

**VARIABILITY OF MORTGAGE INTEREST RATES AND REAL
ESTATE GROWTH IN KISUMU TOWN KENYA**

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FULFILLMENT OF THE REQUIREMENTS FOR THE AWARD
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DECLARATION

I hereby declare that this research proposal is my own work and to the best of my knowledge it contains no materials previously published or written by another person, nor material which to a substantial extent has been accepted for the award of any other Master's degree or diploma at the University of Nairobi or any other educational institution.

I also declare that the intellectual content of this research proposal is the product of my own work except to the extent that assistance from others in conceptions or in style, presentation and linguistic expression as acknowledged.

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DEDICATION

To my dear family, my parents and siblings
For their ending encouragement and support;

ōYou abound with me through it all, as always

And made the task a delightful experienceö

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ABBREVIATION AND ACRONYMS

ARM: Adjustable Rate Mortgage

FRM: Financial Risk Manager

KUP: Kisumu Urban Project

KIUD: Kisumu Integrated Urban Development

NHC: National Housing Corporation

SDE: Stochastic Different Equation

ABSTRACT

The purpose of the study was to investigate the variability of mortgage interest rates and real estate growth. The main problem of the study was the accessibility to mortgage financing as it has been a major problem over the past and many real estate developers have shied from taking up mortgages due to factors like high mortgage interest rates. The main objective of the study was to establish the effect of variations of mortgage interest rates on real estate growth in Kisumu town. The study is of great significance as it could be used to provide background information to research organization and scholars who would want to carry out further studies. The study could also aid Kenyan government in understanding real estate as a fundamental investment project. The study was done through the use of a triangulated research design. The target population of this study comprised of all the 28 licensed commercial banks operating within Kisumu town with major focus on the major 5 dealing with mortgage financing. The most appropriate method for this study was stratified random sampling since the method entails grouping the population into categories based on their varying characteristics. This study adopted secondary sources. This was from the 28 registered financial institutions within the Kisumu town. Secondary data was collected using the secondary data capture form. Data analysis involved descriptive and inferential statistics and Statistical Package for Social Sciences software were used in the analysis. The study concluded that there is need for the researchers to consider many factors in regards variability of mortgage interest rates as there exists minimal variability between the interest rates and mortgage disbursement. The research further concluded that there existed little information in regard to non -performing loans and also for the fourth year leading to inadequate data hence, less credible analysis and therefore future analysis for at least more years to give consistent and conclusive conclusion. The study suggested exploitation of other variables like the economic factors so that mortgage uptake challenge could be fully exhausted so that mortgage uptake troubles could be a problem of the past and also the government should give subsidies and also limit high interest rates to the people who are willing to take up mortgages and this could help in real estate growth.

CHAPTER ONE: INTRODUCTION TO THE STUDY

1.1 Background of the Study

The concept of real estate investment dates back to the 1880s. Real estate investments trusts originated in the 1880s at the time when investors could avoid double taxation. In the 1930s this tax benefit was removed causing investors to pay double taxes. Real estates were required to distribute 90% of their taxable income into the hands of investors (Brueggenman & Fisher, 1997). The increase in real estate investment has been motivated by a number of factors chief among them being that real estate investment is a permanent and long-lasting investment. Some of the benefits that have made real investment popular include; real estate provides a steady stream of income in the form of rental payments, it increases in value due to appreciation thus it is an excellent source of profit and since inflation is your friend in any investment when it drives up home construction costs, it drives up rents as well. Mortgage financing has been used to finance real estate growth for both commercial and residential purposes, this however have been affected by the variations of mortgage interest rates (Njeru, 2012).

The study on the effect of variations of mortgage interest rates on real estate growth is guided by the lien theory of mortgage financing and supported by innovation theory of mortgage financing and classical theory of mortgage financing. These theories try to explain the relationship between mortgage interest rate and real estate growth. The basic idea of this theory is that the demand for capital and supply of capital determines the rate of interest. Lien theory only gives the mortgagee a lien interest in the property, the mortgagee is treated as having transferred title to the mortgage,

subject to the mortgagee's duty to recovery if payment is made (Buckley and Kalarickal, 2004). The classical theory was developed by (Blang, 1992). The basic idea of this theory is that the demand for capital and supply of capital determine the rate of interest. The rate of interest is determined at a point where demand for capital is equal to supply of capital. The classical theory says the demand for capital and supply of capital determines the rate of interest (Blang, 1992). These theories will help in understanding how interest rates relate to mortgage financing as it varies with the demand and supply of mortgage financing.

Kisumu town has been on rapid growth since the upgrading of the town to a city in 2003. Both the housing sector and the commercial sector is of critical concern, this is due to an ever increasing demand for housing amidst a graying housing situation and the desire into venture entrepreneurship mostly real estate (Njeru, 2012). In addition there are upcoming new businesses as well as the demand and supply of the available businesses. This has been affected by the limited space available for establishing businesses and thus many people cannot provide for the collateral (Ojunga, 2014). Mortgage finance is key in solving this situation, in a city whose economic conditions are promising. The study will aid in precipitating the effect of variations of mortgage interest rates in the development of the housing sector, as well as in the development of the Housing Finance Policy Framework for Kisumu town.

1.1.1 Variations in Mortgage Interest Rates

Various financial institutions charge different rates at a given point in time. Mortgage Interest rate is the rate of return on investment and the cost of borrowing funds (Darryl, 1969), interest rates are a price for the use of funds and if rapid monetary

expansion contributes to excessive demand and inflation, it also contributes to rising interest rates. Central Bank's role under the interest rate instrument is to set a short-term official rate of interest, which indicates the price at which it will make liquidity available to the banking system as a lender of last resort. In Kenya, this rate is called the Central Bank Rate.

Interest rates are the single most critical factor in driving the mortgage market and access to more middle income housing. Credit risk is measured by expressing the non performing advances as a percentage of the total gross advances. A moderate numbers of ARM defaults tend to occur as result of high interest rates, while the reverse is true for FRMs. High interest rates lead to an increase in the mortgage payments required for ARMs, inducing some individuals to default, especially early on when accumulated financial savings are small. On the other hand, for FRMs, low interest rates imply lower rental payments compared to mortgage 4 payments, which induces default. However, such default tends to occur on average later in the life of the mortgage, and at slightly lower levels of house prices. A reduction in the official rate for instance, encourages the commercial banks to borrow money from the Central Bank, thereby increasing money supply in the economy. Mortgage interest rates reflect the general lending rate of banks as any other loan in the banks.

1.1.2 Real Estate Growth

Real estate growth is a multifaceted business, encompassing activities that range from the renovation and re-lease of existing buildings to the purchase of raw land and the sale of improved land or parcels to others. Developers are the coordinators of the activities, converting ideas on paper into real property (Brueggeman and Fisher 1997).According to Kigige (2011), real estate refers to things that are not movable

such as land and improvements permanently attached to the land. Igbinoba (2012) states that real estate generally covers all aspects that is residential, commercial, retail and industrial. The increase in real estate investment has been motivated by a number of factors chief among them being that real estate investment is a permanent and long-lasting investment. Some of the benefits that have made real investment popular include; real estate provides a steady stream of income in the form of rental payments, it increases in value due to appreciation thus it is an excellent source of profit and since inflation is your friend in any investment when it drives up home construction costs, it drives up rents as well. For this study, the definition by Igbinoba (2012) will be used.

Demand for real estate is triggered by economic and population growth thus real estate participants construct houses to meet the demand and on return get cash flow from these investments. As the cycle continues, there is oversupply thus creation of trade off between supply and demand (Carey 2001). Financing of real estate has unique characteristics of monthly repayment, long maturity and constant increasing in prices of properties. Due to these characteristics, the prices of houses keep on increasing which eventually leads to un-affordability by potential home owners. Sabri(2001) surveyed the theoretical framework of financing subsidized housing in a developing environment in Palestine and emphasized that private firms are used to subsidize the cost of houses. In support, Thomson and Buckle (2005) argued that subprime mortgage loans are highly priced because they have high administrative costs. Lending firms register losses due to high default rate and long redemption duration.

1.1.3 Variations of Mortgage Interest Rates and Real Estate Growth

Mortgage Interest rates chargeable influence the mortgage quality in that the higher the interest the more expensive the mortgage product becomes, and the more susceptible to defaults due to high repayment costs. Low interest rates on the other hand encourage compliance and prompt repayment thus guaranteeing quality products.

