DEVELOPMENT OF AN APPROPRIATE FUNDING STRATEGY FOR LOW AND MIDDLE INCOME HOUSING MARKETS IN KENYA

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Development of an appropriate Funding Strategy for Low and Middle Income Housing Markets in Kenya

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DECLARATION

This thesis is my original work and has not been presented for a degree in any other university.

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This thesis has been submitted for examination with our approval as university supervisors.

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DEDICATION

This thesis is dedicated to first and foremost the Lord God Almighty, who sustained me right through it all. This thesis is in addition dedicated to my mother, Pauline Lucy Njango, and my father, Samuel Muigai Kimani, from whom I inherited an unquenchable thirst for knowledge and understanding;

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I hereby state that I take full responsibility for any error, omission or mistake committed in the course of this study.

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LIST OF ABBREVIATIONS AND ACRONYMNS

AGM	Annual General Meeting
ARM	Adjustable Rate Mortgages
CBK	Central Bank of Kenya
CBO	Community based organization
CBR	Central Bank Rate
CHB	Central Housing Board
CMT	Constant Maturity Treasury
COFI	Cost of Funds Index
EABS	East African Building society
FHA	Federal Housing Administration
FRM	Fixed Rate Mortgages
FSA	Financial Services Authority
GAO	Government Accountability Office
GDP	Gross Domestic product
GHLC	Government Housing Loan Corporation
GMLC	Government Mortgage Loan Corporation
GoK	Government of Kenya
GPM	Graduated Payment Mortgage
GSE	Government Sponsored Enterprise
HFCK	Housing Finance Company of Kenya
HFIs	Housing finance institutions

IHD	Individual Housing Development
IMF	International Monetary Fund
JB	Jamii Bora
KASP	Kenya Affordable Shelter Project
KCB	Kenya Commercial Bank
KENSUP	Kenya Slum Upgrading Program
KPDA	Kenya Private Developers Association
KIPs	Key Performance Indicators
LIBOR	London Interbank Offered Rate
LTV	Loan to Value Ratio
MBS	Mortgage Backed Securities
MDGs	Millennium Development Goals
MDO	Mortgage debt outstanding
MFIs	Micro finance institutions
MPC	Monetary Policy Committee
NACHU	National Cooperative Housing Union
NGOs	Non-Governmental Organizations
NHC	National Housing Corporation
ODA	Official Development Assistance
PPPs	Public Private Partnerships
PWSPC	Pension Welfare Services Public Corporation

SACCOs	Savings and Credit Co-operative
S & L	Savings and loan
SSA	South Sahara Africa
UK	United Kingdom
UNCHS	United Nations Center for Human Settlements
UN-HABITAT	United Nation Human Settlements Programme
USA	United States of America
USAI D	United States Agency for International Development
USD	United States Dollars
VA	Veterans Affairs
VAT	Value Added Tax

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ABSTRACT

The rapid development of a housing finance has led to a radical transformation in mortgage sector in Kenya in recent years. The changing home mortgage market and unique financing requirements brought about by widespread homeownership have caused a continuing evolution in mortgage lending practice. There is a large gap between demand and supply of housing finance to the low and middle income groups in Kenya. Accessibility of affordable financing options is limited hence making it difficult to own their dream homes. The aim of this study was therefore to evaluate various funding strategies with a view develop an appropriate funding strategy for low and middle housing markets in Kenya.

The research adopted a survey design and was achieved through a questionnaire survey and interviews. Data was collected from documented information from central bank on funding institutions in Kenya. The target population in this study was organizations registered for mortgage lending country wide as of 31st December 2012, commercial banks, MFIs and Sacco's. There were 46 registered mortgage providers licensed under the Banking Act of Kenya and five active MFIs offering housing finance to middle and low income groups. Therefore, the total population for the study consisted of 51financinginstitutions. Random sampling was used to pick the respondents and data analysis was carried out using descriptive, Content and thematic analysis

This study established that the current housing financing options are not appropriate to low and middle income earners owing to high interest rates and collateral requirements. This study therefore, recommends a model which can be applied in the market as an-appropriate funding strategy. Self-help housing model-for individuals constructing their own house is a process-based strategy of acquiring shelter over a period of time by individual households whose social-economic conditions determine the length of time of the process and the nature of building.

CHAPTER ONE

INTRODUCTION

1.1 Background

According to the United Nations Center for Human Settlements (UNCHS), access to housing is a basic human right that should be available to all individuals. However according to Mitullah (2003) nowhere would this be far from reality than in most cities of the developing world where housing for up to 50 percent of city residents is commonly in squatter settlements or in the slums. Mitullah (2003) further reported that in the recent past, practically all authorities on housing provision in developing countries agree that the vast majority of shelter and housing for the middle and low-income groups is and will continue to be provided through the individual effort of people to develop their own houses. According to Ward (1972), in most developing countries, a huge shortfall in housing provision means that the role of the individual housing development will continue to rise.

In Kenya this problem has been exacerbated by the continued decline in GDP growth which currently ranges between 0 to 1 percent per year (Nabutola, 2004). According to Dolde (2006), public sector provision of housing has virtually stopped due to the economic decline, bilateral and multinational support for low cost housing has also not been forthcoming in the past 15years.

Globally, Ward (1972) observed that limited access to finance is a major limiting factor in housing development. The sources of funds for shelter are few and the lending institutions have not really reached some target groups. Qualifying terms for mortgages are still too stringent despite the fact that housing is still in short supply. Inappropriate fiscal policies on real estate financing, inability to finance house loans to groups, low affordability due to poverty, high interest rates on mortgages, absence of graduated payments of mortgages and lack of access to the large deposits of retirement benefit funds have hindered the development of the housing sector (UN-HABITAT, 2005).

Housing finance sector is faced with the challenges of a complicated three tier market that is served by an elaborate financial system (Mwangi, 1997). According to Nabutola (2004) at the top of the hierarchy are households that can afford housing of high quality. In the middle category fall the middle income groups, which are predominantly composed of wage and salaried workers as well as the self-employed. This category is not adequately catered for in the provision of housing and as a result they are relegated to housing targeted for low income earners. The third category which forms the majority of households is the low income earners. They are the most affected by the housing problems arising from inadequate housing and the displacement brought about by insufficient housing facilities for the middle income earners.

Currently, mortgage lending by formal financial institutions only benefits the high income households besides being concentrated almost exclusively in the urban areas. (Nabutola, 2004).The needs of the low income earners and rural people with regard to borrowing have not been adequately addressed. The Commercial banks and non-banking financial institutions are restricted from investing in housing by the provisions in the Banking Act.

In as far as sourcing funds for lending is concerned, the financiers have had to go to the open market and source funds at high market rates, so as to lend to housing buyers/builders, which in turn has resulted in very high house prices. Housing Development Bonds have been used by mortgage finance institutions to mobilize deposits for housing finance. Unfortunately these have been subject to taxation, hence making them less attractive to depositors.

Despite these obstacles, there is increased interest in funding for lower and middle income housing markets in many Kenya. Private sector lenders have found such lending highly profitable if the increased risks can be priced and managed, as evidenced by the rapidly growing sub-prime market in Kenya. Policy makers are justifiably concerned about the housing conditions of lower income households. In an environment with limited public sector resources they are keenly interested in tapping resources mobilized by the private sector for housing and have created novel risk sharing structures to encourage private investment.

The lack of finance has been caused by the intermittent sources of income and low income from the informal employment. UN Habitat (2003) puts forward that the informal sector, which provides for the bulk of employment to the low income group, has not been generating regular and enough income to undertake the expensive housing construction and improvement. Consequent to this, those in the low income group need to save for many years if ever they are to realize a dream of living in an adequate house.

1.2 Statement of the problem

The problem in this study is that, there is a large gap between demand and supply of housing finance to the low and middle income groups in Kenya. Accessibility of affordable financing options is limited hence making it difficult to own their dream homes. Critical analysis and clear understanding of the money market and the current financial system in the country is required to effectively relate housing finance and access of it by the low and middle income earners. The purchase or construction of housing in many countries is inhibited because individuals cannot borrow funds. The available loans are channeled to high and middle-income families. The problem is how do we avail the loanable funds to the low income earners? Finding measures to address this problem and subsequent implementation will provide for access of housing finance for the low-income earners.. In fact, the cost of finance is one of the most prohibitive factors in the Kenyan market for low and middle income developments. The Kenyan Central Bank Rate (CBR), the lending rate of the Central Bank, and therefore all the banks, rose to 18 percent in 2011 (World Bank, 2011).

Yet, even if the banks did lend at reasonable rates, approvals and timely disbursals would still be a challenge. Once the homes are built, the buyers need the finance to buy them especially when catering for low and middle income populations. Financial institutions which provide mortgages in Kenya provide at high interest rates making it too expensive for middle and low income groups (Okonkwo, 1998).

This study explores the various housing funding strategies available to the middle and low income markets and the challenges they face in financing this group with an aim of proposing an appropriate funding strategy.

1.3 Aim and Objectives

1.3.1 Aim

The aim of this study is to develop a self-help housing model as anappropriate funding strategy for low and middle housing markets in Kenya.

1.3.2 Objectives

This study will be guided by the following specific objectives:

1. To identify factors that influences the choice of a financing option for housing by the low and middle income groups in Kenya.
2. To evaluate various financing options for low and middle housing developers in Kenya.
3. To identify challenges facing the financial institutions in delivery of housing finance to low and middle income groups in Kenya.
4. To develop an appropriate financing option for the low and middle income housing market in Kenya.

1.4 Research questions

The research aims to answer the following questions:

1. What are the factors influencing the choice of a financing option for housing by the low and middle income groups in Kenya.
2. What are the various existing financial options available to housing developers in Kenya?
3. What are the challenges facing financial institutions in Kenya in delivery of finance to low and middle income groups.
4. What are the various appropriate financing option available in Kenyan financial institutions?
5. What is the appropriate financing option that can be adopted by financing institutions in Kenya to cater for the low and middle income housing markets?

1.5 Assumptions.

This research study assumes;

1. The targeted sample frame is a fair representation of the low and middle income housing market in Kenya.
2. That housing finance challenges facing the middle and low income groups in Nairobi are replicated to other counties in Kenya.

1.6 Justification of the study.

The study comes a time when a large gap exists between the demand and supply of housing finance particularly to the low and middle income groups in Kenya. The findings of the study will be useful to the stakeholders and players in the real estate industry. It will reveal the factors influencing the choice of a financing option by the middle and low income groups in an effort to fill up the gap. The study will assist individuals in decision making processes and assessing the different avenues that can avail funds for housing development for this group.

The Kenyan housing sector is characterized by inadequacy of affordable and decent housing, low-level of urban home ownership, extensive and inappropriate dwelling units, including slums and squatter settlements. It is estimated that out of a total 150,000 housing units required annually in urban areas, only an estimated 35,000 are produced (GoK, 2010).

Adequate availability of quality and affordable shelter also reduces proliferation of slums and informal settlements characterized in our urban towns, as well as prevent social unrest occasioned by depravity and frustrations of people living in poor housing settlements. The situation for the majority of Kenya's population as far as adequate and comfortable housing provision is concerned is still far from good.

Recent efforts in economic reforms have been extended to the housing finance sector for the sole reason that sound macroeconomic health plays a pivotal role in the success of the housing finance system. More than any other factor, inflation and unemployment and the associated problem of poor wages have hampered the sustainability, effectiveness and overall viability of housing finance institutions.

According to Thalmann (2006), housing finance business in Kenya is relatively small, underdeveloped and constitutes less than 5% of the total resources of the banking system. It is carried out by a small number of specialized institutions that are required by law to secure all their lending by a charge on the land. Commercial banks are more involved in commercial lending and generally keep out of mortgage lending except to their staff. They do, however provide construction financing to developers, if mortgage finance is available.

Nevertheless, looking at the current situation, one may be tempted to ask whether a sustainable, viable and widely available housing finance system could be developed in the near future. Naturally and quite rightly too, many have taken the position that current efforts

will amount to naught unless the country's fundamental economic problems of high inflation, unemployment and low wages are resolved.

1.7 Significance of the study

Developing an appropriate housing finance system will proof significant to the middle and low income groups in Kenya by enabling them fulfill their desire to own homes through accessible and affordable housing financing option developed in the current study.

The outcome of this research will highlight key areas where private developers require reform, change or incentives in order to enter the low and middle-income market. With this knowledge, developers' associations such as Kenya Private Developers Association (KPDA) can lobby for change and policy reforms as well as harness the collective strength of their developers to tap into the lower and middle income market.

