

**MORTGAGE FINANCIAL ACTIVITIES AND HOUSING
DEVELOPMENT IN NIGERIA**

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**BEING A RESEARCH PROJECT SUBMITTED TO THE DEPARTMENT
OF BANKING AND FINANCE, FACULTY OF MANAGEMENT
SCIENCE, UNIVERSITY OF BENIN, BENIN CITY.
IN PARTIAL FULFILLMENT OF THE REQUIREMENT FOR THE
AWARD OF DEGREE OF BACHELOR OF SCIENCE (BSC) IN
BANKING AND FINANCE**

JULY, 2021

DECLARATION

I declare that:

1. This project work is based on the study undertaken by me in the Department of Banking and Finance, Faculty of Management Sciences, University of Benin, Benin City, under the supervision of **Dr. A.O. IZEKOR.**
2. This work has not been submitted for the award of degree elsewhere.
3. All ideas and views are product of my personal research and where the views of others have been expressed, they have been duly acknowledged.

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Date:

CERTIFICATION

We the undersigned certify that this project work was carried out by **SILVER ADAMA NEHIZENA** with **Mat. No MGS1606415** in the Department of Banking and Finance, University of Benin, Benin City, in partial fulfillment for the award of the Degree of Bachelor of Science (BSC) in Banking and Finance.

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DEDICATION

I dedicate this project to God Almighty my creator, my strong pillar, my source of inspiration. And also, to my parents, Mr. and Mrs. Arasomwan Nehizena.

ACKNOWLEDGEMENTS

I wish to express my profound gratitude to God Almighty who is the source of my strength and inspiration. I would like to express my deep and sincere gratitude to my project supervisor Dr. A.O. IZEKOR for giving me the opportunity to do my research under his supervision and providing invaluable guidance throughout this research and also for his friendship, empathy and great sense of humor.

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ABSTRACT

This study attempts to empirically examine the impact of mortgage financial activities and housing development in Nigeria. The study used housing development, mortgage loans, interest on loans and mortgage investment as proxy for housing development in Nigeria. This study made use of secondary data. The data were sourced from the Central Bank of Nigeria Statistical Bulletin from the period of 1992-2018. Descriptive statistics and Ordinary Least Square regression analysis were adopted for analyses. It was found that housing development does not granger causes mortgage loans, housing development does not granger causes interest on loan, while, housing development granger causes mortgage investment. The study recommends that, the Nigerian Government should increase its expenditure as one of the other factors that could affect housing developments, thereby paying more focus on housing development.

CHAPTER ONE

INTRODUCTION

1.1 Background to the Study

The housing sector plays a more critical role in a country's welfare than it has been always recognized, as it directly affects not only the well-being of the citizenry but also the performance

of other sectors of the economy (Ebie, 2015). Housing which is more than just shelter, because it includes utilities and community services like electricity, water supply, good access roads, sewage and refuse disposal facilities and access to health and educational facilities which are perhaps the most important factors that determine housing in urban form (Pius, 2012).

While mortgage institution is usually a bank, either commercial or a savings and loan, the primary mortgage institution is the direct lender of the money that the potential homeowner uses to purchase a house or other property, paying the mortgage back in monthly payments to the issuing institution. Mortgage bank is a bank that specializes in originating and/or servicing mortgage loans (McCord, McGreal & Davis, 2011). In the US a mortgage bank is a state-licensed banking entity that makes mortgage loans directly to consumers. The difference between a mortgage banker and a mortgage broker is that the mortgage banker funds loans with its own capital (MC Donald, 2008).

Adequate housing provision has since the 1970s, engaged the attention of most countries, especially the developing ones for a number of reasons. The first reason is that; it is one of the three most important basic needs of mankind, the others being food and clothing. Secondly, housing is a very important durable consumer item which impacts positively on productivity, as decent housing significantly increases workers well-being, health, and growth. It is one of the indices for measuring the standard of living of people across societies (Ozurumba, 2011).

People must borrow money to finance their financial obligations. They can go to informal financial institutions or formal institutions like banks. In most cases, the borrowers of funds do try to ensure that there is absolute security of the loaned money. In most cases because of economic recession, political instability, bad business decisions etc. it has been noticed that failure to pay the borrowed loan does affect the organizations (Oyedokun, Adewusi, Oletubo & Thomas, 2013). Assets are mortgaged and then if there is any failure the lending organization has right and privileges to sell the said property. It has been said that mortgage financing in Nigeria is a necessary thing for housing sector development. There is no doubt that the nation's mortgage sector has experienced different phases in the last three decades but the sector has remained unpopular among Nigerians because it has failed to play its role of assisting Nigerians desirous of owning their own houses (Okonjo-Iweala, 2013).

Poopola and Alamu (2016), posited that finance is an important aspect of any form of progressive development, unfortunately, if this is not well taken care of, it can also be a clog in the wheel of development. (Poopola & Alamu, 2016). Mortgage finance is the corner stone of housing construction. This implies that the implementation of housing development is contingent largely on the availability of mortgage finance. (Agbola 2005; Ifesanya, 2012). Hence, housing policy is hinged on sustainable finance (NHP, 2012). The influence of the financial sector is hardly felt in the building industry in Nigeria as housing finance through this sector has been negligible. This is confirmed by Lemo (2007) who observed that till the year 2007, from the inception of housing finance system in the country, only a paltry sum of about Seventy billion naira (N70b) which is approximately US\$58.3m, have so far been injected to the system. This only accounts for less than 0.5% of the Gross Domestic Product (GDP).

The unsatisfactory performance of the housing finance system and institutions is linked with the twin problems of accessibility occasioned by underdevelopment of land tenure system coupled with inability of financial systems in providing low cost finance that meets the need of low and medium income group (Mailafia 2015).

1.2 Statement of the Research Problem

The problems of housing in Nigeria are enormous and exhibit apparent and marked regional difference, they are not limited to the following:

- The adopted practice and system of granting loans makes it difficult for the really low income people to benefit.
- Many government housing projects were embarked upon without effective programme of action and appropriate institutional arrangement for their execution.
- There was too much corruption in high quarters. For example, Chief Awolowo alerted the nation to the fraud in the Ministry of Housing and Environment in one of his Campaigns in 1982. He said about N5.4 million was missing, a figure later reduced to N4 million by the minister when he confirmed the said fraud. This shows that money meant for housing project were diverted into private hands thereby allowing the projects to suffer.

In most of our urban centre, the problem is not only restricted to quantity but also the poor quality of available housing units and the environment. The scenario is only slightly different in the rural areas where the problem is primarily that of quality of housing and inadequate infrastructural facilities like roads, drawings, water supply and so on. From available statistics, the magnitude of housing problem in the urban areas of the country is such that five million new housing units will be required to meet existing and future needs up to the year 2010.

In Nigeria, the housing problem can best be described as endemic. From the 1970's crude oil began to play a major role in the growth of the economy,

resulting in extensive urban migration and worsening housing problem. This challenge needs strength from both the public and private sectors. Despite the federal government's access to factors that can engender housing production, only about 4.0 percent of annual housing requirements are met. The public and private sectors are expected to play major roles in housing development and support federal government efforts.

Available statistics from the national bureau of statistics (NBS) formerly known as federal office of statistics (FOS), indicates that 80.0 percent of Nigerians population housing requirements are met through private sector efforts, while governments at the three-tier levels provide the remaining (NBS, 2013).

