

DETERMINANTS OF MORTGAGE UPTAKE

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DECLARATION

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

Signature: Date:

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This research proposal has been forwarded for examination with my approval as the University Supervisor.

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DEDICATION

To my mother, my pillar of strength, Elizabeth Kariuki.

Thank you for unconditionally supporting me. I am honored to have you as a parent.

I am grateful for allowing me the chance to prove and improve on myself through all walks of life. May the Almighty God Richly Bless you.

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ABSTRACT

This study sought to examine the determinants of mortgage uptake in Kenya. This study adopted a cross sectional design of the various mortgage lending institutions in Kenya. Data was drawn from the registered commercial banks by the Central Bank of Kenya. There were 43 registered commercial banks in Kenya as of 30 December 2014. Purposive sampling was used to select 20 mortgage lending institutions and commercial banks which have the most mortgage accounts in the country. The study only used secondary data which was collected from financial statements and government policy papers. Data was analysed using descriptive and regression analysis. The results reveal that the various determinants of mortgage uptake include property prices, interest rates, level of income, costs of operations, the mortgage process as well as the size of the bank. It is concluded that these factors have had a significant influence on the uptake of mortgage products in Kenya. The study recommends that management of mortgage lending institutions need to ensure that these determinants are managed in order to increase uptake of mortgage products.

CHAPTER ONE: INTRODUCTION

1.1 Background of the Study

Mortgage financing is the process of underwriting and extending a home loan or mortgage on commercial property to a qualified applicant. Some mortgage loans are secured by the real property, and provide a schedule of payments of interest and repayment of the principal to a bank. Most mortgage contracts arrange for loans to be fully amortized with adjustable mortgage interest rates and either payment or maturity is fixed for the term of the loan. The mortgage market is important for housing because it makes the investments of real property divisible thereby allowing households more flexibility in adjusting inter-temporal allocation of savings and housing consumption between the present and the future as desired (Mehdian, 2001).

In a typical mortgage contract, the mortgage company provide funds against property to earn interest income, and generally borrow these funds themselves. The price at which the lenders borrow money therefore affects the cost of borrowing. Lenders may also, in many countries, sell the mortgage loan to other parties who are interested in receiving the stream of cash payments from the borrower, often in the form of a security (by means of a securitization (The World Bank,2006).). the financing strategy also takes into account the perceived riskiness of the mortgage loan, that is, the likelihood that the funds will be repaid usually considered a function of the creditworthiness of the borrower, that if they are not repaid, the lender will be able to foreclose and recoup some or all of its original capital; and the financial, interest rate risk and time delays that may be involved in certain circumstances (Stiglitz & Weiss 2005).

The arrangement is such that the property that is purchased with the financing is used as collateral for the debt. For the duration of the mortgage, the lender functions as the mortgage holder on the property (Asare& Whitehead 2006). In the event that the owner of the mortgaged property defaults on the loan, the mortgage company has the right to secure full ownership of the property and offer it for resale to another party. The traditionally role of mortgages was always a predominant form of borrowing in rural economies because land was the most important asset. Landowners borrowed against future rents to finance current consumption or the development of their estates. The traditional form of mortgage lending was a direct loan from one individual to another, both of them usually wealthy (Miller, 2000).

Housing finance plays a major role in the housing system and services of any given country. The importance of properly structured mortgage service provision is also significantly important to the wider economy as well as to the individual home owner. It is further posited that, well-structured mortgage facilities can deliver accessibility to housing facilities to a wider population segment. Home ownership remains the largest single asset that a majority of the individual owners will have in their lifetime. The housing deficit problems is not only limited to the developing countries but also to the developed countries (Wahome, 2010).

The mortgage industry in developing countries is a combination of many interrelated components which include land, infrastructure, building materials, policies, building regulations and more importantly the finance component. Finance in housing delivery is very important because of the huge financial requirement for housing production. Studies have been conducted along this line including that of Fasakin (1998) who suggested the need to strengthen the co-operative housing system, Onibokun (1985) and Ebie (2003) who stated that rent in major cities in Nigeria was about 60% of an

average workers disposable income. This is much higher than the 20-30% recommendation by the United Nations. Omirin (1998) posits into land accessibility and low income house building in metropolitan developing countries. Based on her analysis lack of finance and escalating cost now takes precedence over land accessibility.

Today, developed countries have advanced housing finance systems in which funds flow from savers to home-buyers by the mortgage markets. On the other hand, despite its recognized economic and social importance, housing finance often remains underdeveloped in developing countries mainly due to the lack of macroeconomic stability. The impact of variations in commercial mortgage rates on banks' profitability is largely dependent on the degree of responses of asset and liability rates (Wahome, 2010).

The market to purchase property is much more than a market for accommodation. Demand to purchase a house is influenced by a range of factors, including the expected future costs and benefits associated with owning that property. Many of these payoffs are uncertain. Expectations of future house prices and mortgage interest rates influence how much a person is willing to bid for a house today. The more binding or pervasive supply constraints are, the more an increase in demand will result in rising house prices rather than increased building activity. Traditionally numerous instruments finance home mortgages, offered by public and private sector institutions, in developed countries. How efficient are these instruments or financing arrangements is an important question for research and therefore this study will try to evaluate the issue. The outcome of an efficient mortgage finance system can be viewed in terms of an increase in the homeownership rate or quality of housing (Stiglitz & Weiss 2005).

The demand for housing in Kenya is immense and driven by a growing population and urbanization; hence an efficient housing finance system has significant importance both in meeting the housing needs of individuals and in reinforcing the development of the construction, finance and other related sectors of an economy. According to the CBK 2011 report, new mortgage loans were approximately 1,278 whereas by 2009 the new loan portfolio had grown to over 6,000. By May 2010, the number of new loans was 2,966 which is line with the steady growth seen in the previous years. Demand for residential and commercial houses in Kenya increased after the central bank cut its benchmark interest rate eight times between December 2008 and January 2011 to help boost economic growth. But the mortgage market is still relatively small by international standards with only 20,000 loans. While the growth rate in mortgage loans has been rapid at just under 50% since 2006 and has been growing steadily at 14% annually, the loan portfolio remains small. Nine out of ten Kenyans cannot afford to buy the houses they live in- even with a mortgage loan in tow, if at all they qualify (Aguko, 2012).

Highlights of a report by Central Bank and World Bank released indicate that less than one in every 10 Kenyans can afford a mortgage. The total commercial bank mortgage loan book in the country was only 20,000 accounts, while the total value of mortgage loans, as at the end of December last year was Sh133.6 billion (CBK, 2015).The local housing market faces myriad challenges among them the yawning deficit now estimated to stand at an annual demand of 300,000 housing units against supply of a paltry 60,000.Lwali (2008); a case study of Shelter Afrique whose objective was to find out the limitations faced by shelter Afrique as an international housing institution with operations in various countries including Kenya. Using

multiple regression equation the researcher identified inflation, interest and foreign exchange rates as the major issues.