An understanding of the risk management strategies by developers in the low and middle-income market would allow donor agencies such as UN Habitat and The International Monetary Fund (IMF) to direct funding into projects that would stimulate low income housing supply either directly, through funding of housing development or indirectly, through infrastructure investments.

1.8 Scope of study

This study was limited to evaluating various funding strategies for middle and low income earners with a view to develop a model for an appropriate funding strategy. This was achieved through a questionnaire survey and interview with financial experts. The population for the study was limited to organizations registered for mortgage lending country wide as of 31st December 2012, commercial banks, MFIs and Sacco's. Data was collected from 46 registered mortgage providers licensed under the Banking Act of Kenya and five active MFIs offering housing finance to middle and low income groups. Therefore, the total population for the study consisted of 51 financing institutions operating within Nairobi.

The study specifically sought to examine various funding strategies which are available in Kenya for housing developers; challenges faced by financial institutions in Kenya in delivery of housing finance to low and middle income groups and evaluate any existing sustainable financing option available in Kenyan institutions.

1.9 Limitations of the study

The ideal study would have been a combination of content analysis from records and reports on financial institution and questionnaire surveys where each institution would have been subjected to it. However due to budgetary, time constrains and the fact that employees if financial institutions have limited disclosure of activities of the banks, only information from documented reports and were sort.

Nevertheless, the above limitation does not render the observations made in this study incomplete or invalid. In addition, while the findings may not be broadly generalized, they are indicative of the challenges facing financial institutions in delivery of housing finance to low and middle income housing groups in Kenya.

1.10 Definition of key terms

The following are the definitions of the basic technical terms used in this study: -

1.10.1 Sustainable

Sustainable means consideration and balancing between the economic, social and environmental factors in the development process (Yetgin, 2007).

1.10.2 Mortgage

Mortgage is a transfer of a legal or equitable interest in a specific immovable property for the payment of debt (Pandey, 1999).

1.10.3 Loan

A loan is a debt provided by one entity (organization or individual) to another entity at an interest rate, and evidenced by a note which specifies, among other things, the principal amount, interest rate, and date of repayment. A loan entails the reallocation of the subject asset(s) for a period of time, between the lender and the borrower (Hess, 2003).

1.10.4 Interest

Interest is compensation to the lender, for a risk of principal loss, called credit risk; and forgoing other investments that could have been made with the loaned asset. (Hess, 2003).

1.10.5 Interest rate

An interest rate is the rate at which interest is paid by borrowers (debtors) for the use of money that they borrow from lenders (creditors). Specifically, the interest rate is a percentage of principal paid a certain number of times per period for all periods during the total term of the loan or credit. Interest rates are normally expressed as a percentage of the principal for a period of one year; sometimes they are expressed for different periods like for a month or a day. (Hess, 2003).

1.10.6 Low income

Low income depicts a state of being poor (Income below $466), lack of the means of providing material needs or comforts (National Centre for education statistics, 2010).

1.10.7 Middle income

Middle income relates to those with an average income ($1,046- $ 4,125) within the overall population (National Centre for education statistics, 2010; World Bank report, 2015).

1.10.8 Housing markets

Housing markets depicts general markets of houses being purchased and sold between buyers and sellers (Wells Fargo, 2012)

1.11 Research Organization

This research study has been organized into chapters; the chapters cover the following;

Chapter One is an introduction to the study comprising the background, statement of the problem, objectives of the study, research questions, study justification, scope and limitations, assumptions of the study, definition of terms, and study outline.

Chapter Two is a review of literature and revolves around theoretical framework and other data on funding strategies and housing finance for low and middle income groups under literature review of relevant books, journals, research thesis/papers and internet search. It looks into previous studies, agreements and disagreements to identify gaps in line with the study objectives. This chapter therefore covers review of theories and related literature by other authors in the field under study and specifically study variables. The literature review tries to identify various financing strategies available as sources of housing finance for the low and middle income earners. This study is expected to develop further understanding on the financing strategies to enable the author answer research questions successfully.

Chapter Three is the research design and methodology and this chapter has discussed the research approach, tools and methods used for data gathering and analysis.

Chapter Four presents Data Analysis and Discussions**.** This chapter constituted the presentation and analysis of data gathered at the survey stage of the research. Guided by the methodology, the raw data captured by the research instrument are analyzed and the findings discussed based on research questions or objectives.

Chapter Five gives a summary, Conclusions and Recommendations. Conclusions and recommendations were drawn based upon data analysis, linking them to the problem statement, research questions and objectives of the subject under investigation

CHAPTER TWO

LITERATURE REVIEW

2.1 Introduction

This chapter covers review of theories and related literature by other authors in the field under study and specifically the study variables. The review is conceptualized under the objectives of the study and focuses on the existing housing finance strategies, development of mortgage financing and factors influencing mortgage financing and performance.

This study is expected to develop further understanding on the available sources of funding of housing development for the low and middle income groups in Kenya. Below are the topics which form the basis for literature review

- Overview of housing finance
- Development of mortgage finance in Kenya.
- The theoretical concept of finance.
- State of mortgage financing in Kenya.
- Factors influencing mortgage financing and performance
- Demand and supply of loanable funds
- Housing finance system in Kenya
- Role of government and policy

The following sub-topics give a discussion on the above issues which have been carefully selected to answer the research questions

2.2 Overview of housing finance

Housing finance can be simply defined as the mechanisms by which the construction or purchase of housing by an individual is financed (Boleat, 2005). Factors such as the household's financial status and future expectations will influence their decision on whether to rent or own their residence. In most cases the decision to purchase often puts the household in a situation where he has to borrow funds to complement his savings, most individuals take out a loan; mortgage.

In a primary market, the lender extends a loan to a borrower for the purchase of a house. The loan is such that it takes the house as collateral. According to an interview, Family Bank credit manager (2014) “there are different types of mortgages; however the common mortgages in Kenya include the fixed rate mortgages and the adjustable rate mortgages”. She cited that some of the applicant’s factors that the lender takes into consideration; borrower’s credit history, income, debt, assets and the value of the house to be purchased.

A mortgage has four basic characteristics

- The amount of the loan
- Term of the loan; up to thirty years for fixed rate and self-amortizing mortgages.
- Schedule for the loan payment; either in monthly installments or lump sum
- Interest rate

2.3 Development of mortgage finance in Kenya.

Kenya’s mortgage industry has been on a growth path and is becoming even more competitive. Although growing, mortgage lending is still low, as of December 2012 it stood at 3.7% of Kenya’s GDP compared to 70% and 50% in the US and UK respectively.(Property Leo newspaper September-October issue, p.21,). A number of factors have been identified as retarding the growth of mortgage accounts, they include; affordability and insufficient housing supply plus a lack of understanding about mortgage among Kenyans.

An efficient mortgage market relies on a number of fundamental legal underpinnings. Among advanced economies, the key determinants of the market depth of housing finance are collateral and bankruptcy laws that define the legal rights of borrowers and lenders (Warnock & Warnock, 2008). The efficiency of the legal system may have an impact on borrowing costs and on the costs of financing for capital market products backed by mortgages. One important element relates to the costs, duration, and effectiveness of the enforcement and foreclosure process in the event a borrower defaults.

Kenya’s mortgage market has been described as dynamic; it is growing rapidly and becoming increasingly competitive. Out of the 44 commercial banks only 30 offer mortgage loans to customers, however, it is a common practice for banks to advance mortgages to their employees. According to the Central Bank Economic Report (2012), 71% of mortgage lending in Kenya is done by five institutions: Kenya Commercial Bank (KCB) is the market leader with 30% of the market share, Housing Finance Company of Kenya with 19% of

market share, Standard Chartered Bank, CFC Stanbic Ltd and the Cooperative Bank of Kenya take on the remaining share. There has been tremendous growth in the mortgage market with every passing year; the Central Bank puts forward that this may be partly attributed to an increase in property prices.

Nevertheless, mortgage lending is still accessible to only a small number of the population – mortgage lending as a percentage of GDP stood at 3.7% in December 2012 (Centre for Affordable Housing Finance, 2013). New entrants and aggressive marketing has resulted in development of some newer products. For example, fixed rate mortgages have been made available for between 10-year and 20-year terms. Some banks have recently introduced 100% financing for the full value of a house. The HFCK with its ingenuity and innovativeness has introduced a mortgage that covers 105% of the costs including professional fees, for those unable to access mortgage finance, a rent -to-buy initiative has curbed this problem.

When asked to rank the obstacles to the growth of the mortgage market in a Central Bank survey, 34 lenders cited access to long term funds as the primary obstacle. Other constraints listed include; high interest rates, low income of borrowers, credit risk and lack of financial literacy in respect to mortgage lending. The risk of foreclosures, difficulties in the land titling process, financial regulatory burdens and lack of new housing supply were some of the impeding factors mentioned by households.

2.4 The theoretical concept of finance

The literature on finance reveals that there are only two types of finance available: debt and equity finance. Using either as a source of financing a project either depends on the characteristics of assets being financed and transaction cost. Reasoning suggests the use of debt to finance re-deployable assets and equity used to finance non re-deployable assets (Williamson, 1988). Debts are used if the ability to exploit potentially profitable investment opportunities is limited by the resources of the owner (Jensen & Meckling, 1976). Bank lending as a form of debt can be categorized into two: either as asset specific or corporate loans (Crosby et al, 2000). Again, the debt can be either secured or unsecured. Debt finance can be obtained from formal financial institutions like banks, micro-finance arrangements, indigenous moneylenders, family members, employers and government.

Equity finance gives the household total control over the decisions when undertaking the project if the household completely funds the project using equity. Heffernan (2003) and Tirole (2006) claimed that financial instruments vary widely according to the characteristic of term to maturity. Equity has no redemption date and therefore possesses an infinite term to maturity.

One of the biggest problem facing financial institutions is the lack of information of the promoters and the projects to be financed (Guzman, 2000), to determine whether the borrower will be able to pay the principal and interest when due. Altman and Saunders (1998) emphasized the selection of information on various borrowers' details to include their character, capital, capacity and collateral. However, Mints (2006) limited the required information to the "3Cs of lending" which include; collateral, capacity and credit.

2.4.1 Equity Finance for Housing

Equity finance may be said to consist of all monies pulled together from actors-friends, relatives or business entities, who are interested in maintaining interest in the house purchased with the money raised. Canada Mortgage and Housing Corporation define equity as any material contribution that a funding group controls and that reduces the amount of mortgage financing and/or government subsidies required. Examples of equity include:

- Land and/or buildings that the sponsor group owns or that is being donated by the local government, another nonprofit organization or a faith group;
- Cash that the sponsor has saved, or raised in a fundraising campaign;
- Deposits from committed purchasers in the case of a life lease or home ownership option.

The most common equity-financed model for housing is the Real Estate Investment Trust (REIT).Real Estate Investment Trusts are basically shares in Real Estate Assets, that trade on an exchange. The REIT structure was designed to provide a similar structure for investment in real estate as mutual funds provide for investment in stocks. The concept of REITs began in the United States in the 1960s but became popular in early 1990s (Seiler & Seiler, 2009). In Kenya however, REITs haven't been fully operationalized as yet. It was hoped for that by the start of 2012 the whole system would be fully in place, but apparently the Capital Market Authority is still in the process of fine tuning the Legal Framework that will govern its operation. The REITs ideally take three forms i.e. Equity REITs, Mortgage REITs or Hybrid REIT.

Another type of equity finance model is the Shared Equity Products, which covers a range of financial products that enable the division of the value of the dwelling between two or morelegal entities. These products thus enable the main purchaser to reduce their outgoings by giving up rights to that part of the equity in their homes. These shared equity products may be taken out by first time buyers to reduce the costs of entering the housing market, by more mature owners who wish to diversify their housing equity risks especially older households who are looking to release equity.

2.4.2 Debt finance for housing

The gap between total project costs and the amount of equity and capital grants invested is made up for through debt. Debt finance can be classified into short-term and long-term. There are different types of debt but the most common in housing are construction and mortgage financing. Construction financing in most cases is provided in lump sums, referred to as advances, as components of the project are completed. Interest on the outstanding balance is added to the total accumulated loan amount, repayable on occupancy of the completed building (Canada Mortgage and Housing Corporation, 2013).Mortgages are used for long term financing. Mortgage lenders typically include: banks; trust and life insurance companies; pension funds; and cooperatives.

The most popular funding instrument for housing is the term loan. Here, a specified maturity date sets the time for repayment of the loan amount and interest. Van Order (2007) identifies models for funding loans to be either portfolio lender model or securitization model. While portfolio lender model involves financial intermediaries originating and holding loans which are funded with debt or deposits, the securitization model involves raising funds through the bond markets.

