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An Empirical Examination of the Effect of Mortgage Financing on Performance of Real Estate Sector in Kisumu City, Kenya

[1]DANIEL IPAA ETYANG, [2]OMBABA K. B. MWENGEI

[1]MSC FINANCE STUDENT, JOMO KENYATTA UNIVERSITY OF AGRICULTURE AND TECHNOLOGY
[2]LECTURER, JOMO KENYATTA UNIVERSITY OF AGRICULTURE AND TECHNOLOGY
Responding Author-danielipaaetyang@gmail.com

Abstract: **Housing forms one of the sustainable development goals. In Kenya, it is part of the big four agenda of the Kenyan government. Real estate performance therefore provides an opportunity to achieve these goals. Real estate sector performance financially is important and critical to the overall thriving of the firms in the sector. Failure to meet the required level of performance by real estate firms in terms of revenue earned, profitability and returns on investment may jeopardize the running of activities. This may lead to collapse or closure of real estate firms. The purpose of the study was to establish the effect of financing options on performance of real estate sector in Kisumu City, Kenya. The study will look at the effect of mortgage financing, loan financing and savings financing on performance of real estate sector. The study was anchored on structural form theory, lien theory and liquidity preference theory. This study adopted an exploratory research design. The target population was 23 licensed mortgage and financial institutions, 25 registered real estate firms, one National Construction Authority (NCA) operating in Kisumu City. The respondents was one manager and one accountant in real estate firms, one general manager and one mortgage manager in financial institutions and one official of NCA; totaling to 97 respondents. The sample size was 97 respondents who were purposively selected. A pilot study was conducted to measure the validity and reliability of the research tools. Content validity was used as validity test while reliability was tested using Cronbanch's alpha coefficient. Descriptive (mean, percentages and frequencies) and inferential statistics were employed to analyze the data. Inferential statistics that is correlation and multiple regressions was used to make inferences of the population using data drawn from the population whereas descriptive statistics was used to summarize data from the population. The study results revealed that there was a significant effect of mortgage financing (β = 0.263; P< 0.05), on performance of real estate sector. The study concluded that there is a significantly positive relationship between mortgage, loans and savings financing and real estate sector performance. The study recommended that there is need to increase use of loans and savings as sources of financing. The result of the study will benefit several stakeholders among them the real estate firms, investors, the government of Kenya, the financial institutions and researchers.**

Keywords: **Mortgage financing, performance, real estate sector.**

1. INTRODUCTION

1.1 Background of the Study

Real estate sector is the main pointer of improvement in a nation's economy and is utilized to quantify financial development and strength of a nation. It involves production of lasting steady resources, includes capital and work concentrated exercises along these lines utilized as a driver for financial improvement because there is work created (Aalbers, 2016). Interest in real estate is activated by financial and populace development in this manner real estate member builds residential buildings to fulfill the need and on income from execution from these ventures (Carey, 2016). Due to its cyclical nature, real estate sector is prone to changes both in the national and local economic conditions.

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Despite the fact that the macroeconomic conditions affect the entire sector, how these factors affect the micro-economic variables is equally important (Lwali, 2012). Financing options contribute to the development and growth of the real estate sector. Financing options are practices on ventures which significantly affect the long term financial and operational performance of real estate (Mkok, 2014). Financing options for the most part have impact on the product or services sets of real estate developers, and geological degree and distribution of the operations (Kegode, 2010). Real estate developers ought to attempt investment projects that will create positive value (Barako, 2010).

Financing of real estate has one of a kind quality of month to month reimbursement, long development and steady expanding in costs of properties (Dirnhofer, 2012). Because of these attributes, the costs of houses continue expanding which in the end prompts exorbitance by potential mortgage holders. Real Estate financing is concerned with the production of money for constructing structures. It is a fact that without a well operationalized and efficient housing finance system, the "real" housing market would be sub-optimal. Additionally, a proper housing finance system impacts positively on the entire financial system with far-reaching consequences for enhanced economic growth (Zhu, 2013).

The components of financing options are mortgage finance, loan financing, equity financing and venture capital financing. Financing options are classified into the following specific aspects such as working capital, capital structure, financial analysis, management and capital budgeting (Chung & Chuang, 2010). Options of financing corporate land and the usage, systems and inspirations associated with renting land by assembling and administration partnerships have been explored (Kegode, 2010). This is to state that capital expenditures in the present time frame ought to create future corporate revenue that surpasses the value of the underlying consumption. Mortgage financing alludes to an advance verified by insurance of some predefined property which the borrower should to pay back with foreordained arrangement of portions (Brunauer & Bienert, 2013). The credit is ordinarily for buying or development of housing bequests by people or organizations.

Mortgage financing has as important an effect on the assessment of pay delivering real estate as on any venture vehicle, as it impacts a person's capacity to buy private or business properties. The current competitive Real estate business has forced financial institutions to scrutinize their mortgage lending variances due to its essential role credit market plays in overall performance of the sector. Financing decision is linked to the raising of funds from various sources depending on the type of source, cost of financing, period of financing and the returns. Mortgage financing is normally repaid on monthly installment for an agreed period of time. However, it requires one to put forward some equity, while the funding entity finances the rest of the intended project (Harris & Friedman, 2013).

