sufficient, and sanitary housing ownership over the years remained just a dream to many citizens, most especially the low-income earners who cannot gather resources and labour to build their own homes¹⁵.

The mortgage banks efficiency and performance factors have major impact on Non-Performing Loans (NPLs) which refers to the loan advances that both principal and interest have not been paid as at the due date. Banks experience rise in mortgage loan defaults when

it decided to spend less cost on underwriting and have a direct look on loans in short run, will suffer the risk of having loan performance issues in near future¹⁶. The growth in NPLs in the mortgage banking industry threaten financial stability, obstruct the intermediation of funds from savers to borrowers, and may lessen investment and long-term development¹⁷. The mortgage banks operational inefficiency in the aspect of poor monitoring of mortgage loans, substandard in loan underwriting and higher operating costs will increase the NPLs¹⁸. The inefficiency in mortgage loan lending process is an indication of poor management of the mortgage banks¹⁹.

In mortgage banking industry, the effectiveness and efficiency of the customer service value chain gives the Primary Mortgage Bank the competitive advantage over its competitors in the industry²⁰. The delivery of good quality service by the mortgage lending operator attracts customers. However, despite the efforts of Central Bank of Nigeria (CBN) to improve the service efficiency of the housing sector, the Mortgage Banks' performance has fallen short of customers' expectation²¹. It is against this backdrop that the present study is designed to examine the influence of mortgage financing and innovation capability on housing loan performance of accredited primary mortgage banks in Nigeria. The need for my choice topic is to create the awareness that mortgage is the best financing option to make many Nigerians homeowners as it is obtainable in the developed countries.

1.2 Statement of the Problem

The role of primary mortgage banks in the housing sector is acknowledged as very essential channel that provides long-term mortgage financing gap for the National Housing Fund (NHF) customers to realize their housing dream. However, failure of the primary mortgage banks to carry out their core function of providing sustainable mortgage financing need for potential homeowners in Nigeria and lack of new innovations to improve service efficiency have

negative effect on housing loan performance. Consequently, this has become a source of concern for many households since majority of them cannot save enough fund for personal construction of their own building because of low level of income. The research study tries to examine the influence that the mortgage financing (Long-Term Funds, Household Income, and Interest Rate) and innovation capability (Management Innovation and Process Innovation) would have on housing loan performance of accredited Primary Mortgage Banks in Nigeria using the following performance indicators; Access to Finance, Homeownership Loans, Non-Performing Loans (NPLs) and Service Efficiency.

As mentioned earlier, the housing loan performance of accredited primary mortgage banks in Nigeria is to be measured using the performance indicators of access to finance, homeownership loan volume, non-performing loan ratio level and service efficiency. Access to cheap housing finance in Nigeria has remained widely an unrealisable dream of many Nigerians particularly, those at the lower- and middle-income groups of the society. The problem of housing deficiency has been increasing from bad to worse, widen day by day and consecutive governments from the time of Nigeria's independence have been struggling with this challenge. The fast-growing population and rural to urban migration have been responsible for the deficit of housing in urban cities in Nigeria. Other crucial matters affecting housing delivery in Nigeria include unresolved tenure agreement, cost of building materials, stringent loan requirements from mortgage banks, access to infrastructure, time required to process legal documents, insufficient government housing policies and shortage of housing finance dispositions¹⁰.

Access to mortgage financing is a complex process going by the several procedures that the mortgage loan applicant must pass through and in most cases affected by many factors which include income levels, savings level, interest rates, and availability of collateral among

others²². The provision of mortgage services in most cases depends on the effectiveness and efficient mortgage finance system. The thought of purchasing a house is moved by the cost of acquisition and many governments' economic policies. The present savings habit of Nigerians is geared towards immediate short-term demand based on compound saving form, consequently the primary mortgage banks (PMBs) need to grow attractive long-term savings products that will be steady with long-term mortgage finance identity. The absence of effective secondary mortgage market to warehouse the refinancing mortgages increase query of sustainability of development in the housing finance industry²³.

The unavailability of finance posts a major challenge to low-and-medium income groups in Nigeria because the construction or acquisition of houses involves large financial resources. According to a researcher, housing delivery is restricted by factors which include lack of long-term finance for homeownership/construction, high inflation rate affecting the cost of building materials, poor savings habit of Nigerians, high interest rate on loans charged by primary mortgage banks (PMBs), unfavourable mortgage system and laws are responsible for poor performance of the housing market industry. It was affirmed that despite CBN's effort in restructuring the housing finance sector, the large gap between the performance measure and the primary mandate of the mortgage banks still persists⁹. The FMBN was created as a secondary mortgage market to mobilize Long-Term Funds for the primary mortgage banks (PMBs) through the National Housing Fund (NHF) window as affordable source of fund for homeownership mortgage loans to Nigerians that are contributing into the NHF Scheme⁹.

The PMBs in Nigeria of recent, is facing challenges arising from the fast changes in the mortgage business environment which endanger their continuity and long-term survival. Many scholars recognized the need for the PMBs to be innovative to confront these challenges. Therefore, innovation has been identified as one of the vital capabilities needed

for PMBs success in 21st century business environment. The implication is that PMBs currently require to leverage on innovation as a driving instrument to survive and thrive in highly competitive mortgage business environments²⁴. Hence, the PMBs with innovative capacity can identify advanced technologies and knowledge assets to attain a competitive edge in the mortgage finance industry²⁵. The PMBs with innovative capability always ready to develop innovations that will enable it to survive in the turbulent mortgage market environment. Many research studies revealed that innovation has a powerful and direct influence on the performance of an organization. Therefore, the innovation strategy is recognised as a key indicator of organizational performance²⁶.

Many organizations in the global market today face challenges not solely on unique products offering and results but also include changing in management within the structure for productivity improvement, customer service quality and performance. Some researchers have discovered leadership behaviours, organizational size and learning to be drivers that support management innovation. The long-lasting contribution of management innovation (MI) to the competitive advantage of an organization will be hard to duplicate²⁷. The increasing demand by mortgage customers for additional flexibility and creative services because of greater competitive environment has driven the PMBs to increase their innovation and digital strategies²⁰. The time is now for the PMBs to differentiate themselves from their competitors through a unique way of interacting with their customers, build their internal operations to be more effective and flexible to mortgage industry regulation changes. The significance of an efficient housing finance system deepen homeownership and the development of mortgage sector²⁸.

Consequently, process innovation (PI) involves the capability of an organization to increase its efficiency and effectiveness of operations to enhance service performance at a reduce

cost²⁹. It relates to organizational changes in the approach or process to attain efficiency in increase output, lower cost, faster processing, and service delivery systems³⁰. The implementation of PI by an organization is to advance new equipment to improve production processes and the re-engineering of operational services. The adoption of new approaches and technologies by organization to increase the efficiency and output of its production activities or services are influenced by the Process Innovation²⁴.

The gaps in previous studies established that the inadequate supply of mortgage financing to the housing sector weakens the growth of the sector and overall economic impact²¹. The extension of mortgage credit to households has not always led to higher homeownership rates because historically, there have been other sources of mortgage credit which includes the government and non-bank mediated private loans³¹. The exogenous rise in the change of non-performing loan ratio tends to reduce bank lending volumes and lead to a drop in residential real estate prices³². The research conducted on operational efficiency of bank loans and deposits, identified short-term deposits that is not sustainable for long-term loan creating activities³³. The influence of innovation drivers for housing loan performance have not been considered in previous literatures. Few studies related to innovation capability focuses on management, product, process, service, and technological innovations as it affects insurance business, manufacturing, and commercial banking operations but not on digitization of mortgage banking services. The study on optimization of government housing policies in promotion of building more housing units' gears towards assisting first-time homebuyers is yet to be conducted for Nigeria environment³⁴.

Going by the gaps revealed and problems identified regarding challenges in mortgage banking operations in Nigeria, this study evaluated the interactions of mortgage financing and

innovation capability on housing loan performance of accredited primary mortgage banks in Nigeria.

1.3 Aim and Objectives of the Study

The aim of this study is to examine the effect of mortgage financing (long-term fund, household income and interest rate) and innovation capability (management innovation and process innovation) on housing loan performance measures (access to finance, homeownership loans, non-performing loans, and service efficiency) of accredited primary mortgage banks in Nigeria.

The objectives are to:

- i. determine the influence of long-term fund, household income and interest rate on access to finance of accredited primary mortgage banks in Nigeria.
- ii. assess the effect of long-term fund, household income and interest rate on homeownership loan volume of accredited primary mortgage banks in Nigeria.
- iii. identify the influence of management innovation and process innovation on non-performing loan ratio of accredited primary mortgage banks in Nigeria.
- iv. establish the effect of management innovation and process innovation on service efficiency of accredited primary mortgage banks in Nigeria.
- v. investigate the influence of mortgage financing and innovation capability on housing loan performance of accredited primary mortgage banks in Nigeria.
- vi. evaluate the moderating effect of government housing policy on functional relationship between mortgage financing, innovation capability and housing loan performance of accredited primary mortgage banks in Nigeria.

1.4 Research Questions

This study addressed the following research questions:

- i. How does long-term fund, household income and interest rate influence access to finance of accredited primary mortgage banks in Nigeria?
- ii. What is the effect of long-term fund, household income and interest rate on homeownership loan volume of accredited primary mortgage banks in Nigeria?
- iii. How does management innovation and process innovation influence non-performing loan ratio of accredited primary mortgage banks in Nigeria?
- iv. What is the effect of management innovation and process innovation on service efficiency of accredited primary mortgage banks in Nigeria?
- v. How does mortgage financing and innovation capability influence housing loan performance of accredited primary mortgage banks in Nigeria?
- vi. What moderating effect does government housing policy has on the functional relationship between mortgage financing, innovation capability and housing loan performance of accredited primary mortgage banks in Nigeria?

1.5 Hypotheses

The following hypotheses served as guide to this study:

H₀₁: Long-term fund, household income and interest rate do not have significant influence on access to finance of accredited primary mortgage banks in Nigeria.

H₀₂: There is no significant effect of long-term fund, household income and interest rate on homeownership loan volume of accredited primary mortgage banks in Nigeria.

H₀₃: Management innovation and process innovation do not have significant influence on non-performing loan ratio of accredited primary mortgage banks in Nigeria.

H₀₄: There is no significant effect of management innovation and process innovation on service efficiency of accredited primary mortgage banks in Nigeria.

H₀₅: Mortgage financing and innovation capability do not have significant influence on housing loan performance of accredited primary mortgage banks in Nigeria.

H₀₆: There is no significant moderating effect of government housing policy on the functional relationship between mortgage financing, innovation capability and housing loan performance of accredited primary mortgage banks in Nigeria.

1.6 Significance of the Study

This study will be of great significance to the stakeholders such as students, Researchers, scholars, financial institutions, federal government of Nigeria, society/public and mortgage business partners as explained below.

Students/Researchers/Scholars to identify the gaps in previous studies on mortgage financing and the innovation capabilities of primary mortgage banks in Nigeria to provide easy access to finance for homeownership and to carry out further research work on how the primary mortgage banks can improve its service delivery to their customers.

Financial institutions in the mortgage financing markets to understand the basic challenges being faced by potential homeowners, the management process that can be adopted to reduce the non-performing loans ratio to the CBN threshold limit of 10% and recommend ways that the accredited primary mortgage banks can leverage on technology to reduce their loan processing turnaround time.

Federal Government of Nigeria to institute periodic review on mortgage finance policies and evaluation of mortgage banks' operations through the Central Bank of Nigeria (CBN) in conjunction with the private sector, adding that there is a need for the enhancement and amendment of relevant legislations, including the FMBN Act 82 of 1993, NHF Act 3 of 1992, Mortgage Institutions Act of 1989, Land Use Act, Foreclosure law and other omnibus laws.

Society and the public to be aware of the relevance of mortgage financing institutions as the best window for the actualization of their homeownership dream and the development of low-income mass housing stock for Nigerians.

Mortgage business partners such as Labour Unions, Real Estate Developers Association of Nigeria (REDAN), Mortgage Banking Association of Nigeria (MBAN), Nigeria Employers Consultative Association (NECA), Federal Mortgage Bank of Nigeria (FMBN), Central Bank of Nigeria (CBN), Family Home Fund Limited (FHFL), Nigerian Mortgage Refinancing Company (NMRC) and other relevant professional bodies to understand the shortcomings in mortgage banks' operations and collaborate with each other with a view to developing strategies aimed at achieving the goal of the federal government National Housing Policy (NHP) in Nigeria.

1.7 Scope of the Study

This research study assessed the influence of mortgage financing and innovation capability on the housing loan performance of accredited primary mortgage banks in Nigeria. To be specific, the study examined how the three measurements of mortgage financing represented by long-term fund, household income and interest rate in addition to how innovation capability dimensions depicted by management innovation and process innovation affected housing loan performance measures indicated as access to finance, homeownership loans, non-performing loans, and service efficiency, of accredited primary mortgage banks in

Nigeria. Government housing policy was introduced in this study as a third variable referred to as a moderator to provide a robust explanation for the intended functional relationship between the independent and dependent variables.

The study covered especially those that are within low-and-medium income groups in 129,163 population of National Housing Fund (NHF) Scheme registered customers with Federal Mortgage Bank of Nigeria (FMBN) Ikeja District Office in Lagos as at 31st December 2021. The study also covered mortgage loan operations of twenty (20) FMBN accredited Primary Mortgage Banks (PMBs) in Nigeria as at 31st December 2021. The choice of conducting this research in Lagos is because out of the twenty (20) FMBN accredited PMBs in Nigeria, ten (10) representing 50% of accredited PMBs' operational locations are concentrated in Lagos and considered suitable for this study.

The time frame for this study took two years from 2021-2023.

1.8 Limitation of the Study

This study is not an exception from other previous studies with limitations. Hence, the researchers recognized these limitations to provide chances for further studies.

The study only considered twenty (20) FMBN accredited primary mortgage banks operating in Nigeria whereas the total number of primary mortgage banks licenced to operate by Central Bank of Nigeria (CBN) were thirty-four (34) as at the study period.

The study is limited to Federal Mortgage Bank and accredited Primary Mortgage Banks operations in Lagos. Nevertheless, the level of representation and generalization of the findings not affected by the geographical location because the business office or residence of potential mortgage loan applicant has no relevance with the choice of property location in the sense that NHF Homeownership Loan can be used to acquire property in any part of Nigeria.

The study focused only on NHF scheme contributors and neglected other customers of the accredited primary mortgage banks that are maintaining deposits with the intention of owning their homes in future through mortgage financing. Similarly, the study considered the credit officers of the accredited primary mortgage banks and ignored other related officers such as Loan Administration Officers, Operation Officers, Loan Recovery Officers, Mortgage Loan Origination and Underwriting Officers. This invariably limiting the number of respondents and general views on housing loan performance measures of the accredited primary mortgage banks.

The study concentrated on NHF Homeownership loan product of the accredited primary mortgage banks in Nigeria. However, there are other mortgage loan products such as Estate Development Loan (EDL), Cooperative Housing Loan (CHL), Rent-To-Own (RTO), Home Renovation Loan (HRL), and Commercial Mortgage Loan (CML) among others.

The choice of a cross-section survey research design equally indicates that the study is not able to render explanations of the changes in the dependent variable (housing loan performance) traceable to the independent variable (mortgage financing and innovation capability) and moderating variable (government housing policy) over a long period. Although, this study is not affected by this deficiency since its wide objective is to examine the influence of mortgage financing and innovation capability measures on housing loan performance of accredited primary mortgage banks in Nigeria. This entails the collection of data at a point in time and thereby playing the part to the strength of the design.

Other drawbacks of the research instrument include delay in response time, instances of respondents filling the questionnaire without reading through it and leaving some questions without offering answer to it.

1.9 Operational Definition of Terms

The following terms have the meanings given to them in this study:

Access to Finance: This is the capacity of the primary mortgage banks to make available the housing finance needs for Nigerians at affordable interest rate and with less loan conditions by the mortgage banks.

Government Housing Policy: These are guidelines issued by the federal government to regulate the housing delivery and mortgage operations in Nigeria.

Homeownership Loans: This is a form of housing tenure where homeowner has the overall control, direct access and right to live in a house or apartment acquired through mortgage financing.

Household Income: This is the amount of income an individual earns in one month, before taxes or deductions are taken out and it is used by the mortgage banks to access the ability of a mortgage applicant to repay the loan.

Housing: This refers to shelter, building or a structure that serves as a protective cover for every household.

Housing Loan Performance: This is measured by the ability of primary mortgage banks to provide efficient mortgage financing system that guarantee the mortgage loan applicants access to finance for homeownership and develop the innovation capability to deliver service efficiency.

Innovation Capability: This is the ability to identify advanced technologies and knowledge assets to attain a competitive edge in the mortgage finance industry.

Interest Rate: This is the percentage charged by primary mortgage banks on the total amount lend to its customers for homeownership or the cost of funds that the primary mortgage banks are paying on the funds that they are using in running the mortgage banking business.

Long-Term Fund: This refers to National Housing Fund (NHF) established by the Federal Government of Nigeria (FGN) as a Long-Term Funds scheme that supply the Nigerian mortgage market with sustainable liquidity for the advancement of homeownership through mortgage financing at affordable interest rate.

Management Innovation: This is the capacity of an organization to introduce new understanding methods and procedures that will be adopted by management in performing their work to produce modifications in the administrative processes and organization's approach for efficient service delivery.

Mortgage Financing: This is a loan facility granted to an individual or corporate organization by financial institutions that provides mortgage services, either to buy a home or construct a real estate, in which the property itself stands as a collateral/security for the loan.

Non-Performing Loans: This is the loan advances that both the principal and interest have not been paid by the mortgage loan beneficiaries to the mortgage loan originator for a specific period.

Process Innovation: This involves the capability of an organization to increase its efficiency and effectiveness of operations to enhance service performance at a reduce cost.

Service Efficiency: This is associated with the delivery of quality and effective service by the mortgage lending operators to its customers.

Endnotes

1. G. A. Anidiobu, P. I. P. Okolie & W. N. Ugwuanyi. *Effect of Mortgage Finance on Housing Delivery in Nigeria: The Primary Mortgage Institution (PMI) Perspective*. **Journal on banking Financial Services and Insurance Research**, 8(2), 2018, 36-49.
2. I. Ibrahim, M. S. Muhammad, U. Auwal & D. Raymond. *Perception of Low-Income Earners on the Performance of Mortgage Institutions in Housing Finance in Lafia, Nasarawa State, Nigeria*. **Path of Science Journal**, 5(11), 2019, 2001-2011.
3. A. A. Adzis, H. E. Lim, S. G. Yeok & A. Saha. *Malaysian Residential Mortgage Loan Default: A micro-level analysis*. **Presentation at the Singapore Economic Review Conference, Singapore**, August 5-7, 2019.
4. J. T. Ikyaaave. *How FMBN is deepening mortgage penetration*. **Thisday Newspaper of June 3rd, 2021**, <https://www.thisdaylive.com>.
5. C. C. Nwuba & E. O. Chukwu-Nwuba. *Barriers to Accessing Mortgages in Nigeria's Housing Markets*. **International Journal of Housing Markets and Analysis** (2018): xx-xx <http://doi.org/10.1108/IJHMA.10.2017.0089>.
6. F. O. Ikekpeazu. *Mortgage Financing for Housing Delivery in Nigeria: The Governmental Role in Development of an Effective Mortgage Market*. **PM World Journal**, 7(1), 2018, 1-19.
7. Centre for Affordable Housing Finance in Africa. *Understanding Nigeria's Housing Finance Market*. **CAHF**, <http://www.housingfinanceafrica.org>.
8. Central Bank of Nigeria. *Mortgage Financing in Nigeria*. **Occasional Paper**, 50, <http://www.cbn.gov.ng>.
9. C. N. Chidi-Okeke & I. O. Nwanna. *The Impact of Primary Mortgage Institutions' Housing Loans on Human Development in Nigeria*. **IIARD International Journal of Banking and Finance Research**, 6(3), 2020, 29-40.
10. E. A. Moore. *Addressing Housing Deficit in Nigeria: Issues, Challenges and Prospects*. **CBN Economic and Financial Review Journal**, 57(4), 2019, 201-222.
11. Housing Circuit. *Mortgage Financing in Nigeria: Issues and Challenges*. **Housing Circuit Limited**, <http://www.housingcircuit.com>.

12. The World Bank. *Housing Finance Development Program (P131973). Implementation Completion and Results Report*, 31 October 2019, 5-6.
13. T. N. Ofor, O. S. Alagba & M. S. Ifurueze. *Housing Finance Market and Economic Growth of West Africa Region: A Study of Nigeria and Ghana*. **International Journal of Business and Economic Development**, 6(3), 2018, 49-60.
14. V. Kumar, S. Acharya & T. H. Ho. *Does Monetary Policy Influence the Profitability of Banks in New Zealand?* **International Journal of Financial Studies**, 8(35), 2020, 1-17.
15. Z. A. Ghani. *Primary Mortgage Institutions Challenges for Financing Housing Development in Nigeria*. **International Journal of Research-GRANTHAALAYAH**, 9(2), 2021, 127-137.
16. M. A. Khan, A. Siddique & Z. Sarwar. *Determinants of Non-Performing Loans in the Banking Sector in Developing State*. **Asian Journal of Accounting Research**, 5(1), 2020, 135-145.
17. K. Staehr & L. Uuskula. *Macroeconomic and Macro-Financial Factors as Leading Indicators of Non-Performing Loans: Evidence from the EU Countries*. **Journal of Economic Studies**, 2019, xx-xx <http://doi.org/10.1108/JES.03.2019.0107>.
18. M. O. Farooq, M. S. A. Elseoud, S. Turen & M. Abdulla. *Causes of Non-Performing Loans: The Experience of Gulf Cooperation Council Countries*. **Journal of Entrepreneurship and Sustainability Issues**, 6(4), 2019, 1955-1974.
19. P. Cincinelli & D. Piatti. *How Inefficient is an Inefficient Credit Process? An Analysis of the Italian Banking System*. **The Journal of Risk Finance**, 2021, xx-xx <http://doi.org/10.1108/JRF.08.2020.0184>.
20. A. Thomas. *Convergence and Digital Fusion Lead to Competitive Differentiation*. **Business Process Management Journal**, 26(3), 2020, 707-720.
21. K. B. Aladelusi. *Mortgage Financing and Growth of Housing Sector in Nigeria*. **Proceeding of the 16th iSTEAMS Multidisciplinary Research Nexus Conference**, 16(2), The Federal Polytechnic Ilaro, Ogun State, Nigeria, June 9-11, 2019, 225-230.
22. S. O. Olawumi, A. O. Adewusi & A. K. Oyetunji. *Analysis of the Factors Influencing Access to Mortgage Finance in Lagos Nigeria*. **Global Journal of Business, Economics and Management**, 9(3), 2019, 113-121.
23. P. Siyan, A. E. Adegioriola & O. M. Eriwode. *The Development of Mortgage Finance in Nigeria and its Impact on the Economy*. **International Multilingual Journal of Science and Technology**, 4(3), 2019, 455-465.
24. S. Al-Ahmad, N. F. Easa & N. Mostapha. *Knowledge Sharing and Innovation: Evidence from Lebanese Banks*. **Creative Sustainable Development-BAU Journal**, 1(2), 2020, 1-18.
25. S. A. Chaar & N. F. Easa. *Does Transformational Leadership Matter for Innovation in Banks? The Mediating Role of knowledge Sharing*. **International Journal of Disruptive Innovation in Government**, 1(1), 2021, 36-57.

26. J. R. P. Rajapathirana & Y. Hui. *Relationship between Innovation Capability, Innovation Type, and Firm Performance*. **Journal of Innovation and Knowledge**, 3, 2018, 44-55.
27. P. Khosravi, C. Newton & A. Rezvani. *Management Innovation: A Systematic Review and Meta-Analysis of Past Decades of Research*. **European Management Journal**, 2019, 1-40, <http://doi.org/10.1016/j.emj.2019.03.003>.
28. D. T. Morales & F. L. Trinidad. *Digital Mortgage Banking Acceptability in Philippine Universal Banks: Evidence from UTAUT Model*. **Journal of Information System and Technology Management**, 4(15), 2019, 1-15.
29. S. Najafi-Tavani, Z. Nafaji-Tavani, P. Naude, P. Oghazi, & E. Zeynaloo. *How Collaborative Innovation Networks Affect New Product Performance: Product Innovation Capability, Process Innovation Capability, and Absorptive Capacity*. **Journal of Industrial Marketing Management**, 2018, 1-12, <https://doi.org/10.1016/j.indmarman.2018.02.009>.
30. K. B. Kahn. *Understanding Innovation*. **Journal of Business Horizons**, 61, 2018, 453-460, <https://doi.org/10.1016/j.bushor.2018.01.011>.
31. S. Kohl. *More Mortgages, More Homes? The Effect of Housing Financialization on Homeownership in Historical Perspective*. **Politics and Society Journal**, 46(2), 2018, 177-203.
32. I. Huljak, R. Martin, D. Moccero & C. Pancaro. *Do Non-Performing Loans Matter for Bank Lending and the Business Cycle in Euro Area Countries?* **European Central Bank (ECB) Working Paper**, Series no. 241, 2020, 1-29.
33. T. Nguyen, D. Tripe & T. Ngo. *Operational Efficiency of Bank Loans and Deposits: A case Study of Vietnamese Banking System*. **International Journal of Financial Studies** 6(14), 2018, 1-13.
34. W. M. Jayantha & O. T. Oladinrin. *Identifying Critical Enablers for Homeownership in Hong Kong*. **International Journal of Housing Markets and Analysis**, 13(2), 2020, 185-206.

Chapter Two

Literature Review

The related literature for this study considered conceptual, theoretical, and empirical reviews. This has become imperative because it enables the researcher to understand and examine what has been carried out in the existing research work given the variables under study. The researcher during the conceptual review took consciousness of historical perspective, relevance, definitions, features, merits, and demerits of each variable as demonstrated by previous studies. The theoretical review encapsulates the analysis of several theories that offered theoretical support/rationale for the independent and dependent variables of the study; even, it established the theory that anchored this study. As for the empirical review, the researcher looked at different methodologies used by various studies and their findings. Consequently, submissions were made on how previous studies recognized and measured each variable under study, the mathematical model as provided by the underpinning theory was presented and the chapter concluded with summary of gaps in the literature.

2.1 Conceptual Review

To present a better understanding of the research study, the historical perspective of Federal Mortgage Bank of Nigeria (FMBN) was done and the roles of Primary Mortgage Banks (PMBs) in mortgage loan delivery were discussed because they are the only two players in

the mortgage markets in Nigeria. The conceptual review of the variables to be addressed in this study in occurrence with extant literature becomes relevant for building the understanding of these variables. To accomplish this, each of the variables will be reviewed following their relevance, definitions, features, merits, and demerits. In addition to these, the researcher's definition of each variable will be introduced to contribute to knowledge. The variables under study are Mortgage Financing (Long-Term Fund, Household Income, and Interest Rate), Innovation Capability (Management Innovation and Process Innovation), Housing Loan Performance (Access to Finance, Homeownership Loans, Non-Performing Loans and Service Efficiency) and lastly, Government Housing Policy serve as the moderator.

The conceptual issues are highlighted below for further discussion:

- 2.1.1 Evolution of Mortgage Banking in Nigeria
- 2.1.2 Mortgage Financing
 - 2.1.2.1 Long-Term Fund
 - 2.1.2.2 Household Income
 - 2.1.2.3 Interest Rate
- 2.1.3 Innovation Capability
 - 2.1.3.1 Management Innovation
 - 2.1.3.2 Process Innovation
- 2.1.4 Housing Loan Performance
 - 2.1.4.1 Access to Finance
 - 2.1.4.2 Homeownership Loans
 - 2.1.4.3 Non-Performing Loans
 - 2.1.4.4 Service Efficiency
- 2.1.5 Government Housing Policy

2.1.1 Evolution of Mortgage Banking in Nigeria

The mortgage banks are regarded as a specialized banking institutions saddled with the operational responsibility to provide finance to its customers for the purpose of outright purchase of property, direct construction, or renovation of existing property. The mortgage banking operations started in the year 1956 with the establishment of Nigerian Building Society (NBS) by Commonwealth Development Corporation (CDC) in conjunction with Federal Government and Eastern Region of Nigeria with the initial Authorized share capital

of £1.125m (One Million, One Hundred and Twenty-Five Thousand Pounds) which was equivalent to ₦2.250m (Two Million, Two Hundred and Fifty Thousand Naira). The shareholding was made up of 60 percent for Commonwealth Development Corporation, 31 percent for Federal Government of Nigeria and 9 percent for Eastern Region Government. During the same period, another important institution set up by the Colonial Government was the African Staff Housing Scheme meant to provide housing for the senior African staff who were in the civil service¹.

Consequent upon the introduction of indigenisation policy, The Federal Government of Nigeria (FGN) acquired 100 percent ownership of the NBS in 1973 and with the enactment of FMBN Act No. 7 of 1977 renamed it the “Federal Mortgage Bank of Nigeria². The FMBN took over the assets and liabilities of NBS³. The take-off capital was ₦20million in 1978 and later increased in 1979 to ₦150million⁴. As a result of this, the ownership structure now changed with Federal Government of Nigeria having 60 percent and Central Bank of Nigeria (CBN) 40 percent¹. A management consultant “Dutch firm of Bereusdodmore Bosboom” was engaged by the Federal Government to supervise the operations of the Bank from 1977 to 1980 and handover the management after the three years to indigenous staff³. As at 2019, the equity capital was N5billion for FMBN⁵. Hence, FGN now have 50 percent, CBN 30 percent and Nigerian Social Insurance Trust Fund (NSITF) 20 percent. Out of ₦5billion FMBN current capitalisation, only N2.56billion was fully paid up by the shareholders⁶.

The FMBN was reorganised in 1978 by the Federal Government of Nigeria to accelerate housing delivery in the country. It is expected to provide mortgage lending on a nationwide basis at rates of interest below the market rates. As currently, FMBN source its funds from the deposit’s mobilisation and equity contributions by its shareholders⁷. The FMBN remained the major player in the mortgage finance industry that provides long-term funds in the

housing finance market for all potential borrowers prior to the enactment of Primary Mortgage Institutions (PMIs) Act No. 53 of 1989 to complement its activities⁵. The role of FMBN has also been widened to serve as a conduit that link the mortgage finance market with the capital market. Also, to develop the workable secondary mortgage market and to mobilize funds into the housing finance industry from foreign institutions and individuals⁴.

The FMBN has operational challenges⁴. Thus, slow pace of PMIs' performance, necessitated the FGN establishment of a contributory savings scheme known as the "National Housing Fund (NHF) Act No. 3 of 1992 to serve as a pool that mobilizes long-term funds from Nigerian workers, banks, insurance companies and the Federal Government, to advance loans at soft interest rates to NHF contributors⁸. The Act assigned the responsibility of management and administration of the Fund to FMBN (NHF Act No. 3 of 1992). The promulgation of the FMBN Act 82 of 1993 and the Mortgage institutions Act No. 53 of 1989, accorded FMBN the status of the apex mortgage institution saddled with the responsibility of providing long-term loan facilities to PMIs, regulating and supervision⁸. Therefore, make PMIs a second-tier housing finance institutions⁵. PMIs responsible for provision of long-term loan to individual and corporate property developers for mass housing construction and carry out research study on mortgage finances⁸. However, the old FMBN retail functions were ceded to an autonomous company named "Federal Mortgage Finance Limited (FMFL)" which was carved out in December 1993 from FMBN³. In view of non-performance, the FMFL was consolidated with FMBN in December 2003.

The FMBN mandate as contained in the enabling Act and other related legislations include: The provision of long-term credit facilities to Primary Mortgage Banks in Nigeria; Encourage and promote the emergence and growth of workable primary and secondary mortgage institutions to service the need of housing delivery in all part of Nigeria; Mobilization of domestic and offshore funds into the housing sector; Linking the capital market with the

housing industry; Establishing and operating a viable secondary mortgage market to support the primary mortgage market; Collect, manage and administer the National Housing Fund (NHF) Scheme in accordance with the provision of the NHF Act No. 3 of 1992. The overall focus of FMBN is to promote the delivery of affordable and modern houses through the Primary Mortgage Banks (PMBs) to Nigerians that are contributing into the NHF Scheme via its various products such as NHF Mortgage Loan; Home Renovation Loan, Rent-To-Own Scheme, Individual NHF Construction Loan; Cooperative Loan and Estate Development Loan (EDL)².

2.1.2 Mortgage Financing

This is a loan facility granted to an individual or a corporate organization by financial institutions that provides mortgage services, either to buy a home or construct a real estate, in which the property itself stands as a collateral/security for the loan. The mortgage banks are playing an essential role in raising finance as a popular channel for low- and medium-income earners to acquire, build or renovate existing property which facilitate the development of the housing sector in Nigeria. The institutionalization of mortgage financing commenced in Nigeria with the creation of Nigerian Building Society (NBS) in 1956 that is now transformed into Federal Mortgage Bank of Nigeria (FMBN) because of 100 percent ownership acquisition in 1977 by Federal government of Nigeria⁵. The emergence of mortgage financing came because a potential homeowner with low income might not be able to raise enough fund from own resources to realise his/her dream of homeownership⁹. In an essential channel for housing acquisition and is also of a problem in developing countries like the world's developed economies, mortgage financing represents Nigeria⁴.

According to some scholars, housing finance through formal mortgage banks is assumed to be the solution to housing problems in many developing countries like Nigeria but their

formal mortgage institutions were not successful. However, this position was corroborated by a scholar which reported that 245 PMIs were established in Nigeria between 1991 and 1996 but as at year 2000, only 22% were found to be operating⁸. With the recent report by FMBN, as at year 2021 only twenty (20) Primary Mortgage Banks (PMBs) have full accreditation to access from the apex mortgage institution Long-Term mortgage finance loan and NHF mortgage loan on behalf of NHF contributors². A good number of empirical studies have been carried out on mortgage financing, social housing for the poor, housing contribution to poverty alleviation and the effect of housing on economic growth in Nigeria but none has investigated why Primary Mortgage Banks (PMBs) are operating at a loss despite various business opportunities available in the housing finance market in Nigeria¹.

Mortgage financing according to extant literature has been identified as one of the most challenging limitations in the housing finance industry¹⁰. The large investment opportunities available in the mortgage market have not been utilized because of the small size of the housing finance market and the researcher concluded that a dynamic housing finance market will provide the required finance for individuals, corporate organizations, and estate developers¹¹. In mortgage financing, there are various requirements and conditions that the intending borrower must satisfy to qualify for the mortgage/housing loan. The prospective homeowners' perception of mortgage finance challenges or factors could be responsible for low patronage of mortgage financing in Nigeria¹². There has been a continuous effort and initiatives by FGN to improve the provision of mortgage loans and credit from private lenders because the popular channel to homeownership in advanced economies is through mortgage financing¹³. The recent study has narrowed down the mortgage financing to Long-Term Funds, Household income and Interest rate.

2.1.2.1 Long-Term Fund

The long-term fund as a category of mortgage financing (MF) refers to National Housing Fund (NHF) established by the Federal Government of Nigeria (FGN) as a Long-Term Fund scheme that supply the Nigerian mortgage market with sustainable liquidity for the advancement of homeownership through mortgage financing at affordable interest rate. One of the primary functions of mortgage banks in Nigeria is to gather long-term fund for the overall development of housing finance market to create homeownership loans for their customers that are qualified to access mortgage loans¹⁴. The absence of long-term fund constitutes one of the constraints in the sense that mortgage banks are unwilling to use their short-term deposits to finance long-term housing loan requests¹⁵.

The primary mortgage banks (PMBs) are confronted with lack of longer-term resources because of the failure of Federal Mortgage Bank of Nigeria (FMBN) to deliver on its operational responsibility to promote secondary mortgage market (SMM). The expansion of the window for long-term fund to mortgage lenders is important for the growth of the market because Capital markets (CM) were not well linked to the mortgage market¹⁶. It has been established that mortgage financing requires a large investment capital outlay in which the servicing of the loan facility spread across 5 years and the primary mortgage banks have the challenge to mobilize the long-term deposits to create mortgage assets. The primary mortgage banks' short-term deposits might not be sustainable for their mortgage operations in view of the facts that it is subjected to persistent savings and withdrawals from the account by the customer¹³.

According to some research study revealed that housing delivery is challenged by a lot of factors among which are lack of long-term finance for construction, high inflation rate, poor savings culture by the citizens, high interest rate on loans charged by PMBs, unfavourable mortgage system and laws, are all responsible for poor performance of the housing market⁵. It has been established by previous research that some PMBs were unable to meet up with the

CBN 30 percent minimum mortgage assets to total assets ratio requirement for mortgage operations performance measurement and this was attributed to paucity of long-term fund available to these financial institutions with which they could create mortgage assets⁹. Another research study corroborated the above position that unavailability of long-term fund has been one of the major challenges preventing the primary mortgage banks to create more mortgages for their customers⁴. The shortage supply of required funds to the housing finance market by the primary mortgage banks has prevented its growth and overall economic benefits¹.

The alternative window of getting extra funds to meet the daily operational requests of many primary mortgage banks has been a debt that refers to the fund of borrowed money with the intentions of repayment. Research has revealed that most developing countries established long-term credit institutions like development banks as a special purpose vehicle for the supply of long-term credit for the mortgage market. An easy access to cheap long-term fund by the primary mortgage banks will have a positive consequence on the performance of mortgage banking sector in terms of homeownership loans to qualified mortgage applicants in Nigeria¹⁷.

2.1.2.2 Household Income

The household income as a category of mortgage financing (MF) is the amount of income an individual earns in one month, before taxes or deductions are taken out and it is used by the primary mortgage banks to assess the ability of a mortgage applicant to repay the loan. Consequently, a prospective mortgage loan applicant cannot get a loan amount of more than 1/3 of his/her monthly income in compliance with the global practice. The mortgage loan affordability is determined by the household income instead of the cost of the property¹⁸. The NHF mortgage loan window as a long-term credit provides the opportunity for the low- and

medium-income earners that are contributing into the scheme to obtain affordable loan facility from FMBN through any PMB of their choice for homeownership after satisfying the eligibility criteria of regular flow of income that will guarantee mortgage loan repayment⁸.

A research study revealed that the concept of affordable housing was gauged using income level, affordability, and household size¹⁸. Some scholars argued that the decision to buy a property by potential house owners is subject to their financial standing and only few households can acquire a home with their personal income without any recourse to primary mortgage banks for homeownership loans' facility¹¹. A research study has revealed that Nigeria has unprogressively low homeownership rate of 25% as at November 2018 and the 75% of Nigeria's housing deficit figure is focused on families earning less than one third of the minimum wage who are unable to pay for a decent housing because of their limited income¹⁹. Previous research reported that for average Nigerian citizens, the income level creates a limitation to the realization of homeownership dream of many households in Nigeria²⁰. Consequently, some scholars mentioned increase in household income in their studies as one of the contributing factors to increase homeownership²¹.

2.1.2.3 Interest Rate

The interest rate as a category of mortgage financing (MF) represents the percentage charged by the primary mortgage banks on the total amount lend to its customers for homeownership or the cost of funds the primary mortgage banks are paying on the funds that they are using in running the mortgage banking business. Interest rates have a significant influence on the overall long-term cost of buying a home through mortgage financing. The prospective mortgage loan applicant will seek the lowest possible interest rates but on the other hand, mortgage lenders must manage their risk through the interest rates they offer to their

customers. The interest rate charged by primary mortgage banks is influenced by several elements which includes state of the economy and inflation²².

High interest rate impedes the growth of homeownership and the housing sector¹⁵. The low interest rates have generated a difficult mortgage banking environment, increased competition in the mortgage industry and constitute a threat to the performance of the primary mortgage banks in Nigeria²³. Prospective mortgage lenders often decry the low interest rates of 6% charged by FMBN on investment in the National Housing Fund (NHF) mortgage loan financing, since there are more profitable alternative investment outlets and therefore unwilling to invest in the Fund²⁰.

The critique of extant literature identified that interest rate has a big influence on the performance indicators of most of the primary mortgage banks and consented on the transformational consequences of interest rate on primary mortgage banks' performance and operational efficiency. However, some scholars believed interest rate only has a marginal outcome on the performance indicators of most primary mortgage banks. Existing research studies revealed that when the interest rate is low, potential homeowners are willing to borrow because they find it convenient to meet up with the repayment of the mortgage loan facility. Consequently, when the interest rates are high, prospective house owners are reluctant to borrow since the repayment on mortgage loans will cost more²⁴.

It has been established that combination of interest rate with improved economic outlook and rising household incomes have culminated in increasing demand for homeownership in Nigeria. The low interest rates in most cases give rise to inexpensive funds and make mortgage loans easily accessible by potential homeowners but however convey a negative implication especially to mortgage banks' depositors as a very low return on investment²⁵.

2.1.3 Innovation Capability

This is defined as the ability to identify advanced technologies and knowledge assets to attain a competitive edge in the mortgage finance industry. The empirical work on innovation capability have not developed very much and there is no universal agreement on how to define and operationalize the concept of innovation capability²⁶. The mortgage banking industry of today is being confronted with some challenges arising from fast changing operational environment which threatening their continuity and long-term achievement. The need to be innovative has been identified by academics and practitioners as a weapon to combat these challenges. Research studies have revealed that organizational achievement in the 21st century workplaces depend on innovation as one of the essential elements required and identified transformational leadership (TL) as the most important element that influences innovation. Of recent, the mortgage banking sector faced with frequent transformation resulting from general competition and as a result, the primary mortgage banks initiated new chain of programs and services to be competitive in the mortgage market²⁷.

In view of the globalization, primary mortgage banks have resulted into technological practices and have innovative focus because it will have influence on their operational performance which some research studies have claimed to be the best way to go for the long run survival in turbulent mortgage financing markets²⁸. The innovation capability is regarded as an important asset for primary mortgage banks to acquire and its sustainability to gain competitive advantage in the mortgage finance market²⁹. The implementation of technology to convey a business capability or result entails a wise selection procedure of the correct technology to meet specific business objectives. The primary mortgage banks are on daily basis try to improve their innovation and digital strategies due to their customers' continuous demanding for more easy and creative services following the increase in competition in the mortgage business environment³⁰.

Previous study has confirmed that management and process innovation will be achieved through knowledge sharing in which trust, motivation and management support are consequential for advancement of knowledge transfer and innovation. In the same vain, some researchers established that higher innovation capabilities and activities would be achieved when sharing knowledge with strategic partners and regularly notifying their employees about modifications in processes, directives, and rules. Consequently, when an organization developed the capability to gain, devise and spread knowledge throughout the organization will lessen learning efforts and facilitate improvement in innovation performance of the employees³¹. Inasmuch that organizations may be limited to vital resources and capabilities for innovation, a collaboration strategy can be employed to close this gap³². Therefore, the innovation capability to be discussed in this study centres on management innovation and process innovation.

2.1.3.1 Management Innovation

Management innovation (MI) is the capacity of an organization to introduce new understanding methods and procedures that will be adopted by management in performing their work to produce modifications in the administrative processes and organization's approach for efficient service delivery. Some previous literature on innovation focused on organization leveraging on technological innovation but recent researchers in multiple disciplines have stressed the significant role of management innovation for organisational improvement and performance. It has been established by some scholars that management innovation contributes to the competitive advantage that similar organisation might find it challenging to reproduce. Consequently, some researchers have identified leadership behaviours, organisational learning and organisational size as drivers that advance a better understanding of management innovation³³.

The management innovation relates to new management approaches that are targeted towards improving organizational performance. However, defined as creation and execution of management application, procedure, formation, or method that is new in technology and is calculated to promote organizational objectives. Management innovation generally implies what managers do and how they do it hence, connected with modifications like how managers set their directions, how they make decisions, how they coordinate operations and how they inspire employees²⁸. The overall extant literature on management innovation was regarded as immature and as a result, lacks understanding and the capability to accurately inform subsequent research and application³³.

2.1.3.2 Process Innovation

The process innovation involves the capability of an organization to increase its efficiency and effectiveness of operations to enhance service performance at a reduce cost. It brings about the introduction of new methods or approaches which includes materials, job specifications, equipment, work, and information flow devices for the firm's production activities that are utilized to produce a product and consequently enables quality improvement which also lead to reduction in costs. The process innovation capacity of an organisation can be measured by its ability to initiate new technological processes to achieve quality product and efficient service delivery to its customers³².

A research scholar defined process innovation as the application of latest technology or considerably improved production or delivery techniques which considers changes in devices, human capital and working strategies or a merger of these. Process innovation also described by another researcher as the introduction of new tactics for the product or service or modern method of commercializing the product or service. It is established that process innovation

has effect on productivity, growth, profitability, and efficiency of an organisation. The extent literatures revealed that process innovation has a positive and significant influence on organizational performance as regards financial, growth, customer satisfaction and internal procedure²⁹.

Process innovation according to some scholars is the introduction of recent technology in production processes and distribution strategies by making technical, equipment or software modifications. It is the adoption of novel means achieved by utilizing the innovation and introducing changes in management, structures, applications, and methods. The improvement in the employees' relationship quality and interactive capacity will motivate them to gain knowledge which eventually increase new product and process expansion²⁷. The process innovation deals with the capacity of the organization to implement an improved process than the present activity for better performance³⁴.

2.1.4 Housing Loan Performance

The housing loan performance (HLP) in this study is measured by the ability of the primary mortgage banks to provide efficient housing finance system, number of homeownership loans created, non-performing loans ratio reduction and the efficiency in service delivery. The existing literature revealed that housing loan performance is a conception which revolves around the degree whereby the mortgage loans being paid out by primary mortgage banks are paid back as and when due in addition to interest payment and other mortgage charges. The housing loan performance of primary mortgage banks have a direct effect on the stability of the mortgage finance market (MFM). The provision of mortgage credit is the major business activity for primary mortgage banks and the loan portfolio is usually the greatest asset and main source of income. However, it is one of the pronounce sources of risk to primary mortgage bank's safety and soundness. For effective management of the mortgage loan

portfolio's credit risk, it is essential for the board and management to have the knowledge and control of the primary mortgage bank's risk assets profile and its credit structure³⁵.

Benchmarking has been regarded as one of the most efficient and modern tools capable of improving the housing loan performance of primary mortgage banks and strengthen its competitive advantages. It is a collection of instruments for consistent assessment of positive experiences of primary mortgage banks with leading positions in the mortgage industry and to implement them in the primary mortgage banks' operations. The category of benchmarking may be in form of benchmarking of mortgage units; benchmarking of client service quality; benchmarking of information systems; and benchmarking of mortgage lending transactions which includes financial indicators of mortgage lending operation; indicators of client satisfaction; quality of services; innovations and development of latest technologies³⁶.

According to a research study, the effect of innovation on business performance in service organizations would be more difficult and incompatible compared to manufacturing industry because of intangibility, perishability, inseparability, and variability. Scholars over the years have committed to recognizing the connection between the innovation and organizational performance. Researchers have utilized different type of financial and non-financial indicators to examine the organizational performance. However, some scholars have perceived innovation process as a powerful driver for improving the innovation and business performance of the organizations²⁹.

The federal government in recent past, through the Central Bank of Nigeria (CBN) declared a new public private partnership (PPP) initiative referred to as Nigerian Guarantee Company (NGC) to strengthen the housing finance sector. The company was specifically designed to intensify access to affordable housing finance in Nigeria by finding solution to credit aspect

challenge of the mortgage sector through credit risk sharing with commercial and mortgage banks. Consequently, the NGC is to issue a guaranteed equivalent to an insurance coverage upon payment of 3% of the mortgage as guaranteed fees. The performance indicators anticipated from this initiative when it becomes operational are access to housing finance, access to higher number of mortgages, better loan terms and conditions among others¹⁹.

In accordance with the discussion above, both financial and non-financial measures of housing loan performance are carefully thought about in this study to appraise the performance of primary mortgage banks in Nigeria. The housing loan performance (HLP) measures considered are access to finance, homeownership loans, non-performing loans, and service efficiency. The inclusion of these measures is a resultant-effect of the problems identified in the introductory chapter (see section 1.2).

2.1.4.1 Access to Finance

Access to finance as non-financial measure of primary mortgage banks' housing loan performance in Nigeria is defined in this study as the capacity of the primary mortgage banks to make available the housing finance needs for Nigerians at affordable interest rate and with less loan conditions by the primary mortgage banks. A research study revealed that many components are responsible for the impediment to accessing mortgages which directly hamper homeownership loans' delivery to Nigerians, and these includes inadequate long-term funds, low household incomes; high interest rates, low household savings, and large deposit requirements³⁷.

Some research scholars identified in their studies the paucity of funds, regulatory policy rigidity, bureaucratic bottlenecks in administration, poor savings, and diversion of operational focus among others as challenges of the primary mortgage banks to make funds available at more convenient terms and conditions for housing stock expansion and acquisition of

homeownership which consequently, hindered their smooth operations, performance, and contributions to real estate growth in Nigeria³⁸. It has been established by a researcher that critical problems affecting homeownership in Nigeria include inadequate access to finance, slow administrative processes, and high cost of land registration and titling³⁹. Access to mortgage has been noted by some scholars as a complex process in view of the facts that it requires several procedures and frequently affected by many factors such as income levels, savings level, availability of collateral, and interest rates among others⁴⁰.

Many research studies have restated that mortgage lending policies are stringent which equally play an important role in restricting many middle and low-income households to have access to housing finance for homeownership dream in Nigeria. This position was corroborated by extant literature that mortgage instruments in operation are complex and strict conditions associated with accessibility of the fund which prevented the prospective homeowners from access to the mortgage funds especially those households in middle and low-income groups⁸.

In developing economies like Nigeria, access to housing finance is progressively becoming demanding on daily basis for potential homeowners and feel restrained to apply for housing loan from primary mortgage banks following the strict conditions attached to loan access and affordability¹². The major centre of attention of the supply of housing finance by primary mortgage banks through capital market instruments is to expand access of low-income people to have satisfactory housing⁴¹. In advanced economies like the United State of America, Denmark and Britain, the typical means of homeownership is via a highly organized mortgage scheme and if the mortgage system is effectively and efficiently supervised, the process for accessing mortgage loan will be simple and quick¹⁵.

2.1.4.2 Homeownership Loans

The homeownership loans are a financial measurement of primary mortgage banks' housing loan performance in Nigeria because it entails pooling of large funds together to provide mortgage financing for its potential and qualified customers who desires to have their own houses through mortgages. It is a form of housing tenure where homeowner has the overall control, direct access and right to live in a house or apartment acquired through mortgage financing. The primary function of primary mortgage banks is to make long-term funds available to Nigerians for the realisation of homeownership dreams and this make it a critical indicator to measure the loan performance of the primary mortgage banks going by the number of mortgages created in a financial year.

A research study revealed that the improvement of mortgage deposit in Nigeria can prompt a greater influence of mortgages on homeownership while encouraging further accessibility to loanable funds of the primary mortgage banks⁴². According to research on Islamic banking for homeownership financing, the bank supply homeownership financing services to its customers who require a unique loan to meet his/her demand for building or renovating a house and this special service emanates because of the daily increasing conditions for the fulfilment of housing desires but not tied by the people's cash capacity to buy. The homeownership loan financing established to have a long-term repayment period stretch from 10 to 15 years, nevertheless, the customers' deposit funds utilized for this financing have a short-term period. However, the homeownership financing provisions by Islamic banks in Indonesia are still regarded as the major source of financing for prospective customers⁴¹.

In developed countries like Denmark, United Kingdom, Canada, France, and United State of America, one of the indicators to measure their developed economy is the capability of the households to own and acquire a decent and affordable housing unit¹. Going by the review of the asset-building literature, it is simple to perceive homeownership as a panacea to wealth discrepancies in the United States of America. While some researchers concur, that

homeownership is the most well-known window of building wealth but however, it is attained by the low-income households with considerably high costs and risks⁴³. A research study advocated that homeownership schemes accelerate the pathway from renter apartment to homeowner yet disregard the effect of the schemes and other related policies on homeownership. The primary focus of homeownership is to meet and support the housing demands of household as a whole²¹.

2.1.4.3 Non-Performing Loans

Non-performing loans (NPLs) is another financial indicator that can be applied to measure the housing loan performance of primary mortgage banks in Nigeria and in this study, it refers to as the loan advances that both the principal and interest have not been paid by the mortgage loan beneficiaries to the mortgage loan originator for a specific period. The banks classify loans as NPLs when the repayments of principal and interest are due for more than 90 days or depending on the terms of the loan agreement and the extent of NPLs can give rise to banking distress by making the banks insolvent which negatively influence the economic development. The degree of the NPLs will inspire unreliability of the bank management to reduce lending to its customers which eventually impacted on aggregate demand and investment. In view of the significance attached to NPLs prompt the Central Bank of Nigeria (CBN) to include the NPLs as one of the banks' stress tests models⁴⁴.

Previous literatures revealed different indicators of NPLs, and the outcome of those research studies were conflicting which might be because of dissimilar in methods of data examination used and disparity in economic situation of the countries. The NPLs has direct effect on the profitability of the bank as it impacted on revenues and expenses. A high degree of NPLs is

an indication that the loan assets are not performing, hence prevented the receipt of interest income and low profit to the bank. The NPLs negative effects on interest income, high provisioning requirement, high expenses, and problem in raising long-term funds from the capital market will weaken the financial performance of the banks. Consequently, growing level of NPLs due to poor management of the loans and cost control will increase worry and high concern for not recovering the credit on time, poses cash flow difficulties for the bank since it is no longer earning income from its credit business which resulted in having less money available to create new loans and pay operating costs as mentioned by some scholars⁴⁵.

From the research study of NPLs in euro area indicated that an essential driver of the significant increase in NPLs ratios was the harsh and prolonged recession in major parts of the euro area which considerably reduced the borrowers' ability to service their loans⁴⁶. A research scholar established that one of the major risk management indicators for bank financial performance is NPLs to total loans ratio which can be used to measure bank's level of credit risk and quality of outstanding loans⁴⁷. The decay of the NPLs ratio make it achievable to separately define the incompetency of the management of the lending process and then probe its causes. The banks' management became more determined in handling their NPLs by making the task of controlling and discarding of non-performing credits progressively more efficient⁴⁸.

2.1.4.4 Service Efficiency

The service efficiency as a non-financial indicator to measure the housing loan performance of primary mortgage banks in Nigeria is associated with the delivery of quality and effective service by the mortgage lending operators to its customers. According to a scholar, service innovation is regarded as any invisible act or operation that can be provided to other parties which do not culminate in any ownership claim. This position was corroborated by another

researcher which argues that service innovation is a care that customers get in accomplishing their wants and needs. It is on this premise that organizations are making efforts to deliver good quality service innovation to entice potential customers and sustainability of the existing consumers. Hence, the key to service primary mortgage banks' success is good quality service delivery and the availability of mortgage loan products needed by customers. Innovation is not restricted to the deployment of new products or services but also embraces new business thinking and new processes⁴⁹.

The dream to own a house is a paramount desire for every household in any society. As a result, the efficiency and effectiveness of the housing finance delivery process will be an important social and economic target of households⁸. The effectiveness of the business process and modification products rest on the competitive environment of the industry. Consequently, in the banking and financial services environment, the effectiveness and efficiency of the customer service value chain dominates the competitive advantage of the organization³⁰. A research scholar believed the bank's mortgage customers are of the opinion that digitization of mortgage services will support them in improving the mortgage service and operations of the primary mortgage banks⁵⁰. Generally, the service efficiency of the primary mortgage banks rest on the capability of their management¹³.

2.1.5 Government Housing Policy

The government housing policy as a moderating variable refers to the guidelines issued by the federal government to regulate the housing delivery and mortgage operations in Nigeria. Housing regulation in Nigeria is via policy pronouncements, issuance of white papers and legislation conduct with the operations in the housing delivery chain¹⁸. The federal government have initiated various housing policy reforms to address the observed low performance of access to mortgage finance in housing sector. However, one major challenge

of housing finance in Nigeria is the imperfection of the housing policy in the sense that most of the housing policy initiative to motivate developers and potential house owners lack economic implementation and power that is needed in the housing sector or market²⁰.

The federal government has a duty to create a conducive operating environment for the housing sector to thrive³⁹. Many existing literatures have reported non-performance of Nigeria housing policies and programmes that despite the huge sum of money committed by the government they were not successful⁸. A scholar revealed that because of high priority put on delivery of suitable and affordable housing by the federal government, the CBN credit policies mandated the commercial and merchant banks to apportion a specified lowest percentage of their credit to finance housing schemes of the government⁵¹.

The various housing policy reforms embarked upon by federal government as established by a research study were targeted to achieve optimal performance of the sector going by the huge benefits connected with real estate investment. Nevertheless, these efforts of government with regards to increasing housing production, the supply could not meet up with the demand for housing by households. Consequently, it is asserted that the big size of the real estate market label it a profitable and irresistible area of investment opportunity¹.

It has been established that a bank planning detailed functional policy for mortgage lending and design its performance process requires to take cognizance of change in the external environment and conduct a careful examination of the classes and quality of mortgage lending services on the mortgage market³⁶. However, the effectiveness of the government policy initiatives has started revealing in the housing finance industry as created by the current mortgage finance reforms⁵².

2.2 Theoretical Review

This section explains selected theories on mortgage financing, innovation capability and housing loan performance. The theories reviewed in this section include Lien theory, Title theory and Transformational leadership theory. More so, they are discussed taking cognizance of proponent(s), assumption(s), and the main issues addressed by each theory, supporters, and critics of the theory as well as the significance of the theory to the study.

This study reviewed from relevant theories as follows:

2.2.1 Lien Theory

A researcher ascribed the lien theory of mortgages to an English barrister in the 18th century and it came from the doctrines of equity. The proponent's claim is that if a state applies lien theory, the borrower owns the property during the period of the mortgage and the lender's interest in the property is restricted to the circumstances in which the borrower defaults on the mortgage⁵³. A lien is a right to keep possession of a property belonging to another person until a debt owned by that person is discharged.

The view of another researcher is that the mortgagor holds on to the legal and equitable title to the property, however, conveys an interest in which the mortgagee can only foreclose upon when satisfy the obligation of the mortgagor. This is comparable to a future interest in the property which empowers the mortgagee to utilize the procedure of foreclosure. The interest is a security interest or mortgage, which create a lien on the property. The theory permits title to stay with the mortgagor and the mortgage that is deposited on the property is a cost on the title. The right to ownership emerges upon a default and the mortgagor has a right to petition

the mortgage for any intervention with his right of ownership. The lien theory affirms that the mortgagee has only a lien on the property and is allowed the ownership and rents only upon foreclosure. The lien theory of mortgages consider that foreclosures normally need a civil action against the borrower-owner who is in default. Lien theory assign that a mortgagee of property holds only a lien and not title to the property prior to such time the mortgage is fully paid, and the lien is removed. Under this arrangement, when a loan is made the title is infused in an independent third party (trustee). The trustee obtains a deed of trust containing directives to be followed if the lender issues notice to the trustee that a mortgagor is in default. In this circumstance, the trustee normally informs the borrower that the defect must be cured by a specific date otherwise the trustee will begin the process to auction the property⁵⁴.

It is stated by another researcher that the lien theory is a financing principle that hold back the title deed from the lender banker (Mortgagee) via a mortgage contract. The mortgagor (buyer) retains the property deed (document specifying ownership) throughout the tenure of the loan. The buyer pledges to make complete payments to the lender and the mortgage becomes a lien on the property but the title stays with the borrower (or buyer). The lender's right of possession terminates immediately when the entire outstanding loans are paid off by the borrower. Generally, the removal of right to redeem mortgage loan for the mortgage bank (lender) may be difficult to do in the sense that the buyer and not the lender is having possession of title to the property⁵¹.