Okonkwo (1997) affirms that finance is an essential contributor in housing production and that the main issues are sustainable availability, affordability and accessibility. With increase in urbanization, there is a greater need to increase housing to accommodate the rising population. Mortgage finance facilitates a faster growth in housing which caters for the need of the increasing population. The access to and tapping suitable sources of funding, by individuals and institutions is central to realizing their home ownership and investment decisions. Nevertheless, the amortization of mortgage loan makes it affordable to many borrowers who buy or construct their homes and repay the loan over a longer period of time without having to repay in lump sum.

1.1.4 Real Estate Industry in Kenya

Before the independence of Kenya in 1963, the housing finance sector was marked with instability as a result of political uncertainty. To illustrate this, Housing Finance Institutions (HFIs) deposits dropped significantly in 1962. However this changed from 1964 onwards, where mortgage industry underwent consolidation and growth. The major Housing Finance Institutions (HFIs) at that time were Finance Company of Kenya, Kenya Building Society (KBS) and Savings and Loan (S&L) Kigige (2008)

Okonkwo (1998), as regards to the real estate history says that, Kenya articulated its first housing policy in 1965/66 in Sessional paper No.5 with the long-term goal of ensuring that every household has access to a decent home. However even after more than 30 years, not much has changed though implementation of the policy helped reflect prevailing realities and resources. Several factors have led to this state of affairs. They range from poor past policy frameworks and uncontrollable growth in urban population and the current inaction by the public sector (Ngugi, 2010). However, taking a critical look, current housing problems could also be traced back to the colonial era, especially due to the deliberate marginalization and discrimination of the indigenous people. This is evidenced by the fact that, many squatter settlements and slums in Nairobi date back to the colonial era, when reserves and settlements without basic infrastructure and amenities were created for Africans. Past policies also tended to put too much emphasis on the government doing everything for its poor citizens from planning and land allocation to developing and maintain housing estates, Kigige (2008). The latter gave rise to the National Housing Corporation (NHC) charged with responsibility for providing subsidized housing. Funds for such housing projects came from the World Bank, the U.S government (through USAID) and other international development agencies. The problem is not so much as a result of direct housing by the government but stems from; the activities of the parastatals and issues of price controls, inappropriate building regulations and codes, as well as government failure to carry out efficiently some of its basic functions: planning and provision of services

1.1.5 Real Estate in Kisumu Town

Kisumu town lies geographically along the Latitude $0^{\circ}05'S$, Longitude $34^{\circ}44'E$. It is described as an urban area, having both upcoming and existing buildings. The area is classified as an urban area. The county borders Siaya, Homa-Bay, Kericho and Vihiga Counties in the Western part of Kenya (Igbinoba, 2012).

The town is set to experience a boom in the housing sector in the next five years. A series of development projects are scheduled to begin in January 2016, targeting low- and middle-income earners (Ojunga, 2014). And not just that: the developers at the lakeside town have chosen to use pre-engineered structural insulated panels (Sips) and interlocking bricks, both of which cut construction costs by up to 50 per cent. These technologies will be used in upgrading informal settlements in a partnership that ropes private developers into the ambitious Kisumu Urban Project (KUP) and the Kisumu Integrated Urban Development (KIUD) plans. Sips are a form of prefabricated construction technology popular with both Housing Finance and National Housing Corporation (NHC) projects (Muguchia, 2012).

NHC is also building some 180 housing units in the lakeside town. According to the director, Nishma Karia 2012, the demand for apartments is high in Kisumu, caused by the rising number holiday-makers from the Diaspora who are opting for rentals as opposed to hotels. Demand from the Diaspora market has seen realtors embark on homes expos to tighten their grip on the lucrative market (Njeru, 2010). The annual Kisumu Homes Expo has been making efforts toward showcasing the resurgent real estate sub-sector by targeting contacts and representatives of the Diaspora up market residential houses are to be found in the new Riat Hills and Mamboleo estates. Detached bungalows are migrating to the hillside estates following invasion of

Milimani, also an up market estate, by expansionists who have put up mixed-use developments (Ojunga, 2014)

1.2 Research Problem

There has been no agreement from scholars on the relationship between mortgage interest rates and real estate growth as the empirical findings show positive, negative and even no relationship between the two variables. Accessibility to mortgage financing has been a major problem over the past and many real estate developers have shied from taking up mortgages due to factors like high mortgage interest rates. (Karanja, 2011). However, for many developers who can afford the high interest rates, this has been the most preferred way of financing their investments in real estate. Due to extensive marketing carried out by mortgage financing, many people are finding mortgage financing attractive and are taking up the loan, some at negotiated interest rates (Njeru, 2010).

Many business people have decided to take up mortgages and this has seen Kisumu town grow at a higher rate with an increase of home owners by 26% from 30% within Kisumu town over a period of four years from 2008 to 2011(Igboba, 2012). Previous studies conducted revealed how people lose a lot of money in mortgages and sometimes even their houses but little has been done on unscrupulous contractors who take up these contracts taking advantage of a lot of estates coming up and therefore reduced inspections by the county government. Lenders have also stopped caring about what structures are brought up just allocating finances for these projects. (Whales, 2011), (Witney, 2013), (Rubio, 2008). The annual Kisumu Homes Expo has been making efforts toward showcasing the resurgent real estate sub-sector by

targeting contacts and representatives of the Diaspora up market residential houses are to be found in the new Riat Hills and Mamboleo estates.

Muguchia (2012) studies the effect of flexible interest rates and the results show a negative relationship between flexible interest rates and mortgage financing. Mutero (2007) did a study on access to housing finance in Africa, exploring the issues, he found that Kenya has a well-developed and regulated financial system and, the mortgage finance sector has become competitive and innovative, this sector serves only those households at the top of the income pyramid. Mutero (2007) recommends that there is need to assess the effects of mortgage financing on financial performance in commercial banks in Kenya. Whitney (2013) studies the factors contributing to Real Estate development within Kisumu city and finds a number of factors including increased population and increase in the number of financial institutions. Rubio (2008) studies how the proportion of fixed and variable-rate mortgages in an economy can affect the way shocks are propagated. Second she analyzes optimal implementable simple monetary policy rules and the welfare implications of this proportion. This is a foreign study without Kenyan variables. None of these studies captures Kisumu town and concentrate on my study variables. Therefore this study seeks to answer the research question and fill the gap in knowledge and empirical study, does variability of mortgage interest rates affect real estate growth within Kisumu town?

1.3 Research Objectives

To establish the effect of variability of mortgage interest rates on real estate growth in Kisumu town.

1.4 Value of the Study

The study is of significance as it adds to the existing literature and provides background information to research organizations and scholars who will need to carry out further study on real estate financing as a key area development.

Further, the study is of significance as it aids the Kenyan government in understanding the contribution of the real estate sector in its overall economic growth. This foster implementation of policies that reduce mortgage interest rates in order to promote funding of the real estate sector as a fundamental investment project.

The government of Kenya have faced a lot of problems that comes with real estate development this is because a town is never built as planned and sometimes houses collapse due to poor planning and so this study could be of great significance to Kisumu county government as it will give best recommendations that could stop estates from being developed in wet land and also follow best estate development procedures.

CHAPTER TWO: LITERATURE REVIEW

2.1 Introduction

This chapter discusses theoretical review empirical review and conceptual framework.

2.2 Review of Theoretical Literature

According to the classical theory, the mortgage interest rate can also describe the rate of return from supplying or lending loanable funds. The classical theory says the demand for capital and supply of capital determines the mortgage rate of interest. According to this theory, the property-law doctrine states that a mortgage transfers title to a property to the mortgagee, who holds it until the mortgage has been paid off, at which time title passes to the mortgagor.

2.2.1 Classical Theory of Interest

The basic idea of this theory is that the demand for capital and supply of capital determine the rate of interest. The rate of interest is determined at a point where demand for capital is equal to supply of capital. The demand for capital arises from investment and the supply of capital arises from savings. Since this theory explains the determination of rate of interest by real forces such as thrift, time preference and productivity of capital, it is also called the real theory or nonmonetary theory of interest (Blang, 1992).

The capital or savings is demanded because of its productivity. The marginal productivity of capital diminishes as more and more of it is used for production. The marginal product curve of capital slopes downwards from left to right. Because of this

the demand curve of capital slopes downwards from left to right. This means that lower the rate of interest, the greater shall be the demand for capital (Keynes, 1936)

The supply of capital comes from savings. The supply of savings is affected by rate of interest.