The growth and accessibility of mortgage facilities in the country can be traced back to the incorporation of the Housing Finance Company of Kenya in 1965 with joint ownership; Commonwealth Development Corporation (CDC) with 60% equity ownership and Government of Kenya with 40% equity ownership. The company that is now publically quoted owns 29% of the total mortgage industry. However, the financial industry in Kenya has grown to include other mortgage financiers (Were, 2012).

1.1.1 Determinants of Mortgage Uptake

The lack of affordability is a combination of factors which includes the low levels of income (especially in rural areas), and the high and volatile level of inflation and relatively high margins charged by banks. The high desire to earn quick profits has led to increase in interest rates for borrowers of finance in the institutions and hence it has prevented low-income groups who cannot afford the high interest rates set by the institutions. Deficiencies in a lender's ability to capture or understand risks mean that lenders have to charge a high risk premium (Merna, 2008). Commercial banks and other micro-finance institutions tend to estimate the impact of this type of risk in the performance of the financing activities that they have undertaken (Sing, 2006). Default risk is a major risk that most financial institutions are acquiring insurance for the loans to recover the money they loaned in case of default.

There are various obstacles that influence the uptake of mortgage products such as income levels, interest rates, borrowing costs, financial education, availability of security as well as the age and personal financial commitments. (CBK survey, 2014)

Income Level

The income level affects the ability to take up a mortgage facility. Mortgage facilities are long term investments that consume a substantial amount of one's income for a long time. The income levels also dictate the amount of money that one can qualify for in terms of mortgage facilities. Banks staff who are on contract basis such as the sales team and some operational staff don't qualify for mortgage facilities due to their short engagement period with the bank. Contracts are either one or two year period renewable contracts dependent on the performance of the employee and the needs of the bank within that period. This time is not sufficient for contract based employees to take mortgage facilities (Sing, 2006).

Interest Rates

One of the main factors that influence the demand for mortgage products are the interest rates charged by the commercial banks and other mortgage lenders. Interest rates affect the cost of monthly mortgage payments. A period of high interest rates will increase cost of mortgage payments and will cause lower demand for buying a house. High interest rates make renting relatively more attractive to buying. Interest rates have a bigger effect if homeowners have large variable mortgages. The mortgage industry in the country is characterised by high property prices which have made affordable housing out of reach of most people who may be interested in the purchase of housing through mortgages. This in turn influences the demand for mortgage products in a negative manner as most people are deterred by the high prices. Low property prices on the other hand make housing affordable and this therefore increases the demand for mortgage products (Aguko, 2012).

House Prices

Real house prices are directly determined by the willingness of households to pay for (and willingness of builders to supply) a constant-quality house. Changes in the quantity of housing demanded will affect real prices only to the extent that the long-run housing supply schedule is positively sloped. The housing prices and other associated fees may enter mortgage lending both as a demand and a supply factor. Housing prices, together with income and the mortgage rate, determine how much credit households wish to take out. At the same time, banks' decisions regarding mortgage applications may also be influenced by housing prices, which form an indicator of the collateral value of a house (Greef et al, 2000). Creditworthiness influences the demand for mortgage products due to the fact that individuals who are not creditworthy cannot access any form of credit or loans. In a country where a large number of citizens are creditworthy, the demand for mortgage products and other financial services will be high while fewer creditworthy citizens mean lower demand for mortgage products (Beck, 2008).

Availability of Security

In the mortgage industry and in the larger financial services industry, most loans are backed by security and this means that lack of assets that can be securitised lead to lower demand for credit facilities such as mortgages. It can be argued that the requirements for asset securities in order to access mortgage products may affect demand for the same in a negative manner. This is however eliminated by the fact that in most mortgage arrangements, the property being purchased is considered the security for the mortgage loan.

Marketing Budget of Financier

The annual marketing budget of the financier is also a major determinant of the demand for mortgage products due to the fact that marketing efforts provide

knowledge and information about available mortgage products and the terms and conditions to the mortgage seekers. More marketing efforts mean more people are aware and this leads to an increased demand for the mortgage products. On the other hand, a small marketing budget means that less people are aware of the mortgage products available and therefore lower demand for the same (Dick, 2002).

Cost of Operations

Mortgage contracts attract fees and costs that are levied on the mortgage that increase the cost of procurement. Such costs include; legal fees, stamp duty, arrangement fees, valuation fees, mortgage protection policy all of which add to increase the cost of mortgage and this pushes the costs of mortgages out of reach from most individuals as one not only has to bear in mind the cost of the property but also consider the additional costs which on average amount to 10% of the property value. (Central Bank of Kenya - Mortgage Finance in Kenya –a Baseline survey 2011).

Process of Mortgage Purchase

The process of mortgage purchase also determines the uptake of mortgage products in that it can both hinder and enhance the uptake. Various commercial banks and mortgage institutions may have different processes which differ in terms of the requirements or the length of time it takes to purchase the product (Dick, 2002).

Size of Bank

The size of the bank is also another determinant of the demand for mortgage products due to its ability to influence the supply. This works through the law of demand and supply where increased supply leads to lower prices and this increased demand and vice versa. Larger commercial banks are able to issue more loans and mortgage products and therefore they influence the supply in a positive manner. Smaller banks

on the other hand have fewer assets to support mortgage lending and therefore are unable to influence the demand (Loutskina& Strahan, 2007).

1.1.2 The Mortgage Industry in Kenya

In Kenya, mortgage lending is predominantly done by commercial banks. There are 43 banks and one Mortgage Finance Company in the Kenyan banking system, 25 of them have mortgage portfolios of differing sizes. While some of the banks offer mortgage facilities to their members of staff. Central Bank of Kenya authorises two types of lenders, the ordinary banks and the mortgage companies. Similar regulations with regards to mortgage financing apply to the two types of lenders. According to the Central bank Survey, the largest lender as at 2010 was Kenya Commercial Bank (KCB) following its acquisition of Savings & Loans, followed by HFCK (CBK, 2015).

Though there is an attempt to achieve decent housing for Kenyans, Kenya has, on the whole, failed to address the housing needs of her population. The situation has been partially alleviated through the activities of the private sector housing developers, who have been a key supplier of housing, particularly in Nairobi (Hassanali, 2009). But the attempt has been slowed down as the Government expenditure for housing has been on a consistent decline, stemming from activities on price controls, inappropriate building regulations and codes as well as lack of basic planning and provision of services (Otiso, 2003). This in turn frustrates mortgage dealers eventually hampering the goal of decent house provision. On the other hand, there has been a great appreciation of property prices and volatility across the different property markets in Kenya since the year 2006. According to Hass property consultants, in their first property index in Kenya, the prices for high end residential properties doubled between the years 2005 and 2009 (Hass property index, 2009).

The mortgage industry in Kenya is faced by various issues which have limited the accessibility as well as the affordability of decent housing for most Kenyans. One of the main issues is low income levels of a majority of Kenyans which has made access to mortgage products the preserve of a few. Another issue facing hindering the growth of the industry is the low efficiency levels of the issuance of mortgage loans by the issuing institutions. The discrepancies between the supply and demand of housing units in the country has also negatively affected the growth of the industry since the annual demand is 300,000 housing units against supply of a paltry 60,000 which means the deficit has been growing over the years. Other issues facing the industry include a poor regulatory framework as well as poor financial awareness of a majority of potential customers(Hass Consult, 2013).

