

The Effect of Mortgage Financing Conditionalities on the Development of Residential Housing in Tanzania

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DOI: <https://doi.org/10.5281/zenodo.18864478>

Published Date: 04-March-2026

Abstract: The objective of the study was to analyze the effect of mortgage financing on the development of residential housing in Tanzania. The study employed different estimation techniques in analyzing the empirical relationship between housing financing and development of residential houses in Tanzania. Data was analyzed using the unit root test, descriptive statistics and Ordinary Least Square (OLS) for estimating the variables while the Augmented Dickey-Fuller (ADF) test was used to ascertain stationarity of the variables.

The findings show that there is a strong relationship between mortgage financing and development of residential houses in Tanzania and that the development of affordable housing stock in Tanzania is highly influenced by mortgage loans offered and interest rates charged over the loans. It was also found that Tanzania still suffers from a shortage of good quality and affordable housing. The current housing deficit is estimated at three million housing units valued at US\$180 billion coupled with a 200,000 units annual demand with a projected combined cost of US\$12 billion although the number of housing stock have been increasing over the years. It is recommended that in order to increase residential housing in Tanzania there should be an increase in the amount of funds allocated to finance residential housing developments with low borrowing interest rates. The higher the costs the lower the demand for mortgage finances by the community hence poor residential housing.

Keywords: mortgage finance, housing, interest rate, commercial banks.

1. INTRODUCTION

A mortgage is a legal document by which the owner pledges the title of his asset in the form of security to a creditor in exchange with money (Yiadam and Kofi, 2013). Asare and Whitehead (2006) assert that mortgage is a form of a debt, which is secured by the real estate property submitted by a person or a group of persons to the lender. Likewise, Decardi et al., (2012) define mortgage at individual level as pledging asset as a security for a loan that leads to access to home ownership and means of economic empowerment. On the other hand, Merrill and Tomlinson (2006) and Dondi, et. al. (2023) underscore the fact that mortgage depends on many factors which mainly include capacity to endure risks, personal financial plans and income. Mortgage financing is important to the economic development of a country because it accounts for a sizeable portion of a country's productive activity through backward linkages to land and labour markets (Ziad et al, 2004). Moreover, according to Ziad et. al, (2004), a well-functioning mortgage market requires stable system of providing funds for housing, operating frameworks for the markets and macroeconomic conditions of the economy that are stable enough to appeal to investors. The regulatory institutions also have to establish solid systems for the recovery of debts and land registrations and proper construction procedures to ensure a well-functioning mortgage market (Yiadam and Kofi, 2013; Bertocco and Kalajzic, 2022).

It is expected that governments, especially in the developing world, should make deliberate efforts towards providing basic needs to their people. In the Maslow's Hierarchy of Needs context housing is essentially in the basic physiological needs category. All programs and processes involved in housing development are thus considered very important for both social and economic development of a nation. Although housing is one of the basic needs of life, Africa has one of the worst housing schemes where large proportions of the urban population, particularly the low and middle-income earners resort to the informal housing sector to meet their basic shelter needs (Kabir and Bustani, 2009; Kamau and Mulyungi, 2024). The marginal propensity to spend on housing is very high in Africa as households tend to spend the largest part of their income on housing, meaning that renting or house construction is one of the biggest expenditure items in a family budget. This aspect constrains the family budget as it competes with other important family budgetary allocations (Yiadam and Kofi, 2015). Mortgage finance then emerges as the main housing solution for the majority of the people (Ogunnaike, 2016). A growth in the mortgage market would improve the performance of the housing finance system in the developing world as it will improve accessibility and reduce construction costs (Ansah, 2002).

The demand for housing in developing countries exceeds supply (UN Habitat, 2011). Gardner (2007) maintains that increased funding options available for the mortgage markets, will result to less pressure on governments to provide either direct or subsidized loans to new homebuyers. In Tanzania, several Policies and Acts (e.g. the National Human Settlement Development Policy of 2000, Unit Titles Act of 2008, Mortgage Finance Act of 2008) have been put in place since independence in 1961 to govern housing matters in the country. Despite these policies and acts there is a noted shortage of about 150,000 housing units annually in Tanzania (Finscope, 2023). Financing this deficit requires long term plans and large amounts of money (NBS, 2023). This can be done by designing various mortgage products and developing mechanisms of providing these products on a continuous basis by financial markets (Gevorgyan, et. al., 2006).

The Bank of Tanzania and the World Bank survey conducted in Tanzania in 2010 revealed that long term access to funding is the most critical constraint to the mortgage market in Tanzania (BOT, 2010). Moreover, their assessment of mortgage market constraints identified that access to long-term funds as amongst the top most impediments to the growth of their mortgage markets together with the risks and challenges that come along with it thus making it hard for banks to finance customers. There have been initiatives to address the constraints like the establishment of the National Housing Policy (1981) and the National Land Policy (1995). These policies sought to use the market to allocate land to those with need. Subsequently, the National Human Settlements Development policy was formulated in 2000 for the purpose of creating an enabling environment in the housing sector for the people. However, poor implementation of these policies were experienced throughout the entire period of policy evolution (Finscope, 2023).