In USA, real estate as well as other assets is owned by citizens and non-resident aliens (and others) and over the years the price of housing has been growing due to friendly government policies. The financing of business real estate is separated into obligation and value financing (Hegen, 2010). In terms of value financing, there exist private value, which implies that people have the value of the recorded land organizations; and open value, which is Real Estate Investment Trusts (REITs). As indicated by the estimation of Urban Land Institute (ULI), up to the finish of 2012, the extent of the two value funding is 80percent and 20 percent independently. REITs funding grows great, so far there are in excess of 200 trust organizations exchanging the trades. There are 85 percent value REITs, 15 percent mortgage REITs and 5 percent half and half REITs (Yang, 2014).

The designers in China generally create to sell, not to have on the grounds that to create business land needs extensive measure of cash and the present financing arrangement of real estate sector can't give engineers a chance to have the properties excessively long, their 70-80 percent capital originate from land firms and these advances are normally present moment, they have to recover the assets at the earliest opportunity. Around 10percent of the capital for creating business land originates from land firms; 90percent of the capital originates from the designers' very own store and different assets from financial specialists.

The low extent of financing by bank and high extent of different subsidizes funding decrease the danger of engineers (Jiang, 2014). As indicated by some important measurements, it demonstrates that 70-80 percent capital of Chinese business land designers originates from bank advances, and in certain urban communities it even achieves 90 percent (Han, 2014). As per an examination of business relationship in 2013, in excess of 80 percent of the venture capital of shopping center of every single entire nation originates from land firms. The formal money related area in Japan conveys

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housing support through two noteworthy sources to be specific the State-claimed House Building Finance Corporation (HBFC) and business real estate firms. The private area housing fund organizations likewise takes into account an inconsequential purchaser base.

In Spain, there are consistent financial performance trends in real estate developers between the years 2010 and 2016 and identify efficient financing options such as investment practices is a major predictor of firm performances and overall financial performance (Deard&Dearl, 2016). It is strategic financing practices that determine the level of performance of real estate sectors. Careless financing options are the main cause of failure for real estate developers (Kahreman, 2010). Real estate sectors most of the times have collapsed because of lack of knowledge on financing options which are efficient. Furthermore, uncertainty of the operational context which leads to real estate sectors relying excessively on invested capital and sustain the high liquidity hence these financial features may influence performance (Redman, 2010).

Ghana is deficient of long haul equity which is the most prominent obstacle to the delivery in real estate sector. Despite the presence of policies of the government which acknowledge the central role played by the non-public sector in provision of houses, real estate companies have minimal short haul financing and not able to lend both medium and long haul basis. This leads to the crippling on the real estate industry (Adjonyoh, 2014). The creation of a sound monetary management structure therefore has influenced the ability of the sector to make strategic choices and hence positively influence their financial performance (Jenkinson, 2014). Performance of this sector has been witnessed through increased number of units which have been occupied mostly in urban areas.

In South Africa, while it may seem obvious that financing options improves performance, real estate sectors look at the impact of financing options on performance (Brigham *et al.*, 2016). Financing options is seen have capability not only as the physical assets, but instead as the physical assets, the know-how to maintain and improve real estate, and the knowledge to apply to assist in the real estate sector's operations (Ravichandran & Lertwongsatien, 2015). Using operations management, real estate sector behavior and real estate sector policies, it is supported that the inclusion of the practices as significant influencers of performance success helps improve financial performance as well as management of performances in terms of rental income and occupancy rates (Bhardarwaj, 2010). Financing options available in South Africa has changed the real estate sector performance in terms of demand and supply of housing units.

In Tanzania, when the community part quit housing development, families were left with minimal decision however to move into impromptu settlements and leave without anyone else house development. About 98% of this circumstance currently still and is worsened by a 6% yearly development in population in the city. The reports from the City Council demonstrated that numerous individuals build their very own homes utilizing their own assets in contrast with those that get to fund to have houses built for them (Merrill & Tomlinson, 2013). Due to the support and incentives from the government, the real estate sector is favorable for developers and buyers as well as those who wish to rent housing units for specified periods of time.

The housing sector in Kenya has seen outstanding growth in the current years with property prices strengthening and the quantity and range of projects rising. However, development exercises require a great deal of cash-flow to execute (Mwathi & Karanja, 2017). Money related assets must be used by all property engineers to meet different expenses even before the undertaking starts. As an engineer, one needs to design successfully in verifying financing for improvement. A standout amongst the most basic strides in getting ready for development is recognizing the most reasonable wellspring of subsidizing for development advancement. Kenya has just two money related organizations spend significant time in land subsidizing. These are loans, savings and building Finance Corporation.

Even if Kenya has experienced some growth of real estate sector, as at May 2018, the real estate segment's execution in Kisumu relaxed; with the segment recording a decrease of 3.2% focuses in absolute comes back from 10.1% in May 2016 to 6.9% in May 2018, owing to political vulnerabilities in the zone over the 2017 race. Real estate sector recorded a normal all out income of 8.5percent, along a rental income of 5.5 percent and value valuation for 3 percent. This was a 0.1% point increment in rental income from 5.4 percent in 2016, and a 1.3percentper annum decreases in value thankfulness from 5.6% in a similar year, owing to the political vulnerabilities over the 2017 decision time frame (Cytonn, 2018). Performance of real estate is estimated as far as rental pay, risks of inhabitance level, deals/turnover and profit for speculations. This investigation will gauge real estate execution from a budgetary viewpoint utilizing the accompanying sub-factors return on ventures, return on resource and turnover/deals.