Housing provision and mortgage industry growth is an important aspect of the economic development of the country and this is indicated by its inclusion in various policy papers such as the Kenya Vision 2030 and the National Housing Policy developed in 2004. The Housing Policy was aimed at addressing the deficit in housing supply and in arresting the deteriorating housing conditions countrywide and to bridge the shortfall in housing stock arising from demand that far surpasses supply, particularly in urban areas. The Vision 2030 on the other hand identifies 4 main flagships projects for the industry. These are; The Metropolitan and Investment Plans Initiative, The Housing Development Initiative which calls for an increase in annual productivity of adequate housing with an emphasis on equity in access, beginning with low-income housing, The Mortgage Financing Initiative - establishing a secondary mortgage finance corporation as well as a national housing fund while also introducing housing and infrastructure bonds; and the Enactment of the Housing Bill, 2006 (Vision 2030, 2007).

1.2 Problem Statement

The uptake of financial services offered by commercial banks are affected by various factors and they include income levels, savings levels, availability of bank branches, and availability of bank agents, transaction costs charged by banks (Allen, 2013) banking products, customers saving level and efficiency of services offered by banks among others. This study will therefore shed light on the factors that affect customer demand of the mortgages offered by Commercial Banks in Nairobi County. On the matter of determining factors for financial services demand, these appear to vary. However, the common thread in most studies remains that this demand is a function of income, savings and transaction costs although there are different studies that focus on a variety of other independent determinants of financial service demand. Dick(2002) focused on the costs associated with financial service access, such as; opening balances in America. His findings were that American consumers were less responsive to opening balances than they were to deposit rates. Beck(2008) associated the large fixed transaction costs peculiar to traditional (paper) banking service expansion to be correlated with a consumer perception of cost related inconvenience and hence lower bank service demand.

Obtaining a mortgage in today's mortgage market is a complicated process as it involves many procedures like identifying the best service provider with the best interest rates. This in turn hinders accessibility to mortgage funding. This supported by statistics that show; in May 2011 the mortgage holders stood at 15,049, in December 2011 they were 16,135 mortgage holders (CBK, 2011), while by end of 2012 there were 17,000 holders (Hass Consult, 2013). In April 2015, the number of mortgage accounts in the country had risen to 20,000 holders although it is noted that the industry is yet to reach its full potential. This shows low uptake of mortgage in the

country (CBK, 2015). World Bank (2010) attributed this to fact that mortgage is accessible to only a smallmajority of the Kenyan population. Further,Loutskina and Strahan (2007) point to securitization, cost and availability of mortgages as discriminating factors on those intending to take up mortgages.

Previous studies on the factors that influence the uptake of financial services offered by commercial banks have mostly been general in nature although there are few that have focused on mortgage products both on the international scope as well as locally. Njiririand Wanyoike (2012) studied mortgage facility uptake among the bank staff within commercial banks at Nakuru town and found that employment status of clients affects mortgage financing among banks. Were (2012), evaluated factors affecting the uptake of pension secured mortgages in Kenya and found that high interest rates and high property prices are some of the main factors. Njiru and Moronge (2013) evaluated the factors affecting growth of mortgage industries in Kenya as a case study of National Housing Corporation and found that the main factors were interest rate volatility and poor access. As is seen from the above studies, there is little literature focusing on the factors influencing the uptake of mortgage products from the customers' side in the local setting. This study therefore sought to answer the following question; what are the factors influencing the uptake of mortgage products in Kenya?

1.3 Research Objectives

The main objective of this study is to evaluate the factors influencing the uptake of mortgage products in Kenya.

The specific objectives of the study are;

1. To determine the influence of Process of mortgage purchase on the uptake of mortgage products in Kenya
2. To examine the influence of property prices on the uptake of mortgage products in Kenya
3. To evaluate the influence of level of income on the uptake of mortgage products in Kenya
4. To assess the influence of cost of operations on the uptake of mortgage products in Kenya
5. To evaluate the influence of interest rates on the uptake of mortgage products in Kenya
6. To investigate the challenges facing the mortgage industry in Kenya

1.4 Value of Study

The study will be of value to the mortgage industry in the sense that commercial banks and other financial institutions offering mortgage products will understand the factors that influence the uptake of their products by customers as well as how to ensure that they can package their mortgage products in order to ensure increased customer uptake.

The study will also be valuable to the policymakers in government as it will serve as a guide to them in their tasks of making policies for growth and development of the mortgage industry in Kenya.

The findings of this study will be significant to academicians in that it will add to the body of knowledge of the researchers in the fields of banking, finance and economics. Researchers will also be able to borrow from this study when carrying out similar studies.

CHAPTER TWO: LITERATURE REVIEW

2.1 Introduction

This chapter presents the literature review. First, a theoretical review is provided focusing on theories that explain the factors that influence the access to financial products from commercial banks and other financial institutions. Secondly, the empirical review of the studies that have been done on the factors that influence the uptake of financial products in general with a focus on mortgage products is made. The research gap is then provided.

2.2 Theoretical Literature

This section presents the theories related to access of financial products from financial institutions. The study will be guided by the following theories; Classical Theory of Demand, Classical Theory of Interest Rates, The Theory of Consumer Choice and the Title and Lien Theories of Mortgage

2.2.1 Classical Theory of Demand

McConnel (2008) gives the four basic laws of supply and demand are as follows; If demand increases and supply remains unchanged, a shortage occurs, leading to a higher equilibrium price; If demand decreases and supply remains unchanged, a surplus occurs, leading to a lower equilibrium price; If demand remains unchanged and supply increases, a surplus occurs, leading to a lower equilibrium price; If demand remains unchanged and supply decreases, a shortage occurs, leading to a higher equilibrium price. Demand is often depicted graphically as a negatively sloping curve asymptotic to the x axis (which is representative of the quantity of products demanded). It represents the amount of some good that buyers are willing and able to purchase at various prices, assuming all determinants of demand other than the price

of the good in question, such as income, tastes and preferences, the price of substitute goods, and the price of complementary goods, remain the same. Following the law of demand, the demand curve is almost always represented as downward-sloping, meaning that as price decreases, consumers will buy more of the good (Kurihara, 2013). Just like the supply curves reflect marginal cost curves, demand curves are determined by marginal utility curves. Consumers will be willing to buy a given quantity of a good, at a given price, if the marginal utility of additional consumption is equal to the opportunity cost determined by the price, that is, the marginal utility of alternative consumption choices.