Asabere, McGowan and Sang (2014), submits that there is need to develop mortgage markets in Africa, while mortgage markets are slowly emerging in many African countries, substantial barriers still hinder their growth and expansion. Following the high cost of building or purchasing a residential house/home, people may like to ascertain the maximum limit loanable under the National Housing Fund Scheme. Equally, information as to how the loan is repaid will be beneficial to potential mortgagers and readers alike. It will be interesting equally to indicate the extent reached by various levels of government and mortgage institutions in contribution to the housing development of Nigeria. Previous research have identified the problems of housing in Nigeria and based on what is already existing from statistics available suggest that drastic measures has

to be put in place for housing problem to be solved. What the previous work have left out that this research wants to investigate is the level of involvement of the Federal Mortgage Bank of Nigeria and its relevant contributions to housing development and delivery in Nigeria going forward.

This research wants to investigate the contributions made so far by the FMBN towards housing delivery in Nigeria, and it shall be examined alongside the relevance of the national Housing policy towards the development of housing in the country. Finally, this work will reveal other information a reader or a potential mortgage may inquire for in the general mortgage business in Nigeria. Independent variables such as mortgage loans, interest on loans and mortgage investment will also be considered in this research study.

1.3 Statement of the Research question

More specifically, this study seeks to provide answers to the following research questions;

- i. What is the effect of mortgage loan on housing development in Nigeria?
- ii. What is the impact of interest on loan on housing development in Nigeria?
- iii. What is the effect of mortgage investment on housing development in Nigeria?

1.4 Objectives of the Study

The broad objective of this study is to examine the relationship between mortgage institutions and housing development in Nigeria. Specifically, this study seeks to;

- i. Determine the effect of mortgage loan on housing development in Nigeria.
- ii. Examine the effect of interest on loan on housing development in Nigeria.
- iii. Analyse the effect of mortgage investment on housing development in Nigeria.

1.5 Research Hypotheses

The hypotheses of this study are stated in their null form below;

H₀1: There is no significant effect of mortgage loan on housing development in Nigeria.

H₀2: There is no significant effect of interest on loan to housing development in Nigeria.

H₀3: There is no significant effect of mortgage investment on housing development in Nigeria.

1.6 Scope of the Study

The economic system is a large component of the economy with lot of diverse and sometimes complex parts; this research work only looks at the economy of Nigeria. The work also considers factors such as mortgage loans, interest on loans

and mortgage investment that affect housing development. The empirical investigation of the nature of the relationship between mortgage institutions and housing development in Nigeria will be restricted to the period between 1992 and 2018 this is due to the unavailability of some important data needed for this research. And the reason of using 1992 as the base year was due to the activities that took place before that year in form of housing reforms and policy from the government. Government nonetheless, took another look at housing and thus launched the National Housing Policy in February 1991. This was a comprehensive document aimed at “ensuring that all Nigerians own or have access to decent housing accommodation at affordable cost by the year 2000 A.D.”

1.7 Significance of the Study

Policy Makers and Advisors: The findings of this study will help the policy makers and advisors to have an overview on the role of mortgage institutions on housing development, which further leads to step forward towards assessing the pace of economic growth.

Researchers: This study will aid researchers and financial analysts to analyse different financial institutions at a given time and over the time periods in introducing mortgage institution policies up to the level that is consequently beneficial for spurring the performance and efficiency of the financial institutions.

Investors: The current study will also further help investors to proactively strategize their investment decisions.

1.8 Limitations of the Study

One major limitation of the study is the conflicting figures from the various sources. Often time, figures from the federal Bureau of statistics in both Nigeria. This indeed influences the outcome of this study. Again in terms of measurement of variables, 100% cannot be guaranteed as a result of the country data.

CHAPTER TWO

LITERATURE REVIEW

2.1 Introduction

2.2 Conceptual Literature

2.2.1 Concept of Mortgage

A mortgage is a debt with income producing property such as retail space, office, hotel or multifamily building as collateral (Xudong, 2008). Similar to the former, McDonald and Thornton, (2008), defined mortgage as a particular type of loan for real estate. Furthermore, a mortgage can be both the instrument that pledges real estate as a security for an obligation and the process of pledging real estate as security (Hassanein, Barkouky, 2008). Tuma, (2005) posit that mortgage occurs when owners pledge interest as security or collateral for a loan. This implies that a mortgage can apply to any sort of property say a car, land or even a building. In Nigeria, the mortgage market comprises of primary mortgage market and secondary mortgage market. Primary mortgage market is the market which involves origination and servicing of mortgage loans secured by real estate (Hassanein, Barkouky, 2008). The secondary mortgage market on the other hand allows mortgage originators to sell mortgages that they do not wish to hold in their portfolio and allows ultimate investors to hold mortgages assets without becoming involved in the mortgage origination and servicing.

2.2.2 Primary Mortgage Institutions

Primary Mortgage Institutions (PMIs) also known as Primary Mortgage Banks (PMBs) were established with the enactment of Decree No. 53 of 1989 to mobilize savings for the development of the housing sector. Federal Mortgage Bank of Nigeria (apex mortgage bank) under the mortgage institution decree No. 53 of 1989 has the authority and function of monitoring, controlling and regulating the activities of all PMBs throughout the country (CBN, 2007). PMBs are registered companies operating as financial intermediaries in housing finance sector. The Mortgage Institutions Act, 1989 made provisions for establishing and licensing of PMBs to grant loans and advances to individuals for the purchase or construction of a dwelling house; improvement or extension of an existing dwelling house; and to accept savings and deposits from members of the public and to pay interest thereon. Omirin, M. (2007).

In a CBN review conducted by Kama, Yakubu, Bewaji, Adigun, Adegbe and Elisha (2013) on the performance of PMBs, it shows that they have done poorly from inception, with only 34.2 per cent of the 280 licensed banks at inception in 1989 when the Mortgage institutions Act was enacted, till 1997 when their supervision was transferred to the Central Bank of Nigeria. Out of the 195 handed over to the CBN, only 96 were left at the end of 2003 after another round of licence revocation, which saw 99 losing their licences as a result of poor performance and insolvency. The institutions were constrained by inadequate

capital base, poor corporate governance and lack of well-defined business philosophy, Oni (2005). In 2003, the CBN provided a regulatory framework for the operation of the PMBs. As contained in the guidelines, the PMBs are allowed to grant loans or advances for the purchase or building, improvement or extension of a dwelling/commercial house, and acceptance of savings. Others areas of operation include deposits, management of pension funds/schemes, performing estate management duties as well as offering of project consultancy services for estate development and engaging in estate development through loan syndication. However, the guidelines limited the activities of PMBs to the provision of mortgage finance and excluded other related activities, such as the provision of estate management duties. The PMBs criticized the guidelines as being too stringent and claimed that the conditions in the guidelines limited the institutions from carrying out their assumed operations.

2.2.3 Policy Measures and Instruments for the Reform of the PMI subsector

- a) Phased re-capitalization of PMIs between January 2007 and December 2010 with emphasis on the actual injection of fresh funds to provide the needed liquidity for the sub-sector.
- b) Promotion of professionalism in PMI operation through the institution of professional training and certification process.

