

ANALYSIS OF FACTORS INFLUENCING ACCESSIBILITY TO SECONDARY MORTGAGE FINANCE IN NIGERIA

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Abstract

The study examines the factors influence the level of access of the private developers to fund in the secondary P market for housing developers in the country. The primary objectives of the study include assessing the criteria of accessing loan, identifying the prominent influencing factors and their level of significance. The study sampled the opinions of Real Development Association of Nigeria (REDAN) via questionnaire survey. A total of 308 questionnaires were administered, out of which a total of 233 representing 75.65% were returned, properly filled and analysed. The study deployed the descriptive statistic such as simple frequency distribution, mean weighted score (MWS); and inferential statistics such as ordinary least square (OLS) regression model to analyse its data. The result of the MWS on the importance criteria of accessing loan and level of compliance showed that all the criteria are important but their level of compliance differs. While developers indicated total compliance with criteria including loan repayment and payment interest, tax clearance, terms and condition of the loan, approved building plan, they are fairly complied in other criteria such as registration with CAC, life insurance, guarantee of funds from government sponsored enterprises. The factor analysis identified 10 principal influencing factors and the result of the regression model showed that mortgage characterisation, monetary and fiscal, institutional, demand, e-technological and housing stock factors have statistical significant explanatory power to determine the level of accessing fund in the Secondary Mortgage Market (SMM). This result signal a caution to the corporate bodies and policy makers on the need to critical considered those factors that could significantly influence the investment decision/policy for sustainable housing sector.

Key Word: Secondary Mortgage Market, housing, Factors, Criteria, Fund

Introduction

All over the world, the rate of urbanization has soared as more people now live in cities than in rural areas (Boleat and Walley, 2008; Chiquier and Lea, 2009). According to UN (2010), by

the end of 2030, two-thirds of the world population will be living in urban centres. The implication of this for an emerging economy like Nigeria is enormous. Therefore, the need for an efficient and stable mortgage finance system to enable

urban dwellers acquire decent houses that meet global standards is now of great importance. While considerable skills and resources have gone into improving the efficiency of mortgage finance systems in advanced economies, the same cannot be said of many developing countries, and this is critical as most of the latent demand for housing finance services over the next 30 years will be in emerging markets (Chiquier and Lea, 2009).

According to Ademiluyi (2010), the level of production of housing in Nigeria is only 2 dwelling units per thousand people which is grossly inadequate compared to the required rate of about 8-10 dwelling units per thousand people as recommended by the United Nations. However, despite various government interventions and huge private sector investments through provision of loans by mortgage finance institutions and commercial banks, and direct construction of houses by both the public and private sector, the housing problem in Nigeria country still remains intractable; the housing deficit statistics is increasing rapidly as many of the urban dwellers in Nigeria still do not have access to decent and affordable housing (Boleat and Walley, 2008). Chiquier and Lea (2009) attributable these housing situations to some reasons including small in scale lending capacity, difficult to access mortgage credit facilities and only bank-based with little reliance on capital markets.

In Nigeria, access to mortgage finance has been constrained by an underdeveloped housing finance system and slow mortgage market development as a result of the lack of an effective legal, regulatory and institutional framework, inadequate access to long-term funding cumbersome property registration

procedures, and lacks collateral enforcement as well as ineffective foreclosure procedures. Boleat and Walley (2008), Johnson (2014), Figueira and Goldstein (2010) posit that mortgage market development in Nigeria is hindered by two critical factors namely: inefficient mechanism for transferring property and the absence of long-term finance for home buyers.

For instance, Mabogunje (2004) added that the heavy condition from the extant laws attached with the pension and insurance funds of about trillions of Naira constituted impediment for developers to access them at the SM. Agboola and Adegoke (2006) identified structural deficiencies in the extant laws related to housing finance; inconsistencies in government policies, lack of title and modus operandi between Federal Mortgage Bank of Nigeria (FMBN) and Primary Mortgage Institutions (PMI). Now that substantial fund in the latter introduced SMM has not been accessed till date.

Hoek-Smit (2005) and El-Kafrawy, (2012) argued that, to achieve an efficient mortgage market like what is obtainable in the developed economies, critical components – such as institutional framework, accessibility to financial, human resource, and infrastructure must be effectively harnessed; available in the right degree, and synchronized in the right quantity for efficiency to be attained. The case of Nigeria presents a paradox and the prospect of the secondary mortgage sub-sector lingers immensely untapped for the housing developments. At the moment, the secondary mortgage sub-sector utilization is lower than 10% of Nigeria's Gross Domestic Product (GDP) (Lead Capital, 2011) compared to over 86% utilization in United State of America. The

analysis indicated that the economy mortgage liabilities contributed immensely to the US GDP.

The implication of this is that enormous prospects are available for enlargement, expansion and investment in mortgage financing, and the barriers limiting the possibilities of mortgage financing to enhance the country's economic growth such as issues bordering on accessibility and influencing factors require logical attention.

Literature Review

Secondary Mortgage Finance (SMF): From Local and International Perspective

Secondary Mortgage Finance (SMF) is an essential part of a mortgage finance system and an important driver of the housing market which was not practiced in Nigeria until the 90s after the Primary Mortgage Institutions (PMIs) Act, 1989 was established with enabling law in the Mortgage Institutions Act, 1989 (Ebie, 2009). The SMF is saddled with the responsibility of providing exchange platforms for originated loan of PMI. The central goal of SMF is geared towards raising funds to finance long term investment especially for housing provision. In the advanced and fast developing economics, the SMF has contributed significantly to the physical growth and socio-economic development most especially in the housing sector.