The lien theory is supported by a researcher which claims that there are perhaps no two states in which the law of mortgages is alike in all specifications but they may be broadly grouped into three groups: (1) Those in which the mortgage is retained to pass the legal title to the land at its execution; (2) Those in which the mortgage is kept to pass the title on default, and (3) Those in which the mortgage is maintained to pass no title pending foreclosure. The first perspective often called the legal or title theory and the last referred to as the equitable or lien

theory, while the second which is adopted in only a few states has no name. The lien theory is not without any critic in the sense that a researcher argued that there is uncertainty whether the title and intermediate theories represent the above researcher's second approach of viewing the mortgage. This is that, as between the immediate parties, the legal inception is conceded and the legal rights and responsibilities flowing from the mortgage as a conveyance of the legal estate are acknowledged and enforced by the court of law⁵⁵.

The need for homeownership has been the dream of average households but inability to raise enough funds through personal savings to purchase the property is always a challenge because of the low-income of individuals. Therefore, the lien theory will be relevant to this study to fill the financing gap by linking the mortgage financing to the housing loan performance of primary mortgage bank in the sense that, the borrower (mortgagor) owns the property pledged during the period of the mortgage but the lender's (mortgage bank/mortgagee) interest in the property is restricted to the situations in which the borrower defaults on the mortgage.

The borrower holds on to the legal title of the property acquired which serve as a security to the mortgage that creates a lien on the property and the provider of finance (mortgage bank) will be able to recover its investment from the borrower in the events of default through foreclosure proceedings. Hence, this theory might not be sufficient for this study because no provider of finance will be comfortable to allow the mortgage title to reside with the borrower in which in the event of mortgage default, recovery of investment might be difficult and resulted into non-performing loan problem. In addition, the primary mortgage bank will experience liquidity challenge and prevented it from granting new mortgage credit to other customers for homeownership. Consequently, it is necessary to introduce the "title theory" for the study.

2.2.2 Title Theory

The proponent of title theory claimed that mortgage contract developed into a conditional conveyance in the perception of the property transfer to the borrower only upon repayment of the debt rather than only the property servicing as security in the circumstance the borrower failed to make prompt interest and principal payments. It was revealed that if a state adopts title theory, the lender holds on to the property title pending such time the borrower will pay off the mortgage. That is, the lender (mortgagee) is the legal owner of the property for the period of the mortgage⁵³.

According to a researcher, the fundamental presumption of title theory of mortgage is that the deed of property does not remain with the mortgagor (borrower or buyer) until after the liquidation of the mortgage loan. Under this disposition, the title deed would be deposited in custody of a trustee, and the borrower (mortgagor) would enter into a deed of trust agreement instead of a mortgage contract. A deed of trust (DOT) is a document that accommodates the agreement between a lender (mortgagee) and borrower (mortgagor) to transfer the title in the borrower's property to an impartial third party (known as trustee) who secure the repayment of a loan by the borrower. The borrower faces the possibility of losing his/her property title via litigation or foreclosing actions of the trustee if the outstanding mortgage commitment remain unfulfilled. The trustee derives power from the deed (a signed document that identify a change in ownership of a property) to sell the property and pay the lender (mortgagee) his/her due. To a large extent, foreclosure move is enforceable under title theory as opposed to the lien theory since right of ownership to property is not in the care of the buyer or borrower before full payment is made¹⁴.

A researcher supported the title theory on the ground that no two states in which the law of mortgages is similar in all details but they may be commonly categorized into three groups:

(1) Those in which the mortgage is taken to pass the legal title to the land at its execution; (2) Those in which the mortgage is detained to pass the title on default, and (3) Those in which the mortgage is held on to pass no title pending foreclosure. The first aspect is frequently called the legal or title theory and the last named as equitable or lien theory, while the second which is applied in only a few states has no unique name. Consequently, a researcher stated that the premise under which ejectment may be conducted is that as between the mortgagor and mortgagee, after condition has been broken, the legal title is in the mortgagee and named the perspective of the above research the Intermediate theory⁵⁵.

According to another researcher who supported the title theory, mentioned that after the contractual agreement date of repayment had lapsed, the lender's possession of the property became absolute instead of conditional. If the lender was making use of the property, no lawsuit to make the title absolute is required on the part of the lender. In addition, a researcher revealed that title theory made it uncomplicated to get around usury (the practice of lending money to people at unfairly high rates of interest) laws and generally, a transaction in which the borrower obtained less for the loan than the principal he had to repay frequently would not have been considered in violation of usury laws⁵³.

The criticism of title theory by previous researcher believed there is indecision whether the title theory as asserted accounted for the above researcher's second system of considering the mortgage. This is that, as between the immediate parties, the legal invention is admitted and the legal rights and obligations flowing from the mortgage as a conveyance of the legal estate are perceived and enforced by the court of law⁵⁵.

The mortgage title constitutes one of the major legal documents usually demanded by the primary mortgage banks from any prospective homeownership loan borrower, to stand as a security for the mortgage loan. The title theory is relevant to this study as it links mortgage

financing to the housing loan performance of primary mortgage banks through the provisions of long-term funds for the creation of homeownership loans. The theory granted the lender (mortgage bank/mortgagee) the power to hold on to the property title pending such time the borrower (mortgagor) will pay off the mortgage otherwise, faces the risk of losing his/her property right via litigation or foreclosing actions of the trustee.

The title theory guarantees easy recovery of mortgage loan investment of the primary mortgage banks unlike the lien theory. However, both theories have not addressed the innovation capability as an independent variable in the study. As a result of this, it is imperative to bring in the “transformational leadership theory”.

2.2.3 Transformational Leadership Theory

A researcher first invented the term “transformational leadership” which was later propounded into a theory called “transformational leadership theory” by another researcher. It is a theory of leadership where a leader is assigned to head a team or followers to deliver on a task far away from their immediate self-interests to recognize the required change, developing a vision to direct the change through influence, inspiration, and executing the change simultaneously with dedicated members of a group⁵⁶. The proponent of transformational leadership (TL) theory was of the view that the theory is a procedure in which leaders and followers assist each other to promote to a greater level of morale and motivation. The researcher connected the theory to the problem in disparity between management and leadership and asserted that the distinctions are in characteristics and behaviour⁵⁷.

Transformational leadership has been acknowledged by some researchers as one of the most significant determinants influencing innovation and it is regarded as essential to organizations, as they incorporate creative understanding that give rise to changes in management practices

and processes. A researcher stated that transformational leadership involves allocating goals among team members to motivate them to grow innovative methods to succeed. A researcher stated that leaders can add to the employees' creativity by encouraging other various procedures and views through the application of transformational leadership²⁷.

The transformational leadership theory further supported by a researcher that transformational leadership have its positive consequence on organizations, enhance its work productivity, increase performance and the creativities. Another researcher established that transformational leadership support to grow a foundation of organizational knowledge in the organization and assist to enhance organizational performance by permitting organizations to transfer knowledge better than its competitors. In addition, another researcher stated that powerful vision of a prominent transformational leader can lead the way to reinvention of organizational culture and effortlessly enhance productivity. Consequently, a transformational leader can improve the company's performance and raise the profitability of an organization through exceptional changes in a company's direction⁵⁸.

However, the transformational leadership theory was criticized by various scholars and most of their criticisms are about ethics and moral values of leaders which may give rise to misuse of power and unpleasant outcomes. Transformational leadership employs the idea management and consequently offer itself to unethical self-promotion by leaders. The theory is very hard to be trained or taught because its elements are too exhaustive. Also, the followers might be controlled by leaders and there are possibilities that they lose more than what they gain⁵⁸.

The mortgage banks have realized the importance of digitization of mortgage banking services because of increasing demands of their customers across the mortgage industry with regards to making business transactions more convenient, improve the loan origination

process, enhance efficiency of customer service value chain, and gain competitive advantage over its competitors. The transformational leadership has been perceived as one of the essential factors influencing innovation which prompt changes in management practices and processes. Organizations with innovative capability can acknowledge advanced technologies to achieve a competitive edge.

The transformational leadership theory is very appropriate and relevant to this study as it will link mortgage financing and innovation capability to the housing loan performance of accredited primary mortgage banks in Nigeria. Consequently, it has been adopted as the anchor theory for this study because the lien theory and title theory were unable to recognize the aspect of innovation capability in the study. The most important thing is that any primary mortgage bank which intend to survive and thrive in a rapid-changing environment would depend completely on its capacity to consistently perceive, modify, and innovate its internal resources to align with its environment.

2.3 Review of Empirical Studies

The research study examines mortgage financing, innovation capability and housing loan performance of accredited primary mortgage banks in Nigeria. Consequently, the empirical review of some literatures relating to this study were carried out and notable among them are:

A study examined the mortgage industry financial risk tolerance and mortgage banks credit delivery in Nigeria. The study adopted ex-post facto research design method and employed a time series secondary data sourced from Central Bank of Nigeria (CBN) statistical bulletin covering the period 1992 to 2018. The Ordinary Least Square (OLS) and correlation methods were used in analysing the data for the study period. The findings ascertained that the mortgage products offered in the housing finance market by mortgage banks includes Individual loan, Estate development loan and the National Housing Fund (NHF) loan in

which savings, fixed deposits, balance held for other institutions and total receipt have no significant influence on Total housing loans that represents the mortgage banks' credit delivery in Nigeria. Also, the level of financial risk tolerance of the mortgage finance industry is insignificant; therefore, the loans granted by mortgage banks are small when compared with the savings and other income received by mortgage banks. The research recommended the introduction of additional mortgage products and the designing of an enabling environment to attract more investors into the housing finance industry!

A study evaluated mortgage finance institution and the impact on the Nigerian economy. The study adopted an experimental research design and secondary data sourced from previous empirical studies. The research found that mortgage finance institution activities have a large implication on the Nigerian economy since it provides a channel where both individuals and corporate organizations can source for loan facility to realize homeownership dream and viable housing development in Nigeria. It was suggested that government should formulate policies which ensures the supply and demand for housing³.

Research was conducted to find out the perception of low-income earners on the performance of mortgage institutions in housing finance in Lafia, Nasarawa State, Nigeria. The study adopted a quantitative survey research design and used questionnaire as a data collection source administered on 314 low-income earners randomly selected from the targeted population in Lafia metropolis. The data collected were analysed using descriptive statistics with mean ranking to determine the degree of agreement and the significance of the various variables. The findings showed that mortgage institutions performed well in using low-income earners salary as collateral but failed in providing mortgage loan to low-income earners for homeownership and the rate of interest charged by the mortgage institutions is very high. The researcher suggested that government and stakeholders should reduce the high

interest rate, make mortgage loans accessible and affordable to low-income earners and in addition, increase the funding of mortgage institutions⁴.

A study assessed the impact of primary mortgage institutions' housing loans on human development in Nigeria. The research used ex-post facto design and adopted secondary data sourced from the Central Bank of Nigeria (CBN) statistical bulletin covering a period from 2000 to 2018. The data were analysed using descriptive statistics and Error Correction model (ECM). The Diagnostic tests were conducted using Augmented Disk Fuller (ADF) unit root test and Co-integration test. The findings revealed that the primary mortgage institutions investments and loans have negative and insignificant effect on human development whereas primary mortgage institutions deposits have positive and insignificant effect on the human development. The study recommends that efficient mortgage institutions should collaborate with holders of long-term finance such as Pension Funds Administrators (PFA) and Insurance companies to ensure availability of long-term funds. Furthermore, the review of land use regulations and difficult registration procedures to make the certificate of occupancy which is a document required for mortgage lending easy to obtain⁵.

A study was carried out to evaluate the primary mortgage institutions challenges for financing housing development in Nigeria. The study explored qualitative research methodology in which expert interview and semi-structured questionnaire were used as instruments for the research data collection and analysed using Nvivo tool. The result of the study indicated that accessing housing finance from the Primary Mortgage Institutions (PMIs) remain a major challenge for potential borrowers at the low-and-medium income levels due to stringent conditions attached to housing finance accessibility which also hinder housing development and homeownership in Nigeria. The researcher recommended the need to review the unresolved issues of the Primary Mortgage Institutions (PMIs) and National

Housing Fund (NHF) policies for housing finance operations, to make them workable and to cover the demands of all income classes⁸.

Research investigated the mortgage financing for housing delivery in Nigeria: The governmental role in development of an effective mortgage market. The paper adopted a case study research design and a data collection through secondary instrument source. The findings identified the complicated land tenure system, transfer of legal title procedures, scarcity of long-term financial instruments, lack of mortgage liquidity, weak capital base, inadequate primary mortgage institution, weak corporate governance, high cost of building materials, shortage of skilled labour and expensive cost of funds with high interest rates for construction and mortgages as the challenges of the housing finance sector. The study recommends the need for new policies that will facilitate the development of the housing finance sector, particularly around policy formulation and implementation⁹.

Research evaluated the development of mortgage finance in Nigeria and its impact on the economy. The study makes use of time series data obtained from Central Bank of Nigeria (CBN) statistical bulletin covering the period 1990 to 2016, National Bureau of Statistic and World Bank. The Vector Autoregressive Model (VAR) was employed for the research using linear regression method and descriptive statistics adopted for the analysis of data. The outcome of the study revealed that there is a one-way causal link runs from mortgage finance to economic growth and between the financial market and mortgage financing through long-term financing window of the stock exchange market. The study suggested that Government intervention targeted at consolidating the level of financial re-structuring in the non-financial sector to which mortgage financing belong and policy initiatives at increasing the number of mortgage bank operators to enhance the efficiency and effectiveness of mortgage banking in Nigeria¹⁰.

Research assessed the housing finance market and economic growth of West Africa region: A study of Nigeria and Ghana. The study used ex-post facto research design and a secondary data from Central Bank of Nigeria (CBN) statistical bulletin covering the period 1985 to 2014 and Africa Housing Finance yearbook 2013 and 2015 were adopted. The analysis of the data was carried using Ordinary Least Square Regression method. The outcome of the study revealed that the housing finance markets in Nigeria and Ghana are underdeveloped. Consequently, the researchers recommend that the government of West Africa States should create an enabling environment to entice both local and foreign investors to invest in the housing sector¹¹.

Research investigated the homeowners' perception of the factors affecting access to housing finance in Owerri, Imo State, Nigeria. The study engaged cross-section survey of 450 respondents consisting 300 of those who had borrowed and 150 of those who did not borrow. The sampling technique used for the research was stratified random sampling and the primary instrument for data collection was the questionnaire. The data obtained was analysed using discriminate function. The study found that there are significant differences in perception between those who borrowed loan for housing finance and those who did not. It was revealed that those who borrowed and those who did not borrow perceived the lenders requirements for housing finance as very strict. In addition, measures of access, affordability criteria and possession of registered title collateral were perceived to be the most stringent of the lenders loan conditions for those who have borrowed for financing housing. The study suggested that financial institutions should review the stringent loan conditions for individual borrowers requiring housing finance, to meet the affordability criterion caused by low-income¹².

A study examined the effect of mortgage finance on housing delivery in Nigeria: The Primary Mortgage Institution (PMI) perspective. The research employed ex-post facto research design and used a secondary data collected from Central Bank of Nigeria (CBN) statistical bulletin

covering 1992 to 2016. The techniques adopted for data analysis includes unit root test, descriptive statistics and Ordinary Least Square (OLS). The findings from the study disclosed that there exists a long-run relationship between mortgage finance and housing delivery in Nigeria. The researchers ascertained that housing is an important sector that can drive the Nigeria economy but the inadequate supply of mortgage finance to the sector restrain its development and overall economic effect. The study recommends that government and monetary authorities should make key policies to improve the operations of Primary Mortgage Institutions (PMIs) for optimal performance. Also, access to PMI mortgage loans should be made simple and at lower interest rate to increase and promote housing market¹⁴.

Research was conducted to review the analysing access to long-term debt effects on firm's growth: Evidence of China. The study used a longitudinal research design and secondary quantitative data extracted from the National Bureau of Statistics (NBS) of China covering 2004 to 2017 and published books of the accounts of the companies listed on the Chinese Stock Exchange. The population for this study considered the main industries and the use of stratified survey. The data were analysed using the Statistical Package for Social Sciences (SPSS) Version 22, inferential statistics, correlation model and regression of Pearson's product momentum. The researchers found out that long-term debt negatively influences firm development when sizes and maturity remain important thoughtful option to access long-term finance, however not statistically significant as perceived. It was suggested that government should initiate vital reform to old existing regulation which makes it difficult for most banks to consider the firm size as a determining factor to access long-term credit for optimal performance¹⁷.

Research reviewed the institution and housing development: Mirage, magic, and miracle of low-cost housing in Nigeria. A case study design was adopted in the research and the data collection used was secondary instruments. The result revealed the successive government

efforts through policies and direct engagement in provision of houses. Consequently, the effort at developing alternative building materials had received little success and the failure at meeting the policy targets are caused considerably by the cost of the building. The study recommends the need for effective and sound fiscal policy decisions, inclusive reorientation of the stakeholders and synergy of operators in the ecosystem of the housing market in Nigeria¹⁸.

A study established the fundamentals to affordable homeownership in Nigeria. The case study research design was adopted and the use of secondary data for the study. The findings disclosed that lack of long-term funding, high interest rate, high cost of construction materials, low income, high cost of land, related title, professional fees, and non-existence of supporting infrastructures for building constructions are major factors responsible for homeownership in Nigeria. The study recommended the existence of a viable and effective secondary mortgage market for the mobilisation of long-term funds²⁰.

Research reviewed the identifying critical enablers for homeownership in Hong Kong. The study adopted a questionnaire survey containing a list of 14 factors identified via the literature with 502 useful responses to collect the primary data. A pilot survey was conducted on 10 respondents to ensure the clarity, suitability and time needed to complete the questionnaire and the questionnaire was measure using five-point likert scale. The research employed the use of purposive and random sampling methods to limit the sampling bias. The data obtained were analysed with the aid of Statistical Package for Social Sciences (SPSS) for Windows, Version 23, and AMOS Version 23. The Statistical analytical methods adopted includes mean item score (MIS), exploratory factor analysis (EFA) and structural equation modelling (SEM). From the outcomes of the study, MIS analysis indicated that the highest dominant factors affecting homeownership were prioritizing lending towards first-time

buyers, reforming planning process to allow building of more homes and introducing subsidies for all first-time buyers. Subsidies and policy reforms, fiscal measures, and monetary measures were the three major factors originated from the 14 factors using EFA. Consequently, the SEM analysis finding established that all three factors have a significant positive consequence on homeownership at different levels. The study recommends the optimisation of government housing policies in promotion of building more housing units gears towards assisting first-time homebuyers and to achieve the objective of housing affordability to be within the average rating²¹.

A study was conducted to find out the relationship between monetary policy influence and the profitability of banks in New Zealand. The research makes use of annual data from 19 banks in New Zealand covering 2006 to 2018. The dataset is an unbalanced panel with 105 observations. The secondary data were obtained from two sources; the data related to short-term interest rates, long-term interest rates, inflation and the GDP were collected from the website of Reserve Bank of New Zealand while data related with other variables such as Return on Assets (ROA), Return on Equity (ROE), Capital Adequacy Ratio (CAR), Non-Performing Loan (NPL) ratio, Total Assets (TA) and Loan to Assets (LTA) ratio were received from the Bureau Van Dijk's Bank scope database. The descriptive and inferential statistics were adopted for the analysis of data collected. The results indicated that an increase in short-term interest rate will lead to an increase in the profitability of banks and at the same time, an increase in long-term interest rates will reduce the banks' profitability. Consequently, the monetary policy variables, capital adequacy ratio, non-performing loan ratio and cost to income ratio are also significant factors of the profitability and performance of banks in New Zealand. The researchers suggested investigation on the impact that changes in interest rates will have on bank's profitability and New Zealand economy²³.

A study investigated the effects of interest rates on the lending portfolio of commercial banks in Kenya. The study employed a cross sectional survey research design administered through questionnaire. The target population are the heads of credit in the related departments who were concerned with policies implementation in 43 commercial banks in Kenya and sample size of the study was 64 respondents using stratified random sampling technique. The data obtained for quantitative items the research was analysed with aid of Statistical Package for Social Science (SPSS) version 24 while the data received from the questionnaire was analysed using descriptive statistics and measured with inferential statistics. The findings revealed that the interest rate is the highest contributor to profits in banks and had a negative correlation with the lending portfolio in the sense that, when the interest is high, prospective borrowers are reluctant to borrow since repayment on loans cost more and those with loans have higher likelihood of defaulting. The research suggested that government should implement economic strategies that promote economic growth and enhance multiplier effect²⁴.

Research was carried out to determine the quantified impact of market interest rates on commercial banks' business mix. The study employed time series which covers a period from 2014 to 2018 and the secondary data collected from Czech National Bank (CNB) and from the annual reports of selected banks which are available on their websites. It was a quantitative study which adopted inferential statistics for the analysis of the data collected. The results established that the consumption interest rate, mortgage interest rate, deposit interest rate, inflation rate, disposable income, unemployment, GDP, and the real effective exchange rate have significant impact on the volume of mortgage loans and consumer loans. The researchers recommended that the analysis of liquidity of commercial banks in Czech Republic should be intensified²⁵.

A study appraised innovation capability and product innovation performance: the case of low-tech manufacturing firms. The research adopted a case study and a qualitative research method to have a deep knowledge into process of innovation capability in manufacturing organisations. A purposive sampling technique was employed to select the cases for the study and the primary data were sourced using semi-structured interviews. The analysis of data used triangulation and manual coding. The findings from the study indicated that the determinants which influenced innovation capability includes the collaboration with institutional agents, customers, suppliers, and competitors in interactive learning connected with idea management and idea implementation. The research recommended the consideration of cognitive ability and social interaction as an important element for innovation capability²⁶.

Research was conducted to identify the mediating role of knowledge sharing (KS) on the relationship between the transformational leadership (TL) and innovation in banks. The research adopted a quantitative survey method to appraise the impact of the mediating role of KS on the relationship between TL and innovation. A self-administered questionnaire to collect the primary data using a five-point Likert scale. The population for the study includes all employees at non-managerial level who worked at Lebanese banks through the year 2018 and the probability stratified sampling technique was engaged to determine the sample size. A total of 600 questionnaires were administered to 35 Lebanese banks' employees out of which 310 were returned from 27 banks respondents and explanatory analysis was carried out with the aid of Structural Equations Modelling (SEM) using AMOS 24 to examine the relationship between knowledge sharing (KS) and innovation. The results indicated that leaders demonstrating transformational behaviour were able to advance knowledge sharing culture that intensify the creation of new ideas, products, and processes. Also, the study established that knowledge sharing (KS) mediates the association of transformational

leadership (TL) and innovation. The research suggested the adoption of a longitudinal design that gather data over a period of time, and which might supply valuable insight into the effects of transformational leadership (TL) on knowledge sharing (KS) and innovation²⁷.

A study examined the influence of management innovation and technological innovation on organization performance: A mediating role of sustainability. The researchers obtained empirical data for the study via a structured questionnaire from organizations operating in Pakistan. A total of 700 firms were randomly selected and 700 questionnaires were administered among the firms which demonstrate one questionnaire per organization and to be filled by CEOs or top managers. A total of 304 usable responses were received from the organizations and a sample size above 300 responses provide good results. The data were analysed using structural equation modelling and used descriptive statistics to calculate mean values, standard deviation, and data normality. The Confirmatory Factor Analysis (CFA) was employed to check the validity and reliability of variables adopted in the study. The findings disclosed that management innovation and technological innovation significantly positively promote sustainability and organization performance. Consequently, sustainability plays a partial mediating role between management innovation and organization performance and a partial mediating role between technological innovation and organization performance. The researchers recommended that CEOs and top managers to give priority to management innovation and technological innovation to strengthen sustainability and survive in the long-run²⁸.

Research was conducted to investigate the relationship between innovation capability, innovation type and firm performance. The research adopted empirical study covering insurance industry in Sri Lanka to examine the relationship among innovations capability, innovation type and on the different aspect of firm performance including innovation, market,

and financial performance. The study conducted survey with the use of questionnaire administered on 379 senior managers of insurance companies based on the research framework developed. The findings revealed that to earn innovation performance, firm first require to establish organizational culture that can drive innovation behaviour, internal coordination with employee to motivate the innovation driven mind-set that execute ideas, conceptions into successful product/service, process, business model or system. The study recommends the demand to address divergent aspects which influence the innovation capability such as customer orientation, market orientation, and technology orientation²⁹.

A study examined convergence and digital fusion lead to competitive differentiation. The research was carried out to recognize the business process development strategy in advancing an agile system that surpass customers' expectations and yet safeguard data security and flexible transaction capacity. The research employed the qualitative inductive research approach adopting critical reflection of before and after the execution of convergence and digital integration strategies. The research design integrates cooperative inquiry and multiple levels of analysis adopting data collection methods of comprehensive review of archives, informal interviews, questionnaires, and observations to recognize the collective procedure improvement pathway. The results indicated that organizations which fully incorporate business and digital strategies create synergetic outcomes and strengthen adaptability, innovation, and resiliency in the face of competitive challenges. Consequently, showed that in banking and financial services domain, the effectiveness and efficiency of the customers' service value chain, command the competitive advantage of the organization. The research suggested the formation of a practical framework that promote convergence of business operations, strategic management and digital fusion which led the way to value creation and competitive differentiation³⁰.

Research assessed the knowledge sharing and innovation: Evidence from Lebanese banks. The study employed a quantitative survey method and a self-administered questionnaire to collect the primary data using a five-point likert scale. The population for the study includes all employees at non-managerial level who worked at Lebanese banks through the year 2018 and the probability stratified sampling technique was engaged to determine the sample size. A total of 600 questionnaires were administered to 35 Lebanese banks' employees out of which 310 were returned from 27 banks respondents and explanatory analysis was carried out with the aid of Structural Equations Modelling (SEM) using AMOS 24 to examine the relationship between knowledge sharing (KS) and innovation. The findings ascertained the significance of knowledge sharing in strengthening innovation in the banking sector and stress that knowledge sharing is the most essential determinant of process innovation followed by product innovation. The researchers suggested the consideration of other types of innovation like administrative, technological, radical, incremental, exploitative, and exploratory, and their relationship to knowledge sharing³¹.

A study was conducted to find out how collaborative innovation networks affect new product performance: Product innovation capability, process innovation capability, and absorptive capacity. The research adopted a questionnaire-based survey and data obtained from a sample drawn from the Middle East, particularly the Iranian manufacturing company. A pilot study was conducted on six innovation managers to further assess the face validity of the measures used in the study. Responses were received from 258 companies representing 100% response rate of those qualified firms that agreed to participate in the study. The analysis of data was done using confirmatory factor analysis (CFA) to appraise the probability of common method bias (CMB) by comparing the fit indices between the models with dissimilar levels of complication. The study showed that the impact of collaborative innovation networks on either product innovation capability or process innovation capability are significant only in

the existence of absorptive capacity. The research suggested the focus on the relationship between the collaborative innovation networks and innovation capability as contingent on the level of power and boundary conditions of a company³².

Research appraised the management innovation: A systematic review and meta-analysis of past decades of research. The study adopted meta-analysis of the literature to have knowledge into existing empirical research on management innovation and 66 studies covering the period from 1981 to 2017 were reviewed and analysed. Also, expanded a model of management innovation grounded in selected theoretical lenses to improve the understanding of the different drivers such as moderators, mediators, and outcomes of management innovation. The results established that management innovation is positively connected to organizational size, knowledge management, organizational learning, firms' overall performance and financial performance. The study recommended the integration and synthesising of management innovation studies and inclusion of other databases, conceptualised and unpublished studies in future research³³.

Research investigated the determinants of innovation capability: the roles of transformational leadership, knowledge sharing and perceived organizational support. The study employed survey approach using questionnaire to collect the primary data. A total of 150 Chinese firms randomly selected out of which 88 organizations demonstrated their readiness to participate. The researchers administered 690 questionnaires, but 465 responses were collected and out of which 394 were valid for the study. The study adopted structural equation modelling and cross-sectional design to test hypotheses and data analysis was carried out with aid of SPSS and Analysis of Moment Structures (AMOS) version 21. The validity and reliability of the constructs was examined using Confirmatory Factor Analysis (CFA). The findings were that knowledge sharing moderates' transformational leadership's causes on innovation

capabilities. Consequently, the impacts of transformational leadership and knowledge sharing on a particular aspects of innovation capability are distinct and rely on the level of employees perceived organizational support (POS). The study suggested the testing of mediating roles of knowledge management's components and examine the moderating roles of organization's ownership structure to raise the understanding of possible factors or major conditions that may have considerable effects on organization's innovation capability³⁴.

Research assessed the interest rates and loan performance of deposit money banks in Nigeria. The study adopted secondary data obtained from audited financial statements of the selected banks in Nigeria from 2010 to 2015. Also, from Central Bank of Nigeria (CBN) statistical bulletin database for macroeconomic variables. The population of the study is twenty-two (22) banks in which three (3) banks namely First Bank of Nigeria (FBN), Guaranty Trust Bank (GTB) and United Bank of Africa (UBA) were selected for the sample size. The data collected were analysed using descriptive, correlation and multiple regression analysis. The results indicated that there is a significant and positive relationship between the interest rate and loan repayment measured by credit quality using the non-performing loan ratio. This means that an increase in the interest rate will likely cause a corresponding increase or decrease in the credit quality and consequently, established that any slight change in the lending rate would increase non-performing loan. The research recommends continuing capacity building to improve the credit skills and competencies of bank staff to guarantee safety of lending and recovery systems in our banks³⁵.

Research investigated benchmarking as a tool for providing analytical support to mortgage lending operations of a bank. The study adopted qualitative research and obtained the secondary data from reports of public administration bodies, periodicals, bank annual reports, newspapers, and journals. The data collected were analysed using benchmarking approach. The findings established that the adoption of benchmarking in the operations of banks as

regards mortgage lending is an important tool in the environment of global competition, and its execution in the organization of economic analysis of mortgage lending activities of banks will permit for a higher level of application of mortgage opportunities. The researchers recommended the application of benchmarking should be focused on management review³⁶.

A study evaluated the barriers to accessing mortgages in Nigeria's housing markets. The research employed cross-sectional survey with triangulation of results. The study adopted questionnaire for data collection from three new samples of major stakeholders in the mortgage market in which 450 surveys with households and 10 completed by mortgage lenders, both in Kaduna State and one survey conducted by the FMBN. The sample size for the household was drawn from the regular urban household population of 705,322 using Taro Yamane formula and all the 11 mortgage lending institutions were sampled. The data collected for the study were analysed using descriptive statistics and one-sample T-Test. The research outcome identified low-incomes and savings which limited household's ability to pay mortgage repayments and deposits, high interest rates, poor access to land, inability of prospective borrowers to provide certificates of occupancy (C of O) on their land, insufficient loanable funds, and few number of mortgage lending institutions, as barriers to accessing mortgages in Nigeria's housing markets. The research recommends an encompassing reform to develop a functional mortgage market in Nigeria³⁷.

Research examined the impact of primary mortgage institution' investments on economic growth in Nigeria. The study adopted ex-post facto design and used secondary data obtained from the Central Bank of Nigeria (CBN) Annual Reports which covers from 1995 to 2017. The descriptive statistics was used in analysing the data in which the hypotheses were formulated and tested using Ordinary Least Square (OLS) econometrics. The result indicated that primary mortgage institutions' (PMIs) investments, deposits and loans have a significant influence on economic growth in Nigeria. The study recommended that the Federal Mortgage

Bank of Nigeria (FMBN) as a federal government regulatory authority should relax some of the regulations guiding the operations of the Primary Mortgage Institutions (PMIs) and liberalize the subsector for more effective performance. Besides, the PMIs should redirect substantial percentage of their loanable funds to building and renovation of residential buildings instead of concentrating on commercial buildings and neglecting residential properties. However, this redirection is expected to increase the PMIs impact on provision of housing and enhance their contributions to real estate development in Nigerian economy³⁸.

A study investigated the dimension of housing deficit in Nigeria: Issues, Challenges and Prospects. The research make used of secondary data and case study design. The findings of the study revealed the important role of government in creating an enabling environment for the housing sector. That the provision of affordable housing depends most especially on the strong and political will of governments in addition to the development and implementation of effective housing policies. The researcher recommends the need to strengthening the coordination among public institutions and government ministries that play a crucial role in housing because government on its own cannot solve the Nigeria's housing crisis³⁹.

Research determined the analysis of the factors influencing access to mortgage finance in Lagos Nigeria. The study adopted survey research design using questionnaire to obtain the primary data. The population of the study includes Primary Mortgage Institutions (PMIs) and Real Estate Developers Association of Nigeria (REDAN) in which their list was sourced directly from the published directory of the association and the number of those domiciled in Lagos was extracted. The questionnaire survey was of two types: A and B, administered to 52 PMIs and 69 REDAN members within the study location. Type A was administered to the Heads of Credit Department of the PMI's and the Type B administered to members of REDAN. The data received were analysed using factor analytical technique and the Mann Whitney U-Test. The outcome of the study showed that income, nature of the occupation,

type of collateral, interest rate, years of the banking relationship, loan duration and loan sector are the significant determinants of access to mortgage finance in Lagos Nigeria. The study recommended that the Primary Mortgage Institutions (PMIs) should review on periodical basis the factors they considered in accessing the mortgage finance to reduce the bureaucracies and unfavourable loan conditions required⁴⁰.

A study explained the analysis of homeownership financing for Islamic banks in Indonesia through sharia asset backed securities participation letter. The research employed survey research design and the use of questionnaire as an instrument to source the primary data. The Analytic Hierarchy Process (AHP) was adopted for the data analysis method regarded as a flexible model. The findings were that there are four issues in advancing the competence to reduce the risk of homeownership financing for Islamic banks in Indonesia through the asset-backed consequence of Islamic assets-participation letters namely, legal/structural issues, sharia issues, operational issues, and human resource issues. The results of this research also identified that homeownership financing facilities in Islamic banks are still the principal source of mortgage financing for customers who require a special loan to meet the needs of building or renovating a house. It was recommended by the researchers that the development of homeownership financing through new products as a panacea for increase in market share of the Islamic banking industry⁴¹.

A study appraised Nigeria housing finance operation: A review of key factors affecting housing finance. The researchers sourced their secondary data from previous related articles, journals, books, and thesis. The analysis of data was conducted based on the data collected from the study. The findings identified several factors responsible for effective housing finance which include Nigeria housing policy (NHP), Lack of long-term funding, Low income, High interest rate, Weak institutional framework, Lack of accessibility to PMBs, Limited PMBs, Absence of vibrant secondary mortgage market, PMBs cumbersome

requirements, Inadequate supply of mortgages among others. The study recommended the review of Government housing finance policies towards homeownership in Nigeria⁴².

A study investigated the shared equity homeownership in the United States: A literature review. The study employed a case study research design and adopted a Shared Equity Homeownership (SEH) model as a strategy within the larger arena of US housing policy, low-income homeownership, and wealth. The research found that while wealth accumulation is the biggest obstacle to low-income homeownership, federal and state policies continue to pursue income and credit-based barriers instead; meantime, local policies often pursue programs that allow affordable housing subsidies to discharge overtime. The researchers recommended various hybrid models that are beginning to surface around the country like collaborations between different organizations (e.g., city partnership with SEH programs) and land trust permutations (e.g., housing cooperatives)⁴³.

A study appraised the determinants of non-performing loans in Chinese banks. The research employed a secondary data collected from Bank Scope database of Bureau van Dijk for 197 listed and unlisted Chinese banks covering the period from 2005 to 2014. The study used three different models and two different techniques to investigate the determinants. The researchers compute the coefficients of the independent variables with the use of panel data techniques and Generalized Method of Moments (GMM) system estimation. The findings from the study ascertained that the significant determinants of NPLs in Chinese banks includes GDP growth rate, effective interest rate, inflation rate, foreign exchange rate, type of bank, ownership concentration, bank risk taking behaviour, leverage, and credit quality. The study suggested that NPLs determinants in China should be analysed on the premise of different bank and loan classifications⁴⁴.

A study assessed the causes of non-performing loans: The experience of Gulf cooperation council countries. The research adopted the explanatory and quantitative study method in line with empirical literature. The study employed a secondary data and sourced cross-country bank level data from the financial database Bank Scope of 66 commercial banks for 6 countries in the Gulf Cooperation Council (GCC) region with the use of purposive sampling method, covering the from 2009 to 2015. The researchers used both explanatory and econometrics analysis based on panel data and data collected were analysed with aid of Generalized Method of Moments (GMM) regression. The findings from the bad management hypothesis produced with the model established that non-performing loans are a serious matter that needed appropriate attention and bank profitability calculated by Return on Average Assets (ROAA) has significant and negative consequence on non-performing loans. Also revealed that the primary function of banks is to accept deposits and grant loans not only for short-term but also for long-term to government, businesses, and housing though the delay in loan repayment by the borrower will prevent the granting of further credit. The researchers suggested that management of the bank should carefully evaluate the asset quality, represented by NPLs which impacted on bank performance and financial strength of the economy and enforce efficient receivable management strategy to collect from borrowers on time⁴⁵.

Research was conducted to find out if non-performing loans matter for bank lending and the business cycle in euro area countries. The study adopted a panel VAR model for twelve-euro area countries and ten variables covering the period between the first quarter of 2006 and the third quarter of 2017 and the model allows for cross-sub sectional heterogeneity. The results established that an exogenous rise in the change in NPL ratios tends to reduce bank lending volumes, enlarge bank lending spreads, and leads to a drop in real GDP development and residential real estate prices. The research suggested a reduction in banks' NPL ratios through

the implementation of management loan recovery strategies to achieve improvement in macroeconomic and financial benefits⁴⁶.

A study investigated the impact of credit risk management on the performance of commercial banks in Cameroon. The study adopted descriptive research design and the major source of data collection was secondary, obtained from the BICEC annual reports covering 5 years, journals, and another related document. The analysis of data was carried out using inferential statistics and correlation. The results of the findings revealed that non-performing loans (NPLs) to total loans ratio which is one of the risk management measures is a key predictor and is significantly linked to bank financial performance, followed by the loan to total deposit ratio and loans to total assets ratios that have a reverse effect on financial performance of banks. The study suggested the review of loan assessment techniques for credit applications to enhance improved performance of commercial banks in Cameroon⁴⁷.

Research was conducted to find out how inefficient is an inefficient credit process? An analysis of the Italian banking system. The study adopted a sample of 338 Italian banks, 56 joint-stock banks (SpA), 23 cooperative banks (Popolari) and 259 mutual banks (BCCs) covering the period 2006 to 2017. The researchers employed the maximum probability approach to evaluate the efficient frontier as a set of best management credit practices which reduces the credit risk defined on the premise of the level of loans granted, the technical structure of the loan portfolio (such as credit lines, mortgages, consumer loans and other technical loan categories) and the interest rate charges. The findings identified that the rise in non-performing loans (NPLs) relates to harsh and prolonged recession in Italy which considerably reduced the borrowers' capacity to service their debt, and to other determinants like banks' lending monitoring policies with restricted capacity to work-out defaulted loans. The researcher recommends management implementation of adequate mechanisms for

effective loan monitoring that ensures timely action to be taken against borrowers with early warnings of poor loan performance⁴⁸.

A study was carried out to determine the effect of service product innovation, promotional activities, and company image on saving decisions in PT Bank BNI Syariah, Tbk Area. The study employed an explanatory research design and survey questionnaire to source for the primary data. The population was 100 respondents of PT Bank BNI customers and study adopted a saturated sampling technique which amounted to 100 respondents. The analysis of data collected were done using statistical analysis with regression testing, correlation, determination, and hypothesis testing. The findings revealed that service product innovation, promotional activities and company image significantly influences the decision to save. The research recommends that banks need to grow its product offerings to the public by prioritizing professional services so that the company's image is not only an image but has an edge that spread to sections of the society⁴⁹.

Research examined the digital mortgage banking acceptability in Philippine universal banks: Evidence from Unified Theory of Acceptance and Use of Technology (UTAUT) model. The study employed mixed method research design approach combining both quantitative and qualitative methodologies using survey research technique and interviews. The study area covered five leading Universal Banks offering mortgage loans in the Philippines. The study adopted secondary data sourced from existing literatures on UTAUT model as applied in the banking industry and the journals were synthesized, summarized, and presented in tabular form. The primary data for the quantitative part of the study was collected using survey questionnaire conducted on 250 mortgage clients who are current or potential users of digital mortgage service. The findings disclosed that the indicators of behavioural intention to accept digital mortgage device among mortgage customers were facilitating conditions, performance

expectancy, and effort expectancy. Also, established that performance expectancy is directly related to internet time, frequency of product purchase using a mobile device, and the use of mobile banking. The study suggested the behavioural objective to integrate digital technology in mortgage banking⁵⁰.

A study finds out the mortgage financing and growth of housing sector in Nigeria. The study used an ex-post facto research design and the secondary data adopted was obtained from Central Bank of Nigeria (CBN) bulletin covering the periods 1990 to 2018. The data collected was analysed using Ordinary Least Square (OLS) through SPSS. Findings from the study showed that bank credit estate had a significant positive impact on housing delivery in Nigeria whereas Primary Mortgage Institutions (PMIs) had both negative and non-significant influence on housing sector in Nigeria. Besides, the inadequate supply of mortgage finance to the housing sector weakens the growth of the sector and overall economic impact. The researcher suggested that government and monetary agencies should implement significant policies directed towards improving the activities of Primary Mortgage Institutions (PMIs) for efficient performance⁵¹.

Research evaluated the review of the housing policies and programmes in Nigeria. The study adopted a case study design, and the data was collected using secondary instrument source. The result indicated that the effectiveness of the policy measure is already showing in the housing finance sector as brought about by the recent mortgage finance reforms, but the success of the policy depends mainly on the provision of necessary political will through the creation of an enabling environment for people to own or have access to decent housing. The researcher recommended the widened of the scope of the policy objectives to include the strengthen of all existing public institutions involved in the housing delivery at the federal level and the establishment of a secondary mortgage market to enhance greater accessibility to long term housing fund for house ownership among all parts of the Nigerian population⁵².

Research was carried out to find out the effect of interest capping on financial performance in commercial banks in Kericho Country, Kenya. The study employed a quantitative cross-sectional survey research design targeted at collecting large number of qualitative and quantitative data at a point in time to address the formulated hypotheses. The researchers used stratified sampling technique for the sample size of 70 respondents selected for the study out of the target population of 86 respondents in commercial banks in Kericho Country, Kenya. The primary data was collected with the use of self-administered structured questionnaire which was dispatched through the drop and pick method. Consequently, the secondary data was collected to use for cross validation of the primary data results. The data received were analysed quantitatively and qualitatively. Also, the descriptive and inferential statistics were adopted using Statistical Package for Social Sciences (SPSS) version 24 and the hypotheses testing was done the aid of multiple regression model. The results identified that short loan interest, mortgage interest, deposit interest and fixed deposit interest capping have a statistically significant consequence on financial performance of commercial banks in Kericho County, Kenya. The study recommends that the regulator should be careful in setting capping rates as it affects financial performance of banks⁵⁴.

A study identified the factors affecting house ownership in Nigeria: A probit and heteroscedastic probit model approach. The research adopted the heteroscedastic probit model and make use of nation-wide cross-sectional data of the 2015/2016 General Household Survey (GHS) conducted by the Nigeria Bureau of Statistics. The outcome of the study shows that the major determinants of house ownership in Nigeria are education level, occupation, marital status, household size, age of household head and income. The income negatively influences house ownership in Nigeria in which both probit and heteroscedastic model reveals that as income of the household head increases there is likelihood of owning a house increase. The research suggested that policies which are targeted at maintaining

moderate or lean household size and promoting non-farming occupation along gender-oriented development policies should be supported and promoted by policy makers, since these variables are considered important to increasing house ownership among households in Nigeria⁵⁹.

Research examined the role of financial institutions in housing development in Nigeria. The study employed survey research design in which fifty (50) questionnaires were administered but forty-two (42) were returned and used. Primary and secondary data sources which include interview, questionnaire, internet facilities, journal publications and textbooks were used. The data was analysed using statistical package for social society (SPSS) and presented using descriptive and analytical approaches for qualitative and quantitative data respectively. The outcome of the study revealed that the contribution of financial institutions to housing development is not satisfactory because of restricted options available and lack of consideration for most of the Nigeria population. The researchers recommended that there should be fairness of the interest charge on mortgage loans, in addition with simple and convenient loan arrangement process, flexible interest rate, convenient redemption periods and little stress on collateral security⁶⁰.

A study was conducted on homeownership and the American dream. The researcher adopted a case study research design and a secondary data used for collection. The findings disclosed that homeownership is an essential institution and owning a home helps to lower the financial risk of household in retirement. It is an effective channel which allows families to build wealth and serves as a measure of financial security. However, it is more difficult for households to become homeowners due to challenges in obtaining a mortgage, household income that have not kept pace with the increases in home prices as well as the interest rates. The researchers recommended the review of public policy challenge in the United States which could break down barriers that limit those who would benefit from homeownership⁶¹.

A study assessed the effect of mortgage financing on financial performance of commercial banks in Kenya. The study adopted a descriptive research design and a field survey of a target population of 27 commercial banks in Kenya offering mortgage financing services hence ruling out sampling of the population. The secondary data used was obtained using data collection sheet from the financial reports of the commercial banks for mortgage transactions and Central Bank of Kenya (CBK) annual reports on economic growth both covering 2007 to 2016. Since the data received was quantitative, the research adopted descriptive and inferential statistics to analyse the data. Findings from the study identified that the total amount of mortgage loans offered by the commercial banks in Kenya has a positive significant impact on financial performance. In addition, the interest charged on mortgage has a positive and significant effect on financial performance of the commercial banks in Kenya. The researchers recommend Government policy for interest rate stability to enhance quality of mortgage products offered by the commercial banks in Kenya⁶².

Research was carried out to view the relationship between housing, housing finance and credit risk. The study adopted a descriptive research design and secondary data used was a balanced panel dataset of 23 countries over the period of 2000 to 2012. The results found that housing affordability and household vulnerability significantly influence the risk of banks' loan portfolios. Consequently, the analysis of conditional quartiles of non-performing loan ratios indicated that financial institutions in countries with greater levels of financial independence and less regulated markets also experience greater credit risk. The researchers suggested that regulatory authorities should strictly monitor the mortgage market operations and implement the measure of risk management on financial institutions⁶³.

Research was conducted to find out the effects of financial risks on the performance of deposit money banks in Nigeria. The secondary data used for the study was sourced from the Central Bank of Nigeria (CBN) annual reports and statistical bulletin of various years, CBN

financial stability reports, Nigerian Stock Exchange (NSE) Fact books and financial reports of 18 deposit money banks listed on the floor of NSE covering the period from 2000 to 2019. The data obtained were analysed using descriptive and inferential statistics where model specification estimation was derived. The finding was that combined impacts of financial risks do not influence banks' performance negatively and to be specific, the outcomes from the empirical analysis showed that financial risk proxy by credit risk does not have any significant relationship with financial performance of deposit money banks in Nigeria. Consequently, revealed that Liquidity risk is a significant determinant of deposit money banks performance in Nigeria. The researchers suggested that further comparative studies should be carried out between Nigeria and any other countries in Sub-Saharan Africa, or between Nigeria and any country in Europe or America, this will enable us to see the various impacts of the hypothesized variables on bank performance⁶⁴.

Research assessed the effect of debt financing on firm performance: A study on non-financial sector of Pakistan. The study employed a secondary data with the population of all companies of 14 sectors but because of limitations of data, the sample of 360 companies were selected. The research used Panel least square and Hausman test for the selection of the fixed effect or the random effect model. The findings disclosed that performance of companies is negatively related to the short-term and long-term debt in the sense that increase in debt cause the decrease in performance of the companies because debt is an expensive source of finance. The study recommends that companies should depend more on their internal source of finance since it is inexpensive and dependable source of finance in Pakistani context⁶⁵.

Research established success criteria evaluation for a sustainable and affordable housing model: A case for improving household welfare in Nigeria cities. The study used content analysis and a structured close-ended questionnaire for field survey to collect data. Also, the qualitative analysis adopted to retrieve secondary data from previous literature. The National

Bureau of Statistics (NBS) reported the population size of federal civil servants employed by the government as 67,000 workers. The sample size required for the study is 262 arrived at using confidence level of 95%. The analysis of data obtained applied using the Microsoft Excel data analysis tool for measurements of central tendencies, correlation and ANOVAS. The outcome of the findings showed that security ranks the highest and other criteria of importance include accessibility, adaptability, utility, technology, community, affordability, and acceptability. It was recommended that future research should focus on the social and environmental measurements of sustainable housing as it influences the household particularly in developing countries⁶⁶.

Research appraised more mortgages, more homes, and the effect of housing finance on homeownership in historical perspective. The study adopted time-series design and used long-run panel data for seventeen countries between 1920 and 2013 for secondary data collection. The analysis of data was done using cross-sectional model and correlation. The findings identified that the extension of mortgage credit to households has not always led to higher homeownership rates because historically there have been other sources of mortgage credit which includes the government and non-bank mediated private loans. Consequently, banks' mortgage credit is thus neither necessary nor sufficient for increase in homeownership since the combination of higher wages, government programmes, affordable houses and high savings will lessen reliance on mortgages for house construction or acquisition which invariably provide alternative window to increase homeownership. In addition, the extension of mortgage finance might also be insufficient to create more homeownership in the sense that mortgages can be used simply to finance rental apartments. The researcher recommended that the influence of mortgage debt should be carried out on consumer debt more widely as there is a correlation between the extension of mortgage and consumer debt⁶⁷.

A study examined an exploration of concepts and policies on affordable housing in England, Italy, Poland, and The Netherlands. The research employed a case study design and the secondary data obtained from journals, articles, books, policy reports and statistical sources. Desk research and interviews with key informants, national experts and policymakers were conducted which essentially focused on completing and validating information received through the review of secondary data. The findings were that in all the four countries there is in fact an emerging affordable housing sector which is mainly characterised by policies targeted at helping middle-income households rent housing at below-market price. The study suggested the emergence of alternative forms of affordable housing provision which develop opportunities for socially responsible lending by private actors⁶⁸.

Research evaluated the interest rate and financial performance of Banks in Pakistan. The secondary data was obtained from annual data reports of interest rate of State Banks of Pakistan and financial reports of 20 commercial banks collected from their respective websites for 2008 to 2014. The sample size of the banks was taken based on highest market share and return. The analysis of the data was carried out using a statistical technique of Correlation and Multiple Linear Regression analysis. The study concluded that profitability of banks is significantly affected by changes in the interest rate. The outcome of the research indicated that deposits with other banks and interest rate are negatively affecting the profitability of banks as advances & loans and investment are having positive influence over profitability of banks. The researchers recommend that banks profitability is an essential function of interest rate fluctuation hence, the efficient regulation and administrative structure of bank's lending rate policies should be entrenched⁶⁹.

A study reviewed the mirage of housing affordability: An analysis of affordable housing plans in New York City. The researcher adopted an exploratory study using mixed methods. The secondary data was used were obtained from scholarly work and other sources like

Housing New York Five Borough Ten-Year plan, the NYU Furman Centre, the HUD, NYC's Department of Housing Preservation and Development, the NYCHA, and the U.S. Census Bureau. Instead of adopting only quantitative data, the researcher seeks to clarify the underlying forces driving housing affordability has something which cannot sufficiently be explained simply by quantifying the number of units constructed or the number of households assisted. The data processing method used was inferences from the literature on affordable housing and from comparisons of de Blasio's plan to the outcomes of similar plans executed by former mayors and an explanatory analysis is carried out on the Housing New York Plans. The findings disclosed that while providing any number of affordable housing units is a positive idea, it is unreasonable to conclude that only this intervention can sufficiently address the housing affordability crisis in NYC. The study suggested the scrutinizing of de Blasio's approach if creating thousands of housing units can make an immediate measurable influence on the relationship between supply and demand through rent prices as the Plan demonstrated⁷⁰.

Research identified the operational efficiency of bank loans and deposits: A case study of Vietnamese banking system. The study adopted a pooled cross-sectional sample of financial ratios obtained from annual reports of 44 Vietnamese banks covering the period 2008 to 2015. The analysis of data performed using deterministic frontier model based on corrected Ordinary Least Squares (OLS), estimated by three-stage least squares on a simultaneous equations model and to derive the frontiers for the sampled banks. The results indicated that the underdeveloped banking system like Vietnam, bank deposits have a positive and significant influence on bank loans whereas loans have a positive but insignificant influence on deposits. The research recommended that Vietnamese banks should focus more on deposit-taking activities because they performed moderately well in deposit-taking and loan-creating activities⁷¹.

A study was conducted on commercial banks loans and lending rate in Nigeria: A Toda-Yamamoto causality approach. The research used the augmented Granger causality test approach developed by Toda and Yamamoto (1995). The secondary data adopted from Central Bank of Nigeria (CBN) statistical bulletin covering the period 1981 to 2016. The findings established that Toda-Yamamoto causality test demonstrates a strong unidirectional causality flowing from lending rate to bank loans and from monetary policy rate to lending rate in Nigeria. The researchers suggested the review of CBN monetary policy which sustain a comparatively moderate and stable monetary policy rate that will in turn influence a lower lending rate, to enable investors (both domestic and foreign) have access to more loans and consequently increase in investment, productivity, and employment in the country⁷².

A study appraised the monetary policy and bank credit in Nigeria: A Toda-Yamamoto approach. The researchers employed a descriptive design with a particular use of ex-post facto research design. The study adopted a secondary data annual time series from 1981 to 2016 sourced from Central Bank of Nigeria (CBN) Annual Report and Statistical Bulletin. The data collected were analysed using inferential statistics, preliminary analysis using Augmented Dickey Fuller (ADF) and engaged Toda & Yamamoto granger non-causality model to examine the relationship between variables. The findings indicated that structural changes in Monetary Policy System (MPS) and Monetary Policy Rate (MPR) have significant influence on loan and advances of Deposit Money Banks (DMB) in Nigeria. The research suggested the review of CBN financial system policy to ensure proper management of money supply and other macro-economic variables⁷³.

A study was conducted to examine the monetary policy and financial performance of Deposit Money Banks in Nigeria. The research used quantitative study and adopted a time series secondary data obtained from Central Bank of Nigeria (CBN) Statistical Bulletin covering the period from 1984 to 2018. The population employed for the research is all the deposit money

banks in Nigeria. The data collected were analysed using descriptive and inferential statistics. The findings identified that monetary policy has significant effect on the financial performance are measured as net worth and total credits of deposits money banks both in the short and in the long run. In addition, the lending rate had no significant consequence on financial performance of deposit money banks. The researchers recommended that the CBN should focus on the review of monetary policy for liquidity ratio, loans to deposit ratio and cash reserve ratio to improve the financial performance of deposit money banks in Nigeria⁷⁴.

Research considered the introduction on housing affordability and affordable housing. The study discussed select nation, state or city-specific strategies that address affordable housing challenges in selected Western countries such as United States of America, Australia, Germany, and Sweden. The research adopted units of observations range from households to organizations to municipalities. The study employed primary qualitative data using interview, focus group notes, surveys, and administrative data as well as the secondary quantitative data collected from U.S. Bureau of the Census, U.S. Bureau of Labour Statistics, U.S. Department of Housing and Urban Development, and the Ohio Housing Finance Agency. The results established that housing affordability and affordable housing may be complex to address through policies and programmes. The study suggested the effective strategies to address the housing affordability and affordable housing should be developed⁷⁵.

A study assessed mortgage finance market and housing affordability in Urban Areas in Rwanda: A case of Kigali City. The research design is more quantitative than qualitative but adopted both primary and secondary data. The primary data was collected through survey using designed & tested questionnaires and structured interview. The population of the study is 12 commercial banks available in the study area and three commercial banks were selected as sample size using convenience method. Consequently, the secondary data was received from academic documentations and institutional publications. The findings ascertained that

the adopted loan amortization schedule (even total payment), the increases in the risk for mortgage suppliers caused by the absence of secondary mortgage market, and the influence of short-term financial institutions, reduced mortgage finance affordability (purchase affordability) and hence, only 15% of Kigali City households could afford housing but without repayment affordability. The study also showed that the development of Secondary Mortgage Market (SMM) to reduce the risks that caused the high interest rate, the flexibility on loan amortization method, and the participation of long-term financial institutions in the market with positive legal framework, the mortgage finance market will further ease the issue of housing affordability in Kigali City. The research recommends the financial institutions' review of house loan products to meet rising demand for home ownership in Kigali City. In addition, the mortgage market stakeholders to examine the identified mortgage finance market determinants (the mortgage term, LTV, payment-to-income ratio, types of mortgage market and type of mortgage loan amortization schedule method and interest rate) in policy and decision-making procedures to increase access to home loans⁷⁶.

Research was carried out on customers' deposits and loan administration: Nigerian banks' perception. The study adopted a secondary data sourced from annual reports of ten (10) quoted Nigerian commercial banks covering the period from 2007 to 2016. The data obtained were analysed using panel data analysis. The outcome of the study showed that customers' deposits have strong and statistically significant positive influence on loan and advances in banking sectors in Nigeria which means that for every increase in customers' deposits there will be an improvement in loan and advances of the commercial banks in Nigeria. Also, the interest income has a positive significant impact on loan and advances. The study suggested the development of new products that would attract and motivate customers' patronage to deposit more cash with the bank to create additional loan and advances which will ultimately improve the banks' revenue⁷⁷.

Research reviewed the homeownership status and risk of food insecurity: Examining the role of housing debt, housing expenditure and housing asset using a cross-sectional population-based survey of Canadian households. The study adopted a cross-sectional survey design and sourced the data from the 2010 Survey of Household Spending (SHS). The population of the study is representative of population living in the ten provinces except for individuals living in institutions, military camps or on First Nations reserves. Primary data were received through an in-person interview with the head of household. The data analysis was done using the multivariable logistic regression models. The findings revealed that housing policy may play a role in reducing food insecurity by promoting homeownership and lowering the financial vulnerabilities connected with mortgage debt. The study recommends the examination of the relationship between homeownership, housing asset value and food insecurity within areas with lower housing prices to better understand the protective role of homeownership⁷⁸.

A study explained the methodological weaknesses in the measurement approaches and concept of housing affordability used in housing research: A qualitative study. The research used methodological development and research on housing affordability measurement approaches (HAMA). The study involved an assessment of related literature covering the period between December 2016 and June 2018. However, priority was given to the reports of empirical studies from peer-reviewed academic journals. The results indicated that the major research evidence which summarizes the weaknesses in the standard measures is their incompetence to incorporate sustainability components and over dependence on economic dimension while the difficulty of emerging methodologies, though deepen the overall understanding of various concerns that breed housing affordability challenges. The research recommended the continued conceptual improvement and development of additional

appropriate methods that could better consider the multi-dimensionality inherent in housing affordability challenge⁷⁹.

Research was conducted on assessment of National Housing Policy and homelessness in Nigeria: Policy options for Buhari's Administration. The study employed a qualitative research design and sourced data from extant literatures. The findings were that to achieve an improvement in the housing stock in Nigeria, it is necessary to integrate affordable housing delivery scheme into the formulation and implementation of housing policies and program which should not be at the exclusive preserve of federal government and the removal of governments at the local level. The research suggested the development of an effective housing policy framework towards achieving sustainable housing development in Nigeria⁸⁰.

A study appraised the unified theory of acceptance use of technology (UTAUT) and its applicability to mortgage banking digitization: The case of the Philippines. The research adopted UTAUT model as the conceptual basis which was assessed with the use of sequence of quantitative data and analysis to create a final model that best explains the main phenomena of the data that were collected. The study employed a self-made questionnaire as the primary survey instrument in which the validity and reliability of the instrument tested using pre-test likert questionnaire carried out on ten (10) mortgage clients and five (5) mortgage bank employees in a Universal bank not involved in the study area. The data collection obtained from 250 respondents who are both current and potential mortgage customers who answered the survey questionnaires. The outcome indicated that the factors of behavioural plan to embrace digital mortgage device among mortgage customers were facilitating conditions, performance expectancy and effort expectancy. Also, revealed that age, education, computer knowledge and internet knowledge of the mortgage customers moderate the effect of the three indicators namely, performance expectancy, effort expectancy and social influence on customers' digital mortgage service acceptance. The

researcher recommends the initiation of other bank products like deposits and other investment products for digitization of bank mortgage services⁸¹.