- c) Encouragement of mergers and acquisition in the PMI subsector.
- d) Enforcement of good corporate governance in the subsector.
- e) The evolvement of a level playing field for all operators especially by mobilizing requisite resources suitable for commitment into mortgages such as participation in pension fund administration.
- f) Restructuring of FMBN to improve its credit appraisal and disbursement mechanism as well as project monitoring procedures while encouraging adequately capitalized and repositioned PMIs to package their developer-clients for the purpose of accessing the estate development loan of FMBN.
- g) Drastic overhauling of the administration of the NHF in the realms of registration, mobilization and disbursement as well as transforming it to a trust – NH Trust Fund (NHTF).

Broader definition of mortgage business to include areas like tourism, hospitality business, furniture and fittings, construction, estate management and development, consumer leading and all house-providing or related industries. Felix, O.I. (2018)

Other Reforms include:

- a) Promoting the development of efficient secondary mortgage market appropriately linked with capital market to make housing finance accessible to larger population as means of economic empowerment.
- b) Establishment of a framework for the emergence of specialized institutions or instruments such as mortgage and asset-backed securities (MABS) and

mortgage insurance to enhance the securitization of mortgage loans and allocation of risks.

- c) Establishment of Secondary Mortgage Companies (SMCs) to promote secondary mortgage market facilities for residential mortgage loans from primary market lending institutions and holding the loans in its own portfolio. It will fund its mortgage purchases through its initial capital and the insurance of bonds or other unsecured debt securities. The SMC will package the mortgage loans from its own portfolio or from loan originators and structure them into mortgage-backed securities (MBs) for sale to investors in the capital market.
- d) Promotion of mortgage insurance as public-private partnership ventures as a financial product that offers risk coverage/mitigation to the owners of mortgage loans. Felix, O.I. (2018)

Roles and Responsibilities of Stakeholders

The roles and responsibilities of stakeholders shall be as follows:

Government

The government shall be responsible for:

- a) Ensuring stable macro-economic conditions leading to lower inflation, lower market rates, and higher average incomes.

- b) Efficient system of land registration (Time and Cost) to enhance titling and liens so as to foster the development of housing sector with inputs from the Housing finance Stakeholders' Advisory Committee (HFSAC).
- c) Availability of dependable credit information systems and property database.
- d) Registration of professional real estate intermediaries and developers.
- e) Sound regulatory framework for the supervision of housing finance institutions, real estate companies, agents and brokers, building materials-related institutions.
- f) Enactment of appropriate laws detailing property rights and clear repossession and foreclosure procedure for lenders. The laws and procedures must be continuously updated to enhance inflow of foreign capital for housing development.
- g) Providing basic infrastructures for the enhancement of site and services scheme for property development (electricity, water, roads, telecommunication etc), political and social stability.
- h) Development of smarter housing finance subsidies targeted at market incentives to enhance the funding of affordable mass housing for low income group such as lowering the cost of registration and transfer of property through lien, guarantee of FMBN issue of mortgage bond for mass housing, tax holiday etc.
- i) Developing an active secondary housing/home market.

- j) Development of infrastructure and legal mechanisms for converting slum and squatter rights into legal rights that satisfy all stakeholders. Soludo, C.C. (2007)

Central Bank of Nigeria (CBN)

The role of CBN shall include:

- Promote the establishment of Secondary Mortgage Companies (SMCs) with relevant government agencies, multilateral agencies and estate developers whose main purpose is to run businesses that promote secondary mortgage market facilities for residential mortgage loans. Felix, O.I. (2018)

2.2.4 Federal Mortgage Bank of Nigeria (FMBN): Delivering on Nigeria's Shelter Needs

The Federal Mortgage Bank of Nigeria (FMBN) was established in 1956 as Nigerian Building Society (NBS), a joint venture of the Commonwealth Development Corporation and the Federal and Eastern Governments of Nigeria. With the promulgation of the Indigenisation Act 1973, the Federal Government Acquired 100 percent ownership of the NBS and consequently renamed it the Federal Mortgage Bank of Nigeria (FMBN). In 1994, the FMBN, with the Promulgation of the FMBN Act 82 (1993) and the Mortgage Institutions Act 53 (1989) was accorded the status of the apex mortgage institution in the country. Felix, O.I. (2018)

Objective and Mandate

The Bank mobilizes long-term funds for on-lending to Nigerians to build, buy or renovate their residential houses under the National Housing Fund (NHF) scheme. Essentially, the mandate of the FMBN is to finance housing delivery to Nigeria's teeming population, exploring funding sources such as the NHF, the Nigerian Capital Market and offshore financial markets. Its mandate also includes ensuring that there is adequate liquidity in the Nigerian mortgage sector. It strives to create and nurture a viable and robust housing finance system to improve homeownership for all categories of Nigerians through affordable mortgage services.

Achievements

Felix, O.I. (2018) asserted that in line with its mandate, the FMBI has been delivering residential houses to Nigerians through three main windows (1) The National Housing Fund (2) The Estate Development Loan (EDL) and (3) the Nigerian Capital Market.

- 1) **The NHF Window:** The Bank advances mortgage loans to eligible NHF contributors to purchase, build or renovate residential houses in any location in Nigeria. However, the maximum amount of loan the Bank grants is N15 million. Since the NHF inception in 1992, the FMBN has mobilized a total of N18.596 billion through the scheme as at February 2012. The Bank has

disbursed a total of N34.035 billion in financing for 18,668 houses which have been sold to NHF contributors across the country.

- 2) **The EDL Window:** Equally, N49,182 billion has been disbursed as loans to estate development companies for building of residential houses for sale to NHF contributors. This window has delivered a total of 32, 950 houses to NHF contributors as at February 2012. This effort has indeed led to the springing up of so many housing estates in the six geopolitical zones of the country which are now owned and inhabited by NHF contributors. Thousands of other housing units in various housing estates across the country are currently under construction under this window.
- 3) **The Capital Market Window:** The Bank in May 2007 explored the Nigerian Capital Market to finance the sale of Federal Government houses to civil servants through Mortgage-Backed Bond Instrument. Accordingly, the Bank successfully floated N26 billion as the first tranche of a N100 billion Mortgage – Backed Bond (MBB) used to refinance civil servants’ acquisition of 9,575 non-essential Federal Government- owned residential houses in the Federal Capital Territory, Abuja. The transaction was the first of such transaction by a mortgage institution in sub-Saharan Africa. Currently, a pool of mortgages of about N12 billion from mortgage loan originators is being processed for the 2nd tranche of MBB which shall bring the cumulative beneficiaries under the MBB programme 16, 108 home buyers. Collectively,

therefore, the FMBN has been able to deliver 61,193 housing units to Nigerians, despite the fact that the number of contributors to the NHF has been low; just a little above 3 million people when the maximum target has been 50 million. Felix, O.I. (2018)

2.2.5 Concept of Housing

Housing is defined as the process of providing safe, comfortable, attractive, functional, affordable and identifiable shelter in a proper setting within a neighborhood, supported by continuous maintenance of the built environment for the daily living activities of individuals/families within the community while reflecting their socio-economic, cultural aspirations and preferences (National Housing Policy, 2012). The World Health Organization (WHO) describes “housing as residential environment which includes the physical structure used for shelter, all necessary services, facilities, equipment and devices needed or desired for the physical and mental health and social wellbeing of the family and individuals”. A house also provides the physical framework in which human, social, economic, and cultural resources are realized, enriched, and integrated. In the traditional African society, in particular, housing is, in fact, one of the greatly cherished material properties (Ademiluyi, 2010).