Banking services also follow the law of supply and demand. In the mortgage industry, the number of mortgage loans accessible to customers is determined by various factors such as the supply of loans or even the costs of those loans. This means that in an event where the interest rates on the mortgage loans decrease as a result of market forces or as a result of regulation by the Central Bank, then mortgage loans become more affordable to Kenyans and therefore demand increases as more Kenyans apply for loans in Commercial banks and other Mortgage Financing Institutions. The mortgage industry in Kenya is such that there is a deficit in terms of the housing units available as compared to the annual demand. The increase in demand as a result of lower interest rates therefore will lead to a further increase in the prices of the available housing units (Njiru&Moronge, 2013). The spike in housing prices that has been experienced in the past decade particularly in Nairobi can therefore be partly attributed to fluctuations in interest rates although in Kenya the major reason is the deficit in housing units. Applying the law of demand further, in an event that the interest rates were to increase, the demand for mortgage loans and that of housing

would decrease leading to a decrease in the pricing of available housing if all other conditions are held constant (Macharia, 2013).

The Kenyan market – as with many other countries in Africa – is characterised by a large demand and a chronic undersupply of formal housing. This situation has a great impact on prices. Commercial banks and other mortgage financing institutions can therefore employ the law of demand to influence the uptake of mortgage products through making it easy to access mortgage products as well as a reduction in the interest rates. If the supply of housing units is increased by housing developers, it is expected that the prices would reduce thus spurring growth in the industry (Yannis, 2013).

2.2.2 Classical Theory of Interest Rates

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 (Drumond & Jorge, 2013).

According to this theory, the demand and supply of the mortgage loans in the Kenyan market determines the rate of interest at which these loans are issued by the commercial banks and other mortgage finance institutions. As the demand for mortgage products increases, it will cause the interest rates to rise as the lenders see an opportunity to earn more from their loans. Lower interest rates on the other hand will result in an increase in the demand for mortgage products as well as for housing units since it becomes cheaper for the borrowers to access the mortgage loans. It can therefore be argued that in order to stimulate growth in the mortgage industry in Kenya, the Central Bank should compel the mortgage institutions and commercial banks to lower the interest rates charged on their mortgage products and thus increase their demand. Regulations can also be put in place to curb the rise in interest rates in order to ensure that even lower income earners are able to access and afford mortgage products (Njongoro, 2013).

It is important to note that in Kenya, interest rates are set and determined by the Central Bank through the Monetary Policy Committee. This is usually through the Central Bank Rate (CBR) which is the price at which the CBK lends money overnight to commercial banks. It also serves as a signalling instrument for monetary policy. This rate determines the rates at which commercial banks lend to their customers since their interest rates are based on this CBR. Further, the mortgage industry is also affected by The Kenya Banks' Reference Rate (KBRR) which is the base rate for lending by commercial banks and microfinance banks as well as for pricing mortgage products (CBK, 2015).

2.2.3 Theory of Consumer Choice

The theory of consumer choice relates preferences (for the consumption of both goods and services) to consumption expenditures; ultimately, this relationship between

preferences and consumption expenditures is used to relate preferences to consumer demand curves (Armendiaz, 2005). The link between personal preferences, consumption, and the demand curve is one of the most closely studied relations in economics. Consumer choice theory is a way of analysing how consumers may achieve equilibrium between preferences and expenditures by maximizing utility as subject to consumer budget constraints,

The fundamental theorem of demand states that the rate of consumption falls as the price of the good rises; this is called the substitution effect. Clearly, if one does not have enough income to afford a mortgage loan for the access of better housing, then they are unable to purchase a house in the Kenyan market. As the prices of these houses rise, consumers will substitute away from the purchase of houses to, choosing less costly alternatives which in this situation is rental houses. Subsequently, as the wealth of the individual rises, demand increases, shifting the demand curve higher at all rates of consumption; this is called the income effect. As wealth rises, consumers will substitute away from less costly rental houses, choosing higher priced mortgage products so that they can own their own homes (Aguko, 2010).

The theory of consumer choice examines the trade-offs and decisions people make in their role as consumers as prices and their income changes. In order for a Kenyan consumer to maximize the utility with a reduced budget constraint, they will re-allocate their funds to a rental house in order to reach the highest available indifference curve depending on their income. This therefore means that the high interest rates and the high property prices in the country have left most consumers without the ability to purchase their own houses through mortgages thus most rely on rental houses which are much cheaper. It is important to note that the interest rates, income levels, housing supply deficit, transaction costs, ability to service the loans as

well as the availability of security are some of the main issues that have continually plagued the mortgage industry in Kenya thus making it difficult for most Kenyans to acquire their own property (Olweny, 2011).

2.2.4 Title theory and Lien theory of mortgages

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. Some banks apply a lien theory. This theory only gives the mortgagee a lien interest in the property. In a title theory bank, 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. In a lien theory bank, the mortgagor retains legal and equitable title to the property, but conveys an interest that the mortgagee can only foreclose upon to satisfy the obligation of the mortgagor. This is equivalent to a future interest in the property which allows the mortgagee to use the process of foreclosure. The interest is a security interest or 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 & Kalarickal, 2004). This is the theory used in Kenya by the mortgage institutions and commercial banks.

In Kenya, commercial banks issuing mortgage products and other mortgage financing institutions use the Lien theory and this allows the customers to assume ownership of the property as soon as they acquire the mortgage. This assumption of ownership

allows customers to have the right to transfer the property to a third party and pay-off the mortgage in a lump-sum amount in case of a more profitable deal. It can therefore be argued that this theory adopted in Kenya is more attractive to customers and can be used by firms to attract more customers and thus grow the mortgage industry. The idea of owning the property after purchase of mortgage product can therefore be used as marketing tool by firms in the industry and thus create interest from the public (Wahome, 2010).

2.3 Global Comparisons of Mortgage Industry

In the US, the mortgage industry is characterised by widespread availability of low-cost mortgage loans and this has resulted in increasing demand for mortgage products such as housing over the years. The overall demand for mortgage credit is principally determined by four factors: household growth, increases in homeownership, home-value appreciation and leverage. The interest rates in the country are also customer friendly and this has influenced the growth of the mortgage industry in the country as most people are able to afford the loan repayments. It is however important to note that in some jurisdictions, increasingly stringent land-use controls are pushing up house prices and impairing housing affordability in these areas (Kuvshinov, 2011).

The UK mortgage industry is also influenced by similar factors such as the levels of income, economic growth or income, the availability of mortgages, interest rates as well as market sentiments or expectations. The high levels of income and low rates of unemployment have resulted in an increase in the demand for mortgage products. Rising interest rates in the country have on the other hand influenced the demand for mortgage products by causing it to fall (Wesutsa, 2014). Ogedengbe and Adesopo (2003) examined the problems of financing real estate development in Nigeria through the administration of questionnaires and a simple descriptive analysis. The

study revealed that high interest rates and several other requirements for loan application bedevilled the financing of real properties in Nigeria.

Fang (2004) notes that the Chinese mortgage market is influenced by similar factors as mentioned above. The study reveals that residents' sustainable income, macroeconomic factors are all the reasons for the development of the China's real estate market. It is also noted that mortgage accessibility influences the prices of the housing properties. Japan has a direct credit system which is critical in developing housing finance system. Lenders make long-term loans and the government backs lenders and provides funding. House prices do, indeed, appear to be affected by interest rate changes, and there is evidence that the strength and speed of this transmission differ considerably across countries. The impact of interest rates on house prices seems to be both stronger and more rapid in countries with more developed mortgage markets like Japan (Catte, 2004).