Research was conducted to find out the determinants of mortgage price affordability: A study of Ghana. The study engaged mixed method approach that is, the questionnaires and structured interviews to source for the primary data obtained from a sample drawn from three (3) main players in West African mortgage financing institutions on the indicators that determine the price of affordable mortgage in the mortgage market of Ghana. A 5-point Likert scale was adopted by the respondents to rate the variables and the survey results collected were analysed with the aid of exploratory factor analysis. The results identified economic factors, financial factors, property characteristics, developmental factors and geographical factors as underlining drivers that affects mortgage price affordability. The study suggested government total reforms which includes an effective national policy on housing; devoting a portion of the oil revenue for provision of housing for the low-and-middle-income groups; improving land registration and tenure system reform; and developing an enabling environment for the private sector to initiate affordable housing through tax incentives⁸².

A study was carried out to establish the influence of Technological factors and homeownership through mortgage financing in Kenya. The research employed both secondary and primary data for the study. A descriptive census survey design was conducted on employees in 43 mortgage lenders' banks and mortgage clients in state corporations. The primary data was obtained from 92 credit managers of mortgage institutions and a sample size of 393 mortgage clients selected from a population of 24,000 employees in three parastatals. Also, the secondary data were sourced from published financial statements of Central Bank of Kenya (CBK), mortgage lenders, and Kenya National Bureau Statistics (KNBS) covering the period of 30 years. The data collected from likert type questions were

analysed using frequency distributions and percentages. The findings indicated that technological factors had a statistically significant impact on the growth of homeownership via mortgage financing in Kenya. Outcome also showed that mortgage customers' decisions are strongly influenced by rapid changes in technologies provided for the mortgage operations which helps mortgage firms to gain more clients and continue attracting prospective customers. The study recommended the need for the mortgage industry players to consider the technological influences in the policy making procedure which can enhance the mortgage growth in Kenya⁸³.

A study was carried out to find out the Malaysian residential mortgage loan default: A micro-level analysis. The micro-level data were collected from the lending institution based on the items on loan application form for individuals. A total of 47,158 loan accounts of individual borrowers covering the period from 2003 to 2016 were obtained. The data collected were analysed using logistic regression model and a total of 5,186 loan accounts were default out of the 47,158. The study showed that gender, ethnicity, guarantor availability, loan original balance, loan tenure, loan interest rate and loan-to-value (LTV) ratio are the important indicators that influences mortgage loans default in Malaysia. The study recommends the implementation of a simple test on the essential money management skills during the loan assessment process to minimize the probability of mortgage loan default⁸⁴.

A study was conducted to determine the macroeconomic and macro-financial factors as leading indicators of non-performing loans. The research adopted a panel data models for all EU countries and two groups of EU countries using quarterly data over approximately 20 years. The research outcome identified many macroeconomic and macro-financial variables as the major indicators for non-performing loans in the EU countries even years ahead. Consequently, higher GDP growth, lower inflation and lower debt are strong dominant measures of a lower ratio of non-performing loans in the future. The research recommends

that it is paramount to evaluate whether various macroeconomic and macro-financial variables may serve as key measures for future developments of non-performing loans since many of the indicators operate with long lags⁸⁵.

A study evaluated the organizational and human resource management and innovation: Which management practices are linked to product and/or process innovation? The research employed the use of firm-level data from the Japanese National Innovation Survey and a probit model with sample selection to investigate which factors motivate the tendency to innovate new products or services and the tendency to innovate new processes. The findings were that applying more than one management practice at the same time relates to a higher possibility of innovating new products and executing different types of organizational and human resource management practices at the same time obviously increases the likelihood of product innovation. But in the case of process innovation, the size of the slight effects does not monotonically enlarge in the number of practices implemented. The human resource management practices investigated in this study do not necessarily increase the possibility of process innovation when they are executed together with other organizational management practices. The research recommended sharp organizational changes that can work as a clear indicator of firms' determination to follow an innovation-oriented strategy and help to advance innovation success⁸⁶.

Research reviewed the relationship between knowledge management and innovation performance. The study adopted a survey administered on a sample of 120 companies that are members of Iranian Power Syndicate and a structured questionnaire comprising of close-ended questions were developed in which a seven-point likert scale was adopted. The data for the research were obtained from CEO, senior manager, expert, and senior expert as the main informant because of their knowledge of the company and data analysed using

Structural Equation Model (SEM) and Partial Least Square (PLS) method with the aid of SPSS. The outcome of the study showed that knowledge management actions influence innovation and organizational performance directly, and indirectly through a rise in innovation capability. It was also established that knowledge creation, knowledge integration, and knowledge application promote innovation and performance. The study suggested the designing of knowledge management programs to achieve higher innovation, effectiveness, efficiency, and profitability⁸⁷.

A study considered the resilient homeownership: how partnership-based finance would have prevented the 2008 US mortgage crisis. The research employed times series data with quarterly observations covering the period from 1994 to 2019 which represents a total of 100 observations over the 25-year period. The researcher used Johansen's co-integration test to provide evidence of a long-run relationship between the delinquency rates, volume of refinancing and the change in house price index (HPI) during the period under review. Also, the Granger causality test was adopted to confirm the short run dynamics between the volume of refinancing and the change in house price index (HPI). The variables for unit root tested using Augmented Dickey-Fuller (ADF) test. The results identified that the modern conventional mortgage system, excessive refinancing opportunities and equity extraction were the major indicators that determines the delinquency rates leading to a non-sustainable homeownership. The researcher suggested the encouragement of the households to pursue sustainable homeownership via a partnership-based model with long-term wealth gathering for themselves and their beneficiaries rather than short-term home ownership via the conventional mortgage system that leads to negative equity and defaults when the housing market slumps⁸⁸.

Research assessed homeownership in Urban China: An empirical study of borrower characteristics and the housing provident fund (HPF) program in Kunming. The study employed a survey design in which a structured questionnaire was used to gather relevant information relating to the type of home owned, factors influencing their decision to buy, participation in the HPF programme, choice of financing, and standard demographic characteristics, from household residents that are homeowners and non-homeowners in Kunming. The research conducted a questionnaire pilot test on 30 Kunming residents and engaged the use of convenience sampling technique for the data collection from individuals irrespective of their homeownership status, gender, occupation, or income. A total of 700 questionnaires were administered during a 4-week period in December 2014 out of which 89% response rate, representing 621 respondents were received. The study adopted the logit model and descriptive statistics for the analysis of data collected. The research found that respondents who are married and employed by the state-owned organisations or enterprise, earning other income, command a higher monthly income and highly educated are more likely to be homeowners through the Housing Provident Fund (HPF) programme whereas, the respondents with lower level of income are less likely to own a house. The research recommends the reform in the implementation of HPF scheme to enhance the housing welfare of the people⁸⁹.

Research was conducted on household mortgage demand: A study of the UK, Australia, and Japan. The study engaged the use of three panel data sets namely, Household Income and Labour Dynamics in Australia (HILDA) data covering year 2002, 2006 and 2010 for Australia, Keio Household Panel Survey (KHPS) covering years 2004-2011 for Japan and Understanding Society Survey (USS) data covering year 2009 and 2012 for the UK. The research adopted descriptive statistics and modelling approach involving estimation of three equations with the aid of ordinary least squares: mortgage demand function, housing demand

function and initial loan to value ratio function. The findings indicated that despite homeownership is a preferred tenure and the mortgages are “recourse” loans, housing markets in these three countries operate independent mortgage market institutional organizations. Also, the outcomes revealed that income elasticity of mortgage demand vary despite income elasticity of housing demand being related. Consequently, divergent mortgage institutions in countries that constitute limitations for borrowers also determine mortgage demand. In addition, mortgage and housing demand is determined by other elements which includes demography and economic conditions. The researchers suggested that linkage between mortgage and monetary markets will be weak in Japan in the future but stronger for a long period in Australia and the UK⁹⁰.

A study was carried out on measuring homeownership affordability in emergent market context: an exploratory analysis for Turkey. The research adopted a theoretically informed model to appraise affordability with the use of complementary methodologies in quantitative analysis. The study request to offer lessons about how to solve measurement and modelling problems in emergence market contexts by formulating aggregate/city level housing cost-to-income (HCI) ratio, adjusted HCI (AHCI) ratio, housing affordability index (HAI) and effective HAI (EHAI) sensitive to multiple calculation methodologies and alternative data set involving income distribution and poverty tranches. The results of HCI, AHCI, HAI and EHAI models established that housing is not affordable in Turkey and in Istanbul except for the highest income categories. The outcomes also revealed that the major reasons for the Turkish housing affordability distress particularly heightened in metropolitan areas in Istanbul was because of macroeconomic instabilities, distorted interest rates and short average mortgage maturity, poverty, and unequal income/wealth distribution. The research recommended socially essential policies like reducing income/wealth inequalities and improving affordable housing supply⁹¹.

Research investigated the determinants of non-performing loans in the banking sector in developing state. The study adopted a secondary data sourced from nine commercial banks listed in Pakistan Stock Exchange covering the period from 2005 to 2017. The determinants of NPLs considered includes profitability, operating efficiency, capital adequacy and income diversification. The research employed descriptive statistics and regression modelling for analysis of data using random and fixed effects via STATA statistical software. The findings disclosed that the operating efficiency and profitability measures have a negative relationship with NPLs though were statistically significant, while capital adequacy and income diversification have a negative connection with NPLs however, they were statistically insignificant. The researchers recommended the check of cross-cultural impacts on NPLs and the influence of banking determinants on NPLs using other developing counties model⁹².

Research evaluated knowledge influences on perception of innovation drivers for sustainable housing development models. The study employed a survey design using a semi structured interviews targeted at key representatives of the National Community Land Trust Network (NCLTN), banking & government institution representatives offering loan facilities and a questionnaire to source the primary data. The research applied both qualitative and quantitative techniques. The study adopted binary logistic regression for data analysis to test if there are significant consequences of Community Land Trust Shared Equity Housing Model (CLT SEHM) knowledge on respondents' perceptions. The outcome of the study identified the impact of knowledge on individual perceptions of innovation drivers and the tendency of policy makers or communities to promote innovation in affordable housing delivery could be positively influenced by the strength of knowledge available to prospective project beneficiaries and housing development stakeholders. The study recommended that innovation drivers should centre on addressing matters emanating from the outcomes of an uneven competitive housing market which can be anchored by efficient knowledge spreading.

In addition, the policymakers should encourage the research targeted at developing frameworks which challenge or overcome unfair land acquisition structures⁹³.

A study was conducted on evaluating the role of social capital, tacit knowledge sharing, knowledge quality and reciprocity in determining innovation capability of an organization. The research adopted a survey design method and sourced the primary data using a structured questionnaire administered on a sample size of 190 respondents and the data collected were analysed with the aid of statistical technique of structural equation modelling (SEM). The outcome of the study showed that knowledge reciprocity, relational social capital and cognitive social capital have positive connection with tacit knowledge sharing whereas the structural social capital have no significant effect on tacit knowledge sharing. Consequently, revealed that both tacit knowledge sharing, sand the quality of knowledge were positively linked to innovation capability. The researchers recommended the development of strategic guidelines to assist organizations to establish paths to promote tacit knowledge sharing that will result in advancing innovation capability of an organization which in turn improving business performances and leading to an outstanding competitive advantage in the market⁹⁴.

2.3.1 Findings Review

This sub-section rested on the stand of earlier studies carried out in another circumstance which relates to the objectives of this study. The findings review is done to follow objective by objective approach to reporting findings.

2.3.1.1 Mortgage Financing and Access to Finance

The few studies conducted on mortgage financing relates to financial, organizational, and operational performance of the mortgage banks but hardly you find studies specifically on housing loan performance. The performance effect of mortgage financing and innovation

capability on access to finance for housing loans were done separately in the previous studies without taking cognisance of their combine effects. The capability of mortgage banks to introduce new innovations into mortgage operations have enhanced superior firm performance over its competitors. The lack of access to finance of the mortgage banks by individuals and corporate organisations have been identified by previous studies as a major hindrance for housing loans' performance because of the inability of the mortgage banks to source for long-term funding from the mortgage markets, the low-income of the households and the high interest rates among others. The different methodology adopted in these studies might have resulted in the division of findings.

According to a study conducted by a scholar on mortgage industry financial risk tolerance and mortgage banks credit delivery in Nigeria, the researcher adopted ex-post facto research design and time series data were sourced from the Central Bank of Nigeria (CBN) covering 1992 to 2018. Findings ascertained that the mortgage products offered in the housing finance market by mortgage banks includes Individual Loan, Estate Development Loan, and the National Housing Fund (NHF) Loan in which savings, fixed deposits, balance held for other institutions and total receipts have no significant influence on total housing loans that represents the mortgage banks' credit delivery in Nigeria. Consequently, the level of financial risk tolerance of the mortgage finance industry is insignificant and as a result, the loans granted by mortgage banks are small when compared with the savings and other income received by mortgage banks¹. Another researcher's study on development of mortgage finance in Nigeria and its impact on the economy, using the same time series data approach with different covering period revealed that there is a one-way causal link runs from mortgage finance to economic growth and between the financial market and mortgage financing through long-term financing window of the stock exchange market¹⁰.

A scholar conducted a study on analysing access to long-term debt effects on firm's growth in China using longitudinal research design and secondary quantitative data extracted from the National Bureau of Statistics (NBS) of China covering 2004 to 2017 and published books of the accounts of the companies listed on the Chinese Stock Exchange. The researchers found out that long-term debt negatively influences firm development when sizes and maturity remain important thoughtful option to access long-term finance, however not statistically significant as perceived¹⁷. The above position was corroborated by another study on mortgage financing and growth of housing sector in Nigeria. The findings from the study showed that bank credit estate had a significant positive impact on housing delivery in Nigeria whereas Primary Mortgage Institutions (PMIs) had both negative and non-significant influence on housing sector in Nigeria. Besides, the inadequate supply of mortgage finance to the housing sector weakens the growth of the sector and overall economic impact⁵¹.

The previous study by a researcher evaluated knowledge influences on perception of innovation drivers for sustainable housing development models. The outcome of the study identified the impact of knowledge on individual perceptions of innovation drivers and the tendency of policy makers or communities to promote innovation in affordable housing delivery could be positively influenced by the strength of knowledge available to prospective project beneficiaries and housing development stakeholders as a whole⁹³. However, a scholar evaluated the primary mortgage institutions challenges for financing housing development in Nigeria and the study found out that accessing housing finance from the Primary Mortgage Institutions (PMIs) remain a major challenge for potential borrowers at the low-and-medium income levels due to stringent conditions attached to housing finance accessibility which also hinder housing development and homeownership in Nigeria⁸.

A researcher supported this position after conducting a study on the analysis of the factors influencing access to mortgage finance in Lagos Nigeria. The study adopted survey research design using questionnaire to obtain the primary data. The outcome of the study showed that income, nature of the occupation, type of collateral, interest rate, years of the banking relationship, loan duration and loan sector are the significant determinants of access to mortgage finance in Lagos Nigeria. The study recommended that the Primary Mortgage Institutions (PMIs) should review on periodical basis, the factors they considered in accessing the mortgage finance to reduce the bureaucracies and unfavourable loan conditions required⁴⁰. In similar work conducted by some researchers on key factors affecting housing finance, they identified several factors responsible for effective housing finance in support of previous studies on mortgage financing which includes Nigeria Housing Policy (NHP), Lack of long-term funding, Low income, High interest rate, Weak institutional framework, Lack of accessibility to PMBs, Limited PMBs, Absence of vibrant Secondary Mortgage Market (SMM), PMBs cumbersome requirements, Inadequate supply of mortgages among others⁴².

In another study conducted by a scholar on barriers to accessing mortgages in Nigeria's housing markets, the research employed cross-sectional survey with triangulation of results. The study adopted questionnaire for data collection from three new samples of major stakeholders in the mortgage market in which 450 surveys with households and 10 completed by mortgage lenders, both in Kaduna State and one survey conducted by the Federal Mortgage Bank of Nigeria (FMBN). The data collected for the study were analysed using descriptive statistics and one-sample T-Test. The research outcome identified low-incomes and savings which limited household's ability to pay mortgage repayments and deposits, high interest rates, poor access to land, inability of prospective borrowers to provide certificates of occupancy (C of O) on their land, insufficient loanable funds, and few number of mortgage lending institutions, as barriers to accessing mortgages in Nigeria's housing markets. The

research recommends an encompassing reform to develop a functional mortgage market in Nigeria³⁷.

From the empirical studies reviewed, it has been established globally that mortgage financing remains the best option available to households to acquire personal homes but access to finance remains the main challenge due to insufficient long-term funds, household mortgage loan affordability because of low-income and high interest rates among others, mentioned earlier in this study. Consequently, to support the findings on mortgage financing in Nigeria, we reviewed the work of researchers on mortgage finance market and housing affordability in Urban Areas in Rwanda: A case of Kigali City. The findings ascertained that the adopted loan amortization schedule (even total payment), the increases in the risk for mortgage suppliers caused by the absence of Secondary Mortgage Market (SMM), and the influence of short-term financial institutions, reduced mortgage finance affordability (purchase affordability) and hence, only 15% of Kigali City households could afford housing but without repayment affordability⁷⁶.

The study also showed that the development of Secondary Mortgage Market (SMM) to reduce the risks that caused the high interest rate, the flexibility on loan amortization method, and the participation of long-term financial institutions in the market with positive legal framework, the mortgage finance market will further ease the issue of housing affordability in Kigali City. The researchers suggested that the financial institutions' review of house loan products to meet rising demand for homeownership in Kigali City. In addition, the mortgage market stakeholders to examine the identified mortgage finance market determinants (the mortgage term, Loan-to-Value (LTV), payment-to-income ratio, types of mortgage market and type of mortgage loan amortization schedule method and interest rate) in policy and decision-making procedures to increase access to home loans⁷⁶.

Furthermore, a study investigated the homeowners' perception of the factors affecting access to housing finance in Nigeria found that there are significant differences in perception between those who borrowed loan for housing finance and those who did not. It was revealed that those who borrowed and those who did not borrow perceived the lenders requirements for housing finance as very strict. In addition, measures of access, affordability criteria and possession of registered title collateral were perceived to be the most stringent of the lenders loan conditions for those who have borrowed for financing housing. The study suggested that financial institutions should review the stringent loan conditions for individual borrowers requiring housing finance, to meet the affordability criterion caused by low-income¹².

2.3.1.2 Mortgage Financing and Homeownership Loans

Much work has been done by different scholars as regards the above objective. The mortgage financing literature conducted by a scholar on more mortgages, more homes, and the effect of housing finance on homeownership in historical perspective, adopted time-series design and used long-run panel data for seventeen countries between 1920 and 2013 for secondary data collection. The analysis of data was done using cross-sectional model and correlation. The findings identified that the extension of mortgage credit to households has not always led to higher homeownership rates because historically there have been other sources of mortgage credit which includes the government and non-bank mediated private loans. Consequently, banks' mortgage credit is thus neither necessary nor sufficient for increase in homeownership since the combination of higher wages, government programmes, affordable houses and high savings will lessen reliance on mortgages for house construction or acquisition which invariably provide alternative window to increase homeownership. In addition, the extension of mortgage finance might also be insufficient to create more homeownership in the sense that mortgages can be used simply to finance rental apartments⁶⁷.

The review study on mortgage finance institution and the impact on the Nigerian economy found that mortgage finance institution activities have a large implication on the Nigerian economy since it provides a channel where both individuals and corporate organizations can source for loan facility to realize homeownership dream and viable housing development in Nigeria. It was suggested that government should formulate policies which ensures the supply and demand for housing³. However, the performance of mortgage institutions is challenged has observed from one of the studies reviewed that mortgage institutions performed well in using low-income earners salary as collateral but failed in providing mortgage loans to low-income earners for homeownership and also the rate of interest charged by the mortgage institutions is very high. The researcher suggested that government and stakeholders should reduce the high interest rate, make mortgage loans accessible and affordable to low-income earners and in addition, increase the funding of mortgage institutions⁴.

In a similar study, the fundamentals to affordable homeownership in Nigeria is attributable to lack of long-term funding, high interest rate, high cost of construction materials, low-income, high cost of land, related title, high professional fees and non-existence of supporting infrastructures for building constructions. Therefore, the study recommended the existence of a viable and effective secondary mortgage market (SMM) for the mobilisation of long-term funds²⁰. The work of some researchers re-affirmed in support of the previous studies that the consumption interest rate, mortgage interest rate, deposit interest rate, inflation rate, disposable income, unemployment, gross domestic product (GDP) and the real effective exchange rate have significant impact on the volume of mortgage loans and consumer loans²⁵.

A study was carried out to establish the influence of Technological factors and homeownership through mortgage financing in Kenya. The research employed both secondary and primary data for the study. A descriptive census survey design was conducted

on employees in 43 mortgage lenders' banks and mortgage clients in state corporations. The findings indicated that technological factors had a statistically significant impact on the growth of homeownership via mortgage financing in Kenya. Outcome also showed that mortgage customers' decisions are strongly influenced by rapid changes in technologies provided for the mortgage operations which helps mortgage firms to gain more clients and continue to attract prospective customers. The study recommended the need for the mortgage industry players to consider the technological influences in the policy making procedure which can enhance the mortgage growth in Kenya⁸³.

In another study conducted on household mortgage demand in the UK, Australia and Japan, the findings indicated that despite homeownership is a preferred tenure and the mortgages are "recourse" loans, housing markets in these three countries operate independent mortgage market institutional organizations. Also, the outcomes revealed that income elasticity of mortgage demand vary despite income elasticity of housing demand being related. Consequently, divergent mortgage institutions in countries that constitute limitations for borrowers also determine mortgage demand. In addition, mortgage and housing demand is determined by other elements which includes demography and economic conditions. The researchers suggested that linkage between mortgage and monetary markets will be weak in Japan in the future but stronger for a long period in Australia and the UK⁹⁰.

A study explained the analysis of homeownership financing for Islamic banks in Indonesia through sharia asset backed securities participation letter in which the findings revealed that there are four issues in advancing the competence to reduce the risk of homeownership financing for Islamic banks in Indonesia through the asset-backed consequence of Islamic assets-participation letters namely, legal/structural issues, sharia issues, operational issues, and human resource issues. The results of this research also identified that homeownership

financing facilities in Islamic banks are still the principal source of mortgage financing for customers who require a special loan to meet the needs of building or renovating a house.⁴¹ In addition, homeownership and the American dream study was reviewed, and researchers disclosed that homeownership is an essential institution and owning a home helps to lower the financial risk of household in retirement. It is an effective channel which allows families to build wealth and serves as a measure of financial security. However, it is more difficult for households to become homeowners due to challenges in obtaining a mortgage, household income that have not kept pace with the increases in home prices as well as the interest rates⁶¹.

2.3.1.3 Innovation Capability and Non-Performing Loans

In view of the threat poses by non-performing loans on housing loan performance of the providers of credits as relates to mortgage financing, necessitated the review of few studies already carried out by scholars. Research investigated the determinants of non-performing loans in the banking sector in developing state. The determinants of NPLs considered includes profitability, operating efficiency, capital adequacy and income diversification. The findings disclosed that the operating efficiency and profitability measures have a negative relationship with NPLs though were statistically significant, while capital adequacy and income diversification have a negative connection with NPLs, but they were statistically insignificant⁹². Another study conducted to find out if non-performing loans matter for bank lending and the results established that an exogenous rise in the change of NPL ratio tends to reduce bank lending volumes, enlarge bank lending spreads, and leads to a drop in real GDP development and residential real estate prices⁴⁶.

Also, some scholars assessed the causes of non-performing loans using explanatory and quantitative study methods in line with empirical literatures. The findings from the bad

management hypothesis produced with the model, revealed that non-performing loans are a serious matter that needed appropriate attention and bank profitability calculated by Return on Average Assets (ROAA) has significant and negative consequence on non-performing loans. The study consequently established that the primary function of banks is to accept deposits and grant loans not only for short-term but also for long-term to government, businesses, and housing. However, confirmed that the delay in loan repayment by the borrower will prevent further granting of credit by the financial institutions.⁴⁵ In the same vein, a study appraised the determinants of non-performing loans in Chinese banks and ascertained that the significant determinants of NPLs in Chinese banks includes GDP growth rate, effective interest rate, inflation rate, foreign exchange rate, type of bank, ownership concentration, bank risk taking behaviour, leverage, and credit quality⁴⁴.

Furthermore, study investigated the impact of credit risk management on the performance of commercial banks in Cameroon and the results of the findings revealed that non-performing loans (NPLs) to total loans ratio which is one of the risk management measures is a key predictor and is significantly linked to bank financial performance, followed by the loan to total deposit ratio and loans to total assets ratios that have a reverse effect on financial performance of banks⁴⁷. The work of scholars on interest rates and loan performance of deposit money banks in Nigeria indicated that there is a significant and positive relationship between the interest rate and loan repayment measured by credit quality using the non-performing loan ratio. This means that an increase in the interest rate will likely cause a corresponding increase or decrease in the credit quality and consequently, established that any slight change in the lending rate would increase non-performing loan³⁵.

Research on inefficient credit process aligned with previous study and the researchers employed the maximum probability approach to evaluate the efficient frontier as a set of best

management credit practices which reduces the credit risk defined on the premise of the level of loans granted, the technical structure of the loan portfolio (such as credit lines, mortgages, consumer loans and other technical loan categories) and the interest rate charges. The findings identified that the rise in non-performing loans (NPLs) relates to harsh and prolonged recession which considerably reduced the borrowers' capability to service their debt, and to other determinants like banks' lending monitoring policies with restricted capacity to work-out defaulted loans. The researcher recommends management implementation of adequate mechanisms for effective loan monitoring that ensures timely action to be taken against borrowers with early warnings of poor loan performance⁴⁸.

The non-performing loans (NPLs) as a financial measure for housing loan performance requires the management innovation capability in the management of credit process. Therefore, a study examined the influence of management innovation and technological innovation on organization performance and the findings disclosed that management innovation and technological innovation significantly positively promote sustainability and organization performance²⁸. Another study on relationship between knowledge management and innovation performance supported the previous researcher position and the outcome of the study showed that knowledge management actions influence innovation and organizational performance directly and indirectly through a rise in innovation capability. It was also established that knowledge creation, knowledge integration, and knowledge application promote innovation and performance. The study suggested the designing of knowledge management programs to achieve higher innovation, effectiveness, efficiency, and profitability⁸⁷.

2.3.1.4 Innovation Capability and Service Efficiency

To find out which innovation capabilities influence service efficiency (SE), research assessed the knowledge sharing and innovation in which the findings ascertained the significance of knowledge sharing in strengthening innovation in the banking sector and stress that knowledge sharing is the most essential determinant of process innovation followed by product innovation. The researchers suggested the consideration of other types of innovation like administrative, technological, radical, incremental, exploitative, and exploratory, and their relationship to knowledge sharing³¹. To support the service efficiency as non-financial measure for housing loan performance, a study on operational efficiency of bank loans and deposits of Vietnamese banking system was reviewed. The results indicated that the underdeveloped banking system like Vietnam, bank deposits have a positive and significant influence on bank loans whereas loans have a positive but insignificant influence on deposits⁷¹.

Findings from the study on innovation capability and product innovation performance indicated that the determinants which influenced innovation capability includes the collaboration with institutional agents, customers, suppliers, and competitors in interactive learning connected with idea management and idea implementation²⁶. To corroborate this view, research was conducted to investigate the relationship between innovation capability, innovation type and firm performance and the findings revealed that to earn innovation performance, firm first require to establish organizational culture that can drive innovation behaviour, internal coordination with employee to motivate the innovation driven mind-set that execute ideas, conceptions into successful product/service, process, business model or system²⁹.

Also, research was conducted to identify the mediating role of knowledge sharing (KS) on the relationship between the transformational leadership (TL) and innovation in banks. The research adopted a quantitative survey method to appraise the impact of the mediating role of

KS on the relationship between TL and innovation. A self-administered questionnaire to collect the primary data using a five-point Likert scale. The population for the study includes all employees at non-managerial level who worked at Lebanese banks through the year 2018 and the probability stratified sampling technique was engaged to determine the sample size. A total of 600 questionnaires were administered to 35 Lebanese banks' employees out of which 310 were returned from 27 banks respondents and explanatory analysis was carried out with the aid of Structural Equations Modelling (SEM) using AMOS 24 to examine the relationship between knowledge sharing (KS) and innovation. The results indicated that leaders demonstrating transformational behaviour were able to advance knowledge sharing culture that intensify the creation of new ideas, products and processes²⁷.

Furthermore, a study examined convergence and digital fusion which led to competitive differentiation. However, the results indicated that organizations which fully incorporate business and digital strategies create synergetic outcomes and strengthen adaptability, innovation, and resiliency in the face of competitive challenges. Consequently, showed that in banking and financial services domain, the effectiveness and efficiency of the customers' service value chain, command the competitive advantage of the organization. The research suggested the formation of a practical framework that promote convergence of business operations, strategic management and digital fusion which led the way to value creation and competitive differentiation³⁰.

2.3.1.5 Mortgage Financing, Innovation Capability and Housing Loan Performance

Some scholars examined the effect of mortgage finance on housing delivery in Nigeria and the findings from the study disclosed that there exists a long-run relationship between mortgage finance and housing delivery in Nigeria. The researchers ascertained that housing is an important sector that can drive the Nigeria economy but the inadequate supply of

mortgage finance to the sector restrain its development and overall economic effect¹⁴. Previous study by researchers assessed the effect of mortgage financing on financial performance of commercial banks in Kenya and this support the above study. The findings from the study identified that the total amount of mortgage loans offered by the commercial banks in Kenya has a positive and significant impact on financial performance. In addition, the interest charged on mortgage has a positive and significant effect on financial performance of the commercial banks in Kenya⁶².

In contrary to the above scholars, a study examined the role of financial institutions in housing development in Nigeria and the outcome of the study revealed that the contribution of financial institutions to housing development is not satisfactory because of restricted options available and lack of consideration for most of the Nigeria population. The researchers recommended that there should be fairness of the interest charge on mortgage loans, in addition with simple and convenient loan arrangement process, flexible interest rate, convenient redemption periods and little stress on collateral security⁶⁰. Also, a study that investigated the effects of interest rates on the lending portfolio of commercial banks in Kenya, revealed that the interest rate is the highest contributor to profits in banks and had a negative correlation with the lending portfolio in the sense that, when the interest is high, prospective borrowers are reluctant to borrow since repayment on loans cost more and those with loans have higher likelihood of defaulting²⁴.

Regarding the interactions of innovation capability and housing loan performance, further analysis on management innovation by researchers established that management innovation is positively connected to organizational size, knowledge management, organizational learning, firms' overall performance and financial performance³³. In addition, the work of scholars on the unified theory of acceptance use of technology (UTAUT) and its applicability to

mortgage banking digitization in Philippines was reviewed and the outcome indicated that the factors of behavioural plan to embrace digital mortgage device among mortgage customers were facilitating conditions, performance expectancy and effort expectancy⁸¹.

In support of housing loan financing, research was carried out on customers' deposits and loan administration in Nigerian banks and the outcome of the study showed that customers' deposits have strong and statistically significant positive influence on loan and advances in banking sector in Nigeria, which means that for every increase in customers' deposits there will be an improvement in loan and advances of the commercial banks in Nigeria. Also, the interest income has a positive significant impact on loan and advances. The study suggested the development of new products that would attract and motivate customers' patronage to deposit more cash with the bank to create additional loan and advances which will ultimately improve the banks' revenue⁷⁷.

2.3.1.6 Government Housing Policy, Mortgage Financing, Innovation Capability and Housing Loan Performance

As regard the moderating effect of government housing policy on mortgage financing, innovation capability and housing loan performance, not much has been done in this area. A study examined the impact of primary mortgage institutions' investments on economic growth in Nigeria. The result indicated that primary mortgage institutions' (PMIs) investments, deposits and loans have a significant influence on economic growth in Nigeria. The study recommended that the Federal Mortgage Bank of Nigeria (FMBN) as a federal government regulatory authority should relax some of the regulations guiding the operations of the Primary Mortgage Institutions (PMIs) and liberalize the subsector for more effective performance. Besides, the PMIs should redirect substantial percentage of their loanable funds to building and renovation of residential buildings instead of concentrating on commercial

buildings and neglecting residential properties. However, this redirection is expected to increase the PMIs impact on provision of housing and enhance their contributions to real estate development in Nigerian economy³⁸.

Also, research was conducted to find out the determinants of mortgage price affordability in Ghana. The study engaged mixed method approach that is, the questionnaire and structured interview to source for the primary data obtained from a sample drawn from three (3) main players in West African mortgage financing institutions on the indicators that determine the price of affordable mortgage in the mortgage market of Ghana. The results identified economic factors, financial factors, property characteristics, developmental factors and geographical factors as underlining drivers that affects mortgage price affordability. The study suggested government total reforms which includes an effective national policy on housing; devoting a portion of the oil revenue for provision of housing for the low-and-middle-income groups; improving land registration and tenure system reform; and developing an enabling environment for the private sector to initiate affordable housing through tax incentives⁸².

Furthermore, research identified critical enablers for homeownership in Hong Kong and the findings indicated that the highest dominant factors affecting homeownership were prioritizing lending towards first-time buyers, reforming planning process to allow building of more homes and introducing subsidies for all first-time buyers. The study recommends the optimisation of government housing policies in promotion of building more housing units gears towards assisting first-time homebuyers and to achieve the objective of housing affordability to be within the average rating²¹. Subsequently, the review of issues, challenges, and prospects of housing deficit in Nigeria revealed the important role of government in creating an enabling environment for the housing sector development. That, the provision of

affordable housing depends mostly especially on the strong and political will of governments in addition to the development and implementation of effective housing policies³⁹.

A scholar investigated the role of government in the development of an effective mortgage market for housing delivery in Nigeria and the researcher identified the complicated land tenure system, transfer of legal title procedures, scarcity of long-term financial instruments, lack of mortgage liquidity, weak capital base, inadequate primary mortgage institutions, weak corporate governance, high cost of building materials, shortage of skilled labour and expensive cost of funds with high interest rates for construction and mortgages as the challenges of the housing finance sector⁹. However, scholars that assessed the housing finance market and economic growth of West African region revealed that the housing finance markets in Nigeria and Ghana are underdeveloped. Consequently, the researchers recommends that the government of West Africa States should create an enabling environment to entice both local and foreign investors to invest in the housing sector¹¹. In related review of relationship between housing, housing finance and credit risk, the study found that housing affordability and household vulnerability significantly influence the risk of banks' loan portfolios and the non-performing loan ratios indicated that financial institutions in countries with greater levels of financial independence and less regulated markets also experience greater credit risk⁶³.

The importance of innovation capability in mortgage financing operations to enhance housing loan processing performance necessitated a study that investigated the role of transformational leadership, knowledge sharing and perceived organizational support as the determinants of innovation capability. The findings indicated that knowledge sharing moderates' transformational leadership's causes on innovation capabilities. Also, the impacts

of transformational leadership and knowledge sharing on a particular aspects of innovation capability are distinct and rely on the level of employees perceived organizational support³⁴.

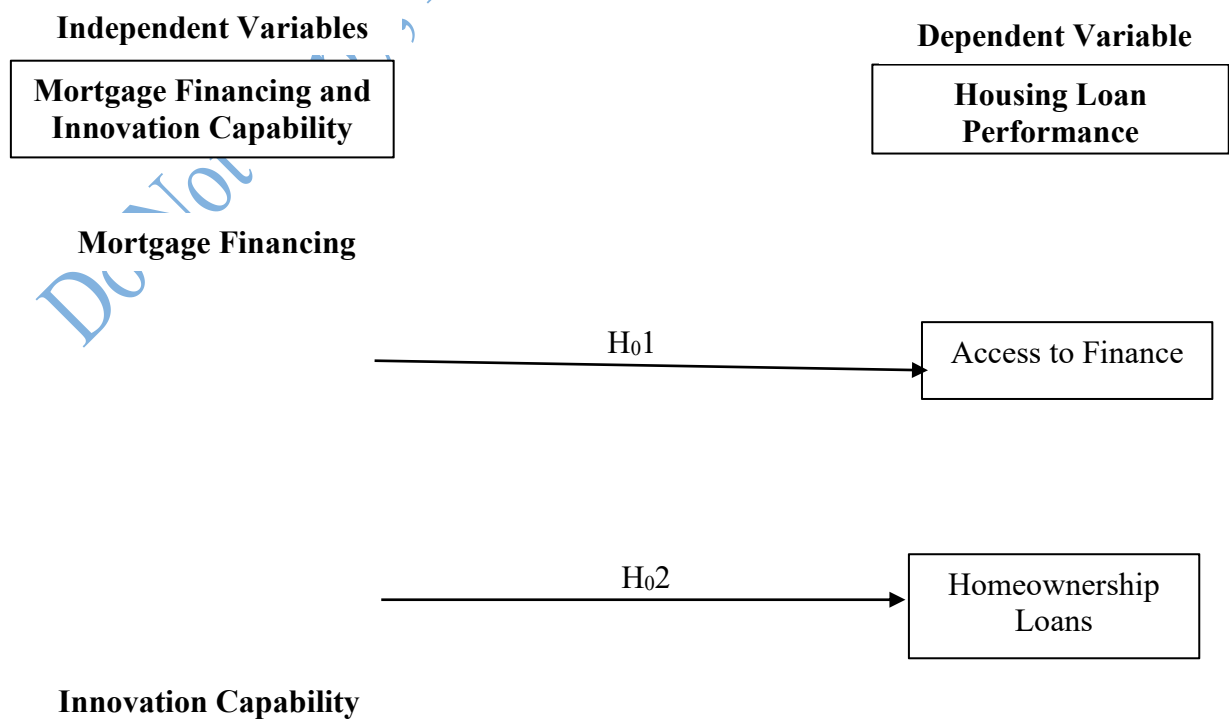
According to previous literature that examined an exploration of concepts and policies on affordable housing in England, Italy, Poland, and The Netherlands. The results revealed that in all the four countries there is in fact an emerging affordable housing sector which is mainly characterised by policies targeted at helping middle-income households, rent housing at below-market price⁶⁸. However, a scholar conducted a study on assessment of National Housing Policy and homelessness in Nigeria. The findings identified that to achieve an improvement in the housing stock in Nigeria, it is necessary to integrate affordable housing delivery scheme into the formulation and implementation of housing policies and program which should not be at the exclusive preserve of federal government and the removal of governments at the local level⁸⁰.

It has been established by various scholars that mortgage financing is the only housing finance window for the low-income and medium-income groups to realise their homeownership dream and to achieve these, requires government intervention in the areas of policies and programmes. To align with the position of previous researchers, a study was carried out to evaluate the review of the housing policies and programmes in Nigeria. The result indicated that the effectiveness of the policy measure is already showing in the housing finance sector as brought about by the recent mortgage finance reforms, but the success of the policy depends mainly on the provision of necessary political will through the creation of an enabling environment for people to own or have access to decent housing. The researcher recommended the widened of the scope of the policy objectives to include the strengthen of all existing public institutions involved in the housing delivery at the federal level and the establishment of a secondary mortgage market to enhance greater accessibility to long term housing fund for house ownership among all parts of the Nigerian population⁵².

2.4 Conceptual Framework

This section demonstrates the conceptual framework and model specification for this study.

2.4.1 Conceptual Framework



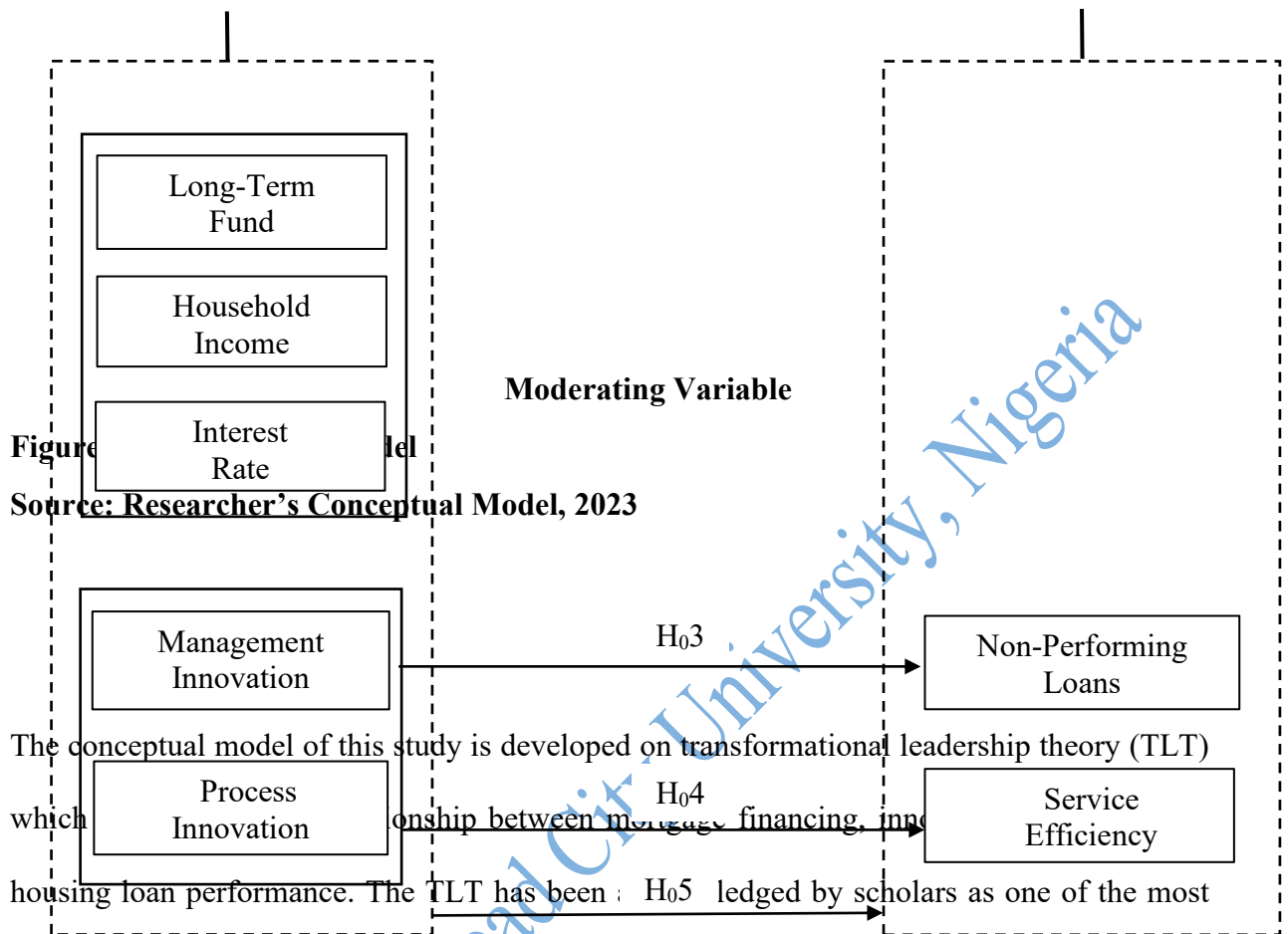


Figure 1
Source: Researcher's Conceptual Model, 2023

The conceptual model of this study is developed on transformational leadership theory (TLT) which housing loan performance. The TLT has been H05 ledged by scholars as one of the most significant determinants influencing innovation and as essential to organizations, as they incorporate creative understanding that give rise to changes in management practices and processes to enhance the organizational performance. The strength of TLT supplies the connection between the mortgage banks and the micro-environment in which they operate. The model thus summarizes the study, mortgage financing, innovation capability and housing loan performance of accredited primary mortgage banks in Nigeria. In which mortgage finance (measured by long-term fund, household income and interest rate) and innovation capability (measured by management innovation and process innovation) are the independent variables, housing loan performance (measured by access to finance, homeownership loans, non-performing loans, and service efficiency) are the dependent variables and the government housing policy is the moderating variable.

2.4.2 Model Specification

The variables in this study are grouped into three and they are: dependent, independent, and moderating variables. The Independent Variables: Mortgage Financing identified as “X” is measured as (long-term fund, household income, and interest rate) and Innovation Capability designated as “W” is measured as (management innovation and process innovation). The Dependent Variable signified as “Y” is Housing Loan Performance measured as (access to finance, homeownership loans, non-performing loans, and service efficiency). The Moderating Variable connoted as “Z” is Government Housing Policy. The functional operational model conveying these variables are represented in the mathematical model using linear regression equation as demonstrated below:

This shows the relationship among variables.

$$Y = f(X, W)$$

$$Y = f(XWZ)$$

Y=Dependent Variable

X= First Independent Variable

W= Second Independent Variable

Z= Moderating Variable

Where:

Y= Housing Loan Performance (HLP)

Sub-variables:

y_1 = Access to Finance (ATF)

y_2 = Homeownership Loans (HL)

y_3 = Non-Performing Loans (NPL)

y_4 = Service Efficiency (SE)

$$Y = y_1 + y_2 + y_3 + y_4$$

X= Mortgage Financing (MF)

Sub-variables:

x_1 = Long-Term Fund (LTF)

x_2 = Household Income (HI)

x_3 = Interest Rate (IR)

$X = x_1 + x_2 + x_3$

W= Innovation Capability (IC)

Sub-variables:

w_1 = Management Innovation (MI)

w_2 = Process Innovation (PI)

$W = w_1 + w_2$

Z = Government Housing Policy

Where:

$Y = (y_1, y_2, y_3, y_4)$

$X = (x_1, x_2, x_3)$

$W = (w_1, w_2)$

$Z = (z)$

Based on the hypotheses formulated for this study, the mathematical models that indicates each hypothesis is emphasized below:

Model/Hypothesis One

The equation below measures the influence of long-term fund, household income and interest rate on access to finance of accredited primary mortgage banks in Nigeria.

Considering the functional notation, the equations are specified as follows:

$y_1 = f(x_1, x_2, x_3)$

$y_1 = \alpha_0 + \beta_1 x_1 + \beta_2 x_2 + \beta_3 x_3 + e$

$$ATF = a_0 + \beta_1LTF + \beta_2HI + \beta_3IR + e \dots \dots \dots \text{Eq. (i)}$$

Model/Hypothesis Two

The equation below measures the effect of long-term fund, household income and interest rate on homeownership loan volume of accredited primary mortgage banks in Nigeria. Considering the functional notation, the equations are specified as follows:

$$y_2 = f(x_1, x_2, x_3)$$

$$y_2 = a_0 + \beta_1x_1 + \beta_2x_2 + \beta_3x_3 + e$$

$$HL = a_0 + \beta_1LTF + \beta_2HI + \beta_3IR + e \dots \dots \dots \text{Eq. (ii)}$$

Model/Hypothesis Three

The equation below measures the influence of management innovation and process innovation on non-performing loan ratio of accredited primary mortgage banks in Nigeria. Considering the functional notation, the equations are specified as follows:

$$y_3 = f(w_1, w_2)$$

$$y_3 = a_0 + \beta_1w_1 + \beta_2w_2 + e$$

$$NPL = a_0 + \beta_1MI + \beta_2PI + e \dots \dots \dots \text{Eq. (iii)}$$

Model/Hypothesis Four

The equation below measures the effect of management innovation and process innovation on service efficiency of accredited primary mortgage banks in Nigeria. Considering the functional notation, the equations are specified as follows:

$$y_4 = f(w_1, w_2)$$

$$y_4 = a_0 + \beta_1w_1 + \beta_2w_2 + e$$

$$SE = a_0 + \beta_1MI + \beta_2PI + e \dots \dots \dots \text{Eq. (iv)}$$

Model/Hypothesis Five

The equation below measures the influence of mortgage financing and innovation capability on housing loan performance of accredited primary mortgage banks in Nigeria. Considering the functional notation, the equations are specified as follows:

$$Y = f(X, W)$$

$$Y = a_0 + \beta_1 X + \beta_2 W + e$$

$$HLP = a_0 + \beta_1 MF + \beta_2 IC + e \dots \dots \dots \text{Eq. (v)}$$

Model/Hypothesis Six

The equation below measures the moderating effect of government housing policy on the functional relationship between mortgage financing, innovation capability and the housing loan performance of accredited primary mortgage banks in Nigeria. Considering the functional notation, the equations are specified as follows:

$$Y = f(XWZ)$$

$$Y = a_0 + \beta_1 X + \beta_2 W + \beta_3 Z + \beta_4 X * W * Z + e$$

$$HLP = a_0 + \beta_1 MF + \beta_2 IC + \beta_3 GHP + \beta_4 MF * IC * GHP + e \dots \dots \dots \text{Eq. (vi)}$$

For this study, the above models will be used.

Where:

a_0 = is the intercept (or constant of the equation) expected value of y when x is equal to zero.

$\beta_1 - \beta_5$ = are the coefficient or parameters to be estimated) of the independent variables

(It is the rate of change in y with respect to x).

e = the error (or stochastic) term to accommodate the effect of other variables that can

influence housing loan performance, but which were not included in the model.

2.5 Summary of Gaps in Literature Reviewed

The review of literature for this study is concluded with this section. This summary takes cognizance of conceptual review theoretical review and empirical review summary.

2.5.1 Gap One: Mortgage Financing and Access to Finance

From the literature reviewed, the mortgage products offered in the housing finance market by primary mortgage banks includes Individual Loan, Estate Development Loan (EDL) and National Housing Fund (NHF) Loan. However, the short-term deposits of the primary mortgage banks are inadequate to provide long-term mortgage financing activities for its customers and as a result, the loans granted by primary mortgage banks are small when compared with the savings and other income received by primary mortgage banks¹. There are causal link runs between the financial market and mortgage financing through long-term financing window of the stock exchange market¹⁰. The scholars found out that long-term debt negatively influences firm development when sizes and maturity remain important thoughtful option to access long-term finance¹⁷. The inadequate supply of mortgage finance to the housing sector weakens the growth of the sector and overall economic impact⁵¹.

The effect of knowledge on individual perceptions of innovation drivers and the tendency of policy makers to promote innovation in affordable housing delivery could be positively influenced by the strength of knowledge available to prospective loan beneficiaries and housing development stakeholders⁹³. The extant literature has identified lack of long-term funds, inadequate household income and high interest rates as part of the challenges confronting the potential borrowers to access housing finance from the primary mortgage banks for homeownership⁸. The previous studies have revealed that periodic review of factors affecting housing finance to reduce the bureaucracies and unfavourable loan conditions, were

not done⁴⁰. There is a dearth of vibrant secondary mortgage market (SMM) expected to provide the needed long-term funds for mortgage financing gap of the primary mortgage banks which culminated in insufficient supply of mortgages to prospective homeowners⁴².

In addition to problems associated with individual access to finance of the primary mortgage banks in Nigeria, includes but not limited to poor access to land, inability of potential mortgage loan borrowers to provide certificate of occupancy (C of O) on their land as a form of security for the loan, insufficient loanable funds, and few number of mortgage lending institutions³⁷. The study of mortgage financing in Kigali City of Rwanda, also recognised absence of secondary mortgage market (SMM) and this reduced mortgage financing affordability which makes only 15% of Kigali City households qualified for housing loan but without repayment affordability⁷⁶. Consequently, the reviewed literature established that homeowners and prospective homeowners have different perception of the factors affecting access to housing finance in Nigeria. Those who borrowed and those who did not borrow perceived the lenders' (mortgage banks) requirements for housing finance as very strict¹².

Given the review of previous studies, there is no additional mortgage products to attract long-term depositors' investment into mortgage finance business. No work done to investigate the environmental factors affecting the primary mortgage banks' operations and the role of government in policy initiatives at increasing the number of primary mortgage bank operators to enhance the efficiency and effectiveness of mortgage banking in Nigeria. The influence of innovation drivers for housing loan performance have not been considered in extant literature. Although, few studies have been done around secondary mortgage market (SMM) but the examination of the inefficiency of the market to provide the long-term funds for primary mortgage banks to access at affordable interest rate to provide homeownership loans to its customers is yet to be carried out.

Consequently, future studies should consider the introduction of additional mortgage products and the designing of an enabling environment to attract more investors into the housing finance industry¹. Government intervention targeted at consolidating the level of financial re-structuring in the non-financial sector to which mortgage financing belong and policy initiatives at increasing the number of primary mortgage bank operators to enhance the efficiency and effectiveness of mortgage banking in Nigeria¹⁰. Government reforms of old existing regulations which makes it difficult for most banks to consider the firm size as a determining factor to access long-term credit¹⁷ and policies directed towards improving the activities of primary mortgage banks for optimal and efficient performance⁵¹ in the aspect of homeownership loans in Nigeria⁴². Influence of innovation drivers that centre on addressing matters emanating from the outcomes of an uneven competitive housing market which can be anchored by efficient knowledge spreading⁹³.

2.5.2 Gap Two: Mortgage Financing and Homeownership Loans

The studies reviewed in connection to the above research objective identified that the extension of mortgage credit to households has not always led to higher homeownership rates because historically there have been other sources of mortgage credit which includes the government and non-bank mediated private loans. This is an indication that primary mortgage banks' credit is thus, neither necessary nor sufficient for increase in homeownership since the combination of higher wages, government programmes, affordable houses and high savings will lessen reliance on mortgages for house construction or acquisition which invariably provide alternative window to increase homeownership. Subsequently, the extension of mortgage finance might also be insufficient to create more homeownership in the sense that mortgages can be used simply to finance rental apartments⁶⁷.

Previous scholars on mortgage financing studies have established that mortgage banking operations have a large influence on the Nigerian economy since it provides a channel where

both individuals and corporate organizations can source for loan facility to realize homeownership dream and viable housing development in Nigeria³. In contrary, the homeownership loans' performance of primary mortgage banks was challenged has observed from one of the reviewed studies that primary mortgage banks performed well when using low-income group salary as collateral, however failed in providing mortgage loans to low-income group for homeownership and the rate of interest charged by the primary mortgage banks was very high⁴.

In a related study, lack of long-term funding, high interest rate, inflated cost of construction materials, low-income of household, excessive cost of land, mortgage title, costly professional fees and non-existence of a viable and effective secondary mortgage market (SMM) for the mobilization of long-term funds are identified as factors associated with affordable homeownership in Nigeria²⁰. The work of some scholars re-confirmed in support of the previous studies that the consumption interest rate, mortgage interest rate, deposit interest rate, inflation rate, disposable income, unemployment, gross domestic product (GDP) and the real effective exchange rate have significant effect on the volume of homeownership loans and consumer loans²⁵.

A study considered the impact of technological factors in relations to homeownership loans mortgage financing in Kenya and the results showed that it has a statistically significant effect on the growth of homeownership. In addition, findings revealed that mortgage customers' decisions are strongly influenced by rapid changes in technologies provided for the mortgage operations which enhance primary mortgage banks to gain more clients and continue to mobilize prospective customers⁸³. However, the reviewed research on household mortgage demand in the UK, Australia and Japan confirmed that despite homeownership is a

preferred tenure and the mortgages are “recourse” loans, housing markets in these three countries operate independent mortgage market institutional organizations⁹⁰.

The extant literature on homeownership financing of Islamic banks in Indonesia via Sharia asset backed securities participation letter proved that homeownership financing facilities in Islamic banks are still the principal source of mortgage financing for customers who require a special loan to meet the needs of building or renovating a house⁴¹. Consequently, the study on homeownership and the American dream provides the support for Islamic banks homeownership financing which disclosed that homeownership is an essential institution and owning a home helps to lower the financial risk of household in retirement. However, revealed that it is more difficult for households to become homeowners due to challenges in obtaining a mortgage, household income that have not kept pace with the increases in home prices, as well as the interest rates⁶¹.

The previous studies have not taken cognizance of mortgage debt through secondary mortgage market (SMM), as another source that can guarantee long-term funding for the creation of more homeownership loans. The government policies to ensure the supply and demand of housing finance for mortgage sector has not been considered. The extant literature is yet to look at the synergy between government housing policies and stakeholders in the mortgage financing sector to improve homeownership loans’ delivery in Nigeria. The analysis of liquidity influence on the volume of mortgage loans has not formed part of the factors considered in previous studies. Despite the technological factor effect on the growth of homeownership as established in the studies, however, is yet to be factored into mortgage banking policy. Study have not been done on the impact of linkage between mortgage and monetary markets on the development of homeownership financing.

Considering the above, future research should focus on the influence of mortgage debt⁶⁷ as a long-term funding source via secondary mortgage market (SMM) for homeownership advancement. The effect of government policy formulation on supply and demand for housing³. Government and stakeholders' policies on reduction of high interest rate, funding of primary mortgage banks, make mortgage loans accessible and affordable to low-income earners⁴. The analysis of liquidity²⁵ factor impact on the volume of homeownership loans of primary mortgage banks in Nigeria. The need for the mortgage industry players to consider the technological influences in the policy making procedure to enhance the mortgage growth⁸³. The impact of linkage between mortgage and monetary markets⁹⁰ on the development of homeownership financing⁴¹.

2.5.3 Gap Three: Innovation Capability and Non-Performing Loans

The extant literature on innovation capability and non-performing loans were done independently. However, studies considered profitability, operating efficiency, capital adequacy and income diversification as the determinants of non-performing loans (NPLs) in the banking sector in developing state. It was established that operating efficiency and profitability measures have a negative relationship with NPLs though were statistically significant, while capital adequacy and income diversification have a negative connection with NPLs, but they were statistically insignificant⁹². Another study reviewed to find out the relevance of NPLs to bank lending, positioned that exogenous rise in the change of NPL ratio tends to reduce bank lending volumes, enlarge bank lending spreads, and leads to a drop in real gross domestic product (GDP) development and residential real estate prices⁴⁶.

Scholars that assessed the causes of NPLs using explanatory and qualitative study methods identified NPLs as a serious matter that needed appropriate attention. Consequently, revealed that the primary function of banks is to accept deposits and grant loans not only for short-

term but also for long-term to government, businesses, and housing. It was confirmed that the delay in loan repayment by the borrower will prevent further granting of credit by the financial institutions⁴⁵. In related study of Chinese banks, recognised GDP growth rate, effective interest rate, inflation rate, foreign exchange rate, type of bank, ownership concentration, bank risk taking behaviour, leverage, and credit quality as determinants of NPLs⁴⁴.

In addition, the reviewed study that linked the impact of credit risk management on the performance of commercial banks in Cameroon showed that NPLs to total loans' ratio which is one of the risk management measures is a key predictor and is significantly connected to bank financial performance⁴⁷. Previous study by researchers on interest rates and loan performance of deposit money banks in Nigeria indicated that there is a significant and positive relationship between the interest rate and loan repayment measured by credit quality using NPL ratio. This means that an increase in the interest rate will likely cause a corresponding increase or decrease in the credit quality and subsequently, proved that any slight change in the lending rate would increase NPLs³⁵. Also, the research on inefficient credit process aligned with previous study and it was identified that the rise in NPLs is linked with harsh and prolonged recession which considerably reduced the borrowers' capability to service their loans, and to other determinants such as banks' lending monitoring policies with restricted capacity to work-out defaulted loans⁴⁸.

In view of the importance of management innovation capability as an enabler to reduce the impact of NPLs on housing loan performance, a study examined the influence of management innovation and technological innovation on organization performance. The outcome of the research confirmed that management innovation and technological innovation significantly positively promote sustainability and organization performance²⁸. Also, similar study on relationship between knowledge management and innovation performance

supported the previous researcher position by admitting that knowledge management actions influence innovation and organizational performance directly and indirectly through a rise in innovation capability⁸⁷.