Despite the policy implementation problems there were some key successful initiatives like the establishment of National Housing Corporation (NHC) in 1962. The NHC of the early days focused on slum clearance projects in the entire country and it enjoyed government subsidy as well as grants and aids from development partners. On the other hand, the current National Housing Corporation (NHC), reconstituted through Act No 2 of 1990, is mandated to provide housing and other buildings in Tanzania based on sound commercial principles. The NHC was compelled to set new strategies and targets due to the enactment of Mortgage Financing (Special provisions) Act and Unit Titles Act (2008) which enabled it to strive to turn challenges into opportunities (NHC'S strategic plan, 2010/2011 – 2014/2015).

The second most vivid government initiative after independence was the inception of Tanzania Housing Bank (THB) in 1972. This bank eventually failed due to management challenges and poor loan recovery strategies (Sulle, 2009). In the light of challenges which THB experienced, Tanzania Mortgage Refinancing Company (TMRC) was founded in 2010, through the Housing Finance Project (HFP), to provide long term financing both in form of refinancing and pre-financing. TMRC functions in alignment with Tanzania's 5 years National Strategy for Growth and Poverty Reduction (MKUKUTA) and Tanzania Development Vision 2050; which emphasizes affordable housing, access to mortgage loans and capital market growth (Bank of Tanzania, 2025).

The financial reforms of the early 1990s, laid down an adequate basis for the country to rebuild a viable housing finance system. The resultant changed macroeconomic and regulatory environment was meant to improve the performance of mortgaged loans (Merrill and Tomlinson, 2006). Also, the enactment of Mortgage Financing (special provisions) Act in 2008 and Unit Titles Act (UTA) in 2008 opened doors for better real estate performance. The enactment of these two laws was expected to bridge the gap between demand and supply leading to the minimization of the housing deficit in Tanzania. However, little has changed since the onset of the two laws (Bank of Tanzania, 2025).

The increasing government initiatives on housing though not considered insignificant could be an implication that the demand for housing is extremely high. However, the seemingly high demand could be indicative of the constraints exerted by mortgage terms and conditions like interest rates, down payments required and loan values (Kioko, 2014; Kamau and Mulyungi, 2023; Dondi, et.al., 2023).

Statement of the Problem

The government of Tanzania in partnership with development partners has increased funding of the housing sector to meet the growing demands of affordable housing (Finscope, 2023). However, the funding by government and development partners alone are not enough to curb the shortage of affordable housing in Tanzania and the mortgage market continues to be amongst the smallest in the East Africa (Samuel, 2015; Dondi, et. al., 2023). Therefore, the need to have stable mortgage market is inevitable to achieve affordable housing for the majority of the people. In order to stabilize the mortgage market conditions, the Central Bank established the Tanzania Mortgage Refinance Company (TMRC) in 2010 under the umbrella of the Housing Project (HFP) with support from the World Bank (Samuel, 2015).

In 2024, the Gross National Income (GNI) per capita in Tanzania was approximately USD 4,120 while the average household size remained at 4.3 persons. For the urban areas the living wage was estimated at around TZS 462,868 per month in 2023 and a large segment of the urban population earns less than USD 1,000 per month. There is a significant housing deficit of approximately 3 million units, with an annual demand of about 200,000 units. The cost of building a basic mortgageable house is estimated at around USD 60,689, which is high relative to income levels. About 93% of urban households are excluded from current mortgaged housing options because existing mortgage products generally cover properties costing above USD 40,000 and interest rates remain relatively high, ranging from approximately 15% to 19% (Findex, 2024).

To access a home loan, lenders assess the borrower's repayment capability and target a debt-to-income ratio below 43%. A home priced at TZS 28 million with an 18% interest rate over 25 years would require monthly payments of at least TZS 424,000. The Findex (2024) report reveals that the ratio of outstanding mortgage debt to GDP is 33% of Tanzania adults of an age 15 years and above, who have mortgage loans. According to the BOT report (2025) the Tanzanian population was estimated at 55 million in 2018, with a growth rate of about 2.9%, therefore increasing the need for growth of housing sector through mortgage by government housing financing authorities and private investors including commercial banks. Although there is inadequate mortgage finance to fund housing especially residential housing in Tanzania, the effect of the available mortgage finance on residential housing is not known. This study set out to uncover the effect of mortgage financing for residential housing in Tanzania.

2. LITERATURE REVIEW

Gilbert (1968) propounded the basic concept of Title Theory. This theory affirms that upon entering mortgage contract the mortgagor passes title of the property, the subject of the mortgage, to the mortgagee, subject to subsequent conditions of payment of the debt. Moreover, the borrower does not retain the title to the property during the loan term rather the borrower gives the title to the mortgage holder. The lender retains the title of the property as security, until the borrower pays all amount of the loan outstanding. However, during the term of the mortgage the borrower has the right to the property and the lender returns the title deed when the borrower completes the loan obligation.