For instance, Okoroafor (2007) submitted that developed countries such as UK, Parts of North America, Germany and some Asian countries like Japan, Korea and Singapore have a well-organized and effective housing finance system. The United States of America financing market shows that mortgage liabilities are the prime constituent of the internal liability markets. Many third world nations gasp with economic

meltdown which has a negative impact on the mortgage financing, hence poor mortgage market. Their mortgage financing is a recent phenomenon or do not have prerequisite fundamental capacity to cope with the demand and need of the financial market in third world economies globally. Thus, in developing economic countries like Nigeria, the impact of SMF has not been felt in the housing sector.

Ogunba *et al.* (2002) and Nubi (2014, 2015) posited that despite policy formulations and reforms of mortgage origination and operation of PMI and SMF in housing sector, housing deficit still persist, as there exists over 17million deficit in the Nigerian housing stock. Housing finance requires huge capital commitment. Sanusi (2003) argued that financing housing development through PMIs is not sufficient to meet the current demand of housing need. The challenges of PMI in financing housing development range from non-existence of long term resources, volatile macro economy lending to their high interest rates, and their modalities of operation that are in line with commercial banking operations. Ademiluyi (2010) noted that the PMI process of securing loan for housing development often discourage developers. This necessitated the need for government to come up with alternative strategy of SMF aimed at increasing accessibility and guaranteeing security of capital in the institutional mortgage system (Ebie, 2009). In Nigeria mortgage system, Secondary Mortgage Market (SMM) introduced in year 2004, and one of the major tradable instruments market is securitization.

Securitization has been defined as the process by which assets, generally predictable cash flows and similar

features, are packaged into interest-bearing securities with marketable investment characteristics (Sanya, 2011). Securitization can provide a long-term source of funding and thereby reduce financial institutions' exposure to fluctuations in prevailing interest rates. Mortgage securitization divides lending into four functions generally handled by four different types of specialized financial institutions: origination, the initial step of making loans to individual borrowers; servicing, managing the ongoing relationship with individual borrowers and collecting payments; securitization, buying large numbers of loans from originators and packaging those loans into investments that can be sold to investors; and funding, buying mortgage backed securities (MBS) from securitizers and holding them in portfolio as an investment.

Recently in SMM, Federal Government's Institutions floated about N100 billion bond (securities) in an attempt to reduce housing supply deficit especially for the low and medium income groups. So far, it is reported that only about N32 billion has been accessed in total up to the year 2015. This were mostly secured by some over-collateralised properties in Abuja the capital city of the country. It therefore appears that despite these government attempts at housing and provision for the target groups, bridging the housing gap is still a mirage (Ebie, 2009 and Kolawole, 2015). Studies have attributed the hurdles in many factors including inadequacies in the institutional operation of the mortgage finance system (Mabogunje, 2004; Agboola and Adegoke, 2006; Ademiluyi, 2010; Boleat and Walley, 2008; Johnson, 2014).

Nigeria Mortgage System and Influencing Factors

Studies on impending factors affecting access to mortgage origination and process have been on the increasing side and issues characterized with mortgage finance arrangement have been a topical debate in the public domain. For instant, in United States, Tighe (2011) looks into barrier that could hinder effective and efficient policy formulation for fair housing implementation. The study premised its discussion on the policy implementation for finance, regulation and public opinion towards providing fair housing for its citizenry. The study emphasis was de-concentration of poverty to encourage equal access to opportunity and equitable distribution of affordable housing across regions in the US. The author attributes the barriers to financial challenges, local capacity constraint, federal funding rules (e.g. low income housing tax credit and home block grant), creative finance and problem of nonprofit developers among others.

However apart from the fact that the study was carried out in a developed climate, the study also lack empirical bases of assessment. Similarly, Sanders (2005) investigates the impact of barriers to homeownership and housing quality on international mortgage market in United States. Study noted that institutional mortgage market is underdeveloped and attributable to barriers such as: legal systems that delay foreclosure proceedings; incomplete or weak financial institutions; high inflation, and cultural barriers to mortgage market development and homeownership. This study however focused on mortgage system in the developed economy.

In Nigeria, Nwuba and Chukwuma-Nwuba (2018) examined factors that

could be a barrier to household in accessing mortgage finance in Kaduna State. The study deployed triangulation approach and surveyed the opinions of household, lenders and the officers in FMBN via structured questionnaire. The authors found that, among the ranked factors, barriers such as household financial strength for repayment, high interest rate, land accessibility, issues relating to land titling and documentation and shortage of mortgage institutions were prominent in the study area. The study limited its scope strictly to Kaduna experience which may not reflect the general situation in the country; also, the study concentrates on mortgage arrangement for homeownership where issues bordering on securitized secondary mortgage arrangement in generating finance for housing provision were not investigated. It must be pointed out that these institutional barrier have not been adequately researched, identified and investigated to make the implementation of the SMM more successful.

Other constraints limiting the availability of housing finance were identified by Buckley and Kalarical (2004), and Merrill (2006) as: unstable macroeconomic conditions, a weak legal framework for property rights, lack of mortgage market infrastructure, and unavailability of funds for long-term finance to promote financial intermediation. Equally, Tiwari and Moriizumi (2003), identified poor access to finance as the further impediment to having affordable housing in Nigeria. The problem of poor access to finance in the mortgage sector presents itself as having 'two faces'. On the one hand, poor access to finance for mortgage lending could mean an outright lack of funds. Due to the peculiarity of mortgage lending, poor access could also mean the inadequacy of available funds from short-term deposits for the long-term lending which mortgage finance requires. This study considers poor access to finance from both perspectives.