Prior studies only considered the determinants of NPLs in the banking sector in the developing countries⁹². Also, previous studies not analysed on the premise of different loan classifications⁴⁴. Most scholars studied the impact of NPLs on bank lending but however, neglected the areas of management preventive and loan recovery strategies. The previous studies focus on the impact of credit risk management⁴⁷. Furthermore, concentrate on interest rates effects on loan performance measured by credit quality using the NPL ratio³⁵. In contrast, the issues bothering on loan assessment techniques for credit applications⁴⁷. In addition, the staff capacity building to improve the credit skills have not been considered³⁵. Few studies on innovation have been on management innovation, technological innovation, knowledge management and organizational performance. However, scholars are yet to examine the sustainability of innovation in the long-run²⁸. As well as, designing of knowledge management programs to achieve higher innovation, effectiveness, efficiency and profitability⁸⁷.

Therefore, future work should examine the cross-cultural impacts on NPLs in the banking sector using other developing countries model⁹². Also, the analysis of NPLs on the premise of different loan classifications⁴⁴. Management loan recovery strategies could be considered⁴⁶. In addition, consider the staff capacity building to improve loan assessment techniques for credit applications⁴⁵. The sustainability of innovation capability in the long run could be looked into²⁸. Further, consider designing of knowledge management programs to achieve higher innovation, effectiveness, efficiency and profitability⁸⁷.

2.5.4 Gap Four: Innovation Capability and Service Efficiency

The service efficiency as a non-financial measure of housing loan performance is influenced by process innovation capability. As regards this objective, only few studies have been conducted by researchers. One of the studies carried out on knowledge sharing and innovation, ascertained the significance of knowledge sharing as the most essential determinant of process innovation in the banking sector³¹. On the other hand, a study on operational efficiency of bank loans and deposits of Vietnamese banking system, identified underdevelopment in banking system. Findings revealed that bank deposits have a positive and significant influence on bank loans whereas loans have a positive but insignificant impact on deposits⁷¹.

Prior studies on innovation capability and product innovation performance, confirmed that collaboration with institutional agents, customers, suppliers, and competitors in interactive learning connected with idea management and idea implementation as determinants which influenced innovation capability²⁶. Consequently, the study on relationship between innovation capability, innovation type and firm performance, supported the previous studies in which it was proved that to earn innovation performance, firm first require to establish organizational culture that can drive innovation behaviour, internal coordination with employee to motivate the innovation driven mind-set that execute ideas, conceptions into successful product/service, process, business model or system²⁹.

The previous studies on mediating role of knowledge sharing (KS) on the relationship between the transformational leadership (TL) and innovation in banks, revealed that leaders demonstrating transformational behaviour were able to advance knowledge sharing culture that intensify the creation of new ideas, products and processes²⁷. In related study on convergence and digital fusion which lead to competitive differentiation discovered that organizations which fully incorporate business and digital strategies, create synergetic outcomes, and strengthen adaptability, innovation, and resiliency in the face of competitive

challenges. Subsequently, expressed that in banking and financial services domain, the effectiveness and efficiency of the customers' service value chain, command the competitive advantage of the organization³⁰.

Most of the previous studies on innovation capability only considered process, product, and technological innovations with regards to their relationship with knowledge sharing. The research conducted on operational efficiency of bank loans and deposits identified short-term deposits that is not sustainable for long-term loan creating activities⁷¹. Prior studies have established several factors as determinants which influenced innovation capability but however, consideration have not been given to cognitive ability and social interaction as an important element for innovation capability²⁶.

Furthermore, scholars have not addressed in the extant literature the divergent aspects which influence the innovation capability such as customer orientation, market orientation and technology orientation²⁹. Few research examined as per the mediating role of knowledge sharing on the relationship between the transformational leadership and innovation in banks was based on cross-sectional design²⁷. Prior research has not considered the practical framework for convergence and digital fusion in business process development strategy³⁰.

Going forward, further studies should be considered on other types of innovation such as administrative, radical, incremental, exploitative, and exploratory with regards to knowledge sharing³¹. The influence of long-term deposit-taking activities as a measure of operational efficiency for bank loans⁷¹. Cognitive ability and social interaction as an important element for innovation capability²⁶. The customer orientation, market orientation and technology orientation as a divergent aspect which influence the innovation capability²⁹. Application of longitudinal design that gather data over a period and which supply valuable insight into the effects of transformational leadership on knowledge sharing and innovation²⁷. The formation

of a practical framework that promote convergence of business operations, strategic management and digital fusion which lead the way to value creation and competitive differentiation³⁰.

2.5.5 Gap Five: Mortgage Financing, Innovation Capability and Housing Loan Performance

Many studies have been conducted on mortgage financing and innovation capability but not much has been witnessed in the aspect of housing loan performance. Extant literature relating to the combined performance impact of mortgage financing and innovation capability have provided inconsistent findings. Some of the previous research have established a long-run relationship between mortgage finance and housing delivery but the inadequate supply of mortgage finance to the housing sector restrains its development and overall economic effect¹⁴. In similar study that examined the effect of mortgage financing on financial performance of commercial banks in Kenya, revealed that total amount of mortgage loans offered, and interest rate charged on mortgage have a positive and significant impact on financial performance of the commercial banks in Kenya⁶².

However, a previous study that assessed the role of financial institutions in housing development in Nigeria contradicted the prior studies and concluded that the contribution of financial institutions to housing development is not satisfactory because of restricted options available and lack of consideration for most of the Nigeria population⁶⁰. In addition, a study that investigated the effects of interest rates on the lending portfolio of commercial banks in Kenya, proved that the interest rate is the highest contributor to profits in banks and had a negative correlation with the lending portfolio in the sense that, when the interest is high, prospective borrowers are reluctant to borrow since repayment on loans cost more and those with loans have higher likelihood of defaulting²⁴.

Going by the relationship of innovation with housing loan performance, further analysis on management innovation by scholars established that management innovation is positively connected to organizational size, knowledge management, organizational learning, firm's overall performance and financial performance³³. Also, prior studies on the unified theory of acceptance use of technology (UTAUT) and its applicability to mortgage banking digitization in Philippines was reviewed and the outcome indicated that the factors of behavioural plan to embrace digital mortgage device among mortgage customers were facilitating conditions, performance expectancy and effort expectancy⁸¹.

The extant literature carried out on customers' deposits and loan administration in Nigeria corroborated the relevance of housing loan finance in the financial sector. Hence, the outcome of the study showed that customers' deposits have strong and statistically significant positive influence on loan and advances in banking sector in Nigeria, which means that for every increase in customers' deposits there will be an improvement in loan and advances of the commercial banks in Nigeria⁷⁷.

There are no prior studies on government key policies that improves the operational performance of primary mortgage banks in Nigeria as regards easy access to mortgage financing at a lower interest rate for prospective homeowners. Most previous studies conducted on innovation capability has never considered the integration and synthesising of management innovation studies³³. In addition, few studies related to innovation capability focuses on management, product, process, service, and technological innovations as it affects insurance business, manufacturing, and commercial banking operations but not on digitization of mortgage banking services.

In view of the above gaps, further research should focus on the influence of government key policies that provides easy access to mortgage financing for homeownership loans at

affordable interest rate by primary mortgage banks in Nigeria. The integration and synthesising of management innovation studies³³. The impacts of digitization of mortgage banking services to enhance operational performance of primary mortgage banks in Nigeria.

2.5.6 Gap Six: Government Housing Policy, Mortgage Financing, Innovation Capability and Housing Loan Performance

Several empirical studies have been done on government housing policy with respect to how it facilitates the provision of housing to reduce the gaps in housing deficit and the establishment of primary mortgage banks to provide the mortgage financing gap for the low-and-medium income groups in Nigeria. However, the use of government housing policy as a moderator in these studies was focused on independent-dependent relationships different from the research context of this present study which focuses on mortgage financing, innovation capability and housing loan performance of accredited primary mortgage banks in Nigeria. Previous scholars have conducted studies on mortgage financing, innovation capability and housing loan performance but less attention is given to government housing policy as a moderator. Moreover, most of the extant literature on government housing policy are one context study and government housing policy were not studied in a moderating-variable capacity.

Prior studies on the impact of primary mortgage institutions' (PMIs) investments on economic growth in Nigeria indicated that PMIs investments, deposits and loans have a significant influence on economic growth in Nigeria³⁸. Also, research conducted to investigate the determinants of mortgage price affordability in Ghana identified economic, financial, property characteristics, developmental, and geographical factors as underlining drivers that affects mortgage price affordability⁸².

Further research assessed the critical enablers for homeownership in Hong Kong revealed that the highest dominant factors affecting homeownership were prioritizing lending towards

first-time buyers, reforming planning process to allow building of more homes and introducing subsidies for all first-time buyers²¹. Subsequent studies on issues, challenges, and prospects of housing deficit in Nigeria confirmed the important role of government in creating an enabling environment for the housing sector development. That, the provision of affordable housing depends mostly especially on the strong and political will of government in addition to the development and implementation of effective housing policies³⁹.

Previous studies on the role of government in the development of an effective mortgage market for housing delivery in Nigeria established that complicated land tenure system, transfer of legal title procedures, scarcity of long-term financial instruments, lack of mortgage liquidity, weak capital base, inadequate PMIs, weak corporate governance, high cost of building materials, shortage of skilled labour and expensive cost of funds with high interest rates for construction and mortgages as the challenges of the housing finance sector⁹. However, scholars that examined the housing finance market and economic growth of West African region proved that the housing finance markets in Nigeria and Ghana are underdeveloped¹¹. In similar studies on relationship between housing, housing finance and credit risk, showed that housing affordability and household vulnerability significantly influence the risk of banks' loan portfolios and the non-performing loan ratios indicated that financial institutions in countries with greater levels of financial independence and less regulated markets also experience greater credit risk⁶³.

Considering the relevance of innovation capability in mortgage financing operations to enhance housing loan processing performance, necessitated a study that investigated the role of transformational leadership, knowledge sharing and perceived organizational support as the determinants of innovation capability. The findings indicated that knowledge sharing moderates' transformational leadership's causes on innovation capabilities. Also, the impacts

of transformational leadership and knowledge sharing on a particular aspects of innovation capability are distinct and rely on the level of employees perceived organizational support³⁴.

The review of existing studies on government housing policies has not reflected research on the impact of housing regulatory authority policies on the management of mortgage banking operations for effective loan delivery of homeownership in Nigeria. The study on optimisation of government housing policies in promotion of building more housing units' gears towards assisting first-time homebuyers is yet to be conducted for Nigeria environment²¹. Prior studies have not investigated the roles of knowledge management's components and examination of the moderating roles of organization's ownership structure to raise the understanding of possible factors or major conditions that may have considerable effects on organization's innovation capability³⁴.

Further work should examine the influence of government housing policies on operational performance of primary mortgage banks in homeownership loans delivery for Nigerians. The optimisation of government housing policies which encourages the acquisition of homeownership loans through mortgage financing for first-time homebuyers in Nigeria. The roles of knowledge management's components and examination of the moderating roles of organization's ownership structure which intensify the consciousness of possible elements that have significant impacts on organization's innovation capability³⁴.

Endnotes

1. O. S. Alagba, K. I. Awa & U. Ediri. *Mortgage Industry Financial Risk Tolerance and Mortgage Banks Credit Delivery in Nigeria*. **Nigerian Journal of Management Sciences**, 21(1 & 2) 2020, 83-103.
2. Federal Mortgage Bank of Nigeria. *Historical Background of FMBN*. **FMBN website**, www.fmbn.gov.ng.

3. U. H. Ogiugo & O. J. Abu. *Mortgage Finance Institution and the Impact on the Nigeria Economy*. **Research Gate Article**, 2019, 187-193, <https://www.researchgate.net/publication/333532002>.
4. I. Ibrahim, M. S. Muhammad, U. Auwal & D. Raymond. *Perception of Low-Income Earners on the Performance of Mortgage Institutions in Housing Finance in Lafia, Nasarawa State, Nigeria*. **Path of Science Journal**, 5(11), 2019, 2001-2011.
5. C. N. Chidi-Okeke & I. O. Nwanna. *The Impact of Primary Mortgage Institutions' Housing Loans on Human Development in Nigeria*. **IIARD International Journal of Banking and Finance Research**, 6(3), 2020, 29-40.
6. A. M. Dangiwa. *FMBN Wants Its Capital Base Increase to ₦500 Billion*. **Financial Nigeria**, <http://www.financialnigeria.com>.
7. A. F. Fashina. *National Housing Fund (NHF) Scheme As a Panacea For Affordable Housing in Nigeria*. **M. Sc. Accounting Thesis, Lead City University, Ibadan, Nigeria**, 2020, 13-14.
8. Z. A. Ghani. *Primary Mortgage Institutions Challenges for Financing Housing Development in Nigeria*. **International Journal of Research-GRANTHAALAYAH**, 9(2), 2021, 127-137.
9. F. O. Ikekpeazu. *Mortgage Financing for Housing Delivery in Nigeria: The Governmental Role in Development of an Effective Mortgage Market*. **PM World Journal**, 7(1), 2018, 1-19.
10. P. Siyan, A. E. Adegioriola & O. M. Eriwode. *The Development of Mortgage Finance in Nigeria and its Impact on the Economy*. **International Multilingual Journal of Science and Technology**, 4(3), 2019, 455-465.
11. T. N. Ofor, O. S. Alagba & M. S. Ifurueze. *Housing Finance Market and Economic Growth of West Africa Region: A Study of Nigeria and Ghana*. **International Journal of Business and Economic Development**, 6(3), 2018, 49-60.
12. O. F. Nwanekezie & I. J. Onuoha. *Homeowner's Perception of the Factors Affecting Access to Housing Finance in Owerri, Imo State, Nigeria*. **International Journal of Finance and Accounting**, 8(2), 2019, 57-64.
13. Central Bank of Nigeria. *Mortgage Financing in Nigeria*. **Occasional Paper**, 50, <http://www.cbn.gov.ng>.
14. G. A. Anidiobu, P. I. P. Okolie & W. N. Ugwuanyi. *Effect of Mortgage Finance on Housing Delivery in Nigeria: The Primary Mortgage Institution (PMI) Perspective*. **Journal on banking Financial Services and Insurance Research**, 8(2), 2018, 36-49.
15. Housing Circuit. *Mortgage Financing in Nigeria: Issues and Challenges*. **Housing Circuit Limited**, <http://www.housingcircuit.com>.
16. The World Bank. *Housing Finance Development Program (P131973), Implementation Completion and Results Report*, 31 October 2019, 5-6.
17. S. Bannerman & G. Fu. *Analysing Access to Long Term Debt Effects on Firms Growth: Evidence of China*. **European Journal of Social Sciences**, 58(1), 2019, 5-13.

18. O. S. Oyediran. *Institution and Housing Development: Mirage, Magic and Miracle of Low-Cost Housing in Nigeria*. **CBN Economic and Financial Review Journal**, 57(4), 2019, 37-63.
19. U. Beji. *Legal and Commercial Issues in Bridging the Housing Deficit Gap in Nigeria*. **LeLaw Article**, www.mondaq.com.
20. A. O. Adediran, S. O. Oladejo & C. O. Ijagbemi. *The Fundamentals to Affordable Homeownership in Nigeria*. **Journal of Multidisciplinary Engineering Science and Technology (JMEST)**, 7(4), 2020, 11659-11666.
21. W. M. Jayantha & O. T. Oladinrin. *Identifying Critical Enablers for Homeownership in Hong Kong*. **International Journal of Housing Markets and Analysis**, 13(2), 2020, 185-206.
22. Investopedia. *Interest Rate*. **Investopedia**, www.investopedia.com/terms/i/interest-rate.asp.
23. V. Kumar, S. Acharya & T. H. Ho. *Does Monetary Policy Influence the Profitability of Banks in New Zealand?* **International Journal of Financial Studies**, 8(35), 2020, 1-17.
24. G. Jakait & N. Omar. *Effects of Interest Rates on the Lending Portfolio of Commercial Banks in Kenya*. **International Journal of Academics and Research (IJARKE)**, 1(1), 2018, 45-53.
25. E. Kostikov, P. Jilkova & P. K. Stranska. *Quantified Impact of Market Interest Rates on Commercial Banks' Business Mix*. **Journal of International Studies**, 12(2), 2019, 258-269.
26. F. Iddris. *Innovation Capability and Product Innovation Performance: The Case of Low-Tech Manufacturing Firms*. **European Business Review Journal**, 31(5), 2019, 646-668.
27. S. A. Chaar & N. F. Easa. *Does Transformational Leadership Matter for Innovation in Banks? The Mediating Role of Knowledge Sharing*. **International Journal of Disruptive Innovation in Government**, 1(1), 2021, 36-57.
28. Y. Zhang, U. Khan, S. Lee & M. Salik. *The Influence of Management Innovation and Technological Innovation on Organizational Performance: A Mediating Role of Sustainability*. **Sustainability Journal**, 11(495), 2019, xx-xx.
29. J. R. P. Rajapathirana & Y. Hui. *Relationship between Innovation Capability, Innovation Type, and Firm Performance*. **Journal of Innovation and Knowledge**, 3, 2018, 44-55.
30. A. Thomas. *Convergence and Digital Fusion Lead to Competitive Differentiation*. **Business Process Management Journal**, 26(3), 2020, 707-720.
31. S. Al-Ahmad, N. F. Easa & N. Mostapha. *Knowledge Sharing and Innovation: Evidence from Lebanese Banks*. **Creative Sustainable Development-BAU Journal**, 1(2), 2020, 1-18.
32. S. Najafi-Tavani, Z. Nafaji-Tavani, P. Naude, P. Oghazi, & E. Zeynaloo. *How Collaborative Innovation Networks Affect New Product Performance: Product Innovation Capability, Process Innovation Capability, and Absorptive Capacity*.

- Journal of Industrial Marketing Management**, 2018, 1-12, <https://doi.org/10.1016/j.indmarman.2018.02.009>.
33. P. Khosravi, C. Newton & A. Rezvani. *Management Innovation: A Systematic Review and Meta-Analysis of Past Decades of Research*. **European Management Journal**, 2019, 1-40, <http://doi.org/10.1016/j.emj.2019.03.003>.
 34. P. B. Le & H. Lei. *Determinants of Innovation Capability: The Role of Transformational Leadership, Knowledge Sharing and Perceived Organizational Support*. **Journal of Knowledge Management**, 2019, xx-xx, <https://doi.org/10.1108/JKM.09.2018.0568>.
 35. A. S. Ogundipe, A. F. Akintola & S. A. Olaoye. *Interest Rates and Loan Performance of Deposit Money Banks in Nigeria*. **EPRA International Journal of Economic and Business Review**, 8(1), 2020, A13-A20.
 36. O. B. Hamkalo & K. S. Demkiv. *Benchmarking as a Tool for Providing Analytical Support to Mortgage Lending Operations of a Bank*. 2019, 91-99, [https://doi.org/10.31767/su.1\(84\)2019.01.10](https://doi.org/10.31767/su.1(84)2019.01.10).
 37. C. C. Nwuba & E. O. Chukwu-Nwuba. *Barriers to Accessing Mortgages in Nigeria's Housing Markets*. **International Journal of Housing Markets and Analysis**, 2018, xx-xx, <http://doi.org/10.1108/IJHMA.10.2017.0089>.
 38. A. P. Werigbelegha & E. O. Peter. *Impact of Primary Mortgage Institutions' Investments on Economic Growth in Nigeria (1995-2017)*. **International Journal of Business and Management Review**, 6(10), 2018, 47-55.
 39. E. A. Moore. *Addressing Housing Deficit in Nigeria: Issues, Challenges and Prospects*. **CBN Economic and Financial Review Journal**, 57(4), 2019, 201-222.
 40. S. O. Olawumi, A. O. Adewusi & A. K. Oyetunji. *Analysis of the Factors Influencing Access to Mortgage Finance in Lagos Nigeria*. **Global Journal of Business, Economics and Management**, 9(3), 2019, 113-121.
 41. S. A. Utami, A. Cakhyaneu & N. S. Wulandari. *Analysis of Home Ownership Financing for Islamic Banks in Indonesia Through Sharia Asset Backed Securities Participation Letter*. **Jurnal Ekonomi Dan Keuangan Syariah**, 4(2), 2020, 211-228.
 42. A. O. Adediran & H. M. Ali. *Nigeria Housing Finance Operation: A Review of Key Factors Affecting Housing Finance*. **Global Scientific Journals**, 7(12), 2019, 1174-1185.
 43. M. M. Ehlenz & C. Taylor. *Shared Equity Homeownership in the United States: A Literature Review*. **Journal of Planning Literature**, 34(1), 2019, 3-18.
 44. M. Umar & G. Sun. *Determinants of Non-Performing Loans in Chinese Banks*. **Journal of Asia Business Studies**, 2018, 1-17 <https://doi.org/10.1108/JABS.01.2016.0005>.
 45. M. O. Farooq, M. S. A. Elseoud, S. Turen & M. Abdulla. *Causes of Non-Performing Loans: The Experience of Gulf Cooperation Council Countries*. **Journal of Entrepreneurship and Sustainability**, 6(4), 2019, 1955-1974.

46. I. Huljak, R. Martin, D. Moccero & C. Pancaro. *Do Non-Performing Loans Matter for Bank Lending and the Business Cycle in Euro Area Countries?* **European Central Bank (ECB) Working Paper**, Series no. 241, 2020, 1-29.
47. F. T. Keginkeu. *The Impact of Credit Risk Management on the Performance of Commercial Banks in Cameroon: Case Study of BICEC Cameroon.* **Global Journal of Management and Business Research**, 18(7), Version 1.0, 2018, 18-40.
48. P. Cincinelli & D. Piatti. *How Inefficient is an Inefficient Credit Process? An Analysis of the Italian Banking System.* **The Journal of Risk Finance**, 2021, xx-xx, <http://doi.org/10.1108/JRF.08.2020.0184>.
49. Sarwani, Y. Sudaryana, W. Wicaksono, N. Wicaksono & Suyatin. *Effect of Service Product Innovation, Promotional Activities and Company Image on Saving Decisions in PT. Bank BNI Syariah, Tbk Area, Jabodetabek.* **Annals of R.S.C.B. Journal**, 25(4), 2021, 16251-16266.
50. D. T. Morales & F. L. Trinidad. *Digital Mortgage Banking Acceptability in Philippine Universal Banks: Evidence from UTAUT Model.* **Journal of Information System and Technology Management**, 4(15), 2019, 1-15.
51. K. B. Aladelusi. *Mortgage Financing and Growth of Housing Sector in Nigeria.* **Proceeding of the 16th iSTEAMS Multidisciplinary Research Nexus Conference**, 16(2), **The Federal Polytechnic Ilaro, Ogun State, Nigeria**, June 9-11, 2019, 225-230.
52. A. Bello. *Review of the Housing Policies and Programmes in Nigeria.* **International Journal of Contemporary Research and Review**, 10(2), 2019, 20603-20616.
53. A. Ghent. *The Historical Origins of America's Mortgage Laws.* **Research institute for Housing America Website**, <https://mba.org>.
54. C. N. Musyimi & T. M. Kising'u. *Effect of Interest Capping on Financial Performance in Commercial Banks in Kericho County, Kenya.* **The Strategic Journal of Business and Change Management**, 6(2) 2019, 1130-1149.
55. W. A. Sturges & S. O. Clark. *Theory and Real Property Mortgages.* **Yale Law Journal Website**, <https://openyls.law.yale.edu>.
56. Wikipedia. *Transformational Leadership.* **Wikipedia Website**, <https://en.m.wikipedia.org>.
57. Langston University. *Transformational Leadership.* **Langston University Website**, <https://www.langston.edu>.
58. S. Baran. *Criticisms and Arguments against Transformational Leadership.* **Linkedin Website**, <https://www.linkedin.com>.
59. I. J. Fasakin, O. O. Olanrewaju & N. I. Umeokeke. *Factors Affecting House Ownership in Nigeria: A Probit and Heteroscedastic Probit Model Approach.* **Greener Journal of Social Science**, 9(2), 2019, 39-44.
60. O. F. Olukayode & O. S. B. Owolabi. *The Role of Financial Institutions in Housing Development in Nigeria.* **The International Journal of Engineering and Science (IJES)**, 7(8) Version 1, 2018, 84-88.

61. L. S. Goodman & C. Mayer. *Homeownership and the American Dream*. **Journal of Economic Perspectives**, 32(1), 2018, 31-58.
62. A. A. Abdulrehman & W. Nyamute. *Effect of Mortgage Financing on Financial Performance of Commercial Banks in Kenya*. **Journal of International Business Innovation and Strategic Management**, 1(6), 2018, 91-122.
63. A. Canepa & F. Khaled. *Housing, Housing Finance and Credit Risk*. **International Journal of Financial Studies**, 6(50) 2018, 1-23.
64. M. Isedu & O. J. Erhabor. *Does Financial Risks Has Effects on the Performance of Deposit Money Banks in Nigeria?* **Saudi Journal of Business and Management Studies**, 6(3), 2021, 71-85.
65. S. Aziz & U. Abbas. *Effect of Debt Financing on Firm Performance: A Study on Non-Financial Sector of Pakistan*. **Open Journal of Economics and Commerce**, 2(1), 2019, 8-15.
66. A. I. Saidu & C. Yeom. *Success Criteria Evaluation for a Sustainable and Affordable Housing Model: A case for Improving Household Welfare in Nigeria Cities*. **Sustainability Journal**, 12(656), 2020, 2-16.
67. S. Kohl. *More Mortgages, More Homes? The Effect of Housing Financialization on Homeownership in Historical Perspective*. **Politics and Society Journal**, 46(2), 2018, 177-203.
68. D. Czischke & G. V. Bortel. *An Exploration of Concepts and Policies on Affordable Housing in England, Italy, Poland and the Netherlands*. **Journal of Housing and the Built Environment**, 2018, xx-xx, <https://doi.org/10.1007/s10901.018.9598.1>.
69. A. Ahmed, R. Rehan, I. U. Chhapra & S. Supro. *Interest Rate and Financial Performance of Banks in Pakistan*. **International Journal of Applied Economics Finance and Accounting**, 2(1), 2018, 1-7.
70. B. Elmedni. *The Mirage of Housing Affordability: An Analysis of Affordable Housing Plans in New York City*. **Sage Journal**, 2018, 1-13, <https://doi.org/10.1177/2158244018809218>.
71. T. Nguyen, D. Tripe & T. Ngo. *Operational Efficiency of Bank Loans and Deposits: A case Study of Vietnamese Banking System*. **International Journal of Financial Studies** 6(14), 2018, 1-13.
72. A. A. Igwemma, C. Ogu, P. U. Agba, J. C. Odionye & C. L. Ogu. *Commercial Bank Loans and Lending Rate in Nigeria: A Toda-Yamamoto Causality Approach*. **Journal of Economics and Sustainable Development**, 11(2), 2020, 13-20.
73. M. A. Afolabi, K. K. Adeyemi, O. S. Salawudeen & T. O. Fagbemi. *Monetary Policy and Bank Credit in Nigeria: A Toda-Yamamoto Approach*. **AUDCE Journal**, 14(5), 2018, 717-735.
74. Y. S. A. Alalade, E. Oseni & O. A. Adekunle. *Monetary Policy and Financial Performance of Deposit Money Banks in Nigeria*. **Asian Social Science Journal**, 16(11), 2020, 123-135.
75. K. B. Anacker. *Introduction: Housing Affordability and Affordable Housing*. **International Journal of Housing Policy**, 19(1), 2019, 1-16.

76. S. Iyandemye, J. Barayandema & F. Gasheja. *Mortgage Finance Market and Housing Affordability in Urban Areas in Rwanda: A Case Study of Kigali City*. **Journal for the Advancement of Developing Economies**, 7(1), 2018, 41-58.
77. T. A. Adegbite & B. A. Azeez. *Customers' Deposits and Loan Administration: Nigerian Banks' Perception*. **International Journal of Applied Research in Management and Economics**, 1(2), 2018, 86-94.
78. A. F. St-Germain & V. Tarasuk. *Homeownership Status and Risk of Food Insecurity: Examining the Role of Housing Debt, Housing Expenditure and Housing Asset Using A Cross-Sectional Population-Based Survey of Canadian Households*. **International Journal for Equity in Health**, 19(5), 2020, 1-12.
79. I. S. Ezennia & S. O. Hoskara. *Methodological Weaknesses in the Measurement Approaches and Concept of Housing Affordability Used in Housing Research: A Qualitative Study*. **Plos One Journal**, 14(8), 2019, 1-27.
80. S. S. Abraham. *Assessment of National Housing Policy and Homelessness in Nigeria: Policy Options for Buhari's Administration*. **IOSR Journal of Humanities and Social Science**, 24(5) Series 3, 2019, 32-38.
81. D. T. Morales & F. L. Trinidad. *Unified Theory of Acceptance Use of Technology (UTAUT) and Its Applicability to Mortgage Banking Digitization: The Case of the Philippines*. **Journal of Information System and Technology Management**, 4(14), 2019, 47-60.
82. D. Owusu-Manu, D. J. Edwards, E. A. Parn, R. O. Asiedu & A. Aboagye. *Determinants of Mortgage Price Affordability: A Study of Ghana*. **International Journal of Housing Markets and Analysis**, 2018, xx-xx, <https://doi.org/10.1108/IJHMA.11.2017.0094>.
83. J. R. Kigomo, T. A. Senaji & G. W. Mwaniki. *Influence of Technological Factors and Homeownership through Mortgage Financing in Kenya*. **The University Journal**, 3(1), 2021, 111-118.
84. A. A. Adzis, H. E. Lim, S. G. Yeok & A. Saha. *Malaysian Residential Mortgage Loan Default: A micro-level analysis*. **Presentation at the Singapore Economic Review Conference, Singapore**, August 5-7, 2019.
85. K. Staehr & L. Uuskula. *Macroeconomic and Macro-Financial Factors as Leading Indicators of Non-Performing Loans: Evidence from the EU Countries*. **Journal of Economic Studies**, 2019, xx-xx, <http://doi.org/10.1108/JES.03.2019.0107>.
86. S. Haneda & K. Ito. *Organizational and Human Resource Management and Innovation: Which Management Practices Are linked to Product and/or Process Innovation?* **Journal of Research Policy**, 2017, 1-12, <http://dx.doi.org/10.1016/j.respol.2017.10.008>.
87. A. Mardani, S. Nikoosokhan, M. Moradi & M. Doustar. *The Relationship between Knowledge Management and Innovation Performance*. **Journal of High Technology Management Research**, 29, 2018, 12-26, <https://doi.org/10.1016/j.hitech.2018.04.002>.

88. M. Bahlous-Boldi. *Resilient Homeownership: How Partnership-Based Finance Would Have Prevented the 2008 US Mortgage Crisis*. **International Journal of Housing Markets and Analysis**, 2020, xx-xx, <https://doi.org/10.1108/IJHMA.04.2020.0045>.
89. W. Wang, C. Gan, Z. Chang, D. A. Cohen & Z. Li. *Homeownership in Urban China: An Empirical Study of Borrower Characteristics and the Housing Provident Fund Program in Kunming*. **Journal of Asia Business Studies**, 2018, xx-xx, <https://doi.org/10.1108/JABS.03.2016.0041>.
90. M. Naoi, P. Tiwari, Y. Moriizumi, N. Yukutake, N. Hutchison, A. Koblyakova & J. Rao. *Household Mortgage Demand: A study of the Uk, Australia and Japan*. **International Journal of Housing Markets and Analysis**, 12(1), 2019, 110-130.
91. Y. Coskun. *Measuring Homeownership Affordability in Emergent Market Context: An Exploratory Analysis for Turkey*. **International Journal of Housing Markets and Analysis**, 2020, xx-xx (Accessed, <https://doi.org/10.1108/IJHMA.01.2020.0033>).
92. M. A. Khan, A. Siddique & Z. Sarwar. *Determinants of Non-Performing Loans in the Banking Sector in Developing State*. **Asian Journal of Accounting Research**, 5(1), 2020, 135-145.
93. O. Ayoade & V. Ahmed. *Knowledge Influences on Perception of Innovation Drivers for Sustainable Housing Development Models*. **International Journal of Knowledge Management Studies**, 11(1), 2020, 1-19.
94. A. Ganguly, A. Talukdar & D. Chatterjee. *Evaluating the Role of Social Capital, Tacit Knowledge Sharing, Knowledge Quality and Reciprocity in Determining Innovation Capability of an Organization*. **Journal of Knowledge Management**, 23(6), 2019, 1105-1135.

Chapter Three

Methodology

This chapter recognized the strategies adopted to investigate the objectives stated in this study, research questions developed, and the formulated hypotheses test in the introductory chapter of this research work. The techniques used followed an integrated framework which include the research design for this study, the study population, sample size computation, sampling technique applied, description of the research instrument employed, pilot study conducted, validity of the research instrument, reliability of the research instrument, method of data collection and data analysis.

3.1 Research Design

A cross-sectional mixed method survey research design technique was employed for this study while it strives to study a segment of a population at a moment in time and to establish the functional relationship at the time of the research study. Also, the mixed method approach was selected to enable the researcher to collect a well-rounded and comprehensive data that was not only numerically descriptive but equally enable the study to gather multiple perspectives and divergent views. The major strength of cross-sectional method over the longitudinal survey design is the ability to be carried out very quickly, less expensive, and easy to collect the initial data and subsequently recognize correlations that can then be considered in a future study using longitudinal survey research design¹. The cross-sectional survey design has been found in previous studies to be appropriate in situation when investigating the functional relationship between the independent variable and dependent variable at a point in time². Besides, cross-sectional design allows the researcher to collect data from numerous distinct individuals at a single point in time unlike the longitudinal research design that collect data persistently from the same individuals over time.

3.2 Population of the Study

The population for this study is in two folds, the first is targeted at credit officers working in all the twenty (20) Federal Mortgage Bank of Nigeria (FMBN) accredited Primary Mortgage Banks in Nigeria as at 31st December 2021³. Out of which only the credit officers of ten (10) accredited PMBs located in Lagos would be sampled using cluster sampling technique to determine because the geographical location constituted 50% of the population and engaged four (4) credit officers each from each of the ten (10) accredited PMBs selected, making up a total forty (40) credit officers using judgement/purposive sampling method. The second target population for this study are the National Housing Fund (NHF) Scheme contributors within low-and-medium income groups registered with FMBN Ikeja District Office Lagos, out of the total population of 129,163 as at 31st December 2021⁴. Out of which sample size of 400 (see page 144) respondents are arrived at using Taro Yamane sample size formula⁵ and used simple random sampling technique for selection.

The choice of Lagos for this study aside from the 50% concentration of PMBs, the sensitivity of housing needs for average households and urban migration necessitated this study to examine the effect of mortgage financing and innovation capability on housing loan performance of accredited primary mortgage banks in Nigeria. Consequently, the level of representation and generalization of the results would still be achieved because the operational location of the PMBs does not matter for the source of mortgage financing. An individual prospective mortgage loan applicant in respective of his/her business office has no relevance with the choice of property location because one of the advantages of NHF loan for homeownership is that the property can be acquired in any part of Nigeria through mortgage financing.

Table 3.1: List of Accredited Primary Mortgage Banks (PMBs)

S/N	Name	Address	Recapitalization	Location
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			Status	
1	Infinity Trust Mortgage Bank Plc	11, Kaura-Namota Street off Faskari Crescent, Area 3 Garki Abuja	National	Abuja
2	Abbey Building Society Plc	23A & B Karimu Kotu Street Victoria Island, Lagos	National	Lagos
3	TrustBond Mortgage Bank (Formerly First Trust Mortgage Bank) Plc	Plot 1607, Adeola Hopewell, Victoria Island, lagos	National	Lagos
4	Mutual Alliance Savings & Loans Ltd	209, Oron Road, Uyo Akwa-Ibom State	National	Uyo
5	Nigeria Police Mortgage Bank	Plot 11, Port Said Street, Wuse Zone 4, Abuja	State	Abuja
6	Delta Trust Mortgage Bank Ltd	126, Nnebisi Road, Asaba, Delta State	State	Asaba
7	Jigawa Savings & Loans Ltd	Maigatari EPZ Complex Gumel, Jigawa State	State	Jigawa
8	City Code Savings & Loans Ltd	21/25 Broad Street, Lagos	State	Lagos
9	AG Homes Savings & Loans Ltd	96, Opebi Road Ikeja, Lagos	State	Lagos
10	Living Trust Mortgage Bank (Formerly	Old Governor's Office, Gbogan Road, Osogbo,	State	Osogbo

	Omoluabi Mortgage Bank Ltd) Plc	Osun State		
11	Lagos Building Investment Company Plc	LBIC House, ASSBIFI Road CBD Alausa, Ikeja	State	Lagos
12	Brent Mortgage Bank Ltd	192A Jide Oki Street off Ligali Ayoride Street, Victoria Island, Lagos	State	Lagos
13	Gateway Mortgage Bank Ltd	Plot 10 & 11, Aderupoko drive Ibara Housing Estate, Abeokuta, Ogun State	State	Abeokuta
14	FHA Homes Savings & Loans Ltd	Plot 2 & 3, Herbert Macaulay way, Zone 6 Wuse Abuja	State	Abuja
15	Jubilee Life Mortgage Bank Plc	65, Adeniyi Jones Avenue, Ikeja Lagos	National	Lagos
16	Haggai Mortgage Bank Ltd	119, Bode Thomas Street, Surulere Lagos	National	Lagos
17	Imperial Homes Mortgage Ltd	28, Saka Tinubu Street Victoria Island, Lagos	National	Lagos
18	Homebase Mortgage Bank Ltd	Plot 639, Adeyemo Alakija Street Victorial Island, Lagos	State	Lagos
19	First Generation	Syndicate Plaza, Plot	State	Abuja

	Mortgage Bank Ltd	404, Ahmadu Bello way, Garki Abuja		
20	Platinum Mortgage Bank Ltd	61, Yakubu Gowon Crescent, Asokoro Abuja	National	Abuja

Source: Federal Mortgage Bank of Nigeria (FMBN) Website, December 2021.

The table below reflected the population of National Housing Fund (NHF) Scheme registered employees with Federal Mortgage Bank of Nigeria (FMBN) Ikeja District Office, Lagos.

Table 3.2: FMBN Ikeja District Office NHF Scheme Registered Employees

FMBN State Office	Address	Registered Employees
Ikeja District Office	6, Ashabi Cole Street, Tisco Plaza, off Agidingbi Street, Alausa Ikeja, Lagos	129,163

Source: FMBN Head Office Abuja ICT Group Database, December 2021

3.3 Sample and Sampling Techniques

This study considered population from two (2) major sources which include twenty (20) accredited Primary Mortgage Banks (PMBs) as contained in Federal Mortgage Bank of Nigeria (FMBN) website as at 31st December 2021 (see table 3.1) and 129,163 total registered National Housing Fund (NHF) Scheme customers with FMBN Ikeja District Office as at 31st December 2021.

However, the researchers adapted cluster sampling technique to select the sample size of ten (10) for the accredited PMBs located around Lagos areas out of the total population of twenty (20) accredited PMBs, following the geographical distribution in pockets of settlement and its cost-effectiveness. Consequently, the judgement/purposive sampling method then employed to select four (4) credit officers from each of the ten (10) PMBs to arrive at a total of forty (40)

credit officers for this study. The choice of credit officers of accredited PMBs and the sampling technique as targeted by this study is considered appropriate in view of facts that they deal directly with mortgage loan origination, underwriting and credit appraisal of prospective homeowners.

In respect of the second population (129,163) as contained in table 3.2, represents total NHF Scheme registered contributors with FMBN Ikeja District Office Lagos. The sample size from the total population was determine using Taro Yamane formula at 95% confidence level⁵. This is because of its simplicity in calculation of sample size as demonstrated below:

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

Where,

SS = Required sample size

N = The population size

e = The tolerable error in investigating the population

Therefore,

$$\begin{aligned} SS &= \frac{129,163}{1 + 129,163 (0.05)^2} \\ &= \frac{129,163}{1 + 129,163 (0.0025)} \\ &= \frac{129,163}{1 + 322.91} \\ &= \frac{129,163}{323.9075} \\ &= 398.77 \text{ (Rounded-up to } \mathbf{400}) \end{aligned}$$

For this study, the minimum sample size approximated figure of **400** NHF Scheme customers representing those that are within low-and-medium income groups, is required. Consequently,

a simple random sampling techniques was adopted because all the elements of the population have equal chance of being selected.

3.4 Description of the Research Instrument

This study employed questionnaire as the research instrument for primary source of data collection and a facilitator of quantitative data analysis. It is a widely used instrument for the collection of wide range of information from many respondents. The adoption of questionnaire as the survey instrument for this study has become imperative because of its ability to be administered effectively, scalability of information, less time consuming, cost savings and respondents' flexibility over where and when to complete their questionnaire. The relevance of the use of questionnaire for this study is traceable to its capacity to collect feedback predicated on the consciousness and judgement of the respondents.

The framework of the questionnaire was an adaptation from previous study² except for the five-point Likert type scale used². The questions were self-developed contingent on the review of prior literature relevant to this research topic, statement of the problem, objectives of the study and research questions. The researcher developed two types of questionnaires, first type address issues relating to Primary Mortgage Banks (PMBs) operations and the second type is to extract relevant information from National Housing Fund (NHF) Scheme contributors concerning housing loan accessibility. Also, the researcher developed a new four-point Likert type scale for measurement and being an ordinal interval scale numbered from 1 to 4. The response options in the PMBs questionnaire covered; Low Extent (LE) = 1, Partially Low Extent (PLE) = 2, Partially High Extent (PHE) = 3 and High Extent (HE) = 4. The NHF Scheme customers questionnaire covered; Disagree (D) = 1, Partially Disagree (PD) = 2, Partially Agree (PA) = 3 and Agree (A) = 4.

The questionnaire for the accredited PMBs is structured into five (5) sections: Section A covered the demographic variables with six (6) items which includes a question requesting the credit officers to rate their knowledge of the overall organizational activities and individual housing loan performance of their PMB on a scale of 1-10 to address the quality of responses. Consequently, respondents who tick below five (5) indicate weak knowledge of the organization's overall activities and individual housing loan performance while above five (5) demonstrate sufficient knowledge, hence they will be considered significant. Section B covered mortgage financing with twenty (20) items, Section C covered innovation capability with fourteen (14) items, Section D covered housing loan performance with sixteen (16) items and Section E covered government housing policy moderating variable with ten (10) items. Similarly, the questionnaire for the NHF Scheme contributors is structured into two (2) sections: Section A covered the demographic variables with seven (7) items and Section B covered housing loan performance with sixteen (16) items.

3.5 Pilot Study

A pilot study involves embarking on research of a pocket size in the sample size determined from a study population in advance with a view to scrutinising the practicability or to enhance the design of the research pending when the main study would be conducted in future⁶. Conducting a pilot study prior to the actual research is a form of a strategy that ensures thorough planning, establishing the effectiveness of the process, the clarity and respondents' comprehension of the questionnaire. It will also assist in confirming the measurability and relevance of the questions to determine if conclusion can be drawn from the resulting data.

The pilot study was conducted for the first population (FMBN Accredited PMBs in Nigeria) using the credit officers working with Living Trust Mortgage Bank Plc Osogbo, Platinum

Mortgage Bank Ltd Abuja, First Generation Mortgage Bank Plc Abuja, Infinity Trust Mortgage Bank Plc Abuja and Gateway Mortgage Bank Abeokuta Ltd, being five (5) of the members in the study population that will not be covered during the major study but possess the related characteristics with selected PMBs for this study. The research engaged five (5) PMBs for the pilot study to ensure the adequacy of the sample size, representing 50% of ten (10) PMBs sample size determined using cluster sampling technique. That being the case, twenty (20) copies of questionnaire were administered using face-to-face contact approach to four (4) credit officers in each of the five (5) PMBs based on judgement/purposive sampling method.

As well, another pilot study was conducted for the second population which concerns NHF Scheme registered contributors with FMBN Oyo State branch since it performs similar functions with FMBN Ikeja District Office, Lagos. The sample size of the NHF Scheme customers employed in the pilot study was 40, representing 10% of the 400-sample size for the study, calculated using Taro Yamane formula⁵ because of its simplicity. Accordingly, copies of questionnaire were administered with the assistance of FMBN Oyo State branch Mobilization Officers, to 40 NHF Scheme contributors founded on simple random sampling technique, since all the elements of the population have equal opportunity of being selected.

Being only twenty (20) copies of questionnaire administered to the credit officers of five (5) PMBs for the pilot study, the researcher retrieved all and considered them usable. Consequently, from the review of the rating of the PMBs in the questionnaire, all the credit officers scored their PMB seven (7) above to demonstrate their knowledge of the overall organizational activities and individual housing loan performance. In respect of the NHF Scheme customers, 34 copies of the questionnaire were returned out of the 40 copies issued and this was made possible with the support of FMBN Mobilization Officers. In view of the

simplicity in ticking the questions as appropriate, all the copies of questionnaire retrieved were filled correctly and the response rate for each population was 100% and 85% respectively.

However, major issues that arose during and after the pilot study cut across the credit officers of PMBs and NHF Scheme contributors. Following my interactions with majority of the respondents during the retrieval of questionnaire, most of them complained about the large number of items in the questionnaire and suggested the reduction of the items in addition to amending few of the questions to increase the response rate during the major research study.

Consequent upon the outcome of the pilot study reported above and coupled with the advice of two faculty members suggesting a reduction in number of items and reconstruction of few questions for easy comprehension by respondents. Hence, the questionnaire to be adopted for this study, on mortgage financing, innovation capability, housing loan performance (PMBs and NHF Scheme Contributors) and moderating variable, were remodelled.

3.6 Validity of the Research Instrument

The research instrument for this study was validated using content and construct validity. In respect of content validity, the two types of questionnaires adopted for this study were validated by four experts made up of two in the academic environment and two professionals in the mortgage industry. They include the researcher's supervisor, a professor in the department of management and accounting of Lead City University Ibadan, Branch Manager (Living Trust Mortgage Bank Plc, Ibadan) and Group Head (Loans & Mortgages) Federal Mortgage Bank Abuja. The inputs of the experts suggesting the reduction in number of questions and the comprehension of the questions by the respondents, were used to remodel the questionnaire as required.

The feedback on the effectiveness of each question based on the pilot study carried out by the researcher prior to the investigation of the main study, make available the chance to pre-test the research instrument to determine the construct validity. In addition, the outcomes of the pilot study enable the researcher to carry out necessary reconstruction and improvement to the research instrument to ensure that items will rightly measure issues they intend to measure.

Subsequently, for the researcher to establish the overall acceptability and validity of the research instrument, an Exploratory Factor Analysis (EFA) was evaluated. The Average Variance Extracted (AVE) and the Composite Reliability (CR) were calculated after obtaining factor loadings from the rotated component matrix via the Varimax Extraction Method (VEM). However, the AVE and CR is a value from 0 to 1 in which a higher value demonstrate higher reliability level and a value more than or equal to 0.5 and 0.7 respectively, confirms the convergent validity⁷.

Therefore, it can be seen from the AVE's computed that its value higher than 0.5 which makes available additional validation of convergent validity and on the other hand, the CR's value more than 0.7 which also supported confirmation of divergent validity for each of the measured variable. Going by the values of both convergent and divergent validity obtained gave attestation to construct validity for all the variables under study and were on that account established. Presented in the table below is a summary of the divergent and convergent validity values.

Table 3.3: Summary of Pilot Test Integrating Construct Validity Test

Variables	Number of items	AVE	CR	Remark
Long-term fund	4	0.814	0.946	Reliable
Household income	4	0.725	0.913	Reliable
Interest rate	4	0.943	0.985	Reliable
Management innovation	4	0.769	0.930	Reliable
Process innovation	4	0.759	0.926	Reliable
Access to finance	4	0.819	0.947	Reliable
Homeownership loans	4	0.788	0.937	Reliable
Non-performing loans	4	0.866	0.963	Reliable
Service efficiency	4	0.690	0.898	Reliable
Government housing policy	4	0.794	0.939	Reliable
Overall		0.797	0.938	

Source: Computed from Pilot study, 2022

Consequently, the factor analysis using the principal component analysis was engaged via Kaiser-Meyer-Olkin (KMO) test to advance the procedure of validating the research instrument to measure the appropriateness of the data to the study, consider the acceptability of the sampling for each variable in the model and for the complete model. Nonetheless, for the variable to be accepted, it is required that the KMO should be greater than 0.5 and according to a researcher, values between 0.8 to 1.0 reveals that the sampling is satisfactory, values between 0.7 to 0.79 are moderate, values between 0.6 to 0.69 are average and values less than 0.6 implies that the sampling is not sufficient, hence the remedial action should be

taken⁷. However, an average value greater than 0.6 is appropriate for sample size less than 100 and average value between 0.5 and 0.6 is allowed for sample sizes between 100 and 200⁷.

Furthermore, the strength of the relationship among variables were assessed using Bartlett test of Sphericity. Thus, Bartlett test the null hypothesis which indicated that the items in the original correlational matrix have no connection among them. This point to the fact that the variables are independent and because of that, it is inappropriate for the study. The table below, show the KMO and Bartlett test values alongside with related probability values that were below the 0.5 threshold, and this indicated that the factor analysis appraised is suitable for the study.

Table 3.4: Validity Statistics Process

Variables	No. of items	KMO	Bartlett	Sig.	Remark
Long-term fund	4	0.601	31.631	(0.000)	Accepted
Household income	4	0.623	25.406	(0.000)	Accepted
Interest rate	4	0.736	60.446	(0.000)	Accepted
Management innovation	4	0.616	26.356	(0.000)	Accepted
Process innovation	4	0.623	26.651	(0.000)	Accepted
Access to finance	4	0.585	57.455	(0.000)	Accepted
Homeownership loans	4	0.650	24.306	(0.000)	Accepted
Non-performing loans	4	0.684	36.271	(0.000)	Accepted
Service efficiency	4	0.591	40.864	(0.000)	Accepted
Government Housing Policy	4	0.602	25.584	(0.000)	Accepted

Source: Computed from Pilot study via SPSS V25, 2022

3.7 Reliability of the Research Instrument

The reliability test for research instrument is of essential to the researcher to establish the degree to which an instrument yield consistent result. Consequently, the researcher subjected the two types of questionnaires for the pilot study to test reliability and since this study uses the Likert-type-scale, the most suitable measure of reliability is the Cronbach's Alpha. In view of this, twenty (20) copies of questionnaire distributed to the credit officers working with PMBs' and forty (40) copies of the second type of questionnaire administered to the NHF Scheme customers of FMBN Ikeja District Office predicated on judgement/purposive and simple random sampling techniques respectively.

The internal consistency was adopted to ascertain the reliability of a measure by assessing the within-scale consistency of the responses to the items of the measure. Therefore, the measurement instrument appropriate to multiple items like that of this study employed Cronbach's Alpha coefficient for evaluating this internal consistency of the items in the questionnaire utilizing the reliability process in Statistical Package for Social Sciences (SPSS) version 25. Nevertheless, it has been established in extant literature that Cronbach's Alpha coefficient of greater than 0.7 but less than 1 score for a questionnaire is reliable⁸. For this study, the composite reliability is engaged to revalidate the reliability of the research instrument. The table below represent the reliability statistic of all the variables in this study.

Table 3.5: Reliability Statistics

S/N	Variables	No of Items	Cronbach's Alpha Coefficient
1	Long-term fund	4	0.706
2	Household income	4	0.730
3	Interest rate	4	0.813
4	Management innovation	4	0.700
5	Process innovation	4	0.752
6	Access to finance	4	0.767
7	Homeownership loans	4	0.727
8	Non-performing loans	4	0.735
9	Service efficiency	4	0.714
10	Government Housing Policy	4	0.724

Source: Computed from Pilot study, 2022

3.8 Method of Data Collection

For this study, a structured questionnaire was employed in agreement with extant literature as the survey research instrument to collect relevant primary data from the credit officers of FMBN accredited Primary Mortgage Banks (PMBs) in Lagos and National Housing Fund (NHF) Scheme Customers of Federal Mortgage Bank of Nigeria (FMBN) Ikeja District Office Lagos, which will assist the researcher to address the objectives of this study. In addition to the survey research conducted for the collection of the primary data, the researcher obtained a classified secondary data on NHF loan disbursements to PMBs and

NPL ratios from 2012 to 2022 from Loan Administration Group of FMBN Head Office, Abuja as contained in the table below.

Table 3.6: NHF Loan Disbursements to Primary Mortgage Banks (PMBs) and NPL Ratio

Year	Number of Beneficiaries	Amount Disbursed (₦)	NPL (%)
2012	1061	6,253,853,628	42.36
2013	1700	9,953,244,633	45.48
2014	1197	6,236,503,540	41.74
2015	1220	7,777,046,644	38.29
2016	580	3,887,865,440	40.65
2017	1284	10,328,886,806	36.55
2018	1949	13,561,937,084	33.17
2019	1199	10,220,159,166	28.46
2020	998	10,138,080,968	23.92
2021	1258	14,455,611,405	18.46
2022	1336	13,727,911,894	11.83
Total	13,782	106,541,101,208	

Source: FMBN Loan Administration Group H/O Abuja Classified Data, May 2023

Also, valid number of correlated articles, conference papers, newspaper publications, published textbooks, theses and website publications were reviewed extensively. The choice of research instrument gives the chance to obtain a stronger perception of the respondents under examination and at the same time aid to minimize the possibility of obtaining an incorrect data for the study. Moreover, previous research study established that this research instrument performs effectively with a cross-sectional survey design in view of the facts that

its support the collection of data concerning the judgement and insight of respondents on latest matters promptly. However, the objectives of this study brought about the emergence of two populations and subsequently required the design of two separate questionnaire to address the variables connecting to the Primary Mortgage Banks (PMBs) and that which relates to the National Housing Fund (NHF) Scheme contributors.

The administration of the questionnaire for the credit officers of the Primary Mortgage Banks (PMBs) were done after seeking clearance from the Head of Human Resources Department and the Head of Credit Unit to enable the organization to participate in the research study. However, because of the peculiarity of the National Housing Fund (NHF) Scheme customers in terms of the large sample size and scattering of their locations, the copies of questionnaire were distributed with the support of NHF Mobilization Officers of FMBN to the NHF Desk Officers of the registered organizations for distribution to their NHF Contributing employees who are interested in participating in the research study.

The first questionnaire which relates to Primary Mortgage Banks (PMBs) operations is structured into five (5) key sections on a modified four-point Likert type scale for measurement and being an ordinal interval scale numbered from 1 to 4. The response options in the PMBs questionnaire covered; Low Extent (LE) = 1, Partially Low Extent (PLE) = 2, Partially High Extent (PHE) = 3 and High Extent (HE) = 4. The extent of adopting the four-point Likert type scale is to eliminate the neutral/undecided rating from the five-point Likert type scale and minimize biases arising from respondents not taken any position.

Section A covered the demographic variables with six (6) items which includes a question requesting respondents to rate their knowledge of the overall organizational activities and individual housing loan performance of their PMB on a scale of 1-10 to address the quality of responses. Consequently, respondents who tick below five (5) indicate weak knowledge of

the organization's overall activities and individual housing loan performance while above five (5) demonstrate sufficient knowledge, hence they will be considered significant.

Section B covered mortgage financing as the independent variable with twelve (12) items divided into three (3) parts; long-term funds with four (4) items, household income with four (4) items and interest rate with four (4) items. Section C covered innovation capability as the second independent variable with eight (8) items categorised into two (2) parts; management innovation with four (4) items and process innovation with four (4) items. Section D covered housing loan performance as the dependent variable with eight (8) items grouped into two (2) parts; homeownership loans with four (4) items and non-performing loans with four (4) items. Section E covered government housing policy as the moderating variable with four (4) items.

The second questionnaire which relates to National Housing Fund (NHF) Scheme contributors comprised of two (2) vital sections on a modified four-point Likert type scale for measurement and being an ordinal interval scale numbered from 1 to 4. The NHF Scheme customers questionnaire covered; Disagree (D) =1, Partially Disagree (PD) = 2, Partially Agree (PA) = 3 and Agree (A) = 4. Section A covered the demographic variables with seven (7) items and Section B covered housing loan performance as the dependent variable with eight (8) items broken down into two (2) parts; access to finance with four (4) items and service efficiency with four (4) items.

Table 3.7: Measurement of Research Instrument

Independent Variable	Indicators	No. of items	Sources
Mortgage financing	Long-term fund	4	Measured bank's liquidity ⁹
	Household income	4	Measured housing affordability ¹⁰
	Interest rate	4	Measured ability to repay credit ¹¹
Innovation capability	Management innovation	4	Measured innovation capability ¹²
	Process innovation	4	Measured quality of loan processes ¹³
Dependent Variable	Indicators	No. of items	Sources
Housing loan performance	Access to finance	4	Measured loan accessibility ¹⁴
	Homeownership loans	4	Measured mortgage loan volume ¹⁵
	Non-performing loans	4	Measured credit performance ¹⁶
	Service efficiency	4	Measured service delivery ¹⁷
Moderating Variable	Indicators	No. of items	Sources
Moderator	Government housing policy	4	Measured housing supply ¹⁸

Source: Researcher's Literature Review, 2022

3.9 Method of Data Analysis

The data obtained from the two (2) types of questionnaires as the primary sources for data collection were analysed with the support of Statistical Package for Social Sciences (SPSS Version 25) and the outcomes were presented using both descriptive and inferential analysis to examine the effect of mortgage financing and innovation capability on housing loan performance of accredited primary mortgage banks in Nigeria. The researcher considered the

adoption of descriptive statistics suitable because it assisted to answer the research questions, illustrate, and condense data regarding frequency distribution, mean, standard deviation and percentage of response about variables under study. Also, recognised the engagement of SPSS as relevant for this study because it is a statistical window that permit the use of primary data to process many data analysis.

The descriptive statistics more significantly strengthen the procedure of carrying out inferential statistics. Consequently, this study employed regression analysis (multiple and hierarchical regression) as the scientific approach to test the hypotheses developed for this study. A research study established that with the support of regression line equation referred to as line of best fit, the regression analysis will study the connection between two or more other variables¹⁹. Further mentioned that the variables engaged to predict the variable of interest refers to as the independent or explanatory or predictor or regressor or manipulated variable whereas the variable whose value is to be predicted is known as the dependent or explained or outcome or target or criterion variable¹⁹. Prior study revealed that the intention of carrying out the multiple linear regression analysis is to determine changes in the dependent variable if the independent variable changes²⁰.

Going by the mathematical point of view, both regression and analysis of variance (ANOVA) are identical in the sense that the dependent variable in both techniques is a continuous one. However, the independent variable under ANOVA analysis can be exclusively categorical variable whereas the independent variable can be adopted as both categorical and continuous variable under regression analysis²¹. This research study identifies both mortgage financing and innovation capability as continuous predictor variables and the appropriateness of a continuous variable has been established by researchers for processing multiple regression analysis via the regression model and find out how they influence housing loan performance.

Consequently, the co-efficient table which shows the β coefficient in the multiple regression analysis concerning continuous variables (mortgage financing and innovation capability) demonstrated the amount of change in the dependent variable (housing loan performance: access to finance, homeownership loans, non-performing loans, and service efficiency) arising from the amount of change in the predictor variables. The correlative effect or contribution of each independent variable (long-term funds, household income, interest rate, management innovation and process innovation) to the modification in the dependent variable was because of this β coefficient.

Regarding the mathematical approach adopted to test the hypotheses developed in the introduction chapter, hypotheses one, two, three, four and five were analysed using multiple regression. This confirmed the corresponding impact of the sub-measures of the predictor variables (mortgage financing and innovation capability) on access to finance, homeownership loans, non-performing loans, and service efficiency. By extension, to prove the effect of mortgage financing and innovation capability on housing loan performance. The hypothesis six was analysed using the hierarchical multiple regression since it positioned the possible moderating effect of government housing policy on the functional relationship between mortgage financing, innovation capability and the housing loan performance. The table below shows the summary for each hypothesis and the method of analysis employed.