Loanable funds theory sets a framework used to ascertain interest rates in the short-run whereby it is determined by the forces of demand and supply of financial claims on both secondary and primary financial markets during a particular period (Bibow, 2005; Kamau and Mulyungi, 2023, Ajeeb and Lai, 2024). It is the intersection of the demand and supply curves of loanable funds which determines the interest rate (Baisi, 2025; Pilbeam, 2005). The loanable funds represent the sum of all money in an economy that individuals, businesses, and governments choose to save and lend out, rather than use for immediate consumption (Buying financial claims to earn interest represents the supply of loanable funds whereby consumer savings, business savings, government savings and the central banks are some of the suppliers of loanable funds. Moreover, loanable funds theory of interest rate determination argues that firms and individuals have a certain amount of financial wealth and they may decide to invest their wealth in either interest earning financial assets, holding it idle earning no interest, or a combination of both (Wickens, 2008, Bilow, 2005, Pilbeam 2005; Buckle and Thompson 2005). In this regard, to influence decisions, increasing interest rates will encourage more savings by economic agents thus increasing the supply of loanable funds (Ajeeb and Lai, 2024). The increase of the supply of loanable funds results to an upward supply curve reflecting a positive association between interest rates and the supply of loanable funds (Wickens,

2008; Thomas and Bywater, 2021). However, Hayes (2010/2021 context) and Bertocco and Kalajzic (2023) critique and challenge the idea that saving drives the supply of credit.

With the lien theory as per Denise and Wheaton (1992) the buyer promises to make all payments to the lender and the mortgage becomes a lien on the property, but the title remains with the borrower. In the case of default by the borrower, the lender is entitled to legal repossession of the mortgaged property meaning that the lender's right of ownership ceases as soon as all outstanding loans are paid off by the borrower. In many incidences however, removal of right to redeem mortgage loan for the mortgage institution (lender) may be hard to do in this regard because the borrower and not the lender is having the title to the property (Kioko, 2014).

Buckley and Kalarickal (2005), Bertocco and Kalajzic (2022) and Ajeeb and Lai (2024) quantify the linkage between housing and enterprise loan provision is qualified. It is purported that the process of establishing systems of secure title is not unproblematic and that the cost can outweigh the economic gains. This can arise where providing property rights to illegal squatters has the effect of undermining respect for property rights, or where the need to adjudicate between counter claims arises. It moreover points out the necessary condition that for a secure title to be translated into effective collateral requires a financial system that will allow it. Even where such a system exists there may be other barriers such as property owners who are self-employed and not able to satisfactorily demonstrate their level of income.

Using the ordinary least square (OLS) estimation to analyze a modified finance model, Anidiobu, et al. (2018) found that mortgage deposits have a positive and significant impact on housing delivery, while mortgage loan exerted negative and non-significant influence on housing provision thereby concluding that while housing is an important sector that can drive the economy, inadequate supply of mortgage finance to the sector stifles its growth and overall economic impact. In the same vein, Kioko (2014) and Ajeeb and Lai (2024) examined the effect of mortgage financing on the performance of real estate market in Kenya and Saudi Arabia respectively and established that there is a positive relationship between mortgage financing and performance of real estate market. Moreover, Oduwaye et al., (2008) and Kamau and Mulyungi (2023) figured that poor land documentation and higher interest rates are among the factors that affect negatively the financing of mortgage markets and recommend that governments should consider lowering interest rates, providing tax rebates, and create special funding for building material industries in order to lower costs of building materials. This is in agreement not only with Udoke and Kpataene (2017) but also with Dondi et. al. (2023) that interest rates have a positive impact on housing development.

3. RESEARCH METHODOLOGY

Following Anidiobu, et al. (2018), this study utilized secondary panel data covering the 1996 to 2024 period that was collected from the Bank of Tanzania (BOT), National Bureau of Statistics (NBS), National Housing Corporation, TIB Development Bank, and Commercial Banks in the country. The model employed in the study was conceptually derived from the work of Pittman (2008) as follows:

$$RI_t = b_0 + b_1MT_t + b_2MR_t + b_3MIR_t + b_4MI_t + E_t \dots \dots \dots (1)$$

Where:

RI_t = Rental Income (Performance of Real Estate Market)

MT_t = Mortgage Terms

MR_t = Mortgage Repayment

MIR_t = Mortgage Interest Rates

MI_t = Mortgage Insurance

b_i = Regression Coefficient

E_t = Error Term

The study also derived its empirical model from Udoka and Owor (2017) who examined the effect of mortgage financing on housing development in Nigeria. They regressed housing stock against the variables that proxied mortgage financing using the following model:

$$HOS = f(MOL, COB, INT)$$

$$\text{HOS} = \beta_0 + \beta_1\text{MOL} + \beta_2\text{COB} + \beta_3\text{INT} + \mu_t \dots\dots\dots (2)$$

Where:

HOS = housing stock

MOL = mortgage loan

COB = cost of building

INT = interest on loan

β_0 = constant

β_1 to β_3 denote coefficients of mortgage loan, cost of building and interest rate

μ_t = error term.