Higher the rate of interest, higher shall be the volume of savings and lower the rate of interest; lower shall be the volume of savings. Hence, the supply curve of savings or capital rises upward from left to right. The rate of interest is determined by the equilibrium of demand and supply. Interest rates will remain stable when the economy, the money market, the loanable funds market, and foreign currency markets are simultaneously in equilibrium (Mc Connell 2005). This theory will help in understanding how interest rates relate to mortgage financing as it varies with the demand and supply of mortgage financing.

2.2.2 Innovation Theory of Mortgage Financing

The theory was developed by Everett (Mitchell Rodgers 1962). Innovations are often adopted by organizations through two types of innovation decisions: collective innovation decisions and authority innovation decisions. The collection-innovation decision occurs when the adoption of an innovation has been made by a consensus among the members of an organization. The authority-innovation decision occurs when the adoption of an innovation has been made by very few individuals with high positions of power within an organization (Rogers, 2005). Unlike the optional innovation decision process, these innovation-decision processes only occur within an organization or hierarchical group. Within the innovation decision process in an organization there are certain individuals termed "champions" who stand behind an innovation and break through any opposition that the innovation may have caused. The champion within the diffusion of innovation theory plays a very similar role as to

the champion used within the efficiency business model Six Sigma. The innovation process within an organization contains five stages that are slightly similar to the innovation decision process that individuals undertake. These stages are: agenda-setting, matching, redefining/restructuring, clarifying and routinizing.

There are both positive and negative outcomes when an individual or organization chooses to adopt a particular innovation. Rogers (2005) states that this is an area that needs further research because of the biased positive attitude that is associated with the adoption of a new innovation (Rogers, 2005). In the Diffusion of Innovation, Rogers lists three categories for consequences: desirable vs. undesirable, direct vs. indirect, and anticipated vs. unanticipated. The innovation adoption curve of Rogers is a model that classifies adopters of innovations into various categories, based on the idea that certain individuals are inevitably more open to adaptation than others.

2.2.3 Lien Theory of Mortgage Financing

According to this theory, the property-law doctrine states that a mortgage transfers title to a property to the mortgagee, who holds it until the mortgage has been paid off, at which time title passes to the mortgagor. Some banks retain and treat the mortgage as a title theory. Since the mortgage is said to hold a title interest, she has the right to possession under this theory (Buckle and Fisher, 1997). Some banks apply a lien theory. This theory only gives the mortgagee a lien interest in the property. In a Lien theory, the mortgage is treated as having transferred title to the mortgagee, subject to the mortgagee's duty to recovery if payment is made. The title is said to remain in the mortgagee until the mortgage has been satisfied and foreclosed. Although the mortgagee has the right of possession to the property, there is generally an express agreement giving the right of possession to the mortgagor. The mortgagee is said to

hold the title for security purposes only. The mortgagor is given the right of possession (Buckley and Kalarickal, 2004).

The Mortgage interest is a security interest on mortgage, which forms a lien on the property. In this theory the right to possession arises upon a default. The mortgagor has a right to sue the mortgagee for any interference with his right of possession (Buckley and Kalarickal, 2004). This theory will help understand the different study variables and the process of mortgage financing and how collateral is used by mortgage financiers to secure the loan.

2.3 Variations of Mortgage Interest Rates and Real Estate Growth

Positive mortgage Interest rates (lending in excess of inflation rates) are viewed as prerequisite for successful and sustainable finance (Buckley, 1999). Long term loans, such as mortgage financing loans have higher interest rates as a result of expectation of, among other factors higher inflation, (Gitman, 1997). The market rate of interest on mortgage loans is established by what borrowers are willing to pay for the use of funds over a specified period of time and what lenders are willing to accept in the way of compensation for the use of such funds. Real estate tends to be highly levered and thus the rate of return earned by equity investors tends to be affected by changes in mortgage interest rate. Even where the investor has a fixed rate of mortgage, an increase in interest rate may lower the price a subsequent buyer is willing to pay. Furthermore, the yield rate (required rate of return) that an investor requires for real estate tends to increase with the overall levels of interest rates in the economy (Fisher, 1999).

Excessive high interest rates in Kenya Finance sector have strongly discouraged long-term investment and constrained Kenya's ability to grow. With nominal interest rates ranging from 20-30% the private sector is unable to borrow to finance long term investments in the mortgage sector. In addition, the 11-18% point spread between lending and deposit rate is much higher than the point spread common in other developing countries (Economic Report on Africa 2002).

According to Kolbe, Greer & Rudner (2003), an approximated one third of all mortgage loans are made to fund new housing construction. They further state that housing is a sector in the industry in which value is created. Its role in the overall economic development cannot be over emphasized. Lorimer (2008) stated that financial institutions invested profoundly in urban improvement in Canada. This was marked by an increase in the number of mortgage loans over the years on real estate with most of it being urban real estate. There has also been a rise in competition by banks and other mortgage lending institutions in advancing mortgage loans. This has improved accessibility of mortgage and lead to development in housing (Claurette and Sirmans, 2010).

Tirtiroglo (1997) asserts that private investors are short of adequate equity funds to finance their development and especially real estate which require a large capital outlay. They thus turn to mortgage financing for faster development as an investment that would bring them returns after a certain period of time. David and Zhu (2004) emphasized the role of mortgage financing to real estate development by funding construction projects, purchase of land and existing buildings, financing companies that they may fund real estate and lending to non-financial firms based on real estate collateral.

Herzog and Early (2000) further states that mortgage financing has been behind the remarkable growth in the real estate sector in the USA. According to UN-Habitat (2009) acquisition of homes in USA is a momentous measure of economic health. Majority of the homes are acquired through mortgage finance which is the most common source of financing real estate growth. This is further supported by Kings (2006) who emphasized housing as a store of wealth which can allow owners to develop housing and non-housing activities. The housing stock which is a valuable asset can thus be used as security for more loans hence promoting development.

Boleat (1982) observed an increasing trend in the issue of mortgage loans over the years especially in Australia. This resulted to a positive development change not only in the housing sector, but also in the State economy. Individuals and developers obtained mortgage loans for construction of new houses or purchase of already built houses. Kings (2006) stated the role of government in the regulation of the mortgage finance industry. He further explained that the need for government to regulate housing finance is due to the expensive and valuable nature of housing, not forgetting the limited supply and high demand. Thus, the government regulates the market through interest rates, rent controls and regulating standards which impose costs on property-owners. Despite government regulation, Kings (2006) concludes by stating that, housing finance accomplish an extra specified purpose which is to guarantee a housing scheme that offers quality and access to households.

2.4 Economic Factors Affecting Real Estate Growth

According to Klimczak (2010) on the capital market, one of important criteria for investment decision is the issue of selecting sources, possibilities and methods of

raising the value of the investment object. Familiarity with sources of value as well as factors of which determine the value and impact upon the attractiveness of a capital market segment in question, allows capital owners to make effective and rational investment decisions. Issues concerning economic and physical properties of the estate that constitute its value are of great importance for prospective investors on the real estate market.

2.4.1 Exchange Rate

According to O'Sullivan & Sheffrin (2003), exchange rate is the value of one currency for the purpose of conversion to another. It is the price of a nation's currency in terms of another currency. An exchange rate thus has two components, the domestic currency and a foreign currency, and can be quoted either directly or indirectly. In a direct quotation, the price of a unit of foreign currency is expressed in terms of the domestic currency (Mongeri, 2011). In an indirect quotation, the price of a unit of domestic currency is expressed in terms of the foreign currency. An exchange rate that does not have the domestic currency as one of the two currency components is known as a cross currency, or cross rate. Exchange rate movements significantly affect the real estate market owing to its information content to the investors. When there are high fluctuations in the exchange rates, the exchange rates movement, there would be high movements of market return volatility. Some studies have concluded that there is a strong relationship between exchange rate movement and interest rates volatility (Otwoma, 2012), while others have not. Most exchange rates use the US dollar as the base currency and other currencies as the counter currency. However, there are a few exceptions to this rule, such as the euro and Commonwealth currencies like the British pound, Australian dollar and New Zealand Dollar (Mongeri, 2011).