Table 3.8: Tool for Data Analyses

S/N	Hypotheses	Tool of Analysis
1	Long-term fund, household income and interest rate does not have significant influence on access to finance of accredited PMBs in Nigeria.	Multiple Regression
2	There will be no significant effect of long-term fund, household income and interest rate on homeownership loan volume of accredited PMBs in Nigeria.	Multiple Regression
3	Management innovation and process innovation does not have significant influence on non-performing loan ratio of accredited PMBs in Nigeria.	Multiple Regression
4	There will be no significant effect of management innovation and process innovation on service efficiency of accredited PMBs in Nigeria.	Multiple Regression
5	Mortgage financing and innovation capability does not have significant influence on housing loan performance of accredited PMBs in Nigeria.	Multiple Regression
6	There will be no significant moderating effect of government housing policy on the functional relationship between mortgage financing, innovation capability and the	Hierarchical Multiple Regression

Source: Researcher's Compilation, 2022

The data collected from the field was subjected to preconditions or assumptions which include normality test, linearity test, multicollinearity test and heteroscedasticity test for running parametric analysis after coding with a view to making accurate inferences. Consequently, if the data collected satisfy the preconditions or assumptions, in that case a parametric analysis via regression can be conducted otherwise non-parametric analysis would be employed. Therefore, the pre-estimation test was carried out for all the variables in this study.

The conducting of a normality test is to ascertain that the data sample has been collected from a normally distributed population using its skewness and kurtosis. Multiple regression analysis entails that data is normally distributed based on the assumption that the error term is normally distributed with a mean of zero and a constant variance. Previous study considered value greater than 3.0 as extremely skewed for variable with a complete skew-index and value greater than 8.0 as exceptionally kurtosis for a kurtosis index. In similar way, it was established that the minimal contravention of the assumption of normality test is for skewness and kurtosis to have an index lower than a perfect value of 2.0 and an outright value of 7.0 respectively²². A graphical representation of a normally distributed data set was conducted using Q-Q plot to validate the skewness and kurtosis statistic.

The linearity test plays an essential role when confirming the suitability of data for regression analysis. The linearity wants to ensure that the independent (predictor) variables in the regression analysis have a straight-line relationship with the dependent (outcome) variable²³. To test the linearity of the relationship between the variables in this study, Pearson's product-moment correlation coefficient was employed. Therefore, prove the linear relationship with

aid of the positive values, the strength of the coefficients and the significant level of the relationship.

The correlation amongst the independent variables was checked by conducting multicollinearity test on the study's data using correlation coefficients and variance inflation factor (VIF). It is a problem when the independent variables are highly correlated with each other because the regression model will not be able to precisely link variance in the dependent variable with the right independent variable, thereby leads to untidy results and incorrect inferences²³. Consequently, a correlation coefficient higher than 0.8 shows the presence of multicollinearity and when the variance inflation factor (VIF) is more than 10 or the tolerance factor (TF) value which is the reverse of VIF is lower than 0.1 specify the suspicion of multicollinearity²³.

The data for this study was subjected to a heteroscedasticity test with a view to ensuring that data demonstrates homoscedasticity which is where the variances along the line of best fit stay the same as you move along the line²⁴. The presence of heteroscedasticity is most prominent in cross-sectional types of data as compared to time series types of data and the variance attained by the researcher should be of insignificant value than the value of the variance of the best linear unbiased estimator (BLUE). Hence, the results achieved for the regression model by the researcher via significant tests would be incorrect because heteroscedasticity is in existence²⁵.

Inasmuch that the data for this research is a cross-sectional, there is a possibility of heteroscedasticity being present in the data. The presumption of classical linear regression model (CLRM) is that the error term is homoscedastic which means the variance is persistent but otherwise, there is existence of heteroscedasticity in the data. For this reason, homoscedasticity was examined using normal probability plot for the normality of residuals.

The normal probability plot at the same time called Normal P-P plot is the technique for testing the assumptions of normality and homogeneity of variance in multiple regression analysis.

Endnotes

1. L. Thomas. *Cross-Sectional Study: Definitions, Uses and Examples*. **Scribbr Website** <https://www.scribbr.com>.
2. A. B. Onamusi. *Entry-Mode Strategy, Firm-Specific Capability and Organisational Performance of Selected Manufacturers of Baby-Care Products in Lagos-State Nigeria*. **PhD Thesis**, 2020, 1-396.
3. Federal Mortgage Bank of Nigeria. *Accredited Primary Mortgage Banks (PMBs)*. **FMBN Website** www.fmbn.gov.ng.
4. Federal Mortgage Bank of Nigeria. *FMBN Ikeja District Office NHF Scheme Registered Contributors as at 31/12/2021*. **FMBN Head Office Abuja ICT Group Database**.
5. C. C. Nwuba & E. O. Chukwu-Nwuba. *Barriers to Accessing Mortgages in Nigeria's Housing Markets*. **International Journal of Housing Markets and Analysis**, 2018, xx-xx, <http://doi.org/10.1108/IJHMA.10.2017.0089>.
6. G. E. Oyedokun. *Research Methodology for Social and Management Scientists*. **OGE Business School, Lagos Aaron, and Hur Publishing**, 2020, 1-342.
7. N. Shreastha. *Factor Analysis as a Tool for Survey Analysis*. **American Journal of Applied Mathematics and Statistics**, 9(1), 2021, 4-11.
8. K. S. Taber. *The Use of Cronbach's Alpha When Developing and Reporting Research Instruments in Science Education*. **Research in Science Education Journal**, 48(1), 2018, 1273-1296.
9. M. A. Afolabi, K. K. Adeyemi, O. S. Salawudeen & T. O. Fagbemi. *Monetary Policy and Bank Credit in Nigeria: A Toda-Yamamoto Approach*. **AUDCE Journal**, 14(5), 2018, 717-735.
10. A. O. Adediran, S. O. Oladejo & C. O. Ijagbemi. *The Fundamentals to Affordable Homeownership in Nigeria*. **Journal of Multidisciplinary Engineering Science and Technology (JMEST)**, 7(4), 2020, 11659-11666.
11. A. A. Abdulrehman & W. Nyamute. *Effect of Mortgage Financing on Financial Performance of Commercial Banks in Kenya*. **Journal of International Business Innovation and Strategic Management**, 1(6), 2018, 91-122.
12. A. Ganguly, A. Talukdar & D. Chatterjee. *Evaluating the Role of Social Capital, Tacit Knowledge Sharing, Knowledge Quality and Reciprocity in Determining Innovation Capability of an Organization*. **Journal of Knowledge Management**, 23(6), 2019), 1105-1135.

13. J. R. Kigomo, T. A. Senaji & G. W. Mwaniki. *Influence of Technological Factors and Homeownership through Mortgage Financing in Kenya*. **The University Journal**, 3(1), 2021, 111-118.
14. A. O. Adediran & H. M. Ali. *Nigeria Housing Finance Operation: A Review of Key Factors Affecting Housing Finance*. **Global Scientific Journals**, 7(12), 2019, 1174-1185.
15. E. Kostikov, P. Jilkova & P. K. Stranska. *Quantified Impact of Market Interest Rates on Commercial Banks' Business Mix*. **Journal of International Studies**, 12(2), 2019, 258-269.
16. P. Cincinelli & D. Piatti. *How Inefficient is an Inefficient Credit Process? An Analysis of the Italian Banking System*. **The Journal of Risk Finance**, 2021, xx-xx, <http://doi.org/10.1108/JRF.08.2020.0184>.
17. D. T. Morales & F. L. Trinidad. *Digital Mortgage Banking Acceptability in Philippine Universal Banks: Evidence from UTAUT Model*. **Journal of Information System and Technology Management**, 4(15), 2019, 1-15.
18. A. Bello. *Review of the Housing Policies and Programmes in Nigeria*. **International Journal of Contemporary Research and Review**, 10(2), 2019, 20603-20616.
19. S. C. Kafle. *Correlation and Regression Using SPSS*. **OCEM Journal of Management, Technology and Social Sciences**, 2020, 126-132, <https://www.researchgate.net/publication/343282545>.
20. Sarwani, Y. Sudaryana, W. Wicaksono, N. Wicaksono & Suyatin. *Effect of Service Product Innovation, Promotional Activities and Company Image on Saving Decisions in PT. Bank BNI Syariah, Tbk Area, Jabodetabek*. **Annals of R.S.C.B. Journal**, 25(4), 2021, 16251-16266.
21. Gianfranco. *What is the difference between ANOVA and Regression: And which one to Choose?* **StatsImprove Article of Low Cost and Highly Professional Statistical Consultancy**, 2019, <https://www.statsimprove.com>.
22. University of Cambridge. *Testing Normality including Skewness and Kurtosis*. **MRC Cognition and Brain Sciences Unit**, www.imaging.mrc-cbu.cam.ac.uk.
23. Statistics Solutions. *Testing Assumptions of Linear Regression in SPSS*. **Statistics Solutions Website**, www.statisticssolutions.com.
24. Laerd Statistics. *Multiple Regression Analysis Using SPSS Statistics*. **Laerd Statistics Website**, <https://statistics.laerd.com>.
25. Statistics Solutions. *Heteroscedasticity*. **Statistics Solutions Website**, www.statisticssolutions.com.

Chapter Four

Results and Discussion of Findings

This chapter reveals the data presentation based on the outcome of the structured questionnaire adopted as the major research instrument for data collection, analysis of the data, discussion of findings and interpretation of results. The questionnaire was used to obtain the required information needed to address the main objective of this study, which is to examine the effect of mortgage financing and innovation capability on housing loan performance of accredited primary mortgage banks in Nigeria. The analysis of the demographic data for the respondents were carried out and presented in tables. Consequently, the hypotheses one to five indicated in chapter one of this study were tested using multiple regression whereas the hypothesis six was tested using hierarchical multiple regression and their related results reported in accordance with each hypothesis tested. The study employed both inferential and descriptive statistics for data analysis with the aid of Statistical Package for Social Sciences (SPSS version 25). The outcome of the findings was interpreted and concluded the chapter with the summary of main research findings presented in tables.

4.1 Demographic Data Analysis

The demographic data analysis deals with the features of the study population to establish appropriateness of the respondents to express view about the study. The questions associated

with bio data of the respondents such as gender, marital status, age, academic qualification, and length of service in the organization. The results are presented below.

Table 4.1: Demographic Data Analysis

Details	PMB Credit Officers		NHF Customers	
	Frequency	(%)	Frequency	(%)
Explanatory Variables				
Gender				
Male	15	40.5	196	55.4
Female	22	59.5	158	44.6
Marital status				
Single	13	35.1	102	28.8
Married	24	64.9	235	66.4
Divorced	0	0	17	4.8
Age				
18-30	28	75.7	29	8.2
31-40	7	18.9	72	20.4
41-50	2	5.4	209	59.0

51-60	0	0	44	12.4
Academic qualification				
WAEC/GCE/ND/NCE	0	0	84	23.7
B.Sc./BA/HND	33	89.2	199	56.2
PGD/MBA/M.Sc./MA	4	10.8	58	16.4
MPhil/PhD	0	0	13	3.7
Length of service				
Below 5 years	21	56.8	16	4.5
6-10 years	11	29.7	69	19.5
11-15 years	5	13.5	66	18.6
Above 16 years	0	0	203	57.4
Total Number of Respondents	37	100	354	100

Source: Field Survey Result, 2023

4.2 Presentation of Data

The data collected from the returned questionnaire of thirty-seven (37) respondents out of the forty (40) copies administered to the credit officers of primary mortgage banks (PMBs) operating within Lagos were the first set of analyses carried out in this study. The questionnaire was subjected to the scale which demanded the respondents to demonstrate their level of understanding about the PMBs' operations and housing loan performance. A

total of thirty-two (32) credit officers picked seven above on the scale of 1-10 and the remaining five (5) respondents picked below five on the scale. All the thirty-seven (37) copies of the questionnaire representing 92.5% response rate, returned by the respondents were thoroughly screened to confirm the correct filling of all the sections and they were considered usable for this study.

In the same vein, the second set of the analysis involved the administration of four hundred (400) copies of questionnaire to the National Housing Fund (NHF) customers in which a total of three hundred and eighty-two (382) were returned. However, after subjecting the returned copies of questionnaire to screening, it was observed that some areas were not filled correctly by twenty-eight (28) respondents and considered not to be appropriate for use in the analysis of this study. At the end of the review, three hundred and fifty-four (354) copies of the returned questionnaire, representing 88.5% response rate were acknowledged satisfactory for analysis of this study. The high response rate accomplished was made possible with the support of NHF Mobilization Officers of FMBN Ikeja District Office and response results are presented below.

Table 4.2: Response Rate

Primary Mortgage Bank (PMB) Credit Officers	Frequency	Percentage (%)
Number of copies returned and used	37	92.5
Number of copies not used	3	7.5
Sample Size	40	100
National Housing Fund (NHF) Customers		
Number of copies returned and used	354	88.5

Number of copies not used	46	11.5
Sample Size	400	100

Source: Field Survey Result, 2023

The outcome of descriptive and inferential statistics carried out on data obtained in connection with all the variables for this study were described in this section alongside the research findings, interpretation, and discussion of results in agreement to subsisting empirical studies. The respondents' view for descriptive analysis of the independent variables were considered first in this section before dealing with the dependent variables. In view of simplicity of analysis, the responses were established on a four-point Likert type scale coded with numerical values and assigned 1 for low extent (LE), 2 for partially low extent (PLE), 3 for partially high extent (PHE), and 4 for high extent (HE).

Consequently, the descriptive statistics like percentages, mean and standard deviation were used to interpret the outcomes. The responses for the mean were interpreted using a width of class interval ranges from 0.50-1.49 implied low degree, 1.50-2.49 implied fairly low degree, 2.50-3.49 implied fairly high degree and 3.50-4.00 implied high degree. In addition, the responses for a standard deviation of greater than 1 signifies that the responses are broadly spread out and in the event of the responses lower than 1 specifies the general agreement on responses received.

4.2.1 Research Questions

The research questions for this study were derived from the research objectives stated in the chapter one and the descriptive analyses of findings for each question were discussed below.

4.2.1.1 Research Question One: how does long-term fund, household income and interest rate influence access to finance of accredited primary mortgage banks in Nigeria?

The first objective of this study desired to determine the influence of long-term fund, household income and interest rate on access to finance of accredited primary mortgage banks in Nigeria. The mortgage financing which is one the independent variable for this study has sub-variables namely long-term fund, household income and interest rate. The survey questionnaire was used as a research instrument to collect the data and the respondents were requested to indicate how high or low, they assessed the statement in relation to long-term fund, household income, interest rate and access to finance of accredited primary mortgage banks in Nigeria.

Long-term fund was presented as one of the mortgage financing elements of primary mortgage banks in Nigeria adopting descriptive statistics and calculated for each statement to unfold the frequencies, percentages, mean and standard deviation on a four-point Likert type scale and assigned 1 for low extent (LE), 2 for partially low extent (PLE), 3 for partially high extent (PHE), and 4 for high extent (HE). The findings for long-term funds revealed the resultant frequencies, percentages, mean and standard deviations as presented below.

Table 4.3: Descriptive Analysis of Responses on Long-Term Fund

Long-Term Fund	Level of Agreement (%) n=37					Average	
	LE	PLE	PHE	HE	TOTAL	Mean	SD
Access NHF mortgage loan from FMBN	0.0%	0.0%	10.8%	89.2%	100%	3.89	0.315
Source funding via secondary	10.8%	13.5%	54.1%	21.6%	100%	2.86	0.887

mortgage market

Mobilize long-term deposits for homeownership loans	5.4%	8.1%	13.5%	73.0%	100%	3.54	0.869
Press for domestic and offshore long-term funds	5.4%	32.4%	51.4%	10.8%	100%	2.68	0.747
Grand Mean and SD						3.24	0.705

Source: Field Survey Result, 2023

The analysis of Table 4.3 indicated that 10.8% of the respondents rated Access NHF mortgage loan from FMBN partially high extent while 89.2% validated high extent. On average, the respondents demonstrated that Access NHF mortgage loan from FMBN is high with a mean of 3.89 and 0.315 for the standard deviation. The outcomes also signified that 10.8% of the respondents rated Source funding via secondary mortgage market as low extent, 13.5% certified partially low extent, 54.1% confirmed partially high extent while 21.6% disclosed high extent. On average, the respondents exhibited that Source funding via secondary mortgage market is moderately high with a mean of 2.86 and 0.887 for the standard deviation.

In addition, the results indicated that 5.4% of the respondents rated Mobilize long-term deposits for homeownership loans as low extent, 8.1% validated partially low extent, 13.5% demonstrated partially high extent while 73.0% signified high extent. On average, the respondents certified that Mobilize long-term deposits for homeownership loans is high with a mean of 3.54 and 0.869 for the standard deviation. Also, confirmed that 5.4% of the respondents evaluated Press for domestic and offshore long-term funds as low extent, 32.4%

disclosed partially low extent, 51.4 indicated partially high extent while 10.8% exhibited high extent. On average, the respondents established that Press for domestic and offshore long-term fund is moderately high with a mean of 2.68 and 0.747 for the standard deviation.

The grand mean for long-term fund is 3.24 which shows that on average, respondents partially agreed with most of the statements on the high scale as regards to how long-term fund is a suitable measure of mortgage financing with 0.705 overall standard deviation. In this regard, it alludes to the fact that the responses were moderately clustered around the mean.

Household income was presented as one of the mortgage financing components of primary mortgage banks in Nigeria using descriptive statistics and computed for each statement to reveal the frequencies, percentages, mean and standard deviation on a four-point Likert type scale and allocated 1 for low extent (LE), 2 for partially low extent (PLE), 3 for partially high extent (PHE), and 4 for high extent (HE). The findings for household income showed the resultant frequencies, percentages, mean and standard deviations as presented below.

Table 4.4: Descriptive Analysis of Responses on Household Income

Household Income	Level of Agreement (%) n=37					Average	
	LE	PLE	PHE	HE	TOTAL	Mean	SD
Assess the ability to repay the mortgage loan base on household income	0.0%	5.4%	0.0%	94.6%	100%	3.89	0.458
Confirm loan applicant regular flow of income	0.0%	5.4%	0.0%	94.6%	100%	3.89	0.458

Accept additional income source to support loan application	0.0%	0.0%	8.1%	91.9%	100%	3.92	0.277
Consider 1/3 monthly income best practice for loan repayment	0.0%	0.0%	2.7%	97.3%	100%	3.97	0.164
Grand Mean and SD						3.92	0.339

Source: Field Survey Result, 2023

The analysis of Table 4.4 validated that 5.4% of the respondents rated Assess the ability to repay the mortgage loan base on household income partially low extent while 94.6% demonstrated high extent. On average, the respondents signified that Assess the ability to repay the mortgage loan base on household income is high with a mean of 3.89 and 0.458 for the standard deviation. The results in addition certified that 5.4% of the respondents rated Confirm loan applicant regular flow of income partially low extent while 94.6% indicated high extent. On average, the respondents disclosed that Confirm loan applicant regular flow of income is high with a mean of 3.89 and 0.458 for the standard deviation.

Also, the outcomes exhibited that 8.1% of the respondents' appraised Accept additional income source to support loan application partially high extent while 91.9% established high extent. On average, the respondents confirmed that Accept additional income source to support loan application is high with a mean of 3.92 and 0.277 for the standard deviation. In addition, proved that 2.7% of the respondents assessed Consider 1/3 monthly income best practice for loan repayment partially high extent while 97.3% validated high extent. On

average, the respondents verified that Consider 1/3 monthly income best practice for loan repayment is high with a mean of 3.97 and 0.164 for the standard deviation.

The grand mean for household income is 3.92 which indicates that on average, respondents agreed with most of the statements on the high scale as it relates to how household income is an appropriate measure of mortgage financing with 0.339 overall standard deviation. In this respect, it implies that the responses were clustered around the mean.

Interest rate was presented as one of the mortgage financing elements of primary mortgage banks in Nigeria adopting descriptive statistics and calculated for each statement to unfold the frequencies, percentages, mean and standard deviation on a four-point Likert type scale and assigned 1 for low extent (LE), 2 for partially low extent (PLE), 3 for partially high extent (PHE), and 4 for high extent (HE). The findings for interest rate revealed the resultant frequencies, percentages, mean and standard deviations as presented below.

Table 4.5: Descriptive Analysis of Responses on Interest Rate

Interest Rate	Level of Agreement (%) n=37					Average	
	LE	PLE	PHE	HE	TOTAL	Mean	SD
Comply with NHF 6% fixed interest rate	2.7%	8.1%	64.9%	24.3%	100%	3.11	0.658
Adopt flexible interest rate	8.1%	10.8%	16.2%	64.9%	100%	3.38	0.982
Apply commercial interest rate for homeownership loans	10.8%	13.5%	54.1%	21.6%	100%	2.86	0.887
Implement CBN interest rate review directive	0.0%	0.0%	16.2%	83.8%	100%	3.84	0.374

Source: Field Survey Result, 2023

The analysis of Table 4.5 indicated that 2.7% of the respondents rated Comply with NHF six percent fixed interest rate as low extent, 8.1% validated partially low extent, 64.9% demonstrated partially high extent while 24.3% indicated high extent. On average, the respondents signified that Comply with NHF six percent fixed interest rate is moderately high with a mean of 3.11 and 0.658 for the standard deviation. The results in addition certified that 8.1% of the respondents appraised Adopt flexible interest rate as low extent, 10.8% confirmed partially low extent, 16.2% disclosed partially high extent while 64.9% exhibited high extent. On average, the respondents established that Adopt flexible interest rate is moderately high with a mean of 3.38 and 0.982 for the standard deviation.

Also, the outcomes proved that 10.8% of the respondents assessed Apply commercial interest rate for homeownership loans as low extent, 13.5% verified partially low extent, 54.1% indicated partially high extent while 21.6% rated high extent. On average, the respondents validated that Apply commercial interest rate for homeownership loans is moderately high with a mean of 2.86 and 0.887 for the standard deviation. In addition, demonstrated that 16.2% of the respondents rated Implement CBN interest rate review directive partially high extent while 83.8% signified high extent. On average, the respondents certified that Implement CBN interest rate review directive is high with a mean of 3.84 and 0.374 for the standard deviation.

The grand mean for interest rate is 3.30 which shows that on average, respondents partially agreed with most of the statements on the high scale as regards to how interest rate is a

suitable measure of mortgage financing with 0.725 overall standard deviation. In this regard, it alludes to the fact that the responses were moderately clustered around the mean.

Access to finance was presented as one of the housing loan performance measures of primary mortgage banks in Nigeria using descriptive statistics and computed for each statement to reveal the frequencies, percentages, mean and standard deviation on a four-point Likert type scale and allocated 1 for disagree (D), 2 for partially disagree (PD), 3 for partially agree (PA), and 4 for agree (A). The findings for access to finance showed the resultant frequencies, percentages, mean and standard deviations as presented below.

Table 4.6: Descriptive Analysis of Responses on Access to Finance

Access to Finance	Level of Agreement (%) n=354					Average	
	D	PD	PA	A	TOTAL	Mean	SD
Inadequate household income	3.1%	9.0%	17.8%	70.1%	100%	3.55	0.785
Stringent conditions attached to mortgage loans	5.4%	12.1%	21.8%	60.7%	100%	3.38	0.896

Unavailability of long-term funding	11.9%	15.3%	31.6%	41.2%	100%	3.02	1.021
Inefficient housing finance system	3.7%	9.9%	37.8%	48.6%	100%	3.31	0.797
Grand Mean and SD						3.32	0.875

Source: Field Survey Result, 2023

The analysis of Table 4.6 validated that 3.1% of the respondents rated Inadequate household income as low extent, 9.0% demonstrated partially low extent, 17.8% signified partially high extent while 70.1% certified high extent. On average, the respondents confirmed that Inadequate household income is high with a mean of 3.55 and 0.785 for the standard deviation. The results in addition certified that 5.4% of the respondents rated Stringent conditions attached to mortgage loans as low extent, 12.1% confirmed partially low extent, 21.8% disclosed partially high extent while 60.7% exhibited high extent. On average, the respondents established that Stringent conditions attached to mortgage loans is moderately high with a mean of 3.38 and 0.896 for the standard deviation.

Also, the outcomes proved that 11.9% of the respondents appraised Unavailability of long-term funding as low extent, 15.3% verified partially low extent, 31.6% indicated partially high extent while 41.2% validated high extent. On average, the respondents demonstrated that Unavailability of long-term funding is moderately high with a mean of 3.02 and 1.021 for the standard deviation. In addition, signified that 3.7% of the respondents assessed Inefficient housing finance system as low extent, 9.9% certified partially low extent, 37.8% confirmed partially high extent while 48.6% disclosed high extent. On average, the

respondents exhibited that Inefficient housing finance system is moderately high with a mean of 3.31 and 0.797 for the standard deviation.

The grand mean for access to finance is 3.32 which indicates that on average, respondents partially agreed with most of the statements on the high scale as it relates to how access to finance is an appropriate measure of housing loan performance with 0.875 overall standard deviation. In this respect, it implies that the responses were moderately clustered around the mean.

The connecting outcomes as in tables 4.3, 4.4, 4.5 and 4.6 jointly indicated that the long-term fund, household income and interest rate which represents the components of mortgage financing measures have diverse influence with access to finance of accredited primary mortgage banks in Nigeria. The finding revealed that the primary mortgage banks (PMBs) in Nigeria have access to long-term funds provided by Federal Mortgage Bank of Nigeria (FMBN) through the National Housing Fund (NHF) window on behalf of customers contributing into the Fund for homeownership at affordable interest rate. Apart from this source, the PMBs also mobilizes funding for its mortgage operations via secondary mortgage market (SMM), long-term deposits and foreign direct investments (FDI) in the Nigeria housing sector.

The finding also established that income earn by individual household play a major role in which the primary mortgage banks uses in evaluating the mortgage loan applications with a view to determining the housing loan affordability. Furthermore, the inability to have access to mortgage credit from primary mortgage banks by NHF customers/individuals is attributed to inadequate household income in Nigeria and coupled with the stringent conditions attached to mortgage loans. Therefore, in view of the findings mentioned above, it implies that long-term fund, household income and interest rate may influence access to finance of accredited

primary mortgage banks in Nigeria individually. This supplied response to research question one has allowed the researcher to accomplish the first objective of this study.

4.2.1.2 Research Question Two: what is the effect of long-term fund, household income and interest rate on homeownership loan volume of accredited primary mortgage banks in Nigeria?

The second objective of this study sought to assess the effect of long-term fund, household income and interest rate on homeownership loan volume of accredited primary mortgage banks in Nigeria. The mortgage financing which is one the independent variable for this study has sub-variables namely long-term fund, household income and interest rate. The survey questionnaire was used as a research instrument to collect the data and the respondents were requested to indicate how high or low, they assessed the statement in relation to long-term fund, household income, interest rate and homeownership loans volume of accredited primary mortgage banks in Nigeria.

Homeownership loans was presented as one of the housing loan performance measures of primary mortgage banks in Nigeria adopting descriptive statistics and calculated for each statement to unfold the frequencies, percentages, mean and standard deviation on a four-point Likert type scale and assigned 1 for low extent (LE), 2 for partially low extent (PLE), 3 for partially high extent (PHE), and 4 for high extent (HE). The findings for homeownership loans revealed the resultant frequencies, percentages, mean and standard deviations as presented below.

Table 4.7: Descriptive Analysis of Responses on Homeownership Loans

Homeownership Loans	Level of Agreement (%) n=37					Average	
	LE	PLE	PHE	HE	TOTAL	Mean	SD

Increase provision for homeownership loans	0.0%	0.0%	18.9%	81.1%	100%	3.81	0.397
Improve the NHF loan disbursements	0.0%	0.0%	16.2%	83.8%	100%	3.84	0.374
Grow the volume of mortgage loans' provided	0.0%	0.0%	16.2%	83.8%	100%	3.84	0.374
Implement CBN 70% minimum loanable funds for creation of mortgage assets	0.0%	0.0%	13.5%	86.5%	100%	3.86	0.347
Grand Mean and SD						3.84	0.373

Source: Field Survey Result, 2023

The analysis of Table 4.7 indicated that 18.9% of the respondents rated Increase provision for homeownership loans partially high extent while 81.1% validated high extent. On average, the respondents demonstrated that Increase provision for homeownership loans is high with a mean of 3.81 and 0.397 for the standard deviation. The outcomes also signified that 16.2% of the respondents rated Improve the NHF loan disbursements partially high extent while 83.8% certified high extent. On average, the respondents confirmed that Improve the NHF loan disbursements is high with a mean of 3.84 and 0.374 for the standard deviation.

In addition, the results disclosed that 16.2% of the respondents rated Grow the volume of mortgage loans provided partially high extent while 83.8% exhibited high extent. On average, the respondents evaluated that Grow the volume of mortgage loans provided is high with a mean of 3.84 and 0.374 for the standard deviation. Also, established that 13.5% of the

respondents proved that Implement CBN seventy percent minimum loanable funds for creation of mortgage assets partially high extent while 86.5% verified high extent. On average, the respondents indicated that Implement CBN seventy percent minimum loanable funds for creation of mortgage assets is high with a mean of 3.86 and 0.347 for the standard deviation.

The grand mean for homeownership loans is 3.84 which shows that on average, respondents agreed with most of the statements on the high scale as regards to how homeownership loans is a suitable measure of housing loan performance with 0.373 overall standard deviation. In this regard, it alludes to the fact that the responses were clustered around the mean.

The associating results as in tables 4.3, 4.4, 4.5 and 4.7 collectively revealed that the long-term funds, household income and interest rate which represents the elements of mortgage financing measures have divergent effect with homeownership loan volume of accredited primary mortgage banks in Nigeria. The finding showed that the primary mortgage banks in Nigeria have increased the volume of homeownership loans granted to qualified mortgage loan applicants through the NHF loan channel between 2019 and 2022. The improvement in homeownership loan volume depends on the availability of long-term funds to ensure liquidity and sustainability of mortgage banks' operations. In addition to these, the NHF customer/individual must meet the basic requirements for Credit Appraisal (CA) which includes 1/3 of monthly income global best practice for mortgage lending to establish loan affordability and repayment.

The finding also testified that the primary mortgage banks are following the Central Bank of Nigeria (CBN) directives of implementing the housing policy of 70% minimum loanable funds for the creation of mortgage assets to reduce the housing deficit which currently estimated at 22 million in Nigeria (Source). Hence, in view of the findings mentioned above,

it insinuates that long-term funds, household income and interest rate may have effect on homeownership loan volume of accredited primary mortgage banks in Nigeria respectively. This provided response to research question two has enabled the researcher to attain the second objective of this study.

4.2.1.3 Research Question Three: how does management innovation and process innovation influence non-performing loan ratio of accredited primary mortgage banks in Nigeria?

The third objective of this study desired to identify the influence of management innovation and process innovation on non-performing loan ratio of accredited primary mortgage banks in Nigeria. The innovation capability which is one the independent variable for this study has sub-variables namely management innovation and process innovation. The survey questionnaire was used as a research instrument to collect the data and the respondents were requested to indicate how high or low, they assessed the statement in relation to management innovation, process innovation and non-performing loan ratio of accredited PMBs in Nigeria.

Management innovation was presented as one of the innovation capability components of primary mortgage banks in Nigeria using descriptive statistics and computed for each statement to reveal the frequencies, percentages, mean and standard deviation on a four-point Likert type scale and allocated 1 for low extent (LE), 2 for partially low extent (PLE), 3 for partially high extent (PHE), and 4 for high extent (HE). The findings for management innovation showed the resultant frequencies, percentages, mean and standard deviations as presented below.

Table 4.8: Descriptive Analysis of Responses on Management Innovation

	Level of Agreement (%) n=37					Average	
	LE	PLE	PHE	HE	TOTAL	Mean	SD
Management Innovation							

Management of the mortgage lending process	5.4%	13.5%	18.9%	62.2%	100%	3.38	0.924
Management capability to introduce new methods and procedures	2.7%	10.8%	13.5%	73.0%	100%	3.57	0.801
Management leadership quality	8.1%	5.4%	16.2%	70.3%	100%	3.49	0.932
Management ability to identify new innovations for competitive edge	5.4%	8.1%	21.6%	64.9%	100%	3.46	0.869
Grand Mean and SD						3.48	0.882

Source: Field Survey Result, 2023

The analysis of Table 4.8 validated that 5.4% of the respondents rated Management of lending process as low extent, 13.5% demonstrated partially low extent, 18.9% signified partially high extent while 62.2% certified high extent. On average, the respondents confirmed that Management of the mortgage lending process is moderately high with a mean of 3.38 and 0.924 for the standard deviation. The results in addition disclosed that 2.7% of the respondents rated Management capability to introduce new methods and procedures as low extent, 10.8% exhibited partially low extent, 13.5% evaluated partially high extent while 73.0% established high extent. On average, the respondents proved that Management capability to introduce new methods and procedures is high with a mean of 3.57 and 0.801 for the standard deviation.

Also, the outcomes verified that 8.1% of the respondents' appraised Management leadership quality (MLQ) as low extent, 5.4% indicated partially low extent, 16.2% validated partially high extent while 70.3% demonstrated high extent. On average, the respondents signified that Management leadership quality is moderately high with a mean of 3.49 and 0.932 for the standard deviation. In addition, certified that 5.4% of the respondents assessed Management ability to identify new innovations for competitive edge as low extent, 8.1% confirmed partially low extent, 21.6% disclosed partially high extent while 64.9% exhibited high extent. On average, the respondents evaluated that Management ability to identify new innovations for competitive edge is moderately high with a mean of 3.46 and 0.869 for the standard deviation.

The grand mean for management innovation is 3.48 which indicates that on average, respondents partially agreed with most of the statements on the high scale as it relates to how management innovation is an appropriate measure of innovation capability with 0.882 overall standard deviation. In this respect, it implies that the responses were clustered around the mean.

Process innovation was presented as one of the innovation capability elements of primary mortgage banks in Nigeria adopting descriptive statistics and calculated for each statement to unfold the frequencies, percentages, mean and standard deviation on a four-point Likert type scale and assigned 1 for low extent (LE), 2 for partially low extent (PLE), 3 for partially high extent (PHE), and 4 for high extent (HE). The findings for process innovation revealed the resultant frequencies, percentages, mean and standard deviations as presented below.

Table 4.9: Descriptive Analysis of Responses on Process Innovation

Level of Agreement (%) n=37	Average
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Process Innovation	LE	PLE	PHE	HE	TOTAL	Mean	SD
Apply new innovations for efficiency service delivery	0.0%	0.0%	13.5%	86.5%	100%	3.86	0.347
Implement workflow strategies to deliver a better-quality service	0.0%	0.0%	10.8%	89.2%	100%	3.89	0.315
Enhance service performance at a reduce cost	0.0%	0.0%	16.2%	83.8%	100%	3.84	0.374
Improve loan processing turnaround time	0.0%	10.8%	13.5%	75.7%	100%	3.65	0.676
Grand Mean and SD						3.81	0.428

Source: Field Survey Result, 2023

The analysis of Table 4.9 indicated that 13.5% of the respondents rated Apply new innovations for efficiency service delivery partially high extent while 86.5% validated high extent. On average, the respondents demonstrated that Apply new innovations for efficiency service delivery is high with a mean of 3.86 and 0.347 for the standard deviation. The results in addition signified that 10.8% of the respondents appraised Implement workflow strategies to deliver a better-quality service partially high extent while 89.2% certified high extent. On average, the respondents disclosed that Implement workflow strategies to deliver a better-quality service is high with a mean of 3.89 and 0.315 for the standard deviation.

Also, the outcomes exhibited that 16.2% of the respondents assessed Enhance service performance at a reduce cost partially high extent while 83.8% established high extent. On average, the respondents proved that Enhance service performance at a reduce cost is high with a mean of 3.84 and 0.374 for the standard deviation. In addition, verified that 10.8% of the respondents rated Improve loan processing turnaround time partially low extent, 13.5% validated partially high extent while 75.7% demonstrated high extent. On average, the respondents signified that Improve loan processing turnaround time is high with a mean of 3.65 and 0.676 for the standard deviation.

The grand mean for process innovation is 3.81 which shows that on average, respondents agreed with most of the statements on the high scale as regards to how process innovation is a suitable measure of innovation capability with 0.428 overall standard deviation. In this regard, it alludes to the fact that the responses were clustered around the mean.

Non-performing loans was presented as one of the housing loan performance measures of primary mortgage banks in Nigeria using descriptive statistics and computed for each statement to reveal the frequencies, percentages, mean and standard deviation on a four-point Likert type scale and assigned 1 for low extent (LE), 2 for partially low extent (PLE), 3 for partially high extent (PHE), and 4 for high extent (HE). The findings for non-performing loans showed the resultant frequencies, percentages, mean and standard deviations as presented below.

Table 4.10: Descriptive Analysis of Responses on Non-Performing Loans

Non-Performing Loans	Level of Agreement (%) n=37					Average	
	LE	PLE	PHE	HE	TOTAL	Mean	SD
Reduce the volume of NPLs ratio	0.0%	0.0%	8.1%	91.9%	100%	3.92	0.277
Maintain CBN 10% not exceeding NPLs ratio	0.0%	0.0%	10.8%	89.2%	100%	3.89	0.315
Improvement in loan recovery efforts	0.0%	0.0%	5.4%	94.6%	100%	3.95	0.229
Effective monitoring of mortgage loan's performance	0.0%	0.0%	8.1%	91.9%	100%	3.92	0.277
Grand Mean and SD						3.92	0.275

Source: Field Survey Result, 2023

The analysis of Table 4.10 indicated that 8.1% of the respondents rated Reduce the volume of NPLs ratio partially high extent while 91.9% validated high extent. On average, the respondents demonstrated that Reduce the volume of NPLs ratio is high with a mean of 3.92 and 0.277 for the standard deviation. The outcomes also signified that 10.8% of the respondents rated Maintain CBN ten percent not exceeding NPLs ratio partially high extent while 89.2% certified high extent. On average, the respondents confirmed that Maintain CBN ten percent not exceeding NPLs ratio is high with a mean of 3.89 and 0.315 for the standard deviation.

In addition, the results disclosed that 5.4% of the respondents rated Improvement in loan recovery efforts partially high extent while 94.6% exhibited high extent. On average, the respondents evaluated that Improvement in loan recovery efforts is high with a mean of 3.95 and 0.229 for the standard deviation. Also, established that 8.1% of the respondents proved that Effective monitoring of mortgage loans' performance partially high extent while 91.9% verified high extent. On average, the respondents indicated that Effective monitoring of mortgage loans' performance is high with a mean of 3.92 and 0.277 for the standard deviation.

The grand mean for non-performing loans is 3.92 which indicates that on average, respondents agreed with most of the statements on the high scale as it relates to how non-performing loans is an appropriate measure of housing loan performance with 0.275 overall standard deviation. In this respect, it implies that the responses were clustered around the mean.

The connecting outcomes as in tables 4.8, 4.9 and 4.10 jointly indicated that the management innovation and process innovation which represents the components of innovation capability measures have diverse influence with non-performing loan ratio of accredited primary mortgage banks in Nigeria. The finding revealed that the management of primary mortgage banks possess the capability to implement new methods and procedures in mortgage lending process for loan origination and underwriting to mitigate against non-performing credit that might arises in future. The management also put in place the mechanism which ensure the strict compliance with CBN 10% not exceeding NPLs ratio as contained in the prudential guidelines and effective monitoring of mortgage loans' performance between 2019 and 2022 to maintain the NPLs threshold limit.

The finding also confirmed that the management of the primary mortgage banks have the leadership quality and ability to identify new innovations which leverage on information technology in the delivery of mortgage operation processes to gain competitive advantage in the mortgage finance industry. In addition, the primary mortgage banks in Nigeria have improved in loan processing turnaround time and by extension enhance their service performance at a reduced cost. Therefore, in view of the findings mentioned above, it implies that management innovation and process innovation may influence non-performing loan ratio of accredited primary mortgage banks in Nigeria individually. This supplied response to research question three has allowed the researcher to accomplish the third objective of this study.

4.2.1.4 Research Question Four: what is the effect of management innovation and process innovation on service efficiency of accredited primary mortgage banks in Nigeria?

The fourth objective of this study sought to establish the effect of management innovation and process innovation have effect on service efficiency of accredited primary mortgage banks in Nigeria. The innovation capability which is one the independent variable for this study has sub-variables namely management innovation and process innovation. The survey questionnaire was used as a research instrument to collect the data and the respondents were requested to indicate how high or low, they assessed the statement in relation to management innovation, process innovation and service efficiency of accredited primary mortgage banks in Nigeria.

Service efficiency was presented as one of the housing loan performance measures of primary mortgage banks in Nigeria adopting descriptive statistics and calculated for each statement to unfold the frequencies, percentages, mean and standard deviation on a four-point Likert type scale and allocated 1 for disagree (D), 2 for partially disagree (PD), 3 for partially

agree (PA), and 4 for agree (A). The findings for service efficiency revealed the resultant frequencies, percentages, mean and standard deviations as presented below.

Table 4.11: Descriptive Analysis of Responses on Service Efficiency

Service Efficiency	Level of Agreement (%) n=354					Average	
	D	PD	PA	A	TOTAL	Mean	SD
Mortgage banks providing effective and efficient service	4.5%	5.4%	18.3%	71.8%	100%	3.57	0.791
Customers' satisfaction in mortgage loan delivery	6.2%	8.5%	21.5%	63.8%	100%	3.43	0.889
Fast track mortgage loan application processing	9.3%	13.6%	20.9%	56.2%	100%	3.24	1.008
Facilitate homeownership loans disbursement	10.2%	12.1%	24.3%	53.4%	100%	3.21	1.011
Grand Mean and SD						3.36	0.925

Source: Field Survey Result, 2023

The analysis of Table 4.11 validated that 4.5% of the respondents rated PMBs providing effective and efficient service as low extent, 5.4% demonstrated partially low extent, 18.3% signified partially high extent while 71.8% certified high extent. On average, the respondents confirmed that Primary Mortgage Banks providing effective and efficient service is high with a mean of 3.57 and 0.791 for the standard deviation. The results in addition disclosed that

6.2% of the respondents rated Customers' satisfaction in mortgage loan delivery as low extent, 8.5% exhibited partially low extent, 21.5% established partially high extent while 63.8% proved high extent. On average, the respondents verified that Customers' satisfaction in mortgage loan delivery is moderately high with a mean of 3.43 and 0.889 for the standard deviation.

Also, the outcomes indicated that 9.3% of the respondents appraised Fast track mortgage loan application processing as low extent, 13.6% validated partially low extent, 20.9% demonstrated partially high extent while 56.2% signified high extent. On average, the respondents certified that Fast track mortgage loan application processing is moderately high with a mean of 3.24 and 1.008 for the standard deviation. In addition, confirmed that 10.2% of the respondents assessed Facilitate homeownership loan disbursement low extent, 12.1% disclosed partially low extent, 24.3% exhibited partially high extent while 53.4% established high extent. On average, the respondents proved that Facilitate homeownership loan disbursement is moderately high with a mean of 3.21 and 1.011 for the standard deviation.

The grand mean for service efficiency is 3.36 which shows that on average, respondents partially agreed with most of the statements on the high scale as regards to how service efficiency is a suitable measure of housing loan performance with 0.925 overall standard deviation. In this regard, it alludes to the fact that the responses were moderately clustered around the mean.

The associating results as in tables 4.8, 4.9 and 4.11 collectively revealed that the management innovation and process innovation which represents the elements of innovation capability measures have divergent effect with service efficiency of accredited primary mortgage banks in Nigeria. The finding showed that the management of mortgage banks have

embraced the use of digital mortgage services to develop the workflow strategies which delivers a better quality and efficiency service to its numerous customers.

Furthermore, most of the NHF contributors agreed that the primary mortgage banks in Nigeria have not done badly in the aspect of efficient services and mortgage loan delivery. However, average customers believed that the primary mortgage banks in most cases delay in mortgage loan application processing and homeownership loans' disbursements. Hence, in view of the findings mentioned above, it insinuates that management innovation and process innovation may have effect on service efficiency of accredited primary mortgage banks in Nigeria respectively. This provided response to research question four has enabled the researcher to attain the fourth objective of this study.

4.2.1.5 Research Question Five: how does mortgage financing and innovation capability influence housing loan performance of accredited primary mortgage banks in Nigeria?

The fifth objective of this study desired to investigate the influence of mortgage financing and innovation capability on housing loan performance of accredited primary mortgage banks in Nigeria. With the identification of two distinctive sets of independent variables namely mortgage financing and innovation capability, the survey questionnaire was used as a research instrument to collect the data for this study. Consequently, the respondents were requested to indicate how high or low they assessed the statement in relation to mortgage financing (long-term fund, household income and interest rate), innovation capability (management innovation and process innovation) and housing loan performance measures (access to finance, homeownership loans, non-performing loans, and service efficiency) of accredited primary mortgage banks in Nigeria. The findings for mortgage financing, innovation capability and the housing loan performance showed the resultant frequencies, percentages, mean and standard deviations as presented below.

Table 4.12: Descriptive Analysis of Responses on Mortgage Financing, Innovation Capability and Housing Loan Performance

Variables	No. of Items	Level of Agreement (%)					Average	
		LE	PLE	PHE	HE	TOTAL	Mean	SD
Mortgage Financing	37	2.7%	8.1%	24.3%	64.9%	100%	3.51	0.768
Innovation Capability	37	2.7%	5.4%	16.2%	75.7%	100%	3.65	0.716
Housing Loan Performance	196	6.1%	9.7%	23.5%	60.7%	100%	3.39	0.896
Grand Mean and SD							3.52	0.793

Source: Field Survey Result, 2023

The analysis of Table 4.12 validated that 2.7% of the respondents rated Mortgage financing as low extent, 8.1% demonstrated partially low extent, 24.3% signified partially high extent while 64.9% certified high extent. On average, the respondents confirmed that Mortgage financing is moderately high with a mean of 3.51 and 0.768 for the standard deviation. The results in addition disclosed that 2.7% of the respondents' rated Innovation capability as low extent, 5.4% exhibited partially low extent, 16.2% evaluated partially high extent while 75.7% established high extent. On average, the respondents proved that Innovation capability is high with a mean of 3.65 and 0.716 for the standard deviation. Also, the outcomes verified that 6.1% of the respondents' appraised Housing loan performance as low extent, 9.7% indicated partially low extent, 23.5% validated partially high extent while 60.7% rated high

extent. On average, the respondents signified that Housing loan performance is moderately high with a mean of 3.39 and 0.896 for the standard deviation.

The grand mean for mortgage financing, innovation capability and housing loan performance is 3.52 which indicates that on average, respondents agreed with most of the statements on the high scale as it relates to how mortgage financing, innovation capability and housing loan performance are appropriate measures of mortgage bank performance with 0.793 overall standard deviation. In this respect, it implies that the responses were clustered around the mean.

The connecting outcomes as in tables 4.3, 4.4, 4.5, 4.6, 4.7, 4.8, 4.9, 4.10, 4.11 and 4.12 jointly indicated that mortgage financing measures (long-term fund, household income and interest rate) and innovation capability measures (management innovation and process innovation) have diverse influence with the housing loan performance (access to finance, homeownership loans, non-performing loans, and service efficiency) of accredited primary mortgage banks in Nigeria. The finding revealed that the primary mortgage banks (PMBs) in Nigeria have access to long-term fund provided by Federal Mortgage Bank of Nigeria (FMBN) through the National Housing Fund (NHF) window on behalf of customers contributing into the Fund for homeownership at affordable interest rate. Also, established that income earn by individual household play a major role in which the primary mortgage banks uses in evaluating the mortgage loan applications with a view to determining the housing loan affordability. In addition to these, the NHF customer/individual must meet the basic requirements for Credit Appraisal (CA) which includes 1/3 of monthly income global best practice for mortgage lending to establish loan affordability and repayment.

The finding revealed that the management of primary mortgage banks possess the capability to implement new methods and procedures in mortgage lending process for loan origination

and underwriting to mitigate against non-performing credit that might arise in future. Also, confirmed that the management of the primary mortgage banks have the leadership quality and ability to identify new innovations which leverage on information technology in the delivery of mortgage operation processes to gain competitive advantage in the mortgage finance industry.

With reference to housing loan performance, the findings showed that the inability to have access to mortgage credit from primary mortgage banks by NHF customers/individuals is attributed to inadequate household income in Nigeria and coupled with the stringent conditions attached to mortgage loans. Also, proved that the primary mortgage banks in Nigeria have increased the volume of homeownership loans granted to qualified mortgage loan applicants through the NHF loan channel between 2019 and 2022. However, the improvement in homeownership loan volume depends on the availability of long-term fund to ensure liquidity and sustainability of mortgage banks' operations.

Furthermore, the management have put in place the mechanism which ensure the strict compliance with CBN 10% not exceeding NPLs ratio as contained in the prudential guidelines and effective monitoring of mortgage loans' performance between 2019 and 2022 to maintain the NPLs threshold limit. Also, have embraced the use of digital mortgage services to develop the workflow strategies which delivers a better quality and efficiency service to its numerous customers. However, the finding as claimed by NHF Customers established that the primary mortgage banks in Nigeria have not provided effective and efficient service that facilitate homeownership loan disbursement to their customers. In addition, the NHF Contributors for instance experiences delay in mortgage loan application processing and lack of customers' satisfaction in mortgage loan delivery.

Following the findings mentioned above, it implies that mortgage financing and innovation capability may influence the housing loan performance of accredited primary mortgage banks in Nigeria individually. This supplied response to research question five has allowed the researcher to accomplish the fifth objective of this study.

4.2.1.6 Research Question Six: what moderating effect does government housing policy has on the functional relationship between mortgage financing, innovation capability and housing loan performance of accredited primary mortgage banks in Nigeria?

The sixth objective of this study sought to evaluate the moderating effect of government housing policy on functional relationship between mortgage financing, innovation capability and housing loan performance of accredited primary mortgage banks in Nigeria. With the identification of two distinctive sets of independent variables namely mortgage financing and innovation capability, the survey questionnaire was used as a research instrument to collect the data for this study. Subsequently, the respondents were requested to indicate how high or low they assessed the statement in relation to mortgage financing (long-term fund, household income and interest rate), innovation capability (management innovation and process innovation), government housing policy and housing loan performance measures (access to finance, homeownership loans, non-performing loans, and service efficiency) of accredited primary mortgage banks in Nigeria. The findings for government housing policy revealed the resultant frequencies, percentages, mean and standard deviations as presented below.

Table 4.13: Descriptive Analysis of Responses on Government Housing Policy

Government Housing Policy	Level of Agreement (%) n=37					Average	
	LE	PLE	PHE	HE	TOTAL	Mean	SD
National Housing Policy (NHP) programmes	0.0%	0.0%	8.1%	91.9%	100%	3.92	0.277
Regulatory authority operational guidelines	0.0%	0.0%	10.8%	89.2%	100%	3.89	0.315
CBN credit policy on housing finance	0.0%	0.0%	8.1%	91.9%	100%	3.92	0.277
Mortgage industry regulation changes	0.0%	0.0%	5.4%	94.6%	100%	3.95	0.229
Grand Mean and SD						3.92	0.275

Source: Field Survey Result, 2023

The analysis of Table 4.12 indicated that 8.1% of the respondents rated National Housing Policy (NHP) programmes partially high extent while 91.9% validated high extent. On average, the respondents demonstrated that National Housing Policy (NHP) is high with a mean of 3.92 and 0.277 for the standard deviation. The outcomes also signified that 10.8% of the respondents rated Regulatory authority operational guidelines partially high extent while 89.2% certified high extent. On average, the respondents confirmed that Regulatory authority operational guidelines is high with a mean of 3.89 and 0.315 for the standard deviation.

In addition, the results disclosed that 8.1% of the respondents rated CBN credit policy on housing finance partially high extent while 91.9% exhibited high extent. On average, the respondents evaluated that CBN credit policy on housing finance is high with a mean of 3.92 and 0.277 for the standard deviation. Also, established that 5.4% of the respondents proved that Mortgage industry regulation changes partially high extent while 94.6% verified high extent. On average, the respondents indicated that Mortgage industry regulation changes is high with a mean of 3.95 and 0.229 for the standard deviation.

The grand mean for government housing policy is 3.92 which shows that on average, respondents agreed with most of the statements on the high scale as regards to how government housing policy is a suitable moderator between mortgage financing, innovation capability and the housing loan performance with 0.275 overall standard deviation. In this respect, it alludes to the fact that the responses were clustered around the mean.

The associating results as in tables 4.3, 4.4, 4.5, 4.6, 4.7, 4.8, 4.9, 4.10, 4.11, 4.12 and 4.13 collectively revealed that mortgage financing measures (long-term fund, household income and interest rate) and innovation capability measures (management innovation and process innovation) have divergent effect with the housing loan performance (access to finance, homeownership loans, non-performing loans, and service efficiency) of accredited primary mortgage banks in Nigeria. The finding showed that the primary mortgage banks (PMBs) in Nigeria have access to long-term funds provided by Federal Mortgage Bank of Nigeria (FMBN) through the National Housing Fund (NHF) window on behalf of customers contributing into the Fund for homeownership at affordable interest rate. Also, established that income earn by individual household play a major role in which the primary mortgage banks uses in evaluating the mortgage loan applications with a view to determining the housing loan affordability. In addition to these, the NHF customer/individual must meet the

basic requirements for Credit Appraisal (CA) which includes 1/3 of monthly income global best practice for mortgage lending to establish loan affordability and repayment.

The finding revealed that the management of primary mortgage banks possess the capability to implement new methods and procedures in mortgage lending process for loan origination and underwriting to mitigate against non-performing credit that might arise in future. Also, confirmed that the management of the primary mortgage banks have the leadership quality and ability to identify new innovations which leverage on information technology in the delivery of mortgage operation processes to gain competitive advantage in the mortgage finance industry.

With reference to housing loan performance, the findings showed that the inability to have access to mortgage credit from primary mortgage banks by NHF customers/individuals is attributed to inadequate household income in Nigeria and coupled with the stringent conditions attached to mortgage loans. Also, proved that the primary mortgage banks in Nigeria have increased the volume of homeownership loans granted to qualified mortgage loan applicants through the NHF loan channel between 2019 and 2022. However, the improvement in homeownership loan volume depends on the availability of long-term fund to ensure liquidity and sustainability of mortgage banks' operations.

Furthermore, the management have put in place the mechanism which ensure the strict compliance with CBN 10% not exceeding NPLs ratio as contained in the prudential guidelines and effective monitoring of mortgage loans' performance between 2019 and 2022 to maintain the NPLs threshold limit. Also, have embraced the use of digital mortgage services to develop the workflow strategies which delivers a better quality and efficiency service to its numerous customers. However, the finding as claimed by NHF Customers established that the primary mortgage banks in Nigeria have not provided effective and

efficient service that facilitate homeownership loan disbursement to their customers. In addition, the NHF Contributors for instance experiences delay in mortgage loan application processing and lack of customers' satisfaction in mortgage loan delivery.

Concerning the government housing policy as a moderating variable, the findings indicated high responses with respect to National housing Policy (NHP) programmes, Regulatory authority operational guidelines, CBN credit policy on housing finance and Mortgage industry regulation changes. In addition, the finding also testified that the primary mortgage banks are following the Central Bank of Nigeria (CBN) directives of implementing the housing policy of 70% minimum loanable funds for the creation of mortgage assets to reduce the housing deficit which currently estimated at 22 million in Nigeria¹. Consequential to the findings mentioned above, it insinuates that government housing policy may have moderating effect on the functional relationship between mortgage financing, innovation capability and the housing loan performance of accredited primary mortgage banks in Nigeria respectively. This provided response to research question six has enabled the researcher to attain the sixth objective of this study.

4.2.2 Hypotheses

In addition to the descriptive analyses of the data carried out to achieve the objectives of this study, it is necessary to test the hypotheses one to five stated in chapter one of this study employing multiple regression whereas the hierarchical regression would be deployed to test the hypothesis six and their associated outcomes reported in consonance with each hypothesis tested. The support of Statistical Package for Social Sciences (SPSS version 25) would be applied for the data analyses.

4.2.2.1 Hypothesis One

H₀₁: Long-term fund, household income and interest rate do not have significant influence on access to finance of accredited primary mortgage banks in Nigeria.

The linear multiple regression analysis was engaged to test the null hypothesis one as indicated in the regression model. The long-term fund, household income and interest rate which comprise the elements of independent variable mortgage financing were created by including responses of all the items applied to rate the variables respectively. The access to finance forms the dependent variable and it was produced by adding responses of all the items used to assess the variable. The outcomes of the multiple regression analysis are presented in the table below.

Table 4.14: Summary of Multiple Regression Analysis for the Influence of Long-Term Fund, Household Income, and Interest Rate on Access to Finance of Accredited Primary Mortgage Banks in Nigeria

Model	Beta	t	Sig.	R	R ²	Adj.R ²	Anova Sig.	F(df)
(Constant)	1.733	2.982	.005	.814	.663	.632	.000	21.595(3,33)
Long-Term Fund	.226	1.005	.322					
Household Income	-.564	-3.128	.004					
Interest Rate	.357	1.438	.160					

a. Dependent Variable: Access to Finance

b. Predictors: (Constant), Long-Term Fund, Household Income, Interest Rate

Source: Researcher's SPSS Regression Analysis Results, 2023

Table 4.14 above unfolded the outcomes of multiple regression analysis for the influence of long-term fund, household income and interest rate on access to finance of accredited primary mortgage banks in Nigeria. The table reveals a model fit which demonstrates how the model equation fits the data. From the table, the value "R" expressed to be one measure of the

quality of the prediction of the dependent variable which is access to finance and its value of 0.814 reveals a good level of prediction. The model summary makes known that the coefficient of determination (R^2) of the main model of this study was 0.663 which specifies that about 66.3% disparity of the access to finance is associated with long-term fund, household income and interest rate, while the remaining 33.7% change in the access to finance can be ascribed to other elements not covered in this model.

Taking into consideration a multiple regression analysis, the Adjusted R^2 was used to confirm the predictive power of the research's model. Going by the results, long-term fund, household income and interest rate have positive and high relationship with access to finance of accredited primary mortgage banks ($R = 0.814$, $p = 0.000$). Consequently, the adjusted coefficient of determination ($Adj.R^2$) of 0.632 indicated that long-term fund, household income and interest rate described 63.2% of the variance in access to finance of the accredited primary mortgage banks under study while the remaining 36.8% difference in access to finance is illustrated by other exogenic variable divergent from long-term fund, household income and interest rate examined in this study. This outcome stipulates that long-term fund, household income and interest rate have influence of 63.2% on access to finance of the accredited primary mortgage banks in Nigeria.

In addition, Table 4.14 gave the results of ANOVA (Overall model significance) for regression test which suggested that the combined long-term fund, household income and interest rate have a significant influence on access to finance of accredited primary mortgage banks in Nigeria. This can be elucidated by the F-value of 21.595 and p-value of 0.000 which is statistically significant at 95% confidence interval. The table shows that the independent variables statistically significantly predict the dependent variable at $F(3, 33) = 21.595$, $p < 0.05$ which indicates that the regression model is a good fit of the data. Therefore, the outcome presumed that long-term fund, household income and interest rate embraced by

accredited primary mortgage banks in Nigeria have influence on access to finance and was statistically significant at 95% confidence level.

Also, Table 4.14 designated the results of regression coefficients for long-term fund, household income and interest rate in connection with the access to finance of accredited primary mortgage banks. The outcomes indicated that long-term fund and interest rate have a positive effect, whereas the household income reported a negative effect on access to finance. Besides, analysis from the regression coefficient results established that at 95% confidence level, long-term fund ($\beta = 0.226$, $p = 0.322$), and interest rate ($\beta = 0.357$, $p = 0.160$) were statistically insignificant in relation to the access to finance of accredited primary mortgage banks in Nigeria while the household income ($\beta = -0.564$, $p = 0.004$) was statistically significant as the p-value of 0.004 less than 0.05 the acceptable threshold.