Table 1: Summary of Literature

S/N	Author(s) and Date	Country	Title	Type and Method	Objective of the study	Result	Critique/Gap
<i>Institutional Operation of Mortgage System</i>							
3	Ibuoye (2008)	Nigeria	Housing Finance and Challenges in a Securitization in a Development Economy	Empirical research works, Descriptive statistics, mean standard deviation model, return risk analysis and performance measurement	Evaluation the performance of mortgage assets and the potential impact it has for Securitisation and finance of mass housing via secondary mortgage market in Nigeria	Mortgage assets has lower returns to other assets measure but has less risk thus making it negatively correlated attractive for one's portfolio	The study focus on assessing the performance of mortgage institution but did not considered institutional operation that could affect its accessibility
5	Nubi (2007)	Nigeria	Secondary Mortgage in Nigeria: The Old is Dead the New Ready to be Born?	Author did a qualitative analysis of the prospects as an SMM in Nigeria using various illustrations to do a comparative analysis of the situation in some developing countries	Evaluation of the prospects of a Secondary Mortgage Market (SMM) in Nigeria	The state of the economy coupled with financial security is low, hence any attempt to forget the old informal ways of communal development which could be enhanced with cooperative groups	The major focus of the study was not institutional operation of the SMM and determinants of level of access to the funds
6	Fabozzi and Modigliani (1992)	USA	Mortgage and Mortgage backed security models	A compilation of contemporary mortgage structure in the developing world	Standardization of mortgage structure and underwriting processes	Description of the economic forces that modelled the mortgage market and evaluation of variety of mortgage design and the securities created from them explanation of contemporary mortgage	This study model the mortgage system in United states and reflects how mortgage function in a developed economies. But it may not reflect the Nigeria mortgage system due to the peculiarities of the country
7	Jemide and Ogedengbe (2015)	Nigeria	Developing Nigeria's Secondary Mortgage Market	Historical review of Federal Government involvement in secondary Mortgage market in Nigeria	Development of Nigeria's Secondary Mortgage market	SMM has potential impact on improving the sources of finance available for affordable housing Nigeria	The study did not considered institutional operations that could hinder the development of SMM
8	Jemide and Ogedengbe (2015)	Nigeria	Developing Nigeria's Secondary Mortgage Market	Historical review of Federal Government involvement in secondary Mortgage Market	Development of Nigeria's Secondary Mortgage market	SMM has potential impact on improving the sources of finance available for affordable housing Nigeria	The study did not considered institutional operations that could hinder the development of SMM

				Mortgage market in Nigeria			
10	Ebie (2009)	Nigeria	Public Sector Driven Housing Provision in Nigeria: Achievement and Problems	Chronological review of public housing provision in Nigeria	To appreciate public sector housing provision in Nigeria	The ability of the nation to efficiently house the people in an index of its civilization	Paper focus on achievement and problems of housing provision with little emphasis on solution
13	Johnson (2014)	Nigeria	Developing the Mortgage sector in Nigeria through the provision of long-term finance: An efficiency perceptives	Use of data environment analysis (DEA) and stochastic cost frontier (SCF) analysis to determine the efficacy of mortgage banks in Nigeria.	To carry out a quantitative assessment of the efficient of firms in the Nigerian mortgage banking sector	Cultural-cognitive factors such as saving habits, debt utilization tendencies, and the debt repayment culture of Nigerians affect the efficiency of the mortgage sector	The study did not considered the institutional operation factors in the development of viable mortgage system
14	Sanders (2005)	USA	Barriers to homeownership and housing quality: the impact of international mortgage market	Author used qualitative discussion to do a market comparison of various mortgage market	Examining in detail problems faced by varieties of countries in term of establishing mortgage market and encouraging quality, affordable housing	Development of international mortgage market has been affected by various factors include legal system that delay foreclosure proceedings, incomplete or weak financial institutions, high inflation rate and cultural barriers to mortgage market development and homeownership.	improvements through medication to legal system, new and financial system

Material and Method

Study Population

The study is quantitative in nature and primary data was used; sought via structures questionnaire survey. Real Estate Developers Association of Nigeria (REDAN) members were used as study population. A total number of 1,350 members were noted (REDAN on-line Directories). The study adopts Taro Yamane formula to arrive at appropriate sample size from REDAN members as a result of large sample population (above 1,000). The formula is expressed as;
 $n = N/(1+N(e)^2)$

Where n = sample size, N = total population and e = margin of error at 5% confidence level

Therefore Sample size for REDAN is given as

$$= 1,350 / (1 + 1350(0.05)^2)$$

$$= 308$$

Therefore, the sample size REDAN is 308 representing 22.15%. Simple random sampling techniques was deployed to draw the sampling so as to give every member of the association an equal chance of been selected.

Method

The study deployed descriptive statistics such as relative importance index (RII) and relative compliant index (RCI). To adopt the relative index analysis, the study used 5 point Likert scale ranging from (weight) Not Applicable (1), Not Important (2), Undecided (3), Important (4) and Very Important (5) for measuring Level of importance. For the measurement of level of compliance, the order of scale range from (weight) Not Aware (1), Not complied (2), Low compliance (3), Fairly Complied (4) and Totally complied (5). Thus, the relative index techniques is expressed in this equation:

$$MS = \frac{Wn_5 + Wn_4 + Wn_3 + Wn_2 + Wn_1}{N} \dots\dots\dots 1$$

Where MS is the mean score

W – Assigned weight to the scale (1-lowest to 5-Highest)

N- Total number of sample

$$Relative\ Compliance\ Index\ (RII) = \frac{MS}{Maximum\ Score(5)} \dots\dots\dots 2$$

Where MS is mean score.