2.4.2 Inflation Rate

Inflation occurs when the prices of goods and services increase over time (Kimani & Mutuku, 2013). Inflation cannot be measured by an increase in the cost of one product or service, or even several products or services. Rather, inflation is a general increase in the overall price level of the goods and services in the economy. It is measured as an annual percentage increase. As inflation rises, every currency an investor own buys a smaller percentage of a good or service. The effects of inflation on the economy are diverse and can be both positive and negative. The negative effects are however most pronounced and comprise a decrease in the real value of money as well as other monetary variables over time (Blanchard, 2000). As a result, uncertainty over future inflation rates may discourage investment and savings, and if inflation levels rise quickly, there may be shortages of properties as realtors begin to hoard out of anxiety that prices may increase in the future (Kimani & Mutuku, 2013).

2.4.3 Money Supply

As indicated earlier, Cummings (2010) presents money supply or money stock is the total amount of monetary assets available in an economy at a specific time. There are several standard measures of the money supply, including the monetary base, M1, and M2. The monetary base is defined as the sum of currency in circulation and reserve balances (deposits held by banks and other depository institutions in their accounts at the Federal Reserve). According to Agénor & Alper (2012) Economists analyze the money supply and develop policies revolving around it through controlling interest rates and increasing or decreasing the amount of money flowing in the economy. Money supply data is collected, recorded and published periodically, typically by the country's government or central bank. Public and private sector analysis is performed

because of the money supply's possible impacts on price level, inflation and the business cycle (Agénor & Alper, 2012).

2.4.4 Real Output

Real Gross Domestic Product (real GDP) is a macroeconomic measure of the value of economic output adjusted for price changes i.e., inflation or deflation (OECD, 2012). This adjustment transforms the money value measure, nominal GDP, into an index for quantity of total output. The result of an economic process that has used inputs to produce a product or service that is available for sale or use somewhere else. Net output, sometimes called net put is a quantity, in the context of production that is positive if the quantity is output by the production process and negative if it is an input to the production process. In macroeconomics, the question of why national output fluctuates is a very critical one. And though no one answer has been come up with, there are some factors which economists agree on which makes output go up and down (Moss, 2007). If one takes growth into consideration, then most economists will agree that there are three basic sources for economic growth i.e. increases in labour, increase in capital and increase in efficiency of the factors of production. Just like increases in inputs of fact ors of production can cause output to go up, just like that, anything that causes labour, capital or efficiency to go down will cause a decline in output or at least a decline in its rate of growth (Moss, 2007)

2.5 Empirical Evidence

Martinez and Maza (2003) found out that housing prices and real income were positively related to mortgage credit while interest rates have a negative impact on the variation in short term credit. Ngugi (2004) brought out that interest rates effect on the amount of credit to the economy is largely minimal. Instead the overall net credit

available in Kenya financial industry is influenced more by other factors such as information asymmetry between the borrowers and the lenders, value of the reserve requirements, debit credit controls on the banking system and perception of risk regarding the solvency of other banks within the banking system.

Gerlach and Peng (2005) examined the long and short term relationship between interest rates and mortgage credit with an application to the Hong Kong housing market and found out that the increase in interest rates were positively and significantly related to growth in long term mortgage loans. Rubio (2008) studied how the proportion of fixed and variable-rate mortgages in an economy can affect the way shocks are propagated. Second it analyzes optimal implementable simple monetary policy rules and the welfare implications of this proportion. A New Keynesian dynamic stochastic general equilibrium model is developed and solved that features a housing market and a group of constrained individuals who need housing collateral to obtain loans. A given proportion of constrained households borrow at a variable rate, while the rest borrows at a fixed rate. The model predicts that in an economy with mostly variable-rate mortgages, an exogenous interest rate shock has larger effects on borrowers than in a fixed-rate economy.

Aggregate effects are also larger for the variable-rate economy. For plausible parameterizations, differences are muted by wealth effects on labor supply and by the presence of savers. More persistent shocks, such as initiation target and technology shocks, cause larger aggregate differences. From a normative perspective it finds that, in the presence of collateral constraints, the optimal Taylor rule is less aggressive against inflation than in the standard sticky-price model. Furthermore, for given monetary policy, a high proportion of fixed-rate mortgages are

Welfare enhancing. Mutero (2007) found out that Kenya experienced credit crunch in the period between 1993 and 2002 because formal lending institutions preferred less risky investments in government securities at the expense of small to medium enterprises. This situation is unfavorable to growth of mortgage markets since they would lack financing needed.

In a study done in the USA they analyzed recent trends in households' mortgage decisions, focusing in particular on the choice between fixed rate mortgages and adjustable-rate mortgages.

They document that the market share of ARMs has declined significantly across all segments of the mortgage market in recent years. Using a simple model, they present evidence that this decline in the ARM share can largely be accounted for by factors that explain mortgage choice in earlier periods in particular, measures of the relative borrowing costs for fixed-rate and adjustable-rate mortgages. Supply-side factors, especially the increasing share of the conforming mortgage market, are also important in accounting for the fall in the ARM share over this period (Moench, Vickery & Aragon, 2010).

Olweny (2011) sought to establish the link between the level of interest and the volatility of interest rates in Kenya using the Treasury bill rates from August 1991 to December 2007. The main variable for the study was the short term interest rate series. In Kenya, this is the Central Bank three month Treasury bill rate. The interest rate volatility was studied using the general specification for the stochastic behavior of interest rates which is tested in a Stochastic

Differential Equation (SDE) for the instantaneous risk free rate of interest as earlier defined by Chan. The study applied the monthly averages of the 91-day T-BILL rate for the period between August 1991 and December 2007 which were obtained from the Central Bank of Kenya. The results of the study were consistent with the hypothesis that the volatility is positively correlated with the level of the short term interest rate as documented by previous empirical studies. The key findings revealed that there exists a link between the level of short-term interest rates and volatility of interest rates in Kenya.

Muguchia (2012) studies the effect of flexible interest rates and the results show a negative relationship between flexible interest rates and mortgage financing. The document argues that if banks charge a fixed rate of interest, it would be possible for investors to plan for a predictable amount of money to be repaid hence stability and increased level of borrowing. Other independent variables in the study include; inflation, non-performing loans, liquidity ratio and negative effects on mortgage financing, while money supply, GDP, customer deposits, bank capitalization and bank size had positive effect on mortgage financing. The study will rely on secondary data from annual reports of the banks and regression analysis was mainly used to analyze the data.

2.6 Summary of Knowledge Gaps

The variations of interest rates on the growth of real estate and mortgage financing remain Controversial in theory. The theories are more generalized rather than specific and inconclusive i.e. for this particular study theories are limited or barely breakdown the variables.

Empirical findings show positive, negative and even no relationship between the two variables. Aguko (2012) concludes that interest rate setting on mortgage debt; government instruments and fiscal measures are the major policies that govern mortgage financing. Gerlach and Peng,(2005) found out that the increase in interest rates were positively and significantly related to growth in long term mortgage loans for real estate development. (Muguchia, 2012) shows a negative relationship between flexible interest rates and mortgage financing for real estate growth.

Global studies have explored the relationship between interest rates and mortgages extensively and they are based on different contextual conditions hence the diversity of findings. Locally empirical study in the relationship between interest rates real estate growth and mortgages is not covered. None of these studies captures Kisumu County and none tries concentrate on my study variables. Therefore this study seeks to answer the research question and fill the gap in knowledge and empirical study in Kenyan context, what is the effect of interest rates on the relationship between mortgage financing and real estate growth in Kisumu County?

CHAPTER THREE: RESEARCH METHODOLOGY

3.1 Introduction

This chapter addressed the approach to the study. It provided a description of research design, target population, sampling size, sampling techniques, data collection instruments and, methods of data presentation and analysis, and explain how validity of the data collection tools will be achieved.

3.2 Research Design

This study was done through the use of a triangulated research design. According to Cooper and Schindler (2003), a triangulated study is concerned with finding out the what, where and how of a phenomenon by combining two study designs, for this case, both descriptive and longitudinal research designs was used. This method is concerned with the intense investigation of problem solving situations in which problems are relevant to the research problem.

This study design was the most appropriate as the study involved two variables and looks at a four year duration. Josphat (2013) studied the effect on interest rates on mortgage uptake in Kenya and used a description research design but only captures the interest rates for 2012. In a study to investigate the factors influencing mortgage uptake Kenya, a descriptive survey was employed in this study. This study targeted 238 staffs in selected department in Housing finance Corporation, Kenya. Stratified random sampling method was conducted to capture the various levels of staffs and management. The study concluded that interest rate setting on mortgage debt; government instruments and fiscal measures are the major policies that govern mortgage financing (Aguko, 2012).