Considering that the long-term fund and interest rate were statistically insignificant regarding access to finance, both were removed from the model. Derived from the coefficient of regression table, the regression model is restated as follows:

$$ATF = 1.733 - 0.564HI \dots \dots \dots \text{Eq. (i)}$$

Where: ATF = Access to Finance

HI = Household Income

In accordance with the regression equation above, assuming that all elements were constant at zero, access to finance of accredited primary mortgage banks in Nigeria is 1.733. As well, the outcome reveals that accepting all other independent variables at zero, one naira decrease in household income will lead to 0.564 decrease in access to finance of accredited primary mortgage banks in Nigeria. Considering the result, the household income has a low relative effect with a coefficient of -0.564 and a t-value of -3.128. Hence, this study can conclude that

long-term fund, household income and interest rate significantly influence the access to finance of accredited primary mortgage banks in Nigeria.

On the strength of this result (Adj. $R^2 = 0.632$, $F(3, 33) = 21.595$, $p = 0.000$), this study rejects the null hypothesis one (H_01) which states that long-term fund, household income and interest rate does not have significant influence on access to finance of accredited primary mortgage banks in Nigeria.

4.2.2.2 Hypothesis Two

H₀₂: There is no significant effect of long-term fund, household income and interest rate on homeownership loan volume of accredited primary mortgage banks in Nigeria.

To test the null hypothesis two, the linear multiple regression analysis was employed as indicated in the regression model. The long-term fund, household income and interest rate which account for the components of independent variable mortgage financing were generated by adding responses of all the items utilized to appraise the variables individually. The homeownership loans make up the dependent variable and it was originated by including responses of all the items implemented to analyse the variable. The results of the multiple regression analysis are presented in the table below.

Table 4.15: Summary of Multiple Regression Analysis for the Effect of Long-Term Fund, Household Income, and Interest Rate on Homeownership Loans of Accredited Primary Mortgage Banks in Nigeria

Model	Beta	t	Sig.	R	R ²	Adj.R ²	Anova Sig.	F(df)
(Constant)	2.490	5.456	.000	.790	.624	.590	.000	18.274(3,33)
Long-Term Fund	.266	1.510	.141					
Household Income	.085	.598	.554					
Interest Rate	.046	.238	.813					

a. Dependent Variable: Homeownership Loans

b. Predictors: (Constant), Long-Term Fund, Household Income, Interest Rate

Source: Researcher's SPSS Regression Analysis Results, 2023

Table 4.15 above explained the results of multiple regression analysis for the effect of long-term fund, household income and interest rate on homeownership loan volume of accredited primary mortgage banks in Nigeria. The table shows a model fit which specifies how the model equation fits the data. From the table, the value "R" clarified to be one measure of the quality of the prediction of the dependent variable which is homeownership loans and its value of 0.790 presents a good level of prediction. The model summary ascertained that the coefficient of determination (R^2) of the main model of this study was 0.624 which describes that about 62.4% discrepancy of homeownership loan volume is attributable to long-term fund, household income and interest rate, while the remaining 37.6% variation in homeownership loan volume can be assigned to other factors not covered in this model.

Keeping in mind a multiple regression analysis, the Adjusted R^2 was employed to authenticate the predictive power of the study's model. From the outcomes, long-term fund, household income and interest rate have positive and high significant relationship with homeownership loan volume of accredited primary mortgage banks ($R = 0.790$, $p = 0.000$). Therefore, the adjusted coefficient of determination ($Adj.R^2$) of 0.590 validated that long-term fund, household income and interest rate described 59% of the differential in homeownership loan volume of the accredited primary mortgage banks under study while the remaining 41% gap in homeownership loan volume is explained by other exogenous variable contrary from long-term fund, household income and interest rate investigated in this study. This result state clearly that long-term fund, household income and interest rate have effect of 59% on homeownership loan volume of the accredited primary mortgage banks in Nigeria.

Furthermore, Table 4.15 spell out the outcomes of ANOVA (Overall model significance) for regression test which delivered that the combined long-term fund, household income and

interest rate have a significant effect on homeownership loan volume of accredited primary mortgage banks in Nigeria. This can be verified by the F-value of 18.274 and p-value of 0.000 which is statistically significant at 95% confidence interval. The table shows that the independent variables statistically significantly predict the dependent variable at $F(3, 33) = 18.274, p < 0.05$ which indicates that the regression model is a good fit of the data. For this reason, the result posited that long-term fund, household income and interest rate adopted by accredited primary mortgage banks in Nigeria have effect on homeownership loan volume and was statistically significant at 95% confidence level.

Accordingly, Table 4.15 gave an explanation on the outcomes of regression coefficients for long-term fund, household income and interest rate in relation to the homeownership loan volume of accredited primary mortgage banks. The results disposed that long-term fund, household income and interest rate have a positive effect on homeownership loan volume. On top of that, analysis from the regression coefficient outcomes substantiated that at 95% confidence level, long-term fund ($\beta = 0.266, p = 0.141$), household income ($\beta = 0.085, p = 0.554$) and interest rate ($\beta = 0.046, p = 0.813$) were statistically insignificant as regards to the homeownership loan volume of accredited primary mortgage banks in Nigeria.

Since the long-term fund, household income and interest rate were statistically insignificant pertaining to homeownership loan volume, they were removed from the model since the variables have no significant effect on homeownership loan volume of the accredited primary mortgage banks under examination. Founded from the coefficient of regression table, the regression model is restated as follows:

$$HL = 2.490 \dots \dots \dots \text{Eq. (ii)}$$

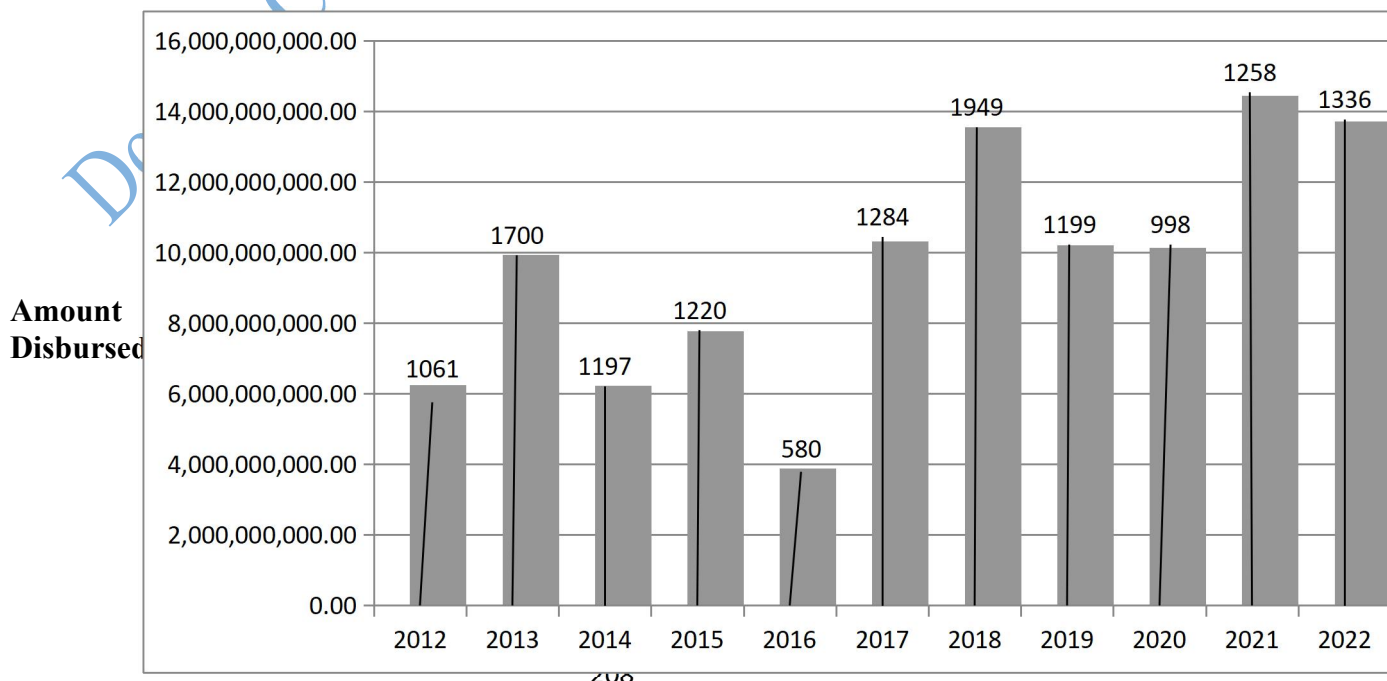
Where: HL = Homeownership Loans.

In agreement with the regression equation above, predicating that all components were constant at zero, homeownership loan volume of accredited primary mortgage banks in Nigeria is 2.490.

Going by the overall outcomes, since the p-value in ANOVA result indicates that the combined long-term fund, household income and interest rate statistically significantly predict the homeownership loan volume of accredited primary mortgage banks in Nigeria as revealed in Table 4.15, this study can attest that long-term fund, household income and interest rate have effect on homeownership loan volume of accredited primary mortgage banks in Nigeria. On the strength of this result (Adj. $R^2 = 0.590$, $F(3, 33) = 18.274$, $p = 0.000$), this study rejects the null hypothesis two (H_02) which states that there will be no significant effect of long-term fund, household income and interest rate on homeownership loan volume of accredited primary mortgage banks in Nigeria.

Consequently, the secondary data on National Housing Fund (NHF) loan disbursements to primary mortgage banks in Nigeria from 2012 to 2022 was obtained from Federal Mortgage Bank of Nigeria (FMBN) to further give support to the multiple regression analysis results.

NHF Loan Disbursements to PMBs



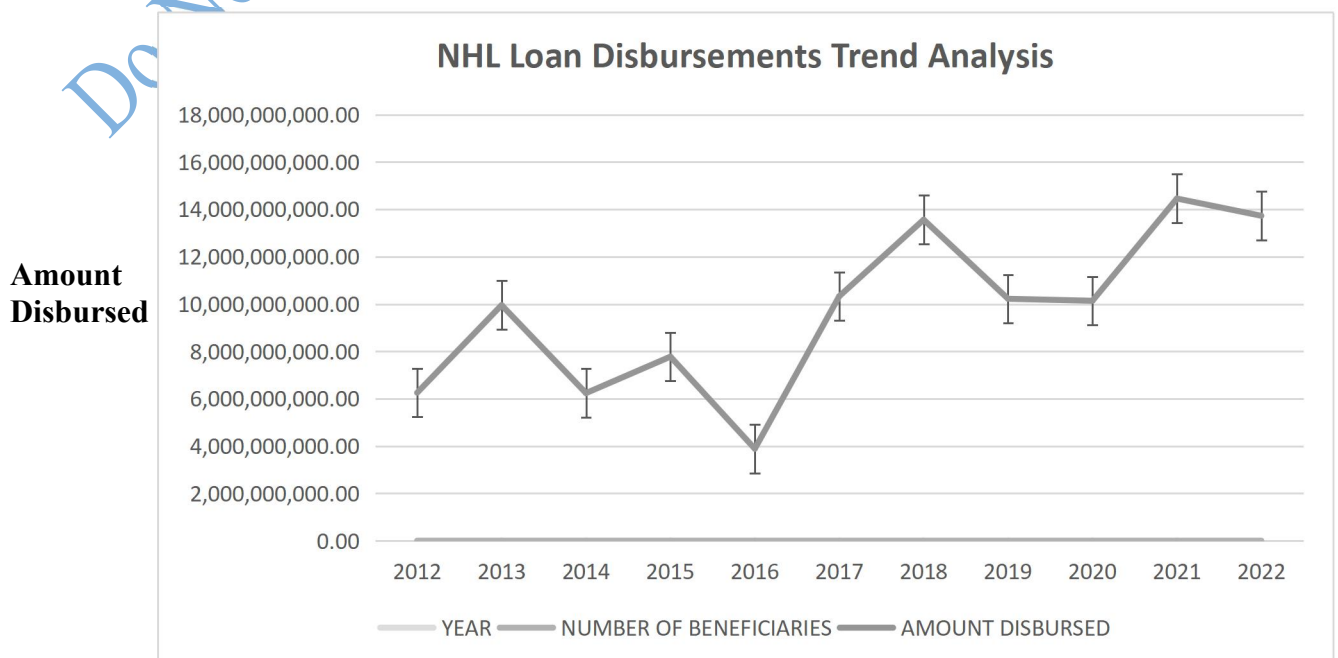
Year

Figure 4.1: NHF Loan Disbursements to PMBs Bar Chart

Source: FMBN Loan Administration Group H/O Abuja Classified Data, 2023

Table 3.6 (see page 153) contained the data used in plotting the above bar chart of the NHF loan disbursements to PMBs from 2012 to 2022. From the analysis in the table, year 2016 has the lowest NHF disbursement of ₦3,887,865,440 for 580 beneficiaries while the year 2021 has the highest disbursement of ₦14,455,611,405 for 1,258 beneficiaries. Hence, the total NHF loan disbursed by FMBN to PMBs from 2012 to 2022 was ₦106,541,101,208 for 13,782 beneficiaries. Considering the total of 129,163 (see page 142) NHF Scheme registered customers with FMBN Ikeja, indicates that only 10.67% have benefited from the NHF loan in Nigeria during the period under investigation. This finding further validated the multiple regression result that long-term fund, household income and interest rate have significant effect on homeownership loan volume of accredited primary mortgage banks in Nigeria.

The trend analysis result as shown in Figure 4.2 revealed fluctuations in total amount of NHF loan disbursements by FMBN to PMBs from 2012 to 2018, stable in 2019 to 2020, increased drastically in 2021 and decline in 2022 with a small margin. This implies that a lot of factors are responsible for NHF homeownership loan disbursement by FMBN to PMBs in Nigeria.



Year

Figure 4.2: NHF Loan Disbursements to PMBs Trend Analysis

Source: FMBN Loan Administration Group H/O Abuja Classified Data, 2023

4.2.2.3 Hypothesis Three

H₀₃: Management innovation and process innovation do not have significant influence on non-performing loan ratio of accredited primary mortgage banks in Nigeria.

To evaluate the null hypothesis three, the linear multiple regression analysis was used as revealed in the regression model. The management innovation and process innovation which represent the constituents of independent variable innovation capability were initiated by including responses of all the items applied to gauge the variables separately. The non-performing loans compose the dependent variable, and it was created by adding responses of all the items employed to estimate the variable. The reactions of the multiple regression analysis are presented in the table below.

Table 4.16: Summary of Multiple Regression Analysis for the Influence of Management Innovation and Process Innovation on Non-Performing Loans of Accredited Primary Mortgage Banks in Nigeria

Model	Beta	t	Sig.	R	R ²	Adj.R ²	Anova Sig.	F(df)
(Constant)	2.554	8.296	.000	.774	.599	.575	.000	25.365(2,34)
Management Innovation	.127	1.885	.068					
Process Innovation	.242	1.912	.064					

a. Dependent Variable: Non-Performing Loans

b. Predictors: (Constant), Management Innovation, Process Innovation

Source: Researcher's SPSS Regression Analysis Results, 2023

Table 4.16 above unfolded the outcomes of multiple regression analysis for the influence of management innovation and process innovation on non-performing loan ratio of accredited primary mortgage banks in Nigeria. The table reveals a model fit which demonstrates how the model equation fits the data. From the table, the value “R” expressed to be one measure of the quality of the prediction of the dependent variable which is non-performing loans and its value of 0.774 reveals a good level of prediction. The model summary makes known that the coefficient of determination (R^2) of the main model of this study was 0.599 which specifies that about 59.9% disparity of the non-performing loans is associated with management innovation and process innovation, while the remaining 40.1% change in the non-performing loans can be ascribed to other elements not covered in this model.

Taking into consideration a multiple regression analysis, the Adjusted R^2 was used to confirm the predictive power of the research’s model. Going by the results, management innovation and process innovation have positive and high relationship with non-performing loan ratio of accredited primary mortgage banks ($R = 0.774$, $p = 0.000$). Consequently, the adjusted coefficient of determination ($Adj.R^2$) of 0.575 indicated that management innovation and process innovation described 57.5% of the variance in non-performing loan ratio of the accredited primary mortgage banks under study while the remaining 42.5% difference in non-performing loans is illustrated by other exogenic variable divergent from management innovation and process innovation examined in this study. This outcome stipulates that management innovation and process innovation have influence of 57.5% on non-performing loan ratio of the accredited primary mortgage banks in Nigeria.

In addition, Table 4.16 gave the results of ANOVA (Overall model significance) for regression test which suggested that the combined management innovation and process innovation have a significant influence on non-performing loan ratio of accredited primary mortgage banks in Nigeria. This can be elucidated by the F-value of 25.365 and p-value of

0.000 which is statistically significant at 95% confidence interval. The table shows that the independent variables statistically significantly predict the dependent variable at $F(2, 34) = 25.365$, $P < 0.05$ which indicates that the regression model is a good fit of the data. Therefore, the outcome presumed that management innovation and process innovation embraced by accredited primary mortgage banks in Nigeria have influence on non-performing loans and was statistically significant at 95% confidence level.

Also, Table 4.16 designated the results of regression coefficients for management innovation and process innovation in connection with the non-performing loans of accredited primary mortgage banks. The outcomes indicated that management innovation and process innovation have a positive effect on non-performing loans. Besides, analysis from the regression coefficient results established that at 95% confidence level, management innovation ($\beta = 0.127$, $p = 0.068$) and process innovation ($\beta = 0.242$, $p = 0.064$) were statistically insignificant in relation to the non-performing loan ratio of accredited primary mortgage banks in Nigeria.

Considering that the management innovation and process innovation were statistically insignificant regarding non-performing loans, both were removed from the model. Derived from the coefficient of regression table, the regression model is restated as follows:

$$NPL = 2.554 \dots \dots \dots \text{Eq. (iii)}$$

Where: NPL = Non-Performing Loans

In accordance with the regression equation above, assuming that all elements were constant at zero, non-performing loan ratio of accredited primary mortgage banks in Nigeria is 2.554.

Given the overall results, since the p-value in ANOVA outcome shows that the combined management innovation and process innovation statistically significantly predict the

non-performing loan ratio of accredited primary mortgage banks in Nigeria as indicated in Table 4.16, this study can affirm that management innovation and process innovation have influence on non-performing loan ratio of accredited primary mortgage banks in Nigeria. On the strength of this result (Adj. $R^2 = 0.575$, $F(2, 34) = 25.365$, $p = 0.000$), this study rejects the

null hypothesis three (H_03) which states that management innovation and process innovation does not have significant influence on non-performing loan ratio of accredited primary mortgage banks in Nigeria.

To verify the position of the multiple regression analysis result stated above, a secondary data on non-performing loan (NPL) ratio of primary mortgage banks from 2012 to 2022 was collected from Federal Mortgage Bank of Nigeria (see page 153).

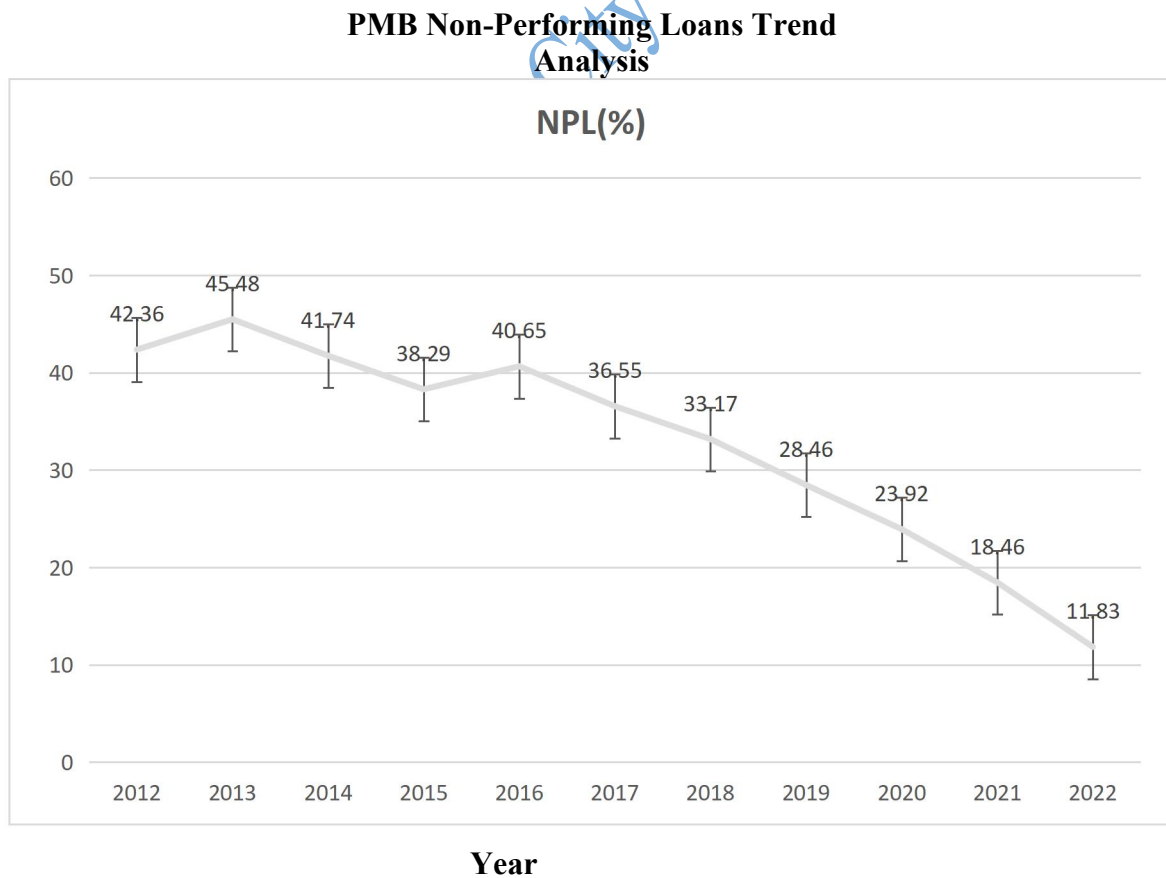


Figure 4.3: PMB Non-Performing Loans Trend Analysis
Source: FMBN Loan Administration Group H/O Abuja Classified Data, 2023

The trend analysis result as shown in Figure 4.3 demonstrated a continuous decrease in non-performing loan ratio of the primary mortgage banks in Federal Mortgage Bank's record from 2016 to 2022 but still below the CBN threshold limit of 10%. The NPL ratio being one of the housing loan performance measurements, reflected the innovation capability of the management of mortgage banks in loan origination, underwriting and effective monitoring of homeownership loan performance. This finding further confirmed the multiple regression analysis result that management innovation and process innovation have significant influence on non-performing loan (NPL) ratio of accredited primary mortgage banks in Nigeria.

4.2.2.4 Hypothesis Four

H₀₄: There is no significant effect of management innovation and process innovation on service efficiency of accredited primary mortgage banks in Nigeria.

The linear multiple regression analysis was engaged to test the null hypothesis four as indicated in the regression model. The management innovation and process innovation which comprise the elements of independent variable innovation capability were created by adding responses of all the items utilized to rate the variables respectively. The service efficiency form the dependent variable and it was produced by including responses of all the items implemented to assess the variable. The outcomes of the multiple regression analysis are presented in the table below.

Table 4.17: Summary of Multiple Regression Analysis for the Effect of Management Innovation and Process Innovation on Service Efficiency of Accredited Primary Mortgage Banks in Nigeria

Model	Beta	t	Sig.	R	R ²	Adj.R ²	Anova Sig.	F(df)
(Constant)	1.103	1.510	.140	.382	.146	.096	.068	2.909(2,34)
Management	.289	1.809	.079					

Innovation

Process Innovation -.220 -.732 .469

a. Dependent Variable: Service Efficiency

b. Predictors: (Constant), Management Innovation, Process Innovation

Source: Researcher's SPSS Regression Analysis Results, 2023

Table 4.17 above explained the results of multiple regression analysis for the effect of management innovation and process innovation on service efficiency of accredited primary mortgage banks in Nigeria. The table shows a model fit which specifies how the model equation fits the data. From the table, the value "R" clarified to be one measure of the quality of the prediction of the dependent variable which is service efficiency and its value of 0.382 presents a fair level of prediction. The model summary ascertained that the coefficient of determination (R^2) of the main model of this study was 0.146 which describes that about 14.6% discrepancy of service efficiency is attributable to management innovation and process innovation, while the remaining 85.4% variation in service efficiency can be assigned to other factors not covered in this model.

Keeping in mind a multiple regression analysis, the Adjusted R^2 was employed to authenticate the predictive power of the study's model. From the outcomes, management innovation and process innovation have weak positive statistically insignificant relationship with service efficiency of accredited primary mortgage banks ($R = 0.382$, $p = 0.068$). Therefore, the adjusted coefficient of determination ($Adj.R^2$) of 0.096 validated that management innovation and process innovation described 9.6% of the differential in service efficiency of the accredited primary mortgage banks under study while the remaining 90.4% gap in service efficiency is explained by other exogenous variable contrary from management innovation and process innovation investigated in this study. This result state clearly that management innovation and process innovation have effect of 9.6% on service efficiency of

the accredited primary mortgage banks in Nigeria. In this case, further studies should be carried out to identify other factors that affect service efficiency and under what condition would the management innovation and process innovation of the accredited primary mortgage banks affect service efficiency.

Furthermore, Table 4.17 spell out the outcomes of ANOVA (Overall model significance) for regression test which delivered that the combined management innovation and process innovation have no significant effect on service efficiency of accredited primary mortgage banks in Nigeria. This can be verified by the F-value of 2.909 and p-value of 0.068 which is statistically insignificant at 95% confidence interval. The table shows that the independent variables statistically insignificantly predict the dependent variable at $F(2, 34) = 2.909$, $P > 0.05$ which indicates that the regression model is not a good fit of the data. For this reason, the result posited that management innovation and process innovation adopted by accredited primary mortgage banks in Nigeria have no effect on service efficiency and was statistically insignificant at 95% confidence level.

Accordingly, Table 4.17 gave an explanation on the outcomes of regression coefficients for management innovation and process innovation in relation to the service efficiency of accredited primary mortgage banks. The results disposed that management innovation and process innovation have both positive and negative effect on service efficiency. On top of that, analysis from the regression coefficient outcomes substantiated that at 95% confidence level, management innovation ($\beta = 0.289$, $t = 1.809$, $p = 0.079$) and process innovation ($\beta = -0.220$, $t = -0.732$, $p = 0.469$) were statistically insignificant as regards to the service efficiency of accredited primary mortgage banks in Nigeria.

Because the management innovation and process innovation were statistically insignificant pertaining to service efficiency, they were removed from the model since the variables have

no significant effect on service efficiency of the accredited primary mortgage banks under examination. Founded from the coefficient of regression table, the regression model is restated as follows:

$$SE = 1.103 \dots \dots \dots \text{Eq. (iv)}$$

Where: SE = Service Efficiency.

In agreement with the regression equation above, predicating that all components were constant at zero, service efficiency of accredited primary mortgage banks in Nigeria is 1.103.

Going by the overall outcomes, since it has been proved that management innovation and process innovation have no statistically significant effect on service efficiency of accredited primary mortgage banks in Nigeria as revealed by result in Table 4.17, this study can attest that management innovation and process innovation does not have effect on service efficiency of accredited primary mortgage banks in Nigeria. On the strength of this result (Adj. $R^2 = 0.096$, $F(2, 34) = 2.909$, $p \in 0.068$), this study fails to reject the null hypothesis four (H_04) which states that there will be no significant effect of management innovation and process innovation on service efficiency of accredited primary mortgage banks in Nigeria.

4.2.2.5 Hypothesis Five

H₀₅: Mortgage financing and innovation capability do not have significant influence on housing loan performance of accredited primary mortgage banks in Nigeria.

To test the null hypothesis five, the linear multiple regression analysis was employed as revealed in the regression model. The mortgage financing and innovation capability served as the independent variables while the housing loan performance served as the dependent variable. Hence, they were produced by including responses of all the items employed to

appraise the variables individually. The results of the multiple regression analysis are presented in the table below.

Table 4.18: Summary of Multiple Regression Analysis for the Influence of Mortgage Financing and Innovation Capability on Housing Loan Performance of Accredited Primary Mortgage Banks in Nigeria

Model	Beta	t	Sig.	R	R ²	Adj.R ²	Anova Sig.	F(df)
(Constant)	-.331	-.813	.422	.748	.559	.533	.000	21.538(2,34)
Mortgage Financing	.847	3.734	.001					
Innovation Capability	-.221	-.909	.370					

a. Dependent Variable: Housing Loan Performance

b. Predictors: (Constant), Mortgage Financing, Innovation Capability

Source: Researcher's SPSS Regression Analysis Results, 2023

Table 4.18 above unfolded the outcomes of multiple regression analysis for the influence of mortgage financing and innovation capability on housing loan performance of accredited primary mortgage banks in Nigeria. The table reveals a model fit which demonstrates how the model equation fits the data. From the table, the value "R" expressed to be one measure of the quality of the prediction of the dependent variable which is housing loan performance and its value of 0.748 shows a good level of prediction. The model summary makes known

that the coefficient of determination (R^2) of the main model of this study was 0.559 which specifies that about 55.9% disparity of the housing loan performance is associated with mortgage financing and innovation capability, while the remaining 44.1% change in the housing loan performance can be ascribed to other elements not covered in this model.

Taking into consideration a multiple regression analysis, the Adjusted R^2 was used to confirm the predictive power of the research's model. Going by the results, mortgage financing and innovation capability have positive and high relationship with housing loan performance of accredited primary mortgage banks ($R = 0.748$, $p = 0.000$). Consequently, the adjusted coefficient of determination ($Adj.R^2$) of 0.533 indicated that mortgage financing and innovation capability described 53.3% of the variance in housing loan performance of the accredited primary mortgage banks under study while the remaining 46.7% difference in housing loan performance is illustrated by other exogenic variable divergent from mortgage financing and innovation capability examined in this study. This outcome stipulates that mortgage financing and innovation capability have influence of 53.3% on housing loan performance of the accredited primary mortgage banks in Nigeria.

In addition, Table 4.18 gave the results of ANOVA (Overall model significance) for regression test which suggested that the combined mortgage financing and innovation capability have a significant influence on housing loan performance of accredited primary mortgage banks in Nigeria. This can be elucidated by the F-value of 21.538 and p-value of 0.000 which is statistically significant at 95% confidence interval. The table shows that the independent variables statistically significantly predict the dependent variable at $F(2, 34) = 21.538$, $p < 0.05$ which indicates that the regression model is a good fit of the data. Therefore, the outcome presumed that mortgage financing and innovation capability embraced by accredited primary mortgage banks in Nigeria have influence on housing loan performance and was statistically significant at 95% confidence level.

Also, Table 4.18 designated the results of regression coefficients for mortgage financing and innovation capability in connection with the housing loan performance of accredited primary mortgage banks. The outcomes indicated that mortgage financing has a positive effect, whereas the innovation capability reported a negative effect on housing loan performance. Besides, analysis from the regression coefficient results established that at 95% confidence level, mortgage financing ($\beta = 0.847$, $p = 0.001$) was statistically significant in relation to the housing loan performance of accredited primary mortgage banks in Nigeria while the innovation capability ($\beta = -0.221$, $p = 0.370$) was statistically insignificant as the p-value of 0.370 greater than 0.05 the acceptable threshold.

Considering that the innovation capability was statistically insignificant regarding housing loan performance, it was removed from the model. Derived from the coefficient of regression table, the regression model is restated as follows:

$$HLP = -0.331 + 0.847MF \dots\dots\dots \text{Eq. (v)}$$

Where: HLP = Housing Loan Performance

MF = Mortgage Financing

In accordance with the regression equation above, assuming that all elements were constant at zero, housing loan performance of accredited primary mortgage banks in Nigeria is -0.331. As well, the outcome reveals that accepting all other independent variable at zero, a unit increase in mortgage financing will lead to 0.847 increase in housing loan performance of accredited primary mortgage banks in Nigeria. Considering the result, the mortgage financing has a high relative effect with a coefficient of 0.847 and a t-value of 3.734. Hence, this study can conclude that mortgage financing and innovation capability significantly influence the housing loan performance of accredited primary mortgage banks in Nigeria.

On the strength of this result (Adj. $R^2 = 0.533$, $F(2, 34) = 21.538$, $p = 0.000$), this study rejects the null hypothesis five (H_{05}) which states that mortgage financing and innovation capability does not have significant influence on housing loan performance of accredited primary mortgage banks in Nigeria.

4.2.2.6 Hypothesis Six

H₀₆: There is no significant moderating effect of government housing policy on the functional relationship between mortgage financing, innovation capability and the housing loan performance of accredited primary mortgage banks in Nigeria.

To evaluate the null hypothesis six, the hierarchical multiple regression analysis was used as revealed in the regression model and the analysis was done in hierarchical order. The mortgage financing (X) and innovation capability (W) are the independent variables in the study as adopted by the primary mortgage banks in Nigeria and were employed in the regression analysis. In addition, data for the housing loan performance (Y) which is the dependent variable was produced by including responses of all items for the variable while that of government housing policy (Z) was attained from adding responses of all items for the variable.

Consequently, the relationship expression for mortgage financing, innovation capability and government housing policy ($X*W*Z$) was acquired by multiplying the combined score for mortgage financing, innovation capability and government housing policy. The hypothesis six would be validated if the result of the interconnection of mortgage financing, innovation capability and government housing policy ($X*W*Z$) on the housing loan performance of accredited primary mortgage banks in Nigeria is statistically significant. The reactions of the hierarchical regression analysis step by step are presented in the table below.

Table 4.19: Summary of Hierarchical Regression Analysis for the Moderating Effect of Government Housing Policy on the Functional Relationship between Mortgage Financing, Innovation Capability and Housing Loan Performance of Accredited Primary Mortgage Banks in Nigeria

Model ^{1,2,3}	Beta	t	Sig.	R	R ²	Adj. R ²	R ² Δ	F Δ	Sig. F Δ	Anova Sig.	F(df)
(Constant) ¹	-.331	-.813	.422	.748	.559	.533	.559	21.538	.000	.000	21.538(2,34)
Mortgage Financing	.847	3.734	.001								
Innovation Capability	-.221	-.909	.370								
(Constant) ²	2.513	1.795	.082	.782	.611	.576	.053	4.466	.042	.000	17.311(3,33)
Mortgage Financing	.808	3.726	.001								

Innovation	.151	.517	.609								
Capability											
Government	-1.037	-2.113	.042								
Housing											
Policy											
(Constant) ³	4.029	2.734	.010	.816	.666	.625	.055	5.275	.028	.000	15.984(4,32)
Mortgage	-.218	-.444	.660								
Financing											
Innovation	-.556	-1.349	.187								
Capability											
Government	-.792	-1.672	.104								
Housing											
Policy											
MF*IC*GHP	.213	2.297	.028								

-
- a. Predictors: (Constant), Mortgage Financing, Innovation Capability
b. Predictors: (Constant), Mortgage Financing, Innovation Capability, Government Housing Policy
c. Predictors: (Constant), Mortgage Financing, Innovation Capability, Government Housing Policy, MF*IC*GHP which signify Mortgage Financing*Innovation Capability* Government Housing Policy
d. Dependent Variable: Housing Loan Performance

Source: Researcher's SPSS Regression Analysis Results, 2023

Table 4.19 above explained the results of hierarchical regression analysis for the moderating effect of government housing policy on the interactions between mortgage financing, innovation capability and housing loan performance of accredited primary mortgage banks in

Nigeria. The model one in the table summarize the result for the analysis if moderating effect of government housing policy is not considered. Thus, the model reflected mortgage financing and innovation capability as the independent variables whereas the housing loan performance represents the dependent variable.

According to the Table 4.19, Model 1 shows that $R = 0.748$, $Adj. R^2 = 0.533$ and $F(2, 34) = 21.538$, $p = 0.000$. The value of adjusted coefficient of determination ($Adj.R^2$) was 0.533 which describes that about 53.3% discrepancy of the housing loan performance of accredited primary mortgage banks in Nigeria is attributable to mortgage financing and innovation capability, while the remaining 46.7% variation in housing loan performance can be assigned to other factors not covered in this model. The explained discrepancy in the interaction between mortgage financing and innovation capability on housing loan performance was proved to be statistically significant at p-value which is below the accepted threshold of 0.05. The section in table of regression coefficients reveals that the coefficient was positive while the constant was negative and statistically significant given the p-value of 0.001. Therefore, the model that acknowledges the effect of mortgage financing and innovation capability on housing loan performance was denoted as follows:

$$HLP = -0.331 + 0.847MF - 0.221IC \dots \dots \dots \text{Eq. (vi)}$$

Where: HLP = Housing Loan Performance.

MF = Mortgage Financing

IC = Innovation Capability

In Model 2, a multiple regression relating to mortgage financing, innovation capability and government housing policy was introduced as predictor variables in the model. However, the

outcome stipulates that there was an improvement over the earlier model, with an R of 0.782, R² change of 0.053, and Adj. R² of 0.576 which indicates that the regression model describes 57.6% of the variations in housing loan performance while the remaining 42.4% is associated with variables not included in the model. The change in R² was statistically significant at F (1, 33) = 4.466 and p-value of 0.042 (p<0.05) indicating that the second set of predictors (mortgage financing, innovation capability and government housing policy) could predict housing loan performance of the accredited primary mortgage banks in Nigeria.

The mortgage financing has a coefficient of 0.808, t-value of 3.726, and a p-value of 0.001 which demonstrates that the performance of mortgage financing higher than that of innovation capability which has a coefficient of 0.151, t-value of 0.517 and a p-value of 0.609 which is statistically insignificant. Similarly, the beta coefficient for government housing policy has a coefficient of -1.037, t-value of -2.113, and a p-value of 0.042 which shows a lesser performance compared to innovation capability but statistically significant. This established that government housing policy has a negative and statistically significant effect on housing loan performance of accredited primary mortgage banks in Nigeria. Consequently, one additional government housing policy introduce will bring about 1.037 decrease in housing loan performance.

Given that the innovation capability was statistically insignificant regarding housing loan performance, it was removed from the model. Constructed from the coefficient of regression table, the regression model is restated as follows:

$$HLP = 2.513 + 0.808MF - 1.037GHP \dots \dots \dots \text{Eq. (vii)}$$

Where: HLP = Housing Loan Performance

MF = Mortgage Financing

GHP = Government Housing Policy

The Model 3 considered the introduction of interaction term of mortgage financing, innovation capability and government housing policy using regression model. The result in the Table reveals that the R² change is 0.055 and F-change of 5.275 with a corresponding p-value of 0.028 which suggested that the interaction term of mortgage financing, innovation capability and government housing policy have a positive and significant effect on housing loan performance of accredited primary mortgage banks in Nigeria (p<0.05).

In addition, the interaction term of mortgage financing, innovation capability and government housing policy have a beta coefficient of 0.213, t-value of 2.297 and a corresponding p-value of 0.028. For this reason, this imply that government housing policy moderate the functional relationship between mortgage financing, innovation capability and housing loan performance of accredited primary mortgage banks in Nigeria. The confirmed regression equation from the outcome is stated as follows:

$$HLP = 4.029 - 0.218MF - 0.556IC - 0.792GHP + 0.213 (MF*IC*GHP) \dots\dots\dots Eq.$$

(viii)

Where: HLP = Housing Loan Performance

MF = Mortgage Financing

IC = Innovation Capability

GHP = Government Housing Policy

MF*IC*GHP = Interaction term of Mortgage Financing, Innovation Capability and Government Housing Policy

The results assert that government housing policy has moderating effect on the functional relationship between mortgage financing, innovation capability and housing loan

performance of accredited primary mortgage banks in Nigeria. On the ground of this result, this study rejects the null hypothesis six (H_06) which states that there will be no significant moderating effect of government housing policy on the functional relationship between mortgage financing, innovation capability and the housing loan performance of accredited primary mortgage banks in Nigeria.

4.3 Discussion of Findings

This section presents the discussion of findings based on conceptual, theoretical, and empirical submissions in past literature with the result of the current study.

The results of multiple regression analysis for the influence of long-term fund, household income and interest rate on access to finance of accredited primary mortgage banks in Nigeria ascertained that long-term fund, household income and interest rate have positive and significant influence.

The conceptual finding suggested that lack of long-term fund constitute one of the constraints of mortgage banks to provide sustainable liquidity for long-term housing loan requests². Scholars identified housing delivery challenges to absence of long-term finance and high interest rate among others³. Also, unavailability of long-term fund has been one of the major problems preventing the mortgage banks to create more mortgages for their numerous customers⁴. As well, the mortgage loan affordability is determined by the household income instead of the cost of the property⁵. Therefore, the low interest rate in most cases give rise to inexpensive funds and make mortgage loan easily accessible by prospective homeowners but however, convey a negative implication especially to mortgage banks' depositors as a very low return on investment⁶. Scholars indicated that inadequate long-term fund, low household

income, high interest rate, low household savings and large deposit requirements were components responsible for the impediment to accessing mortgages⁷.

In addition, the expansion of the window for long-term fund to mortgage lenders is important for the growth of the mortgage market⁸. The shortage supply of required funds to the housing finance market by the mortgage banks has prevented its growth and overall economic benefits⁹. Some scholars argued that the decision to buy a property by potential house owners is subject to their financial standing and only few households can acquire a home with their personal income without any recourse to mortgage banks for housing loans' facility¹⁰. The interest rate charged by mortgage banks is influenced by several elements which includes state of the economy and inflation rate¹¹. Access to mortgage financing has been noted by some scholars as a complex process because it requires many procedures and frequently affected by income level, savings level, availability of collateral, and interest rate among others¹².

The findings of this study provided support for both lien theory and title theory. The perspective of lien theory authenticated that the borrower owns the property during the period of the mortgage and the lender's interest in the property is restricted to the circumstances in which the borrower defaults on the mortgage¹³. The title theory point of view validated that mortgage contract developed into a conditional conveyance in the perception of the property transfer to the borrower only upon repayment of the debt rather than only the property servicing as security in the circumstance the borrower failed to make prompt interest and principal payments¹³. This study's results are in concordance with these theoretical perspectives.

This finding corroborates with empirical study which identified Nigeria Housing Policy (NHP), lack of long-term funding, low income, high interest rate, weak institutional

framework, lack of accessibility to PMBs, absence of vibrant secondary mortgage market (SMM), limited PMBs, inadequate supply of mortgages and PMBs cumbersome requirements as factors responsible for effective housing finance in Nigeria¹⁴. This result is supported by a scholar that established income, nature of the occupation, type of collateral, interest rate, years of the banking relationship, loan duration and loan sector as the significant determinants of access to mortgage finance in Lagos, Nigeria¹².

Similarly, study revealed that bank credit estate had a significant positive impact on housing delivery in Nigeria and concluded that inadequate supply of mortgage finance to the housing sector mitigates against the growth of the sector in addition to the overall economic impact¹⁵. This result attested to the submission of the previous empirical literature that accessing housing finance from the primary mortgage institutions (PMIs) remain a major challenge for potential borrowers at the low-and-medium income levels due to stringent conditions attached to housing finance accessibility which also hinder housing development and homeownership in Nigeria¹⁶.

Furthermore, scholars confirmed that low-income and savings which limited household's ability to pay mortgage repayments and deposits, high interest rate, poor access land, inability of prospective borrowers to provide certificate of occupancy (C of O) on their land, insufficient loanable funds, and few number of mortgage lending institutions as barriers to accessing mortgages in Nigeria's housing markets⁷. Study revealed that those who borrowed and those who did not borrow perceived the lenders requirements for housing finance as very strict. Also, measures of access, affordability criteria and possession of registered title collateral were perceived to be the most stringent of the lenders loan conditions for those who have borrowed for financing housing¹⁷.

Consequently, given the support found in conceptual, theoretical, and empirical submissions in previous literature with this present research's result, the study asserts that long-term fund, household income and interest rate have positive and significant influence on access to finance of accredited primary mortgage banks in Nigeria.

The results of multiple regression analysis for the effect of long-term fund, household income and interest rate on homeownership loan volume of accredited primary mortgage banks in Nigeria established that long-term fund, household income and interest rate have positive and significant effect.

From the conceptual position, the long-term fund, household income and interest rate strengthen homeownership loan volume. Scholars have proved that one of the primary functions of mortgage banks in Nigeria is to gather long-term funds for the overall development of housing finance market to create homeownership loans for their customers that are qualified to access mortgage loan¹⁸. The National Housing Fund (NHF) mortgage loan facility as a long-term credit provides the opportunity for the low-and-medium income earners that are contributing into the scheme to obtain affordable loan facility from FMBN through any primary mortgage bank (PMB) of their choice for homeownership after satisfying the eligibility criteria of regular flow of income that will guarantee mortgage loan repayment¹⁶. However, high interest rate impedes the growth of homeownership and the housing sector².

Consequently, study revealed that most developing countries established long-term credit institutions like development banks as a special purpose vehicle for the supply of long-term credit to the mortgage market¹⁹. Therefore, easy access to cheap long-term funds by the mortgage banks will have a positive effect on the performance of mortgage banking sector in terms of homeownership loans to qualified mortgage applicants in Nigeria¹⁹. Scholars have

identified increase in household income as one of the contributing factors that increases homeownership²⁰. Also, demonstrated that the improvement of mortgage deposit in Nigeria will prompt a greater influence of mortgages on homeownership while encouraging further accessibility to loanable funds of the mortgage banks¹⁴.

Going by the theoretical view, the lien theory assigned that a mortgagee (lender banker) of property holds only a lien and not title to the property prior to such time the mortgage is fully paid, and the lien is removed²¹. It is a financing principle that hold back the title deed from the lender banker (mortgagee) through a mortgage contract. On the other hand, the title theory indicated that the lender holds on to the property title pending such time the borrower will pay off the mortgage¹³. The fundamental presumption of title theory of mortgage is that the deed of property does not remain with the mortgagor (borrower or buyer) until after the liquidation of the mortgage loan¹⁸. Under this disposition, the title deed would be deposited in custody of a trustee and the borrower (mortgagor) would enter into a deed of trust agreement instead of a mortgage contract¹⁸. This study's results are in correlation with these theoretical perspectives.

This finding ratifies the empirical study which established that the consumption interest rate, mortgage interest rate, deposit interest rate, inflation rate, disposition income, unemployment, GDP, and the real effective exchange rate have significant impact on the volume of mortgage loans and consumer loans⁶. Scholars supported this view that homeownership is an essential institution and owning a home helps to lower the financial risk of household in retirement²². It is an effective channel which allows families to build wealth and serves as a measure of financial security²². However, it is more difficult for households to become homeowners due to challenges in obtaining a mortgage, household income that have not kept pace with the increases in home prices as well as the interest rates²².

In the same way, study disclosed that lack of long-term funding, high interest rate, high cost of construction materials, low income, high cost of land, related title, professional fees and non-existence of supporting infrastructures for building constructions are major factors responsible for homeownership in Nigeria²³. Also, a scholar revealed that PMBs performed well in using low-income earners' salary as collateral but failed in providing mortgage loan to low-income earners for homeownership and likewise the rate of interest charged by the mortgage banks is very high⁴. Though a study supported that homeownership financing facilities in Islamic banks are still the principal source of mortgage financing for customers who require a special loan to meet the needs of building or renovating a house²⁴.

Notwithstanding the influence of long-term fund, household income and interest rate on homeownership loan volume, a contrary submission was found in empirical study. The findings identified that the extension of mortgage credit to households has not always led to higher homeownership rates because historically there have been other sources of mortgage credit which includes the government and non-bank mediated private loans²⁵. Hence, banks' mortgage credit is thus neither necessary nor sufficient for increase in homeownership since the combination of higher wages, government programmes, affordable houses and high savings will lessen reliance on mortgages for house construction or acquisition which invariably provide alternative window to increase homeownership²⁵. Besides, the extension of mortgage finance might also be insufficient to create more homeownership in the sense that mortgages can be used simply to finance rental apartments²⁵.

Accordingly, on the strength of the support found in conceptual, theoretical, and empirical submissions in extant literature with this current research's result, the study postulates that long-term fund, household income and interest rate have positive and significant effect on homeownership loan volume of accredited primary mortgage banks in Nigeria.

The results of multiple regression analysis for the influence of management innovation and process innovation on non-performing loan ratio of accredited primary mortgage banks in Nigeria identified that management innovation and process innovation have positive and significant influence.

The conceptual finding considered management innovation and process innovation as components that drive reduction in non-performing loan ratio of the mortgage banks. Extant literature on innovation focused on organization leveraging on technological innovation but recent researchers in multiple disciplines have stressed the significant role of management innovation for organizational improvement and performance²⁶. It has been established by some scholars that management innovation contributes to the competitive advantage that similar organization might find it challenging to reproduce²⁶. A scholar identified that the process innovation deals with the capacity of the organization to implement an improved process than the present activity for better performance²⁷. Hence, the degree of NPLs will inspire unreliability of the bank management to reduce lending to its customers which eventually impacted on aggregate demand and investment²⁸.

The finding aligns with the study which specified that management innovation relates to new management approaches which are targeted towards improving organizational performance²⁹. It has been proved to be a creation and execution of management application, procedure, formation, or method that is new in technology and is calculated to promote organizational objectives²⁹. In addition, scholars established that process innovation has effect on productivity, growth, profitability, and efficiency of an organization³⁰. However, previous literature revealed that process innovation has a positive and significant influence on organizational performance as regards financial, growth, customer satisfaction and internal procedure³⁰. A research scholar confirmed that one of the major risk management indicators

for bank financial performance is NPLs to total loans' which can be used to measure bank's level of credit risk and quality of outstanding loans³¹.

The findings of this study provide support for transformational leadership theory which has been acknowledged by some researchers as one of the most significant determinants influencing innovation and it is regarded as essential to organizations, as they incorporate creative understanding that give rise to changes in management practices and processes³². The transformational leadership theory further supported by a scholar that transformational leadership has its positive consequence on organizations, enhance its work productivity, increase performance and the creativities³³. This study's results are in concordance with the theoretical perspectives.

This finding corroborates with the empirical study which disclosed that management innovation and technological innovation significantly positively promote sustainability and organization performance²⁹. Consequently, sustainability plays a partial mediating role between management innovation and organization performance and a partial mediating role between technological innovation and organization performance²⁹. Also, findings from the bad management hypothesis produced with the model established that NPLs are a serious matter which needed appropriate attention and bank profitability calculated by Return on Average Assets (ROAA) has significant and negative consequence on NPLs³⁴. In addition, it has been revealed that the delay in loan repayment by the borrower will prevent the granting of further credit³⁴.

Similarly, study ascertained that an exogenous rise in the change in NPL ratio tends to reduce bank lending volumes, enlarge bank lending spreads, and leads to a drop in real GDP development and residential real estate prices³⁵. Furthermore, scholars indicated that there is a significant and positive relationship between the interest rate and loan repayment measured

by credit quality using the NPL ratio³⁶. This means that an increase in the interest rate will likely cause a corresponding increase or decrease in the credit quality and thus, demonstrated that any slight change in the lending rate would increase NPL³⁶.

Consequently, given the support found in conceptual, theoretical, and empirical submissions in previous literature with this present research's result, the study asserts that management innovation and process innovation have positive and significant influence on non-performing loan ratio of accredited primary mortgage banks in Nigeria.

The results of multiple regression analysis for the effect of management innovation and process innovation on service efficiency of accredited primary mortgage banks in Nigeria showed that management innovation and process innovation have no significant effect.

The findings differ from conceptual submission which indicated that management innovation is the capacity of an organization to introduce new understanding methods and procedures that will be adopted by management in performing their work to produce modifications in the administrative processes and organization's approach for efficient service delivery²⁶. Besides, a scholar revealed that process innovation capacity of an organization can be measured by its ability to initiate new technological processes to achieve quality product and efficient service delivery to its customers³⁷. Previous literature considered process innovation as an approach to utilizing the innovation and introducing changes in management, structures, applications, and methods to attain organizational efficiency and performance³².

Furthermore, study revealed that the key to service mortgage banks' success is good quality service delivery and the availability of mortgage loan products needed by customers³⁸. Extant literature confirmed that the dream to own a house is a paramount desire for every household in any society¹⁶. As a result, the efficiency and effectiveness of the housing finance delivery

process will be an important social and economic target of households¹⁶. Consequently, a scholar believed that the bank's mortgage customers are of the opinion that digitization of mortgage services will support them in improving the mortgage service and operations of the mortgage banks³⁹. Given this result, one can deduce that even if mortgage customers continue to request for homeownership loans, still it does not imply that they are exceedingly satisfied with the quality of service, mostly because there are few accredited primary mortgage banks and only specialised financial institutions which grant long-term credits for mortgage loans' facility in Nigeria.

The views of the critics of transformational leadership theory were corroborated with the findings of this study. Most of the scholars' position is that ethics and moral values of leaders may give rise to misuse of power and unpleasant outcomes³³. In addition, transformational leadership employs the idea management and for this reason offer itself to unethical self-promotion by leaders³³. The theory is very hard to be trained or taught because its elements are too exhaustive³³. Moreover, the followers might be controlled by leaders and there are possibilities that they lose more than what they gain³³.

The empirical studies present contrary submissions. A study indicated that leaders demonstrating transformational behaviour were able to advance knowledge sharing culture that intensify the creation of new ideas, products, and processes³². As well, the study established that knowledge sharing (KS) mediates the association of transformational leadership (TL) and innovation³². Similarly, a scholar suggested that organizations which fully incorporate business and digital strategies create synergetic outcomes and strengthen adaptability, innovation, and resiliency in the face of competitive challenges⁴⁰. Therefore, showed that in banking and financial services domain, the effectiveness and efficiency of the customers' service value chain, command the competitive advantage of the organization⁴⁰.

However, this finding validates the empirical study which identified that the underdeveloped banking system like Vietnam, bank deposits have a positive and significant influence on bank loans whereas loans have a positive but insignificant influence on deposits⁴¹. On top of that, findings suggested that to earn innovation performance, firm first require to establish organizational culture that can drive innovation behaviour, internal coordination with employee to motivate the innovation driven mind-set that execute ideas, conceptions into successful product/service, process, business model or system³⁰.

This study's finding consolidates the submissions of the critics of transformational leadership theory considering that in spite of the attested ownership of management innovation and process innovation by the accredited primary mortgage banks in Nigeria, still its effect on service efficiency being a measure of housing loan performance is insignificant. Grounded on previous findings and results of this study, it can be concluded that management innovation and process innovation have no significant effect on service efficiency of accredited primary mortgage banks in Nigeria.

The results of multiple regression analysis for the influence of mortgage financing and innovation capability on housing loan performance of accredited primary mortgage banks in Nigeria proved that mortgage financing and innovation capability have positive and significant influence.

Conceptually, the selection of an appropriate mortgage financing and innovation capability boost the housing loan performance of accredited primary mortgage banks in Nigeria. Scholars emphasized that the emergence of mortgage financing came because a potential homeowner with low income might not be able to raise enough fund from own resources to realise his/her dream for homeownership⁴². Previous study established that housing finance through formal mortgage banks is assumed to be the solution to housing problems in many

developing countries like Nigeria, but their formal mortgage institutions were not successful¹⁶. However, in view of the globalization mortgage banks have resulted into technological practices and have innovative focus since it will have influence on their operational performance which some research studies have claimed to be the best way to go for the long run survival in turbulent mortgage financing markets²⁹.

Similarly, scholars believed that large investment opportunities available in the mortgage market have not been utilized because of the small size of the housing finance market and the researchers concluded that a dynamic housing finance market will provide the required finance for individuals, corporate organizations, and estate developers¹⁰. Also, mortgage financing according to extant literature has been identify as one of the most challenging limitations in the housing finance industry⁴³. Therefore, the prospective homeowners' perception of mortgage finance challenges of factors could be responsible for low patronage of mortgage financing in Nigeria¹⁷. For this reason, mortgage banks are on daily basis try to improve their innovation and digital strategies to meet their customers' continuous demanding for more easy and creative services following the increase in competition in the mortgage business environment⁴⁰.

The findings of this study underpin the statements of lien theory, title theory and transformational leadership theory position. The lien theory predicates that the lender's right of possession terminates immediately when the entire outstanding loans are paid off by the borrower¹⁵. Likewise, the title theory presumes that the borrower faces the possibility of losing his/her property title through litigation or foreclosing actions of the trustee if the outstanding mortgage commitment remain unfulfilled¹⁸. Consequently, transformational leadership theory has been perceived as one of the essential factors influencing innovation

which prompt changes in management practices and processes³². This study's suggestion aligns with these theoretical positions.

Extant empirical literatures have provided support for the findings of this study. A scholar identified that the total amount of mortgage loans offered by the commercial banks in Kenya has a positive significant impact on financial performance and the interest charged on mortgage loans has a positive and significant effect on financial performance of the commercial banks in Kenya⁴⁴. In addition, findings from a study indicated that technological factors had a statistically significant impact on the growth of homeownership through mortgage financing in Kenya⁴⁵. Besides, study showed that mortgage customers' decisions are strongly influenced by rapid changes in technologies provided for the mortgage operations which helps mortgage firms to gain more clients and continue attracting prospective customers⁴⁵.

Furthermore, previous studies disclosed that there exists a long run relationship between mortgage finance and housing delivery in Nigeria¹⁸. The scholars ascertained that housing is an important sector which can drive the Nigeria economy but the inadequate supply of mortgage finance to the sector restrain its development and overall economic effect¹⁸. A study corroborated that customers' deposits have strong and statistically significant positive influence on loan and advances in banking sector in Nigeria which means that for every increase in customers' deposits there will be an improvement in loan and advances of the commercial banks in Nigeria⁴⁶. As well, the interest income has a positive significant impact on loan and advances⁴⁶.

Regardless of the essential role of mortgage financing and innovation capability in the housing loan performance of mortgage banks, a study revealed that the contribution of the financial institutions to housing development is not satisfactory because of restricted options

available and lack of consideration for poor majority of the Nigeria population⁴⁷. Previous study proved that interest rate is the highest contributor to profits in banks and had a negative correlation with the lending portfolio in the sense that, when the interest is high, prospective borrowers are reluctant to borrow since repayment on loans cost more and those with loans have higher likelihood of defaulting⁴⁸.

Hence, considering the strength of the support found in conceptual, theoretical, and empirical submissions in extant literature with this current research's result, the study postulates that mortgage financing and innovation capability have positive and significant influence on housing loan performance of accredited primary mortgage banks in Nigeria.

The results of hierarchical multiple regression analysis for the effect of government housing policy on the functional relationship between mortgage financing, innovation capability and housing loan performance indicates the presence of a moderating effect on the relationship. This result confirmed that government housing policy had a positive and significant moderating effect on the functional relationship between mortgage financing, innovation capability and housing loan performance of accredited primary mortgage banks in Nigeria.

The conceptual findings have demonstrated the important role of government housing policy in the regulations of mortgage banking sector operations for improved service delivery and performance. A study indicated that there has been a continuous efforts and initiatives by Federal Government of Nigeria (FGN) to enhance the provision of mortgage loans and credit from private lenders because the popular channel to homeownership in advanced economies is through mortgage financing⁴⁹. Scholars revealed that mortgage banking industry of today is being confronted with some challenges arising from fast changing operational environment which threatening their continuity and long-term achievement³². Another study showed that empirical works on innovation capacity have not developed very much and there is no

universal agreement on how to define and operationalize the concept of innovation capability⁵⁰. However, some scholars have perceived innovation process as a powerful driver for deepening the innovation and business performance of the organizations³⁰.

In addition, a study specified that housing regulation in Nigeria is via policy pronouncements, issuance of white papers and legislation conduct with the operations in the housing delivery chain⁵. Also, research revealed that the FGN initiated various housing policy reforms to address the observed low performance of access to mortgage finance in housing sector but one major challenges of housing finance in Nigeria is the imperfection of the housing policy in the sense that most of the housing policy initiative to motivate developers and potential house owners lack economic implementation and power that is needed in the housing sector or market²³. Scholars established that a bank planning detailed functional policy for mortgage lending and design its performance process requires to take cognizance of change in the external environment and conduct a careful examination of the classes and quality of mortgage lending services on the mortgage market⁵¹.