Term loans vary from short term through the medium term to long term (project finance, capital expenditure)-which might have tenure of between 10 and 30 years. Lending for commercial purposes is short-tenured while the typical tenure of mortgage loans varies between 10 years and may be as long as 30 years. In many developing countries, families are frustrated by their inability to borrow the money to make a house purchase. Housing finance may be limited to those with a high and steady income. Individuals able to secure finance are usually required to provide an initial down payment of 30% or higher, of the value of the unit and the mortgage may be large relative to the value of the project.

2.5 Housing Development approaches in developing countries

According to Keivan and Werna (2001) urban planners and managers have tried to utilize various modes of housing provision to meet urban housing demand in developing countries, with mixed results. In this section, the various modes of housing development are assessed with an objective of ascertaining the role of Individual Housing Development (IHD) in the overall framework of urban housing development.
Ward (1972) concluded that broadly, housing can be divided into conventional (formal) and unconventional (informal) modes. An understanding of such housing provision modes is necessary if the place of individual housing development is to be clearly ascertained. Public sector housing programmes normally take the form of direct public provision of completed units, aided self-help programmes and settlement upgrading.

2.6 State of Mortgage financing

According to Hardoy and Satterthewaite, (1997) in Third World nations, the number of conventional dwellings constructed annually is between 2 and 4 per 1000inhabitants while the urban population is expanding at between 25 and 60 persons per1000 inhabitants per year. In such a scenario, more emphasis will have to focus on finding what measures need to be considered to improve the participation of individuals in the development of their own houses. This is common not only in Nairobi, but also in Cairo, Bangkok and Karachi (Amis, 1996).

Hardoy and Satterthewaite (1997) are of the opinion that conventional housing comprises direct and indirect housing provision by the government or city authorities. Direct government housing may include housing for civil servants while indirect housing may include programs that involve the government or the local authorities in collaboration with other housing agencies such as Non-governmental organizations, international donors or community groups. These include sites and services schemes.

Hardoy and Satterthewaite (1997) believe that co-operative housing is another form of conventional housing that involves the development of collective housing for people in a specific field, for example, teachers and company workers. Co-operatives collective advantages for low-income households exist in at least two areas; first pooling of resources lowers the individual housing costs that each household would otherwise incur; second, it

offers economy of scale in land, building materials, construction, financing, maintenance, management and service provision through shared costs.

However even in such scenarios, under high housing demand conditions land or housing costs may be too high such that cost sharing my not necessarily make housing affordable for low income households. In India, Housing co-operatives enjoy preferential treatment in the allocation of government land, credit and other subsidies such as easier interest rates and duty exemptions (Amis, 1996). In Kenya, most cooperatives advance low-interest loans to their members to purchase land and individually develop their own houses.

Other forms of conventional housing development include the private sector housing companies such as the Housing Finance Company of Kenya (HFCK) and the East African Building society (EABS) who provide financing and also engage in direct conventional house development. Housing developed through the private sector is usually sold on a mortgage basis to working class people.

2.6.1 Unconventional Housing

Informal or unconventional housing is spontaneous, unplanned or unregulated. It includes both squatter settlements and often also self-help and individual housing development. The shelters constructed may not meet official building standards. The share of the informal sector provided housing in the current housing production in developing countries is very high, ranging typically from 75 to 90 percent (Ogu & Ogbuozobe, 2001). It has also been estimated that the number of dwellings made by the informal sector is several times higher than what is reported in official statistics (UNCHS, 1995).

Informal sector housing exists due to the inability of low-income groups to purchase high quality formal housing that is produced through the conventional sector. As a result unconventional mode of housing has become a necessary part of the urban growth and development process as a strategy to meet housing needs for the vast majority of the urban poor (Keivan & Werna, 2001).

Planning and regulatory procedures have also contributed to the development of the informal housing supply. Stringent regulations have contributed to a lack of adherence to most planning procedures. Thus, instead of creating an environment of total disregard of standards

and regulations by the informal sector, the strategy should be one of finding a middle ground, whereby quality and safety are not compromised while trying to improve housing development and ownership.

Case studies in specific cities of developing countries show that it is common for the majority of the population to live in illegal settlements, tenements or cheap boarding houses where infrastructure and service levels range from inadequate to almost nonexistent (Hardoy & Satterthewaite, 1997). The failure of governments in the provision of basic infrastructure and services or a framework to encourage other sources of investment(individual, community based, private sector) and to ensure adequate supplies of land for housing has made Third World cities centers of competition for the most basic elements of life. Generally unconventional housing includes squatter settlements, slums and informal subdivision areas.

Squatter settlements comprise shelters erected illegally on land meant for other uses. A squatter is a person occupying land over which he/she has no legal title. By occupying land illegally and in total disregard of legal consequences, squatters demonstrate by their actions the extent and magnitude of shortfalls in affordable housing. It is notable that they provided the most common form of shelter in most developing countries between 1950 and the mid-1980s (Baross, 1990), found that low-income households could only afford the non-conventional housing especially the cheaper site and services schemes unsubsidized. Baross (1990) s also found that interest subsidization through cross-subsidies would be necessary if the urban poor have to spend less than 25%of their income on housing consumption. He observed that much of the subsidized housing in Nairobi is occupied by the relatively high income households rather than the low-income households. Therefore, low income and middle income residents must seek alternative housing. According to Hardoy and Satterthewaite (1997) a key issue then is how such people can develop housing and whether all individuals can afford to do so.

Gulyani, (2006) identified the other form of unconventional housing as slums. They are usually developed and maintained by landlords who charge a monthly rental fee. In developing countries they provide rental housing for low-income groups as they are usually located close to centers of employment, such as the industrial area. The slum is usually the first shelter for the unemployed people migrating from the rural areas. After some time such individuals may move on to start squatter settlements to avoid paying rent.

2.6.2 Joint ventures

Fisher and Jeffry (1997) noted that Joint ventures in housing development cut across both the conventional and unconventional housing modes. They involve various stakeholders in the provision of housing, each with a clear role and mandate. The government may provide the technical assistance, in land-use planning, regularization and registration, and financial institutions, donors or CBOs mobilize financial resources while the slum dwellers provide labour. A good example of a joint venture in housing development in Kenya is the ongoing Mathare 4A Slums project in Nairobi. The joint venture involves the government, donors, CBOs and slum dwellers for slum upgrading (Gulyani, 2006).

Individual housing development may be regarded as an extension of the self-help housing model. Self-help may involve individuals as well as group inputs and corresponds to a system of production, financing and maintenance in which a significant part is carried out by the group. Usually it involves them in an incursion into functions that would normally be the responsibility of either the public or private sectors that are either unable or unwilling to provide that service (Baross, 1990). The involvement of the local and central governments have assisted self-help housing efforts either with technical support, advice and/or financial support.

Ward (1972) stated that two types of self-help housing may be defined: First, at its most simple it refers to specific and largely unrelated actions in which an individual or group takes partial responsibility for organizing and carrying through the installation of particular work for example a sewerage system, and building and financing the development of their homes. The Second, more complex level of group may involve itself in several actions integrated vertically and aimed at transforming the local social and economic structure, for example the group not only constructs dwellings but also produces the basic materials such as bricks, tiles, cement, and elements of infrastructure. In this way, housing becomes a means of affecting the local economic structure. This second approach faces objections from vested interest groups (traditional suppliers of housing and building materials).

Mathey, 1997 distinguishes another classification between the two forms of self-help housing. These are the autonomous solutions and assisted self-help. Autonomous solutions are also often referred to as spontaneous self-help meaning that the development was not planned

officially even though it may be quite well prepared (planned) by the users themselves. Assisted self-help on the other hand is characterized by the intervention of the state with the aim of overcoming certain recurrent shortcomings in autonomous building activity. In order to reach a larger number of beneficiaries with limited budgets, non-conventional housing policies have been introduced in many developing countries in the form of site and services and slum upgrading projects.

However, a counter argument can be advanced which is especially relevant for thecase of Nairobi that self-help housing, whether assisted or not is never really autonomous but must accommodate itself in the spaces left by others or for that matter must survive amongst other housing factors and limitations (Nabutola, 2004). Individual housing development being essentially self-help in nature should therefore be viewed in this light with a prospect of formulating measures to enhance the role that individual builders can play in housing provision (Mathey, 1997).

Keivan and Werna (2001) observed that in developing countries, self-help housing offers an alternative housing approach given their inability to provide adequate housing for the fast growing urban population. Self- help housing is complimented by the serious consideration given to associated concepts such as intermediate technology and merits of localized scale production and organization. Support for the concept by the World Bank and Habitat helped to create an interest and mobilize government support and institutional acceptability of the concept as a solution for housing the urban low-income group. This formal acceptance contributed to the success of mobilization of donor finances in the form of loans to self-help housing projects in developing countries (UN-HABITAT, 2005).

Various authors advanced the positive aspects of self-help housing in developing countries, one of the prominent ones being Ward. According to Ward (1972) advantages of self-help housing include the following;

1. Self-help housing is assumed to be much cheaper than state or market provided housing.
2. Officially defined standards have little meaning for self-builders as uniform standards can never match individual needs.
3. The architectural quality of a self-built house is considerably better that that of official housing because construction and design is determined by the aspired use value and not the profit value as in private housing market.
4. Marginal population groups are integrated through self-help.

Amis (1996) observed that these advantages however raise fundamental questions that hinge upon the issue of overall land-use planning and coordination, infrastructure planning, design and implementation and safety. If every individual were to build whatever type of housing without consideration to land-use requirements and standards, then serious problems of facility provision and safety may arise. Therefore the need to formulate facilitative measures for individual housing development becomes crucial.

According to Amis (1996) another aspect is that the growing scarcity of low-priced land, the rising cost of materials, the inevitable expansion of low-income populations, declining opportunities and productive employment and the failure of the traditional approaches to development have all helped push the institutional acceptability of the individual housing development approach to meeting the housing shortfalls in urban areas.

2.7 Some Criticisms of Self-help

Self-help housing was mainly donor sponsored. The reasons behind or underlying such support can be interpreted as ranging from a genuine attempt to improve the conditions of the urban poor, to that of a conspiracy of monopolistic capitalism to maintain the status quo at the international level. Though self-help offered advantages of greater social control achieved through the organization and dissemination of benefits, at the national level, it was seen as allowing labour to be exploited twice over, first at work and second in the construction of the home (Ward, 1972).
The Concept was criticized for retarding structural change and underwriting low wages in so far as access to low-cost shelter reduced the wage level required for subsistence. Self-help was also viewed as being too optimistic and far from offering freedom to build. Its romanticism obscured the real suffering experienced and self-help only acted as a blue print for its continuance as governments adopted a *laissez-faire* policy. Self-help was also seen as providing a short-term breathing space, while presenting no long-term solution. It has also been criticized for seeming to rationalize poverty through slum upgrading and poor and substandard housing development (Nabutola, 2004).

Nevertheless, such criticisms led to the subsequent drastic reduction of funding by donors for housing projects based on the self-help concept. Currently, most self-help housing projects are

sponsored either by non-governmental organizations or housing associations. Gradually public sector led self-help housing has evolved into the individual housing development process, which is at the personal initiative level in contrast to self-help that was essentially at the community level. It is this new shift in approach to housing development that poses a major planning challenge for future housing development in Kenya (Ward, 1972).

2.8 Development of Housing strategies in Kenya

State of Mortgage Financing is a number of housing finance systems around the world and they differ from each other in sources of fund, linkage with secondary market, mortgage products and in the role of government (Stephens, 2000). The Mortgaging system of Germany and Denmark is characterized by specialized mortgage banks with mortgage bonds backed by collateral pool as the principal source of funding. Government has stringent control of the system. The UK has a depository-type housing finance system with commercial banks and savings banks as mortgage lenders. The source of fund is mainly retail deposits and the mortgage instrument is 'variable rate mortgage'. The government insures deposits. The housing finance system of the USA is linked to the secondary mortgage market (Stephens, 2000).

Banks and mortgage companies are principal lenders and mortgages are sold to investors in the secondary market as mortgage backed securities (MBS) and this constitutes the major source of funding. Both variable and fixed rate mortgages are issued and the role of government is to regulate securities. Another form of housing finance system is through a directed credit system. The lender is a specialized housing lender who has a privileged source of funding. Lenders make long-term loans and the government backs lenders and provides funding. A direct credit system is the major component of the developing housing finance system besides the depository system. MBS are relatively nascent in origin in Japan. Earlier papers (Diamond & Lea, 1992)have concerns with the compared efficiency of housing finance systems across countries and their results have not been very categorical in saying which system is best (Diamond & Lea, 1992). This paper moves a step ahead in comparing efficiency of mortgage system within a particular country. It is expected that such a comparison would present a better insight in the housing finance system because the boundary

conditions (such as macroeconomic conditions, broad regulatory environment) for all mortgage instruments within a country are similar (Tse, 2002).