Equations (1) and (2) were modified to arrive at a primary model which provided the foundation of our study with the baseline model represented mathematically as follows:

$$\text{RHOS}_t = \beta_0 + \beta_1\text{MLN}_t + \beta_2\text{MLR}_t + \mu_t \dots\dots\dots (3)$$

Where:

t = time period

β_0 = intercept

β_1 & β_2 = coefficient parameters

MLN = mortgage loan

MLR = mortgage lending rate

μ = error term

RHOS_t = Residential housing stock, which is a dependent variable.

To reduce variation, natural logarithm was introduced to residential housing stock, mortgage loan, and mortgage deposit to come up with the following equation.

$$\ln\text{RHOS}_t = \beta_0 + \beta_1\ln\text{MLN}_t + \beta_2\text{MLR}_t + \mu_t \dots\dots\dots (4)$$

Where:

t = time period

β_0 = intercept

β_1 & β_2 = coefficient parameters

$\ln\text{MLN}$ = log of mortgage loan

MLR = mortgage lending rate

μ = error term.

RHOS_t = log of residential housing stock, a dependent variable.

To estimate the variables, data analysis used the unit root test, descriptive and Ordinary Least Square (OLS). The Augmented Dickey-Fuller (ADF) test was used to ascertain stationarity of the variables. Descriptive statistics (normality test) was applied to determine how well distributed the variables were, while the Johansen co-integration test ascertained long-run relationship among variables in the model.

4. DATA ANALYSIS AND FINDINGS

Performance of Real Estate Market

The Tanzanian real estate sector has been growing steadily in recent years accompanied by a strong and sustained economic growth averaging 7%, a fast growing population of over 60 million and efforts by the Government, in collaboration with foreign development partners, to meet the growing demand for affordable housing (TIC, 2015). The

current demand for housing is estimated at about 200,000 houses annually, and a total housing shortage of 3 million houses (BOT, 2025). The Tanzanian housing sector's fast-growing demand is mainly driven by the fast-growing Tanzanian population which was estimated at over 70 million in 2025 which is estimated to more than double by 2050 (Worldometer, 2025).

The present state of the real estate market is underdeveloped. With about 70 percent of the urban population immersed in unplanned informal settlements, there is immense opportunity for growth especially bearing in mind that the government's strategy is geared towards upgrading. Affordable housing is in short supply mainly constrained by the lack of a more permanent access to long-term financing, which is made available on an ad hoc basis by international development banks (CAHFA, 2025). Other reasons include developers seeking higher returns from upmarket developments targeting wealthier buyers who have greater disposable income (TMRC, 2018). With the current annual demand of 200,000 plots and a 3,000,000 housing gap, Tanzania faces a huge hurdle but equally presents enormous opportunities for the prudent investor (CAHFA, 2025). The total housing deficit was estimated at 2.2 million units in 2000. It has since escalated to in excess of 3 million units. Between 1990 and 2001, the average annual demand for plots in Dar es Salam was 20,000 units while the average annual supply was under 700, leaving about 97 percent of the recorded demand unfulfilled. This trend has continued unabated to the present (Shelter Afrique, 2012). Since most Tanzanians construct their own homes slowly over a number of years, the supply of land is crucial for housing development. At the national level, the annual demand for formal land has averaged about 150,000 plots annually while the supply is about 8,000 surveyed plots annually, indicating an annual shortfall of 95 percent (Shelter Afrique, 2012). Figure 1 shows the trend of Mortgage growth rate in Tanzania from 2007 to 2025.

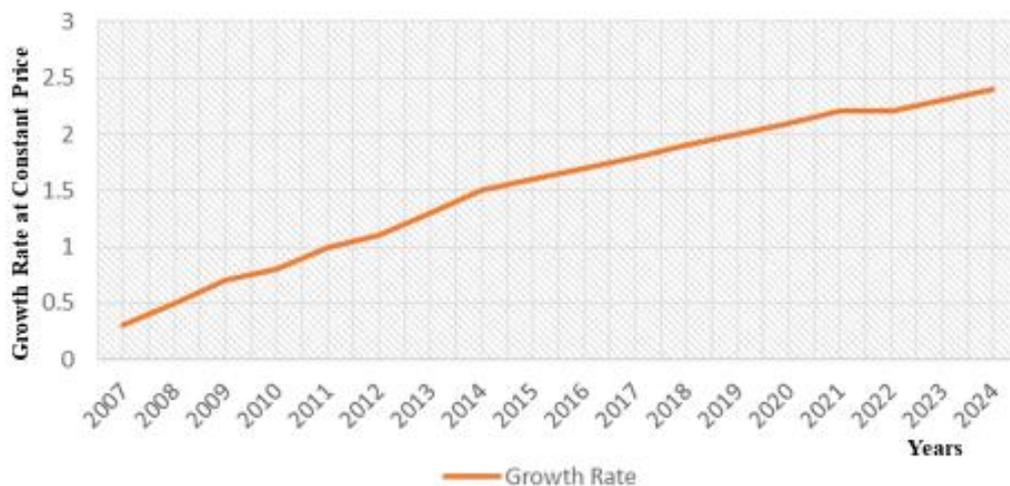


Fig. 1. Growth of Real estate activities in Tanzania from 2007 to 2024 at constant price