Housing has been a driver of economic growth throughout the world and there is no reason why it cannot do the same in Africa (Giddings, 2007). Failure to look

into issues in the delivery of affordable housing and improved urban service delivery will not only lead to the creation of slums and worsen the standard of living for the majority of Africa's urban dwellers, it will also deter the region's plans to create the broad-based economic growth required to lower poverty (Giddings, 2007). Omole (2009), asserted that housing is essential and comprises of vital services and facilities, which constitutes the physical environment that connects individuals with the community in which they evolve. Therefore, environmental amenities like waste disposal, water supply, road access and location services inferred by the distinct links between required economic and social infrastructure like education, health and recreation are all parts of the package of services designated as housing (Aribigbola, 2001). The National Technical Working Group on Housing (2009), describes the meaningful influence housing plays in the economy as it accounts for a substantial part of the manufacturing activity of a country, through its linkages to land markets, furniture, materials used for building, labour markets and its relationship with financial markets.

2.2.6 The Urban Housing Scene in Nigeria

Urbanization in Africa has not yet brought the economic development and degree of prosperity that might have been expected (Giddings, 2007). Inadequate education and physical infrastructure, combined with poor governance, have constrained the efficient use of productive resources, and the industrial development that might have come with it (UN-HABITAT, 2012). Housing is a key component of urban development. Improved housing is not only a desirable goal in its own right, but it also contributes to economic growth, social development, improved governance and enhanced security and stability (Giddings, 2007). The crisis in the housing sector of the developing world has various dimensions, which range from absolute housing units shortages, to the emergence and proliferation of the slums/squatter settlements, the rising cost of housing rent, and the growing inability of the average citizen to own their own houses or procure decent accommodation of their taste in the housing market (Ademiluyi, 2010). Ibem (2009), opined that one of the major problems developing countries are faced with, is the issue of inadequate provision of housing and infrastructure for the growing urban population.

According to Giddings (2007), African governments' efforts to provide shelter for the increasing urban population hasn't yielded much result, very little new housing is actually being built or improved by the formal sector and most of it that is built remains unaffordable to the great majority of the poor. Since the urban areas is regarded as the engine of growth which propels national economic

development (Akhmat, Bochun, 2010), the effects and problems generating from these population growth have obviously constituted critical challenges to sustainable housing and urban development (Jiboye, 2011). Giddings (2007), estimates that Zambia has 74% of urban dwellers living in slums; in Nigeria, 80%; in Sudan, 85.7%; in Tanzania, 92.1%; in Madagascar 92.9%; and in Ethiopia, a staggering 99.4%. The Kibera slum in Nairobi has more than half a million people packed into 225 hectares (2,000 people per hectare)

The proportion of the Nigerian population living in urban centers has therefore increased phenomenally over the years; while only 7% of Nigerians lived in urban centers in the 1930s, and 10 percent in 1950, by 1970, 1980 and 1990, 20 percent, 27 percent and 35% lived in the cities respectively (Jiboye, 2011). Over 40% of Nigerians now live in urban centers of varying sizes (Okupe, 2002). Olotuah (2002), estimated that about 2.3 million urban housing units are below standard, only 33% of houses are considered to be physically sound, and 44% and 19% require minor and major repairs respectively to bring them normative and structural standards. It is the right of every individual to have decent housing yet a greater number of Nigerians live in poor housing conditions. The reality of this development is that the urban house forms in Nigeria is occupied by extended family living with many inconveniences, while spatial congestion and infrastructures overloads cause problems in living comfort (Awotona, Ogunshakin, 1994; Jiboye, 2011). According to Jiboye (2011), the issue of inadequate housing

can be attributed to rapid urbanization and lack of policy implementation witnessed in major cities across the country which is the case of the study area, Abuja

2.2.7 Housing Finance in Nigeria

Governments all over the world acknowledge that housing is one of the surest means for the creation of jobs, eradication of poverty, reduction of corruption and ensuring the security of the nation (Kayode, 2011). Housing has remained grossly inadequate to cater for an estimated Nigerian population of over 160 million people (National Bureau of Statistics, 2014). In view of providing adequate housing finance aimed at improving home ownership to redress the estimated housing deficit of 14-17 million units, the country requires about N49 trillion to finance the deficit (Tanimu, as cited in FMBN, 2009). According to a study conducted by Enhancing Financial Innovation and Access; EFINA (2010), the World Bank estimated that about 720,000 housing units need to be produced annually for the next 20 years to close the housing gap in the country.

In Nigeria, the provision of affordable housing for the citizenry has remained the principal focus of every successive government. Particular efforts include the establishment of the Lagos Executive Development Board (LEDB) in 1928; the Nigerian Building Society in 1956; Formation of Housing Corporations in 1956 and 1960; National Council on Housing in 1971; Federal Mortgage Bank of

Nigeria (FMBN) in 1977; National Housing Policy (NHP) in 1991, Establishment of Primary Mortgage Institutions (PMIs) in 1991; the National Housing Fund (NHF) in 1992 and National Housing Trust Fund (NHTF) in 2005 (Olotuah & Bobadoye, 2009).

Finance has been identified as one of the most critical factors influencing housing provision because housing requires a huge capital outlay which is even beyond the capacity of the low - middle income group that constitute the Nigerian populace. Sanusi, J.O. (2003) asserted that 75 percent of the Nigerian population is estimated to be of the low-income group.

In a study conducted by Folorunso, Khan, and Olowoyo (2012), finance serves as a major hindrance to effective production or acquisition of affordable housing especially among the low and middle income earners in Nigeria. Odu (1992) asserted that finance is required in order to actualize the goals of the various housing policies and schemes established by the government. Also, lack of soft loan serves as one of the major obstacles against urban housing production in Nigeria as identified in the study of Olusola, Aina and Ata (2002). However, there are other factors that serve as hindrances to home acquisition like slow bureaucratic procedures, land accessibility, unstable macroeconomic environment (such as inflation) and poor structure of mortgage but several studies have shown that finance serves as a major hindrance because housing requires a huge capital

outlay. Loans are available to prospective contributors at soft interest rate issued by the PMBs at 6 percent but studies have shown that they lack access to these funds.

Ogunsemi and Abiola-Falemu (2006) affirmed that the disbursement process, terms and conditions to be met are cumbersome and tend to inhibit early approval and subsequent disbursements are hindrances to PMIs active involvement in the operation of the scheme. Similarly, Emoh and Nwachukwu (2011) observed that most PMIs have been hamstrung in participating effectively in the implementation of the scheme because the disbursement process, terms and conditions are presently cumbersome and tend to inhibit early approval and by extension disbursement.

It is on the importance of housing finance that government most often find ways to improve existing housing and housing policies such as credit policies, state/municipal government financing, specialized institutions, FMBN, Federal Mortgage Finance Limited (FMFL), PMBs and NHF (Sanusi, 2003). Ajanleko (2001) posits that the enormous public sector efforts have not effectively addressed an expanding housing deficit and escalating construction costs and that such efforts must be substantially collaborative with the private sector. Hence, government decided to establish a framework within which such collaboration can effectively address the housing problem. In light of the above, PMBs were

established to facilitate housing delivery in Nigeria through the institution of a private - sector arrangement to supplant the public sector which had proved ineffective over the years in that respect.

