

**THE EFFECT OF INTEREST RATES ON THE SUPPLY OF REAL
ESTATE FINANCE IN NAIROBI COUNTY**

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DECLARATION

This research project is my original work and has not been presented for examination in any other institution.

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This research project proposal has been submitted for examination with my approval as the University of Nairobi supervisor.

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DEDICATION

This research paper is dedicated to my parents Mr. and Mrs. Obondy, my brothers Bob, Edward, Eric and Phil who have been my constant source of inspiration. They have given me the discipline and drive to tackle this task with enthusiasm and determination. Without their love and support this project would not have been possible. This research paper is also dedicated to my late brother Timothy Miser Obondy – R.I.P.

ABSTRACT

This study investigates the effect of interest rates on the supply of the real estate finance in Nairobi County. It examines the theories for real estate finance.

The study adopts secondary data from the financial reports, mortgage market reports and Management reports from HassConsult Ltd and the data readily available in the companies' websites.

The research adopted a descriptive method where the units of study sought to establish the effect of interest rates on the supply of real estate finance in Nairobi County. This method is preferred because it allows for the prudent comparison of the research findings. The study concludes that the interest factor plays a major role in determining the supply of real estate finance but with different weight and direction. This comes into play when the research is done in the short term or the long term.

The study found that there was a strong positive relationship between the lending rate and the total sales of real estate in the short term. The implication of the finding is that interest rates have significant impact on the mortgage sales. The study determined the effect of the interest rates on the supply of real estate finance and found out that more people are likely to borrow money when the interest rate is lower as doing so will cost them less than at another time. It was also evident that when the interest rate is higher, borrowing becomes more expensive and slows. Hence there was significant increase in the sales index matching with the drop in the mortgage interest rates. This principle applies to loans that come in the form of mortgages. When interest rates are lower, people are generally more willing to take out a mortgage than when rates are higher. Though higher interest rates typically mean a cooling of demand for real estate, since a purchaser will have a higher payment on the same property, the opposite is happening in the short term.

The study recommends that there is need for further research done on all the financial institutions providing mortgage such as Credit unions because their determinants of mortgage interest rates are not the same as those of commercial banks.

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ABBREVIATIONS

CBR	Central Bank Rates
CCN	City Council of Nairobi
CDC	Commonwealth Development Corporation
CIC	Co-operative Insurance Company
GDP	Gross Domestic Product
HFCK	Housing Finance Company of Kenya
KUSCCO	Kenya Union of Savings and Credit Co-operatives Ltd
MPT	Modern Portfolio Theory
NCCK	National Christian Council of Kenya
NHC	National Housing Corporation
REIT	Real Estate Investment Trusts.
SACCO	Savings and Credit Co-operative
S&L	Savings and Loan Kenya Limited
UNHABITAT	United Nations Human Settlements Programme
USAID	United States Agency for International Development

CHAPTER ONE

INTRODUCTION

1.1 Background of the Study

Nairobi is the most populous city in East Africa with a current estimated population of about 3 million. According to the 2009 census, in the administrative area of Nairobi, 3,138,295 inhabitants lived within 696 km², which has expanded from 3.84 km² in 1910. It is currently the 12th largest city in Africa including the population of its suburbs. Nairobi County has 16 constituencies with over 3 Million inhabitants who need housing.

Investment under uncertainty is one of the most important economic decisions that investors make. Dixit and Pindyek (1994) among all variables that might affect investment, interest rates changes have important implications for monetary and fiscal policies. Capozza and Li (1994) suggested that when firms make irreversible investments with uncertain payoff, the effect of an interest rate change on investment is non-monotonic. The real estate market operates under the same pressures and forces that guide the rest of the markets. With the demand for housing units in urban areas currently standing at 150,000, only 23% is being met. The gap is widening annually and needs urgent solution. The shortfall is more acute among low income households whose present demand is about 48% of the total new constructions required in Kenya. Since 60% of the population is younger than 25 years, it is evident that the demand for housing will rise steadily as those aged twenty years and below will reach adulthood and start family life. In order to address this shortfall, there is need to balance between housing supply and demand. According to Barasa (2010) the Government needs to have several initiatives in place including direct development of housing, financing developers and other tax incentives. Companies or Individuals that want to acquire residential or a commercial houses, need to have ways of financing the construction of the buildings. This could be in form of mortgages through home financing institutions. As the population grows, there are factors that affect the provision of housing such as the Interest rate. Interest rates can significantly affect the cost of financing and mortgage rates, which in turn affects property-level costs and thus influences values.

1.1.1 Concept of Interest Rates

Interest rate is the rent paid on borrowed money. Lenders receive interest as compensation for foregoing the use of their funds now. The original amount lent is called the principal sum and the percentage of principal which is payable over a period of time is the interest. Ivey (2002) and Heaton (2002). In money monetary using economies, money creates claims because it is an asset, a store of value, as well as means of exchange. Therefore those who lend money expect to be compensated for handing over their claims for period of the loan to those who borrow the money. The compensation is the interest rate expressed as a rate of percentage per annum because it is convenient way of calculating and comparing the cost of borrowing money. Therefore the interest rate can be defined as the price the lenders expect and borrowers pay for exchanging current claims for greater future claims to goods and services.

Interest rate represents cost of money (Kimutai, 2003). The interest rate for this study in the interest rate that commercial bank banks and Mortgage Finance companies charge for the loans they charge their clients for purposes of development of real estate. Interest rates, especially the rates on interbank exchanges and Treasury bills, have an effect on the value of income-producing real estate as on any investment vehicle. The influence of interest rates on an individual's ability to purchase residential properties is so profound; many people will incorrectly assume that the only deciding factor in real estate valuation is the mortgage rate.

1.1.2 Supply of Housing

Suppliers can extend bargaining power to participants in an industry by raising the prices or reducing the quality of purchased goods and services. Powerful suppliers can thereby squeeze profitability out of an industry Mintzberg (2003) maintained that the bargaining power of suppliers is important to industry competition because suppliers can also affect quality of exchange relationships. While supporting his ideas, Porter,(1998) argued that competition may soon become intense as powerful suppliers raise prices, reduce services or reduce the quality of goods and services. National Housing Corporation (NHC) had to

increase the residential flats in middle class Madaraka Estate Nairobi West by filling the empty spaces left by the initial building plan in 1973. The capacity of the houses in Nairobi of 1973 according to CCN matched the population of the city according to the Kenya National Assembly Official Records (Hansard of 17th Oct 1973). This was due to increase of residential housing. NHC also demolished the bungalow type housing estate formerly belonging to Kenya Railways to put up apartments that carry 30 housing units per flat. This is in order to increase the supply of housing in Nairobi County. Most of these rentals units comprise high-rise flats to maximize both land space and profits for landlords. Even those that started as low-rise buildings have been transformed into high-rise flats (Anyamba, 2004).

The lack of access to affordable housing has driven the majority of low to very low income earners to seek rentals in the Nairobi slums. Therefore the only opportunity for the majority of the low to very low income population has been the unregulated slum settlements (Agwanda et al. 2004). The growth of the economy has boosted the supply for real estate in Nairobi and its environs which attract skilled and unskilled labor directly putting pressure on the supply of housing. There is property boom in Kenya mainly due to severe shortage of residential and commercial buildings. If the consumer is price sensitive and well educated regarding housing, the buyer power is high; also if substitute housing is available in the market, the buyer power will also be high (Harrison et al, 2008).