Commercial banks, finance companies, the Government Housing Loan Corporation (GHLC), and other public sector organizations provide housing loans in Japan (Yetgin, 2007). Among public institutions, GHLC is the largest financier. Besides GHLC, the Pension Welfare Services Public Corporation (PWSPC) and local government bodies also finance home purchases. Among private institutions, commercial banks (City banks and regional banks) are major financiers for home purchases. Specialized housing loan companies, which existed until 1995, also funded homebuyers. These institutions mostly fund individuals and developers. The Bank of Japan regulates these financial institutions except for the GHLC, which is supervised by the Ministry of Infrastructure, Land and Transportation. Institutions other than GHLC compete in the free financial market for lending and funding, and generally use such means as expanding their branch network to get more business and gain a larger share of the market. The GHLC receives a major share of its resources from the treasury allocation of the Fiscal Investment and Loan Program of the national government. Among the financial institutions, commercial banks as a group have mobilized the greatest proportion of household savings and are currently the largest provider of housing loans (Buckley & Kalarickal, 2004).

According to World bank (2002) GHLC is the only specialized housing finance institution in the country. It is a state enterprise providing subsidized credit backed by government funding. A well-functioning housing finance system must be able to allocate enough resources for housing project development as well as for home mortgage financing. In Japan, the allocation of funds for private financial institutions is now done through market forces; that is, mortgage interest rates reflect market rates. Since housing finance from private financial institutions is completely integrated in the overall financial system, its effectiveness is closely linked to the health of the overall economic and financial sector.

Calomiris (2001) noted that Government Mortgage Loan Corporation (GMLC) which is supervised by the government, Infrastructure and Transportation, is a special-purpose financial institution established under the Government Housing Corporation Law of 1950. Its share of housing loans outstanding for individuals has grown rapidly, from 16% in 1973 to 36% in 1995 and 37% in 2000, the highest market share for any single financial institution. A

major source of funding for the GHLC is the Treasury Investment and Loan Program of Government, which is funded by postal savings, pension funds, postal life insurance, government-guaranteed bonds and an industrial investment special accounts fund. Of the total Treasury Investment and Loan Program, GHLC's share has been around 20–25%. The GHLC also floats specialized bonds to raise finance. Loans to individuals for home purchases are offered by GHLC at a subsidized rate (the amount of interest rate subsidy has been around 200 basis points). The difference between the lending rate of GHLC to individuals and the borrowing rate from the Treasury Investment and Loan Program is subsidized through the General Account of Government. Besides lending to individuals for home purchase, GHLC also finances entrepreneurs/developers for construction of houses. However, funding to entrepreneurs is not subsidy-based. The position of GHLC in the housing finance system is very typical. It does not lend directly to the borrowers but operates through commissioned financial institutions (typically banks) (Calomiris, 2001).

2.8.1 Empirical Review

Altogether, there has been a steady increase in the supply of and demand for home mortgage finance as well as a number of new, often large, suppliers. Although Flanagan, Ralph and Ryan (1998) in 1999 still maintained that "Italian households still opt for more liquid and, thus, less risky investments," this conclusion would be hard to sustain today. The changes in the mortgage market resulted in lower interest rates, higher possible loan-to-value ratios, higher possible loan-to-income ratios, and longer loan periods. In particular, the higher loan-to-value ratios are important as it means that the level of down-payments required to buy a house is lower, and that has a potential all In particular, the higher loan to- value ratios are important as it means that the level of down-payments required to buy a house is lower, and that has a potentially strong effect on the young, who are the most likely to need a mortgage when buying a home, but it "also shifted the burden of homeownership from large down-payment to greater mortgage payments" (Del, Daniela, Lusardi, & Annamaria, 2003). By 1993, when the landslide changes in mortgage market had just been initiated, mortgage installments rose as high as 52% of family income (Villosio, 1995). Since 1993, changes have had more impact, and Italian banks have also extended maturities.

De Cleene and Wood(2004) indicated that quarter to a third of households in most emerging markets can afford a mortgage to purchase the least expensive developer built unit" However,

in low-income countries, where most SSA countries are located, the percentage is far lower. In Zambia for example, the maximum percentage with access based on having formal tenure alone, is around 8%. The review of post-1999 housing finance literature found that the UN-(UN-HABITAT, 2005) World Bank and IMF, as well as other researchers and consultants. Merrill (2006) noted that development of mortgage finance in South Saharan African countries over the past twenty years have improved for 8 -10%. As a factor in the economy, housing remains important.

Buckley and Kalarickal (2004) noted that different parties, depending, in part, on the type of mortgage originated, hold the mortgage debt outstanding (MDO). The principal types of residential mortgages loans in the USA are uninsured conventional loans, privately insured conventional loans (for those with high LTVs) and government insured (FHA and VA) loans. Approved private lending institutions originate government-insured loans using specific programs. These loans can be pooled into mortgage-backed securities through Ginnie Mae. All three types of loans are made on new construction, existing property and on dwellings for owner occupancy and rental (Buckley & Kalarickal, 2004).

Kenya as a nation has embraced the capitalist system of economy where the provision of housing is left to private developers and to a smaller extends to National Housing Corporation, a government body (Mutero, 2007). Despite the good effort and policies created by the Government over the last seven years on improvement of living conditions through creation of better economic environment for investors. Alder and Mutero (2007) indicated that only a small proportion of urban households - estimated to be less than 10% have traditionally qualified for mortgage loans from HFIs, with the majority ruled out by their low incomes. Borrowers generally consist of high net worth individuals. Even with the fall in interest rates since the 1990s, and the recent extension of lending terms to 25 years by some HFIs, the impact of mortgage lending is still very limited.

According to Dolde (2006) housing sector targeting low income earner has continued to perform poorly. This sector is characterized by inadequacy of affordable and decent housing units, lack of amenities, units of semi-permanent nature and high tenancy turn over (Gulyani, 2006). Millennium Development Goals (MDGs No. 7) stipulates that access to housing is

fundamental right for every citizen. Housing fulfills physical needs by providing security and shelter from weather and climate. Adequate housing is essential for human survival with dignity. Without a right to housing, many other basic rights will be compromised including right to family life and privacy.

Like many other emerging markets, Kenya has struggled to provide basic housing for poor and modest income households. Estimated housing demand for urban areas is 150,000 units a year, but formal production of housing by both the public and private sectors is 200 other slum areas in and around the city. Previous governments had made almost no effort to bring sanitation and improved shelter to the slums, and corruption and land grabbing by the political elite exacerbated ineffective land policies. Optimism has increased with the advent in 2004 of the new National Housing Policy and KENSUP –the Kenya Slum Upgrading Program–which reflect a strong commitment to improve living conditions. Kenya's formal housing market is now providing upper income 1 Source: Kenya Slum Upgrading (Mwangi, 1997).

Benefiting from improved macro-economic fundamentals and a reinvigorated banking and mortgage finance sector, international banks such as Barclay's and Standard Charter have entered the mortgage market, providing vigorous competition for Kenya's restructured housing lenders such as HFCK and Savings and Loan (Calomiris, 2001). Mutero (2007) observed that Kenya also has a well-developed microfinance sector, including four large microfinance banks (Equity Bank, K-Rep Bank, Family Bank and Cooperative Bank) which serve the upper end of the microfinance market, and about 50 microfinance organizations, a number of which are quite large. The microfinance banks and MFIs had $225 million in outstanding loans, 3 million savers, and 500,000 borrowers at the beginning of 2006. As one example, the Kenya Women's Financial Trust, the largest MFI in Kenya, has a loan portfolio of over $32 million. Kenya's SACCO movement, with 3000 active societies, is the largest in Africa, with outstanding loans of $1.15 billion. With a few exceptions, however, the microfinance sector has not addressed the gap in financing low income shelter. Housing lending has not gone very far down market, and the majority of Kenyans, especially the very poor still lack access to formal financial services (Alder & Mutero, 2007).

Government has estimated a housing need of 150,000 dwellings per year in Kenya's urban areas (GoK, 2010). According to Nabutola (2004) government further estimates that formal

production by the public and private sectors is not more than 30,000 units per year and concludes that the annual deficit of more than 120,000 housing units is met by slum housing. The demand for urban housing in Kenya is severely constrained by low incomes relative to housing costs, and the limited funding strategies available to most households. In Nairobi, with a population of around 3 million people, nearly 60% of households live in slum areas. A recent survey of these settlements showed that 73% of households live below the poverty line. Moreover, around 90% are tenants, forced into this type of tenure by poor access to land and, in some cases, by the deliberate choice to invest in their rural homes. Slums in Mombasa, the second largest town, are also characterized by high levels of poverty, and renting is the predominant tenure. In the other principal towns the poorest people typically live as tenants in slums except in Kisumu, the third largest town, where the degree of owner-occupation is relatively high (Mwangi, 1997).

Amis (1996) noted that there are no readily available data on the distribution of household income in urban areas, the localities where housing markets are typically found, making it difficult to determine what types of housing are affordable. But income data from the Nairobi slums survey referred to above allow a limited analysis of affordability. The median household income of the non-poor in these slums was just over Ksh 10,000 (USD 125) in 2004. Households earning this income can afford a dwelling costing Ksh 175,000 (USD 2,600), equivalent to two rooms built of permanent materials (Placeholder3)

It must be the case that overcrowding in the existing formal housing stock also helps meet the housing shortage. Gulyani (2006) using an expenditure-based poverty line, defined as an expenditure of Ksh 3,174 (US$42) per adult equivalent per month, excluding rent, find that about 73 percent of the slum households in Nairobi are "poor" and 27 percent are "non-poor." A large part of the land in Kisumu's slums was at one time owned communally, held in trust by the municipal council. Later, this land was adjudicated and demarcated, and freehold titles issued (Nabutola, 2004).

Affordability should take future income into account, especially income from subletting (Gulyani, 2006). Households would be prepared to pay more for housing was the options to purchase to be offered. But given the very low incomes of the majority of slum dwellers, the bulk of which is spent on food, it is impossible for such households to afford conventional

dwellings if only current income is considered. Where a strong subletting market exists, for instance in Nairobi, even households with virtually no income can afford a housing loan, serviced from subletting income (Murugu, 2003).

Nabutola (2004) recommended that housing demand in low-income markets should therefore take into account, not just current income, but future income from subletting. Where other income generating activities are integrated into housing programme, still more income would be available to service housing loans. That said, it does not appear as if any lenders have responded to this, suggesting an area for future growth. As in most developing countries, only a small proportion of urban households – probably not more than 10% have traditionally qualified for mortgage loans from HFIs, with the majority ruled out by their low incomes. Banks typically do not offer mortgage loans smaller than Ksh 500,000 (USD 7,500) and borrowers generally consist of high net worth individuals. Even with the fall in interest rates since the 1990s, and the recent extension of lending terms to 25 years by some HFIs, access to mortgage loans is still very limited, although it has improved (Ndirangu, 2004).

2.8.2 Classification of Mortgages

Mortgage programs may be classified into two different groups, as fixed rate loans and adjustable rate loans. According to Chijoriga (2000), Fixed-rate mortgages are the most common mortgage for first-time homebuyers because they're stable. Typically the monthly mortgage payment remains the same for the entire term of the loan allowing for predictability in your monthly housing costs. The benefits of a fixed-rate mortgage include: inflation protection, long term planning and low risk. If interest rates increase, the mortgage and mortgage payment will not be affected. The customer will know what his/her monthly mortgage expense will be for the entire term of your mortgage. This can help you plan for other expenses and long-term goals. The customer will always know what your mortgage payment will be, regardless of the current interest rate. This is why fixed-rate mortgages are so popular with first-time buyers (Basu & Blavy, 2004).
A five- or ten-year interest-only period is typical. After this time, the principal balance is amortized for the remaining term. In other words, if a borrower had a thirty-year mortgage loan and the first ten years were interest only, at the end of the first ten years, the principal balance would be amortized for the remaining period of twenty years. The practical result is that the early payments (in the interest-only period) are substantially lower than the later

payments. This gives the borrower more flexibility because he is not forced to make payments towards principal. Indeed, it also enables a borrower who expects to increase his salary substantially over the course of the loan to borrow more than he would have otherwise been able to afford, or investors to generate cash flow when they might not otherwise be able to. During the interest-only years of the mortgage, the loan balance will not decrease unless the borrower makes additional payments towards principal (Daphnis & Ferguson, 2004). Under a conventional amortizing mortgage, the portion of a payment that represents principal is very small in the early years (the same period of time that would be interest-only).