3.3 Population

The population of this study comprised of all the 28 licensed commercial banks operating within Kisumu town with major focus on the major 5 dealing with mortgage financing. These commercial banks are licensed and regulated pursuant to the provisions of the Banking Act and the Regulations and Prudential Guidelines issued there under. Currently there are 44 licensed commercial banks with only 28 operating within Kisumu County (CBK, 2012).

3.4 Sampling Designs and Techniques

Sampling design specifies for every sample its possibility of being drawn. The most appropriate method for this study is stratified random sampling since the method entails grouping the population into categories based on their varying characteristics. The number of each stratum shall be established from which a sample is selected randomly based on number of units in each stratum. The subjects of the strata shall then be pulled to form a random sample.

3.5 Data Collection

The study used secondary sources. This was from the 28 registered financial institutions within the Kisumu town. Secondary data was collected using the secondary data capture form. Information such as past mortgage interest rates from the year 2009 to 2013 charged by various mortgage financiers and the registered real estate owners within the study area and the amount of mortgage loan uptake at the varied interest rates.ds

3.6 Data Analysis and Presentation

Analysis of data involved descriptive and inferential statistics and Statistical Package for Social Sciences software was used in the analysis. In presenting the research findings, tables were used to interpret and present data in percentages. To determine the correlation between variables multiple regression analysis will be conducted. The level of significance was at 95%

Regression model

$$Y = \beta_0 + \beta_1X_1 + \beta_2X_2 + \beta_3X_3 + \beta_4X_4 + \epsilon$$

Where Y is the variable- real estate growth in Kenya

β_0 -is the regression constant,

β_1 , β_2 , β_3 and β_4 are the coefficients of independent variables,

X_1 is mortgage uptake for year 2010 X_2 is mortgage uptake for year 2011, X_3 is the amount for year 2012 X_4 is mortgage uptake for year 2013.

ϵ is the error term

Table 3.1: Regression Model

VARIABLE	DEFINATION	FORMULAR
Y	Real Estate growth in Kenya	Was measured by comparing real estate growth yearly in Kisumu
0	Constant	
	Coefficient of the variable	The Mean Mortgage Interest rates for each respective year were computed.
X1	Mortgage uptake for year 2010	The total amount of mortgage loans disbursed by 28 banks was summed up for 2010
X2	Mortgage uptake for year 2011	The total amount of mortgage loans disbursed by 28 banks were summed up for 2011
X3	Mortgage uptake for year 2012	The total amount of mortgage loans disbursed by 28 banks were summed up for 2012
X4	Mortgage uptake for year 2013	The total amount of mortgage loans disbursed by 28 banks were summed up for 2013
E	Error	

Analysis of variance (ANOVA) will be used to test significance of the model. This is because in the above model, multiple sample cases will be involved. Using this technique one can draw inferences about whether the samples have been drawn from population having the same mean (Kothari).

CHAPTER FOUR: DATA ANALYSIS, RESULTS AND DISCUSSION

4.1 Introduction

This chapter presents the findings built on the secondary data collected. This is essential for a scientific study and for ensuring that we have all relevant data for making contemplated comparisons and analysis, technically speaking, processing of data involves editing, coding, classification and tabulation of collected data so that they are agreeable to analysis. Analysis refers to the computation of certain measures along with probing for patterns of relationships that exists in the data-groups (Lee & Wang, 2003).

4.2 Data Analysis

In analyzing the data, MS Excel was used to perform the analysis as it aides in organizing and summarizing the data by the use of descriptive statistics such as tables. After tabulation the analytical model in Table 3.1 together with percentages and coefficients was calculated to support or conflict the study tests.

4.2.1 Mortgage Disbursed

Table 4.1 Mortgage Disbursed

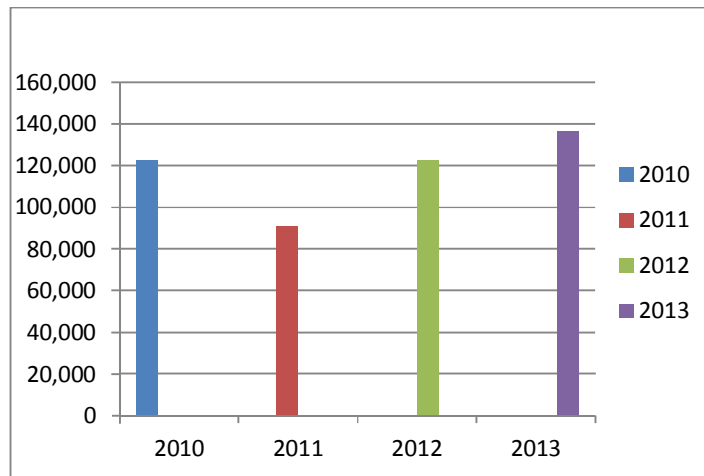
Year	Mortgage disbursed in Kshs. Millions	% change
2010	122,157	
2011	90,403	-26.2
2012	122,157	35.1
2013	136,480	11.73

Source: Research findings

From table 4.1, the amount of mortgage disbursed in 2010 was (122157), 2011 was (90403), 2012 was (122157) and 2013 was 136480) in the four years, started at a higher note and then it reduced after which 2012 it started increasing. There was reduction in the mortgage disbursement and this revealed a negative change after which, there was a high pitch increase in growth and then in 2013 growth reduced.

Mortgage disbursement, 2010/2011/2012/2013

Figure 4.1 Mortgage Disbursement



Source: Research findings

4.3 Mortgage Interest Rates

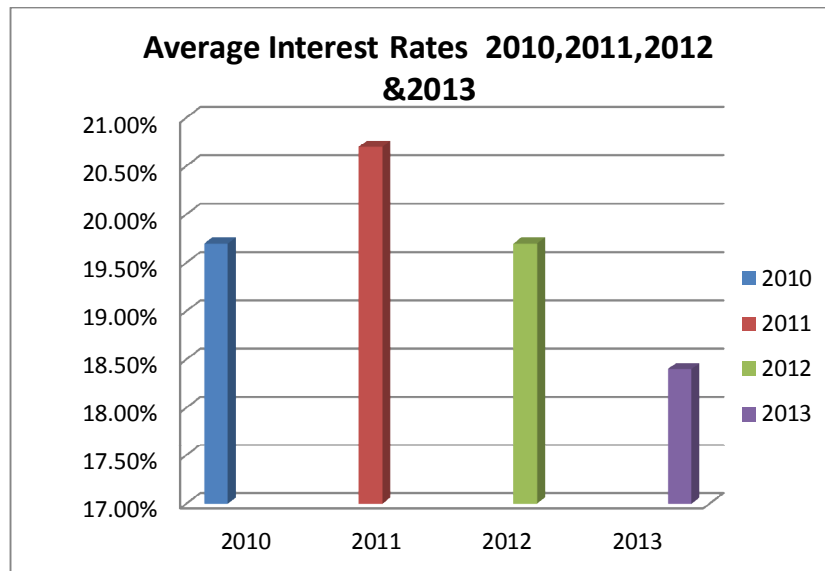
The average mortgage disbursement interest rates was, in 2010 (19.7), 2011 (20.7), 2012 (19.7) and 2013 (18.4) the interest rate highest at 20.7 in 2011 and lowest in 2013 at 18.4. As indicated, the average mortgage interest rates were alternating either positive or negative change. The results of the analysis shown in table 4.2 and Figure 4.2.