To determine the categorization of the responses, the study adapted the RII transformation scale recommended by Akadiri (2011) and Majidb *et al.* (2018). The measurement is scaled as thus:

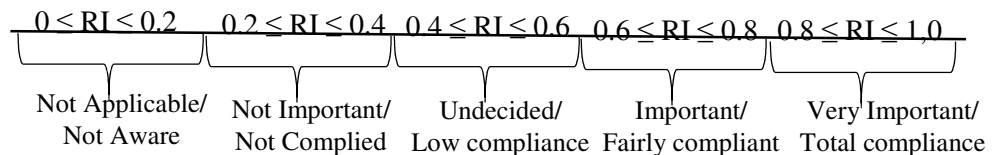


Table 2: Scale for Weighted Options

Likert Scale	Authors Specification for RII		Modifications by the study	
	Scale Range	Remarks	Scale Range	Remarks
5	$0.8 \leq RI \leq 1.0$	Very Important	$0.8 \leq RC \leq 1.0$	Total Compliance
4	$0.6 \leq RI \leq 0.8$	Important	$0.6 \leq RC \leq 0.8$	Fairly Compliant
3	$0.4 \leq RI \leq 0.6$	Undecided	$0.4 \leq RC \leq 0.6$	Low Compliance
2	$0.2 \leq RI \leq 0.4$	Not Important	$0.2 \leq RC \leq 0.4$	Not Complied
1	$0 \leq RI \leq 0.2$	Not applicable	$0 \leq RC \leq 0.2$	Not Aware

The study utilized factor analysis (Principal Component Analysis) to reduce the influencing factors into categories based on the correlation matrix. The categorized factors will then be regressed on the level of access to mortgage finance to identify the significant contributing factors. the factorial equation model is presented as follows:

$$y_{ij} = v_j + \lambda_{j1} \eta_{i1} + \lambda_{j2} \eta_{i2} + \dots + \lambda_{jk} \eta_{ik} + \dots + \lambda_{jm} \eta_{im} + \epsilon_{ij} \dots\dots\dots 3$$

Where y_{ij} are factor items, v_j are the factor intercepts, η_{ik} are factor values, λ_{jk} are factor loadings, ϵ_{ij} are residuals with zero means and zero correlations.

In addition, regression analysis was deployed to ascertain the level of significant of the influencing factors on the level of access. Regression analysis is mathematically expressed as;

$$y = a + bx \dots\dots\dots 4$$

- where
- y is the dependent variable
- x is the independent variable
- a is the constant
- b is the co-efficient/slope of the independent variable

for this study, it can be re-write as

$$ASM = \alpha + b_1 fac_1 + b_2 fac_2 + b_3 fac_3 \dots + b_n fac_n + \epsilon \dots\dots\dots 5$$

Where ASM is Access to Secondary Mortgage
b is factorial regression coefficient and ϵ is an error term.

Result and Discussion

In Table 3, the analysis of the questionnaire administered and retrieval were presented. During the questionnaire survey exercise, a total number of 308 questionnaires were administered to the REDAN members out of which 233 representing 75.65% were retrieved, properly filled and analysed. The high rate of response conform with the recommendation of Babbie (2007) which

states that, over 70% response rate is of excellent representation of the entire population. The high rate of response (above 70%) could be attributed to the willingness of the respondents to participate in the subject matter of the study as a result of the relevance of the study to trending issues in the housing sector and the intension of the study to proffer solutions as it affects real estate developers.

Table 3: Analysis of Administered Questionnaire to Real Estate Development Association of Nigeria (REDAN)

Questionnaire Administered	Questionnaire Retrieved	Percentage (%)
308	233	75.65

Analysis in Table 4, presents the result of summarized descriptive analysis on the socio-demographic characteristics of the respondents which include gender, Age Bracket, highest educational qualification and relevant working experience. The analysis on gender distribution showed that male gender accounted for 80.3%, while their female counterpart represented 19.7% of the sample population. For the age distribution, higher number of respondents, i.e. 41.6% falls within the age bracket of 31 to 40years, age bracket, 41-50years and 51-60years accounted for 27.9% and 23.6% respectively, 4.3% and 2.6% respondents were within the age category 21 – 30years and. Above 60years respectively, Indeed none of the respondents were found to have age below 21years as shown in Table 4.

Analysis of highest educational qualification showed that 45.1% had obtained Master of Science (MSc) Degree, 34.3% had Bachelor of Science (BSc) Degree. 8.6% and 49.7% had Doctor of Philosophy (PhD) and Post Graduate Diploma (PGD) certificates respectively. Respondent with Higher National Diploma (HND) qualification represents 2.6% while 4.7% of the respondents are known to have obtained other certificates. On relevant work experience, the result of analysis showed that 29.6% and 27.5% had experience of 6 – 10years and above 20years respectively. 20.6% of the respondents had obtained 11 – 15years

experience, 14.2% of the respondents' experience were between 15 – 29years, while the least in experience of the respondents were those having experience below 5years and they account for 8.2% of the sampled population.