1.1.3 Effects of Interest Rate on Supply of Real Estate

Chetty (2007) specifically suggests that investment is backward-bending function of interest rate. This means that a decrease in the interest rate reduces investment when the interest rate is low, the difference between the interest rate and the expected future income growth is small and increases investment when the interest rate is high. Market changes have had a direct relationship on the supply of real estate. The real estate market comprises of the owner or user on the demand side of the market while developers and renovators comprise the supply side. The higher the interest rates the higher the housing price which will result in a drop in the supply for housing and vice versa. Due to the

heterogeneous nature of real estate, pricing is very difficult, the search costs creates information asymmetry which greatly restricts substitutability due to its nature of being unique. Interest rates have an economically significant effect on real estate prices. A decrease in the interest rate may strongly stimulate investment in a booming economy when asset values are high, but will have no negative effect on investment in a recession when assets values are low. This result has important policy implication, which will result in a drop in the supply for real estate.

Mortgage rates are only one interest-related factor influencing property values. Because interest rates also affect capital flows, the supply and demand for capital and investors' required rates of return on investment, interest rates will drive property prices in a variety of ways. The impact of real estate interest rates on house prices: whether long-term real interest rates declined sufficiently to explain the extraordinary rise in house prices observed between 1996 and 2007. The theory by Chetty (2007) therefore predicts that a decrease in the interest rate increases the capital improvement when the cap is low and versa. Central Banks have no alternative but fix their interest rates as dictated by the Central Bank of Kenya rate (CBR). The CBR is the lowest interest rates the Central Bank charges for lending to banks. The CBR is currently at 8.5% unless expected circumstances warrant reviews. Due to the changes in interest rates, mortgage facilities remain out of reach to many Kenyans due to high interest rates charged.

1.1.4 Real Estate in Kenya

As the city grows in size and population, the provision of urban services has not been, and will not keep pace with the demand. Responding to Urban- growth projections and in attempt to address the current and future challenges of the Nairobi County, the government of Kenya prepared an ambitious vision 2030 to spatially redefine the Nairobi Metropolitan Region and create a world class city region envisaged to generate (Ochieng 2007). A number of organizations, such as the National Housing Corporation union, the NCKK and Pamoja Trust, are involved in housing delivery especially for socio economically disadvantaged groups, whether they work in formal or informal

employment. The non-profit organizations undertake negotiations on behalf of their clients with the relevant authorities for lending conditions that favour housing.

The company was responding to the growing demand from indigenous Kenyans having their own houses. The relationship between the supply and interest rates of real estate is the trend that describes any consistent pattern of change in the general direction of the real estate industry which with time becomes noticeable in terms of changes. The changes could be due to inflation on the economy which will have a resultant change in mortgage rates, it could be as a result of housing boom which may have a direct impact on the real estate supply. The phenomenon can be as a result of the economic change, a change in mortgage rates, consumer speculation or other fundamental or non-fundamental reasons. High inflation will result in high mortgage rates and a decline in the supply for real estate, also it may affect the supply as a result of increase in the real estate factors of production such as construction cost. This will result in many residential properties remaining under considerable stress hence home prices adjusted for inflation.

Most home owners finance their purchases by putting a down payment requirement with mortgage financiers and the house equity serves as collateral for the loan (Diaz and Luengo-Prado, 2002)

1.2 Statement of the Problem

Kenya's capital Nairobi is a paradox. It is a city that is one of the most important economic hubs of the continent which contributes about 60% of the GDP to the Kenyan economy. The headquarters of the United Nations Human Settlements Programme mandated to promote sustainable cities with adequate shelter for all, are based in Nairobi. Nairobi County fulfills some major preconditions for politically accountable and pro-poor governance: it has formal democratic institutions, intense political competition, a majority of poor citizens voting in high numbers and a vibrant media landscape. Yet, roughly 1.8 million people, who translates to 60% of County's official total population, live in slums

(Syagga et al., 2001). In these low-income informal settlements the incidence of economic poverty is high, housing is of sub-standard quality and basic services are barely provided.

Since colonialism, Kenya has never resolved the land problem despite several regimes. This has resulted in environmental, social-economic and political problems including deterioration in and land quality, squatting and landlessness. This has had a negative effect on individual accessing long term amortized loans to develop homes on the land. Those who discover natural resources are creating the knowledge that those resources exist. (Kirzner ,1978). Like other African cities after independence, Nairobi experienced a rapid increase in in rural-to-urban migration. This influx brought unserviced and unauthorized housing, a proliferation of small trade and petty- commodity production (Lee-smith, 1989). However despite the problems, the real estate in Kenya especially in Nairobi has experienced a steady growth. The pressure of growing population does not match the supply of real estate. The demand for residential homes far outweighs the supply. UN-HABITAT statistics shows the demand for houses in the cities in Kenya is over 150,000 units per annum compared to the supply of only 50,000 units per annum (UN-HABITAT, 2006). Globally, housing requirement has always exceeded its delivery.

Despite the growing demand for housing, the colonial administration was intolerant of attempts by Africans to provide shelter for themselves and residential structures built from temporary materials were violently demolished (Macoloo, 1998). While it is a dream for everyone to own a home, the major portion of the funds to purchase one must be borrowed through mortgage credit. This dream has not been achieved due to high cost of finance in Kenya such as bank rates charged, high mortgage rates to consumer which stifles the supply for the real estate.

The dramatic increase in mortgage credit has been blamed for the housing crisis. However, the relationship between the two remains largely unexplained. The paper analyses the effect of interest rates and supply of real estate financing in Nairobi County to determine whether mortgage lending has led to boom and busts. Many studies have been done on supply of the real estate in Kenya. Many studies have been done on the

supply of real estate finance. This study is however different from Jumbale D.K (2012) whose study looked into the relationship between house prices and real estate financing. The study is also different from Ngumo L.W (2012) whose research was based on the effect of interest rates on the financial performance of firms offering mortgages in Kenya. None of the above studies focused on the effect of interest rates on the supply of real estate which this study seeks to establish. This study sought to fill the existing research gap by conducting a study in determining the effect of interest rates and supply of real estate financing in Nairobi County.

1.3 Research Objective

The research objective is to establish the effect of interest rates on the supply of real estate finance in Nairobi County.

1.4 Importance of the Study

The study is important to the following groups of people:-

1. Investors

The financial institutions that provide housing such as Commercial banks, Savings and Loans associations, Insurance Companies and Pension funds which have become equity investors in housing projects will benefit from this study. They will understand how interest rates will affect their influx of capital into the real estate development in order to satisfy their needs for higher yield particularly in the development of new property. They will be able to make investment decisions.

2. Government and Regulatory Agencies.

In addition to local regulators, other professional bodies can use the findings as a reference for policy guidelines (e.g. regulations) on the supply of the real estate by the Architectural Association of Kenya. The study provides a good foundation for showing effects of interest rates and the supply of real estate as a means of enforcing good provision of housing to millions of Kenyans in Nairobi County. The government might

also find the findings of this study useful for informing regulations of the subsector to ensure fair competition and observe strict professionalism in this field.

3. Academicians and Researchers

Real estate is a major area of discussion and research and the study contributes by providing additional dimensions about the supply of real estate finance in Nairobi County. Scholar's findings of this study could form basis for further research as well as adding to the body of knowledge in finance discipline.

4. The Central Bank

Being the regulator on the operations of Commercial bank, the study will inform the bank in formulating s process policies geared towards regulation of interest rates within the real estate sector.

CHAPTER TWO

LITERATURE REVIEW

2.1 Introduction

This chapter provides an overview of real estate theories, previous studies, related data and studies that are related to financial leverage and stock returns. The remainder of the paper is concerned with the results of numerous empirical studies that have been published during the past quarter-century. The Importance of this section is that it provides support to the study being undertaken. It also provides the main reference point that is necessary to write this research paper. The source of the literature is mostly from related journal, articles, textbooks and the internet.

2.1.1 Industry's Driving Forces

According to Ochieng (2007), there are several housing delivery systems which have been used or are in use in Nairobi. These include provision of housing by the employer, National Government or the City Council of Nairobi (CCN): tenant purchase, site and service schemes and self-help housing; private tenant housing; and conventional and non-conventional housing delivery systems. Due to lack of affordable housing, especially for the populous urban poor, non-conventional housing is becoming an important housing delivery system in Nairobi.