In consonance with the interaction perception, the effect that an independent variable (mortgage financing and innovation capability) has on a dependent variable (housing loan performance) is subject to the level of a third variable (government housing policy), indicated here as the moderator. In line with the position advanced by the transformational leadership theory which stated that transformational leader can strengthen the company's performance and raise the profitability of an organization through exceptional changes in a company's direction³³. Study showed that knowledge sharing moderates' transformational leadership's causes on innovation capabilities²⁷. Thus, the impacts of transformational leadership and knowledge sharing on a particular aspects of innovation capability are distinct and rely on the level of employees perceived organizational support²⁷. Moreover, impact of knowledge on

individual perceptions of innovation drivers and the tendency of policy makers to promote innovation in affordable housing delivery could be positively influenced by the strength of knowledge available to prospective homeowners⁵².

Previous empirical studies corroborated the government housing policy as a moderator for housing loan performance. Scholars suggested that the provision of affordable housing depends most especially on the strong and political will of governments in addition to the development and implementation of effective housing policies⁵³. Similarly, study indicated that the effectiveness of the policy measure is already showing in the housing finance sector as brought about by the recent mortgage finance reforms, but the success of the policy depends mainly on the position of necessary political will through the creation of an enabling environment for people to own or have access to decent housing⁵⁴. However, many existing literatures have reported non-performance of Nigeria housing policies and programmes that despite the huge sum of money committed by the government they were not successful¹⁶.

Consequently, the findings of this study validate this view and equally align with the statement of the transformational leadership theory. This is because the interaction-term of government housing policy, mortgage financing and innovation capability have significant moderating effect on housing loan performance. Therefore, in view of the support found in previous literature with this present research's result, the study deduced that government housing policy has significant moderating effect on the functional relationship between mortgage financing, innovation capability and the housing loan performance of accredited primary mortgage banks in Nigeria.

Endnotes

1. J. T. Ikyaave. *How FMBN is deepening mortgage penetration*. **Thisday Newspaper of June 3rd, 2021**, <https://www.thisdaylive.com>.
2. Housing Circuit. *Mortgage Financing in Nigeria: Issues and Challenges*. **Housing Circuit Limited**, <http://www.housingcircuit.com>.
3. C. N. Chidi-Okeke & I. O. Nwanna. *The Impact of Primary Mortgage Institutions' Housing Loans on Human Development in Nigeria*. **IIARD International Journal of Banking and Finance Research**, 6(3), 2020, 29-40.
4. I. Ibrahim, M. S. Muhammad, U. Auwal & D. Raymond. *Perception of Low-Income Earners on the Performance of Mortgage Institutions in Housing Finance in Lafia, Nasarawa State, Nigeria*. **Path of Science Journal**, 5(11), 2019, 2001-2011.
5. O. S. Oyediran. *Institution and Housing Development: Mirage, Magic, and Miracle of Low-Cost Housing in Nigeria*. **CBN Economic and Financial Review Journal**, 57(4), 2019, 37-63.
6. E. kostikov, P. Jilkova & P. K. Stranska. *Quantified Impact of Market Interest Rates on Commercial Banks' Business Mix*. **Journal of International Studies**, 12(2), 2019, 258-269.

7. C. C. Nwuba & E. O. Chukwu-Nwuba. *Barriers to Accessing Mortgages in Nigeria's Housing Markets*. **International Journal of Housing Markets and Analysis**, 2018, xx-xx, <http://doi.org/10.1108/IJHMA.10.2017.0089>.
8. The World Bank. *Housing Finance Development Program (P131973). Implementation Completion and Results Report*, 31 October 2019, 5-6.
9. O. S. Alagba, K. I. Awa & U. Ediri. *Mortgage Industry Financial Risk Tolerance and Mortgage Banks Credit Delivery in Nigeria*. **Nigerian Journal of Management Sciences**, 21(1 & 2) 2020, 83-103.
10. T. N. Ofor, O. S. Alagba & M. S. Ifurueze. *Housing Finance Market and Economic Growth of West Africa Region: A Study of Nigeria and Ghana*. **International Journal of Business and Economic Development**, 6(3), 2018, 49-60.
11. Investopedia. *Interest Rate*. **Investopedia**, www.investopedia.com/terms/i/interest-rate.asp.
12. S. O. Olawumi, A. O. Adewusi & A. K. Oyetunji. *Analysis of the Factors Influencing Access to Mortgage Finance in Lagos Nigeria*. **Global Journal of Business, Economics and Management**, 9(3), 2019, 113-121.
13. A. Ghent. *The Historical Origins of America's Mortgage Laws*. **Research institute for Housing America Website**, <https://mba.org>.
14. A. O. Adediran & H. M. Ali. *Nigeria Housing Finance Operation: A Review of Key Factors Affecting Housing Finance*. **Global Scientific Journals**, 7(12), 2019, 1174-1185.
15. K. B. Aladelusi. *Mortgage Financing and Growth of Housing Sector in Nigeria*. **Proceeding of the 16th iSTEAMS Multidisciplinary Research Nexus Conference**, 16(2), **The Federal Polytechnic Ilaro, Ogun State, Nigeria**, June 9-11, 2019, 225-230.
16. Z. A. Ghani. *Primary Mortgage Institutions Challenges for Financing Housing Development in Nigeria*. **International Journal of Research-GRANTHAALAYAH**, 9(2), 2021, 127-137.
17. O. F. Nwanekezie & I. J. Onuoha. *Homeowner's Perception of the Factors Affecting Access to Housing Finance in Owerri, Imo State, Nigeria*. **International Journal of Finance and Accounting**, 8(2), 2019, 57-64.
18. G. A. Anidiobu, P. I. P. Okolie & W. N. Ugwuanyi. *Effect of Mortgage Finance on Housing Delivery in Nigeria: The Primary Mortgage Institution (PMI) Perspective*. **Journal on banking Financial Services and Insurance Research**, 8(2), 2018, 36-49.
19. S. Bannerman & G. Fu. *Analysing Access to Long Term Debt Effects on Firms Growth: Evidence of China*. **European Journal of Social Sciences**, 58(1), 2019, 5-13.
20. W. M. Jayantha & O. T. Oladinrin. *Identifying Critical Enablers for Homeownership in Hong Kong*. **International Journal of Housing Markets and Analysis**, 13(2), 2020, 185-206.
21. C. N. Musyimi & T. M. Kising'u. *Effect of Interest Capping on Financial Performance in Commercial Banks in Kericho County, Kenya*. **The Strategic Journal of Business and Change Management**, 6(2) 2019, 1130-1149.

22. L. S. Goodman & C. Mayer. *Homeownership and the American Dream*. **Journal of Economic Perspectives**, 32(1), 2018, 31-58.
23. A. O. Adediran, S. O. Oladejo & C. O. Ijagbemi. *The Fundamentals to Affordable Homeownership in Nigeria*. **Journal of Multidisciplinary Engineering Science and Technology (JMEST)**, 7(4), 2020, 11659-11666.
24. S. A. Utami, A. Cakhyaneu & N. S. Wulandari. *Analysis of Home Ownership Financing for Islamic Banks in Indonesia Through Sharia Asset Backed Securities Participation Letter*. **Jurnal Ekonomi Dan Keuangan Syariah**, 4(2), 2020, 211-228.
25. S. Kohl. *More Mortgages, More Homes? The Effect of Housing Financialization on Homeownership in Historical Perspective*. **Politics and Society Journal**, 46(2), 2018, 177-203.
26. P. Khosravi, C. Newton & A. Rezvani. *Management Innovation: A Systematic Review and Meta-Analysis of Past Decades of Research*. **European Management Journal**, 2019, 1-40, <http://doi.org/10.1016/j.emj.2019.03.003>.
27. P. B. Le & H. Lei. *Determinants of Innovation Capability: The Role of Transformational Leadership, Knowledge Sharing and Perceived Organizational Support*. **Journal of Knowledge Management**, 2019, xx-xx (Accessed September 26, 2021, <https://doi.org/10.1108/JKM.09.2018.0568>).
28. M. Umar & G. Sun. *Determinants of Non-Performing Loans in Chinese Banks*. **Journal of Asia Business Studies**, 2018, 1-17, <https://doi.org/10.1108/JABS.01.2016.0005>.
29. Y. Zhang, U. Khan, S. Lee & M. Salik. *The Influence of Management Innovation and Technological Innovation on Organizational Performance: A Mediating Role of Sustainability*. **Sustainability Journal**, 11(495), 2019, xx-xx.
30. J. R. P. Rajapathirana & Y. Hui. *Relationship between Innovation Capability, Innovation Type, and Firm Performance*. **Journal of Innovation and Knowledge**, 3, 2018, 44-55.
31. F. T. Kegninkeu. *The Impact of Credit Risk Management on the Performance of Commercial Banks in Cameroon: Case Study of BICEC Cameroon*. **Global Journal of Management and Business Research**, 18(7), Version 1.0, 2018, 18-40.
32. S. A. Chaar & N. F. Easa. *Does Transformational Leadership Matter for Innovation in Banks? The Mediating Role of knowledge Sharing*. **International Journal of Disruptive Innovation in Government**, 1(1), 2021, 36-57.
33. S. Baran. *Criticisms and Arguments against Transformational Leadership*. **Linkedin Website**, <https://www.linkedin.com>.
34. M. O. Farooq, M. S. A. Elseoud, S. Turen & M. Abdulla. *Causes of Non-Performing Loans: The Experience of Gulf Cooperation Council Countries*. **Journal of Entrepreneurship and Sustainability**, 6(4), 2019, 1955-1974.
35. I. Huljak, R. Martin, D. Moccero & C. Pancaro. *Do Non-Performing Loans Matter for Bank Lending and the Business Cycle in Euro Area Countries?* **European Central Bank (ECB) Working Paper**, Series no. 241, 2020, 1-29.

36. A. S. Ogundipe, A. F. Akintola & S. A. Olaoye. *Interest Rates and Loan Performance of Deposit Money Banks in Nigeria*. **EPRA International Journal of Economic and Business Review**, 8(1), 2020, A13-A20.
37. S. Najafi-Tavani, Z. Nafaji-Tavani, P. Naude, P. Oghazi, & E. Zeynaloo. *How Collaborative Innovation Networks Affect New Product Performance: Product Innovation Capability, Process Innovation Capability, and Absorptive Capacity*. **Journal of Industrial Marketing Management**, 2018, 1-12, <https://doi.org/10.1016/j.indmarman.2018.02.009>.
38. Sarwani, Y. Sudaryana, W. Wicaksono, N. Wicaksono & Suyatin. *Effect of Service Product Innovation, Promotional Activities and Company Image on Saving Decisions in PT. Bank BNI Syariah, Tbk Area, Jabodetabek*. **Annals of R.S.C.B. Journal**, 25(4), 2021, 16251-16266.
39. D. T. Morales & F. L. Trinidad. *Digital Mortgage Banking Acceptability in Philippine Universal Banks: Evidence from UTAUT Model*. **Journal of Information System and Technology Management**, 4(15), 2019, 1-15.
40. A. Thomas. *Convergence and Digital Fusion Lead to Competitive Differentiation*. **Business Process Management Journal**, 26(3), 2020, 707-720.
41. T. Nguyen, D. Tripe & T. Ngo. *Operational Efficiency of Bank Loans and Deposits: A case Study of Vietnamese Banking System*. **International Journal of Financial Studies** 6(14), 2018, 1-13.
42. F. O. Ikekpeazu. *Mortgage Financing for Housing Delivery in Nigeria: The Governmental Role in Development of an Effective Mortgage Market*. **PM World Journal**, 7(1), 2018, 1-19.
43. P. Siyan, A. E. Adegioriola & O. M. Erivwode. *The Development of Mortgage Finance in Nigeria and its Impact on the Economy*. **International Multilingual Journal of Science and Technology**, 4(3), 2019, 455-465.
44. A. A. Abdulrehman & W. Nyamute. *Effect of Mortgage Financing on Financial Performance of Commercial Banks in Kenya*. **Journal of International Business Innovation and Strategic Management**, 1(6), 2018, 91-122.
45. J. R. Kigomo, T. A. Senaji & G. W. Mwaniki. *Influence of Technological Factors and Homeownership through Mortgage Financing in Kenya*. **The University Journal**, 3(1), 2021, 111-118.
46. T. A. Adegbite & B. A. Azeez. *Customers' Deposits and Loan Administration: Nigerian Banks' Perception*. **International Journal of Applied Research in Management and Economics**, 1(2), 2018, 86-94.
47. O. F. Olukayode & O. S. B. Owolabi. *The Role of Financial Institutions in Housing Development in Nigeria*. **The International Journal of Engineering and Science (IJES)**, 7(8) Version 1, 2018, 84-88.
48. G. Jakait & N. Omar. *Effects of Interest Rates on the Lending Portfolio of Commercial Banks in Kenya*. **International Journal of Academics and Research (IJARKE)**, 1(1), 2018, 45-53.

49. Central Bank of Nigeria. *Mortgage Financing in Nigeria*. **Occasional Paper**, 50, <http://www.cbn.gov.ng>.
50. F. Iddris. *Innovation Capability and Product Innovation Performance: The Case of Low-Tech Manufacturing Firms*. **European Business Review Journal**, 31(5), 2019), 646-668.
51. O. B. Hamkalo & K. S. Demkiv. *Benchmarking as a Tool for Providing Analytical Support to Mortgage Lending Operations of a Bank*. 2019, 91-99, [https://doi.org/10.31767/su.1\(84\)](https://doi.org/10.31767/su.1(84)) 2019.01.10.
52. O. Ayoade & V. Ahmed. *Knowledge Influences on Perception of Innovation Drivers for Sustainable Housing Development Models*. **International Journal of Knowledge Management Studies**, 11(1), 2020, 1-19.
53. E. A. Moore. *Addressing Housing Deficit in Nigeria: Issues, Challenges and Prospects*. **CBN Economic and Financial Review Journal**, 57(4), 2019, 201-222.
54. A. Bello. *Review of the Housing Policies and Programmes in Nigeria*. **International Journal of Contemporary Research and Review**, 10(2), 2019, 20603-20616.

Chapter Five

Conclusion

This chapter explains the summary of the findings, conclusions, and recommendations of the study. In addition to these, the findings of this study concisely encapsulate the contributions of the study to knowledge while focusing attention on specific implication of findings and suggested areas for further research.

5.1 Summary of Findings

The study examined the influence of mortgage financing (long-term fund, household income and interest rate) and innovation capability (management innovation and process innovation) on the housing loan performance measures (access to finance, homeownership loans, non-

performing loans, and service efficiency) of accredited primary mortgage banks in Nigeria. The study specifically assessed the effect of mortgage financing on access to finance and homeownership loan volume respectively. As well, it established the effect of innovation capability on non-performing loan ratio and service efficiency separately. Correspondingly, the study examined the influence of mortgage financing and innovation capability on housing loan performance. Additional analysis was carried out to evaluate the moderating effect of government housing policy on functional relationship between mortgage financing, innovation capability and housing loan performance of accredited primary mortgage banks in Nigeria.

This study was constructed into five chapters to accomplish the previously stated specific objectives. The introductory chapter explained a comprehensive background to the study that revealed four global regions (North America, Europe, Asia, and Africa) in which the Asia presented the highest percentage in homeownership rate via mortgage financing whereas Nigeria out of the African countries considered, has the lowest homeownership rate. Generally, the emerging economies fall distant behind developed economies in the provision of mortgage financing. For this reason, the study examined the influence of mortgage financing and innovation capability on housing loan performance of accredited primary mortgage banks in Nigeria to proffer empirical solutions to tackle the challenges of performance recognized. Furthermore, six objectives conceived in the study were broken down into five correlative-effect relationship and one moderating-effect relationship respectively.

The review of extant associated literatures applicable to the concept of mortgage financing represented by long-term fund, household income and interest rate in addition to how innovation capability dimensions depicted by management innovation and process innovation influence housing loan performance measures by access to finance, homeownership loans,

non-performing loans, and service efficiency were carried out. The review equally encapsulated discussions on government housing policy as a moderating variable. Some definitions bothering on study variables established above were reviewed to place the understanding of each variable within the existing literature. The review of this conceptual definition of each variable ended with the researcher's definition which is a determined attempt expressed as a conceptual contribution to knowledge.

The empirical review separated methodological, and findings review. A few methodologies embraced by scholars were reviewed to recognize the divergent methods used and the reason for the adoption of each methodology. Even though, it was ascertained that various methods were employed by scholars, still most of the scholars adopted quantitative method, ex-post facto research design, primary data, case study, cross-sectional survey, explanatory method, purposive sampling, ordinary least square, questionnaire, mixed method, time series secondary data, multiple regression analysis, correlation method, structural equation modelling, partial least square method, and vector autoregressive model. Furthermore, the findings review presented mixed result regarding the influence of mortgage financing and innovation capability on housing loan performance. Considering the inadequate empirical findings to support the moderating effect of government housing policy on mortgage financing, innovation capability and housing loan performance of accredited primary mortgage banks in Nigeria, a theoretical justification via the transformational leadership theory was offered to describe the likely moderating effect to anticipate.

The study examined and review three theories that have specific relevance to the research work. The lien theory suggested that the borrower hold on to the legal title of the property acquired which serve as a security to the mortgage that creates a lien on the property and the provider of finance (mortgage bank) will be able to recover its investment from the borrower in the events of defaulting through foreclosure proceedings. The title theory granted to the

lender (mortgage bank/mortgagee) the power to hold on to the property title pending such time the borrower (mortgagor) will pay off the mortgage otherwise, faces the risk of losing his/her property right via litigation or foreclosing actions of the trustee. The transformational leadership theory support to grow a foundation of organizational knowledge in the organization and assist to enhance organizational performance by permitting organizations to transfer knowledge better than its competitors.

Also, acknowledged as one of the most significant determinants influencing innovation and it is considered as essential to organizations as they incorporate creative understanding that give rise to changes in management practices and processes. This provided theoretical justification to illustrate the moderating-effect objective constructed in this study. The transformational leadership theory was adopted as the underpinning theory for this study because other theories were unable to recognize the aspect of innovation capability in the study. It is considered as appropriate and relevant to this study since it will link the mortgage financing and innovation capability to the housing loan performance of accredited primary mortgage banks in Nigeria.

Furthermore, the six gaps identified in the reviewed literature were analysed using the conceptual model designed by the researcher. Moreover, the review of literature presented conceptual, theoretical, methodological, and empirical prove for this current study as well as the justification for the evaluation of concerned variables. As regards the methodology, the study employed cross-sectional mixed method survey design which is quantitative non-experimental correlational research technique. Considering the specific objectives of this study, two populations (credit officers of PMBs and NHF scheme contributors) were established. The cluster sampling technique was used to obtain sample size of 40 credit officers and scientific formula for 400 NHF scheme contributors from both populations in

which judgement/purposive sampling simple random sampling techniques were adopted respectively.

The two-questionnaires constructed for the study were self-developed based on mortgage sector experience and previous literatures. This was used to collect data from both populations after they have been scientifically validated to be justifiable and dependable for the preconceived motive via the conduct of a pilot study. All the thirty-seven (37) copies of the questionnaire representing 92.5% response rate, returned by credit officers of PMBs were thoroughly screened to confirm the correct filling of all the sections and they were considered usable for this study. Also, a total of three hundred and eighty-two (382) were returned by NHF customers and after subjecting the returned copies of questionnaire to screening, it was observed that some areas were not filled correctly by twenty-eight (28) respondents and considered not to be appropriate for use in the analysis of this study. At the end of the review, three hundred and fifty-four (354) copies of the returned questionnaire, representing 88.5% response rate were acknowledged satisfactory for analysis of this study.

The study employed both descriptive and inferential statistics to analyse the data. Categorically, the descriptive statistics strengthened the analysis for all the variables in the study and presented answer to the specific research questions of the study. Further, the inferential statistics empowered the test of the six null hypotheses composed in the introductory chapter. That is, hypotheses one-five being a relative-effect analysis were confirmed via multiple regression analysis while hypothesis six being a moderating-effect analysis was verified through hierarchical multiple regression analysis. The data analysis ascertained the analytical method used, interpretation of results, and discussion of the research findings. Generally, six research objectives, questions, and hypotheses were developed and tested. In addition, the data analysis was conducted in agreement with the study's determined objectives and hypotheses from which the models were examined,

interpreted, and conclusions drawn. Frequency distribution tables and percentage presentation approaches were engaged in the analysis and interpretation of data obtained using the Statistical Package for Social Sciences (SPSS) version 25.

Besides, the research objectives one and two were analysed via multiple regression analysis to justify the influence of mortgage financing on access to finance and homeownership loan volume respectively. Comparably, research objectives three and four were analysed through multiple regression analysis to validate the effect of innovation capability on non-performing loan ratio and service efficiency separately. Likewise, research objective five was analysed via multiple regression analysis to examine the influence of mortgage financing and innovation capability on housing loan performance. Correspondingly, research objective six was analysed through hierarchical multiple regression analysis to support the moderating effect of government housing policy on functional relationship between mortgage financing, innovation capability and housing loan performance of accredited primary mortgage banks in Nigeria.

The data created were sorted, coded, analysed, and substituted in each of the functional relationship equations to derive multiple regression models and ascertain the statistical significance of mortgage financing measures and innovation capability dimensions on housing loan performance of accredited primary mortgage banks in Nigeria and final acceptance or rejection of the hypotheses were arrived at. From the interpretation of analyses of data received and findings of the study, the following can be added up as the key empirical findings of this study:

1. Mortgage financing measures (long-term fund, household income and interest rate) have significant influence on access to finance of accredited primary mortgage banks in Nigeria (Adj. $R^2 = 0.632$, $F(3,33) = 21.595$, $p = 0.000$).

2. Mortgage financing measures (long-term fund, household income and interest rate) have significant effect on homeownership loan volume of accredited primary mortgage banks in Nigeria (Adj. $R^2 = 0.590$, $F(3,33) = 18.274$, $p = 0.000$).
3. Innovation capability dimensions (management innovation and process innovation) have significant influence on non-performing loan ratio of accredited primary mortgage banks in Nigeria (Adj. $R^2 = 0.575$, $F(2,34) = 25.365$, $p = 0.000$).
4. Innovation capability dimensions (management innovation and process innovation) have no significant effect on service efficiency of accredited primary mortgage banks in Nigeria (Adj. $R^2 = 0.096$, $F(2,34) = 2.909$, $p = 0.068$).
5. Mortgage financing and innovation capability have significant influence on housing loan performance of accredited primary mortgage banks in Nigeria (Adj. $R^2 = 0.590$, $F(3,33) = 18.274$, $p = 0.000$).
6. Government housing policy has significant moderating effect on the functional relationship between mortgage financing, innovation capability and housing loan performance of accredited primary mortgage banks in Nigeria ($R^2\Delta = 0.055$, $F\Delta = 5.275$, $p = 0.028$).

5.2 Conclusion

Grounded on the empirical findings, this study concluded that there was a statistically significant effect of mortgage financing elements (long-term fund, household income and interest rate) innovation capability dimensions (management innovation and process innovation) on each of the measures of housing loan performance which include access to finance, homeownership loan volume and non-performing loan ratio of accredited primary

mortgage banks in Nigeria. Generally, the study established that mortgage financing and innovation capability have a significant influence on the housing loan performance of accredited primary mortgage banks in Nigeria. Further analysis revealed that government housing policy moderated the functional relationship between mortgage financing, innovation capability, and housing loan performance given the interaction effect was significant.

Considering the theoretical review, the result of this study is in line with the transformational leadership theory which presented the theoretical underpinnings for this study. The research adopted this theory as a guide since its position connect to the variables under examination. The transformational leadership theory described how to grow a foundation of organizational knowledge in the organization and assist to improve organizational performance by permitting organizations to transfer knowledge better than its competitors. Besides, the theory is accepted as the most significant determinants that influence innovation which is regarded as important to organizations because it incorporate creative understanding which give rise to changes in management practices and processes. Accordingly, it will link the mortgage financing and innovation capability to the housing loan performance of accredited primary mortgage banks in Nigeria and provided the justification for the moderating effect of the government housing policy.

5.3 Recommendations

The following recommendations are made based on the findings of this study:

- i. The study established that mortgage financing measurements (long-term fund, household income and interest rate) significantly determine access to finance even though the extent of involvement varies. Therefore, the management of primary

mortgage banks should focus more attention on the household income when carrying out credit appraisal proposal (CAP) of National Housing Fund (NHF) mortgage loan application to guide against any future unperforming credit. Also, to allow homeownership loan applicant to provide any additional income source to enhance access to finance of the primary mortgage banks in Nigeria.

- ii. The performance of the mortgage banks is gauged by the volume of homeownership loans created through mortgage financing dimensions indicated as long-term fund, household income, and interest rate. The management of the mortgage banks are encouraged to seek for other long-term funding sources outside the NHF loan window to increase homeownership loan delivery to its customers and sustainability of mortgage banks' operations.
- iii. The innovation capability components significantly contribute to the improvement in non-performing loan ratio of the mortgage banks. Considering the CBN 10% NPL threshold limit for financial institutions, the management of the mortgage banks should sustain the quality leadership that identify new technologies for effective monitoring of mortgage loans' performance and commit financial resources into capacity development of their employees for skills acquisition in mortgage lending process and credit appraisal proposal (CAP) indicators.
- iv. The findings of this study revealed that management innovation and process innovation in operation at the mortgage banks could not significantly improve their service efficiency. The inability of the NHF customers not to enjoy quality service delivery may not be surprising because they accept whatever loan conditionalities offered to them since there is only FMBN and PMBs as players in the mortgage banking business in Nigeria. Therefore, collective effort is necessary for management

of the mortgage banks to ensure that these innovation capability dimensions are intensified to deliver services that meet and surpass NHF customers' expectations.

- v. The outcome of this study suggested that mortgage financing and innovation capability influence the housing loan performance of mortgage banks. Considering the performance effect of mortgage financing and innovation capability, management of primary mortgage banks should take appropriate measures to strengthen performance dimensions such as access to finance, homeownership loan volume, non-performing loan ratio, and service efficiency.
- vi. The government housing policy significantly moderate the functional relationship between mortgage financing, innovation capability, and housing loan performance as demonstrated in the study findings. Consequently, to further improve housing loan performance of the mortgage banks, the management of PMBs must continue to implement the relevant government housing policies that support the performance effect of both the mortgage financing and innovation capability that are existing in the mortgage banks.

5.4 Contributions to Knowledge

This study offers huge conceptual, theoretical, and empirical contributions to knowledge as stated below:

Conceptual Contribution

Following the conceptual review carried out, this study provides dip contribution to knowledge conceptually in various ways. In this study, all the variables were redefined by the researcher to advance a strong interpretation and understanding of each of the concept. The mortgage financing was defined as a credit facility granted to an individual or corporate

organization by financial institutions that dispenses mortgage services, either to buy a home or construct a real estate, in which the property itself stands as a collateral/security for the loan. Also, the long-term fund considered as the National Housing Fund (NHF) scheme that supply the mortgage market with sustainable liquidity for the advancement of homeownership loan to NHF contributors at affordable interest rate. As well, the household income defined as earnings use by the mortgage banks to determine the qualification of an individual for mortgage loan facility request. In addition, the interest rate represents a small percentage charged by PMBs on the total amount lends to its customers for homeownership loan or the cost of funds that the PMBs are paying on the funds which they are using in running the mortgage banking business.

Consequently, the innovation capability was considered to a multifaceted concept which necessitates cross-departmental effort to identify advanced technologies and knowledge assets to attain a competitive edge in the mortgage finance industry. Also, the management innovation was defined as the capacity of an organization to introduce new understanding methods and procedures that will be adopted by management in performing their work to produce modifications in the administrative processes and organization's approach for efficient service delivery. In addition, process innovation conceptualized as a capability of the PMBs to increase its efficiency and effectiveness of operations to enhance service performance at a reduce cost to the organization.

Housing loan performance was defined as the ability of PMBs to provide efficient mortgage financing system that guarantee the mortgage loan applicants access to finance for homeownership and develop the innovation capability to deliver quality service. Also, access to finance was defined as the capacity of the PMBs to make available the housing finance needs for its customers at affordable interest rate and with less loan conditions by the mortgage banks. Besides, the homeownership loan was considered as a form of housing

tenure where homeowner has the overall control, direct access and right to live in a house or apartment acquired through mortgage financing. Furthermore, non-performing loan (NPL) was regarded as loan advances in which the principal and interest element have not been paid by the mortgage loan beneficiary to the mortgage loan originator (mortgage bank) for a specific period. In addition, service efficiency demonstrates the delivery of quality and effective service by the mortgage lending operators to its customers. Lastly, government housing policy was conceptualized as the guidelines issued by the federal government to regulate the housing delivery system and targeted to attain optimal performance of mortgage sector operations in Nigeria.

The conceptual review also contributes to knowledge through the self-development of two research instruments for the collection of specified data set and the instrument comprise that of mortgage financing of PMBs in Nigeria and the other was conceived to address NHF customers' satisfaction in mortgage loan delivery. Subsequently, future studies may embrace these instruments to aid data collection bothering on mortgage financing and NHF customers' satisfaction. Also, this study recognized and filled the conceptual gaps in literature regarding the moderating role of government housing policy (GHP) in describing the relationship between mortgage financing (MF), innovation capability (IC), and overall housing loan performance (HLP) of accredited primary mortgage banks (PMBs) in Nigeria.

The existing studies on mortgage financing and innovation capability have been reported in academic literature. Nevertheless, no known studies have conceptually appraised the housing loan performance and how government housing policy moderate the interaction between MF, IC, and HLP of accredited PMBs in Nigeria. In conclusion, the conceptual model developed for the study recommend another area in which this study has contributed to the body of knowledge conceptually because no known similar studies, both theoretical and empirical,

have employed the model in their studies. Therefore, adding to models that can explain the connection between MF, IC and HLP of accredited primary mortgage banks in Nigeria.

Theoretical Contribution

The outcome of this study is in alignment with the transformational leadership theory which provided the theoretical underpinnings for this study. This theory was selected to guide this study variables because their point of view is tied to the focus of the study and the variables under investigation. The transformational leadership theory is considered as the most significant determinants influencing innovation and it is regarded as essential to organizations, as they incorporate creative understanding that give rise to changes in management practices and processes.

Therefore, the innovation capability measurements investigated are all capabilities which are not fixed but can be renewed by the PMBs under investigation on a consistent basis to exploit opportunities in the business environment and accordingly, achieving higher operational performance. The most essential thing is that any PMB which intend to survive and thrive in a rapid-changing environment, would depend completely on its capacity to consistently perceive, modify, and innovate its internal resources to align with its environment.

Empirical Contribution

This study assessed the interconnections of mortgage financing dimensions, innovation capability elements, and housing loan performance of accredited primary mortgage banks in Nigeria. The empirical outcome of this study contributes to the existing literature and empirical findings in mortgage financing measurements, innovation capability dimensions,

and housing loan performance. Moreover, it will serve as a reference material for future researchers.

Categorically, hypothesis one suggested that long-term fund, household income and interest rate have significant influence on access to finance of accredited primary mortgage banks in Nigeria. Also, hypothesis two indicated that long-term fund, household income and interest rate have significant effect on homeownership loan volume of accredited primary mortgage banks in Nigeria. Besides, hypothesis three established that management innovation and process innovation have significant influence on non-performing loan ratio of accredited primary mortgage banks in Nigeria.

In addition, hypothesis four demonstrated that management innovation and process innovation have no significant effect on service efficiency of accredited primary mortgage banks in Nigeria. Furthermore, hypothesis five confirmed that mortgage financing and innovation capability have significant influence on housing loan performance of accredited primary mortgage banks in Nigeria. Lastly, hypothesis six posited that government housing policy has a significant moderating effect on the functional relationship between mortgage financing, innovation capability, and housing loan performance of accredited primary mortgage banks in Nigeria.

Notwithstanding the conceptual, theoretical, and empirical contributions to knowledge, the findings of this study have implications for management of accredited primary mortgage banks investigated, NHF scheme contributors who served as customer, the researchers, government, regulators, and the stakeholders in housing delivery in Nigeria.

5.4.1 Implications for Management

The findings of this study specify the need for management of the mortgage banks to employ relevant mortgage financing since each of the components presents divergent degrees of

performance to the organization. In addition, the study suggest that management should sought for another long-term funding channel apart from the NHF mortgage loan offered by the FMBN and institutionalise quality leadership that identify new innovations for effective monitoring of mortgage loans' performance.

The results also certified that innovation capability measurements (management innovation and process innovation) did not provide consistent and significant improvement to service efficiency of the accredited primary mortgage banks in Nigeria. For this reason, management of the mortgage banks must invest in advancing a more effective management innovation and process innovation. This is because extant literature has persistently positioned the significant effect of management innovation and process innovation on the housing loan performance.

Generally, this study contributes valuable strategic information on innovation capabilities to be established by the management of the accredited primary mortgage banks and those requiring attention to stimulate several measures of housing loan performance such as access to finance, homeownership loan volume, non-performing loan ratio, and service efficiency.

5.4.2 Implications for NHF Scheme Contributors

This study enables the NHF scheme contributors to express their unsatisfactory service delivery offered by the accredited primary mortgage banks which will provide a strategic guidance for their management to develop a new thinking on how to strengthen the mortgage banks' service efficiency and performance. Through the questionnaire administered, the NHF scheme contributors were able to appraise the turnaround time (TAT) of their mortgage loan processing and the overall quality of services provided by the accredited primary mortgage banks. Consequently, devising the platform for customers' feedback and engagement which further help the management of accredited primary mortgage banks in Nigeria to be

conscious of what drives service efficiency and thus assisting them to make informed decision.

5.4.3 Implications for Researchers

This study delivers beneficial information and contributions to empirical literature on the relationship between mortgage financing components (long-term fund, household income and interest rate), innovation capability elements (management innovation and process innovation), and housing loan performance measures (access to finance, homeownership loan volume, non-performing loan ratio, and service efficiency). In addition, this study addressed some gaps in the existing literature on mortgage financing and innovation capability. Moreover, it supplied reference material for students to acquire knowledge and has generated the platform for further studies in mortgage financing and innovation capability.

5.4.4 Implications for Government

The findings of this study established that government housing policy significantly moderate the functional relationship between mortgage financing, innovation capability, and housing loan performance. The study considered the macro environment and understanding the role of government in developing the framework within which business operates via economic policies. This study furnishes the government with a piece of empirical information to justify the effect of macro environment on housing loan performance of the accredited primary mortgage banks with the desire that housing policies which will improves the homeownership loan delivery to Nigerians are formulated and implemented. Furthermore, create enabling environment for secondary mortgage market (SMM) to strive to provide another long-term funding source to PMBs at cheaper interest rate and increase minimum wage of workers to meet the loan affordability condition.

5.4.5 Implications for Regulators

The outcome of this study validated the influence of both mortgage financing and innovation capability to the general performance of the accredited primary mortgage banks in Nigeria. The implication of these findings is that it will allow the regulators of financial institutions to put appropriate measures in place to deepen the mortgage sector overall performance in competing positively with developing countries and offer mortgage products of similar quality. The strategic information provided by this study as regards the challenges being confronted by prospective homeowners of the mortgage banks is expected to intensify the regulators' decision for the mortgage industry with the aid of technology and operational guidelines.

5.4.6 Implications for Stakeholders

The stakeholders in the housing delivery in Nigeria includes Federal Mortgage Bank of Nigeria (FMBN), Central Bank of Nigeria (CBN), Labour unions, Real Estate Developers Association of Nigeria (REDAN), Mortgage Banking Association of Nigeria (MBAN), Nigeria Employers Consultative Association (NECA), Family Home Fund Limited (FHFL), Nigerian Mortgage Refinancing Company (NMRC), and other related professional bodies. The findings of this study provide the stakeholders with information on limitations of mortgage banking operations to deliver affordable housing and the need to collaborate with a view to initiating strategies aimed at achieving the goals of the federal government National Housing Programmes (NHP) in Nigeria.

5.5 Suggested Areas for Further Research

This study has limitations which provides the prospect and submissions for future research work.

- i. Future studies may consider all the primary mortgage banks licenced by Central Bank of Nigeria (CBN) to increase the population.
- ii. Even though geographical location of the PMBs have no significant effect on NHF Scheme customers' decision for homeownership, further studies may consider Abuja or any other location that has the presence of mortgage banks.
- iii. Further studies may consider the entire customers and every relevant operational staff of the PMBs to strengthen the quality of findings.
- iv. Since the PMBs offers divergent mortgage loan products apart from the NHF Homeownership loan, future studies may consider Estate Development Loan (EDL), Cooperative Housing Loan (CHL), Rent-To-Own (RTO), Home Renovation Loan (HRL) or Commercial Mortgage Loan (CML).
- v. To present clarifications on causality between the variables studied over time, further studies may consider a longitudinal research design.

Bibliography

Conferences

Adzis, A. A., Lim, H. E., Yeok, S. G., & Saha, A. *Malaysian Residential Mortgage Loan Default: A micro-level analysis*. Presentation at the Singapore Economic Review Conference, Singapore, August 5-7, 2019.

Aladelusi, K. B. *Mortgage Financing and Growth of Housing Sector in Nigeria*. Proceeding of the 16th iSTEAMS Multidisciplinary Research Nexus Conference, 16(2), The Federal Polytechnic Ilaro, Ogun State, Nigeria, June 9-11, 2019, 225-230.

Journals

Abdulrehman, A. A., & Nyamute, W. *Effect of Mortgage Financing on Financial Performance of Commercial Banks in Kenya*. **Journal of International Business Innovation and Strategic Management**, 1(6), 2018, 91-122.

Abraham, S. S. *Assessment of National Housing Policy, and Homelessness in Nigeria: Policy Options for Buhari's Administration*. **IOSR Journal of Humanities and Social Science**, 24(5) Series 3, 2019, 32-38.

Adediran, A. O., & Ali, H. M. *Nigeria Housing Finance Operation: A Review of Key Factors Affecting Housing Finance*. **Global Scientific Journals**, 7(12), 2019, 1174-1185.

Adediran, A. O., Oladejo, S. O., & Ijagbemi, C. O. *The Fundamentals to Affordable Homeownership in Nigeria*. **Journal of Multidisciplinary Engineering Science and Technology (JMEST)**, 7(4), 2020, 11659-11666.

Adegbite, T. A., & Azeez, B. A. *Customers' Deposits and Loan Administration: Nigerian Banks' Perception*. **International Journal of Applied Research in Management and Economics**, 1(3), 2018, 86-94.

Afolabi, M. A., Adeyemi, K. K., Salawudeen, O. S., & Fagbemi, T. O. *Monetary Policy and Bank Credit in Nigeria: A Toda-Yamamoto Approach*. **AUDCE Journal**, 14(5), 2018, 717-735.

Ahmed, A., Rehan, R., Chhapra, I. U., & Supro, S. *Interest Rate and Financial Performance of Banks in Pakistan*. **International Journal of Applied Economics Finance and Accounting**, 2(1), 2018, 1-7.

Al-Ahmad, S., Easa, N. F., & Mostapha, N. *Knowledge Sharing and Innovation: Evidence from Lebanese Banks*. **Creative Sustainable Development-BAU Journal**, 1(2), 2020, 1-25.

Alagba, O. S., Awa, K. I., & Ediri, U. *Mortgage Industry Financial Risk Tolerance and Mortgage Banks Credit Delivery in Nigeria*. **Nigerian Journal of Management Sciences**, 21(1 & 2) 2020, 83-103.

Alalade, Y. S. A., Oseni, E., & Adekunle, O. A. *Monetary Policy and Financial Performance of Deposit Money Banks in Nigeria*. **Asian Social Science Journal**, 16(11), 2020, 123-135.

Anacker, K. B. *Introduction: Housing Affordability and Affordable Housing*. **International Journal of Housing Policy**, 19(1), 2019, 1-16.

- Anidiobu, G. A., Okolie, P. I. P., & Ugwuanyi, W. N. *Effect of Mortgage Finance on Housing Delivery in Nigeria: The Primary Mortgage Institution (PMI) Perspective*. **Journal on banking Financial Services and Insurance Research**, 8(2), 2018, 36-49.
- Ayoade, O., & Ahmed, V. *Knowledge Influences on Perception of Innovation Drivers for Sustainable Housing Development Models*. **International Journal of Knowledge Management Studies**, 11(1), 2020, 1-19.
- Aziz, S., & Abbas, U. *Effect of Debt Financing on Firm Performance: A Study on Non-Financial Sector of Pakistan*. **Open Journal of Economics and Commerce**, 2(1), 2019, 8-15.
- Bahlous-Boldi, M. *Resilient Homeownership: How Partnership-Based Finance Would Have Prevented the 2008 US Mortgage Crisis*. **International Journal of Housing Markets and Analysis**, 2020, xx-xx, <https://doi.org/10.1108/IJHMA.04.2020.0045>.
- Bannerman, S., & Fu, G. *Analysing Access to Long Term Debt Effects on Firms Growth: Evidence of China*. **European Journal of Social Sciences**, 58(1), 2019, 5-13.
- Bello, A. *Review of the Housing Policies and Programmes in Nigeria*. **International Journal of Contemporary Research and Review**, 10(2), 2019, 20603-20616.
- Canepa, A., & Khaled, F. *Housing, Housing Finance and Credit Risk*. **International Journal of Financial Studies**, 6(50) 2018, 1-23.
- Chaar, S. A., & Easa, N. F. *Does Transformational Leadership Matter for Innovation in Banks? The Mediating Role of knowledge Sharing*. **International Journal of Disruptive Innovation in Government**, 1(1), 2021, 36-57.
- Chidi-Okeke, C. N., & Nwanna, I. O. *The Impact of Primary Mortgage Institutions' Housing Loans on Human Development in Nigeria*. **IIARD International Journal of Banking and Finance Research**, 6(3), 2020, 29-40.
- Cincinelli, P., & Piatti, D. *How Inefficient is an Inefficient Credit Process? An Analysis of the Italian Banking System*. **The Journal of Risk Finance**, 2021, xx-xx, <http://doi.org/10.1108/JRF.08.2020.0184>.
- Coskun, Y. *Measuring Homeownership Affordability in Emergent Market Context: An Exploratory Analysis for Turkey*. **International Journal of Housing Markets and Analysis**, 2020, xx-xx, <https://doi.org/10.1108/IJHMA.01.2020.0033>.
- Czischke, D., & Bortel, G. V. *An Exploration of Concepts and Policies on Affordable Housing*

in England, Italy, Poland, and the Netherlands. Journal of Housing and the Built Environment, 2018, xx-xx, <https://doi.org/10.1007/s10901.018.9598.1>.

Ehlenz, M. M., & Taylor, C. *Shared Equity Homeownership in the United States: A Literature*

Review. Journal of Planning Literature, 34(1), 2019, 3-18.

Elmedni, B. *The Mirage of Housing Affordability: An Analysis of Affordable Housing Plans in*

New York City. Sage Journal, 2018, 1-13, <https://doi.org/10.1177/2158244018809218>.

Ezennia, I. S., & Hoskara, S. O. *Methodological Weaknesses in the Measurement Approaches and Concept of Housing Affordability Used in Housing Research: A Qualitative Study. Plos One Journal*, 14(8), 2019, 1-27.

Farooq, M. O., Elseoud, M. S. A., Turen, S., & Abdulla, M. *Causes of Non-Performing Loans:*

The Experience of Gulf Cooperation Council Countries. Journal of Entrepreneurship and Sustainability, 6(4), 2019, 1955-1974.

Fasakin, I. J., Olanrewaju, O. O., & Umeokeke, N. I. *Factors Affecting House Ownership in Nigeria: A Probit and Heteroscedastic Probit Model Approach. Greener Journal of Social Science*, 9(2), 2019, 39-44.

Ganguly, A., Talukdar, A., & Chatterjee, D. *Evaluating the Role of Social Capital, Tacit Knowledge Sharing, Knowledge Quality and Reciprocity in Determining Innovation Capability of an Organization. Journal of Knowledge Management*, 23(6), 2019, 1105-1135.

Ghani, Z. A. *Primary Mortgage Institutions Challenges for Financing Housing Development in Nigeria. International Journal of Research-GRANTHAALAYAH*, 9(2), 2021, 127-137.

Goodman, L. S., & Mayer, C. *Homeownership, and the American Dream. Journal of Economic Perspectives*, 32(1), 2018, 31-58.

Haneda, S., & Ito, K. *Organizational and Human Resource Management and Innovation: Which Management Practices Are linked to Product and/or Process Innovation? Journal of Research Policy*, 2017, 1-12, <http://dx.doi.org/10.1016/j.respol.2017.10.008>.

Ibrahim, I., Muhammad, M. S., Auwal, U., & Raymond, D. *Perception of Low-Income Earners*

on the Performance of Mortgage Institutions in Housing Finance in Lafia, Nasarawa State, Nigeria. Path of Science Journal, 5(11), 2019, 2001-2011.

Iddris, F. *Innovation Capability and Product Innovation Performance: The Case of Low-Tech*

Manufacturing Firms. European Business Review Journal, 31(5), 2019, 646-668.

- Igwemma, A. A., Ogu, C., Agba, P. U., Odionye, J. C., & Ogu, C. L. *Commercial Bank Loans and Lending Rate in Nigeria: A Toda-Yamamoto Causality Approach*. **Journal of Economics and Sustainable Development**, 11(2), 2020, 13-20.
- Ikekpeazu, F. O. *Mortgage Financing for Housing Delivery in Nigeria: The Governmental Role in Development of an Effective Mortgage Market*. **PM World Journal**, 7(1), 2018, 1-19.
- Isedu, M. & Erhabor, O. J. *Does Financial Risks Has Effects on the Performance of Deposit Money Banks in Nigeria?* **Saudi Journal of Business and Management Studies**, 6(3), 2021, 71-85.
- Iyandemye, S., Barayandema, J., & Gasheja, F. *Mortgage Finance Market and Housing Affordability in Urban Areas in Rwanda: A Case Study of Kigali City*. **Journal for the Advancement of Developing Economies**, 7(1), 2018, 41-58.
- Jakait, G., & Omar, N. *Effects of Interest Rates on the Lending Portfolio of Commercial Banks in Kenya*. **International Journal of Academics and Research (IJARKE)**, 1(1), 2018, 45-53.
- Jayantha, W. M., & Oladinrin O. T. *Identifying Critical Enablers for Homeownership in Hong Kong*. **International Journal of Housing Markets and Analysis**, 13(2), 2020, 185-206.
- Kahn, K. B. *Understanding Innovation*. **Journal of Business Horizons**, 61, 2018, 453-460
<https://doi.org/10.1016/j.bushor.2018.01.011>.
- Kegninkeu, F. T. *The Impact of Credit Risk Management on the Performance of Commercial Banks in Cameroon: Case Study of BICEC Cameroon*. **Global Journal of Management and Business Research**, 18(7), Version 1.0, 2018, 18-40.
- Khan, M. A., Siddique, A., & Sarwar, Z. *Determinants of Non-Performing Loans in the Banking Sector in Developing State*. **Asian Journal of Accounting Research**, 5(1), 2020, 135-145.
- Khosravi, P., Newton, C., & Rezvani, A. *Management Innovation: A Systematic Review and Meta-Analysis of Past Decades of Research*. **European Management Journal**, 2019, 1-40, <http://doi.org/10.1016/j.emj.2019.03.003>.
- Kigomo, J. R., Senaji, T. A., & Mwaniki, G. W. *Influence of Technological Factors and Homeownership through Mortgage Financing in Kenya*. **The University Journal**, 3(1), 2021, 111-118.
- Kohl, S. *More Mortgages, More Homes? The Effect of Housing Financialization on Homeownership in Historical Perspective*. **Politics and Society Journal**, 46(2), 2018, 177-203.

- Kostikov, E., Jilkova, P., & Stranska, P. K. *Quantified Impact of Market Interest Rates on Commercial Banks' Business Mix*. **Journal of International Studies**, 12(2), 2019, 258-269.
- Kumar, V., Acharya, S., & Ho, T. H. *Does Monetary Policy Influence the Profitability of Banks in New Zealand?* **International Journal of Financial Studies**, 8(35), 2020, 1-17.
- Le, P. B., & Lei, H. *Determinants of Innovation Capability: The Role of Transformational Leadership, Knowledge Sharing and Perceived Organizational Support*. **Journal of Knowledge Management**, 2019, xx-xx, <https://doi.org/10.1108/JKM.09.2018.0568>.
- Mardani, A., Nikoosokhan, S., Moradi, M., & Doustar, M. *The Relationship between Knowledge Management and Innovation Performance*. **Journal of High Technology Management Research**, 29, 2018, 12-26, <https://doi.org/10.1016/j.hitech.2018.04.002>.
- Moore, E. A. *Addressing Housing Deficit in Nigeria: Issues, Challenges and Prospects*. **CBN Economic and Financial Review Journal**, 57(4), 2019, 201-222.
- Morales, D. T., & Trinidad, F. L. *Digital Mortgage Banking Acceptability in Philippine Universal Banks: Evidence from UTAUT Model*. **Journal of Information System and Technology Management**, 4(15), 2019, 1-15.
- Morales, D. T., & Trinidad, F. L. *Unified Theory of Acceptance Use of Technology (UTAUT) and Its Applicability to Mortgage Banking Digitization: The Case of the Philippines*. **Journal of Information System and Technology Management**, 4(14), 2019, 47-60.
- Musyimi, C. N., & Kising'u, T. M. *Effect of Interest Capping on Financial Performance in Commercial Banks in Kericho County, Kenya*. **The Strategic Journal of Business and Change Management**, 6(2) 2019, 1130-1149.
- Najafi-Tavani, S., Nafaji-Tavani, Z., Naude, P. N, Oghazi, P., & Zeynaloo, E. *How Collaborative Innovation Networks Affect New Product Performance: Product Innovation Capability, Process Innovation Capability, and Absorptive Capacity*. **Journal of Industrial Marketing Management**, 2018, 1-12, <https://doi.org/10.1016/j.indmarman.2018.02.009>.
- Naoi, M., Tiwari, P., Moriizumi, Y., Yukutake, N., Hutchison, N., Koblyakova, A., & Rao, J. *Household Mortgage Demand: A study of the Uk, Australia, and Japan*. **International Journal of Housing Markets and Analysis**, 12(1), 2019, 110-130.
- Nguyen, T., Tripe D., & Ngo, T. *Operational Efficiency of Bank Loans and Deposits: A case Study of Vietnamese Banking System*. **International Journal of Financial Studies** 6(14), 2018, 1-13.
- Nwanekezie, O. F., & Onuoha, I. J. *Homeowner's Perception of the Factors Affecting Access to Housing Finance in Owerri, Imo State, Nigeria*. **International Journal of Finance and Accounting**, 8(2), 2019, 57-64.

- Nwuba, C. C., & Chukwu-Nwuba, E. O. *Barriers to Accessing Mortgages in Nigeria's Housing Markets*. **International Journal of Housing Markets and Analysis**, 2018, xx-xx, <http://doi.org/10.1108/IJHMA.10.2017.0089>.
- Ofor, T. N., Alagba, O. S., & Ifurueze, M. S. *Housing Finance Market and Economic Growth of West Africa Region: A Study of Nigeria and Ghana*. **International Journal of Business and Economic Development**, 6(3), 2018, 49-60.
- Ogundipe, A. S., Akintola, A. F., & Olaoye, S. A. *Interest Rates and Loan Performance of Deposit Money Banks in Nigeria*. **EPRA International Journal of Economic and Business Review**, 8(1), 2020, A13-A20.
- Olawumi, S. O., Adewusi, A. O., & Oyetunji A. K. *Analysis of the Factors Influencing Access to Mortgage Finance in Lagos Nigeria*. **Global Journal of Business, Economics and Management**, 9(3), 2019, 113-121.
- Olukayode, O. F., & Owolabi, O. S. B. *The Role of Financial Institutions in Housing Development in Nigeria*. **The International Journal of Engineering and Science (IJES)**, 7(8) Version 1, 2018, 84-88.
- Owusu-Manu, D., Edwards, D. J., Parn, E. A., Asiedu, R. O., & Aboagye, A. *Determinants of Mortgage Price Affordability: A Study of Ghana*. **International Journal of Housing Markets and Analysis**, 2018, xx-xx, <https://doi.org/10.1108/IJHMA.11.2017.0094>.
- Oyediran, O. S. *Institution and Housing Development: Mirage, Magic, and Miracle of Low-Cost Housing in Nigeria*. **CBN Economic and Financial Review Journal**, 57(4), 2019, 37-63.
- Rajapathirana, J. R. P., & Hui, Y. *Relationship between Innovation Capability, Innovation Type, and Firm Performance*. **Journal of Innovation and Knowledge**, 3, 2018, 44-55.
- Saidu, A. I., & Yeom, C. *Success Criteria Evaluation for a Sustainable and Affordable Housing Model: A case for Improving Household Welfare in Nigeria Cities*. **Sustainability Journal**, 12(656), 2020, 2-16.
- Sarwani, Sudaryana, Y., Wicaksono, W., Wicaksono, N., & Suyatin. *Effect of Service Product Innovation, Promotional Activities and Company Image on Saving Decisions in PT. Bank BNI Syariah, Tbk Area, Jabodetabek*. **Annals of R.S.C.B. Journal**, 25(4), 2021, 16251-16266.
- Shreastha, N. *Factor Analysis as a Tool for Survey Analysis*. **American Journal of Applied Mathematics and Statistics**, 9(1), 2021, 4-11.
- Siyan, P., Adegioriola, A. E., & Eriywode, O. M. *The Development of Mortgage Finance in*

Nigeria and its Impact on the Economy. **International Multilingual Journal of Science and Technology**, 4(3), 2019, 455-465.

Staehr, K., & Uuskula, L. *Macroeconomic and Macro-Financial Factors as Leading Indicators*

of Non-Performing Loans: Evidence from the EU Countries. **Journal of Economic Studies**, 2019, xx-xx, <http://doi.org/10.1108/JES.03.2019.0107>.

St-Germain, A. F., & Tarasuk, V. *Homeownership Status and Risk of Food Insecurity: Examining the Role of Housing Debt, Housing Expenditure and Housing Asset Using A Cross-Sectional Population-Based Survey of Canadian Households*. **International Journal for Equity in Health**, 19(5), 2020, 1-12.

Taber, K. S. *The Use of Cronbach's Alpha When Developing and Reporting Research Instruments in Science Education*. **Research in Science Education Journal**, 48(1), 2018, 1273-1296.

Thomas, A. *Convergence and Digital Fusion Lead to Competitive Differentiation*. **Business Process Management Journal**, 26(3), 2020, 707-720.

Umar, M., & Sun, G. *Determinants of Non-Performing Loans in Chinese Banks*. **Journal of Asia Business Studies**, 2018, 1-17, <https://doi.org/10.1108/JABS.01.2016.0005>.

Utami, S. A., Cakhyaneu, A., & Wulandari, N. S. *Analysis of Home Ownership Financing for Islamic Banks in Indonesia Through Sharia Asset Backed Securities Participation Letter*. **Jurnal Ekonomi Dan Keuangan Syariah**, 4(2), 2020, 211-228.

Wang, W., Gan, C., Chang, Z., Cohen, D. A., & Li, Z. *Homeownership in Urban China: An Empirical Study of Borrower Characteristics and the Housing Provident Fund Program in Kunming*. **Journal of Asia Business Studies**, 2018, xx-xx, <https://doi.org/10.1108/JABS.03.2016.0041>.

Werigbelegha, A. P., & Peter, E. O. *Impact of Primary Mortgage Institutions' Investments on Economic Growth in Nigeria (1995-2017)*. **International Journal of Business and Management Review**, 6(10), 2018, 47-55.

Zhang, Y., Khan, U., Lee, S., & Salik, M. *The Influence of Management Innovation and Technological Innovation on Organizational Performance: A Mediating Role of Sustainability*. **Sustainability Journal**, 11(495), 2019, xx-xx.

Periodicals

Central Bank of Nigeria. *Mortgage Financing in Nigeria*. Occasional Paper, 50, <http://www.cbn.gov.ng>.

Fashina, A. F. *National Housing Fund (NHF) Scheme as a Panacea for Affordable Housing in Nigeria*. M. Sc. Accounting Thesis, Lead City University, Ibadan, Nigeria, 2020, 13-14.

Federal Mortgage Bank of Nigeria. *FMBN Ikeja District Office NHF Scheme Registered Contributors as at 31/12/2021*. FMBN Head Office Abuja ICT Group Database.

Hamkalo, O. B., & Demkiv, K. S. *Benchmarking as a Tool for Providing Analytical Support to Mortgage Lending Operations of a Bank*. 2019, 91-99, [https://doi.org/10.31767/su.1\(84\)](https://doi.org/10.31767/su.1(84)) 2019.01.10.

Huljak, I., Martin, R., Moccerro, D., & Pancaro, C. *Do Non-Performing Loans Matter for Bank Lending and the Business Cycle in Euro Area Countries?* European Central Bank (ECB) Working Paper, Series no. 241, 2020, 1-29.

Ikyaaave, J. T. *How FMBN is deepening mortgage penetration*. Thisday Newspaper of June 3rd, 2021, <https://www.thisdaylive.com>.

Kafle, S. C. *Correlation and Regression Using SPSS*. OCEM Journal of Management, Technology and Social Sciences, 2020, 126-132, <https://www.researchgate.net/publication/343282545>.

Ogiugo, U. H., & Abu, O. J. *Mortgage Finance Institution, and the Impact on the Nigeria Economy*. Research Gate Article, 2019, 187-193, <https://www.researchgate.net/publication/333532002>.

Onamusi, A. B. *Entry-Mode Strategy, Firm-Specific Capability and Organisational Performance of Selected Manufacturers of Baby-Care Products in Lagos-State Nigeria*. PhD Thesis, 2020, 1-396.

The World Bank. *Housing Finance Development Program (P131973)*. Implementation Completion and Results Report, 31 October 2019, 5-6.

Textbook

Oyedokun, G. E. *Research Methodology for Social and Management Scientists*. OGE Business School, Lagos Aaron, and Hur Publishing, 2020, 1-342.

Webpages

Baran, S. *Criticisms and Arguments against Transformational Leadership*. 2019. LinkedIn Website, <https://www.linkedin.com>.

Beji, U. *Legal and Commercial Issues in Bridging the Housing Deficit Gap in Nigeria*. LeLaw Article, www.mondaq.com.

Centre for Affordable Housing Finance in Africa. *Understanding Nigeria's Housing Finance Market*. CAHF, <http://www.housingfinanceafrica.org>.

Dangiwa, A. M. *FMBN Wants Its Capital Base Increase to ₦500 Billion*. Financial Nigeria, <http://www.financialnigeria.com>.

Federal Mortgage Bank of Nigeria. *Accredited Primary Mortgage Banks (PMBs)*. FMBN Website www.fmbn.gov.ng.

Federal Mortgage Bank of Nigeria. *Historical Background of FMBN*. FMBN website, www.fmbn.gov.ng.

Ghent, A. *The Historical Origins of America's Mortgage Laws*. Research institute for Housing America Website, <https://mba.org>.

Gianfranco. *What is the difference between ANOVA and Regression: And which one to Choose?* StatsImprove Article of Low Cost and Highly Professional Statistical Consultancy, 2019. <https://www.statsimprove.com>.

Housing Circuit. *Mortgage Financing in Nigeria: Issues and Challenges*. Housing Circuit Limited, <http://www.housingcircuit.com>.

Investopedia. *Interest Rate*. Investopedia, www.investopedia.com/terms/i/interest_rate.asp.

Laerd Statistics. *Multiple Regression Analysis Using SPSS Statistics*. Laerd Statistics Website, <https://statistics.laerd.com>.