Source: BOT annual report 2024

Tanzania is facing a limited number of real estate actors to provide affordable reliable houses (Sheuya, 2010; Tanzania Invest, 2019). The private developer/builder market is virtually absent. The little private development which does occur tends to be luxury developments aimed at the wealthy, expatriates or the Diaspora. Reasons given for lack of real estate developers are (i) lack of access to finance (ii) lack of technical and managerial capacity in real estate development sector and (iii) the high cost of using imported materials and (iv) the lack of provision of basic services and infrastructure by local authorities (Tanzania Invest, 2019). Developers are then forced to develop their own solutions, which inevitably raises the price of houses significantly (BOT, 2018).

Mortgage Terms

Most lenders offer loans for home purchase and equity release while a few offer loans for self-construction which for the most part continue to be expensive beyond the reach of the average Tanzanian. While improved from the levels of 22 - 24 percent in 2010 to 15 – 19 percent offered today, market interest rates are still relatively high hence negatively affecting affordability (BOT, 2018). Additionally, while some improvements have been noted, bureaucratic processes around issuance of titles (especially unit titles) continue to pose a challenge by affecting borrowers' eligibility to access mortgage loans (Sheuya, 2010; Kamau and Mulyungi, 2023). Figure 2 shows the trend of debt outstanding on mortgage between 2019 and 2025 showing an upward trend.

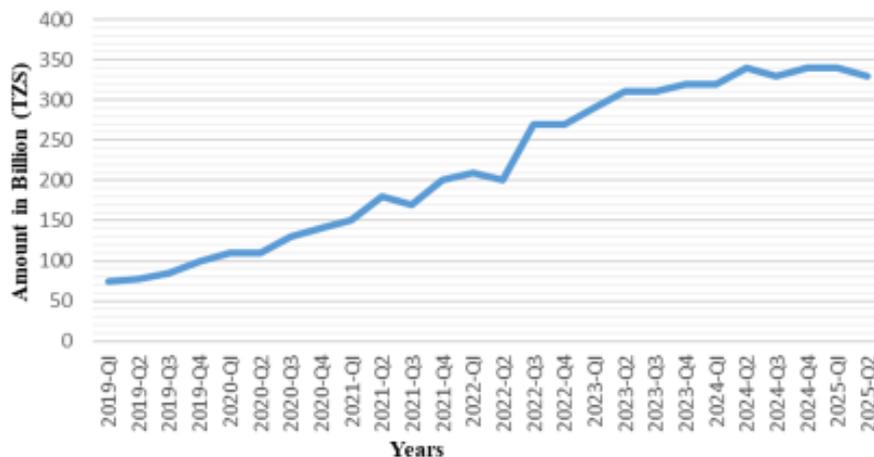


Fig. 2. Mortgage Debts Outstanding in Tanzania

Source: BOT Mortgage update report, March 2025

Mortgage outstanding in Tanzania has been increasing each year. The growth rate of mortgage loans in Tanzania was 3.6% in the first quarter of 2025 and 11.1% year-over-year as of March 31, 2025. This was an increase from 1.7% in the previous quarter (Q2 2024) and 6.9% year-over-year as of June 30, 2024. As of March 31, 2025, the outstanding mortgage debt in Tanzania was TZS 683.03 billion (US\$ 255.79 million). This represents a 3.6% growth in the value of residential mortgages compared to the previous quarter, with the average mortgage debt size being TZS 118.66 million (US\$44,438.12).

Outstanding mortgage debt at 31 December 2025 was TZS 421.07 billion (US\$183.67 million) compared to TZS 344.84 billion at 31 December 2024. The average mortgage debt size was TZS 84.28 million (US\$36,763) compared to TZS 82.62 million at 31 December 2024. Typical interest rates offered by mortgage lenders range from an average of 15% to 19%, though some lenders may offer specific rates such as 17% or even lower rates like 8.75% for certain products (BOT, 2022). Mortgage debt advanced by the top five lenders accounts for 70 percent of the total outstanding mortgage debt (Tanzania Invest, 2025).

Currently the ratio of mortgage debt outstanding to GDP in Tanzania is around 0.53%, which is lower than that in other East African countries, such as Uganda (0.9%), Kenya (3.45%) and Rwanda (3.52%). This is mainly due to the inadequate supply of affordable housing and high interest rates in Tanzania (Massare, 2018). For this, the Government of Tanzania has committed itself to ensuring that loan interest rates are reduced in order to enable many Tanzanians to acquire loans (BOT, 2018).