A housing market brings together buyers, sellers, renters with the intention of the permanent or temporary transfer of a place of shelter. Shelter is necessary for survival, Supply for housing is relatively inelastic and insensitive to price (Podenza, 1988). Different forces take on prominence in shaping competition in each industry (Grant, 1998). Shift in buyer demographics and new ways of using the product can alter the state of competition by opening the way to market industry's product through a different mix of dealers and retail outlets prompting the procedures to broaden or narrow their products. Some drivers of change are unique and specific to a particular industry shifts in industry growth up or down are a driving force for industry change, affecting the balance between industry supply and buyer demand, entry and exit and the character and strength of competition. An upsurge in buyer demand triggers a race among established firms and

newcomers capture the new sales opportunities. A slowdown in the ratio at which demand is growing nearly always portends mounting rivalry and increased efforts by some firms to maintain the high interest rates of growth by taking sales and market share away from rivals (Mintzberg 2007). Industries significantly differ due to several factors that affect the attractiveness of the same, this may include the conditions of supply, the geographical setting, the degree of product differentiation, extent of vertical integration and the extent of economies of scale and the learning curve effects (Luffman et al, 1996). However due to the construction lead time, the industry may not be so attractive to investors who would wish for a quick conversion. Feifei et al (2010) observes that commercial real estate value generally exhibits a low correlation with other popular asset classes.

2.2 Review of Theories

2.2.1 Keynes' Liquidity Preference Theory

Keynes (1973) defined his liquidity preference theory as the rate of interest. Interest and money makes the rate of interest to depend on the present supply of money and the demand for schedule for a present claim on money in terms of deferred claim. Therefore, the rate of interest depends on the demand and supply of money (Keynes, 1937). Keynes' view is that primary way in which interest rates affect the level of aggregate output is through their effects on the planned investment spending.

Interest rates play a major role in the investment supply schedule. Keynes advocates government monetary policy directed at influencing the rate of interest. However, he believes that the other factors that influence the investment demand schedule are too powerful for such monetary policy alone to achieve levels of investments sufficient to maintain full employment. There is a well-recognized relationship between investment supply and interest rates. According to classical economic theory, interest rates sensitively adjust to allocate all available funds for investment purposes. Keynes attacks the classical view. He argues that it is impossible to determine the rate of investment just from demand and savings supply. Keynes uses the term liquidity preference for those who prefer to

keep significant sums in the sterile form of cash. Keynes assumes that people part from their savings only if offered an interest in return. Thus, the interest offered counters a liquidity preference to hold wealth in the form of immediately useable but sterile cash. Hence, the rate of interest at any time, being the reward for parting with liquidity, is a measure of unwillingness for those who possess money to put with their liquidity control over it. The rate of interest is not the price which brings into equilibrium the supply for resources to invest with the readiness to abstain from present consumption.

2.2.2 Portfolio Theory and Real Estate

Bruggerman and Fisher (2008) noted that every investor will consider adding real estate investment vehicles in an existing portfolio returns if it will result to increase in expected portfolio returns while maintaining or lowering the portfolio risk. Harry Markowitz (1959) introduced the Modern Portfolio Theory (MPT), which attempted to model the benefits of establishing diversification strategies for portfolio investments. MPT is a breakthrough in financial research which has had impact on the practice of Investment management. Any discussion of the theory of stock price behavior has to start with Markowitz (1952 & 1959). The Markowitz model is a single-period model, where an investor forms a portfolio at the beginning of the period. The investor's objective is to maximize the portfolio's expected return, subject to an acceptable level of risk (or minimize risk, subject to an acceptable expected return). As securities are added to a portfolio, the expected return and standard deviation change in very specific ways, based on the way in which the added securities co-vary with the other securities in the portfolio. Feldman (2003) confirms that investments in real Estate companies help reduce the portfolio's total risk and improve overall asset allocation efficiency.

2.2.3 Modern Portfolio Theory and Capital Asset Pricing Model

Building on the Markowitz framework, Sharpe (1964), Lintner (1965) and Mossin (1966) independently developed what has come to be known as the Capital Asset Pricing Model (CAPM). This model assumes that investors use the logic of Markowitz in forming portfolios. Hassan (1990) noted on the relationship between Real Estate analysis and

Modern Portfolio Theory (MPT) that Real estate generally outperforms stocks and bonds in risk and return measurement. Real Estate assets provide excellent diversification potential for portfolio investors and also a good inflation hedge. Most pension funds only allocate 5% of their portfolio in real estate equity assets (Smith, 1992). This therefore proves that real estate in an under-utilized asset class.

Why is real estate under-utilized when it offers such proven opportunities to minimize risk and simultaneously accomplish an acceptable return? Such investment characteristics certainly offer opportunities for diversification that are incomparable with other asset classes. MPT has also something to offer in Malaysian perspective. Hishamuddin et al. (2003) found that by adding Malaysian Real Estate Investment Trust (REIT) in the investment portfolio can provide higher return at the same level of risk. In other words, by including listed REIT in the investment portfolio would offer better performance. Grundy and Malkiel (1996) noted that most investors think of risk as measuring the chance that returns will be lower than expected and, specifically, that investment will produce a loss.

2.2.4 Liquidity and Real Estate

Bodie et al (2008) defines liquidity as the speed and ease with which an asset can be converted to cash based on information. The important issue on the problem of direct real estate investment is the lack of liquidity compared with other major investments media (McAllister and Mansfield, 1998; Smith, 1992). The main reasons are due to large lot size, high transaction costs, no central market place, infrequency of real estate transactions and delay due to legal work. The problem of relative illiquidity influences the attractiveness of real estate as an asset class. Illiquidity restricts the portfolio managers' ability to switch between real estate and other asset classes. This was also observed by Feifei et al (2010). A study by Bruno (1999) observed that real estate possesses four types of risks that are not found in most other investments. Real estate is illiquid in nature than other financial investments, it is difficult to find a buyer and a seller hence raises transaction costs. Cost of acquiring information is also greater.

2.3 Review of Empirical Studies

There are empirical studies done on the real estate. These studies show the relationship of the real estate and its effect with the changes in interest rates. The attractiveness of the real estate has had a direct proportion to the supply of the real estate finance and consequently the real estate prices, therefore interest rates have a direct effect on the real estate prices.

Ganesan et al. (1999) supports the idea that housing price is a leading indicator of housing supply. They observed that housing demand in Hong Kong dropped instantly after the Tiananmen Square incident in 1989 and the Gulf War in 1991, but housing supply was only adjusted in the years following these incidents. They therefore suggested that there is a lag effect on the adjustments of housing supply. The short run supply of housing is also fairly inelastic because housing supply is based on current completions that will continue, and cannot be changed within a short period of time. Unlike housing supply, it is possible for housing demand to change suddenly due to external changes. Ganesan et al. (1999) agrees that fluctuations in demand should manifest themselves primarily in changes in the price of housing and much less so in the supply of housing.

Podenza (1988) found that downturns in housing start to occur before general downturns. He is of the view that residential investment, like stock prices and interest rates, is a good predictor of GDP. This is because real estate is durable asset that take a long time to produce and thus investing in real estate is a forward looking exercise.

Aschauer (1989) argues, using a growth accounting framework for post-war U.S. data, that public infrastructure investment – virtually all of which is building investment – is a key component of growth, and that much of the post-1973 productivity slowdown can be attributed to cutbacks in public capital investment. On the other hand, DeLong and Summers (1991, 1992) and DeLong (1992), suggest that building investment has a negligible relationship with growth using purchasing power parity adjusted data. They even find a negative social return to investment in buildings.