2.5 Empirical Review

Shelter is among the most basic human needs and home ownership is one way of satisfying this need. However, home ownership requires substantial resources in terms of time and financial resources. Njiriri and Wanyoike (2012), sought to find out the mortgage facility uptake among the bank staff within commercial banks at Nakuru Town. The specific objective of the study was to establish the effect of personal finance commitments on mortgage facility uptake. The findings indicated that, while a high percentage of staff were eligible for mortgage (58.7%), there were factors hindering the mortgage uptake; serving probation period (10.7%), contract employees (17.3%), salary over commitments (6.7%) and little time towards retirement (13.3%). Personal financial commitments such as short-term financial commitments, salary over commitments, taking care of siblings, young family commitments, and

reservations towards long-term financial commitment influenced the ability to take up mortgage facilities.

Inganga (2014) examined the factors affecting customer demand for financial services offered by commercial banks in Nairobi County. The study results revealed that; many respondents reported earnings above Ksh. 20,000, there was under saving, many investors had accounts that were opened with nil requirements for bank balances, Interest rates on the other hand were cheaper for short term credit services, 51% of respondents operated savings accounts, 32 % operated checking accounts and 14% salary accounts. The study focused on financial services in general and therefore did not cover the mortgage industry in depth. This study seeks to identify the specific issues in the mortgage industry in Kenya.

Wahome (2010) evaluated the relationship between factor influencing mortgage financing and performance of mortgage institutions in Kenya. The target population for the study was all mortgaging firms in Kenya that offer mortgage financing services. The study concludes that mortgage firms in Kenya emphasizes on mortgage financing to improve firm performance. The study concludes that mortgage financing is influenced by market and financial factors which includes increase investment and Improve Profitability of the firm, improvement of risk management, attraction of more customers,promotion of innovations, Market Penetration, diversification of investment and encountering competitions in the market lowering of interest on Treasury bond, Kenya financial laws require bank to have less cash in reserve and High interest from Mortgage, creating of wealth and Improving savings. The study failed to address the factors that lead customers to demand for mortgage products which will be addressed in this study.

Njiru and Moronge (2013) carried out a study that sought to establish the factors affecting growth of mortgage industry in Kenya. The study found out that the factor that affect growth of mortgage industry in Kenya were; interest rate volatility and mortgage loans accessibility to low income earners which affected to great extent compared to credit risk which was found to have lesser effect. It also found out that the Kenya government had not put up sufficient incentives & regulations that could encourage greater uptake of the mortgage. The study recommends that to improve on mortgage industry growth government should put up in place rules & regulations to prevent the customers from being exploited through high interest rates and other charges. Also it should review property registration system work towards a one stop shop with unified data base. It further recommends that players in mortgage industry to work towards product range diversity. This will in turn capture the needs of low income earners. This study used descriptive analysis and therefore did not identify the strength of the influence of each of the factors. The current study will employ the use of regression analysis in order to identify the specific nature of the relationships between the factors and the dependent variables.

Njongoro (2013) studied the effect of mortgage interest rates on the growth of mortgage financing in Kenya. The research findings shows that total mortgage outstanding have been increasing while average interest rate generally increased in the period of study. A strong negative relationship was realized between mortgage interest rate and growth of mortgage financing. In overall the results indicate that mortgage interest rate and non-performing loans are not adequate predictors of growth of mortgage market as indicated by the coefficients. This study only focused on one factor, the interest rates, and therefore is not comprehensive enough. The current

study will focus on a number of factors in order to determine which among them is most important in terms of influencing the industry.

2.5 Conceptual Framework

The study will be guided by the following conceptual framework. This conceptual framework will be used to establish the various factors that influence the uptake of mortgage products in Kenya. The independent variables which are the factors are volatile interest rates, property prices. The dependent variable is uptake of mortgage products.

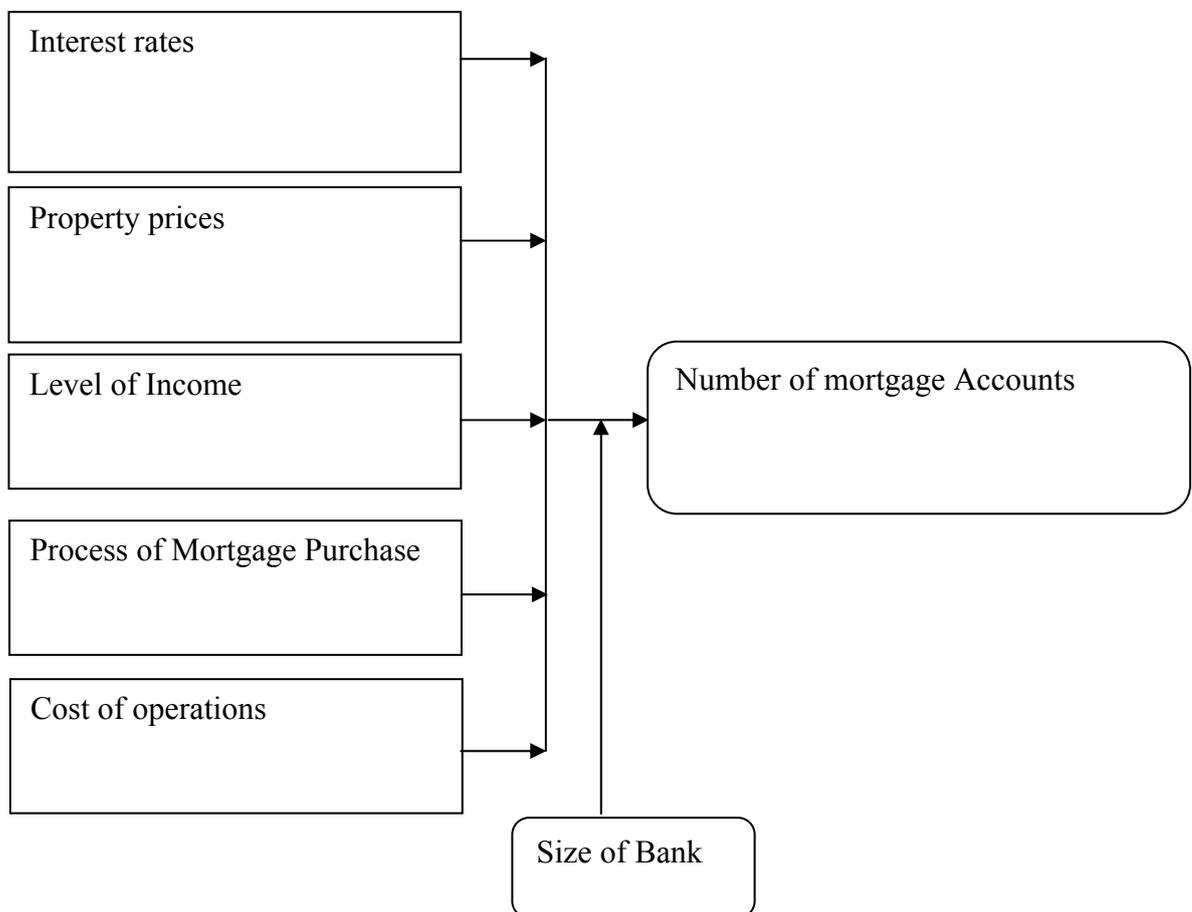


Figure 1: Conceptual Framework

Independent

Intervening

Dependent Variable

Source: Author (2015).