Mortgage Interest Rates

High interest rates have been previously reported as among the major barriers to real estate development and investment activities in the country (Mwiga, 2011; Makoba 2008). About 25% of the private developers acknowledge that, they have decided to construct their properties using their own equity since they could not afford paying for the prevailing interest rates (UNHABITAT, 2008). There is also a wide concern from other interested parties that the banks could lower the interest rates so as to make loans affordable to the majority (URT, 2016)

According to the mortgage lending banks, determination of lending interest rates amongst other things takes into account risk, profit margins, operational cost, and discount rates for some banks securing capital from the central bank. Normally, rates are calculated based on Treasury Bills rates. However, the higher the risk of the building, the higher the interest rate and vice versa. Interest rates are also lowered depending on the reputation and creditworthiness of the borrowers. With the existing interest rates, it is clear that, the real estate industry would not achieve any significant growth (Tanzania Invest, 2018). This finding concurs with Kironde et al, (2003) who argue that if income levels remain low and interest rates high, it is difficult for investors to be lured into housing finance. The research carried out by Finscope Tanzania in 2009, shows that mortgage finance affordability is still a challenge in the country. Figure 3 shows the trend of interest rate charged for mortgage loans in Tanzania from 2007-2025.

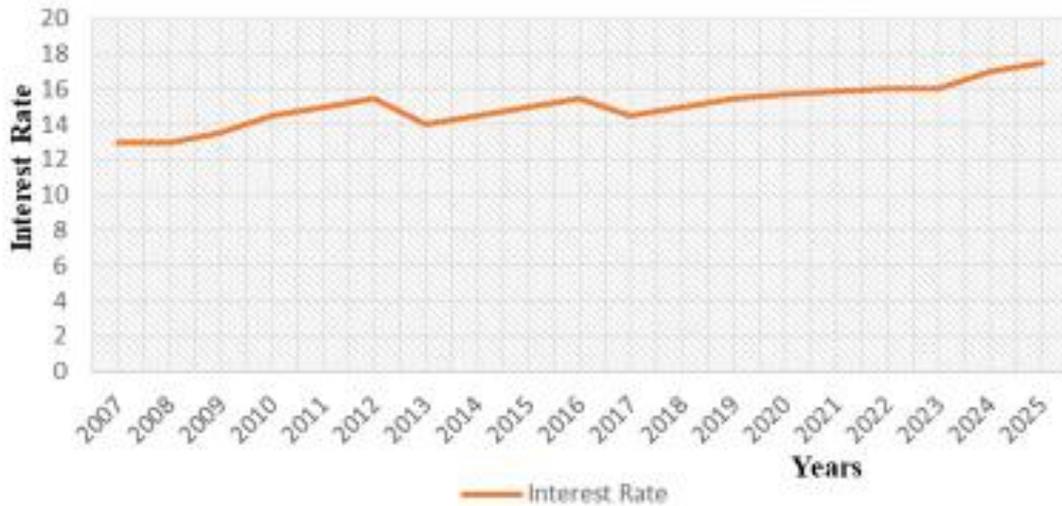


Fig. 3. Interests for Housing Loan in Tanzania 2007-2025

Source: BOT, 2025

Interest rates charged by financial institutions on housing loans range from 16% to 20%, which is considered to be too high for the majority of the Tanzanians. Many banks offer long-term loans (15 – 20 years) while many others offer short-term loan (5 – 10 years). To a great extent, the prevailing interest rates and the short term repayment period discourage many property developers from opting for real estate loans (TMRC, 2018). Due to high interest rates, some private developers have decided to undertake property development using equity disregarding the long time it takes them to complete their projects. Also, most projects take long to get buyers because most of them have difficulties accessing loans implying that estate developers wait for a long time before selling the properties. Besides, financial institutions have limited capacity to engage in mortgages due to funding constraints as they lack long term funding, i.e. banks’ deposits are short term while mortgage products are long term. Therefore, the funding mismatch forces them to offer short term lending at a high interest rates so as to cover themselves from risks (URT, 2016).

The typical mortgage product offered by banks in Tanzania has a term of between 10 and 20 years. Interest rates are usually variable although some banks do offer a limited fixed period for the first five years. The rates are either benchmarked to a measure such as the bank’s prime lending rate which is based on its cost of funds or a wholly discretionary rate. This is similar to the UK system where competition ensures that the discretionary system is not abused by lenders (Mushi. *et all*, 2017). The loan to value is a maximum of 80 percent although this is done in an unconventional way for some lenders. The lender effectively finances 100 percent of the property value and requires the borrower to hold a deposit equivalent to 20 percent of the property value in a blocked account with the bank (BOT, 2018). The impact of this arrangement is to make the borrower take out more than they would otherwise and effectively charging them the extra interest on that amount which would otherwise have just been their equity in the house.

Descriptive statistics

Table 1 shows that the mortgage growth rate for the period of 30 years averaged 1.6 annually with maximum growth at 2.6 in 2025 and the minimum at 0.1 in 2001. Despite individual income limitations, the mortgage growth has been increasing over time. Demand for housing and housing loans remains extremely high but is constrained by inadequate supply of affordable housing and high interest rates.