Graduated mortgage loan is often referred to as GPM. It is a mortgage with low initial monthly payments which gradually increase over a specified time frame. These plans are mostly geared towards young men and women who cannot afford large payments now, but can realistically expect to do better financially in the future (Wood, 1983). GPMs are available in 30 year and 15 year amortization, and for both conforming and jumbo mortgage. Over a period of time, typically 5 to 15 years, the monthly payments increase every year according to a predetermined percentage (Murugu, 2003). For instance, a borrower may have a 30-year graduated payment mortgage with monthly payments that increase by 7 % every year for five years. At the end of five years, the increases stop. The borrower would then pay this new increased amount monthly for the rest of the 25-year loan term (UN-HABITAT, 2005).

An adjustable rate mortgage (ARM) is a mortgage loan where the interest rate on the note is periodically adjusted based on a variety of indices. Among the most common indices are the rates on 1-year constant-maturity Treasury (CMT) securities, the Cost of Funds Index (COFI), and the London Interbank Offered Rate (LIBOR). A few lenders use their own cost of funds as an index, rather than using other indices (Wijkander, 2000). This is done to ensure a steady margin for the lender, whose own cost of funding will usually be related to the index. Consequently, payments made by the borrower may change overtime with the changing interest rate (alternatively, the term of the loan may change).

ARMs generally permit borrowers to lower their initial payments if they are willing to assume the risk of interest rate changes. In many countries, banks or similar financial institutions are the primary originators of mortgages. For banks that are funded from customer deposits, the customer deposits will typically have much shorter terms than residential mortgages. If a bank

were to offer large volumes of mortgages at fixed rates but to derive most of its funding from deposits (or other short-term sources of funds), the bank would have an asset-liability mismatch: in this case, it would be running the risk that the interest income from its mortgage portfolio would be less than it needed to pay its depositors. Banking regulators pay close attention to asset-liability mismatches to avoid such problems, and place tight restrictions on the amount of long-term fixed-rate mortgages that banks may hold (in relation to their other assets). To reduce this risk, many mortgage originators will sell many of their mortgages, particularly the mortgages with fixed rates (Kluger & Miller, 2000).

Wachira (1999) observed that for the borrower, adjustable rate mortgages may be less expensive, but at the price of bearing higher risk. Many ARMs have "teaser periods," which are relatively short initial fixed-rate periods (typically one month to one year) when the ARM bears an interest rate that is substantially below the "fully indexed" rate. The teaser period may induce some borrowers to view an ARM as more of a bargain than it really represents. A low teaser rate predisposes an ARM to sustain above-average payment increases. Amortization refers at the process of paying off a debt (often from a loan or mortgage) over time through regular payments. A portion of each payment is for interest while the remaining amount is applied towards the principal balance. The percentage of interest versus principal in each payment is determined in an amortization schedule. Negative amortization only occurs in loans in which the periodic payment does not cover the amount of interest due for that loan period (Wachira, 1999). The unpaid accrued interest is then capitalized monthly into the outstanding principal balance. The result of this is that the loan balance (or principal) increases by the amount of the unpaid interest on a monthly basis (Dolde, 2006). The purpose of such a feature is most often for advanced cash management and/or more simply payment flexibility, but not to increase overall affordability. A newer loan option has been introduced which allows for a 40-year loan term. This makes the minimum payment even lower than a comparable 30-year term (Calomiris, 2001).

i. Fixed Rate Mortgages (FRM)

A fixed rate mortgage specifies an interest rate that is fixed over the term of the loan. Consequently, the loan repayments periodically deducted on the borrowers account are fixed. This would be an amortized loan combining both interest and principal loan repayment into equal periodic repayments. These mortgages carry a higher degree of certainty as the return to

the mortgage firm is well known at the commencement of the facility and the obligation by the borrower is fixed. Banks will however impose heavy penalties on early repayment of this facility to discourage lumpsum payment of this loan as this may curtail their future expected earnings (Clauretie, ,Terrence, & Sirmans, 2003).

ii. Adjustable Rate Mortgages (ARM)

Crosbie (1996) noted that there exists several versions of variable interest rate but a common feature in all is that interest rate floats in relation to an index. The interest rate chargeable is a margin above the base rate or the Treasury bill rate. While the margin above the base or Treasury bill rate may itself be fixed, the rate charged on the mortgage will primarily be driven by short term movements in the money market. This implies that the net amount paid by the borrower cannot be projected with certainty. These loans are not amortized and therefore the borrower makes separate payments for interest and principal loan amount (Ndirangu, 2004). The interest is charged on the current account monthly while the principal repayment is charged separately to the some account. In the long run Mayo (1998) states that lenders have to ensure that their lending rates cover the interest rate paid to their depositors and also cover their expenses.

iii. Income Property Mortgage

This type of mortgage is used as collateral for borrowings because it provides its own revenue to repay the principal and interest payments used to finance it. Several firms will come together to finance the project and besides the borrowers own contribution to the project is significant. The property being financed is usually commercial based such as apartments, offices, shops, warehouses. This nature of mortgage will be serviced from the income generated from the collateral. The interest rate charged reflects the risk associated with the property ability to generate adequate income to cover both interest and principal amount (Reilly & Brown, 1997).

iv. Capital Repayment Mortgages

The monthly repayment covers both the capital and interest on the mortgage. Most lenders charge interest at the start of each period and then have the loan reduced through repayments calculated to discharge it over the full term (Souster, 1996). In the early years of the loan, the interest element is a far greater proportion of the monthly repayments than the capital

element. It is common for the lenders to insist on a credit life insurance protection cover, over the borrower's life to cover any eventuality of death while the loan is outstanding (Fisher & Jeffry, 1997).

v. Interest only Mortgages

In this type of mortgage the borrower only meets the monthly interest obligations. The principal is repaid at the end of the loan term. This then implies that the principal debt advanced does not reduce overtime and there is no guarantee that the individuals investment will grow sufficiently to repay the loan (Crosbie, 1996).

vi. Capped Rate Mortgages

This mortgage provided for the maximum chargeable rate for a period of time. With such a mortgage, the borrower is usually protected from serious rises in interest rate charged. In an environment of risk and uncertainty, the type of mortgage offered by the bank has an influence on the returns to shareholders since some of the mortgage arrangements provide for the revision of the interest rate charge. This enables the bank to recover its cost without any restrictions (Kohn, 1999).

2.8.3 Characteristics of a mortgage

Mortgage loan is characterized by the following features: Repayment period, Minimum/Maximum loan limits, Interest rates and what determines these rates, Mortgage Finance Assessment, Mortgage Finance Assessment, Credit rating and Pre-qualification and Approval. Mortgage repayment periods vary from company to company. It currently ranges between 1-20 years. The choice of term depends on one's ability to meet the loan repayments and their retirement age. The maximum age limit is currently 65 years (Stiglitz & Weiss, 2005).

There are currently no loan limits as loan amounts are mostly determined by ability to pay and the property values- as per financing percentages described above (Ndirangu, 2004). The interest rates depend on the term of borrowing, and currently range between 15% (shortest term 1-5 years) and 15.75% (longest term 12-20 years). A rate of 15.5% is applicable for over 5- 12 years. Diaspora market enjoys the relatively the same rates (Yang & Maris, 2004).

Employed persons: latest pay stubs/slips say 3 months and bank statements say latest 3-months and latest income tax returns (Arimah, 2000). Self-employed persons: We require: a business/company profile, registration certificate, 6 months bank statements and latest 2 years tax returns (Wachira, 1999). There are credit department that assesses all applications. However, in the future firms may rely on credit ratings/ reference reports sent to them from foreign rating agencies. Pre-qualification of all applications received is normally done. This would usually involve checking all requisite documents have been received/ testing ability to pay/ seeking clarification if need be. Then a request for a valuation of the property will be required. Loan approval process will usually be after receipt of valuation report. Pre-approval: will usually be in specific cases- e.g. in project financing (Chijoriga, 2000).

2.9 Factors influencing mortgage financing

The rapid development of a variety of mortgage-backed securities has led to a radical transformation in mortgage sector in recent years (Calomiris, 2001). By integrating the mortgage market into the traditional capital markets, these securities have broadened the financial base for home mortgages. By attracting a variety of new types of investors to the mortgage market and by integrating the mortgage market into the broader, more highly developed capital markets, mortgage backed securities promise to stabilize the supply of funds to the housing sector of the economy once an early casualty in any period of credit stringency (CBK, 2010). The changing home mortgage market and the unique financing requirements brought about by widespread homeownership have caused a continuing evolution in mortgage lending practices.

Calomiris (2001) highlights the general perception that the chartering of national mortgage intermediaries did offer large potential efficiency gains from economies of scale, where the intermediaries are able to spread the fixed costs over a larger portfolio, and to achieve superior portfolio diversification by holding a national mortgage portfolio. Wallison (2002) highlights the potential increase in interest rate by 15 to 35 basis points if the cost advantage of housing financing, since the enterprise cost is likely to be increased. This historical argument, however, cannot justify perpetuating the current home mortgage market. In fact, the argument actually supports the chartering of competitive banks nationwide where new entrants are encouraged into the market. Because economies of scale can be realized when

there is competition, there is no need for any government subsidies for these institutions (Calomiris, 2001).

Souster (1996) observed that mortgage financing has led to Competition among the financing firms leading to achieving optimal efficiency and resource allocation decisions can be determined by financial responses to relative price signals. According to Hess (2003) lack of competition delays the financial firms' clients' enterprise's ability to operate efficiently, respond to market forces and compete against private sector firms. By going on to full privatization, the time and cost for setting the financial target(s) for the public enterprises will also be eliminated (Waterman, 1992). The above arguments are supported by (Wallison, 2002), who believes that competition among financial institutions is desirable to make the public enterprises, like Fannie Mae and Freddie Mac, transmit some of their cost to their customers. It is therefore crucial and beneficial for financial institutions to internalize more of their own cost of risk-taking, and to absorb losses, while reducing tax-payers' risk in case of mortgage default. He further explains that homebuyers can also take advantage of the many competitive housing loan packages offered in the private mortgage sector. Homebuyers can thus benefit from more choice in the private loan sector. Hess (2003) supports this view and states that by introducing competition in order to raise the market share for new entrants, more options can be created for homebuyers, who need to finance their housing purchases. This allows monopolies like Fannie Mae and Freddie Mac to earn profits, through any profit based on performance and on their creditworthiness rather than on legislations, government-sponsored tax and regulatory advantages that creates, in the market participants' eyes an implicit federal guarantee.

Economy theories suggest that monopolistic enterprises, as profit-maximizing entities, produce goods and or services, until marginal cost equals marginal revenue, unlike under perfect competition where production stops when price equals marginal cost. In practical terms, monopolies will often produce well below the demand, and overcharge to maximize profits. This results in an inherent efficiency loss and a misallocation of scarce resources (Hess, 2003). In addition, Albon (1985) also finds that monopolies like public enterprises that are expected to operate under a minimum required rate of return (i.e. hurdle rate), often show different degrees of inefficiency. Albon (1985) explains that the reason for such inefficiency is that the public enterprise's performance, in the absence of market discipline, will manifest

itself in both price and quantity performances. In pricing terms, creditors demand a yield on Fannie Mae and Freddie Mac debt that approximates the risk-free rate, rather than market rate. In quantity terms, the credit support provided to Fannie Mae and Freddie Mac, and the Treasury-like characteristic of their borrowing instruments, give the two policy instruments the ability to raise funds in amounts in excess of that. Meanwhile, this is not the case with non-GSEs, which bear similar risks. Such support reduces the required yield and even if the GSEs under-perform, they will continue to have sufficient funding support from the government – thereby significantly reducing corporate competency and efficiency.

Mortgaging financing loans today make use of a variety of techniques to aid in their loan decisions. Most lenders make judgments simply based on “rules-of-thumb” derived from their personal experiences and their feel for the market. However, such ad hoc heuristics can easily generate bias and create an unrecoverable loss. It is important that an objective analytical technique be applied to the analysis of the causes and prediction of mortgage default risk. The mortgage financing lead to better analysis of risks facing mortgage loans portfolio. Dolde (2006) indicated that some mortgage loan defaults were believed to have a significant relationship with the characteristics of both mortgages and borrowers at the time of loan origination. Chinloy (1985) made significant contributions to the indirect identification of risk through the structure of mortgage interest rates. Incidentally, (Ferguson, 2003) argued that government-insured home mortgages were generally financed on much more liberal terms with a larger loan-to-value ratio.

Kenya’s changing mortgage climate, which according to an article in the Washington post began when Kenya’s financial laws changed, requiring banks to have less cash in reserve, Lower interest rates on treasury bonds, encouraged banks to find other ways to invest money. These days, Barclays offers interest rates around 13 percent (from a previous high of 30%). This has made banks to venture into mortgage business in order to supplement their business income. Premier mortgage financier, Housing Finance and UN Habitat have signed a framework agreement establishing the terms for future cooperation in provision of affordable housing (UN-HABITAT, 2005).