CHAPTER THREE: RESEARCH METHODOLOGY

3.1 Introduction

This chapter presents the research methodology. First, a presentation of the research design is provided. This is followed by an explanation on the target population, sampling design, description of research instruments, description of data collection procedures and a description of data analysis procedures.

3.2 Research Design

This study adopted a cross sectional design. According to Cooper & Schindler (2006) in a cross sectional design, either the entire population or a subset thereof is selected, and from these individuals, data are collected to help answer research questions of interest. The information about the variables that is gathered represents what is going on at only one point in time.

3.3 Population of Study

Data was drawn from the registered commercial banks by the Central Bank of Kenya. There were 43 registered commercial banks in Kenya as of 30 December 2014. Data was obtained for a two year period from 2013 to 2014. The two years were chosen because other studies have considered such two year period and this study intends also to contribute to this area of study.

3.4 Sample Size

This study used purposive sampling to select 20 mortgage lending institutions and commercial banks which have the most mortgage accounts in the country. The list of the 20 institutions is shown in Appendix 1.

3.5 Data Collection Procedures

For purposes of this study, only secondary data was used. Secondary data was collected from the websites of the various commercial banks, their annual financial statements, archives as well as that of the CBK and other government policy papers such as the Vision 2030 document. Data on Property prices was collected from property management firms such as Hass Consult.

3.6 Data Analysis and Modelling

Data analysis was carried out through the use of descriptive statistics such as frequencies, percentages and standard deviation. In order to establish the relationship between the independent variables and the dependent variable, multiple regression analysis was carried out. To avoid co-linearity between the independent variables, correlation analysis was carried out and adjustments made to ensure the independent variables do not affect each other and hence the results. The study used the following model

$$Y = \alpha + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \beta_4 X_4 + \beta_5 X_5 + \beta_6 X_6 + \epsilon$$

Where

Y Mortgage accounts

X₁ Interest Rate

X₂ Property prices

X₃ Level of Income

X₄ Process of Mortgage Purchase

X₅ Costs of Operations

X_6 Size of bank

a – is the constant

ϵ - Error term

Table 1: Definition of Variables

Variable	Definition	Measurement
Mortgage Accounts	Number of mortgage accounts in the industry	Number of mortgage accounts in the industry
Interest Rate	The rate of interest charged on a mortgage loan	Prevailing lending interest rate (CBK)
Property Prices	Average prices of housing units	Natural log of average prices of housing units
Level of Income	The average level of income of loan applicant	Per capita Income
Process of Mortgage Purchase	Process taken to purchase the mortgage	Percentage of Asset valueused as Collateral.
Cost of operations	The costs of operating the mortgage lending operations	Natural log of the annual costs of operations for mortgage lending
Size of bank	The assets of the bank	Natural log of the bank assets

Variables in the model are transformed using natural logarithm in order to ensure linearity of the model. Strength of the model was tested using significance of F statistic at 5% level as well as using the coefficient of determination R^2 .

CHAPTER FOUR

DATA ANALYSIS, RESULTS AND DISCUSSION

4.1 Introduction

This chapter presents the data analysis results and the discussion of findings. The results are shown in terms of the correlation analysis and regression analysis. The main objective of this study is to evaluate the factors influencing the uptake of mortgage products in Kenya.

4.2 Correlation Results

The table below presents the results of the correlation analysis which was done to examine any serial correlations among the independent variables which, when entered into the model for regression analysis, would lead to spurious results. This is a common issue with regression analysis and may influence the results of the regression analysis. Multi-collinearity or serial correlation is a situation where two or more independent variables (predictors) in a regression model are moderately or highly correlated.

Table 2: Correlation Results

	IR	PP	LI	MP	CP	SB
Interest Rate	1					
Property Prices	.447**	1				
Level of Income	.757	.470	1			
Mortgage Process	.289	.207	.347	1		
Cost of Operations	.242	-.095	.464	.164	1	
Size of Bank	.346	.230	.401	.247	.354	1

Source: Research Data (2015)

The results show that there were low correlation between the independent variables and therefore no serial correlations between the variables. None of the correlations between the independent variables was significant. These results therefore reveal that there was no multicollinearity between any of the predictor variables and therefore the results of the regression analysis could be relied upon.

4.3 Regression Analysis

The results in Table3 present the ANOVA from the regression analysis showing the significance of F-statistic.

Table 3: ANOVA

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	.205	5	.041	12.541	.001
	Residual	.067	24	.003		
	Total	.272	29			

Source: Research Data (2015)

Table 4 shows that the *F*-statistic of 12.541 was significant at 5% level of significance, $p = .001$. This shows that the model was fit to explain the relationship between the independent variables and mortgage uptake in Kenya.

Table 5 shows the results of the regression coefficients. The significance is shown in terms of t-values and the p-values.

The table below shows the regression model summary results. The results show the values of R, R², adjusted R², and the standard error of estimate.

Table 4: Model Summary

Model	R	R ²	Adjusted R ²	Std. Error of the Estimate
1	.848 ^a	.758	.702	.05287

Source: Research Data (2015)

The results in the table above show that the independent variables had a high correlation with the Mortgage uptake (accounts) (R = 0.848). The model accounted for 75.8% of the variance in performance as shown by the R².

Table 5: Regression Results

	Unstandardized		Standardized	t	Sig.
	Coefficients		Coefficients		
	B	Std. Error	Beta		
(Constant)	.015	.037		.418	.680
Interest Rate	-.002	.001	-.619	-3.895	.001
Property Prices	-.004	.003	.159	1.262	.002
Level of Income	.002	.001	.012	.064	.003
Mortgage Process	-.005	.002	.234	-0.195	.002
Costs of Operations	.002	.001	-.362	-2.870	.008
Size of Bank	.002	.003	-.471	-2.427	.001

Source: Research Data (2015)

The results in the table above show that interest rates had a negative effect on uptake of mortgage products in Kenya and this effect was significant at 5% level (B = -0.002, p = 0.001). The P value is significant if it is less than 5% i.e. (0.05) since significance

was being measured at 95% confidence level. The results also show that property prices had a negative effect on uptake of mortgage products in Kenya and this effect was significant at 5% level ($B = -0.004$, $p = 0.002$). The results in the table above show that level of income had a positive effect on uptake of mortgage products in Kenya and this effect was significant at 5% level ($B = .002$, $p = 0.003$). The results in the table above show that the mortgage process had a negative effect on uptake of mortgage products in Kenya and this effect was significant at 5% level ($B = -0.005$, $p = 0.002$). The results in the table above show that costs of operations had a positive effect on uptake of mortgage products in Kenya and this effect was significant at 5% level ($B = 0.002$, $p = 0.008$). The results in the table above show that the size of bank had a positive effect on uptake of mortgage products in Kenya and this effect was significant at 5% level ($B = 0.002$, $p = 0.001$).