Mustafa (2002) stated that housing finance during the colonial days in Nigeria was limited to expatriates and a few selected indigenous senior civil servants in urban centers. As part of the measures to promote a private sector driven housing programme, the NHP of 1991 was designated with the objective of encouraging private sector participation in the provision of affordable housing for the Nigerian citizens (Kama et al., 2013). The performance of the national housing policies was not better either, with an achievement rate of 0.84 percent during the national housing programme, as only 1,014 housing units were constructed out of the planned 121,000 housing units. However, despite the effort of PMBs, the delivery of adequate and affordable housing in Nigeria, over the years, has not met the desired target (Usman, 2015). Mailafia (2007) argued that an appropriate regulatory reform should be put in place to reposition the PMBs because awareness about these banks is almost unknown among many people. According to the study, it will enable the sub-sector play the expected roles for the delivery of affordable housing stocks on sustainable basis particularly to low income group through resource mobilization within the framework of national policy on housing finance.

2.2.8 Overview of Housing Finance Arrangements in Nigeria

According to Sanusi (2003), the major housing finance arrangements in Nigeria are namely, State/Municipal Government Financing, Federal Mortgage Bank of Nigeria (FMBN), Federal Mortgage Finance Limited (FMFL), Primary Mortgage Institutions (PMIs), National Housing Fund (NHF), Insurance Companies' Funds, Specialized Institutions and Credit Policies:

- 1. State/Municipal Government Financing:** State and Municipal Governments have also been known to be involved in mortgage financing, albeit, on a limited scale. The sources of such fund usually include budgetary allocation, complemented with facilities from development institutions. Such funds are often channelled through the states' development finance institutions such as the Housing Corporations or Investment and Property Development Corporations for on lending to individuals for residential building construction. Indeed, the erstwhile regional governments of the 1960s set up the regional housing corporations, with clear mandate to provide long term credit for housing development. Felix, O.I. (2018)
- 2. Federal Mortgage Bank of Nigeria (FMBN):** The FMBN commenced operations in 1978, following the promulgation of the FMBN Decree no. 7 of January, 1977 as a direct federal government intervention to accelerate its housing delivery programme. The FMBN is expected to expand and coordinate mortgage lending on a nation-wide basis, using resources from

deposits mobilized and equity contributions by the Federal Government and CBN at rates of interest below the market rates. By mid-1980s, the FMBN was the only mortgage institution in Nigeria. However, it is arguable if this mandate has been satisfactorily performed to date. Felix, O.I. (2018)

3. The Federal Mortgage Finance Limited (FMFL): The FMFL was established in 1993 to carry out the retail aspect of mortgage financing and provide credible and responsive housing finance services, while FMBN became the nation's apex mortgage lending agency. The FMFL is expected to provide long term credit facilities to mortgage institutions in Nigeria to enable them grant comparable facilities to individuals desiring to acquire houses of their own; encourage and promote the emergence and growth of primary mortgage institutions to serve the need of housing delivery in all parts of Nigeria; and to collect, manage and administer contributions to the National Housing Fund (NHF) in accordance with the provision of the NHF Decree No.3 of 1992. Felix, O.I. (2018)

4. Primary Mortgage Institutions (PMIs): The promulgation of the Mortgage Institutions Decree No. 53 of 1989 provided the regulatory framework for the establishment and operation of Primary Mortgage Institutions (PMI) by private entrepreneurs. The FMBN under the decree became the apex institution, which regulates primary mortgage institutions

and was empowered to license the PMIs as second-tier housing finance institutions. The PMIs, under the decree were to mobilize savings from the public and grant housing loans to individuals, while the FMBN mobilizes capital funds for the primary mortgage institution. The PMIs were expected to enhance private sector participation in housing finance. Felix, O.I. (2018)

5. **National Housing Fund (NHF):** The NHF was established subsequent to the promulgation of the National Housing Fund Decree No. 3 of 1992 as a mandatory contributory scheme to mobilize cheap and long-term funds for housing credits. The Fund represented the financial component of the new National Housing Policy, which was adopted in 1991. The NHF is aimed at encouraging a multiplication of housing finance institutions, enhancing mobilization and growth of long term funds and making loans affordable to more borrowers. Other objectives of the fund include: ensuring constant supply of loans to Nigerians for the purpose of building, purchasing and improvement of residential houses, providing incentives for the capital market to invest in property development, encouraging the development of specific programmes that would ensure effective financing of housing development and to provide long term loans to mortgage institutions for on-lending to contributors to the fund. It is also expected to insulate the housing finance system from the fluctuations that had characterized its

past reliance on government intervention. This is consistent with the practice in other countries especially, as sustainable housing finance operations require the mobilization of private sector. Generally, the strategies for effective mobilization of funds for housing finance in Nigeria had evolved around three areas: Voluntary schemes, Mandatory schemes, Government budgetary allocation and financial transfers. Felix, O.I. (2018) Under the voluntary scheme, mobilization is done as follows:

- a) Private individuals: Government encourages individuals to save to build or buy their houses at low interest rates. Under this scheme, the PMIs are to mobilize savings and deposits from the public like the commercial banks. The success of the PMIs in the competitive financial market therefore depends on their management competence.
- b) Government introduces appropriate fiscal measures to protect the assets and liabilities of individuals, and stabilize individual deposit through contractual savings schemes.
- c) The CBN, through its monetary and financial policies, encourages deposit money banks to set up subsidiaries that would specialize in primary mortgage activities.

Under the mandatory scheme, we have.

- a) Mandatory contributions of Nigerian workers in both the public and private sectors. Participation in the scheme is required for all workers earning N3,000.00 per annum or more. The participants contribute 2.5 percent of their monthly salaries to the housing fund at an interest rate of 4 per cent to each savings/contribution made.
- b) Contributions of 10 per cent of banks' loans and advances to the Fund at an interest rate of 1 per cent above the rate on current account. This is subsequently transferred to the FMBN for the housing sector through a properly devised system, thereby liberating deposit money banks from the burden of mortgage loans.
- c) Contributions by the Nigerian Social Insurance Trust Fund (NSTIF) and the insurance companies, which are expected to invest a minimum of 20 per cent of their nonlife funds and 40 per cent of their life funds in real estate development, or which not less than 50 per cent must be channelled through FMBN, at an interest rate not exceeding 4 percent. Under this arrangement, government now relaxes the existing restrictive provisions as contained in the insurance Decree No. 59 of 1976 and the Trustee Investment Act No. 13 of 1962 so as to allow the insurance industry and pension funds to invest huge resources in housing development.

6. Insurance Companies' Funds: Insurance companies are equally well-suited to providing housing finance because of their stable base of funding and the

long-term nature of their liabilities. They are therefore not only fund mobilizers, but also important source of capital fund for the economy. Funds from life insurance companies also provide resources for the financing of the housing sector in Nigeria. The structure of the loans and advances of the sector indicate that the insurance sector has been active in mortgage financing.