Chetty (2007) shows that a change in the interest rate affects not only the net present values (NPV's) of possible projects but also the value of waiting. More importantly, the effect on the value of waiting is stronger than the effect on the NPV's when the interest rate is low. Hence a decrease in interest rate reduces investment when the interest rate is lower but increases the investment when the interest rate is high.

Ahearne et al. (2005) suggests that low interest rates do tend to precede housing price peaks, with a lead of approximately one to three years.

Bernanke and Getler (2001) believe that the best policy framework for attaining both objectives is a regime of flexible inflation targeting; either of the implicit form practiced in countries such as United States or of the more explicit and transparent type that has been adopted in many other countries.

Todaro and Smith (2009), imply that any increase in the demand for goods and services generated by rapid money creation will not be matched by increases in supply. Such effect is that excess demand pushes prices up and leads to inflation. The assumed direct linkage between lower interest rates, higher investments and expanded outputs may not always exist. Specifically, higher interest rates would probably affect individuals' and institutions' demand for financial assets and credit, with higher interest rates tending to increase asset prices and inhibit credit growth.

Coulson and Kim (2000) showed that residential investment is a leading indicator of GDP in the United States. Their result suggest that the residential sub-sector is a leading sector of the economy, and that changes in housing demand are ahead of changes in aggregate demand. Green (1997) proposes that this trend is due to forward looking behavior and the potential exogenous forces in residential investment that lead to the economically exogenous movements. These forces are the income tax treatment of residential investment and regulatory treatment of housing finance institutions. If residential investment is given favorable tax treatment, more capital will be attracted and people will be given high-paying jobs. Hence, when people become wealthier, they will spend more

and stimulate economic growth. Therefore, an increase in residential investment will lead to economic growth.

Grenadier (2002) demonstrated that competition reduces the value of an investor's real option and consequently increases investment.

2.4 Real Estate Financing

There are different ways of real estate financing; these may be governmental or commercial sources and institutions. Home buyer or builder can obtain financial aid from savings and loan associations, commercial banks, saving banks, mortgage bankers and brokers, life insurance companies, credit unions, federal agencies, individual investors and builders. In most advanced economies, the main source of capital used by individuals and small companies to purchase and improve land and buildings is mortgage loans. In Ghana, only 5% of those who want to own a house can do so from their own resources, 60% would require some form of financial assistance and remaining 35% are not capable of owning and building a house in their lifetime (Derban, 2002).

2.4.1 Credit Unions

Credit Unions are cooperatives which provide financial assistance to people who share common bond to offer home loans among other financial services. Safaricom Investment Co-operative unveiled a Sh 1 Billion housing project on a five acre parcel of land in Mlolongo. The project will be financed through a partnership with the Cooperative Bank of Kenya to put up 300 housing units. The project is meant to bridge the annual housing deficit in Nairobi, while meeting the rising demand for gated communities.

2.4.2 Commercial Banks

Due to changes in banking laws and policies, commercial banks are increasingly active in home financing. Mortgage uptake in Kenya stands at slightly under 20,000 homes notwithstanding the fact that several banks offer mortgage lending that the Standard Chartered Bank has reduced its mortgage lending rates to 16.9% and the Mortgage Company partnering with financiers to lend at 14 % as signs that the challenges of high financing costs. High interest rates have seen both property developers and home

buyers affected, owing to the high cost of borrowing. Existing mortgage buyers have been most hit since the second half of 2011 when banks hiked rates in waves that peaked up to 30 per cent. This has also affected supply of middle- to lower-income housing units as developers for these markets are usually financed by banks. Units that also came into the market in this period have remained dead stock, piling pressure on developers who are repaying loans. Developers have reported that many prospective buyers pulled out when the interest rate environment started becoming unpredictable.

2.4.3 Life Insurance Companies

Life insurance is another source of financial assistance. They lend on real estate as one form of investment and adjust their portfolio from time to time. CIC Insurance acquired 400 acres of land in Isinya and Kitengela area at a cost of Sh1 billion for a multi-billion-shilling property development targeting the middle class.

2.4.4 Mortgage Bankers and Brokers

These are companies or individuals who originate mortgage loans and sell them to other investors, service the monthly payments and may act as agents to dispense funds for taxes and insurance. Larger mortgage bankers service mortgages, while smaller mortgage bankers tend to sell the servicing rights.

Mortgage brokers typically have access to the loan offerings of numerous mortgage bankers. They inform borrowers of loan choices, receive loan applications, and perform certain services, such as collecting documentation, and initiating credit and other reviews. Mortgage bankers purchase and fund loans arranged by mortgage brokers and by other mortgage bankers. To do so, mortgage bankers use their own funds, funds they borrow, or funds they receive from secondary market investors. As part of the funding process, mortgage bankers are responsible for loan underwriting and, correspondingly, have a significant financial stake in a loan's performance.

2.4.5 Savings and Loan Associations

This is a financial institution, organized cooperatively or corporately, that holds the funds of its members or clients in interest-bearing accounts and certificates of deposit, invests these funds chiefly in home mortgage loans and may also offer checking accounts and other banking services.

2.4.6 Real Estate Investment Trusts

REIT's are committed to real estate lending and can and do serve the national real estate market. REIT's are the only truly liquid assets related to real estate investments, However, public REIT's do not exist in Kenya. Benveniste et al (2001) observed that REIT's makes it easy to invest in real estate. Sharpe et al (1999) define REIT's as an investment fund similar to an investment company whose main objective is to hold primarily real estate related assets either through mortgages, construction or development loans. REIT's structure was designed to provide similar structure for investment in real estate as mutual funds provide for investments in stocks.

2.5 Conclusions

Research has been carried out on various parts of the world in the area of real estate financing. The section has reviewed literature review related to the supply of real estate in relation to the interest rates mortgage financing. The literature review has showed the response of the supply of real estate to the interest rate changes depends on the difference between the interest rate and the expected future income growth rate.

CHAPTER THREE

RESEARCH METHODOLOGY

3.1 Introduction

This chapter describes the research design and methodology that was used to carry out the research. It presents the research design to the study population, sample size and sampling procedure, data collection instruments, data analysis, validity as well as reliability.

3.2 Research Design

Research design refers to a way the study is designed, that the method used to carry out the design (Mugenda and Mugenda, 2003). Redman et al. (1923), define research as a systematized effort to gain new knowledge. It is also considered as a movement, movement from the known to the unknown. This study is a descriptive research. Investigation is conducted in which quantitative data was collected and analyzed in order to describe the specific phenomenon on the current trend on supply of real estate and interest rates studying the linkages between the two factors.

3.3 Population

Population is a well-defined set of people, services, elements, and events, groups of things or households that are being investigated. The population of interest in this study is obtained from the list of Commercial banks and Mortgage Finance companies who finance real estate development in Nairobi County as at the start of the year 2003.

3.4 Sample

The sample was culled from all the mortgage lenders. A desired sample of 30 firms was obtained using Non-Probability sampling method. The researcher employed Convenience sampling technique. Mugenda and Mugenda (2003) indicated that a sample size of 30 and above of the population is sufficient sample size for a study. Hence the sample size is considered to be large and therefore representative. The study sampled the secondary data from the selected banks.

3.5 Data Collection

Secondary data was collected for the purpose of this study. Secondary data was collected from sampled firms' performance, journals, magazines, books and archived records.

3.6 Data Analysis

For the collected data to be interpreted, the financial reports, mortgage special reports were edited for completeness, consistency and accuracy ready for analysis. The data collected was coded, tabulated then drew statistical inferences according to the response received. This was analyzed using linear regression model in order to relate supply of real estate finance and the mortgage interest rates. The model treated housing sales as the dependent variable while the mortgage interest rates as independent variables. The tools were selected for their clarity, preciseness and ease of understanding and interpretation. Statistical Package for Social Sciences (SPSS) was used to aid in the analysis.