TABLE 1. Descriptive Statistics of the variables

Statistics	Observations	Mortgage Growth Rate	Mortgage Debt in TZS Billion	Interest Rate
Mean	30	1.6	218	15.1
Standard deviation	30	0.09	66.8	3.22
Max	30	2.6	345	17.6
Min	30	0.1	157	13

Different banking institutions are offering mortgage loans to support development of affordable houses in Tanzania and mortgage loans have increased over time. On average mortgage lenders have issued about TZS 66.8 trillion since 1995 with maximum lending in 2022 where TZS 345 billion was issued. The number of mortgage lenders is expected to increase further as more lenders continue to launch their mortgage loan products to reach all house loans needed. Most lenders offer loans for home purchase and equity release while a few offer loans for self-construction which for the most part continue to be expensive beyond the reach of the average Tanzanian.

Interest rates are considered the main challenge affecting mortgage development in Tanzania as it affects the building costs. High interest rates offered by mortgage lenders also pose as another impediment to the growth the mortgage market. On average interest rate on mortgage loans is 15.1 percent with maximum interest of 17.6 in 2024. During the third quarter of 2024, interest rates offered by mortgage lenders were reported to range between 16 – 19 percent. The government has however expressed its commitment to ensure the loan interest rates are reduced in order to enable many Tanzanians to acquire loans.

Unit-Root Test Results

The Dickey-Fuller test assesses the null hypothesis that a unit root is present in an autoregressive model. The alternative hypothesis is different depending on which version of the test is used, but is usually stationarity or trend-stationarity (Dickey, 1979). Fisher type ADF was used to confirm our expectation that variables data used are stationary. Therefore, the test was performed and low p-values indicate stationarity. When we run ADF on white noise, we expect to see a low p-value. Table 2 presents the unit root results of Fisher type ADF test.

TABLE 2: Fisher type ADF test panel unit root results

Variable	Fisher type ADF test		Level of integration
	Level	P-value	
Mortgage Growth Rate	-0.1277	0.0024	I(1)
Mortgage Debts	-2.9861	0.0086	I(1)
Interest Rate	-0.7668	0.016	I(1)

Table 2 suggests that mortgage growth rate, mortgage debt and interest variables are stationary after first level of differencing I(1). All variables were found to have negative signs, thus, we reject the null hypothesis that they are not stationary, and therefore all-time series variables appeared to be stationary at first level of differencing. We, therefore, fail to reject the null hypothesis in the ADF test since the calculated p-value is greater than the conventional significant level at 0.05. First difference process was conducted in order to make the variables stationary. Their calculated probability values are less than the conventional significance level of 0.05. We reject the null hypothesis of the unit root problem and hence, at least one panel is stationary at first difference.

Multicollinearity Test

This test was conducted among the independent variables to check whether they don't predict each other perfectly as there will be biased in the estimation. A correlation matrix is used to present the multicollinearity test results and Table 3 presents those test results showing that there is no multicollinearity problem among the independent variables since the entire obtained indexes are below 75 percent. The higher obtained index is 0.106 which is between Mortgage loan and Lending Interests providing an indication that there is no multicollinearity problem and thus the variables can be used for the estimation of the model.

Table 3: Multicollinearity result

Variable	Mortgage Loan	Interest Rate
Mortgage Loan	1	
Interest	0.106	1

Model estimations and interpretation

Using the STATA software to analyze the data, an econometric model was obtained and different tests were carried out to check problems that could be contained within the data. The Ordinary Least Squares technique was used for model estimation and testing of variables significance.

Table 4: OLS Regression Output Table

Regression Results					Number of observations	60
Source	SS	Df	MS			
Model	2.33508899	3	1.58377225		F(3, 27)	
Residual	0.359223041	27	0.006531328			
Total	6.69431203	30	0.113462916			
					Prob > F	0.0021
					R-squared	0.9163
					Adj R-squared	0.9124
					Root MSE	0.08082
In HOS	Coef.	Std. Err.	T	P> t	[95% Conf. Interval]	
Mortgage Loan	0.0491877	0.0139383	3.35	0.001	0.0212548	0.0771206
Interest Rate	-0.0256379	0.0200025	1.28	0.205	-0.014448	0.0657238
Constant	0.101679	0.1145582	9.62	0.000	0.872099	1.331259

From Table 4, $R^2 = 0.9163$ showing that 91.63% of variation in the dependent variable is explained by independent variables Mortgage Loan and Loan Interest rate. This indicates that the development of affordable housing stock in Tanzania is highly influenced by mortgage loans offered and interest rates charged over the loans. The overall significance of the model is tested as follows:

H_0 : the overall model is statistically insignificant ($\beta_1 = \beta_2 = 0$)

H_1 : the overall model is statistically significant ($\beta_1 = \beta_2 \neq 0$)

The p value for the f-test is significant at 5% level thus, the overall model is statistically significant as the p value is 0.0021. We then developed a research model. Since the dependent variable is Housing Stock growth rate (Y) while independent variables are mortgage loan and mortgage loan interest rate; then