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Kisumu City is the third biggest city in Kenya and has been on rapid growth since the upgrading of the town to a city in 2003. Both the residential and the commercial sector is of critical concern, this is due to an ever increasing demand for housing amidst a graving housing situation and the desire into venture entrepreneurship mostly real estate (Njeru, 2012).In Kisumu, there is high demand for apartments which is attributed to outsiders or foreign market has seen developers embark on house expos to match the demand from this lucrative market (Njeru, 2010). There is increase in demand for residential houses.

Government decentralization and urbanization leads to increase in demand for housing. The big 4 agenda on housing sees the government planning to construct 500,000 houses by 2022. This will offset the demand for houses in major cities and towns in Kenya. The top of the line section comprises of prime rural areas in Kisumu, for instance, Milimani and its surroundings. The portion recorded a decrease in act, with the rate of development of value gratefulness dropping by 1.8 percent per annum (p.a.). from 5.9 percent in May 2016 to 2.4 percent in May 2018, and rental yields dropping by 0.1% point p.a. from 5.7 to 5.6 percent in a similar period. The decrease in execution is inferable from sit back and watch demeanor by financial specialists over the drawn out 2017 electioneering time frame, which diminished monetary movement in the city (Cytonn, 2018).

1.2 Statement of the Problem

Housing forms one of the sustainable development goals. In Kenya, it is part of the big four agenda of the Jubilee government. Real estate performance therefore provides an opportunity to achieve these goals. It is a dream of every one to own a home and that is why most people living in urban areas are working hard to own homes in big towns, either individually or as a group (Mwangi, 2012). Kisumu city being the third largest city and central to the Lake Region Economic Block, it is expected to have adequate, modern and decent housing units that yield high returns on investment to cater for its growth rate of 2.8% per annum (p.a) (Cytonn, 2018). Housing demand in Kisumu city far outweigh supply. The demand is so high that about 50% or more than 434,661 inhabitants live in slums (Cyton, 2016). The present shortfall translates to a standard of 550 residential units/day in urban areas, with Kisumu onlyfacing a less of 410 residential units/day. Over 80% of the residents of Kisumu live in dilapidated residence and mostly in slums as compared to only 20% living in high income estates such as Milimani. Those residents living in slums and lowly developed estates such as Kondele, Manyatta, Nyalenda and Obunga are overcrowded and the houses they live also fetch very low returns for owners (Cytonn, 2018). Persistence of such problems therefore means that the government will not be able to achieve one of its pillars of sustainable development goals of building 500,000 housing units by the year 2022. The resultant of this is that the residents of Kisumu city will continue to live in a dilapidated and inhabitable housing condition which is a security threat and a health hazard to the city and the country at large. Therefore, the study seeks to examine the effect of financing options on performance of real estate in Kisumu City, Kenya.

1.3 Objective of the Study

The study was objective was to examine the effect of mortgage financing on performance of real estate sector in Kisumu City

2. LITERATURE REVIEW

2.1 Theoretical Review

The study is grounded on structural form theory, lien theory and liquidity preference theory as discussed as follows.

Structural Form Theory

Structural form theory was figured by Pottow in 2007. The theory explains the mortgage financing evolution in developing countries in Sub Saharan Africa (SSA) as well as the steps which need to be taken to stretch mortgage loans to middle income earners. This will enable them to meet their residential needs as far as their affordability is concerned. This theory states that there are a number of challengesaffecting the delivery of formal real estate finance among most middle income class.

This theory unearths that there exist various issues when it went to the conveyance of conventional housing account among majority, if not every one of the nations. These issues are a documentation of macroeconomic precariousness, an antagonistic organizational, lawful and administrative condition which led to wasteful, housing resources collateralization,

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a poor documentation of open part housing land firms, building social orders and other master housing loan specialists in that most have been devastated because of poor administration and an absence of assets and restricted accessibility of long haul subsidizing options to complete intermediation which stretch the expense of a residential building over a generally significant lot of time (Sturzenegger & Levy-Yeyati, 2011).

Emerging from this terrible past is a step to resuscitate and bring contract loaning into various nations. Also, as a major aspect of the move to fix monetary markets, various advisors have been sent into creating nations to start archiving the particular issues of every nation just as to make suggestions on the most proficient method to address them. Improvement operators, specifically, are additionally advancing suggestions concerning the requirements to guarantee market monetary advancement as well as the market for capital market venture important to lure the personal division into conveyance of real estate money. The structural form theory assumes that there are problems facing the real estate sector through mortgage financing. These problems include macroeconomic instability, legal and regulatory environment, adverse institutional, the use of collateral for housing units, building societies as well as inadequate documentation of public housing sector finance.

The theory expects that there are various difficulties in the arrangement of housing capital crosswise over most if not all nations. A task achievement is hampered by a documentation of macroeconomic flimsiness, an unfriendly organizational, legitimate and administrative context leading to insufficient, and securitization of housing resources. The theory expresses that a poor record of open division housing land firms, building social orders and other expert housing are demolished because of poor administration and an absence of assets and insufficient accessibility of long haul subsidizing sources to complete agencywhich spread the expense of a land area over a moderately significant alot of time henceforth ensuring land segment achievement. In relation to this study, this theory documents the rationale of mortgage financing aimed at determining the processes to taken to stretch the market to middle income earners and make them meet their housing needs to the extent of how much they can afford.