4.4 Discussion and Interpretation of Findings

The study sought to determine the influence of Process of mortgage purchase on the uptake of mortgage products in Kenya. Mortgage process was measured as the percentage of asset value used as collateral. The results reveal that the mortgage process had a negative effect on uptake of mortgage products in Kenya and this effect was significant at 5% level ($B = -0.005$, $p = 0.002$). This means that the higher the percentage of asset value used as collateral, the lower the percentage the commercial bank pays for the property. This in turn results in decreased interest in mortgage products. This is consistent with previous literature such as Njiriri and Wanyoike (2012).

The study sought to determine the influence of interest rates on the uptake of mortgage products in Kenya. Interest rate was taken to be the rate of interest charged on a mortgage loan. The results show that interest rates had a negative effect on

uptake of mortgage products in Kenya and this effect was significant at 5% level ($B = -0.002$, $p = 0.001$). This means that the higher the interest rates the fewer the customers take up mortgage products. A unit increase in interest rates leads to a 0.002 decrease in mortgage uptake. This is in line with previous literature on the factors affecting mortgage uptake which indicate that an increase in interest rates leads to less demand for loan products (Inganga et al., 2014).

The study sought to determine the influence of property prices on the uptake of mortgage products in Kenya. Property prices were measured as the natural log of average prices of housing units in the country. The results in the table above show that property prices had a negative effect on uptake of mortgage products in Kenya and this effect was significant at 5% level ($B = -0.004$, $p = 0.002$). This means that an increase in property prices results into a decrease in the uptake of mortgage products. A unit increase in property prices leads to a 0.004 decrease in mortgage uptake. This is in line with the results of Macharia (2013) who notes that the high property prices in Nairobi are a contributory factor to the low uptake of mortgage products.

The study sought to determine the influence of level of income on the uptake of mortgage products in Kenya. The level of income was measured as the Per capita Income in Kenya. The results show that level of income had a positive effect on uptake of mortgage products in Kenya and this effect was significant at 5% level ($B = 0.002$, $p = 0.003$). This means that an increase in Per capita income in the country results in an increase in the uptake of mortgage products. A unit increase in the level of income leads to a 0.002 increase in mortgage uptake. This is in line with the results of Fang (2004) who notes that sustainable income and other macroeconomic factors are all the reasons for the development of the China's real estate market.

The study sought to determine the influence of costs of bank operations on the uptake of mortgage products in Kenya. Costs of operations were measured as the natural log of the marketing budget of the mortgage department of the lending institutions. The results show that the costs of operations had a positive effect on uptake of mortgage products in Kenya and this effect was significant at 5% level ($B = 0.002$, $p = 0.008$). This means that an increase in the costs of operations (marketing) leads to an increase in the uptake of mortgage products. A unit increase in the costs of operations leads to a 0.002 increase in mortgage uptake level. This is in line with the results of Wahome (2010) who notes that high costs of mortgage access deter consumers from taking up mortgage products in Kenyan commercial banks.

Finally, the study sought to determine the influence of size of bank on the uptake of mortgage products in Kenya. The size of bank was measured as the natural log of the bank assets as at end of year. The results show that the size of bank had a positive effect on uptake of mortgage products in Kenya and this effect was significant at 5% level ($B = 0.002$, $p = 0.001$). This means that the more the bank assets, the more its ability to lend and therefore the more the mortgage uptake in the country. A unit increase in the size of bank leads to a 0.002 increase in mortgage uptake level. Previous studies such as Were (2012) note that the size of the mortgage institution in terms of assets is a crucial determinant of its ability to lend to consumers.

4.5 Challenges facing the Mortgage Industry in Kenya

The study also sought to establish the challenges facing the mortgage industry in Kenya. The results were obtained from an evaluation of the Residential Mortgage Market Survey (2014) reveal that the top challenges affecting the growth of the mortgage industry in Kenya are the high property prices, high interest rates, low levels off income, high incidental costs and difficulties with property registration.

Table 6: Challenges to Mortgage Market

Challenges	Frequency
High cost of Housing/Properties	22
High Interest Rates	21
High incidental costs (legal fee, valuation fee, stamp duty)	15
Low level of Income	14
Difficulties with property registration/titling	13
Stringent land laws	8
Access to long term finance	8
High costs of building/construction land	6
Lengthy charge process timelines	5
Start-up cost	5
High cost of funds	4
Credit risk	3

4.6 Summary of Chapter

This chapter has presented the findings of the data analysis process. The results are presented as follows; correlation results and regression results and finally, a discussion of the findings is carried out in comparison to the previous literature on the factors influencing the uptake of mortgage products. The next chapter presents the conclusions and recommendations of the study

CHAPTER FIVE

SUMMARY OF FINDINGS, CONCLUSION AND RECOMMENDATIONS

5.1 Introduction

This chapter presents the summary of findings, conclusion of the study, recommendations for policy and practice, limitations of the study, and suggestions for further research. The main objective of this study was to evaluate the factors influencing the uptake of mortgage products in Kenya

5.2 Summary and Discussion of Findings

The study sought to establish the determinants of mortgage uptake in Kenya. The major findings are summarized as follows based on the conceptual framework of the study.

The regression results showed that the model accounted for 75.3% of the variance in performance as shown by the R^2 . The F -statistic of 12.541 was significant at 5% level of significance. This means that the model used was fit to explain the relationship between independent variables and mortgage uptake in the country.

The study sought to determine the influence of Process of mortgage purchase on the uptake of mortgage products in Kenya. The results reveal that the mortgage process had a negative effect on uptake of mortgage products in Kenya. This effect was significant at 5% level.

The study sought to determine the influence of interest rates on the uptake of mortgage products in Kenya. The results show that interest rates had a negative effect on uptake of mortgage products in Kenya. This effect was significant at 5% level.

The study sought to determine the influence of property prices on the uptake of mortgage products in Kenya. The results show that property prices had a negative effect on uptake of mortgage products in Kenya. This effect was significant at 5% level.

The study sought to determine the influence of level of income on the uptake of mortgage products in Kenya. The results show that level of income had a positive effect on uptake of mortgage products in Kenya. This effect was significant at 5% level.

The study sought to determine the influence of costs of bank operations on the uptake of mortgage products in Kenya. The results show that the costs of operations had a positive effect on uptake of mortgage products in Kenya. This effect was significant at 5% level.

The study also sought to determine the influence of size of bank on the uptake of mortgage products in Kenya. The results show that the size of bank had a positive effect on uptake of mortgage products in Kenya. This effect was significant at 5% level.

The study also sought to establish the challenges facing the mortgage industry in Kenya. The results reveal that the top challenges affecting the growth of the mortgage industry in Kenya are the high property prices, high interest rates, low levels off income, high incidental costs and difficulties with property registration.