In summary, the descriptive statistics of the socio-demographic characteristics of the respondents showed that the study recorded more participation of male professional members of REDAN (80.3%) compared to their female counterpart (19.7%). The male dominance of the respondents corroborates with Oni (2009) Oloyede *et al.* (2011), and Oloke *et al.* (2017) which reported a gender bias towards male dominance in the built profession, especially in real estate practice and attributed the result to the time and physical strength which real estate demands. Proportionately, 95.7% of the respondents were of age 31years and above, 97.4% of them had attained highest educational qualification from BSc to PhD level, while 91.9% had years of relevant work experience of 6years and above as indicated by the analysis in Table 4. This showed that the REDAN members that participated in the survey exercise were mature, had relevant educational background and good quality of relevant working experience in the housing sector, which signifies that their responses, opinions, comments and submissions could be relied upon and valid in analyzing the subject matter of the study.

Table 4: Socio-Demographical Characteristics of the Respondents

Profile	Parameters	Frequency	Percentage (%)
Gender	Male	187	80.3
	Female	46	19.7
	Total	233	100.00
Age	< 21yrs	-	-
	21-30yrs	10	4.3
	31-40yrs	97	41.6
	41-50yrs	65	27.9
	51-60yrs	55	23.6::'
	>60yrs	6	2.6
	Total	233	100.00
Highest Educational Qualification	HND	6	2.6
	B.Sc	80	34.3
	PGD/Equivalent	11	4.7
	M.Sc.	105	45.1
	PhD	20	8.6
	Others	11	4.7
	Total	233	100.00
Work Experience	≤5yrs	19	8.2
	6-10yrs	69	29.6
	11-15yrs	48	20.6
	16-20yrs	33	14.2
	>20yrs	64	27.5
	Total	233	100.00

The result of the corporate loan assessment to mortgage facilities at the SMM showed that eleven (11) criteria were identified to be very important but at varying degrees. The criteria in this category with their corresponding RII in order of importance include; Approved building plan (0.941), Tenure of the loan (0.909), Terms and Condition of the loan (0.893), Loa repayment and payment interest (0.893), Annotated Survey plan with beacons and bearing (0.892), Insurance of the housing to be purchased

(0.879), Registration with CAC (0.859), 3years Audited account (0.854), Bill of Quantities (0.848), Loan registration (0.842) and Guarantee of Funds from Government Sponsored Enterprises (0.824). Other criteria such as Initial Payment (0.799), Life Insurance (0.779), One-off Loan Administration (0.749), bond and registration fee (0.746) and Hypothecation bond and registration fee (0.696) were identified to be important as presented in table 5.

Table 5: Important Criteria for Accessing Mortgage Funds at the SMM (Corporate loans)

Criteria for Accessing Mortgage Funds	Level of Importance					TWF	RII	Rating
	NA	NI	U	IM	VI			
Approve building plan	-	-	66	145	910	1121	0.941	
Tenure of the loan	-	14	75	140	830	1059	0.909	
Terms and Condition of the loan	-	-	126	164	750	1040	0.893	
Loan repayment and payment interest	-	10	93	192	745	1040	0.893	
Annotated Survey plan with beacons and bearing	-	-	150	104	785	103	0.892	
Insurance of the housing to be purchased	5	12	75	212	720	1024	0.879	VI
Registration with CAC	-	20	153	128	700	1001	0.859	
3years Audited account	5	20	96	204	675	995	0.854	
Bill of Quantities	12	-	129	172	675	988	0.848	
Loan registration	6	18	123	204	630	981	0.842	
Guarantee of Funds from Government Sponsored Enterprise	11	8	138	224	580	961	0.824	
The initial payment	11	38	114	228	540	951	0.799	
Life insurance	5	40	165	268	480	908	0.779	
A one-off loan administration fee	17	42	111	348	355	873	0.749	
Hypothecation bond and 0registration fee	6	44	219	240	360	869	0.746	IM
Commission for currency exchange	28	32	204	232	315	811	0.696	

Note: Not Applicable (NA), Not Important (NI), Unsure (U), Important (IM), Very Important, Total Weighted Frequency (TWF), Relative Importance Index (RII)

In Table 6, the result of the respondents expressed total compliance of cooperate mortgagor to criteria such as, Loan repayment and payment interest (0.806), Tax clearance (0.836), Bill of Quantity (0.836), Terms and Condition of the loan (0.820), Insurance of Housing to be purchased (0.817), A one-off loan administration fee (0.813), Tenure of the loan (0.811), Approve building plan (0.808) and 3years Audited account

(0.805). Other categories of criteria such as Registration with CAC (0.790), Hypothecation bond and registration fee (0.787), Loan registration (0.781), the Initial Payment (0.771), Life insurance (0.765), Guarantee of Funds from government sponsored enterprise (0.748) and Commission for currency exchange (0.729) were said to be fairly complied with as indicated by the respondents.