Mortgage Financing and Performance of Real Estate Sector

Fang (2014) examined the association between mortgage financing and real estate market financial performance in China. The study relied on secondary data and adopted quantitative analysis to achieve its objectives. The study findings indicated that mortgage financing is a basic factor in the consistently expanding real estate market in china. In addition, the examination also indicated that that microfinance factors and the inhabitants' maintainable salary can't be overlooked the extent that the rising real estate market are concerned. Accordingly, this examination uncovered that contracts assume a vital job in advancing real estate's advancement. Their examination was done in China and concentrated on mortgage credit and financial performance of real estate. However, the current study was done in Kisumu County, Kenya and was specific to the effects of mortgage financing on real estate performance.

Mwathi and Karanja (2017) investigated the influence of mortgage financing options on improvement of real estate in Kenya. The reason for this examination was to set up the wellsprings of real estate financing in Kenya. In explicit terms the investigation assessed in the case of funding in real estate commences from; contract funding, funds, investment and value funding. This investigation likewise utilized logical plan since it is directed to depict the current circumstance, what individuals right now accept, what individuals are doing right now, etc. The number of respondents in this research was all real estate firms in Nairobi. Data was analyzed utilizing SPSS and results were presented in recurrence tables and outlines. The information was then broke down regarding illustrative insights like frequencies, means and rates. The discoveries showed that contract financing is the most utilized wellspring of financing, with value and investment being minimal wellspring of financing utilized. Their investigation concentrated on mortgage financing, funds, funding and value financing and was conducted in Nairobi while this examination will concentrate on mortgage, loan and savings financing in Kisumu City.

Kioko (2014) investigated the impact of mortgage financing on real estate market performance in Kenya. The goal of examination was to decide the impact of mortgage funding on residential units market execution. The free variables included; number of mortgage advances, measure of mortgage credits adjusts GDP development and swelling rate whereas the dependent factor was the execution of real estate markets. The study used both primary and secondary sources of data from published and audited annual reports of investments for the population of interest, CBK, KNBS and property price index from property consultants. The examination found the quantity of mortgage credits, measure of

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mortgage advances adjusts GDP development and swelling rate to negatively impact the market for real estate in Kenya. Kioko's investigation looked at the quantity of mortgage advances, measure of mortgage credits adjusts, GDP development and expansion rate while this examination will concentrate on mortgage financing, reserve funds, value and advance financing.

Leclerc and Fortin (2014) analyzed the factors of mortgage financing indebtness in Canada using primary and secondary data. The study employed multiple regression models to establish the factors of mortgage loans. The study found that new mortgage advances are altogether influenced by financing costs thrilled while estimation of real estate is affected by costs of residential units. Because of this, the obligation to salary proportion of families has continually stayed elevated. The decrease in costs of real estate has prompted decrease in shopper certainty, destabilized the money related markets and in this manner decrease in monetary and budgetary development. In addition, market for real estate may possibly develop if possibility property holders are inspired to contribute and possess a residential home. This order is accomplished through arrangement of appropriations through enthusiasm on mortgage, arrangement of value moderate residential units and offering contract enthusiasm at minimal rates. Their examination centered was completed in Canada and focused on the impact of mortgage loan indebtness. The present investigation was directed in Kenya and will concentrate on mortgage financing.

Waithaka (2013) studied the effect of mortgage financing on the performance of Real estate industry in Kenya. The following aspects were the specific objectives of the study; to examine the effect of interest rate, loan terms, mortgage risks, and inflation on performance of Real estate industry in Kenya. The study used both primary and secondary sources of data from published and audited annual reports of investments for the population of interest, C.B.K, KNBS and property price index from property consultants. The results of the analysis were presented in tables, percentages, graphs and charts. From the findings on the effect of mortgage financing on financial performance of the Real estate industry, the study found that mortgage financing had positive influence on financial performance of Real estate. The study further revealed that interest rate affected the Real estate performance to a great extent as mortgage prices are principally determined by real interest rates. Prompt authorization and approval process of mortgage loans improves on loan terms and therefore Real estate performance.

Conceptual Framework

The conceptual framework illustrates the association between the dependent and the independent variable. The independent variable was mortgage financing whereas the dependent variable is performance of real estate sector. Mortgage financing was measured by adjustable rate mortgage, fixed rate mortgage, jumbo loans and interest only mortgage. The dependent variable was measured by turnover/sales, occupancy levels and the number of housing units. The study was illustrated by the conceptual framework as illustrated.

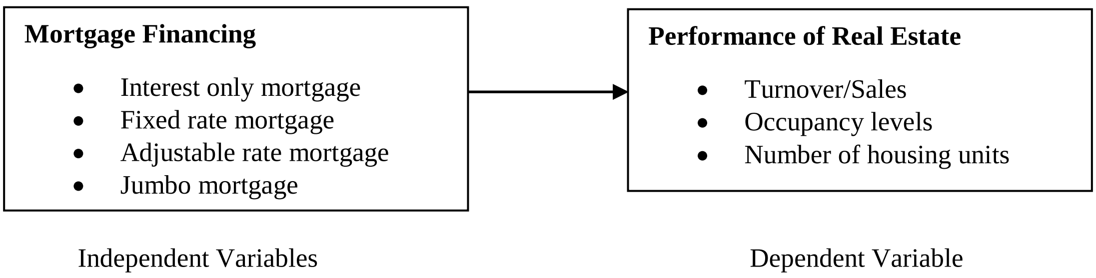

Figure 2.1: Conceptual Framework

3. RESEARCH METHODOLOGY

Research Design

The study adopted an exploratory research design. An exploratory design was deemed the best design to the objectives of the study. A research design is the general arrangement of how one approach addressing the research question (Saunders, Lewis &Thornhill, 2000). This plan was viewed as proper for the kind of goal of this examination as it empowered the specialist to depict the as they exist without control of factors. It sought to obtain information on the effect of financing options on performance of real estate sector in Kisumu City.