The equation of the regression line can be expressed as follows:

$$f(x) = mx + b$$

Where;

f(x) represents the real estate sales

x represents the mortgage interest rate

b is a constant that denotes the Y intercept.

Coefficient m describes the movement in supply of real estate as a result of movement in the interest rates.

3.7 Data Validity and Reliability

The accuracy of data collected was largely dependent on the instruments of data collection in terms of validity and reliability (Mugenda and Mugenda, 2003). Validity as noted by Robinson (2002) is the degree to which result obtained from the analysis of the

data actually represents the phenomenon under study. Reliability refers to a measure of degree to which research instruments yield consistent results (Mugenda and Mugenda, 2003).

CHAPTER FOUR

DATA ANALYSIS AND DISCUSSION OF FINDING

4.1 Introduction

This chapter presents and discusses the data analysis, findings, interpretations and presentation of the study in line with the research objective. Research objective was to establish the effect of interest rates on the supply of real estate finance in Nairobi County.

4.2 Data Presentation

In this section, we used the historical data regression analysis to investigate the effect of interest rates on the supply of real estate financing.

Table 4.1:

Regression Statistics	
Multiple R	0.803
R Square	0.644
Adjusted R Square	0.605
Standard Error	1.392
Observations	11

Adjusted R squared is coefficient of determination which tells us the variation in the dependent variable due to changes in the independent variable, from the findings in the above table the value of adjusted R squared was 0.605 an indication that there was variation of 60.5% on sales performance due to changes in interest rates at 95% confidence interval . This shows that 60.5 % changes in sales of mortgages could be accounted for by changes in interest rates. R is the correlation coefficient which shows the relationship between the study variables, from the findings shown in the table above there was a strong positive relationship between the study variables as shown by 0.803.

Table 4.2:

ANOVA					
	<i>df</i>	<i>SS</i>	<i>MS</i>	<i>F</i>	<i>Significance F</i>
Regression	1	31.719288	31.719288	16.34820498	0.002914149
Residual	9	17.46207564	1.940230626		
Total	10	49.18136364			

The study found out that the correlation in table 2, it showed that correlation coefficient between interest rates and real estate sales was $r^2 = 0.803084848$ and $p = 0.002914149$, we can say that our model is 80.3% accurate. Since the p- value was lesser than 0.005 thresholds, the study concludes that there is significant relationship between interest rates and the sales. As we know ANOVA test is used for analysis of variances or comparison for two or more variables.

Table 4.3:

Coefficient of Regression Analysis

	<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>
Interest rate	10.038	1.336	7.5118	0.000036	7.015519	13.06168	7.01551	13.061689
Sales Index	0.0231	0.0057	4.04329	0.002914	0.010186	0.036063	0.01018	0.0360632

The table 3 shows coefficients of regression model which has been prepared above. This table shows the values of betas to include in an equation or model. The established regression equation was;

$$Y = 0.0231 X + 10.038$$

From the above regression equation it was revealed that holding the interest rate to a constant zero, the sales index would stand at would stand at 0.023125144, a percentage increase in interest rate would lead to increase in sales index by a factor of 10.03860449 The study further revealed that the interest rate over long term was statistically significant to affect the sales, as all the values were less than 0.05%.

4.2.1 Lending Rates

The study computed interest rates as measured by percentage change over the period under study. The interest rate stood at 15% in 2003, using the 2002 interest as the base year. Thereafter the interest dropped to 12.9% by 2004. The interest rates fluctuated between 14% to 14.8% between 2006 to 2011 before increasing by 6% to reach the 20% mark in 2012. This later reduced to 16.4% in 2013. These findings are illustrated in the figure 1 and table 1 below.

Table 4.4: Mean Interest Rate 2003-2013

Year	Mean Interest rate (%)
2003	15
2004	12.9
2005	13
2006	14.2
2007	14
2008	14.5
2009	15
2010	14.7
2011	14.8
2012	20
2013	18.75

Figure 1: Lending Rates

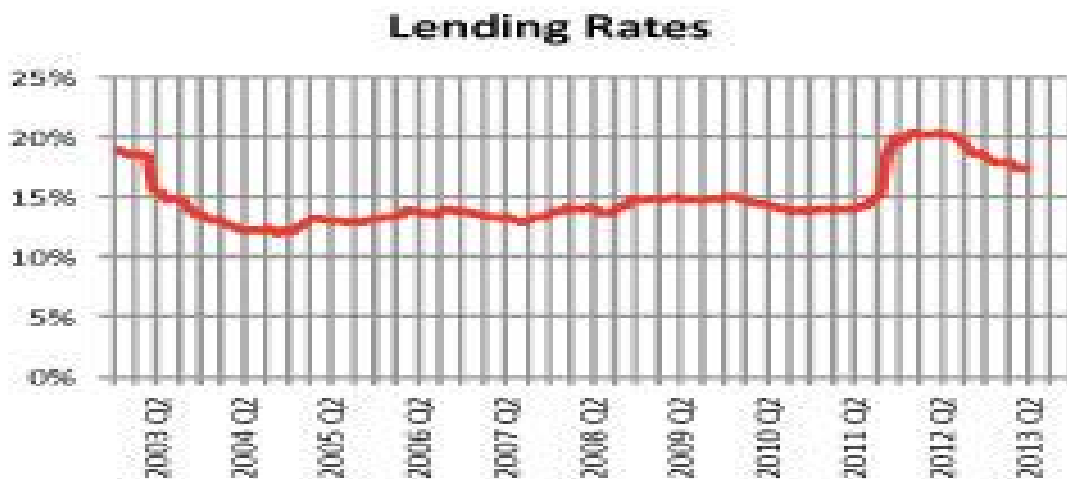


Figure 1 above shows the lending interest rates for the commercial bank for the last 10 years. The final mortgage market report of 2012 revealed the emergence of 'super-spreads' as banks took wider profit margins on the most recent CBK interest rate cut, rather than cutting rates to borrowers. Barclays bank led the pack as the most competitive mortgage lender, despite holding its rate at 15.5 per cent. Other banks have emerged offering mortgage rates of 19 per cent or higher on a CBK rates. However, with mortgage rates now static in a range between 15 and 20 per cent have stimulated a revival in project finance. Marginally, the interest rates have remained rather constant between the years 2004 to 2011

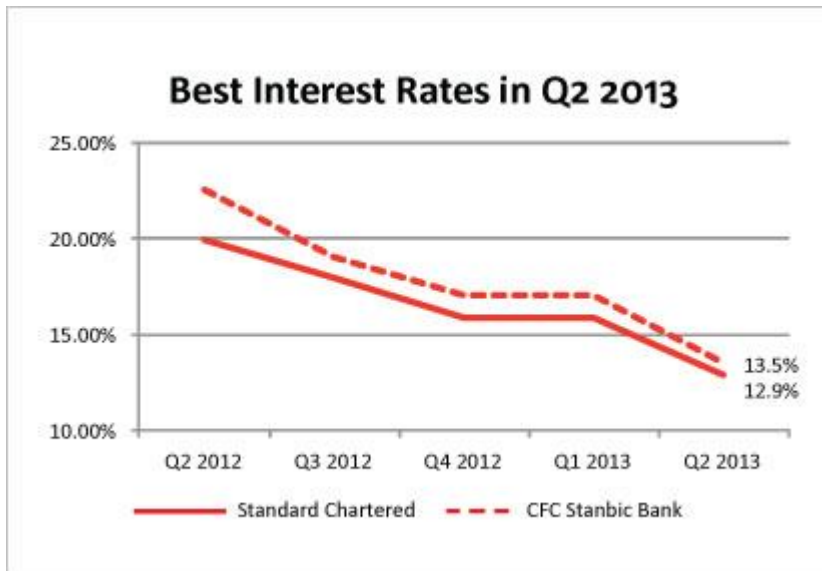
Table 4.5: 2013 Mortgage Rate League Table as at June 2013