Kenya’s nascent personal finance markets are being fuelled by the sustained economic growth that underpins the development of the rest of the banking sector. High commodity prices, relative political stability and economic reform in the Kenya have seen average annual growth

rates in excess of 6 percent, and the International Monetary Fund expects Kenya to grow at an average rate of 6.4 percent in 2008 (McLeod, 2002). Economic success has manifested itself in the emergence of a middle class and increasing numbers of educated professionals from the diaspora returning to the continent. As more people enter the formal economy, the market for personal finance is seeing ever greater demand.

Incomes are growing and people feel a lot more confident to take on loans to buy their homes. Changing peoples' perception of debt and consumer borrowing in Kenya is an important step in home ownership. Some Kenyans perceive debt as a negative thing because they don't understand the product. Once they become comfortable that debt is not something to be ashamed of, debt does not mean you're going to be jailed, that you lose your livelihood, and that these institutions are there to help you overcome these concerns, they are happy to borrow (Arimah, 2000). Personal finance has the potential to transform Kenyan society. It is still in its infancy but there is no doubt about it.

When a bank has a borrower, he stays with the bank for a couple of years. That allows the bank to not just give a housing loan but to sell life insurance, a current account and other savings products. According to Basu and Blavy (2004) mortgage lending in Ghana increased from $2.4m in 2002 to $44.1m in June 2008, and there are signs that the customer base is widening. Since its inception in 2006, Ghana Home Loan's average loan cost has dropped from $150,000 to $35,000. Yet even at these prices, mortgages remain out of reach for much of the country's population. A $35,000 home loan is still around 35 times Ghana's average household income.

One East African bank has managed to buck the trend of lending exclusively to high income customers. With mortgages starting from as little as $6, Kenya's Equity Bank has experienced considerable commercial success by targeting precisely those segments of the market shunned by other banks. Equity's pre-tax profits increased from KSh 74m in 2002 (then $0.9m) to KSh2.4bn in 2007 (then $41m). For the first nine months of 2008 alone it posted a 177 percent pre-tax profit increase to KSh4.24b ($53.66 million) (De Cleene & Wood, 2004).

Today, with 2.8m account holders, Equity claims to be home to almost half of all the bank accounts in Kenya (Merrill, 2006). This success is due to what is described as a unique business model that is suitable for low income, or "bottom of the pyramid" consumers. "It is readily accessible; it is conveniently located and generally affordable for that segment. This is in the sense that the transactions have been reduced to small units that are suitable for that segment (Dolde, 2006). On the back of its success, Equity has recently started operations in Uganda and South Sudan. In 2007, the bank acquired a 25 percent stake in the Kenyan mortgage company Housing Finance, where it hopes to apply its model to affordable housing for low income consumers (Dolde, 2006).

For the time being, Africa's housing markets' contribution to GDP remains limited, but there is little disagreement about their potential. The experience of Equity Bank demonstrates that the obstacles to providing formal financial services to the informal sector are not insurmountable, so long as the right local sensitivity and innovation are applied.

2.10 Demand and Supply of loanable funds

The loanable funds theory is a framework used to determine interest rate in the short-run. According to this the interest rate is determine by the demand for and supply of direct and indirect financial claims on the primary and secondary markets during a given time period (Bibow, 2005)

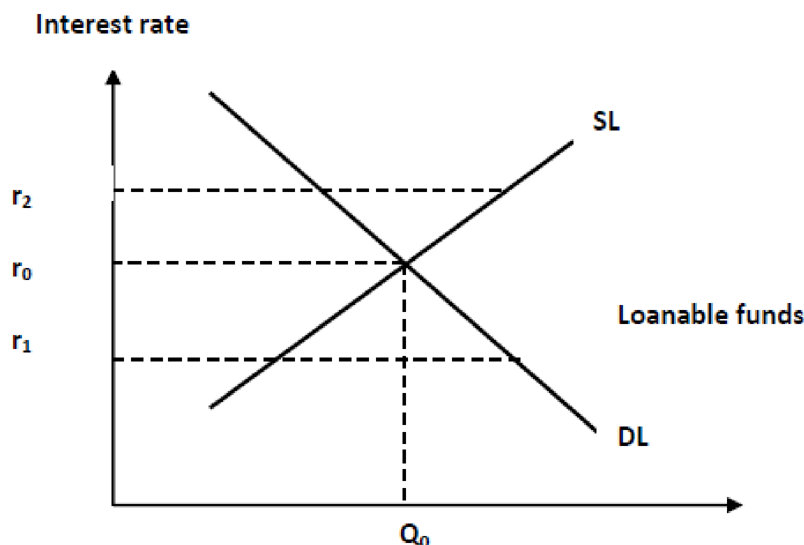

Figure 2.1 Structure of Loanable Funds Model

Source: Pilbeam (2005)

- If SL only increases, Q0 will increase and r0 decreases.
- If DL only increases, Q0 will increase and r0 will increase.
- If both SL and DL increases, Q0 will increase r0 might increase, decrease, or remain unchanged.

The intersection of the demand and supply of loanable funds/ housing finance determines the interest rate according to the loanable funds approach to interest rate determination (Pilbeam, 2005). SL represents the housing finance supply and DL represents the housing finance demand. The point at which SL and DL cross one another is the equilibrium point Q0. It is the point at which the quantity demanded equals quantity supplied.

Buying of financial claims to earn interest represent the supply of loanable funds; Consumer savings, business savings, government savings and the central bank are some of the suppliers of loanable funds. The Loanable funds theory of interest rate argues that economic agents have a certain amount of financial wealth and they can decide to hold the wealth in the form of either interest earning financial assets, or in cash which earns no interest, or a combination of the two (Pilbeam 2005; Buckle & Thompson 2005; Wickens 2008). Increase in interest rate will encourage more saving and increase supply of loanable funds so that the loanable fund supply curve slopes upwards, therefore exist a positive relationship between interest rates and the supply of loanable funds.

It is important to consider the Central Bank's role in the supply of loanable funds in the country. In Kenya, the country's monetary and credit system is regulated and strongly influenced by the Central Bank of Kenya. Through a policy called the monetary policy, the Central Bank has the ability to directly affect the supply of credit in Kenya, and by so doing affect interest rates.

2.10.1 Supply of loanable funds

Other than the interest rate there are various factors that affect the supply of loanable funds. They cause the supply curve SL to shift to either sides, for example, increase in the quantity of money may cause the SL curve to shift downwards as there would be an increase in the supply of loanable funds and people would have more to save resulting in a new equilibrium with lower interest rates. Other factors that may cause the SL curve to shift and result into a new equilibrium include:

1. Change in the income tax
2. Changes in government budget from deficit to surplus position
3. Expected inflation
4. Change in saving rate: public desire to hold money balances
5. Changes in business saving

Each of the above scenarios has an impact on the savings either of the government or of households. A situation that causes the amount of savings to increase will increase the supply of loanable funds shifting the SL curve to the right. The supply of loanable funds comes from individuals who have some extra income they want to save and lend out. This lending can occur directly, such as when a household buys a bond from a firm, or it can occur indirectly, such as when a household makes a deposit in a bank, which in turn uses the funds to make loans (Mankiw, 2008).

2.10.2 Demand of Loanable Funds

The need to sell financial claims represents the demand for loanable funds. The demand for loanable funds emanates from business investment, consumer credit purchase and government budget deficit. Barker (2003) argues that the Demand for loanable funds decreases as the

interest rate increases due to increase in cost of borrowing. There is a negative relationship between interest rate and demand for loanable funds, so that demand for loanable funds curve slopes downward.

Demand for loanable funds comes from households and firms who wish to borrow to make investments. This demand includes families taking out mortgages to buy homes and firms borrowing to buy new equipment or build factories. In both cases, investment is the source of the demand for loanable funds (Mankiw, 2008)

Some factors that affect the demand of loanable funds include:

i. **Changes in future expected profits or business activities**

If business expected higher profit in the future demand for investment or investment demand increase, and so does demand loanable funds, DL curve shifts to the upwards, resulting in a new equilibrium with higher interest rate and higher equilibrium quantity.

ii. **Changes in government budget from surplus to deficit position**

Increase in government expenditure, increases government borrowing to cover its deficit, therefore the demand for loanable funds increases, and the DL curve shifts to the right.

iii. **Changes in tax**

A decrease in tax results in a decrease in government revenue, and thus increases the demand for loanable funds, and DL curve will shift to the right.

Megbolugbe*et al* (1991) gave the general form of the housing demand equation which is the same with the quantity of housing finance demanded as:

$Q = q(Y, Ph, Po, T)$

Where Q is housing consumption, Y is household income, Ph is the relative price of housing, Po is a vector of prices of other goods and services and T is a vector of taste factor.

It is argued that it is out of the disposable income that a lender determines the amount borrowers can afford to spend on housing. For this study; data would be collected from users of housing finance at the household level.

2.11 Factors influencing Mortgage financing and Performance

Dolde (2006) examined efficiency versus risk in large domestic USA banks. He found that profit efficiency is sensitive to credit risk and insolvency risk but not to liquidity risk or to the mix of loan products. Fabozzi (2005) conducted an empirical study on interest rate and

exchange rate exposures of institutions in pre-crisis Korea. Results indicated that Korean commercial banks and merchant banking corporations had been significantly exposed to both interest rate and exchange rate risks, and that the subsequent profitability of SACCOs Institutions was significantly associated with the degree of pre-crisis exposure. The results also indicated that the Korean case highlights the importance of upgrading financial supervision and credit risk management practices as a precondition for successful financial liberalization.

Crosbie (1996) satated that credit Risk management dictates that as long as the demand for liquidity from depositors and borrowers is not too highly correlated, the intermediary should pool these two classes of customers together to conserve on its need to hold costly liquid assets the buffer against unexpected deposit withdrawals and loan take downs. According to Hess (2003) liquidity risk management is entering a new and much more demanding era. The Basel Committee on Banking Supervision and the International Institute of Finance has set high hurdles in terms of principles and recommendations. The UK Financial Services Authority (FSA), meanwhile, will soon be publishing its proposals for reinvigorating its liquidity risk regulations (Yang & Maris, 2004).
According to Nabutola (2004) funding growth through core saving has become largely a thing of the past. The advent of nonbank competition and the rise of third-party funding mean that community banks now operate in a dynamic funding market, which requires the use of more sophisticated liquidity risk management practices (Yeager & Seitz, 1989). Industry experts point to many different underlying causes for the demise of growth in deposits, such as the increased financial sophistication of the public, demographic shifts, the rise of nonbank competitors offering a whole wave of alternative investment products, new delivery systems such as the Internet, and competition from credit unions and insurance companies (Calomiris, 2001).

2.12 Mortgage Firms Risk in Lending

Mortgage firms are in business of taking risks (Wachira, 1999). The level of risk and uncertainty varies in direct proportion with the period of time for which the mortgage has been borrowed. Longer period of time will naturally have a higher level of risk and uncertainty (Wood, 1983). According to Nyandemo and Singh (2003) uncertainty is a situation when decision makers do not have full knowledge about the future of a product,

demand, factor costs and other relevant variables. It may be stated that uncertainty is a state of knowledge in which one or more alternative result in a set of specific outcomes but where probabilities of the outcome are neither known nor meaningful. In other words, when uncertainty is reduced to possible outcomes, and to alternative courses of action it becomes a risk. Risk is therefore a state of knowledge in which each alternative leads to one of a specific set of outcomes, each occurring with a probability that is known (CBK, 2010).

There are some investment characteristics peculiar to real estate that makes it more risky than investing in government securities (Mwangi, 1997). A summary of major investment risk characteristics that must be considered by investors and mortgage borrowers when deciding among alternative mortgage structures are discussed here under. Interest rate, inflation and default rate risk are common to all mortgages while business and management risk has a higher impact on income property mortgages than residential mortgages.

2.12.1 Interest Rate Risk

As defined by Fisher and Jeffry (1997) interest rate risk is the exposure of a financial institution's current or future earnings and capital to interest rate change. Most financial Institutions suffer losses in profits or asset value when the general level of interest rates rises. Real estate tends to be highly levered and thus the rate of return earned by equity investors tends to be affected by changes in interest rate. Even where the investor has a fixed rate of mortgage, an increase in interest rate may lower the price a subsequent buyer is willing to pay.