Table 4.2 Mortgage Interest Rates

Year	Average	% change
2010	19.7	
2011	20.7	5.3
2012	19.7	-5
2013	18.4	-6.6

Source: Research findings

Figure 4.2: Mortgage Interest Rates

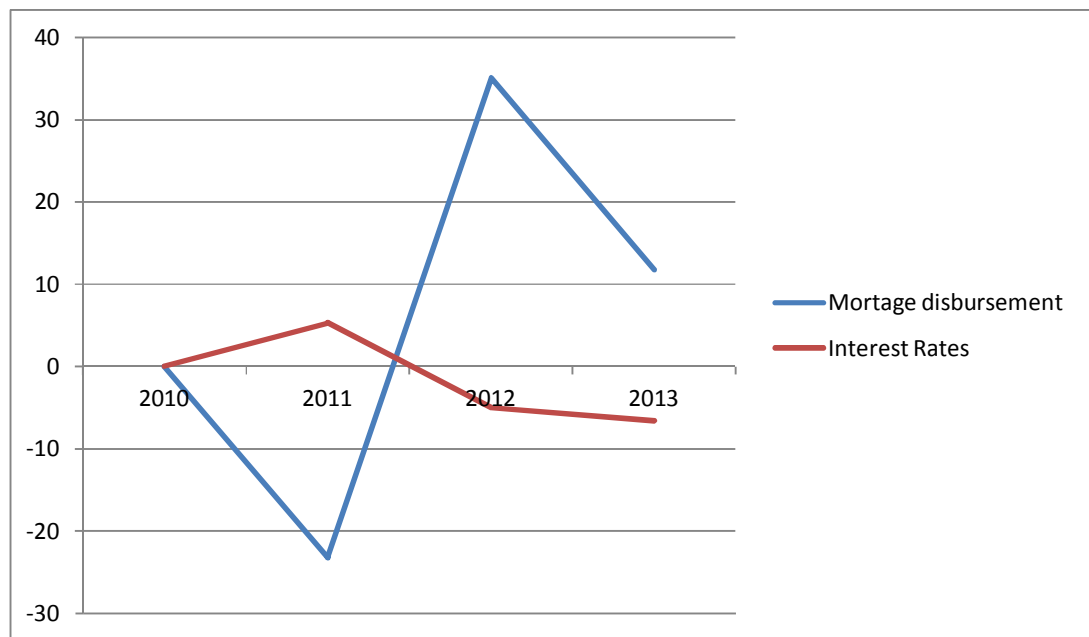


Source: Research findings

4.4 Comparison Between Mortgage Disbursement and Average Interest Rates

As we begin 2010 there is a big difference in the movement of the graph in that as mortgage disbursement reduce, interest rates increases up to 2011 where the interest rates sharply reduces to the negative until 2012 where it gradually reduces. On the other hand, Mortgage disbursement sharply reduces until 2011 and then sharply increases until 2012 then again sharply reduces as shown in Figure 4.3. from the above analysis, it is evident that the loan uptake increases with the decrease in interest rates and decreases with the increase of interest rates.

Figure 4.3 Comparison Between Mortgage Disbursement and Average Interest Rates



Source: Research findings

4.5 Non-Performing Loans

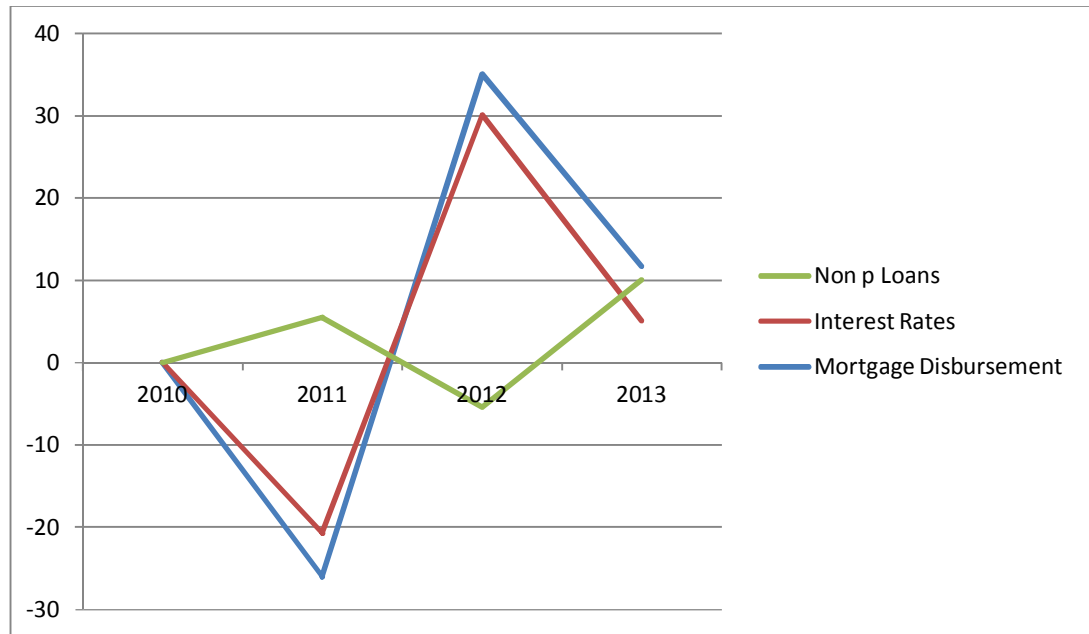
The variation of non-performing loans in table 4.3 in 2011 was high by 26.2% after which in 2012 it dropped by 35.5% which is positive. Again in 2013 non-performing loans increased to 11.7% Nonperforming loans is introduced in this analysis to act as control variable in this study.

Table 4.3 Nonperforming Loans

Year	No of NPL	% change
2010	4363	
2011	3220	26.2
2012	4364	-35.5
2013	4874	11.7

Source: Research findings

Figure 4.4 Nonperforming Loans



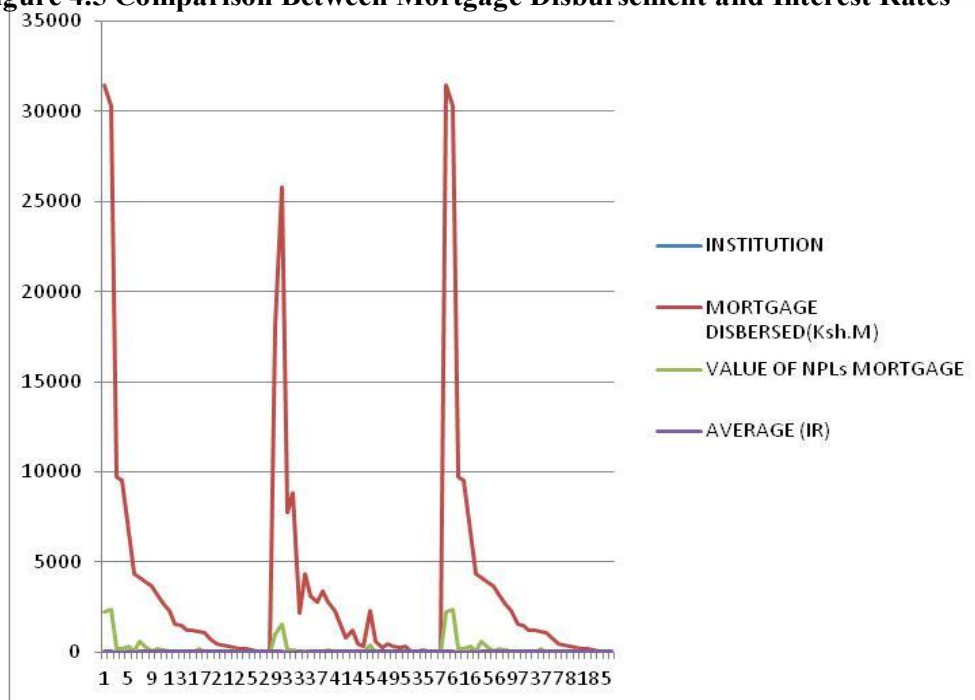
Source: Research findings

In the figure, it is clearly revealed that between 2010 and 2011 there was a negative change in interest rates and mortgage disbursement after which there was a positive change meaning that both interest rates and mortgage disbursement increased. On non performing loans, there was gradual positive change until mid 2010 when again there was negative change. As can be seen in the graph, none performing loans is partially varied to other variables. The trend of change in mortgage disbursement and change in interest rate are similar except that the degree is varied. The trend in change in non- performing loans is partially varied to the loan disbursement and interest rates.

4.6 Comparison Between Mortgage Disbursement and Interest Rates

The figure below shows the movement of the change of each factor over the four years. The trend of change in mortgage disbursement and change in non-performing loans are similar except that the degree is varied. The trend in change in interest rates is not very clear but can be viewed as partially varied to the other two factors as illustrated in figure 4.5

Figure 4.5 Comparison Between Mortgage Disbursement and Interest Rates



Source: Research data

4.7 Regression Analysis

The analysis equation was analyzed using MS- excel regression tool to obtain statistical results to assist in understanding the relationship between mortgage interest rates and mortgage financing in Kisumu county Kenya with non-performing loans as a control variable.