Rank	Bank	Mean Interest rate (%)
1	Standard Chartered	12.9%
2	CFC-Stanbic	13.5%
3	Commercial Bank of Africa	15%
4	National Bank	15%
5	Barclays Bank	15.5%
6	Co-operative Bank	15.75%
7	KCB S&L	16%
8	Housing Finance	16%
9	I&M Bank	16.5%
10	Bank of Africa	17%
11	Family Bank	18%
12	Equity Bank	18%
13	NIC Bank	18%
14	Chase Bank	18%
15	Consolidated Bank	19%
16	Diamond Trust Bank	19%

The result of the mortgage interest rate shows that some lenders cut rates to about 13.5%, several other lenders are charging more than 18%, resulting to most loans given at a 10-point or more spread over the Central Bank of Kenya's rate of 8.5%. Standard Chartered Bank offered 12.9 per cent for 45 days, but conditional on uptake of a bundle of products. This short-term promotional rate is a new phenomenon. However, CFC Stanbic took lead

position with the best mortgage rate, on a cut from 17.0 per cent to 13.5 per cent. Despite claims of holding rates high on election concerns, only half of the banks assessed cut rates. Consolidated Bank, Diamond Trust, Chase Bank, Equity Bank, Family Bank, Housing Finance, and NIC Bank all remained at rates of 18 per cent to 19 per cent. This represents a 10 point or more spread over the CBK rate of 8.5%

Figure 2:



The best two banks offering the lowest interest rates in the 2nd Quarter of 2013, standard Bank and CFC Stanbic banks. Foreign Banks are getting creative in their drive to capture market share by offering lucrative special rates and bundle packages. Standard Chartered Bank is leading the way with their 45 day offer at 12.9% p.a. floating rate. This rate although the lowest currently in the market comes tied with certain other products e.g. credit card and an overdraft with a view to building a more holistic offering. On pure mortgages, CFC Stanbic in response to Standard Chartered Bank is now offering 13.5% to compete with the regular Standard Chartered Bank rate of 13.9% if one opts to take the mortgage product alone.

4.2.2 Real Estate Sales

This is one of the variables to test the supply for the real estate in the study. The Hass composite sales index represents all the mortgage sales on all property types in the Nairobi County on annual basis for the period under study.

Table 4.6: The Hass Composite Sales Index 2003-2013

Year	Sales Index
2003	140
2004	145
2005	145
2006	150
2007	170
2008	220
2009	250
2010	260
2011	290
2012	320
2013	350

Index 2000 = 100

Table 2 above shows the mean interest rates of the Hass sales index of mortgages for the period 2003 to 2013

The property values have increased 3.46 times since 2000. The middle market continues to ask for higher sales prices over the years as developers recover the extra costs of land, construction materials in markets where the demand remains solid. There is a trend across all the sectors of the market of households shifting to cheaper housing options. The shift comes against a backdrop of squeezed household budgets on inflationary pressures and near static pricing in housing.

Figure 3: Composite Property Sales Index

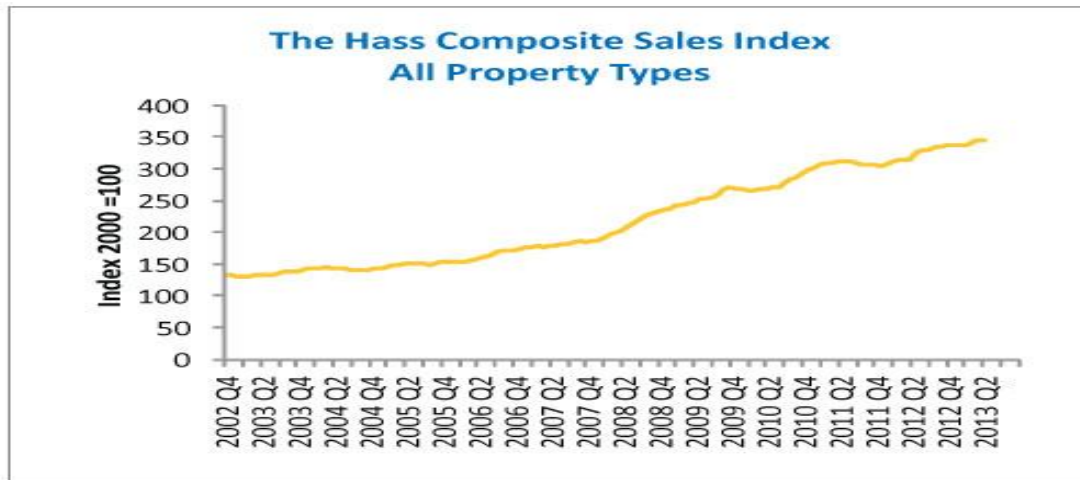


Figure 2 above gives a picture of the sales in the same period as those depicted in the lending rates above. When mortgage rates are lower, that is Year 2004 to 2011; this makes the purchasing of a home more affordable, hence the steady rise in the sales index in the same period. During the 2nd Quarter in 2011, the interest rates rose sharply, which has a resultant effect of the sales index dipping in the 4th quarter of the same year. Consequently, the sales of homes rise as more consumers are able to take out a low-cost loan. Consumers with existing mortgages may attempt to re-finance their mortgage, meaning they trade their current loan for another, cheaper one. In periods of low interest rates, more houses are often built as supply rises, and development companies are able to borrow money at a cheaper rate to finance the construction.

4.2.3 Combined Variables

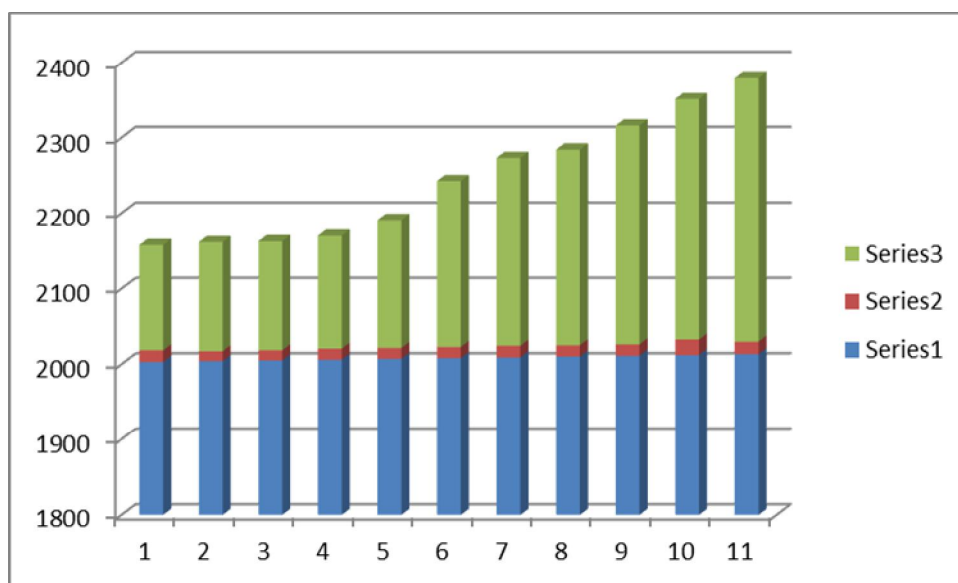
The study is out to establish the effect of the interest rates on the supply of real estate finance in the county. The two variables under study are tested against each other to determine their relationship. The researcher found the annual mean of interest charged by the banks to test this against the sales of property through mortgage.