The goal is to control interest rate risk to an acceptable level. It has been observed that the techniques used to measure interest rate risk include; interest rate gap analysis, duration analysis and simulation. The interest rate analysis shows that changes in interest rates lead to substantial losses or gains. Duration on the other hand is a measure of the sensitivity of an asset value to change in interest rates. Simulation analysis gives a financial institution an opportunity to plan for a financial structure that limits its interest rate risk to acceptable level (Yeager & Seitz, 1989).

2.12.2 Inflation Risk

Unexpected Inflation can reduce an investor's rate of return if the income from investment does not increase sufficiently to offset the impact of inflation thereby reducing the real value of the investment. Real estate has historically done well during periods of low inflation than

in periods of high inflation. This may be attributed to leases that allow for pricing adjustment with unexpected changes in inflation (Dolde, 2006).

Furthermore the replacement costs of real estate tend to increase with inflation. During periods of high vacancy rates, when the demand for space is weak and new construction is not feasible, the income from real estate does not tend to be increase with unexpected inflation (Maitysiak , 2000).

2.12.3 Default Risk

One major concern of the lender is the risk that borrowers will default on their obligations to repay the principal and interest. This is the default risk and it varies with the nature of land and credit worthiness of the individual borrower. Default risk relates to the likelihood that the borrower's income may fall after the loan is made, thereby 15 jeopardizing the receipt of future mortgage payments. Similarly should the market value of a property fall below the outstanding loan balance the borrower to lose the motivation to repay the mortgage leading to default. The possibility that a default may occur means that lenders charge a premium or higher interest rates to offset possible loan losses (Clauretie, ,Terrence, & Sirmans, 2003).

2.12.4 Business Risk

This risk is more prevalent on income property mortgage than any other type of mortgage. Many regions on the country experience differences in the rate of growth due to changes in demand, population changes etc. Those properties that are affected to a greater degree than others will be riskier. A property with a well-diversified tenant mix is less likely to be subject to business risk. Similarly properties with leases that provide the owner with protection against unexpected changes in expenses will have a lower business risk. Commonly, leases will contain a clause that allows the owners to review the rent due to recover any increase in costs necessary in managing the property (Maitysiak , 2000).

2.12.5 Financial Risk

The use of debt financing magnifies the business risk. Financial risk increases as the amount of debt proportion financing a mortgage increases, according to Fabozzi (2005) the higher the loan to value ratio the higher the financial risk.

2.12.6 Liquidity Risk

This risk occurs when a continuous market with many buyers and sellers and frequent transactions are not available. The more difficult an investment is to liquidate, the greater the risk that a price concession may have to be given to a buyer should the seller have to dispose of the investment quickly. Real estate has relatively high degree of liquidity risk.

It can take 6-12 months to sell real estate income properties especially during periods of weak demand. Special purpose properties would tend to have much higher liquidity risk than properties that can be adapted to alternative uses (Kohn, 1999).

2.13 Determination and Measurement of Interest rates

Prior to interest rates liberalization, interest rates were determined through administrative controls and after liberalization by market forces (Wachira, 1999). These factors that now determine interest rates include; inflationary expectations, the real rate of interest differentials, excess liquidity and domestic and foreign interest rate differentials, i.e. when there are no restrictions on capital movements.

According to Villosio (1995) there exist two approaches used to determine interest rate; liquidity funds approach and loan able funds approach. These approaches assume that the level of income and employment determined in the real section of the economy are constant. A zero rate of inflation is also assumed.

2.13.1 Liquidity Preference Approach

The liquidity preference approach views interest rates from the supply and demand of the stock of money in the finance system.

The demand for money is Md=Md (Yi,r)

Md= Money demanded Y= Level of Income r=Interest rate

The approach indicates that interest rate is determined by the interaction of supply and demand of money stock. According to Ball (1996)money is demanded mainly for transaction, precautionary and speculative purposes

2.13.2 Loan able Funds Approach

Under this framework, the interest rate is the price paid for the right to borrow and utilize loan able funds (Harey, 1993). It is well known that the level of interest tends to rise in periods which the rate of inflation increases.

The supply of loan able funds is a function of Interest and Income i.e.

SL=SL (Yi,r)

SL=Supply of loan able funds Y=Income level r=Interest rate

According to Thygerson (1995) the equilibrium interest rate is that rate which equates supply and demand of loan able funds as long as competitive forces apply in the financial system, there is a natural mechanism to bring interest rates to equilibrium.

2.14 Housing finance System in Kenya

Kenya's financial market is served by a broad range of commercial banks and non-banking institutions as well as by capital market institutions including the NSE. There are also channels and instruments for mobilizing long term funds for development. There are estimated to be 43 Commercial banks in Kenya; two mortgage finance companies, Housing Finance and The Mortgage Company (TMC); and 11 Non-banking financial institutions, (Central Bank of Kenya, 2012).

Housing finance Institutions in many developing countries are characterized by poor asset portfolio, and illiquid mortgage instruments partly owing to limited availability of secondary mortgage markets or any other forms of liquidity facility (Warnock, 2008). Primary mortgage markets are also poorly developed, partly because the institutions operate under an often chaotic and uncertain legal framework, doubtful property rights title, doubtful security of tenure and uncertain foreclosure procedures.

The acquisition of adequate housing confronts the choice between renting and owning. These options are determined majorly by a household's access to financial resources. Renting dictates that a household has a regular stream of income, owning requires the household to have access to a large amount of accumulated finance because the purchase of a home is very

expensive, more so, purchasing requires a large payment up front which normally requires that the homeowners secure a mortgage and therefore also requires a regular income stream to pay the mortgage (Doling Vandenberg & Tolentino, 2013). In the long-run homeownership is cheaper than renting because of the low interest rates and mortgage rates that can go as low as 3%, fixed rate spread over a long span of time, up to 30 years. The Real Estate industry has three identifiable sources that finance its activities, equity (the individual household's own available resources), and debt and government subsidy.

The provision of housing finance can be split into two components: (i) the provision of housing finance by a lender who has sufficient funds at hand, and (ii) the mobilization of funds within an economy so that lending institutions have access to funds (Warnock, 2008). For lenders with adequate funds to decide on allocating part of the funds to long-term housing finance, a number of preconditions must be in place:

- Information on the borrower. Availability of relevant information to assess the creditworthiness of prospective borrowers, which enables the determination of the probability of default. To assure the accuracy of the information, credit history such as public credit registries or private credit bureaus could be used to standardize it. It is best if the source has a wide coverage of the population, and the most informative source would include negative as well as positive transactions.
- Ability to value the property. There should be a mechanism to determine the market value of property. Where data on the sales price and appropriate features of the home, that is location, size etc. are maintained in a proper property registry, appraisers can more accurately value homes for borrowers and lenders.
- Ability to secure collateral. The lender should be able to secure collateral against the loan in case of default. This requires a proper legal and registry system to assure the rights therein and ownership of the property such that the lender can seize the property in case of default.
- Macroeconomic stability. The macroeconomic environment should be stable. The lender passes the interest rate risk to the borrower in an unstable environment. Substantial interest rate risk will retard the development of the housing finance system, as either lender will go out of business (e.g., U.S. savings and loans in the 1980s) or borrowers will be unable to repay their loans or both.

Housing finance is characterized by the application procedures, period of the loan, collateral and repayment method. Loan applications in conventional institutions involve lengthy procedures for one to get qualified. The period of the loan is usually on long term basis often more than 10 years. This form of finance is insensitive to inflation and changes in borrower's income. Furthermore some sort of collateral is required to secure the loan, usually immovable tangible assets. Securing mortgages requires a proper title deed and registration of the same. Repayment of the loan is normally on an annuity basis i.e. equal periodic payments covering interest and capital.

2.15 Sources of funds

Wachira (1999) noted that there are essentially four entirely different ways of raising primary funds for housing loans;

a) Private equity,
b) Long-term private debt,
c) Deposits,
d) Government or government-directed credit

These are all forms of savings which are looking for a return, be it social or economic (Ndirangu, 2004). Is there a best way to raise funds depends on the operational costs and the difficulties of risk management.

The earliest housing finance institutions were mutual organizations, pooling the funds of a small group to make loans to members of the group (Calomiris, 2001). The funds mobilized by mutuals were equity –that is there were not guaranteed to be repaid at par by the institution but rather depending on the performance of the loans made to the group. According to Calomiris (2001) this system works well in small group situations –the fact that the members of the group know each other improves information and enforcement. But the pure building society model involves waiting periods to accumulate sufficient funds for loans which increases the opportunity cost of housing. This problem led to creation of modern depository institutions where the borrowers and savers did not necessarily belong to the same group. Depository lenders offer increased availability of funds and economies of scale in both fund raising and lending but the expansion of the group leads to reduced information advantages.

According to Ball (1996), Equity capital is an extremely important component of finance of rental housing, often the most important vehicle for providing affordable housing. Sufficient equity in a project can improve the likelihood and reduce the cost of obtaining a loan. Equity capital can be scarce or non-existent in the presence of rent control or regulations on the return that can be earned by investors. In many emerging markets, such programs can have the unintended effect of diminishing the stock of affordable housing (Baross, 1990).

Equity investors are critical suppliers of operating capital and bearers of risk in private market systems. As the residual risk takers they require higher returns on their investment than do lenders. According to Maitysiak (2000) raising equity capital is more costly and problematic for affordable housing due to the greater perceived risk. In developed countries in Europe and North America, non-profit organizations and charitable foundations provide some of this funding. Their mission and membership allows them to accept lower returns than private for profit investors thus lowering the cost and increasing the availability of such housing.

However, according to Orori (2014), major providers of housing finance can be grouped into four categories as follows:

1. Non-institutional finance (informal sector)
2. Private institutional finance
3. Public housing
4. International sources

2.15.1 Non-Institutional Finance (Informal Sector)

The informal sector of an economy is distinguished from the formal sector by the extent to which government is functionally cognizant of the activities carried on (Akanji, 1998).
They were established to cater for the shortcomings of conventional institutions. Informality of housing finance is best understood in terms of availability to people who want to finance housing that is not acceptable by the formal sector specializing in long term mortgage finance. Low income households have a long standing skepticism of acquiring formal finance and considerable experience of various forms of self-finance in which people come together to save for the purchase of housing, cars or land (Wurtzbach, 1995). Some informal sector finance sources for housing are as follows:

a) Personal or Family Savings

Usually is the easiest and cheapest form of finance. Personal savings and other assets make a great source of funds. Because you already have them, acquisition costs are minimal. Obtaining finance from family also presents a cheap and flexible alternative, it is however, important to note that this may potentially affect your relationships.

b) Loan from Friends, Relatives and Neighbors

Terms and conditions vary across time and place. They depend on the strength of the personal bond between the borrower and the lender and the urgency of fund (Megbolugbe, 1987). To obtain the loan, the borrower relies on nonconventional collateral and creditworthiness is measured in terms of social behavior rather than in terms of material assets.

Often the loans are given free or on very low interest rates. Conditions for repayment are more flexible and may become open-ended essentially converting the loan partly or completely into a gift. There is however, substantial social pressure to repay the loan according to the initial terms and conditions.

c) Savings & Credit Unions

They extend credit to their members for different uses, including the purchase of houses. The borrowing member is usually given four or six times what he has saved. This is against 40% equity required by formal mortgage lenders. The loans are charged low interest rates. Unlike formal finance systems, there is no need for mortgage documents and no need for title deeds. The reliability of their member is all that counts and there is a committee to judge that (Nabutola, 2004).

d) Individual Moneylenders

They are determined by commercial business motives. Limits on loans depend on the assets owned by the borrowing household, income, relationship with the money lender or availability of collateral. Interest rates may vary considerably and are high compared to banks. To a large extent the interest rate is determined by opportunity cost and risk premiums and cannot simply attributed to an assumed monopoly position of money lenders (Adams, 1992).

2.15.2 Private Institutional Finance

Conventional Housing Finance Institutions are accessible and provide housing finance to the middle and high-income segment of the population. Public sector housing finance institutions

have offered longer-term loans also to lower income groups, but even these have largely been restricted to borrowers with clear land title and certifiable income, a condition only met in public low-income housing projects. The vast majority of the population remains excluded (Nabutola, 2004).

a) Commercial Banks

This category of bank is retail bankers by operation. Previously they only lent on short-term basis because they had to meet the withdrawal request at the shortest notice. Development of commercial banks has led to the transition from short-term lending to now long-term loans and mortgage packages that have had a major impact in the growth of real estate, mainly by private investors. Development in the mortgage market can be attested by the fact that banks, for example Housing Finance released a unique product, 105% financing solution of the project's cost.

b) Sharia Banks

These are Islamic banks that are managed according to sharia law. The Quran prohibits the collection of interest (riba) in all monetary transactions, charging fees (and donations) for services provided in lieu of charging interest on loaned capital. The strictness of the banks prohibits issuance of loans for illegal purposes.