Table 6: Rate of Compliance with the Criteria for Accessing Mortgage Funds at the SMM (Corporate Loans)

Criteria for Accessing Mortgage Funds	Level of Compliance					TWF	RCI	Rating
	NA	NC	LC	FC	TC			
Loan repayment and payment interest	5	10	165	324	435	939	0.806	TC
Tax clearance	5	20	171	108	670	974	0.836	
Bill of Quantities	11	-	150	216	590	967	0.830	
Terms and Condition of the loan	7	-	207	176	565	955	0.820	
Insurance of the housing to be purchase	-	10	174	328	440	952	0.817	
A one-off loan administration fee	-	12h	159	376	400	947	0.813	
Tenure of the loan	5	10	207	188	535	945	0.811	
Approved building plan	5	-	273	88	575	941	0.808	
3years Audited account	11	10	210	132	575	938	0.805	
Registration with CAC	16	10	183	176	535	920	0.790	
Hypothecation bond and registration fee	5	-	177	440	295	917	0.787	FC
Loan registration	18	-	207	180	505	910	0.781	
The initial payment	5	12	306	100	475	898	0.771	
Life insurance	4	11	225	296	345	892	0.765	
Guarantee of Funds from government sponsored enterprise (Ginny-Fanny Mae etc.)	11	20	228	272	340	871	0.748	
Commission for currency exchange	14	18	255	252	310	849	0.729	

Note: Not Aware (NA), Not Compliant (NC), Low Compliance (LC), Fairly Compliant (FC), Total Compliance (TC), Total Weighted Frequency (TWF), Relative Compliance Index (RCI)

In order to expose the salient factors that could hinder the private individuals and corporate organizations in accessing mortgage facilities in the SMM, investigation were carried out on the influencing factors noted in literature and the other factors that reflect the current situation and the peculiarities of the country's mortgage system. The influencing "factors were re-categorised using Principal Component Factor (PCF) analysis and generic names were given to the newly grouped influencing factors. To achieve this, the tests for sample suitability and adequacy for factor analysis were conducted using Kaiser-

Meyer Olkin (KMO) and Bartlett's Test of Sphericity (chi square) and the result was presented in Table 7.

As indicated in Table 7, the Kaiser-Meyer Olkin (KMO) is 0.762 and Bartlett's Test of Sphericity has coefficient (chi square) of 204.35 with a significant value of 0.001 ($p < 0.05$). The KMO calculated value (.762) was found to be greater than the minimum required value' (0.60) and significant value ($p < .05$). This implies that the factor model is fit and the sample size is adequate to run the factor analysis (Tabachnick and Fidell, 2007). The analysis of result showed that, the value of KMO .7 which is above the

minimum required value of 0.60 implies the adequacy of the sample size. Also, the significant value ($p < 0.05$) of Bartlett's Test of Sphericity satisfied the suitability condition of the sample for modelling factor analysis

Therefore the study sample size passed the recommended requirement tests for the use of factor analysis model. The influencing factors with their corresponding label number are presented in Table 8.

Table 7: Sample Suitability and Adequacy for Principal Factor Analysis

Tests	Result
Kaiser-Myer Olkin (KMO)	0.762
Bartlett's Sphericity (chi square)	204.3501
df	174
sig.	.001

Note: df denotes degree of freedom, Significant (sig.) at 0.05 confidence Level

Table 8: Influencing Factors of Accessing Secondary Mortgage Market (SMM)

LN	Variable	LN	Variable
1	Interest Rate	22	Mortgage market transparency
2	Inflation Rate	23	Trade volume of the securities
3	Exchange Rate	24	Level of demand/Patronage
4	Investment Risk	25	Income level/status of the potential investor
5	Finance	26	Population growth/structure
6	Changes in Policy	27	Currency-in-circulation
7	Custom and Tradition	28	Housing Demand-supply gap
8	Norms/Belief	29	Rate of property development
9	Political Ideology	30	Technology/ICT
10	Political Will	31	Professional Advice/Consultancy
11	Regulatory Bodies	32	Public Enlightenment/Sensitization
12	Mortgage Underwriting Process	33	Literacy Level
13	Corruption/Mismanagement of Fund	34	Attitude of the mortgagor
14	Leadership/Management Puzzle	35	Charges and Fee
15	Return on Investment	36	Laws and Regulations
16	Man-power/Technical Know-how	37	Database/National Identity
17	Fund Tenure Mismatch	38	Credit Rating
18	Non-performing loan indicators	39	Mortgage Insurance
19	Loan default Risk	40	Guarantors
20	Economic Outlook	41	Inadequate Mortgage Creation at the primary level
21	Foreign Direct Investment		

Note: LN denotes the label number of the variable in the factor analysis

Analysis in Table 9 showed the extracted solution using eigenvalues criterion ($egv > .10$) and the rotation sum of squared loading of the influencing factors. Out of the forty-one (41) variables examined, ten (10) principal component

factors (PCF) were extracted 10 component factors. The component factors were rotated using rotated component matrix (varimax rotation option) to tract the categorised variables that were loaded under the 10 component

factors. The rotated variable were grouped based on the highest loaded variable under each component factors and were sorted to obtain the principal component factors

(Table 10). The grouped variable under the 10 principal component factors were classified and given a generic name.

Table 9: Extracted Principal Component Factors influencing the level of access to SMM funds