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Target Population

Population refers to a complete group of subjects that is objects or persons that have the same common characteristics. Target population refers to the whole group of subjects to which the study intends to generalize the research findings from (Kothari, 2004). Accessible population on the other hand implies that population which the researcher will get the conclusions; it refers to the subset of the target population and it is that population the researcher will draw the sample size from (Mugenda & Mugenda, 2003).

In this study the population of interest was registered real estate firms, financial institutions and National Construction Authority (NCA) in Kisumu City. There are 23 licensed mortgage and financial institutions, 25 registered real estate firms operating in Kisumu City. The study targeted one manager and one accountant in real estate firm, one general manager and one mortgage manager in financial institution and one official of NCA; therefore the population targeted by the study was 97 respondents as depicted in Table 3.1

Table 3.1: Target Population

Firm	Target Group	Target Number
Real Estate Firms	Manager and Accountant	50
Financial Institutions	General Managers and Mortgage Manager	46
NCA	Approval officer	1
Total		**97**

Source: Kenya Property Developers Authority; Kisumu County (2019)

Census Survey

According to Cooper and Schindler (2000) a researcher must clearly define the characteristic of the population, determine the required sample size and choose the best method for selecting members of the sample from the larger population hence the sample size was selected using census since the target population is small. A census gives a genuine proportion of the populace for example no examining mistake, benchmark information might be acquired for future investigations and definite data about little sub-bunches inside the populace is bound to be accessible. Since the population is small (97) census was utilized to select respondents who participated in the study from whole population (Kothari, 2004). The sample size was 97 respondents.

Data Collection Instruments

The study adopted a self-administered semi-structured questionnaire to solicit required data from the targeted subjects. By utilizing self-regulated questionnaire about the impact of financing alternatives on execution of real estate was solicited. The instrument likewise guarantee secrecy of respondents as their personalities won't mention for (Kombo & Trumph, 2012). A questionnaire was presented to managers of financial and private developers.

Regression Model

$Y\boldsymbol{i} = \alpha + \beta_1 X_1 + \mathcal{E}$ ………………………………………...…Equation 3.1

yRepresents the dependent variable (performance of real estate sector)

α- the constant of equation (represents the changes that cannot be explained by independent variables in the model)

X_1Represents Mortgage Financing

$\beta_{1,}$ are the coefficients of independent variables

Ɛ - error term

The measures of the performance of the real estate sector were turnover/sales, occupancy levels and the number of housing units. The study measured performance of real estate using a likert scale (1 to 5). Performance can be measured on a likert scale (Mummel, 2010).

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4. RESEARCH FINDINGS AND DISCUSSIONS

Response Rate

The study targeted one manager and one accountant in real estate firm, one general manager and one mortgage manager in financial institution and one official of NCA. The study sampled 97 respondents and managed to collect data from 95 respondents. This represented 97.9 per cent response rate. The unreturned questionnaires were 2 representing 2.1% of the administered questionnaires. The main reason for the unreturned questionnaires was that the questionnaires were wrongly filled and in some cases the respondents ticked two answers. However, this response rate was deemed satisfactory as suggested by Field (2013) who recommends 75% as a rule of the thumb for minimum responses.

Table 4.1: Response Rate

Responses	No	Percentages
Administered questionnaires	97	100
Unreturned	2	2.1%
Usable questionnaires	95	97.9

Demographic Characteristics of the Respondents

The study sought to establish the general information of the respondents. The study sought to establish the category, gender, years of experience and highest educational level of respondents. The study results are presented in Table 4.3;

Category of Respondents

The study sought to analyze the category of respondents as indicated in Table 4.2

Table 4.2: Category of Respondents

Category of the Respondents	Frequency	Percent
Junior management	53	55.3
Senior Management	42	44.7
Total	**95**	**100**

The study results on the category from which the respondents hailed from indicated that 55.3% were junior management staff while 44.7% were senior management staff. This gives the implication that the study collected data from both categories represented in the study. Therefore the views of both categories were captured in the study.

Distribution of Respondents by Gender

This study analyzed how respondents were distributed according to their gender. The results of the analysis are presented in Table 4.3

Table 4.3: Gender of the Respondents

Gender	Frequency	Percent
Male	58	57.6
Female	37	42.7
Total	**95**	**100.0**

The study findings on the gender of the respondents showed that 61.5% were male while 38.5% were female. This shows that the study managed to collect data from both genders and their opinions were represented in the study.

Distribution of Respondents by Years of Experience

Respondents were asked to indicate the number of years of experience they have had in the in the real estate sector to assess their familiarity in the field and hence assure validity of their responses, the results are as indicated in Table 4.4.