Langston University. *Transformational Leadership*. Langston University Website, <https://www.langston.edu>.

Statistics Solutions. *Heteroscedasticity*. Statistics Solutions Website, www.statisticssolutions.com.

Statistics Solutions. *Testing Assumptions of Linear Regression in SPSS*. Statistics Solutions Website, www.statisticssolutions.com.

Sturges, W. A., & Clark, S. O. *Theory and Real Property Mortgages*. Yale Law Journal Website, <https://openyls.law.yale.edu>.

Thomas, L. *Cross-Sectional Study: Definitions, Uses and Examples*. Scribbr Website <https://www.scribbr.com>.

University of Cambridge. *Testing Normality including Skewness and Kurtosis*. MRC Cognition and Brain Sciences Unit, www.imaging.mrc-cbu.cam.ac.uk.

Wikipedia. *Transformational Leadership*. Wikipedia Website, <https://en.m.wikipedia.org>.

Appendix I-PMB's Survey Questionnaire

Primary Mortgage Banks (PMBs) Questionnaire

**LEAD CITY UNIVERSITY, IBADAN, OYO STATE, NIGERIA
DEPARTMENT OF MANAGEMENT AND ACCOUNTING,
FACULTY OF MANAGEMENT AND SOCIAL SCIENCES**

Dear Respondent,

As part of the requirement for a Doctor of Philosophy degree (PhD) in Accounting, I am carrying out a study on **“MORTGAGE FINANCING, INNOVATION CAPABILITY AND HOUSING LOAN PERFORMANCE OF MORTGAGE BANKS IN NIGERIA”**. This study is mainly an academic exercise as all information provided would be treated with utmost confidentiality. In any event, you feel uncomfortable to continue, you may withdraw your consent at no cost. Below is the questionnaire that addressed the objectives of this study, and it is targeted at **Credit Officers** of the PMBs. Please, feel free to tick the option that best express your personal views.

Thank you,

Abiodun Fasunle FASHINA

Section A: Demographic Information

Please, carefully go through each item and tick (✓) as appropriate.

1. Gender: Male () Female ()
2. Marital status: Single () Married () Divorced ()
3. Age bracket: 18-30 () 31-40 () 41- 50 () 51-60 ()
4. Highest academic qualification: WAEC/GCE/ND/NCE () B.Sc./BA/HND () PGD/MBA/M.Sc./MA () MPhil/PhD ()

5. Length of Service: Below 5 years () 6-10 years () 11-15 years () Above 16 years ()
6. Kindly rate your knowledge of the overall organizational activities and individual housing loan performance of your Primary Mortgage Bank (PMB) on the scale below:

Very low

Excellent

1	2	3	4	5	6	7	8	9	10

Section B: Mortgage Financing

The statement in this section concerns mortgage financing as related to your Primary Mortgage Bank (PMB). Using the four-point Likert-type-scale provided, please indicate the extent to which each statement applies to your organization by selecting one of the options provided (1, 2, 3, and 4).

1 = Low Extent; 2 = Partially Low Extent; 3 = Partially High Extent; 4 = High Extent

I	Long-Term Funds	LE	PLE	PHE	HE
	To what extent does your PMB achieve the following relative to industry average?				
1	Access NHF mortgage loan from FMBN	1	2	3	4
2	Source funding via secondary mortgage market (SMM)	1	2	3	4
3	Mobilize long-term deposits for homeownership loans	1	2	3	4
4	Press for domestic and offshore long-term funds	1	2	3	4
II	Household Income	LE	PLE	PHE	HE
	To what extent does your PMB realize the following relative to industry average?				
1	Assess the ability to repay the mortgage loan base on household income	1	2	3	4
2	Confirm loan applicant regular flow of income	1	2	3	4
3	Accept additional income source to support loan application	1	2	3	4
4	Consider 1/3 monthly income best practice for loan repayment	1	2	3	4
III	Interest Rate	LE	PLE	PHE	HE
	To what extent does your PMB implement the following relative to industry average?				
	Comply with NHF 6% fixed interest rate	1	2	3	4
2	Adopt flexible interest rate	1	2	3	4
3	Apply commercial interest rate for homeownership loan	1	2	3	4
4	Implement CBN interest rate review directive	1	2	3	4

Section C: Innovation Capability

The statement in this section concerns innovation capability as applicable to your Primary Mortgage Bank (PMB). Using the four-point Likert-type-scale provided, please indicate the extent to which each statement applies to your organization by selecting one of the options provided (1, 2, 3, and 4).

1 = Low Extent; 2 = Partially Low Extent; 3 = Partially High Extent; 4 = High Extent

IV	Management Innovation To what extent does your PMB accomplish the following relative to industry average?	LE	PLE	PHE	HE
1	Management of the mortgage lending process	1	2	3	4
2	Management capability to introduce new methods and procedures	1	2	3	4
3	Management leadership quality	1	2	3	4
4	Management ability to identify new innovations for competitive edge	1	2	3	4
V	Process Innovation To what extent does your PMB deliver the following relative to industry average?	LE	PLE	PHE	HE
1	Apply new innovations for efficiency service delivery	1	2	3	4
2	Implement workflow strategies to deliver a better-quality service	1	2	3	4
3	Enhance service performance at a reduce cost	1	2	3	4
4	Improve loan processing turnaround time	1	2	3	4

Section D: Housing Loan Performance

The statement in this section concerns housing loan performance as observed by mortgage banks. Using the four-point Likert-type-scale provided, please indicate the extent to which each performance statement applies to your organization by selecting one of the options provided (1, 2, 3, and 4).

1 = Low Extent; 2 = Partially Low Extent; 3 = Partially High Extent; 4 = High Extent

VI	Homeownership Loans In the last 3 years, to what extent does your PMB achieve the following relative to industry average?	LE	PLE	PHE	HE
1	Increase provision for homeownership loans	1	2	3	4
2	Improve the NHF loan disbursements	1	2	3	4
3	Grow the volume of mortgage loans provided	1	2	3	4
4	Implement CBN 70% minimum loanable funds for creation of mortgage assets	1	2	3	4
VII	Non-Performing Loans (NPLs)	LE	PLE	PHE	HE

	In the last 3 years, to what extent does your PMB accomplish the following relative to industry average?				
1	Reduce the volume of NPLs ratio	1	2	3	4
2	Maintain CBN 10% not exceeding NPLs ratio	1	2	3	4
3	Improvement in loan recovery efforts	1	2	3	4
4	Effective monitoring of mortgage loans' performance	1	2	3	4

Section E: Moderator

The statement in this section concerns moderating variable which mortgage banks are exposed to. Using the four-point Likert-type-scale provided, please indicate the extent to which each statement affects your organization by selecting one of the options provided (1, 2, 3, and 4).

1 = Low Extent; 2 = Partially Low Extent; 3 = Partially High Extent; 4 = High Extent

VIII	Government Housing Policy	LE	PLE	PHE	HE
	To what extent does the following items influence your PMB's housing policy delivery for homeownership?				
1	National Housing Policy (NHP) programs	1	2	3	4
2	Regulatory authority operational guidelines	1	2	3	4
3	CBN credit policy on housing finance	1	2	3	4
4	Mortgage industry regulation changes	1	2	3	4

Thank you for filling this questionnaire and for the time sacrificed.

Appendix II-PMB's Survey Questions for Pilot Study

Section B which Addressed Mortgage Financing

B Mortgage Financing

1 To what extent does your PMB achieve the following relative to industry average?

Please, indicate the extent to which each statement applies to your organization.

- | | |
|----------------|---|
| Long-Term Fund | Access NHF mortgage loan from FMBN () |
| | Source funding via secondary mortgage market () |
| | Mobilize long-term deposits for homeownership loans () |
| | Efforts of owners to increase capital base () |
| | Press for domestic and offshore long-term funds () |

2 To what extent does your PMB realize the following relative to industry average?

Please, indicate the extent to which each statement applies to your organization.

- | | |
|------------------|---|
| Household Income | Assess the ability to repay the mortgage loan () |
| | Determine loan affordability () |
| | Confirm loan applicant regular flow of income () |
| | High household income increase loan affordability () |
| | Low household income reduce loan affordability () |

Accept additional income source to support application ()

Apply 1/3 monthly income best practice ()

Maximum 80% Loan-to-Value (LTV) ratio ()

- 3 To what extent does your PMB implement the following relative to industry average? Please, indicate the extent to which each statement applies to your organization.

Interest Rate Comply with NHF 6% fixed interest rate ()
Adopt flexible interest rate ()
Apply commercial interest rate for homeownership loan ()
High interest rate reduce mortgage loan application ()
Low interest rate increase mortgage loan application ()
CBN interest rate review directive ()
Interest rate risk management ()

Section C which Addressed Innovation Capability

C Innovation Capability

- 1 To what extent does your PMB accomplish the following relative to industry average? Please, indicate the extent to which each statement applies to your organization.

Management Innovation Management of the mortgage lending process ()
Management response to changing operational environment ()
Management capability to introduce new methods and procedures ()
Management leadership quality ()
Management support to achieve organizational

objectives ()

Management ability to identify new innovations for competitive edge ()

2 To what extent does your PMB deliver the following relative to industry average?

Please, indicate the extent to which each statement applies to your organization.

Process Innovation Apply new innovations for efficiency service delivery ()

Workflow strategies to deliver a better quality service ()

Enhance service performance at a reduce cost ()

Deepen mortgage penetration ()

Strengthen capacity of digital end-to-end mortgage origination process ()

Improve loan processing turnaround time ()

Benchmarking of mortgage lending transactions ()

Effectiveness and efficiency of the customers' service value chain ()

Section D which Addressed Housing Loan Performance of PMBs

D Housing Loan Performance

1 In the last 3 years, to what extent does your PMB achieve the following relative to industry average? Please, indicate the extent to which each performance statement applies to your organization.

Homeownership Loans Increase provision for homeownership loans ()

Apply the credit risk management indicators ()

Improve the NHF loan disbursements ()

- Grow the volume of mortgage loans' provided ()
- Frequency in mortgage loan applications received ()
- Multiply homeownership loan applications processed ()
- Implement 70% minimum loanable funds for creation of mortgage assets ()
- Strengthen effective loan evaluation process ()

2 In the last 3 years, to what extent does your PMB accomplish the following relative to industry average? Please, indicate the extent to which each performance statement applies to your organization.

- Non-Performing Loans
- Widen the volume of NPLs ratio ()
 - Reduce substandard in loan underwriting ()
 - Maintain 10% not exceeding NPLs ratio ()
 - Effect of high NPLs on housing loan performance ()
 - Rate of mortgage loan default ()
 - Enlarge loan recovery strategies ()
 - Expand quality of mortgage assets ()
 - Effective monitoring of mortgage loans ()

Section E which Addressed the Moderating Effect

E Moderator

1 To what extent does the following items reflect your PMB's housing policy delivery for homeownership? Please, indicate the extent to which each statement applies to your organization.

- Government Housing Policy
- Policy for mortgage lending ()
 - Effectiveness of National Housing Policy ()
 - Regulatory authority operational guidelines ()

- Inefficient secondary mortgage market ()
 - Government microeconomic policies impact ()
 - CBN credit policy on housing finance ()
 - External environment operating challenges ()
 - Key performance indicators design ()
 - Mortgage industry regulation changes ()
 - Land tenure system and foreclosure laws ()
-

Appendix III-NHF Customer's Survey Questionnaire

National Housing Fund (NHF) Scheme Contributors **Questionnaire**

LEAD CITY UNIVERSITY, IBADAN, OYO STATE, NIGERIA
DEPARTMENT OF MANAGEMENT AND ACCOUNTING,
FACULTY OF MANAGEMENT AND SOCIAL SCIENCES

Dear Respondent,

As part of the requirement for a Doctor of Philosophy degree (PhD) in Accounting, I am carrying out a study on “**Access to Finance**” and “**Service Efficiency**” focusing on mortgage banks in Nigeria. This study is mainly an academic exercise as all information provided would be treated with utmost confidentiality. In any event that you feel uncomfortable to continue, you may withdraw your consent at no cost. Below is the questionnaire that addressed two of the objectives of this study. Please, feel free to tick the option that best express your personal views.

Thank you,

Abiodun Fasunle FASHINA

Section A: Demographic Information

Please, carefully go through each item and tick (✓) as appropriate.

1. Gender: Male () Female ()
2. Marital status: Single () Married () Divorced ()
3. Age bracket: 18-30 () 31-40 () 41- 50 () 51-65 ()

4. Employment status: Full-Time () Part-Time () Contract staff () Self Employed ()

5. Highest academic qualification: WAEC/GCE/ND/NCE () B.Sc./BA/HND ()
PGD/MBA/M.Sc./MA () MPhil/PhD ()

6. Length of Service: Below 5 years () 6-10 years () 11-15 years () Above 16 years ()

7. Period of NHF Scheme contribution: Below 6 months () 6 months-2 years ()
2-5 years () Above 5 years ()

Section B: Housing Loan Performance

The statement in this section concerns housing loan performance as revealed by mortgage banks. Using the four-point Likert-type-scale provided, please indicate your level of agree/disagree based on your overall assessment of each performance statement by selecting one of the options provided (1, 2, 3, and 4).

1 = Disagree; 2 = Partially Disagree; 3 = Partially Agree; 4 = Agree

I	Access to Finance	D	PD	PA	A
	Please, indicate your level of agree/disagree with the following:				
1	Inadequate household income	1	2	3	4
2	Stringent conditions attached to mortgage loans	1	2	3	4
3	Unavailability of long-term funding	1	2	3	4
4	Inefficient housing finance system	1	2	3	4
II	Service Efficiency	D	PD	PA	A
	Please, indicate your level of agree/disagree with the following:				
1	Mortgage banks providing effective and efficient service	1	2	3	4
2	Customers' satisfaction in mortgage loan delivery	1	2	3	4
3	Fast track mortgage loan application processing	1	2	3	4
4	Facilitate homeownership loans' disbursement	1	2	3	4

Thank you for taking your time to fill this questionnaire.

- Improved customer service quality ()
- Digitization of mortgage operations for performance ()
- Customers' satisfaction in mortgage loan delivery ()
- Quality of mortgage lending services ()
- Fast track mortgage loan application processing ()
- Facilitate homeownership loans' disbursement ()
- Creating awareness for prospective homeowners ()

Appendix V-Validity Test

Exploratory Factor Analysis (EFA)

1. Long-Term Funds

β	β^2	$1 - \beta^2$
.930	.864900	.135100
.908	.824464	.175536
.971	.942841	.057159
.791	.625681	.374319
3.600	3.257886	.742114

$$AVE = \frac{\text{Sum of } (\beta^2)}{N}$$

Where "N" is the number of items/factors loading i.e. (β).

$$CR = \frac{(\text{Sum of } \beta)^2}{(\text{Sum of } \beta)^2 + \text{Sum of } (1 - \beta^2)}$$

$$\text{Average Variance Extracted (AVE)} = \frac{3.257886}{4} = .814$$

$$\text{Composite Reliability (CR)} = \frac{(3.600)^2}{(3.600)^2 + .742114} = \frac{12.96}{13.702114} = .946$$

KMO and Bartlett's Test

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.601
Bartlett's Test of Sphericity	Approx. Chi-Square	31.631
	df	6
	Sig.	.000

Rotated Component Matrix^a

Component

	1	2
Access NHF mortgage loan from FMBN	.930	-.046
Source funding via secondary mortgage market	.908	-.170
Mobilize long-term deposits for homeownership loans	-.067	.971
Press for domestic and offshore long-term funds	.791	.487

Extraction Method: Principal Component Analysis.

Rotation Method: Varimax with Kaiser Normalization.^a

a. Rotation converged in 3 iterations.

2. Household Income

β	β^2	$1 - \beta^2$
.878	.770884	.229116
.745	.555025	.444975
.878	.770884	.229116
.896	.802816	.197184
3.397	2.899609	1.100391

$$\text{Average Variance Extracted (AVE)} = \frac{2.899609}{4} = .725$$

$$\text{Composite Reliability (CR)} = \frac{(3.397)^2}{(3.397)^2 + 1.100391} = \frac{11.539609}{12.64} = .913$$

KMO and Bartlett's Test

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.623
Bartlett's Test of Sphericity	Approx. Chi-Square	25.406
	df	6
	Sig.	.000

Rotated Component Matrix^a

	Component	
	1	2

Assess the ability to repay the mortgage loan base on household income	.878	.280
Confirm loan applicant regular flow of income	.745	-.482
Accept additional income source to support loan application	.878	.280
Consider 1/3 monthly income best practice for loan repayment	.197	.896

Extraction Method: Principal Component Analysis.

Rotation Method: Varimax with Kaiser Normalization.^a

1. Rotation converged in 3 iterations.

3. Interest Rate

β	β^2	$1 - \beta^2$
.964	.929296	.070704
.975	.950625	.049375
.945	.893025	.106975
.999	.998001	.001999
3.883	3.770947	.229053

$$\text{Average Variance Extracted (AVE)} = \frac{3.770947}{4} = .943$$

$$\text{Composite Reliability (CR)} = \frac{(3.883)^2}{(3.883)^2 + .229053} = \frac{15.077689}{15.306742} = .985$$

KMO and Bartlett's Test

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.736
Bartlett's Test of Sphericity	Approx. Chi-Square	60.446
	df	6
	Sig.	.000

Rotated Component Matrix^a

	Component	
	1	2
Comply with NHF 6% fixed interest rate	.964	-.049
Adopt flexible interest rate	.975	-.046
Apply commercial interest rate for homeownership loans	.945	.070
Implement CBN interest rate review directive	-.008	.999

Extraction Method: Principal Component Analysis.

Rotation Method: Varimax with Kaiser Normalization.^a

a. Rotation converged in 3 iterations.

4. Management Innovation

β	β^2	$1 - \beta^2$
.866	.749956	.250044
.934	.872356	.127644
.971	.942841	.057159
.716	.512656	.487344
3.487	3.077809	.922191

$$\text{Average Variance Extracted (AVE)} = \frac{3.077809}{4} = .769$$

$$\text{Composite Reliability (CR)} = \frac{(3.487)^2}{(3.487)^2 + .922191}$$

$$= \frac{12.159169}{13.08136} = .930$$

KMO and Bartlett's Test

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.616
Bartlett's Test of Sphericity	Approx. Chi-Square	26.356
	df	6

Sig.

.000

Rotated Component Matrix^a

	Component	
	1	2
Management of the mortgage lending process	.866	.217
Management capability to introduce new methods and procedures	.934	-.091
Management leadership quality	.063	.971
Management ability to identify new innovations for competitive edge	.716	.513

Extraction Method: Principal Component Analysis.

Rotation Method: Varimax with Kaiser Normalization.^a

a. Rotation converged in 3 iterations.

5. Process Innovation

β	β^2	$1 - \beta^2$
.966	.933156	.066844
.896	.802816	.197184
.703	.494209	.505791
.898	.806404	.193596
3.463	3.036585	.963415

$$\text{Average Variance Extracted (AVE)} = \frac{3.036585}{4} = .759$$

$$\text{Composite Reliability (CR)} = \frac{(3.463)^2}{(3.463)^2 + .963415}$$

$$= \frac{11.992369}{12.955784} = .926$$

KMO and Bartlett's Test

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.623
Bartlett's Test of Sphericity	Approx. Chi-Square	26.651
	df	6
	Sig.	.000

Rotated Component Matrix^a

	Component	
	1	2
Apply new innovations for efficiency service delivery	.012	.966
Implement workflow strategies to deliver a better-quality service	.896	.094
Enhance service performance at a reduce cost	.592	.703
Improve loan processing turnaround time	.898	.134

Extraction Method: Principal Component Analysis.

Rotation Method: Varimax with Kaiser Normalization.^a

a. Rotation converged in 3 iterations.

6. Access to Finance

β	β^2	$1 - \beta^2$
.941	.885481	.114519
.913	.833569	.166431
.839	.703921	.296079
.923	.851929	.148071
3.616	3.2749	.7251

$$\text{Average Variance Extracted (AVE)} = \frac{3.2749}{4} = .819$$

$$\text{Composite Reliability (CR)} = \frac{(3.616)^2}{(3.616)^2 + .7251} = \frac{13.075456}{13.800556} = .947$$

KMO and Bartlett's Test

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.585
Bartlett's Test of Sphericity	Approx. Chi-Square	57.455
	df	6
	Sig.	.000

Rotated Component Matrix^a

	Component	
	1	2
Inadequate household income	.941	.143
Stringent conditions attached to mortgage loans	.913	.221
Unavailability of long-term funding	.310	.839
Inefficient housing finance system	.074	.923

Extraction Method: Principal Component Analysis.

Rotation Method: Varimax with Kaiser Normalization.^a

a. Rotation converged in 3 iterations.

7. Homeownership Loans

β	β^2	$1 - \beta^2$
.894	.799236	.200764
.967	.935089	.064911
.837	.700569	.299431
.847	.717409	.282591
3.545	3.152303	.847697

$$\text{Average Variance Extracted (AVE)} = \frac{3.152303}{4} = .788$$

$$\text{Composite Reliability (CR)} = \frac{(3.545)^2}{(3.545)^2 + .847697}$$

$$= \frac{12.567025}{13.414722} = .937$$

KMO and Bartlett's Test

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.	.650
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Bartlett's Test of Sphericity	Approx. Chi-Square	24.306
	df	6
	Sig.	.000

Rotated Component Matrix^a

	Component	
	1	2
Increase provision for homeownership loans	.894	.233
Improve the NHF loan disbursements	.086	.967
Grow the volume of mortgage loans provided	.837	.260
Implement CBN 70% minimum loanable funds for creation of mortgage assets	.847	-.219

Extraction Method: Principal Component Analysis.

Rotation Method: Varimax with Kaiser Normalization.^a

a. Rotation converged in 3 iterations.

8. Non-Performing Loans (NPLs)

β	β^2	$1 - \beta^2$
.987	.974169	.025831
.931	.866761	.133239
.886	.784996	.215004
.916	.839056	.160944
3.72	3.464982	.535018

$$\text{Average Variance Extracted (AVE)} = \frac{3.464982}{4} = .866$$

$$\text{Composite Reliability (CR)} = \frac{(3.72)^2}{(3.72)^2 + .535018}$$

$$= \frac{13.8384}{14.373418} = .963$$

KMO and Bartlett's Test

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.	.684
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Bartlett's Test of Sphericity	Approx. Chi-Square	36.271
	df	6
	Sig.	.000

Rotated Component Matrix^a

	Component	
	1	2
Reduce the volume of NPLs ratio	.046	.987
Maintain CBN 10% not exceeding NPLs ratio	.931	.157
Improvement in loan recovery efforts	.886	-.213
Effective monitoring of mortgage loans' performance	.916	.165

Extraction Method: Principal Component Analysis.

Rotation Method: Varimax with Kaiser Normalization.^a

a. Rotation converged in 3 iterations.

9. Service Efficiency

β	β^2	1- β^2
.718	.515524	.484476
.758	.574564	.425436
.879	.772641	.227359
.948	.898704	.101296
3.303	2.761433	1.238567

$$\text{Average Variance Extracted (AVE)} = \frac{2.761433}{4} = .690$$

$$\text{Composite Reliability (CR)} = \frac{(3.303)^2}{(3.303)^2 + 1.238567}$$

$$= \frac{10.909809}{12.148376} = .898$$

KMO and Bartlett's Test

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.	.591
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Bartlett's Test of Sphericity	Approx. Chi-Square	40.864
	df	6
	Sig.	.000

Rotated Component Matrix^a

	Component	
	1	2
Mortgage banks providing effective and efficient service	.718	.574
Customers' satisfaction in mortgage loan delivery	.758	.341
Fast track mortgage loan application processing	.879	-.161
Facilitate homeownership loans' disbursement	.039	.948

Extraction Method: Principal Component Analysis.

Rotation Method: Varimax with Kaiser Normalization.^a

a. Rotation converged in 3 iterations.

10. Government Housing Policy

β	β^2	$1 - \beta^2$
.839	.703921	.296079
.919	.844561	.155439
.964	.929296	.070704
.835	.697225	.302775
3.557	3.175003	.824997

$$\text{Average Variance Extracted (AVE)} = \frac{3.175003}{4} = .794$$

$$\text{Composite Reliability (CR)} = \frac{(3.557)^2}{(3.557)^2 + .824997} = \frac{12.652249}{13.477246} = .939$$

KMO and Bartlett's Test

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.602
Bartlett's Test of Sphericity	Approx. Chi-Square	25.584
	df	6
	Sig.	.000

Rotated Component Matrix^a

	Component	
	1	2
National Housing Policy (NHP) programmes	.839	.252
Regulatory authority operational guidelines	.919	.156
CBN credit policy on housing finance	.071	.964
Mortgage industry regulation changes	.835	-.336

Extraction Method: Principal Component Analysis.

Rotation Method: Varimax with Kaiser Normalization.^a

a. Rotation converged in 3 iterations.

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Appendix VI-Cronbach's Alpha Reliability Test

1. Long-Term Funds

Reliability Statistics

Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
.706	.678	4

Item Statistics

	Mean	Std. Deviation	N
Access NHF mortgage loan from FMBN	3.4500	1.05006	20
Source funding via secondary mortgage market	3.6000	.82078	20
Mobilize long-term deposits for homeownership loans	3.6000	.82078	20
Press for domestic and offshore long-term funds	2.9000	1.37267	20

Inter-Item Correlation Matrix

	Access NHF mortgage loan from FMBN	Source funding via secondary mortgage market	Mobilize long-term deposits for homeownership loans	Press for domestic and offshore long-term funds
Access NHF mortgage	1.000	.769	-.085	.654

loan from FMBN				
Source funding via secondary mortgage market	.769	1.000	-.172	.570
Mobilize long-term deposits for homeownership loans	-.085	-.172	1.000	.336
Press for domestic and offshore long-term funds	.654	.570	.336	1.000

2. Household Income

Reliability Statistics

Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
.730	.696	4

Item Statistics

	Mean	Std. Deviation	N
Assess the ability to repay the mortgage loan base on household income	3.6000	.75394	20
Confirm loan applicant regular flow of income	3.5000	.51299	20
Accept additional income source to support loan application	3.6000	.75394	20
Consider 1/3 monthly income best practice for loan repayment	3.5500	.51042	20

Inter-Item Correlation Matrix

Assess the ability to repay the mortgage	Confirm loan applicant regular flow of income	Accept additional income source to	Consider 1/3 monthly income best practice for

	loan base on household income		support loan application	loan repayment
Assess the ability to repay the mortgage loan base on household income	1.000	.408	.815	.328
Confirm loan applicant regular flow of income	.408	1.000	.408	-.101
Accept additional income source to support loan application	.815	.408	1.000	.328
Consider 1/3 monthly income best practice for loan repayment	.328	-.101	.328	1.000

3. Interest Rate

Reliability Statistics

Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
.813	.755	4

Item Statistics

	Mean	Std. Deviation	N
Comply with NHF 6% fixed interest rate	3.1000	1.25237	20
Adopt flexible interest rate	3.1000	1.25237	20
Apply commercial interest rate for homeownership loans	2.9000	1.25237	20
Implement CBN interest rate review directive	3.4500	.75915	20

Inter-Item Correlation Matrix

Comply with NHF 6%	Adopt flexible	Apply commercial	Implement CBN interest
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	fixed interest rate	interest rate	interest rate for homeowners hip loans	rate review directive
Comply with NHF 6% fixed interest rate	1.000	.933	.846	-.050
Adopt flexible interest rate	.933	1.000	.879	-.050
Apply commercial interest rate for homeownership loans	.846	.879	1.000	.050
Implement CBN interest rate review directive	-.050	-.050	.050	1.000

4. Management Innovation

Reliability Statistics

Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
.700	.757	4

Item Statistics

	Mean	Std. Deviation	N
Management of the mortgage lending process	3.6500	.74516	20
Management capability to introduce new methods and procedures	3.5000	.76089	20
Management leadership quality	2.5500	1.23438	20
Management ability to identify new innovations for competitive edge	3.2500	.78640	20

Inter-Item Correlation Matrix

	Management of the mortgage lending process	Management capability to introduce new methods and procedures	Management leadership quality	Management ability to identify new innovations for competitive edge
Management of the mortgage lending process	1.000	.696	.278	.606
Management capability to introduce new methods and procedures	.696	1.000	.028	.572
Management leadership quality	.278	.028	1.000	.447
Management ability to identify new innovations for competitive edge	.606	.572	.447	1.000

5. Process Innovation

Reliability Statistics

Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
.752	.764	4

Item Statistics

	Mean	Std. Deviation	N
Apply new innovations	3.2000	.95145	20

for efficiency service delivery			
Implement workflow strategies to deliver a better-quality service	3.4500	.82558	20
Enhance service performance at a reduce cost	3.3500	.81273	20
Improve loan processing turnaround time	3.4500	.75915	20

Inter-Item Correlation Matrix

	Apply new innovations for efficiency service delivery	Implement workflow strategies to deliver a better-quality service	Enhance service performance at a reduce cost	Improve loan processing turnaround time
Apply new innovations for efficiency service delivery	1.000	.147	.585	.160
Implement workflow strategies to deliver a better-quality service	.147	1.000	.537	.668
Enhance service performance at a reduce cost	.585	.537	1.000	.584
Improve loan processing turnaround time	.160	.668	.584	1.000

6. Access to Finance

Reliability Statistics

Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
.767	.774	4

Item Statistics

	Mean	Std. Deviation	N
Inadequate household income	3.4444	.87650	36
Stringent conditions attached to mortgage loans	3.3056	.78629	36
Unavailability of long-term funding	2.6944	1.09073	36
Inefficient housing finance system	3.1944	.92023	36

Inter-Item Correlation Matrix

	Inadequate household income	Stringent conditions attached to mortgage loans	Unavailability of long-term funding	Inefficient housing finance system
Inadequate household income	1.000	.792	.415	.209
Stringent conditions attached to mortgage loans	.792	1.000	.412	.310
Unavailability of long-term funding	.415	.412	1.000	.630
Inefficient housing finance system	.209	.310	.630	1.000

7. Homeownership Loans

Reliability Statistics

Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
.727	.719	4

Item Statistics

	Mean	Std. Deviation	N
Increase provision for	3.0500	1.27630	20

homeownership loans			
Improve the NHF loan disbursements	3.3500	1.03999	20
Grow the volume of mortgage loans provided	3.1500	1.03999	20
Implement CBN 70% minimum loanable funds for creation of mortgage assets	2.6500	1.22582	20

Inter-Item Correlation Matrix

	Increase provision for homeownership loans	Improve the NHF loan disbursements	Grow the volume of mortgage loans provided	Implement CBN 70% minimum loanable funds for creation of mortgage assets
Increase provision for homeownership loans	1.000	.264	.747	.617
Improve the NHF loan disbursements	.264	1.000	.241	-.023
Grow the volume of mortgage loans provided	.747	.241	1.000	.497
Implement CBN 70% minimum loanable funds for creation of mortgage assets	.617	-.023	.497	1.000

8. Non-Performing Loans (NPLs)

Reliability Statistics

Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
.735	.737	4

Item Statistics

	Mean	Std. Deviation	N
Reduce the volume of NPLs ratio	3.2000	1.15166	20
Maintain CBN 10% not exceeding NPLs ratio	3.0000	1.33771	20
Improvement in loan recovery efforts	3.3500	1.03999	20
Effective monitoring of mortgage loans' performance	3.3000	1.03110	20

Inter-Item Correlation Matrix

	Reduce the volume of NPLs ratio	Maintain CBN 10% not exceeding NPLs ratio	Improvement in loan recovery efforts	Effective monitoring of mortgage loans' performance
Reduce the volume of NPLs ratio	1.000	.171	-.105	.168
Maintain CBN 10% not exceeding NPLs ratio	.171	1.000	.719	.839
Improvement in loan recovery efforts	-.105	.719	1.000	.682
Effective monitoring of mortgage loans' performance	.168	.839	.682	1.000

9. Service Efficiency

Reliability Statistics

Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
.714	.719	4

Item Statistics

	Mean	Std. Deviation	N
Mortgage banks providing effective and efficient service	3.0556	1.11981	36
Customers' satisfaction in mortgage loan delivery	2.5833	.96732	36
Fast track mortgage loan application processing	2.8056	1.06421	36
Facilitate homeownership loans' disbursement	2.8056	1.14191	36

Inter-Item Correlation Matrix

	Mortgage banks providing effective and efficient service	Customers' satisfaction in mortgage loan delivery	Fast track mortgage loan application processing	Facilitate homeownership loans' disbursement
Mortgage banks providing effective and efficient service	1.000	.655	.489	.500
Customers' satisfaction in mortgage loan delivery	.655	1.000	.419	.261
Fast track mortgage loan application processing	.489	.419	1.000	.015
Facilitate homeownership loans' disbursement	.500	.261	.015	1.000

10. Government Housing Policy

Reliability Statistics

Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
.724	.685	4

Item Statistics

	Mean	Std. Deviation	N
National Housing Policy (NHP) programmes	3.1500	1.34849	20
Regulatory authority operational guidelines	3.3000	1.08094	20
CBN credit policy on housing finance	3.6000	.59824	20
Mortgage industry regulation changes	3.7000	.80131	20

Inter-Item Correlation Matrix

	National Housing Policy (NHP) programmes	Regulatory authority operational guidelines	CBN credit policy on housing finance	Mortgage industry regulation changes
National Housing Policy (NHP) programmes	1.000	.726	.209	.482
Regulatory authority operational guidelines	.726	1.000	.195	.656
CBN credit policy on housing finance	.209	.195	1.000	-.154
Mortgage industry regulation changes	.482	.656	-.154	1.000

regulation changes				
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Appendix VII-Descriptive Analysis of Responses

1. Descriptive Analysis of Responses on Long-Term Funds

Statistics

		Access NHF mortgage loan from FMBN	Source funding via secondary mortgage market	Mobilize long-term deposits for homeowners hip loans	Press for domestic and offshore long-term funds
N	Valid	37	37	37	37
	Missing	0	0	0	0
Mean		3.8919	2.8649	3.5405	2.6757
Std. Deviation		.31480	.88701	.86905	.74737

Access NHF mortgage loan from FMBN

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Partially high extent	4	10.8	10.8	10.8
	High extent	33	89.2	89.2	100.0
	Total	37	100.0	100.0	

Source funding via secondary mortgage market

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Low extent	4	10.8	10.8	10.8
	Partially low extent	5	13.5	13.5	24.3
	Partially high extent	20	54.1	54.1	78.4
	High extent	8	21.6	21.6	100.0
	Total	37	100.0	100.0	

Mobilize long-term deposits for homeownership loans

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Low extent	2	5.4	5.4	5.4
	Partially low extent	3	8.1	8.1	13.5
	Partially high extent	5	13.5	13.5	27.0
	High extent	27	73.0	73.0	100.0
	Total	37	100.0	100.0	

Press for domestic and offshore long-term funds

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Low extent	2	5.4	5.4	5.4
	Partially low extent	12	32.4	32.4	37.8
	Partially high extent	19	51.4	51.4	89.2
	High extent	4	10.8	10.8	100.0
	Total	37	100.0	100.0	

2. Descriptive Analysis of Responses on Household Income

Statistics

		Assess the ability to repay the mortgage loan base on household income	Confirm loan applicant regular flow of income	Accept additional income source to support loan application	Consider 1/3 monthly income best practice for loan repayment
N	Valid	37	37	37	37
	Missing	0	0	0	0
Mean		3.8919	3.8919	3.9189	3.9730
Std. Deviation		.45849	.45849	.27672	.16440

Assess the ability to repay the mortgage loan base on household income

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Partially low extent	2	5.4	5.4	5.4
	High extent	35	94.6	94.6	100.0
	Total	37	100.0	100.0	

Confirm loan applicant regular flow of income

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Partially low extent	2	5.4	5.4	5.4
	High extent	35	94.6	94.6	100.0
	Total	37	100.0	100.0	

Accept additional income source to support loan application

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Partially high extent	3	8.1	8.1	8.1
	High extent	34	91.9	91.9	100.0
	Total	37	100.0	100.0	

Consider 1/3 monthly income best practice for loan repayment

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Partially high extent	1	2.7	2.7	2.7
	High extent	36	97.3	97.3	100.0
	Total	37	100.0	100.0	

3. Descriptive Analysis of Responses on Interest Rate

		Statistics			
		Comply with NHF 6% fixed interest rate	Adopt flexible interest rate	Apply commercial interest rate for homeowners hip loans	Implement CBN interest rate review directive
N	Valid	37	37	37	37
	Missing	0	0	0	0
Mean		3.1081	3.3784	2.8649	3.8378
Std. Deviation		.65760	.98182	.88701	.37368

Comply with NHF 6% fixed interest rate

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Low extent	1	2.7	2.7	2.7
	Partially low extent	3	8.1	8.1	10.8
	Partially high extent	24	64.9	64.9	75.7
	High extent	9	24.3	24.3	100.0
	Total	37	100.0	100.0	

Adopt flexible interest rate

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Low extent	3	8.1	8.1	8.1
	Partially low extent	4	10.8	10.8	18.9
	Partially high extent	6	16.2	16.2	35.1
	High extent	24	64.9	64.9	100.0
	Total	37	100.0	100.0	

Apply commercial interest rate for homeownership loans

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Low extent	4	10.8	10.8	10.8
	Partially low extent	5	13.5	13.5	24.3
	Partially high extent	20	54.1	54.1	78.4
	High extent	8	21.6	21.6	100.0
	Total	37	100.0	100.0	

Implement CBN interest rate review directive

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Partially high extent	6	16.2	16.2	16.2
	High extent	31	83.8	83.8	100.0
	Total	37	100.0	100.0	

4. Descriptive Analysis of Responses on Access to Finance

		Statistics			
		Inadequate household income	Stringent conditions attached to mortgage loans	Unavailability of long-term funding	Inefficient housing finance system
N	Valid	354	354	354	354
	Missing	0	0	0	0
Mean		3.5480	3.3785	3.0226	3.3136
Std. Deviation		.78528	.89581	1.02077	.79694

Inadequate household income

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Disagree	11	3.1	3.1	3.1
	Partially disagree	32	9.0	9.0	12.1
	Partially agree	63	17.8	17.8	29.9
	Agree	248	70.1	70.1	100.0
	Total	354	100.0	100.0	

Stringent conditions attached to mortgage loans

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Disagree	19	5.4	5.4	5.4
	Partially disagree	43	12.1	12.1	17.5
	Partially agree	77	21.8	21.8	39.3
	Agree	215	60.7	60.7	100.0
	Total	354	100.0	100.0	

Unavailability of long-term funding

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Disagree	42	11.9	11.9	11.9
	Partially disagree	54	15.3	15.3	27.1
	Partially agree	112	31.6	31.6	58.8
	Agree	146	41.2	41.2	100.0
	Total	354	100.0	100.0	

Inefficient housing finance system

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Disagree	13	3.7	3.7	3.7
	Partially disagree	35	9.9	9.9	13.6
	Partially agree	134	37.8	37.8	51.4
	Agree	172	48.6	48.6	100.0
	Total	354	100.0	100.0	

5. Descriptive Analysis of Responses on Homeownership Loans

		Statistics			
		Increase provision for homeownership loans	Improve the NHF loan disbursements	Grow the volume of mortgage loans' provided	Implement CBN 70% minimum loanable funds for creation of mortgage assets
N	Valid	37	37	37	37
	Missing	0	0	0	0
Mean		3.8108	3.8378	3.8378	3.8649
Std. Deviation		.39706	.37368	.37368	.34658

Increase provision for homeownership loans

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Partially high extent	7	18.9	18.9	18.9
	High extent	30	81.1	81.1	100.0
	Total	37	100.0	100.0	

Improve the NHF loan disbursements

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Partially high extent	6	16.2	16.2	16.2
	High extent	31	83.8	83.8	100.0
	Total	37	100.0	100.0	

Grow the volume of mortgage loans' provided

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Partially high extent	6	16.2	16.2	16.2
	High extent	31	83.8	83.8	100.0
	Total	37	100.0	100.0	

Implement CBN 70% minimum loanable funds for creation of mortgage assets

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid Partially high extent	5	13.5	13.5	13.5
High extent	32	86.5	86.5	100.0
Total	37	100.0	100.0	

6. Descriptive Analysis of Responses on Management Innovation

		Statistics			
		Management of the mortgage lending process	Management capability to introduce new methods and procedures	Management leadership quality	Management ability to identify new innovations for competitive edge
N	Valid	37	37	37	37
	Missing	0	0	0	0
Mean		3.3784	3.5676	3.4865	3.4595
Std. Deviation		.92350	.80071	.93159	.86905

Management of the mortgage lending process

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid Low extent	2	5.4	5.4	5.4
Partially low extent	5	13.5	13.5	18.9
Partially high extent	7	18.9	18.9	37.8
High extent	23	62.2	62.2	100.0
Total	37	100.0	100.0	

Management capability to introduce new methods and procedures

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Low extent	1	2.7	2.7	2.7
	Partially low extent	4	10.8	10.8	13.5
	Partially high extent	5	13.5	13.5	27.0
	High extent	27	73.0	73.0	100.0
	Total	37	100.0	100.0	

Management leadership quality

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Low extent	3	8.1	8.1	8.1
	Partially low extent	2	5.4	5.4	13.5
	Partially high extent	6	16.2	16.2	29.7
	High extent	26	70.3	70.3	100.0
	Total	37	100.0	100.0	

Management ability to identify new innovations for competitive edge

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Low extent	2	5.4	5.4	5.4
	Partially low extent	3	8.1	8.1	13.5
	Partially high extent	8	21.6	21.6	35.1
	High extent	24	64.9	64.9	100.0
	Total	37	100.0	100.0	

7. Descriptive Analysis of Responses on Process Innovation

Statistics

		Apply new innovations for efficiency service delivery	Implement workflow strategies to deliver a better-quality service	Enhance service performance at a reduce cost	Improve loan processing turnaround time
N	Valid	37	37	37	37
	Missing	0	0	0	0
Mean		3.8649	3.8919	3.8378	3.6486
Std. Deviation		.34658	.31480	.37368	.67562

Apply new innovations for efficiency service delivery

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Partially high extent	5	13.5	13.5	13.5
	High extent	32	86.5	86.5	100.0
	Total	37	100.0	100.0	

Implement workflow strategies to deliver a better-quality service

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Partially high extent	4	10.8	10.8	10.8
	High extent	33	89.2	89.2	100.0
	Total	37	100.0	100.0	

Enhance service performance at a reduce cost

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Partially high extent	6	16.2	16.2	16.2
	High extent	31	83.8	83.8	100.0
	Total	37	100.0	100.0	

Improve loan processing turnaround time

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Partially low extent	4	10.8	10.8	10.8
	Partially high extent	5	13.5	13.5	24.3
	High extent	28	75.7	75.7	100.0
	Total	37	100.0	100.0	

8. Descriptive Analysis of Responses on Non-Performing Loans

		Statistics			
		Reduce the volume of NPLs ratio	Maintain CBN 10% not exceeding NPLs ratio	Improvement in loan recovery efforts	Effective monitoring of mortgage loans' performance
N	Valid	37	37	37	37
	Missing	0	0	0	0
Mean		3.9189	3.8919	3.9459	3.9189
Std. Deviation		.27672	.31480	.22924	.27672

Reduce the volume of NPLs ratio

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Partially high extent	3	8.1	8.1	8.1
	High extent	34	91.9	91.9	100.0
	Total	37	100.0	100.0	

Maintain CBN 10% not exceeding NPLs ratio

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Partially high extent	4	10.8	10.8	10.8
	High extent	33	89.2	89.2	100.0
	Total	37	100.0	100.0	

Improvement in loan recovery efforts

		Frequency	Percent	Valid Percent	Cumulative Percent
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Valid	Partially high extent	2	5.4	5.4	5.4
	High extent	35	94.6	94.6	100.0
	Total	37	100.0	100.0	

Effective monitoring of mortgage loans' performance

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Partially high extent	3	8.1	8.1	8.1
	High extent	34	91.9	91.9	100.0
	Total	37	100.0	100.0	

9. Descriptive Analysis of Responses on Service Efficiency

		Statistics			
		Mortgage banks providing effective and efficient service	Customers' satisfaction in mortgage loan delivery	Fast track mortgage loan application processing	Facilitate homeowners hip loans' disbursement
N	Valid	354	354	354	354
	Missing	4	4	4	4
Mean		3.5734	3.4294	3.2401	3.2090
Std. Deviation		.79051	.88860	1.00789	1.01061

Mortgage banks providing effective and efficient service

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Disagree	16	4.5	4.5	4.5
	Partially disagree	19	5.3	5.4	9.9
	Partially agree	65	18.2	18.3	28.2
	Agree	254	70.9	71.8	100.0
	Total	354	98.9	100.0	
Missing	System	4	1.1		
Total		358	100.0		

Customers' satisfaction in mortgage loan delivery

		Frequency	Percent	Valid Percent	Cumulative Percent
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Valid	Disagree	22	6.1	6.2	6.2
	Partially disagree	30	8.4	8.5	14.7
	Partially agree	76	21.2	21.5	36.2
	Agree	226	63.1	63.8	100.0
	Total	354	98.9	100.0	
Missing	System	4	1.1		
Total		358	100.0		

Fast track mortgage loan application processing

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Disagree	33	9.2	9.3	9.3
	Partially disagree	48	13.4	13.6	22.9
	Partially agree	74	20.7	20.9	43.8
	Agree	199	55.6	56.2	100.0
	Total	354	98.9	100.0	
Missing	System	4	1.1		
Total		358	100.0		

Facilitate homeownership loans' disbursement

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Disagree	36	10.1	10.2	10.2
	Partially disagree	43	12.0	12.1	22.3
	Partially agree	86	24.0	24.3	46.6
	Agree	189	52.8	53.4	100.0
	Total	354	98.9	100.0	
Missing	System	4	1.1		
Total		358	100.0		

10. Descriptive Analysis of Responses on Mortgage Financing, Innovation Capability and Housing Loan Performance

Statistics

		Mortgage Financing	Innovation Capability	Housing Loan Performance
N	Valid	37	37	196
	Missing	159	159	0
Mean		3.5135	3.6486	3.3878
Std. Deviation		.76817	.71555	.89595

Mortgage Financing

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Low extent	1	.5	2.7	2.7
	Partially low extent	3	1.5	8.1	10.8
	Partially high extent	9	4.6	24.3	35.1
	High extent	24	12.2	64.9	100.0
	Total	37	18.9	100.0	
Missing	System	159	81.1		
Total		196	100.0		

Innovation Capability

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Low extent	1	.5	2.7	2.7
	Partially low extent	2	1.0	5.4	8.1
	Partially high extent	6	3.1	16.2	24.3
	High extent	28	14.3	75.7	100.0
	Total	37	18.9	100.0	
Missing	System	159	81.1		
Total		196	100.0		

Housing Loan Performance

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Low extent	12	6.1	6.1	6.1

Partially low extent	19	9.7	9.7	15.8
Partially high extent	46	23.5	23.5	39.3
High extent	119	60.7	60.7	100.0
Total	196	100.0	100.0	

11. Descriptive Analysis of Responses on Government Housing Policy

		Statistics			
		National Housing Policy (NHP) Programmes	Regulatory authority operational guidelines	CBN credit policy on housing finance	Mortgage industry regulation changes
N	Valid	37	37	37	37
	Missing	0	0	0	0
Mean		3.9189	3.8919	3.9189	3.9459
Std. Deviation		.27672	.31480	.27672	.22924

National Housing Policy (NHP) Programmes

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Partially high extent	3	8.1	8.1	8.1
	High extent	34	91.9	91.9	100.0
	Total	37	100.0	100.0	

Regulatory authority operational guidelines

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Partially high extent	4	10.8	10.8	10.8
	High extent	33	89.2	89.2	100.0
	Total	37	100.0	100.0	

CBN credit policy on housing finance

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Partially high	3	8.1	8.1	8.1

extent				
High extent	34	91.9	91.9	100.0
Total	37	100.0	100.0	

Mortgage industry regulation changes

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid Partially high extent	2	5.4	5.4	5.4
High extent	35	94.6	94.6	100.0
Total	37	100.0	100.0	

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Appendix VIII-Hypotheses Test

Hypothesis One

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.814 ^a	.663	.632	.30474

a. Predictors: (Constant), Interest Rate, Household Income, Long-Term Fund

		ANOVA ^a				
Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	6.016	3	2.005	21.595	.000 ^b
	Residual	3.065	33	.093		
	Total	9.081	36			

a. Dependent Variable: Access to Finance

b. Predictors: (Constant), Interest Rate, Household Income, Long-Term Fund

		Coefficients ^a				
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	1.733	.581		2.982	.005
	Long-Term Fund	.226	.224	.402	1.005	.322
	Household Income	-.564	.180	-.408	-3.128	.004
	Interest Rate	.357	.248	.601	1.438	.160

a. Dependent Variable: Access to Finance

Hypothesis Two

Model Summary				
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.790 ^a	.624	.590	.23925

a. Predictors: (Constant), Interest Rate, Household Income, Long-Term Fund

		ANOVA ^a				
Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	3.138	3	1.046	18.274	.000 ^b
	Residual	1.889	33	.057		
	Total	5.027	36			

a. Dependent Variable: Homeownership Loans

b. Predictors: (Constant), Interest Rate, Household Income, Long-Term Fund

		Coefficients^a				
		Unstandardized Coefficients		Standardized Coefficients		
Model		B	Std. Error	Beta	t	Sig.
1	(Constant)	2.490	.456		5.456	.000
	Long-Term Fund	.266	.176	.637	1.510	.141
	Household Income	.085	.142	.082	.598	.554
	Interest Rate	.046	.195	.105	.238	.813

a. Dependent Variable: Homeownership Loans

Hypothesis Three

Model Summary				
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.774 ^a	.599	.575	.18038

a. Predictors: (Constant), Process Innovation, Management Innovation

ANOVA^a						
Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	1.651	2	.825	25.365	.000 ^b
	Residual	1.106	34	.033		
	Total	2.757	36			

a. Dependent Variable: Non-Performing Loans

2. Predictors: (Constant), Process Innovation, Management Innovation



		Coefficients^a				
		Unstandardized Coefficients		Standardized Coefficients		
Model		B	Std. Error	Beta	t	Sig.
1	(Constant)	2.554	.308		8.296	.000
	Management Innovation	.127	.067	.399	1.885	.068

Process Innovation	.242	.127	.404	1.912	.064
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a. Dependent Variable: Non-Performing Loans

Hypothesis Four

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.382 ^a	.146	.096	.42810

a. Predictors: (Constant), Process Innovation, Management Innovation

ANOVA^a

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	1.066	2	.533	2.909	.068 ^b
	Residual	6.231	34	.183		
	Total	7.297	36			

a. Dependent Variable: Service Efficiency

b. Predictors: (Constant), Process Innovation, Management Innovation

Coefficients^a

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	1.103	.731		1.510	.140
	Management Innovation	.289	.160	.558	1.809	.079
	Process Innovation	-.220	.301	-.226	-.732	.469

a. Dependent Variable: Service Efficiency

Hypothesis Five

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.748 ^a	.559	.533	.47001

a. Predictors: (Constant), Innovation Capability, Mortgage

Financing

		ANOVA ^a				
Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	9.516	2	4.758	21.538	.000 ^b
	Residual	7.511	34	.221		
	Total	17.027	36			

a. Dependent Variable: Housing Loan Performance

b. Predictors: (Constant), Innovation Capability, Mortgage Financing

		Coefficients ^a				
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	-.331	.407		-.813	.422
	Mortgage Financing	.847	.227	.946	3.734	.001
	Innovation Capability	-.221	.244	-.230	-.909	.370

a. Dependent Variable: Housing Loan Performance

Hypothesis Six

		Model Summary							
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	R Square Change	Change Statistics			Sig. F Change
						F Change	df1	df2	

					Change				e
1	.748 ^a	.559	.533	.47001	.559	21.538	2	34	.000
2	.782 ^b	.611	.576	.44774	.053	4.466	1	33	.042
3	.816 ^c	.666	.625	.42129	.055	5.275	1	32	.028

a. Predictors: (Constant), Innovation Capability, Mortgage Financing

b. Predictors: (Constant), Innovation Capability, Mortgage Financing, Government Housing Policy

c. Predictors: (Constant), Innovation Capability, Mortgage Financing, Government Housing Policy, MF*IC*GHP

		ANOVA ^a				
Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	9.516	2	4.758	21.538	.000 ^b
	Residual	7.511	34	.221		
	Total	17.027	36			
2	Regression	10.411	3	3.470	17.311	.000 ^c
	Residual	6.616	33	.200		
	Total	17.027	36			
3	Regression	11.348	4	2.837	15.984	.000 ^d
	Residual	5.679	32	.177		
	Total	17.027	36			

a. Dependent Variable: Housing Loan Performance

b. Predictors: (Constant), Innovation Capability, Mortgage Financing

c. Predictors: (Constant), Innovation Capability, Mortgage Financing, Government Housing Policy

d. Predictors: (Constant), Innovation Capability, Mortgage Financing, Government Housing Policy, MF*IC*GHP

		Coefficients ^a				
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	-.331	.407		-.813	.422

	Mortgage Financing	.847	.227	.946	3.734	.001
	Innovation Capability	-.221	.244	-.230	-.909	.370
2	(Constant)	2.513	1.400		1.795	.082
	Mortgage Financing	.808	.217	.903	3.726	.001
	Innovation Capability	.151	.291	.157	.517	.609
	Government Housing Policy	-1.037	.491	-.417	-2.113	.042
3	(Constant)	4.029	1.474		2.734	.010
	Mortgage Financing	-.218	.491	-.244	-.444	.660
	Innovation Capability	-.556	.412	-.578	-1.349	.187
	Government Housing Policy	-.792	.474	-.319	-1.672	.104
	MF*IC*GHP	.213	.093	1.772	2.297	.028

a. Dependent Variable: Housing Loan Performance

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Biodata

A. Personal Data

1. **Full Names:** Fashina Abiodun Fasunle
2. **Address:** 3 Harmony Lane 4, Oluode-Adeoje Estate, Oluyole Extension, Ibadan, Oyo

State.

3. **Email Address:** abiodunfashina@yahoo.co.uk
4. **Phone Numbers:** 08035960666 and 08084557776
5. **Date of Birth:** 31st December 1964.
6. **Place of Birth:** Lagos Mainland
7. **Nationality:** Nigerian.
8. **Marital Status:** Married.
9. **Name and Address of Next of Kin:** Mrs. Yetunde Fashina, 3 Harmony Lane 4,
Oluode-Adeoje Estate, Oluyole Extension, Ibadan, Oyo State.

B. Educational Background

1. Educational Institutions Attended with Dates and Qualification:

Primary Education:

Ansar-Ud-Deen Primary School, Odunfa Ebute Metta, Lagos 1973-1978

Secondary Education:

Nigerian Peoples High School Ebute-Metta, Lagos 1979-1980

Denton Grammar School, Ebute Metta, Lagos 1980-1984

Tertiary Education:

Kwara State Polytechnic, Ilorin 1988-1990

Ogun State Polytechnic (Now Moshood Abiola), Abeokuta 1993-1994

Yaba College of Technology, Lagos 1993-1995

University of Ado-Ekiti (Now Ekiti State University) Ado-Ekiti 1999-2001

Lead City University, Ibadan 2016-2018

Lead City University, Ibadan 2018-2020

2. Academic Qualifications Obtained with Dates:

First School Leaving Certificate 1978

West African Examination Council	1984
National Diploma in Accountancy (Lower Credit)	1990
Diploma in Computer Studies (Upper Credit)	1994
Higher National Diploma in Accountancy (Lower Credit)	1995
Master of Business Administration (MBA)	2004
Bachelor of Science in Accounting (First Class)	2018
Master of Science in Accounting (Credit)	2020

C. Professional Qualifications with Dates:

Associate, Institute of Chartered Accountants of Nigeria (ACA)	1999
Associate, Chartered Institute of Taxation of Nigeria (ACTI)	2000
Fellow, Institute of Chartered Accountants of Nigeria (FCA)	2010
Fellow, Chartered Institute of Taxation of Nigeria (FCTI)	2013
Registered Professional, Financial Reporting Council of Nigeria (FRC)	2017

D. Work Experience and Position with Dates:

Federal Mortgage Bank of Nigeria (FMBN)

Ibadan Zonal Manager/GM	March 2022 – Date
Ibadan Zonal Manager/DGM	October 2019 – February 2022
Lagos Zonal Coordinator/DGM	July 2017 - September 2019
Group Head/AGM (Audit) H/O Abuja	November 2016 - July 2017
State Coordinator/AGM (Ogun State Office)	August - October 2016
Head of Department/AGM (NHF) H/O Abuja	February - August 2016
State Controller/AGM (kogi State Office)	June 2013 - January 2016
Principal Manager (Ibadan Zonal Office)	September 2012 - May 2013
State Controller (Lagos Main)	June 2011 - Aug 2012
Principal Manager (SW Zonal Office, Ibadan)	April - June 2011
Principal Manager (Research & Documentation)	May 2010 - March 2011
Principal Manager/TL (Deposits & Receivables)	August 2009 - May 2010
Senior Manager (Finance & Accounts)	July 2007 – July 2009

Head (Accounts & Reconciliation) March 2004 - June 2007

Federal Mortgage Finance Limited(FMFL)

Branch Manager (Akure) December 2003 - February 2004

Deputy Manager (Audit & Systems) Abuja January - November 2003

Assistant Manager (Audit & Systems) Abuja May - December 2002

Ag.Branch Manager (Abeokuta) January 2000 - April 2002

Branch Accountant/Supervisor 1 (Abeokuta) January 1997 - December 1999

Clerk Grade 1(Abeokuta) January 1993 – December 1996

Nigerian Bottling Company (NBC) Plc Ajegunle, Lagos

Account Supervisor February 1991 - December 1992

University of Ado-Ekiti (Abeokuta Campus)

Part Time Lecturing 2000

Imo State University (Abeokuta Campus)

Part Time Lecturing 2000

E. Membership of Academic Professional Bodies: N/A

F. Publication (if any):

- i. Global Scientific Journal, Volume 7, Issue 8, August 2019: 52-65.
- ii. ESUT Journal of Accountancy, Volume 11, Issue 2, July-December 2020: 161-174.
- iii. International Journal of Management Sciences and Business Research, Volume 10, Issue 6, June 2021: 29-37.

G. Creative Work: Developed workflow strategies and key Performance Indicators (KPIs).

H. Major Conferences/Workshops Attended:

- i. Computerised Financial Applications, Dubai UAE (2008).
- ii. International Borrowing, Debt Management and Mortgage Finance in Emerging Economies, Dubai UAE (2011).
- iii. Leadership And Strategic Management, London, United Kingdom (2012).
- iv. Project Management, London, United Kingdom (2013).

- v. African Global Economic and Development, California, USA (2014).
- vi. FSS 2020 And Bank Consolidation: Labour and Management Dimension, Nigeria (2008).
- vii. Transforming Mortgage Delivery, Management and Finance, Nigeria (2014).
- viii. Public Sector Budgeting and Budgetary Controls, Nigeria (2014).
- ix. Advanced Project Management, Nigeria (2016).
- x. Corporate Culture and Performance, Nigeria (2019).
- xi. Critical Thinking & Effective Decision Making/Disruptive Thinking to Drive Innovation & Growth, Nigeria (2019).
- xii. Environmental and Social Risk Management, Nigeria (2021).
- xiii. Performance Management, Developing KPIs and Reporting, Nigeria (2021).
- xiv. Inspiration Leadership and Successful Team Building, Nigeria (2022).
- xv. FinTrak Core-Banking Solution, Nigeria (2023). Etc

I. Extra-Curricular Activities: Football, Table-Tennis, Swimming and Watching Movies.

Signature

Date

The University Compliance Certification

This is to certify that the Theses by Abiodun Fasunle Fashina with matriculation number LCU/PG/001903 in the Department of Management and Accounting, Faculty of Management

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