Component	Initial Eigen values			Rotation Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	13.999	34.144	34.144	4.761	11.612	11.612
2	4.308	10.507	44.650	4.738	11.556	23.168
3	3.003	7.325	51.975	4.206	10.259	33.427
4	2.192	5.346	57.322	4.022	9.810	43.236
5	1.842	4.492	61.814	2.990	7.293	50.529
6	1.820	4.440	66.253	2.912	7.102	57.631
7	1.637	3.992	70.245	2.796	6.819	64.450
8	1.435	3.501	73.746	2.237	5.455	69.95
9	1.260	3.074	76.820	2.191	5.344	75.249
10	1.187	2.895	79.715	1.831	4.466	79.715
11	.954	2.328	82.042			
12	.881	2.148	84.190			
13	.784	1.911	86.102			
14	.773	1.886	87.988			
15	.699	1.706	89.694			
16	.581	1.417	91.111			
17	.56	1.258	92.369			
18	.438	1.068	93.437			
19	.404	.986	94.422			
20	.367	.894	95.316			
21	.319	.777	96.093			
22	.260	.634	96.728			
23	.258	.630	97.358			
24	.210	.513	97.871			
25	.198	.482	98.352			
26	.139	.339	98.691			
27	.119	.291	98.982			
28	.112	.273	99.254			
29	.079	.192	99.446			
30	.052	.127	99.573			
31	.046	.112	99.685			
32	.041	.099	99.785			
33	.033	.080	99.865			
34	.028	.069	99.933			
35	.015	.037	99.970			
36	.006	.015	99.985			
37	.004	.009	99.994			
38	.003	.006	100.000			
39	.000	.000	100.000			
40	.000	.000	100.000			
41	.000	.000	100.000			

Table 10: Rotated Component Matrix

Variable	Component									
	1	2	3	4	5	6	7	8'	9	10
Fund Tenure Mismatch	.836									
Non-performing loan indicators	.738									
Mortgage Underwriting Process	.709									
Mortgage market transparency	.653									
Credit Rating	.640									
Man-power/Technical Know-how	.580									
Attitude of the mortgagor	.573									
Income level/status of the potential investor		.741								
Mortgage Insurance		.738								
'Changes in Policy		.688								
Laws and Regulations		.671								
Interest Rate		.606						"	"	
Population growth/structure		.570								
Investment Risk		.450								
Currency-in-circulation			.829							
Leadership/Management Puzzle			.732							
Political Ideology			.622							
Return on Investment			.599							
Inflation Rate			.556							
Trade volume of the securities			.531							
Loan default Risk				.753						
Economic Outlook				.727						
Finance				.602						
Exchange Rate				.593						
Custom and Tradition					.859					
Norms/Belief					.696					
Regulatory Bodies					.431					
Guarantors						.807				
Literacy						.759				
Level										
Database/National Identity						.581				
Level of demand/Patronage							.827			
Political Will							.642			
Foreign Direct Investment							.561			
Professional Advice/Consultancy							.473			
Technology ICT								.849		
Charges and Fees								.811		
Inadequate Mortgage Creation at the primary level									.662	
Public Enlightenment/Sensitization									.626	
Corruption/Mismanagement of Fund									.569	
Rate of property development										.694
Housing Demand-supply gap										.565

In Table 11, the ten (10) extracted Principal Component Factors (PCF) were compiled and given the generic name in this study. The factor one Principal Factor 1 (PF1) has seven components i.e. Fund Tenure Mismatch, Non-performing loan indicators, Mortgage Underwriting Process, Mortgage market transparency, Credit Rating, Man-power/Technical Know-how and Attitude of the mortgagor and the components factor was named **Mortgage Characterisation Factor (MCF)**. Component factor two comprises (PF2): Income level/status of the potential investor: Mortgage Insurance, Changes in Policy, Laws and Regulations, Interest Rate, Population growth/structure and Investment Risk and named **Mortgage Risk Factor (MRF)**, The third component factor (PF3) is made up of Currency-in-circulation, Leadership/Management Puzzle, Political Ideology, Return on Investment, Inflation Rate and Trade volume of the securities and called **Monetary and Fiscal Factor (MFF)**. Component factor four (PF4) consist of Loan default Risk, Economic Outlook, Finance and Exchange Rate which are referred to as **Financial Risk Factor**

(FRF). The fifth component factor extracted (PF5) include Custom and Tradition, Norms/Belief and Regulatory Bodies and named **Institutional Influencing Factor (IIF)**. The factor six (PF6) is made up of Guarantors, Literacy Level and Database/National Identity which are called **Loan Guarantee Factor (LGF)**. The influencing factors such as Level of demand/patronage, Political Will Foreign Direct Investment and Professional Advice/Consultancy were categorised under PF7 and named **Demand Influencing Factors (DIF)**. The components loaded on PF8 are Technolog4.8b/ICT and Charges and Fee named **E-Technological Factors (ETF)**. PF9 consist of Inadequate Mortgage Creation at the primary level, Public Enlightenment/Sensitization and Corruption/Mismanagement of Fund and called **Public Orientation Factor (POF)**. While the principal factor 10 (PF10) comprises influencing factors such as Rate of property development and Housing Demand-supply gap and called **Housing Stock Related Factor (HSRF)**.

Table 11: Principal Component Factors

Principal Factors	Components	Generic Name
Factor 1	Fund Tenure Mismatch Non-performing loan indicators Mortgage Underwriting Process Mortgage market transparency Credit Rating Man-power/Technical Know-how Attitude of the mortgagor	Mortgage Characterization Factor (MCF)
Factor 2	Income level/status of the potential investor Mortgage Insurance Changes in Policy Laws and Regulations Interest Rate Population growth/structure Investment Risk	Mortgage Risk Factor (MRF)
Factor 3	Currency-in-circulation Leadership/Management Puzzle Political Ideology Return on Investment Inflation Rate Trade volume of the securities	Monetary and Fiscal Factor (MFF)
Factor 4	Loan default Risk Economic Outlook Finance Exchange Rate	Financial Risk Factor (FRF)
Factor 5	Custom and Tradition Norms/Belief Regulator4.8b Bodies	Institutional Factor (IF)
Factor 6	Guarantors Literacy Level Database/National Identity	Loan Guarantee Factor (LGF)
Factor 7	Level of demand/Patronage Political Will Foreign Direct Investment Professional Advice/Consultancy	Demand Influencing Factors
Factor 8	Technology/ICT Charges and Fee	E-Technological Factors (ETF)
Factor 9	Inadequate Mortgage Creation at the primary level Public Enlightenment/Sensitization Corruption/Mismanagement of Fund	Public Orientation Factor (POF)
Factor 10	Rate of property development Housing Demand-supply gap	Housing Stock Related Factor (HSRF)