7. **Specialized Institutions:** The main competing institutions with banks and insurance companies in the area of housing have been specialized institutions such as semi-government agencies, mortgage banks and building societies.
8. **Credit Policies:** In recognition of the importance of the housing sector, and considering that banks have ready access to cheap sources of funds through retail deposits as well as the infrastructure to process real estate loans efficiently and the skills to manage the risks involved, the Central Bank of Nigeria, CBN, has encouraged banks to support the development of the housing sector in Nigeria. In particular, the CBN has through its credit policies, required the erstwhile commercial and merchant banks to allocate a stipulated minimum proportion of their credit to the housing/construction sector. In the 1979/80 fiscal year for instance, the minimum stipulated for banks was five percent of total loans and advances. The share was raised to six percent in 1980 and thirteen percent in 1982. Where banks failed to meet the stipulated target, such shortfalls were deducted at source from the defaulting bank's deposit with the CBN and passed on to the

housing/construction sector through the Federal Mortgage Bank of Nigeria, FMBN. The financial sector was, however, liberalized in 1993. With the deregulation, the preferred status accorded to the housing and construction sector was discontinued. Felix, O.I. (2018)

2.3 Theoretical Literature

The relationship between mortgage financing and business activity in the housing sector can best be understood from the theory of general finance that broadly explains the mechanism through which financial intermediation leads credit from the monetary sector to influence employment, output and prices in the real sector of the economy. This way or channel through which the actions in the monetary sector affect the real sector is called the transmission mechanism. In other words, the transmission mechanism is the link between the monetary and real sectors of the economy (Pius, 2012). The theories are explained below;

2.3.1 The Title Theory

The basic concept of the Title theory as stated by Gilbert (1968) is that upon making the mortgage, the mortgagor passes title of the property, the subject of the mortgage, to the mortgagee, subject to a condition subsequent. This condition subsequent is the payment of the debt. Upon fulfilment of the condition, title to property divests (reverts to) the mortgagor. For example, a (mortgagor) mortgages

real property to B (the mortgagee) in a title state. Under the terms of the instrument, title passes on to B. however, the instrument will state that if A complies with the condition (makes payment), then the instrument will be void. At the time of the mortgage, by virtue of a provision in the mortgage, A is generally entitled to remain in possession of the property even though he passed title to his mortgagee.

2.3.2 The Lien Theory

The lien theory on the other hand which is adopted by majority of the countries was developed by Hester (1975) and it allows title to remain with the mortgagor and the mortgage that is placed on the property is a charge on the title. The mortgage instrument says nothing about title, but state “The mortgagor does hereby mortgagee to after the recording of the instrument, it becomes a lien on the property described in the mortgage. The rule regarding the priority of mortgages whether in title or lien states is substantially the same rule as that regarding the priority of deeds the instrument recorded first, in the absence of fraud, is the operative one. To avoid such circumstances, mortgages should be recorded immediately. It is from the idea of having the first lien against the property that the term “first mortgage” was derived. The term “first mortgage” simply means that the party holding such instrument has recorded mortgage first in point of time and thus has priority over any subsequently recorded mortgages. First mortgage,

Second mortgage, third mortgage, and so on as stated by Dobson (1976) indicates the order of their recording, and by the same token, the priority in case of foreclosure for the private creditors.

2.3.3 Urban Spatial Theory

The theory underpinning this study is the urban spatial theory, propounded by DiPasquale and Wheaton (1994). The theory asserts that housing stock depends on urban population, series of economic factors, cost of new construction activity and more importantly on credit availability. A greater density of population in the metropolitan area leads to a high demand for housing. Basically, an increase in cost of building activity leads to abnormal increase in house price. This is because the high cost of building materials and high labour price result in a rise in house price. The urban spartial theory emphasizes that there is a relationship between stock of housing and urban population. An increase in population positively increases the demand for housing, thereby causing the price of housing to increase. DiPasquale identified credit availability as the most important element in housing supply although studies always failed to discover a consistent relationship between finance and housing supply, the Neo-classical economists assert in the economic theory and housing demand that finance is the core product of housing investment. Also, the amount of financial resources determines the amount invested in housing. The Neoclassists also emphasized that there are factors that

increase or decrease the supply of houses such as construction cost, credit availability as well as economic factors, these are the key endogenous variables in housing supply.

2.3.4 Investment Base Theory

James Poterba in 1984 introduced this theory. The emphasis of this theory is based on the supply of housing as a function of series of economic factors such as real house price, cost of new construction, land and credit availability. Poterba specified three (3) basic assumptions in relation to this theory. First, that housing industry is composed of competitive firms and the industry's output is dependent on the real price of housing construction. Second, there are limits to materials of production and third, increase in demand for housing leads to growth in equilibrium price structure of housing. The major determinants of housing supply are credit availability and cost of construction. An increase in the price of construction of housing, initially results in a decrease in the demand for housing while a positive change in credit availability raises housing investment. Topel and Rosen (1988), added a model to the Poterba's theory of housing and this model encompasses of economic expectations which are interest rate, inflation rate and their lag values. However, advocates of the Poterba theory criticized urban spartial theory stating that the theory ignored land, a highly important issue because land is a unique element of housing supply. However, the difference

between investment based theory and the urban partial theory is whether or not to consider the issue of land as an input in the supply of housing.

2.4 Empirical Literature

Brissmis and Viassopoulos (2009) studied the relationship between mortgage financing and housing policies in Greece using vector auto regression analysis (VAR). The result shows that housing prices in Greece are exogenously weak. Similarly, Carbo and Fernandez (2010) also examined the relationship between mortgage market and housing prices and whether financial instability make difference using vector auto regression analysis (VAR) was carried out and they found out that a shift in mortgage lending that occurred in Spain in 2001 increased the economic significance of mortgage lending impact on house prices.

Conversely, Tiwari and Moriizumi (2010) investigated the efficiency in housing finance and carried out a comparative study of mortgage instrument in Japan using regression analysis. The Estimated error correction models for fixed and adjustable rate mortgages of city banks and fixed rate mortgages of Government Housing Loan Corporation indicate that there is a long-run relationship between mortgage rates and risk-free ten year government bond yield, however, there are also short-run adjustments and the adjustment speed depends on the risk perceived by lenders. It was further found out that the house mortgage lenders that are the government housing loan corporation have not adequately addressed

housing finance risk and that there is no secondary market, where risks could be addressed in pricing of mortgages.

Pollio and Obuobie (2010) in a study of mortgage financing and loan repayment in Ghana using data on about one thousand (1000) randomly selected loans approved between 2002 and 2007, it was discovered that monitoring surprisingly increased the likelihood of default by forty-eight (48) percent. It was found that repayment is affected mainly by frequency of loan monitoring among Ghanaian profit-making microfinance institutions. This was attributed to excessive pressure from the institutions' agents encouraging borrowers to invest in high-risk projects in order to generate higher cash flows to repay the loan.

McCord, McCreal, Berry, Haran and Davis (2012) studied the implication of mortgage finance on housing market affordability, they used regression analysis on the analysis mortgage lending statistic or national income in the period (1993-2009) and the result show the relationship between mortgage finance and affordability has been influenced by deregulation of the mortgage market, causing increase in housing prices and affordability pressure. Conversely, Ijaiya, Lawal and Osemene (2012) investigated microfinance and mortgage financing in Nigeria. The study used ordinary least square and it was observed that there is a positive relationship between informal micro finance and housing finance in Offa local government, Kwara state, Nigeria. Similarly, Ukpai, Jobrin, Phebean, Adegble

and Elisha (2013) also investigated mortgage finance in Nigeria, employing descriptive analysis and it was revealed that the minimum awareness of existing mortgage finance arrangement minimize financing capacity of mortgage institution and incapable title/legal framework remain an encumbrance title to the growth of the sector.