5.3 Conclusion of the Study

The results reveal that the mortgage process had a negative effect on uptake of mortgage products in Kenya. This study therefore concludes that consumers consider the mortgage process before they can apply for loans. A favourable mortgage process

where there are few steps and requirements and where the percentage of asset value used as collateral is high leads to high mortgage uptake.

The results show that interest rates had a negative effect on uptake of mortgage products in Kenya. This study therefore concludes that an increase in interest rates lead to lower uptake of mortgage products. This is attributed to the fact that higher interest rates results to high cost mortgages which in turn results in less consumer interest.

The results show that property prices had a negative effect on uptake of mortgage products in Kenya. This study therefore concludes that an increase in property prices in the industry results in less demand of mortgages since people avoid expensive products.

The results show that level of income had a positive effect on uptake of mortgage products in Kenya. The study therefore concludes that the demand for mortgage products is influenced by the level of income of a customer.

The results show that the costs of operations had a positive effect on uptake of mortgage products in Kenya. The study therefore concludes that the costs incurred to market mortgage products lead to increased awareness of available products to customers which increases the chances of mortgage uptake.

The results show that the size of bank had a positive effect on uptake of mortgage products in Kenya. This study therefore concludes that banks or mortgage institutions with large assets are able to offer ore mortgage products to their customers. When all other determinants are favourable, a firm with more assets is able to lend more to customers.

5.4 Recommendations of the Study

This study makes a number of recommendations. First, the study recommends that mortgage financing institutions and commercial banks need to make the process of mortgage purchase easier and more convenient for customers. This will increase mortgage uptake in the industry.

The study also recommends that the Central Bank of Kenya should come up with ways of managing the process of setting up interest rates by commercial banks and mortgage institutions in order to maintain them at a favourable level to stimulate the growth of the mortgage industry.

The study also recommends that the government should come up with policies to help make the real estate environment conducive for investments in order to ensure the rise of property prices is managed effectively.

The study also recommends that the government should provide a positive environment for investments in order to promote economic development and thus lower the employment rate. This will ensure most households have a sustainable level of income which can be used to purchase mortgage products.

The study also recommends that the management of mortgage institutions and commercial banks need to increase their marketing budgets for mortgage products in order to increase the market awareness of the available mortgage products.

The study also recommends that individuals seeking to acquire mortgages should compare the interest rates and the costs of access from various institutions in order to select the lowest provider.

The study also recommends that the commercial banks offering mortgage products and other mortgage finance institutions should compare interest rates and costs of

application with other players in the industry in order to set their rates and costs competitively.

5.5 Limitations of the Study

The study also relied on secondary data from the financial statements of the firms. While this is a reliable source of data, it is quantitative in nature and therefore it was not possible to fully interrogate the various determinants of mortgage uptake as may have been the case if interviews were conducted. To improve this, it will be important to use mixed methods in data collection in future studies.

The time span for the data collected in this study was two years. This is not a very long period that can help provide robust results for applicability by the mortgage lending institutions. A longer period, of say 5 or 10 years, would have been preferred but resources were scarce. A longer period would help reduce this limitation.

5.6 Suggestions for Further Research

The study recommends that more studies should be conducted on the topic using fairly longer time periods (more than 5 years) as such studies may be useful in showing the trends as well as the long term relationship between various determinants and mortgage uptake in Kenya.

The study also recommends that further studies explore the determinants of mortgage uptake in Kenya using a mixed methodology where both primary and secondary sources of data are used. This way, some of the issues that cannot be addressed through secondary data can be accurately captured.

Future studies can use an improved model with more firm-specific control variables in the model as such may improve the accuracy of the model and therefore lead to better and robust results.

REFERENCES

- Aguko.J. (2010).Analysis of the Factors Influencing Mortgage Financing in Kenya a Case of Housing Finance Company of Kenya, *Unpublished MBA Project*, University of Nairobi.
- Asare, E. & Whitehead.C. (2006). Formal Mortgage Markets in Kenya: Nature and implications. *RICS Research Paper Series* 6(13): 1-21
- Drumond, I. & Jorge, J. (2013). Loan interest rates under risk-based capital requirements: The impact of banking market structure. *Economic Modelling*, 32, pp.602-607.
- Inganga, B.W., Njeru, A., Ombui, K. &Tirimba, O. (2014), Factors affecting customer demand for financial products offered by commercial banks in Nairobi County, *International Journal of Scientific and Research Publications*,4(11): 1-25
- Kurihara, K. (2013). *Monetary Theory and Public Policy*. Hoboken: Taylor and Francis.
- Macharia, E. W. (2013). The effects of global financial crisis on the financial performance of commercial banks offering mortgage finance in Kenya. *International Journal of Social Sciences and Entrepreneurship*, 1(2): 688-701
- Mehdian, (2001) .Professor of Finance School of Management. Oct. 2001. An Analysis of stock Market Anomalies.Vol.28 (7).
- Miller, E. K. (2000). Task-specific neural activity in the primate prefrontal cortex.*J. Neurophysiol.* 84(1): 451–459.
- Njiriri, M.W. & Wanyoike, D (2014), An Assessment of Mortgage Loan Uptake among Bank Staff: A Survey of Commercial Banks in Nakuru Town, *International Journal of Science and Research (IJSR)*, 3(10): 2191-2195
- Njiru, M. M. &Moronge, M. (2013). Factors affecting growth of mortgage industries in Kenya: A case study of National Housing Corporation. *International Journal of Social Sciences and Entrepreneurship*, 1 (7), 26-35.

- Njiru, M. M. & Moronge, M. (2013). Factors affecting growth of mortgage industries in Kenya: A case study of National Housing Corporation. *International Journal of Social Sciences and Entrepreneurship*, 1 (7), 26-35.
- Olweny.T. (2011).Modelling Volatility of Short-term Interest Rates in Kenya.*International Journal of Business and Social Science*, 2 (7); Special Issue –April 2011.
- Stiglitz, J. E., & A. Weiss, (1981).Credit rationing in markets with imperfect information.*The AREUEA Journal*, 21 (4),511-38
- The World Bank. (2006). Making Finance Work for Africa.www-wds.worldbank.org
- Wahome, M.W. (2010), A survey of factors influencing mortgage financing in Kenya, *Unpublished MBA Project*, University of Nairobi
- Were, M. (2012), *Factors affecting the uptake of pension secured mortgages in Kenya*, Retirement Benefits Authority, Research& Development Department

Appendices

Appendix 1: Mortgage Lending Institutions

1. Housing Finance
2. KCB
3. Barclays
4. Cooperative Bank
5. Equity Bank
6. Family Bank
7. Chase Bank
8. CBA
9. CFC Stanbic
10. ABC
11. Consolidated Bank
12. DTB
13. First Community Bank
14. I&M Bank
15. K-Rep bank
16. National Bank of Kenya
17. Standard Chartered Bank
18. Prime Bank
19. Transnational Bank
20. UBA