Table 4.5 Regression Statistics

<i>Regression Statistics</i>								
Multiple R	0.61862							
R Square	0.38270							
Adjusted R Square	0.36800							
Standard Error	2.921364							
Observations	87							
ANOVA								
	<i>Df</i>	<i>SS</i>	<i>MS</i>	<i>F</i>	<i>Significance F</i>			
Regression	2	444.4421	222.2211	26.03837	1.59E-09			
Residual	84	716.8869	8.534368					
Total	86	1161.329						
	<i>Coefficients</i>	<i>Standard Error</i>	<i>t Stat</i>	<i>P value</i>	<i>Lower 95%</i>	<i>Upper 95%</i>	<i>Lower 95.0%</i>	<i>Upper 95.0%</i>
Intercept	21.37808	0.377588	56.61748	0.9102	20.6272	22.12895	20.6272	22.12895
MORTGAGE DISBERSED (Ksh.M)	-0.00085	0.000144	-5.91384	0.98008	-0.00114	-0.00057	-0.00114	-0.00057
MORTGAGE INTEREST RATES	0.008823	0.002022	4.364593	0.3605	0.004803	0.012843	0.004803	0.012843

Source: Research data

The main objective of the study was to establish the effect of variability of mortgage interest rates on real estate growth in Kisumu town.

The results above show a high negative relationship between the mortgage disbursement and mortgage interest at -0.00085 growth of mortgage financing as given by the β_1 coefficient which is -0.7223 . The β_2 coefficient is 0.008823 , which implies that a very low positive relationship between non-performing and growth of mortgage disbursement

However the P values which show the extent of reliability on the data on each variable give P value for the intercept as 90% which means there is 90% probability results, while that of Mortgage disbursement 98% and that of non-performing loans is 36%. These values are greater than 10% implying that the significance of coefficients is very low. This implies that the mortgage interest rate and non-performing loans variables have a small margin of influence on the growth mortgage market in Kisumu town. Mortgage Interest rates chargeable influence the mortgage quality in that the higher the interest the more expensive the mortgage product becomes, and the more susceptible to defaults due to high repayment costs. Low interest rates on the other hand encourage compliance and prompt repayment thus guaranteeing quality products.

4.8 Discussion of Findings and Interpretation

The results obtained show that the independent variables are not adequate predictors of the rate of growth of mortgage financing as given by the coefficient of variation $R^2 = 0.38$. This implies about 62% of change of mortgage disbursed cannot be explained. Other variables need to be factored in the analysis to have comprehensive prediction

of change in mortgage financing. This implies that the mortgage interest rate and non-performing loans variables have a small margin of influence on the growth mortgage market in Kisumu town. Mortgage Interest rates chargeable influence the mortgage quality in that the higher the interest the more expensive the mortgage product becomes, and the more susceptible to defaults due to high repayment costs. Low interest rates on the other hand encourage compliance and prompt repayment thus guaranteeing quality products.

In the ANOVA analysis the significance F value is 11% which means that only 11% of the output occurred by chance. This is relatively high and means significance of the model is low.

The graphical summary of change in mortgage financing and change in mortgage interest rates show a similar trend. This means that changes in mortgage interest rates have minimal effect on change on mortgage disbursement. Real estate tends to be highly levered and thus the rate of return earned by equity investors tends to be affected by changes in mortgage interest rate. Excessive high interest rates in Kenya Finance sector have strongly discouraged long-term investment and constrained Kenya's ability to grow. Even where the investor has a fixed rate of mortgage, an increase in interest rate may lower the price a subsequent buyer is willing to pay but at a certain level as interest rates is just one of the factors affecting mortgage uptake, others include inflation, mortgage availability. Furthermore, the yield rate (required rate of return) that an investor requires for real estate tends to increase with the overall levels of interest rates in the economy.

CHAPTER FIVE: CONCLUSION AND RECOMMENDATIONS

5.1 Introduction

This chapter involves drawing of conclusions after interpreting the data analysis in the previous chapter. This conclusion summarizes the study and finally gives recommendations.

5.1. Summary of Study

The study was looking at the variability of mortgage interest rates and real estate growth in Kisumu town Kenya. Statistical results show a negative relationship between these two variables indicating that as the interest rates increase mortgages will be affected to an extent.

Statistical analysis results show that the two independent variables determine variation of growth of mortgage market up to 38% which leaves 62% unexplained. This implies that other factors contribute to the growth of mortgage disbursement hence to real estate growth; these will include exchange rate, inflation rates money supply and real output. Therefore it is important to emphasize that interest rates are the real factor in the real estate growth as stated by this research.

The number of non-performing loans was reducing from 2010 up to 2011 when again it increased slightly before dropping until 2013. The ratio of number of non-performing loans and number of mortgage loans held by banks had reduced from 5% to 2011. This is a positive change to the market and as the mortgage market expands this ratio should be maintained or reduced to increase efficiency in the market. Non-performing loans affect flow of money in the market also leading to inhibited growth.

5.2 Conclusion

From the statistical results, there is need for the researchers to consider many factors in regards to variability of mortgage interest rates as there exists minimal variability between the interest rates and mortgage disbursement. The study further concluded that there existed little information in regard to non -performing loans and also for the four year leading to inadequate data leading to less credible analysis and therefore future analysis for at least more years to give consistent and conclusive conclusion.

It is important to note that the mortgage market has many variables as shown by these results that interest rate are just but a fraction of the determinants. However with the limitation unavailability of credible information on mortgage statistics identified in this research further analysis of interest rate can be conducted if data is made more accessible to give a better conclusion of the extent of effects of interest rate.

5.3 Recommendation

This research recommended that there is need for collection of primary information so that the respondents could give their experience with respect to non -performing loans. Central bank could only give the data for the mortgage disbursement but not for the individuals taking up the mortgages.

The study further recommended exploitation of other variables like the economic factors so that mortgage uptake challenge could be fully exhausted so that mortgage uptake problems could be a problem of the past and also the government should give subsidies and also curb high interest rates to the people who are willing to take up mortgages and this could help in real estate growth.

5.4 Limitation

The study was limited to variability of mortgage interest in Kisumu and therefore the study could not be used to generalize mortgage uptake country wide.

Inadequate data as the regulator from the central bank did not allow for the submission of detailed information, the banks also with-hold the information, stating that internal policies limit submission of data to the public. This tremendously affected the study. Therefore, changes were made to adapt the research to the limitations.

In preparing and conducting the complete project is costly and it is evident why research firms need sufficient and adequate financing for me as a researcher there was financial constraints that I had to go through.

5.5 Area for Further Research

The study suggests that the topic mortgage awareness be made the background for future studies so that it can enhance real estate growth further increasing mortgage uptake.

Future study needs be enhanced on accommodation of low income earners on uptake of mortgage financing so that development of real estate is not selective but inclusive and accommodative to all.

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APPENDICES

Appendix 1: List of Commercial Banks in Kenya as at December 2014

1. African Banking Corporation Ltd
2. Bank Of India
3. Bank of Africa Kenya Ltd
4. Bank Of Baroda (Kenya) Ltd.
5. Barclays bank of Kenya Ltd
6. CFC Stanbic Bank Limited
7. Chase Bank Kenya Ltd
8. Charterhouse Bank Ltd
9. Citibank N A Kenya
10. Co-operative Bank of Kenya Ltd
11. Commercial Bank of Africa
12. Consolidated Bank
13. Credit Bank Ltd
14. Development Bank Of Kenya Ltd
15. Diamond Trust Bank
16. Dubai Bank Kenya Ltd
17. Ecobank Kenya Ltd
18. Equatorial Commercial Bank Limited
19. Equity Bank
20. Family Bank ltd
21. Fidelity Commercial Bank Ltd

22. Fina Bank
 23. First community Bank Ltd
 24. Giro Commercial Bank Ltd
 25. Guardian Bank Ltd.
 26. Gulf African Bank Ltd
 27. Habib Bank A.G Zurich
 28. Habib Bank Ltd
 29. Imperial Bank Ltd
 30. Investments & Mortgages Bank Limited ó I&M Bank
 31. Jamii Bora Bank Ltd
 32. K-Rep Bank
 33. KCB Bank
 34. Middle East Bank (K) Ltd
 35. National Bank
 36. NIC Bank
 37. Oriental Commercial Bank Ltd.
 38. Paramount Universal Bank Ltd
 39. Prime Bank
 40. Standard Chartered Bank Kenya Ltd
 41. Trans-National Bank(K) Ltd
 42. UBA Kenya Bank Ltd
 43. Victoria commercial Bank Ltd
- Non-Banking Financial Institution
1. Housing Finance Company Ltd