Clement, Tareef and Sanya (2012) investigated the trends realities and prospect of housing delivery using descriptive analysis and found that housing is perceived and actually seen a long term investment that gives a hedge against high inflation. Hullgren and Soderberg (2013) investigated the relationship between consumer characteristic and mortgage preference. The studied used binary logistic regression and it was observed that low income, financial literacy, low level of education and troubled interest rate increases customer preference to choose adjustable rate mortgage

Iyaiya (2012), carried out a research on microfinance and mortgage financing in Nigeria. Primary source of data was used in the study and multiple regression analysis was employed to examine the impact of microfinance and mortgage finance in Nigeria. The result showed that credit facilities provided by informal microfinance were used by housing purposes by the respondents. Based on the findings, he recommended the establishment of a regulatory body that would ensure the construction of decent houses, the risk of land purchase should be

eliminated and tenure security should be ensured. Adebamowo, Oduwaye and Oduwaye (2012) investigated the structure and challenges confronting the operations of the PMBs in Lagos. Using 160 copies of questionnaire and oral discussion, the study found NHF policy, structure of PMBs, the national economic climate, high cost of building materials and public apathy, difficulty of access to land and land documentation constraints, poor collateral, high interest rates and competitive finance market as major challenges confronting PMBs operations.

Ndururi (2012) assessed the effect of mortgage on financial performance of banks in Kenya. Using multiple regression on 44 commercial banks in Kenya, the study found that there is a positive relationship between bank performance and mortgage financing. However, the result of the study would have been more robust if it covered institutions which finance mortgages as the commercial banks only offer mortgage in the market. In contrast, Ojiambo (2014) evaluated the effect of real estate finance on the financial performance of listed commercial banks in Kenya from 2009-2013. Using multiple regression analysis, the study found that mortgage finance had a strong negative effect on the financial performance of listed commercial banks in Kenya. Furthermore, liquidity and cost of operations also had a strong effect on the financial performance of commercial banks. However, the scope covered by the study is short and therefore, the data used is limited which might be inadequate for any improvement in the

performance of banks. There would have been a more improved result if the period covered by the study is increased.

Ayodele, Obafemi and Sabastim (2013) studied options for sustainable mortgage finance in Nigeria. The study employed quantitative analysis and found out that Nigeria alone has a large deficit of houses. This implies that the number of houses available is insufficient compared to the entire population. Nwuba, Egwulahi and Salawu (2014) examined clients mean of influences on mortgage, they studied make use of sectional survey, group discussion and questionnaire was used for data collection and a descriptive analysis was also employed and they found out that client means of influence are more insidious approach.

Asabere, McGowan and Mooklee (2014) investigated the link between financing and economic development in Africa. The studied employed ordinary least square (OLS) method and the result shows that there is a significant positive correlation between the size of mortgage market and level of GNI per capita. Odi (2014) investigated the implication of mortgage financing on housing for all in Nigeria by year 2020 using the ordinary least square method to analyze the data gathered. The study found out that there is an existing positive relationship between supply of housing and roof gage credit.

Freeman and Harden (2014) investigated affordable home ownership, the incidence and effect of down payment assistance. The study adopted descriptive

analysis and reveals that the performance of loan incorporating assistance from seller funded profit was conspicuously worse than other means. In Ghana, Amoss, Gadazkpo and Amankwah (2015) investigated challenges of real estate development from the developer's perspective, the study used quantitative analysis and they found out that the challenges are the problem of development and building permit approvals.

Oyedokun, Adewusi, Oletubo and Thomas (2013) used questionnaire, weighted mean score and rank correlation analysis to investigate the mortgage lending in Nigeria. It was discovered that statistical based credit models are seldom used by the lenders while the evolving role of information technology in mortgage lending is yet to be given due attention. Sanusi (2003) investigated the issues and challenges of mortgage financing in Nigeria using content analysis. It was observed that increase surveillance and supervisory activities on the mortgage institution will help to ensure orderly growth and development in the Nigeria housing sector. Ozurumba (2011) in a related study, examine the urban housing financing in the South-Eastern states of Nigeria using correlation analysis. It was revealed that inefficient machinery and inadequate funding for effective implementation of the nation's housing programme is caused by the operation of the mortgage banks in Nigeria.

Ubom and Ubom (2015) examined the contributions of Primary Mortgage Institutions (PMIs) to real estate development in Nigeria from 1992-2012. Narrative and descriptive research designs were used for the study. Using simple percentages and ratios, the study found that rigid regulatory policies and insufficient fund hinder the smooth operations of the PMIs and their contributions to real estate development in the economy. Eni and Danson (2016), examined the factors affecting private sector housing supply in Calabar, using survey and systematic sampling method to select the houses along the street of the metropolis. They found out that factors such as cost of construction, population growth, inflation rate, income per capita and cost of land contribute to housing delivery in Calabar. Secondary source of data was adopted and also, percentiles and t-test as well as Pearson product moment of correlation was employed. The test result indicated that insufficient number of mortgage Institutions in Nigeria contributes to insufficient housing delivery.

CHAPTER THREE

METHODOLOGY

3.1 Introduction

This chapter focuses on the methods and techniques employed in carrying out the study. In doing this, the following sections are examined; Research design, population and sample, model specification, sources of data, method of data analysis and measurement of variables.

3.2 Research Design

The study is based on longitudinal research design, this is so because the variables of interest are secondary data, historical in nature and they were collected over a period of time from 1990 to 2018.

3.3 Population and Sample

The population of this study constitutes the entire policies on the Nigerian housing sector. But due to the inability to obtain the data for the entire policies of the effect of mortgage institutions on Nigerian housing sector, the study will be restricted to few variables which are mortgage loan, interest on loan and mortgage investment. It spans within the period of 1990 to 2018 in which is long enough to cater for the issue of degree of freedom.

3.4 Sources of Data

The study uses predominantly secondary data sourced from the Central Bank of Nigeria Statistical Bulletin (2018). More so, previous study and literature on

mortgage institutions and housing development in Nigeria provides immeasurable guide in this study.

3.5 Model Specification

In this study, hypotheses have been stated with the view of examining the relationship between mortgage institutions and housing development in Nigeria.

In capturing this study, these variables were used as proxy. Thus, the model is represented in a functional form. It is shown as below:

$$HD = f(\text{MLoan}, \text{IntLoan}, \text{Minvest}) \text{-----} (2.1)$$

In a linear function, it is represented as follows,

$$HD = \alpha_0 + \alpha_1 \text{ML} + \alpha_2 \text{IL} + \alpha_3 \text{MI} + \mu \text{.....} (2.2)$$

Where;

HousD = Housing development

MLoan = Mortgage loans

IntLoan = Interest on loans

Minvest = Mortgage investment

α_0 = Coefficient

$\alpha_1, \alpha_2, \alpha_3$ are the parameters

μ = error term

$\alpha_1, \alpha_3 > 0, \alpha_2 < 0$

3.6 Method of Data Analysis

The methodology employed in the empirical analysis of these research study will go beyond the (OLS); ordinary least square method. This is because recent studies in econometrics have shown that time series data tend to meander through time with little tendency to revert back to the original equilibrium position thereby violating the constancy assumption of the (OLS), thus according to Engel and Granger (1987) yields spurious and nonsense correlation.

The autoregressive distribution lag (ARDL) estimation technique will be adopted for this study. This will be used to estimate the error correction model (ECM). Before the ECM is estimated, necessary test of both unit root and co-integration tests will be carried out to justify the applicability of the error correction model. First, the underlying properties of the process that generates our time series whether the variables in our model are stationery or non-stationery will be determined using the Augmented Dicker fuller (ADF) tests. Lastly, co-integrated variable contains an error correction element, indicating that any deviation from equilibrium in the short run will be corrected in the long run.