Table 4.4: Respondents Years of experience

Years of Work	Frequency	Percent
1-5 Years	10	10.8
6-10 Years	42	43.8
11-15 Years	43	45.4
Total	**95**	**100**

The study results on the respondent's years of experience indicated that 10.8% of the respondents had experience of between 1-5 years; 43.8% had experience of6-10 years whereas 45.4% had experience of between 11-15 years old. The findings of this study indicate that the respondents had adequate experience to respond to the questions and are informed the financing options of real estate sector. This concurs with the study by Lussier (2008) who summarized that the individuals with higher experiences have greater chances of responding to the questionnaire statements compared to people with less experience.

Distribution of Respondents by Highest Education Level

Respondents were asked to indicate their highest education level. This item was to assess their level of skills and to establish whether they were in a position to answer the questionnaire accurately and the results were as indicated in Table 4.5.

Table 4.5: Distribution of Respondents by Education Level

Educational Level	Frequency	Percent
Certificate	32	33.2
Diploma	36	37.4
Bachelor's Degree	22	22.8
Post-graduate	6	6.6
Total	**95**	**100**

The study findings on the education level of the respondents indicated that 33.2% were certificate level, 37.4% were diploma graduates; 22.8% were bachelor's degree graduates; 6.6% were post-graduate. This implies that the respondents were knowledgeable and therefore understood the study questions and this could be interpreted to mean that they gave a true and fair view of the study questions.

Descriptive Statistics

The descriptive statistics are presented in the section that follows; the information was sought in relation to the study objectives. In this section the study used descriptive statistics, which include mean, standard deviation and variance. The evaluation of mean was done in accordance to Aggresti (2009) who indicated that a mean of 1.00 to 2.49 is evaluated to be very weak, 2.50 to 3.49 Weak, 3.50 to 4.49 Strong and 4.50 to 5.00 Very Strong, while for standard deviation of greater than 0.5 was evaluated to indicate homogeneity and a standard deviation less than 0.5 indicates heterogeneity of data.

Mortgage Financing and Performance of Real Estate Sector

The study sought to establish the effect of mortgage financing on performance of real estate sector in Kisumu County. The study findings were presented in Table 4.6.

Table 4.6: Mortgage Financing and Performance of Real Estate Sector

Statements		SA	A	U	D	SD	Mean	Std Dev
i. Interest only mortgage affects performance of real estate market in Kenya.	F	27	40	15	8	5	3.80	1.047
	%	28.1	42.4	15.8	8.6	5		

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ii.	Fixed rate mortgage is the main type of mortgage used to finance real estate	F	29	38	14	14	5	3.79	1.074
		%	30.2	39.6	14.4	14.4	5		
iii.	Adjustable rate mortgage maintain high level of customers' satisfaction in terms of mortgage requests	F	21	59	13	2	0	4.04	0.342
		%	22.3	61.9	13.7	2.2	0		
iv.	Jumbo mortgage is mostly used in the real by estate firms in the region	F	40	27	16	8	5	3.93	0.346
		%	41.7	28.1	17.3	7.9	5		

The study findings revealed that 70.5% were of the view that interest only mortgage affects performance of real estate market in Kenya While 13.6 disagreed. This was further supported by (mean=3.80; Std Dev 1.047). These findings were supported by Kioko (2014) who investigated the impact of mortgage financing on real estate market performance in Kenya and revealed that positive relationship exists between mortgage financing and performance of real estate market in Kenya. Homeowners invest in real estate property in anticipation of future increase in prices and rental income. Financial institutions provide adequate information to potential homeowners thus there is flow of information hence reduction in cases of moral hazards and adverse selection. To boost performance of real estate market in Kenya, the government has introduced RIETs, private public partnership, introduction of pension funds to be used as security to access the mortgage market.

The respondents were further requested to give their view on whether fixed rate mortgage is the main type of mortgage used to finance real estate 69.8% of the respondents agreed while 19.4 disagreed. This was further supported by (mean=3.79; Std Dev 1.074). These findings were supported by Waithaka (2013) collaborated the result of the research in his study on the effect of mortgage financing on the performance of Real estate industry in Kenya found that mortgage financing had positive influence on financial performance of Real estate. The study further revealed that interest rate affected the Real estate performance to a great extent as mortgage prices are principally determined by real interest rates therefore Prompt authorization and approval process of mortgage loans improves on loan terms and therefore Real estate performance.

In addition, the respondents were requested to give their opinions on whether adjustable rate mortgage maintain high level of customers' satisfaction in terms of mortgage requests. Majority of the respondents 84.2% of the respondents agreed while 22% disagreed. This was further supported by (mean=4.04; Std Dev 0.342). These findings were supported by Mwathi and Karanja (2017) who investigated the influence of mortgage financing options on customer satisfaction among real estate in Kenya indicated that that mortgage financing is the most utilized wellspring of financing and enhances customer satisfaction, with value and investment being minimal source of financing utilized.

Lastly, the researcher sought the respondents opinion on whether Jumbo mortgage is mostly used in the real estate firms in the region, majority of the respondents agreed 69.8% of the respondents agreed while 12.9% disagreed. This was further supported by (mean=3.93; Std Dev 0.346). These findings were supported by Fang (2014) on his study on the association between mortgage financing and real estate market monetary execution in China agreed to findings by indicating that mortgage financing is an extremely basic factor in the consistently expanding home costs in china. He also indicated that mortgage financing and the inhabitants' maintainable salary can't be overlooked the extent that the rising home costs are concerned. Accordingly, this examination uncovered that mortgage financing assume a vital job in advancing real estate's advancement.

Performance of Real Estate Sector

The study finally sought to determine the indicators of performance of real estate sector in Kisumu County. The study results were as tabulated in Table 4.7.