Table 4.7: Interest rates 2003-2013

Year	Mean Interest rate (%)	Sales Index
2003	15	140
2004	12.9	145
2005	13	145
2006	14.2	150
2007	14	170
2008	14.5	220
2009	15	250
2010	14.7	260
2011	14.8	290
2012	20	320
2013	18.75	350

Table 2 above shows the mean interest rates versus the Hass sales index of mortgages for the period 2003 to 2013

Figure 4: Relationship between Interest rates and Mortgage Sales



From figure 4 above, it can be observed that there is a clear defined relationship between interest rates and the real estate sales. The movement interest rates are fluctuating around the 14% mark in the year 2006 to 2011 before rising sharply to 20% in 2012. During this period, the mortgage sales index has been gradually increasing from the index 150 in 2006 to index 290 in 2011 before increasing to 320 in 2012. This study shows there is a correlation coefficient between interest rates and the sales.

4.3 Summary and Interpretations of the Findings

The study made use of secondary data in analyzing the effect of interest rates on supply of real estate finance. The secondary data was obtained from the published annual reports of selected banks and Mortgage management reports of HassConsult. The mode F-value which is significant at 1% level indicates that the model do not suffer from significant bias. However, the coefficient of determination (R^2) indicates that a change in interest rate is accounted for by the explanatory variables while the adjusted r-Squared further justifies this effect. This invariably means that there is a strong relationship between the interest rates and the mortgage sales in Nairobi county.

To determine the relationship between the interest rates and the real estate sales as specified in the research question, the study employed various techniques such as simple regression as well as column charts. All the statistical tests for significance were done at 95% confidence level, therefore the threshold for the p - value was 0.05. The implication of the findings is that interest rates have significant impact on the mortgage sales. As a result any change in the interest rates will have an effect on the mortgage sales thus the supply of real estate financing.

Generally, when the interest rate is lower, people are more likely to borrow money, as doing so will cost them less than at another time. Conversely, when the interest rate is higher, borrowing becomes more expensive and slows. This principle applies to loans that come in the form of mortgages. When interest rates are lower, people are generally more willing to take out a mortgage than when rates are higher. Interest rates are the rates at which money can be borrowed for a set period of time. The higher the rate, the more

money a borrower must pay in the form of interest on the loan. The Central Bank of Kenya sets a rate at which it lends money to banks and other financial institutions also known as the CBR, which in turn affects the rate at which they lend to businesses and individuals, such as people seeking a mortgage.

CHAPTER FIVE

SUMMARY, CONCLUSION AND RECOMMENDATIONS

5.1 Summary

The broad objective of the study was to establish the effect of interest rates on the supply of real estate finance in Nairobi County. The study hypothesized that supply for real estate was on the increase with the decline in the interest rates charged by the real estate financiers. The samples drawn from the population were stratified into strata of interest rates on the supply of real estate. According to the data collected by the researcher indicated a strong influence of the interest rates on the supply of real estate. According to the data, the quantity supplied increased while the interest rates decreased. This is in line with the law of demand and supply. To establish the relationship of the two variables of capital gains and the interest rates, a correlation model was used. The correlation model showed a positive correlation implying a positive degree of association.

Mortgage lending by the banks for real estate purposes represents the major type of lending at present in Kenya, most importantly in Nairobi County. Consistent growth in real estate financing can be explained by house prices which have been on the rising trend and the growth to access to credit. Housing pricing plays major role in the investment of house owning, this has a direct impact on the sales levels. The study found out that the supply of interest rates finance also depends on the property type such as Standalone houses, Town houses and Apartments. It also shows that factors that affect demand is the real disposable income which also connects to the capital cash flows, real interest rates after tax and real estate financing. This result suggests that supply of real estate finance is not triggered only by housing pricing, housing types, net disposable income but also the prevailing interest rates.

For cash buyers, the sector remained the country's strongest asset class, with returns from real estate since January 2011, and throughout the slowdown caused by high interest rates, higher than returns from the Nairobi Stock Exchange. For cash buyers, property remains the country's best investment for returns, but with the market now driven primarily by cash buyers, the issue is the lack of access for home buyers who need finance.

5.2 Conclusion

Retail investors especially homeowners, focus on changing mortgage rates because they have a direct influence on real estate prices. However, interest rates also affect the availability of capital and the demand for investment. Although real estate values are influenced by the supply and demand for properties in a given locale and the replacement cost of developing new properties. These capital flows influence the supply and demand for property and, as a result, they affect property prices. In addition, interest rates also affect returns on substitute investments, and prices change to stay in line with the inherent risk in real estate investments. These changes in required rates of return for real estate also vary during destabilization periods in the credit markets. As investors foresee increased variability in future rates or increase in risk, risk premiums widen, putting increased downward pressure on property prices.

The study set out to determine the effect of the interest rates on the supply of real estate finance and found out that more people are likely to borrow money when the interest rate is lower as doing so will cost them less than at another time. It was also evident that when the interest rate is higher, borrowing becomes more expensive and slows. Hence there was significant increase in the sales index matching with the drop in the mortgage interest rates. This principle applies to loans that come in the form of mortgages. When interest rates are lower, people are generally more willing to take out a mortgage than when rates are higher. Though higher interest rates typically mean a cooling of demand for real estate, since a purchaser will have a higher payment on the same property, the opposite is happening in the short term.

The study also found that there was a positive relationship between the interest rates and sales of real estate. It can therefore be concluded that the movements of relative interest rates and sales index are positively correlated, indicate conclusively that there is a relationship between the two. The conclusion of this causal study, drawn from the regression analysis is that there is clear defined relationship between the interest rates and real estate sales in Nairobi County.

5.3 Policy Recommendations

The study recommends that there is need for the monitoring of the capital flow. The interest rates can significantly affect the cost of financing and mortgage rates, which in turn affects property-level costs and thus influences values. However, supply and demand for capital and competing investments have the greatest impact on required rates of return (RROR) and investment values.

As the Central Bank of Kenya moves focus away from monetary policy and more toward managing interest rates as a way to stimulate the economy or stave off inflation, its policy has had a direct effect on the value of all investments. As interbank exchange rates decrease, the cost of funds is reduced and funds flow into the system; conversely, when rates rise, the availability of funds decreases. As for real estate, the changes in interbank lending rates either add or reduce the amount of capital available for investment. The amount of capital and the cost of capital affect demand but also supply capital available for real estate purchases and development.

These changes in capital flows can also have a direct impact on the supply and demand dynamics for property. The cost of capital and capital availability affect supply by providing additional capital for property development, and also affect the population of potential purchasers seeking deals. These two factors work together to determine property values.

There is need to follow through on tax on rental properties may reduce the attractiveness of the buy-to-rent or build-to-rent properties quite significantly for some, as the taxes will reduce the income due to investors. The tax authorities may well consider reducing the taxation levels of these investments from 30% in line with those in shares in the stock exchange which are only taxed at 5% to encourage investment in affordable housing which is in dire need in the country. An amnesty consideration would also encourage more landlords to come forward and be compliant going forward backdating tax payments may render many landlords bankrupt.

5.4 Limitations of the Study

The study was based on a sample limited to Kenyan mortgage financial institutions and selected commercial banks. It did not cover other mortgage financial institutions in the Kenyan market. Considering the high level of confidentiality within the financial sector, it was impossible to acquire secondary data in form of management reports relating to the number of housing units sold within the prevailing mortgage interest rate which resulted to the researcher to work with the mean interest rate.

Real estate sector is characterized by heightened competition and information from some banks such as the sales made from mortgages was not readily available while some banks flatly refused to share the information including the mortgage interest rates charged within the period of study forcing the researcher to randomly moving to the next institution hence wasting time and resources.

The inability to include more organizations to the research was a limiting factor. The study only sampled selected commercial banks whereas the study could have covered more institutions across all sectors offering mortgages such as the Credit unions, Life Insurance Companies so as to provide a more broad based analysis.

The scope and depth of the study was also limited by the time factor and financial resource constraints. The time allocated for the study was insufficient while holding a fulltime job and studying part time. However the researcher tried to conduct the research within the time frame specified.