The study further probed the effects of the ten (10) principal influencing factors i.e. mortgage characterization factor (MCF), mortgage risk factor (MRF),

monetary and fiscal factor (MFF), financial risk factor (FRF), institutional factor (IF), loan guarantee factor (LGF), demand influencing factors, demand

Influencing Factors (DIF) e-technological factors (ETF), public orientation factor (POF), housing stock related factor (HSRF) on the level of accessing SMM and the result of the analysis for both the corporate entities and individuals were presented in Table 12.

In Table 12, the result showed that the principal factors have both “the positive and negative impact but at varying degrees and level of significance. For instance, the principal factors that exhibited positive and significance ($p < .05$) that is, it improves the level of accessing SMM by the corporate organisation as indicated by their standardized beta (β) and p-value. These principal factors were MCF (.266, .003); IF (.178, .034); ETF (.143, .045) and HSRF (.364, .000). For instance, mortgage characterization factor (MCF) with positive beta coefficient of .266 indicates that, an improvement in the level of assessing the SMM by corporate loan and suggest that those factors such as fund tenure mismatch, non-performing loan indicators, mortgage underwriting process, mortgage transparency, credit rating, man-power/technical know-how, attitude of the mortgagor positively affect the corporate establishing in accessing loan at secondary mortgage market in the country, by ensuring that the operations of SM run effectively and efficiently. Other principal factors with positive coefficient that also impact the SMM in similar manner; were those with p-value less than 5% ($P < .05$) showed a statistical.

For principal factors with significant negative impact on corporate level of accessing SMM, are Monetary and Fiscal Factor (MFF) and demand Influencing Factors (DIF) with respective beta (β) and prob. values (β , prob.) of (-.337, .000) and (-.285, .000). These result can be interpreted to mean that the significant adverse effects of factors on level of access to SMM. For example mortgage risk factors (income level/status of the potential investor, mortgage insurance, changes in policy, laws and regulations, interest rate, population growth/structure and investment risk); and monetary and financial factors (currency-in-circulation, leadership/management puzzle, political ideology, return on investment, inflation rate, trade volume of the securities) have not been encouraging the operations of SMM that could enable corporate entities to access housing loans. Furthermore, the mortgage risk factors such as change in policy, laws and regulations, interest rate etc. if not properly enforced, control and maintenance could be a clog in the operational wheel of SMM in the country.

The model summary of the regression analysis in Table 12 showed that the explanatory variables (principal factors) contributes 23.9% to variance of SMM level of access and the combined effect of the principal factors showed a statistical significance on the explained variable (SMM level of access) as indicated by R-square and ANOVA p-value ($p > .05$).

Table 12: SMM Influencing Factor on Corporate level of Accessing Loan

Influencing Factor	Standardized Coefficients		
	Beta	t-Stats	Sig.
Mortgage Characterization Factor (MCF)	.266	3.010	.003
Mortgage Risk Factor (MRF)	-.201	-1.917	.057
Monetary and Fiscal Factor (MFF)	-.337	-3.731	.000
Financial Risk Factor (FRF)	.150	1.529	.128
Institutional Factor (IF)	.178	2.132	.034
Loan Guarantee Factor (LGF)	.049	.642	.522
Demand Influencing Factor (DIF)	-.285	-3.323	.001
E-Technological Factor (ETF)	.143	2.017	.045
Public Orientation Factor (POF)	.047	.586	.559
Housing Stock Related Factor (HSRF)	.364	4.726	.000

<i>Model Summary</i>		<i>Analysis of Variance (ANOVA)</i>	
Multiple R (%)	48.9	R Mean Score	4.515
R Square (%)	23.9	F-Stats	6.978
Adj. R Square (%)	20.5	Sig.	.000

Dependent Variable: Level of Access; Level of Significant at 5% (p<0.05).

Conclusion and Recommendations

The study investigates the factor influencing accessibility to secondary mortgage fund in Nigeria. This was done with a view to identify the prominent factors that could significantly determine the level of access of private developers to the fund in the secondary mortgage market for housing development and provision. The study therefore probed the importance of the criteria for accessing the mortgage credit facilities and the level of compliance of the mortgagor; the prominent influencing factors and the level of significant of the factors on the level of access using mean weighted score (MWS), factor analysis and regression model respectively. the study found that, all the listed criteria were identified to be important; the respondents however expressed that while criteria such as loan repayment and payment interest, tax clearance, terms and condition of the loan, approved building plan were totally complied with, some other criteria including registration with CAC, life

insurance, guarantee of funds from government sponsored were fairly complied with. The factor analysis extracted ten (10) principal component factors were regressed on level of access to fund in SMM, the result of the regression analysis showed that influencing factors such as mortgage characterisation, monetary and fiscal, institutional, demand, e-technological and housing stock factors have statistical significant explanatory power to determine the level of accessing fund in SMM, while the model accounts for 48.90% to total variance. This result signal a caution to the corporate bodies and policy makers on the need to critically consider those factors that could significantly influence the investment decision/policy for sustainable housing sector.

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