Table 4.7: Performance of Real Estate Sector

Statements		SA	A	U	D	SD	Mean	Std Dev
i. Increase in number of housing units indicates the level of performance of real estate sector	F	40	44	8	3	0	4.52	0.764
	%	42.4	46	8.6	2.9	0		

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ii. Sales volume increase indicates good performance	F	40	44	8	3	0	4.49	0.606
	%	42.4	46	8.6	2.9	0		
iii. High occupancy rates indicates a good performance of real estate	F	51	32	12	0	0	4.52	1.446
	%	54	33.8	12.2	0	0		

The study results on indicators of revenue collection revealed that 90.4% were of the view that increase in number of housing units indicates the level of performance of real estate sector while 2.9% disagreed. This was further supported by (mean=4.52; Std Dev 0.764).These findings were supported by Barton and Gordon (2014) in Brazil, search for financial competitiveness has led real estate sector and other related sectors to continue assuming an increasingly high amount of debt in order to maintain operations and performances at an acceptable level.

In addition, 89.8% were of the view that sales volume increase indicates good performance, while 2.9% disagreed. This was further supported by (mean=4.49; Std Dev 0.606).These findings were supported by In addition, Deard and Dearl, (2016) In Spain, stated that efficient financing options such as investment practices are a major predictor of firm performances and overall financial performance.

Lastly majority of the respondents 90.4% were of the view that high occupancy rates indicates a good performance of real estate and no one disagreed This was further supported by (mean=4.52; Std Dev 1.446).These results were in agreement with results by Newstia, (2014) who examined the housing system in Britain and stated that the effect of the outstanding debts have an impact of performance of real estate sector and many developers of real estate especially private developers have been hard hit by the unpaid loans.

Inferential Statistics

This section puts into perspective the relationship between the independent variables and the dependent variable and also the influence of the independent variable on the dependent variable. The section outlines the results of both correlation The decision rule for correlation was in accordance to Saunders (2003) who postulated that that r=1 shows a Perfect linear correlation, 0.9 < r < 1 indicates Positive strong correlation, 0.7 <r < 0.9 Positive high correlation 0.5 < r < 0.7 Positive moderate correlation, 0< r < 0.5 Weak correlation r=0 No, relationship and -1 <r = < 0 Negative relationship

Table 4.8: Overall Correlation analysis

		Mortgage financing	Real estate performance
Mortgage financing	Pearson Correlation	1	
Real estate performance	Pearson Correlation	.795**	1

From the study the results indicate that all the study variables had positive high correlation to performance of real estate sector in Kisumu city, this was indicated by Mortgage financing (0.795; p<0.05). This implies that Mortgage financing, Loans financing and Savings financing positively and significantly influence performance of real estate sector in Kisumu city.

From the study it should be noted, the above table was at 99% level of confidence (significant at the 0.01 level (2-tailed), since a unit change in mortgage financing leads to 79.5 % change in performance of real estate in Kisumu city, also a unit change in loan financing leads to 86.5% change in performance of real estate in Kisumu city, and lastly a unit change in savings financing leads to 87.1% change in performance of real estate in Kisumu city. Therefore loan financing is the most significant factor for the performance of real estate in Kisumu city. This is attributed to the fact that loan financing is an essential for real estate performance since it benefits more assets for which thusly quickens development. Also an expansion in the loans financing supports relentless state yield by more than its immediate effect on performance in light of the fact that the incited increase in salary raises loan accessibility prompting a further loans thus performance of real estate sector.

This concurs to the findings by Kioko (2014) who revealed that revealed there is a positive relationship exists between mortgage financing and performance of real estate market in Kenya. Homeowners invest in real estate property in anticipation of future increase in prices and rental income. In addition Amidu (2007) in his study also agreed with these findings. There is a positive relationship between operating assets (fixed assets) and long-term debt and Adjonyoh (2007) argued that lack of access to long term capital is a major barrier to real estate delivery. Lastly Jangili (2011) who noted that increased saving is a necessary and sufficient condition for investment since it avails more funds for investment, which in turn accelerates growth

Multiple Regression Analysis

Multiple regression analysis is a powerful technique used for predicting the unknown value of a variable from the known value of two or more variables. In this study multiple regression will help predict the combined effect of mortgage, loan and savings financing on real estate sector performance in Kisumu City. The results of multiple regression analysis shown in Table 4.9.

Table 4.9: Multiple Regression Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.860[a]	.739	.712	.01897

a. Predictors: (Constant), Mortgage financing, Loan financing, Savings financing

b. Dependent Variable: Performance.

From Table 4.9, R-Squared is used to evaluate the goodness of fit of a model. In regression, the R square coefficient of determination is a statistical measure of how well the regression line approximates the real data. It measures the proportion of the variation in dependent variable in this case strategic innovation implementation, explained by independent variables. The adjusted R-squared is a modified version of R-squared that has been adjusted for the number of predictors in the model. The adjusted R-squared increases only if the new term improves the model more than would be expected by chance. It decreases when a predictor improves the model by less than expected by chance while the standard error of the estimate is a measure of the accuracy of predictions.

From the results on model summary R= 0.860, R- square = 0.739, adjusted R- square= 0.712, and the SE= 0.01897. The coefficient of determination also called the R square is 0.739. This implies that the effect of the predictor variables (mortgage financing) explains 73.9% of the variations in real estate sector performance in Kisumu City. This implies that a 1 unit change in the predictor variables (mortgage financing) has a strong and a positive effect on in real estate sector performance in Kisumu City.