5.5 Suggestions for Further Studies

From the findings and conclusion, the following for future research in finance were recommended; Firstly, this study focused on commercial banks offering mortgage financing in Nairobi and therefore generalization cannot adequately extend to other organizations in other industries providing real estate financing such as Credit unions, Life Insurance Companies and Savings and Loans associations, this is due to the factors that affect pegging of the interest charged. Based on this fact among others, it is therefore recommended that a broad study covering all financial institutions offering mortgage

products be done to find out the effect of the interest rates on the supply of real estate finance.

Further research could dwell on the importance of driving forces in the real estate development and management industry. This study will be critical so as to understand what forces affect the survival, growth and prosperity of real estate.

In this study, the supply for mortgage credit has been assured with the total sales but not the number of mortgage credits to show the supply in order to verify the supply in terms of numbers of mortgage to gauge supply. Finally, it is also suggested that the future research should focus on the different aspect of valuation of real estate and environmental factors on the property value.

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APPENDIX I : INTEREST RATES DATA 2003-2013

	Bank	2003 JUNE	2004 JUNE	2005 JUNE	2006 JUNE	2007 JUNE	2008 JUNE	2009 JUNE	2010 JUNE	2011 JUNE	2012 JUNE	2013 JUNE
1	Stan Chartered	15.3	12.8	14.7	14	16.3	15.5	18.8	16.4	17.3	25.2	19.9
2	CFC Stanbic	16.7	15.7	13.6	13.2	14.1	14.2	14.3	13.8	16.2	20.1	18.4
3	CBA	17.3	10.8	12.6	14.6	13.2	18.2	16.4	12.8	14.1	18.75	17.7
4	National Bank	13.2	13.8	13.4	13.8	12	14.3	15.7	14.5	16	21.2	18
5	Barclays bank	14.6	15.5	12.8	16.2	14.1	13.7	17.5	16.2	16.2	20.4	15.5
6	Co-op Bank	13.4	10.8	14.2	11.8	13.5	13.7	14.5	12.8	15.3	19.2	19.3
7	KCB	15.7	14.8	11.8	17.7	15	15.4	15.7	15.4	13.8	20.7	16.5
8	Housing Finance	16.2	13.5	12.9	14.3	12.7	12.3	13.4	17.5	14.7	18.3	23.3
9	I&M Bank	13.7	9.5	16.8	16.7	15.8	12.6	16.8	12.7	15.4	21.8	16.5
10	Bank of Africa	16.1	13	12.7	15.4	16.3	16.4	10.6	12.3	14.3	18.76	17
11	Family Bank	-	-	-	11.4	12.8	14.5	14.8	17.8	13.8	22.76	18.3
12	Equity Bank	-	10.7	12.2	14.2	11.8	15.7	14.2	15.1	13.4	18.5	17.9
13	NIC Bank	17.5	13.8	11.6	12.8	12.8	13.6	12.9	16.3	14.7	17.5	18.8
14	Chase Bank	13.8	9.7	12.4	15.2	15.2	13.4	13.5	15.1	13.6	18.7	22.7
15	Consolidated	14.7	12.8	13.7	11.8	15.8	15.1	14.5	13.3	15.3	20.25	21.7
16	Diamond Trust	16.5	15.2	14.3	13.8	13.4	13.5	15.4	13.4	12.4	18.7	18.5
	Total	214.7	192.4	199.7	226.9	224.8	232.1	239	235.4	236.5	320.82	300.0
	Mean	15.33	12.82	13.31	14.18	14.05	14.5	14.93	14.71	14.78	20.05	18.75
	(x)	15	12.9	13	14.2	14	14.5	15	14.7	14.8	20	18.75

APPENDIX II: LIST OF COMMERCIAL BANKS AND MORTGAGE FINANCE

COMPANIES IN NAIROBI COUNTY

African Banking Corporation Ltd. P.O Box 46452 - 00100, Nairobi
Bank of Africa Kenya Ltd. P. O. Box 69562 - 00400,Nairobi
Bank of Baroda (K) Ltd, P. O Box 30033 – 00100, Nairobi
Bank of India, P. O. Box 30246 - 00100 Nairobi
Barclays Bank of Kenya Ltd. P. O. Box 30120 –00100,Nairobi
CFC Stanbic Bank Ltd. Postal Address: P. O. Box 72833 -00200 Nairobi
Charterhouse Bank Ltd. P. O. Box 43252 Nairobi
Chase Bank (K) Ltd. P. O. Box 66015 - 00800, Nairobi.
Citibank N.A. Kenya, P. O. Box 30711 – 00100, Nairobi
Commercial Bank of Africa Ltd. P.O. Box 30437– 00100, Nairobi
Consolidated Bank of Kenya Ltd. P. O. Box 51133 - 00200, Nairobi
Co- operative Bank of Kenya Ltd. P. O. Box 48231 – 00100, Nairobi
Credit Bank Ltd. P. O. Box 61064 – 00200, Nairobi.
Development Bank of Kenya Ltd. P. O. Box 30483 - 00100, Nairobi
Diamond Trust Bank Kenya Ltd. P. O. Box 61711 – 00200, Nairobi
Dubai Bank Kenya Ltd. P. O. Box 11129 – 00400, Nairobi
Ecobank Kenya Ltd. P. O Box 49584 - 00100 Nairobi
Equatorial Commercial Bank Ltd. P. O. Box 52467- 00200 Nairobi
Equity Bank Ltd. P. O. Box 75104 - 00200, Nairobi
Family Bank Limited. P. O. Box 74145 - 00200 Nairobi
Fidelity Commercial Bank Ltd. P. O. Box 34886 - 00100 Nairobi
Fina Bank Ltd. P. O. Box 20613 – 00200, Nairobi
First Community Bank Limited. P. O. Box 26219 - 00100., Nairobi
Giro Commercial Bank Ltd. P. O. Box 46739 – 00200, Nairobi
Guardian Bank Ltd. P. O. Box 67681 – 00200, Nairobi
Gulf African Bank Limited. P. O. Box 43683 – 00100, Nairobi
Habib Bank A.G Zurich. P. O. Box 30584 - 00100 Nairobi
Habib Bank Ltd. P. O. Box 43157 – 00100, Nairobi
Imperial Bank Ltd. P. O. Box 44905 – 00100, Nairobi
I &M Bank Ltd. P.O. Box 30238 – 00100, Nairobi
Jamii Bora Bank Limited. P. O. Box 22741 – 00400, Nairobi
Kenya Commercial Bank Ltd. P. O. Box 48400 – 00100, Nairobi
K- Rep Bank Ltd. P. O. Box 25363 – 00603, Nairobi
Middle East Bank (K) Ltd. P. O. Box 47387 - 0100 Nairobi

National Bank of Kenya Ltd. P. O. Box 72866 - 00200 Nairobi
NIC Bank Ltd. P. O. Box 44599 - 00100 Nairobi
Oriental Commercial Bank Ltd. P.O BOX 14357 - 00800, Nairobi
Paramount Universal Bank Ltd. P. O. Box 14001 - 00800 Nairobi
Prime Bank Ltd. P. O. Box 43825 – 00100, Nairobi
Standard Chartered Bank Kenya Ltd. P. O. Box 30003 - 00100 Nairobi
Trans - National Bank Ltd. P. O. Box 34353 - 00100 Nairobi
UBA Kenya Bank Limited. P. O. Box 34154 - 00100 Nairobi
Housing Finance Ltd. P. O. Box 30088 - 00100 Nairobi

Source: [www.centralbank.go.ke/images/docs/Bank Supervision Reports/Commercial Banks Directory](http://www.centralbank.go.ke/images/docs/Bank%20Supervision%20Reports/Commercial%20Banks%20Directory)

APPENDIX III: REQUEST LETTER TO COLLECT DATA