3.7 Operationalization of Variables

Variable name	Proxy	Measurements	Apriori expectation
Housing development	HD	Real estate values is used to proxy housing stocks/development	
Mortgage loans	ML	Loans granted to facilitate housing development is used to measure mortgage loans.	+
Interest on loans	IL	Loans to deposits Ratio (Per Cent) is used to proxy interest on loans	-
Mortgage investment	MI	Placement or investments in mortgage sector is used to proxy mortgage investment	+

CHAPTER FOUR

PRESENTATION AND ANALYSIS OF DATA

4.1 Data Presentation

This chapter is on the presentation and empirical analyses of results derived from the estimated empirical model. The data for empirical analyses are Mortgage loans, Interest on loans and Mortgage Investment were used to capture the effect on Housing Development in Nigeria.

Table 1: Data for Housing Development, Mortgage loans, Interest on loans and Mortgage Investment

YEAR	HOUSD(B"₦)	MLOAN(B"₦)	INTLOAN	MINVEST(B"₦)
1992	19.45	0.21	3.19	0.90
1993	30.41	0.34	21.23	1.19
1994	89.47	0.56	53.66	0.61
1995	150.73	0.40	35.78	0.92
1996	197.61	0.76	30.32	2.81
1997	219.71	0.74	17.72	2.10
1998	320.44	0.79	18.12	2.27
1999	604.83	0.92	20.11	2.47
2000	433.52	0.86	19.14	2.37
2001	537.31	1.03	75.63	2.88
2002	604.83	6.60	19.14	18.28
2003	712.75	12.90	35.69	2.40
2004	945.49	6.00	9.29	32.29
2005	1447.48	2.10	2.69	40.88
2006	2216.00	7.56	9.12	40.36
2007	2490.71	40.76	26.14	149.09
2008	2836.99	108.53	65.29	69.83
2009	3262.54	118.59	80.07	61.19
2010	3718.45	132.88	71.08	66.99
2011	4127.99	122.81	75.25	89.70
2012	4584.96	120.91	70.67	99.42
2013	5544.10	132.29	80.21	83.34
2014	6677.10	50.98	92.49	47.69
2015	7475.54	74.10	100.69	74.23
2016	8187.55	64.22	124.01	81.89
2017	8340.43	103.58	147.32	107.95
2018	8715.38	97.62	170.64	105.78

Sources: Central Bank of Nigeria Statistical Bulletin (2019)

4.2 Inferential Analyses

Table 2: Descriptive Statistics

	HOUSD	INTLOAN	MINVEST	MLOAN
Mean	2758.954	54.61815	44.06778	44.77926
Median	1447.480	35.78000	40.36000	7.560000
Maximum	8715.380	170.6400	149.0900	132.8800
Minimum	19.45000	2.690000	0.610000	0.210000
Std. Dev.	2940.860	44.86622	43.78064	52.25974
Skewness	0.856355	0.922211	0.584116	0.598833
Kurtosis	2.328581	3.150935	2.260168	1.632906
Jarque-Bera	3.807199	3.852759	2.151131	3.716266
Probability	0.149031	0.145675	0.341105	0.155964
Sum	74491.77	1474.690	1189.830	1209.040
Sum Sq. Dev.	2.25E+08	52337.43	49835.35	71008.10
Observations	27	27	27	27

Source: Researcher's Computation (2021) using E-view 7.0

The Descriptive Statistics in Table 2 test to ascertain the normality of the data distribution. The values of the variables (HOUSD, INTLOAN, MINVEST, MLOAN) for the Jarque-Bera statistic are 3.807199, 3.852759, 2.151131, 3.716266 respectively; and the probability values are 0.149031, 0.145675, 0.341105, 0.155964 which are respectively not significant. This inferred that the result is an indication that the frequency distribution for the data are normally distributed. Thus, further regressions can be carried out.

Table 3: Granger Causality Test Result

Pairwise Granger Causality Tests

Date: 06/14/21 Time: 14:54

Sample: 1992 2018

Lags: 1

Null Hypothesis:	Obs	F-Statistic	Prob.
LINTLOAN does not Granger Cause LHOUSD	26	0.06730	0.7976
LHOUSD does not Granger Cause LINTLOAN		0.64840	0.4289
LMINVEST does not Granger Cause LHOUSD	26	3.32600	0.0812
LHOUSD does not Granger Cause LMINVEST		9.27121	0.0058
LMLOAN does not Granger Cause LHOUSD	26	1.84773	0.1872
LHOUSD does not Granger Cause LMLOAN		2.83183	0.1059

Source: Researcher's Computation (2021) using E-view 7.0

4.2.1 Test of Hypotheses

The hypotheses were tested using the granger causality, such that the probability values at 5 % level of significance were considered to test for the effects of the independent variables on the dependent variable. The results of the hypotheses are shown in Table 2.

Hypothesis 1

H_0 : There is no significant effect of mortgage loans on housing development in Nigeria and vice versa. Table 2, showed the result derived from the granger causality test, such that the probability values of $0.1872 > 0.05$, which is not significant for LMLOAN; and $0.1059 > 0.05$, also not significant for LHOUSD. These imply that LMLOAN and LHOUSD do not granger cause each other. Consequently, the variations in mortgage loans have no effect on housing development; and as such, the variations in housing development have no effect on mortgage loans.

Hypothesis 2

H₀: There is no significant effect of interest on loan to housing development in Nigeria and vice versa. Table 2, showed the result derived from the granger causality test, such that the probability values of $0.7976 > 0.05$, which is not significant for LINTLOAN; and $0.4289 > 0.05$, also not significant for LHOUSD. These imply that LINTLOAN and LHOUSD do not granger cause each other. Consequently, the variations in Interest on loans have no effect on housing development; and as such, the variations in housing development have no effect on Interest on loans.

Hypothesis 3

H₀: There is no significant effect of mortgage investment on housing development in Nigeria and vice versa. Table 2, showed the result derived from the granger causality test, which indicates a unilateral causality such that the probability values of $0.0812 > 0.05$, which is not significant for LMINVEST; and $0.0058 < 0.05$, which is significant for LHOUSD. Apparently, LMINVEST does not granger causes LHOUSD, which indicates that mortgage investment has no significant effect on the variations in housing development in Nigeria. However, LHOUSD granger causes LMINVEST, which implies that the variations in mortgage investment is due to the variations in the housing development in Nigeria.

CHAPTER FIVE

SUMMARY OF FINDINGS, CONCLUSION AND RECOMMENDATIONS

5.1 Summary of Findings

Based on the results of the tests of hypotheses, the following findings were observed:

1. The study portrayed evidence that mortgage loans does not granger causes housing development in Nigeria; as well as housing development does not granger causes mortgage loans.
2. The study showed evidence that interest on loan does not granger causes housing development in Nigeria; as well as housing development does not granger causes interest on loan.
3. The study revealed evidence that mortgage investment does not granger causes housing development in Nigeria; While, housing development granger causes mortgage investment.

5.2 Conclusion

It is the conclusion of this study that mortgage loans, interest on loan and mortgage investments have no consequential effects on the low or increase in

housing development in Nigeria for the period considered. However, the low or increase in housing development in Nigeria may be induced by other factors such as low Government expenditure.

5.3 Recommendation

Based on the empirical results, which showed that mortgage loans, interest on loan and mortgage investments do not granger cause housing development in Nigeria, the study recommends that, the Nigerian Government should increase its expenditure as one of the other factors that could affect housing developments, thereby paying more focus on housing development.

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