This study therefore assumes that the difference of 26.1% of the variations is as a result of other factors not included in this study. The standard error(S) of the regression provides the absolute measure of the typical distance that the data points fall from the regression line. S is in the units of the dependent variable. The standard error is an important indicator of how precise an estimate of the population parameter the sample statistic is Standard error(S) must be less than 2.5%. As presented in table 4.9(S=.01897) which is 1.9%. This indicates that the regression model is precise using the units of the dependent variable.

Assessing the Fit of the Multiple Regression Model

Multiple regression analysis was conducted to test the influence among predictor variables on real estate sector performance in Kisumu City. All the three null hypotheses were tested using F statics. The test results are shown in Table 4.10.

Table 4.10 ANOVA Results

Model		Sum of Squares	df	Mean Square	F	Sig.
	Regression	9.722	3	3.241	92.346	.000[b]
1	Residual	3.437	29	.119		
	Total	13.159	32			

a. Dependent Variable: Performance.

b. Predictors: (Constant), Mortgage financing, Loan financing, Savings financing

The findings of the study in Table 4.10 showed that there was a statistically significant relationship between the independent variables and the dependent variable (F= 92.346; $p<0.05$). This therefore indicates that the multiple regression model was a good fit for the data. It also indicates that mortgage financing influence real estate sector performance in Kisumu City.

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Regression Coefficients

The study employed multiple regression analysis to test the hypotheses. Multiple regression analysis was conducted to test the influence among the study variables mortgage financing, loan financing and savings finances on real estate sector performance in Kisumu City. This was done with a significance level of 0.05, such that when the significance value is less than the 0.05 the null hypothesis is rejected and when it is above 0.05 we fail to reject the null hypothesis (Ringle, Sven & Michael, 2015).These results were presented in Table 4.11.

Table 4.11: Regression Coefficients

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
(Constant)	0.369	0.224		1.648	0.105
Mortgage financing	0.263	0.024	0.534	10.744	0.000

a. Dependent Variable: Performance of real estate sector

The first null hypothesis H_{01}stated that; Mortgage financing has no significant effect on performance of real estate sector in Kisumu City. The study findings indicated that there was a statistical significant effect of mortgage financing on performance of real estate sector ($\beta = 0.263$; $p<0.05$). The study therefore rejected the null hypothesis at 95% level of significance and accepted the alternate hypothesis which showed that there was an effect of mortgage financing on performance of real estate sector in Kisumu City. This finding is attributed to the fact that mortgage financing is an extremely basic factor in the consistently expanding home costs in Kenya and is always advertised by financial institutions in the social media. These findings concur with the findings by Kioko (2014) who revealed that revealed that positive relationship exists between mortgage financing and performance of real estate market in Kenya. Homeowners invest in real estate property in anticipation of future increase in prices and rental income.

5. SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

Summary of Findings

This study was designed to find out the effect of financing options on performance of real estate sector in Kisumu City, Kenya. A sample of 97 respondents was engaged in the study. Questionnaire with a 5 point likert scales was used to collect data. After the data had been collected, it was analyzed using both descriptive and inferential statistics and was presented using tables.

The first objective of the study sought to examine the effect of mortgage financing on performance of real estate sector in Kisumu City. The study indicated that there was a significant relationship between mortgage financing and the performance of real estate sector. This implied that mortgage financing is a factor for performance of real estate sector in Kisumu City. These findings meant that the null hypothesis was rejected.

Conclusions

From the findings, the following conclusions can be established; adjustable rate mortgage maintains high level of customers' satisfaction in terms of mortgage requests. Mortgage financing enables acquisition of mortgage properties by able potential homeowners through scheduled repayment and to the lender, it is an avenue of revenue generation since there are interest charges.

Recommendations

Based on the results, findings and conclusions the following recommendations have been made:

Recommendation for Policy and Practice

This study recommends that for the achievement of the big four agenda on housing, The study recommends that the government through the Central Bank and mortgage lending firms should implement policies that reduce on the interest rates that financial institutions charge on mortgages.

Second, the government should regulate mortgage interest rates to boost performance of real estate in Kenya and improve the political stability of the country to encourage investment in isolated areas of the country

Recommendations on Theories

The study showed that mortgage financing is a critical factor for performance of real estate sector. The study found that Structural form theory explains the mortgage financing evolution in developing countries as well as the steps which need to be taken to stretch mortgage loans to middle income earners. This will enable them to meet their residential needs as far as their affordability is concerned. The theory expresses that a poor record of open division housing land firms, building social orders and other expert housing are demolished because of poor administration and an absence of assets and insufficient accessibility of long haul subsidizing sources to complete agency which spread the expense of a land area over a moderately significant a lot of time henceforth ensuring land segment achievement.

Suggestions for Further Research

From the regression output, it was revealed that the study variables explain 73.9% of the variations in real estate sector performance in Kisumu County. This study therefore assumes that the difference of 26.1% of the variations is as a result of other factors not included in this study. Further research is therefore advocated for to focus on other factors that affect performance of real estate in Kenya. These factors include political, legal, social, economic and geographical factors. Secondly, some research needs to be carried out to establish how location of mortgage property affects performance of real estate market. From empirical review, mortgage property was documented that significantly affect performance of real estate market.

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