CBK Bank supervision report 2012 pg. 82-96

Appendix II: (Secondary Data Used)

	2010		
INSTITUTION	MORTGAGE DISBERSED (Ksh.M)	VALUE OF NPLs MORTGAGE (Ksh.M)	AVERAGE INTEREST RATE %
KENYA COMMERCIAL BANK LTD	31,455	2,218	15.90
HOUSING FINANCE COMPANY LTD	30,293	2331	15.00
STANDARD CHATERED BANK LTD	9,723	162	14.00
CFC STANBIC LTD	9,488	190	13.90
COOPERATIVE BANK OF KENYA LTD	6,643	312	20.05
BARCLAYS BANK LTD	4,341	19	13.00
NATIONAL BANK OF KENYA	4,123	572	15.50
CONSOLIDATED BANK OF AFRICA	3,848	286	23.00
EQUITY BANK LTD	3,684	35	22.00
COMMERCIAL BANK OF AFRICA LTD	3,194	153	15.20
DEVELOPMENT BANK LTD	2,617	147	24.90
I&M BANK LTD	2,309	26	15.50
CHASE BANK	1,531	28	20.00
AFRICAN BANKING CORPORATION LTD	1,506	37	22.00
BANK AFRICA LTD	1,212	5	22.90
FAMILY BANK LTD	1,193	7	24.50
ECO-BANK LT	1136	183	22.90
GULF AFRICAN BANK LTD	1069	3	15.70
NIC BANK LTD	715	0	21.10
BANK OF BARODA LTD	434	2	20.20
DIAMOND TRUST BANK OF KENYA LTD	423	0	20.60
PRIME BANK LTD	350	0	19.90
FIDELITY BANK LTD	261	115	22.50
JAMII BORA BANK LTD	218	7	20.00
TRANSNATIONAL BANK LTD	192	25	23.50
BANK OF INDIA	101	0	22.00
VICTORIA COMMERCIAL	63	0	21.70

BANK LTD			
HABIB BANK LTD	18	0	20.60
ORIENTAL COMMERCIAL BANK LTD	17	0	22.70
TOTAL	122,157	6,863	
AVERAGE INTEREST RATE	19.7%		
AVERAGE LOANS DISBURSED	4363		

	2011		
INSTITUTION	MORTGAGE DISBURSED (Ksh.M)	VALUE OF NPLs MORTGAGE (Ksh.M)	AVERAGE INTEREST RATE %
KENYA COMMERCIAL BANK LTD	18,105	1024	15.90
HOUSING FINANCE COMPANY LTD	25,777	1579	15.20
STANDARD CHATERED BANK LTD	7,753	119	13.40
CFC STANBIC LTD	8,807	83	14.00
COOPERATIVE BANK OF KENYA LTD	2,166	42	23.90
BARCLAYS BANK LTD	4,372	22	13.00
NATIONAL BANK OF KENYA	3,100	81	16.00
CONSOLIDATED BANK OF AFRICA	2,764	69	25.00
EQUITY BANK LTD	3,387	24	24.00
COMMERCIAL BANK OF AFRICA LTD	2,769	87	15.20
DEVELOPMENT BANK LTD	2,273	69	24.00
I&M BANK LTD	1,546		14.50
CHASE BANK	777	8	20.00
AFRICAN BANKING	1,237	7	22.00

CORPORATION LTD			
BANK AFRICA LTD	482		22.00
FAMILY BANK LTD	330	1	24.50
ECO-BANK LT	2,269	359	22.70
GULF AFRICAN BANK LTD	590	2	16.70
NIC BANK LTD	248	-	21.10
BANK OF BARODA LTD	434	7	21.20
DIAMOND TRUST BANK OF KENYA LTD	300	-	21.60
PRIME BANK LTD	262	-	19.90
FIDELITY BANK LTD	315	-	23.30
JAMII BORA BANK LTD	66	28	20.00
TRANSNATIONAL BANK LTD	71	-	26.70
BANK OF INDIA	99	-	23.00
VICTORIA COMMERCIAL BANK LTD	66	-	21.70
HABIB BANK LTD	17	-	21.60
ORIENTAL COMMERCIAL BANK LTD	21	-	23.70
TOTAL	90,403	3611	
AVERAGE INTEREST RATE	20.70%		
AVERAGE NO LOANS DISBURSED	3230		

	2012		
INSTITUTION	MORTGAGE DISBERSED (Ksh.M)	VALUE OF NPLs MORTGAGE (Ksh.M)	AVERAGE INTEREST RATE %
KENYA COMMERCIAL BANK LTD	31,455	2,218	15.90
HOUSING FINANCE COMPANY LTD	30,293	2331	15.00
STANDARD CHATERED BANK LTD	9,723	162	14.00
CFC STANBIC LTD	9,488	190	13.90
COOPERATIVE BANK OF KENYA LTD	6,643	312	20.05
BARCLAYS BANK LTD	4,341	19	13.00
NATIONAL BANK OF KENYA	4,123	572	15.50
CONSOLIDATED BANK OF AFRICA	3,848	286	23.00
EQUITY BANK LTD	3,684	35	22.00
COMMERCIAL BANK OF AFRICA LTD	3,194	153	15.20
DEVELOPMENT BANK LTD	2,617	147	24.90
I&M BANK LTD	2,309	26	15.50
CHASE BANK	1,531	28	20.00

AFRICAN BANKING CORPORATION LTD	1,506	37	22.00
BANK AFRICA LTD	1,212	5	22.90
FAMILY BANK LTD	1,193	7	24.50
ECO-BANK LT	1136	183	22.90
GULF AFRICAN BANK LTD	1069	3	15.70
NIC BANK LTD	715	0	21.10
BANK OF BARODA LTD	434	2	20.20
DIAMOND TRUST BANK OF KENYA LTD	423	0	20.60
PRIME BANK LTD	350	0	19.90
FIDELITY BANK LTD	261	115	22.50
JAMII BORA BANK LTD	218	7	20.00
TRANSNATIONAL BANK LTD	192	25	23.50
BANK OF INDIA	101	0	22.00
VICTORIA COMMERCIAL BANK LTD	63	0	21.70
HABIB BANK LTD	18	0	20.60
ORIENTAL COMMERCIAL BANK LTD	17	0	22.70
TOTAL	122,157	6,863	
AVERAGE INTEREST RATE	19.7%		
AVERAGE LOANS DISBURSED	4363		

	2013	
INSTITUTION	MORTGAGE DISBURSED (Ksh.M)	AVERAGE INTEREST RATE %
KENYA COMMERCIAL BANK LTD	33,460	14.50
HOUSING FINANCE COMPANY LTD	31,978	14.80
STANDARD CHATERED BANK LTD	9,650	12.50
CFC STANBIC LTD	8,885	13.90
COOPERATIVE BANK OF KENYA LTD	5,442	17.50
BARCLAYS BANK LTD	6,600	16.00
NATIONAL BANK OF KENYA	3,492	14.50
CONSOLIDATED BANK OF AFRICA	2,909	18.30
EQUITY BANK LTD	4,784	18.90
COMMERCIAL BANK OF AFRICA LTD	3,823	14.90
DEVELOPMENT BANK LTD	3,508	20.00
I&M BANK LTD	2,167	15.50
CHASE BANK	2784	18.50
AFRICAN BANKING	2,841	18.50

CORPORATION LTD		
BANK AFRICA LTD	1689	20.00
FAMILY BANK LTD	802	20.50
ECO-BANK LT	2,876	20.10
GULF AFRICAN BANK LTD	1088	17.50
NIC BANK LTD	947	18.10
BANK OF BARODA LTD	1200	18.20
DIAMOND TRUST BANK OF KENYA LTD	1504	19.50
PRIME BANK LTD	974	17.50
FIDELITY BANK LTD	890	19.30
JAMII BORA BANK LTD	709	20.00
TRANSNATIONAL BANK LTD	290	20.70
BANK OF INDIA	607	19.00
VICTORIA COMMERCIAL BANK LTD	280	18.70
HABIB BANK LTD	102	18.60
ORIENTAL COMMERCIAL BANK LTD	199	19.70
TOTAL	136,480	
AVERAGE INTEREST RATE	18.4%	
AVERAGE NO OF DISBURSED LOANS	4,874	

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