Mortgage Loan coefficient ($\ln X_1$) = 0.0491877

Mortgage loan interest rate coefficient ($\ln X_2$) = -0.0256379

$\ln Y$ represents Housing Stock growth rate in Tanzania

Estimated Econometric model

$$\ln Y = 0.101676 + 0.0491877 \ln X_1 - 0.0256379 \ln X_2$$

$$S \quad 0.1145582 \quad 0.0139383 \quad 0.0200025$$

$$t \quad 15.67 \quad 3.35 \quad 1.28$$

$$R^2 = 0.9463$$

Mortgage Loan

Mortgage loan is considered to have a positive influence on the growth of housing stock in Tanzania. The results show that housing stock increases as more people get access to the loans. The coefficient of determination of mortgage loans outstanding is 0.049 implying that when mortgage loan increases from one level to another the housing stock increases by 4.9 percent. Tanzania has 58 commercial banks and other private financial institutions regulated by the BOT. As per the June 2025 Monetary Policy Statement, the banking sector remained stable and profitable with levels of capital and liquidity generally above regulatory requirements. Capital and liquidity ratios for the sector were 18.7 percent and 39.0 percent as at the end of April 2025, above regulatory requirements of 10 percent and 20 percent respectively. These results are in agreement with Merrill and Tomlinson (2006) and Arimah (2000) who also observed a positive relationship between mortgage loan and housing stock growth in Sub-Saharan Africa.

Mortgage Loan Interest Rate

Interest rate is among the obstacles facing housing development in Tanzania having a negative relationship with the growth of housing stock. It increases the cost of borrowing making it expensive for many to afford a modern house. From the regression results the coefficient of determination is -0.0256 which means that when the interest rate rises from one level to another the housing stock growth falls by 2.56 percent. On the supply side, the interest rate is the rate of return on investment. When the rate of interest is low on mortgage lending, there is a tendency for the financial institutions to look for an alternative investment outlet in order to make good profits. Financial sector experts recommend that the reasonable mortgage rate should be less than 14 percent (Hassanein and El-Barkouky, 2009). On the demand side, when the banks charge between 15 – 20 percent on the loans to housing, they are creating room for default by the borrowers (Akinwunmi, 2009). Lowering interest rates in the economy will lower mortgage interest payments, making cheaper borrowing costs. Therefore, lowering the interest rate by the housing finance institutions at the range between 4% – 14% is assumed to be appropriate to encourage a large segment of the low and middle income households to borrow and this is likely to be a determinant of effective formal housing finance system (Akinwunmi, 2009).

5. CONCLUSION AND RECOMMENDATIONS

The study findings indicate that mortgage interest rates, inflation, mortgage risks and loan terms greatly and positively affect the performance of real estate financing in Tanzania. It has been established that in Tanzania, there is a significant housing deficit of approximately 3 million units, with an annual demand of 200,000 new units. The cost of building a basic mortgageable house is estimated at around USD 60,689, which is high relative to income levels. Moreover, the majority of urban households (an estimated 93%) are excluded from current mortgaged housing options because existing mortgage products generally cover properties costing above USD 40,000. While interest rates have improved from previous levels, they remain relatively high, ranging from approximately 15% to 19% in recent years, negatively impacting affordability. To afford a home loan, lenders assess the borrower's repayment capability and debt-to-income ratio (aiming for below 43%). A home priced at TZS 28 million with an 18% interest rate over 25 years would require monthly payments of at least TZS 424,000.

It is concluded that the price of mortgage substitutes has a significant relationship with demand for mortgage finance in Tanzania. If the cost of purchasing/building a house using own savings or using ordinary loans from loaning facilities is significantly low, it will lower the demand for mortgage finance. To increase residential housing in Tanzania there should be an increase in the amount of funds allocated to finance residential housing developments with low borrowing interest rates. The higher the costs the lower the demand for mortgage finances by the community hence poor residential housing.

In most banks mortgage lending is in conformity with the mission of providing banking services to micro, small and medium enterprises. It is recommended that the Government should regulate the interest rate charged by banks so that most Tanzanians can afford to acquire mortgage loans from different financial institutions. As the interest rates charged by banks are deemed to be too high, the interest rate should accommodate factors such as time value of money in favor of customers and reasonable gain for banks. The government should exempt VAT on sales of houses since the land and building materials are VAT inclusive which will reduce the house selling prices.

It is further recommended that the government should provide infrastructure that support NHC towards construction of affordable housing. This should be in terms of low land survey fees, road infrastructure and provision of water and electricity services in respect to all projects carried on by national housing. When these costs are incurred by NHC it contributes to the cost of the project resulting in increasing houses selling prices.

Mortgage institutions should evaluate the cost of mortgages substitutes for comparison and ensure advantages of mortgage finance outweighs other alternatives. Other costs involved in mortgage application such as stamp duty and legal cost should be waived or taken care of by the mortgage institutions. The Mortgage Financing Regulations will help expand and regulate the business of mortgage financing in the Tanzanian market, and provide opportunities for upcoming housing finance companies to reduce the concentration of mortgage finance business in the banking and financial institutions sector.

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