Disapproval of interest on loans disallows Muslims from taking up conventional mortgages. Islamic mortgages were introduced as a way to go around this and provide home finance to Muslims who can't raise cash to buy property. The bank, to earn profit undertakes in capital and real estate investment opportunities among others.

c) Microfinance

Microfinance can be described as provision of a broad variety of financial services such as payment services, money transfer, insurance, but more typically deposit facilities and loans for individuals in the lower income groups for their house development or micro-enterprises (Khawari, 2004). Microfinance was developed due to the financial exclusion of the low income group from formal financial systems; loans are usually small and short term and are designed to suit the repayment ability of low-income families.

Housing micro-finance (HMF) is a subset of microfinance designed to meet the housing needs of the poor. It is designed for low-income households who wish to expand or improve their

dwellings, or to build a home in incremental steps or relying on the sequential small loans (Fergusson, 1999).

d) Contractor Financed

Contractor financing has changed from interest-free loans provided by the government in the form of large advance payments-to short-term, fee-bearing loans provided by commercial banks.

Private property developers and other investors have applied various financing techniques like: Turnkey, Pre-letting and, Joint financing, (loan syndication) to finance housing project.

e) Non-Banking Financial Institutions

NBIFs were set up to fill the gap in the financial systems and rectify inefficiencies in loan facilities. They mobilize savings in competition with commercial banks. The savings are then channeled into credit for commerce, agriculture, industry and the real estate.

Non-bank financial institutions (NBFIs), such as insurance companies, housing finance institutions, pension funds and investment funds mobilize savings, provide market-based safety nets, and fund long-term investments to support growth as well as job creation.

f) Insurance Companies

Life funds of insurance companies are long term savings in form of annuities or endowment Policies, which can only mature at the occurrence of certain known events, like death, accident or retirement. This creates a fund base that enables life assurance companies to invest on long term capital assets like real estate investment and get involved in the following: Loan for real estate development based on capital value of the policies, investment in mortgage and debentures; direct investment in or development of real property i.e. acquiring or developing landed properties apart from those meant for their own occupation.

g) Pension Funds

They operate like insurance companies and finance housing mainly for the pensioners. In Kenya we have the National Social Security Fund (NSSF).

h) Housing Finance Institutions

Housing finance institutions are deposit-taking primary institutions. There are three HFIs in Kenya, namely Housing Finance Company of Kenya (HFCK), Savings and Loan Kenya Ltd(S&L) and the East Africa Building Society (EABS).

i) Mortgage Companies

In Kenya they are defined by the Banking Act cap 488 as a company other than a financial institution which accepts, from members of the public, money on deposit repayable on demand or at the expiry of a fixed period or after notice and is established for the purpose of employing such money in accordance with section 15.The major mortgage companies in Kenya are Housing Finance and the mortgage company.

2.15.3 Public Housing Finance

Public houses are financed, often constructed, owned and operated by the public sector. They may be let out to the general public or to civil servants but continue in public ownership whether they produce economic profit or loss.

In most countries, the governments have provided housing for the poor through massive housing programs (UNCHS, 2002). However due to high subsidies provided, they tend to attract higher income groups and miss the target group. In Kenya, the NHC channels public fund for lower and middle income groups through local authorities (UNCHS, 1994).

2.15.4 International Sources

They include private funds, public bilateral and public multilateral funds. Major providers of private funds include the Commonwealth Development Corporation (CDC), United States Agency for International Development (USAID) and the World Bank.

2.16 The role of government and policy

The role of government in low income housing is pivotal and national leaders have a legal and social contract to provide services in return for political support. Despite this, many governments are unable to meet these needs because of administrative, financial, and institutional weakness coupled with poor planning and rapid population growth. There is the assertion that lack of sufficient funds is one of the main reasons for the poor housing

conditions in urban cities and available national funds are competed for by various sectors of the economy. Often, only the vital and productive sectors are financed and for a long time, the definition of productive sectors has excluded housing provision, particularly for the low income households (Macoloo, 1994).

2.16.1 Government strategy and incentives

Some of the dominant strategies for housing and service provision for Kenya's urban poor include slum upgrading and site and service schemes. However, the efficacy of these strategies has been limited by ambivalent government attitude to irregular settlements. These strategies have failed because of a reliance on inappropriate building by-laws and infrastructural standards, and modern designs, construction technology, and conventional building materials that all make housing unaffordable to the poor, even after subsidies. Although there have been calls to government to adopt more suitable alternatives, few changes have taken place, because policy makers view proposed modifications as being too old-fashioned and incongruent with their quest to modernize the country (Otiso, 2003). Thus, government initiatives in providing public housing have proven to be pathetically slow with many of the houses provided being economically and socially irrelevant, this further prompting the rise of informal settlements (Macoloo, 1994).

In April 2007, President Mwai Kibaki launched a US$12 billion Kenya Slum Upgrading Strategy aimed at improving the lives of 5.4 million Kenyans over the next 13years. In December 2007, Housing Minister Soita Shitanda announced the Government's plan to set aside 250 acres for development of affordable houses for low income earners in Mlolongo area in the outskirts of Nairobi (GoK, 2007). Although these are welcome developments, it is likely that plans may not materialize as the number of public housing building plans approved has declined over the years.

More recently, as the Government has taken cognizance of the acute deficit of housing in the lower end of the market, it has planned to improve the situation by encouraging supply; in a move towards becoming facilitator by enabling policy formulation conducive to mobilize the private sector participation is low-income housing (GoK, 1999). Some recent initiatives include the zero-rating of VAT on building materials used in the construction of 20 or more low-income housing units and the discussion of possible tax advantages and tax holidays for

developers in the low-cost housing sector (GoK, 2007). Even as Kenya's earlier policy of direct supplier of housing has given way to a more pragmatic strategy of getting other actors involved, the housing situation remains serious. It is evident that there is a widening gap between policy formulation and the implementation process, and the status of low-income housing delivery is far beyond satisfactory. Poor past policy frameworks, uncontrollable urban population growth and current inaction by the public sector have been the key reasons for this (Okonkwo, 1998).

Key areas of challenge that relate to developing country initiatives include rapid urban population growth, the misuse of dwelling funds, the adverse effects of increasing rents for low-income groups, the deficiency of the housing loan system and the increase in luxury houses rather than social houses (Yetgin, 2007).

However, the real challenge for the Government is to create an enabling environment for investment and to remove the impediments that hamper private sector development. These range from functioning labour, capital, and input markets through to an efficient and effective administration process, with an emphasis on showing real progress, building on key success in market where the private sector already has incentives to invest (Fabozzi, 2005). Similar approaches have been successful in other countries where in recognizing their acute housing deficits, Governments have made cognizant efforts towards becoming facilitators rather than hindrances to private sector real estate developers, this done through joint consultative meetings and implementation of a range of incentives for investors (Hassanali, 2009).

2.17 The role of the private sector

Private sector housing is defined as any production which is not connected at all with the actions of the state, neither directly constructed by the state nor financially sponsored by the state, where production is not expected to have a social element.
Mitullah (2003) have argued that three factors are important in influencing the level of new house building. These are direct capital investment by the state for public housing, state support for production and consumption and changes in the profitability of house builders in the private sector. The private sector can play an important role in housing provision, provided that the state offers sufficient and appropriate incentives to the sector (Mitullah, 2003). In Kenya, the private sector, both formal and informal, remains the largest producer of

housing units in the country. Initiatives by the private sector can be both large-scale and deep in impact, contrary to the government initiatives which may be large-scale but usually limited in impact (Otiso, 2003).

The clear motivation that underlies the private sector is profit (or potential profitability) with profit-maximizing options being, in the context of housing, producing and selling more of the product; reducing the cost of production through lower raw material and wage costs (cost per unit or quantity) and finally, increasing the price of the product or service (Hancock, 1998). The private sector is capable of providing living needs to large segments of the urban community if they operate within a well-conceived competitive environment where there is a possibility of charging consumers and making a profit, absence of daunting obstacles such as technology and scale of investment and the presence of competent governments with the capacity to enforce standards, contract fulfillment and service provision (Otiso, 2003). Ball(1996)suggests that the trigger of development activity is an analysis of market opportunities by developers who see demand for new housing, anticipate adequate return on investment, gear their resources towards purchase of land and housing production and then sell these housing units with a view to maximizing profits. Profitability in housing is advocated to be based on three variables: House prices, land prices and building costs, where:

Profit = House Prices – {Land Prices + Building Costs} (Golland, 1996)

Macoloo (1994) defines the key components of housing to be land, finance, building materials and construction technologies, these relating to the costs in the profit model above. In a survey of developers, Thalmann (2006) however purports that few market developers actively monitor the market for business and profit opportunities but instead respond to market triggers, such as availability of land. As such, the supply of housing may not respond only to market signals and incentives.

2.18 Conceptual framework

Independent Variables/Factor groups

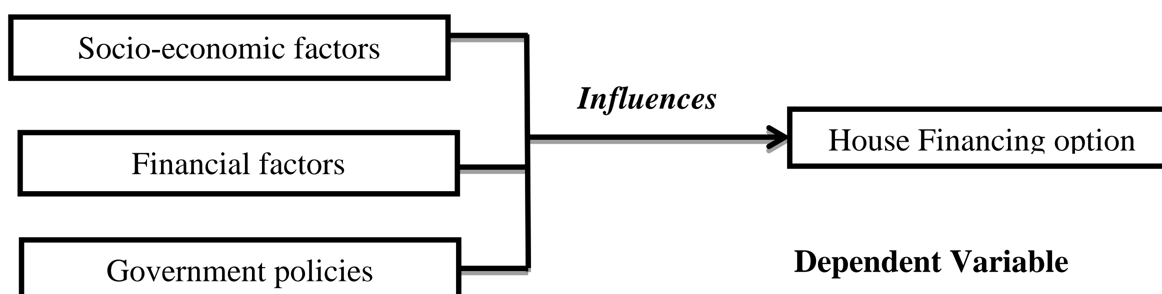

Figure 2.2: Conceptual framework:

Source, Researcher`s own creation (2015).

2.19 Conclusion

Mortgage companies and banks that offer mortgage loans, hold diversified portfolios of mortgage loans and therefore spreading risks in a manner that would be impossible if individuals were making mortgage loans directly. Since mortgage companies are large in size and number they gain in economies of scale. They also have more expertise in analyzing credit, setting up loans, and making collections than individuals; thus reducing costs of processing loans and subsequently increasing the availability of real estate loans. Mortgage financing requires borrowers to put in some savings to finance part of the cost of property by making a down payment. However, this as revealed through the literature is a major hindrance to the low and medium income groups in accessing housing finance. Hence a need for an-appropriate funding option for this group.

Furthermore, the criteria employed by most housing finance institutions relentlessly restrict the access of low-income groups to funds for housing. To access mortgages, borrowers are required to have some sort of collateral for the loan, real estate has been the most popular security recognized by lending institutions, a condition that acts as a major handicap to the poor, and to women as they have the legal right to get titled land in their name in African countries in particular.

CHAPTER THREE

RESEARCH DESIGN AND METHODOLOGY

3.1 Introduction

Chapter Two presented an in-depth discussion on delivery of housing finance to the low and middle income groups in the literature review. Of particular interest, was to identify a set of factors that influence choice of financing option and present literature Gap. This chapter describes the methodology that has been used to collect the data and to analyze them, to provide assurance that appropriate research procedures were followed. The chapter is organized around five major topics, namely: research design, target population, data collection, questionnaire design and data analysis.

3.2 Research design

According to Bryman (2012), a research design is a plan that provides a framework for the collection and analysis of data. Considering the objectives in the current study, a survey design was deemed suitable to answer the research questions and it consisted of eight phases; the first one is the proposal for identifying and defining the problems and establishment of the objectives of the study and development of research plan. The second phase of the research includes literature review. Literatures on funding options and the factors influencing the choice of a financing option have been reviewed. Phase Three consisted of a questionnaire design, through distributing the questionnaire to a sample of respondents from financial institution’s operating in Nairobi-Kenya. A pilot study was conducted at this stage, the pilot study was to test and prove that the questionnaire questions are clear to be answered in a way that help to achieve the target of the study. The fourth phase of the research involved questionnaire distribution.

The fifty phase of the research focused on data analysis and discussion. Statistical Package for the Social Sciences, (SPSS) was used to perform the required analysis. The sixty phase of the research included Analyzing documents from financial institutions. The seventy phase involved interviews with selected managers from lending institutions. The aim of the

interviews was to have an in-depth discussion and capture the experts views on the proposed model. The last phase of the research involved the conclusions and recommendations.

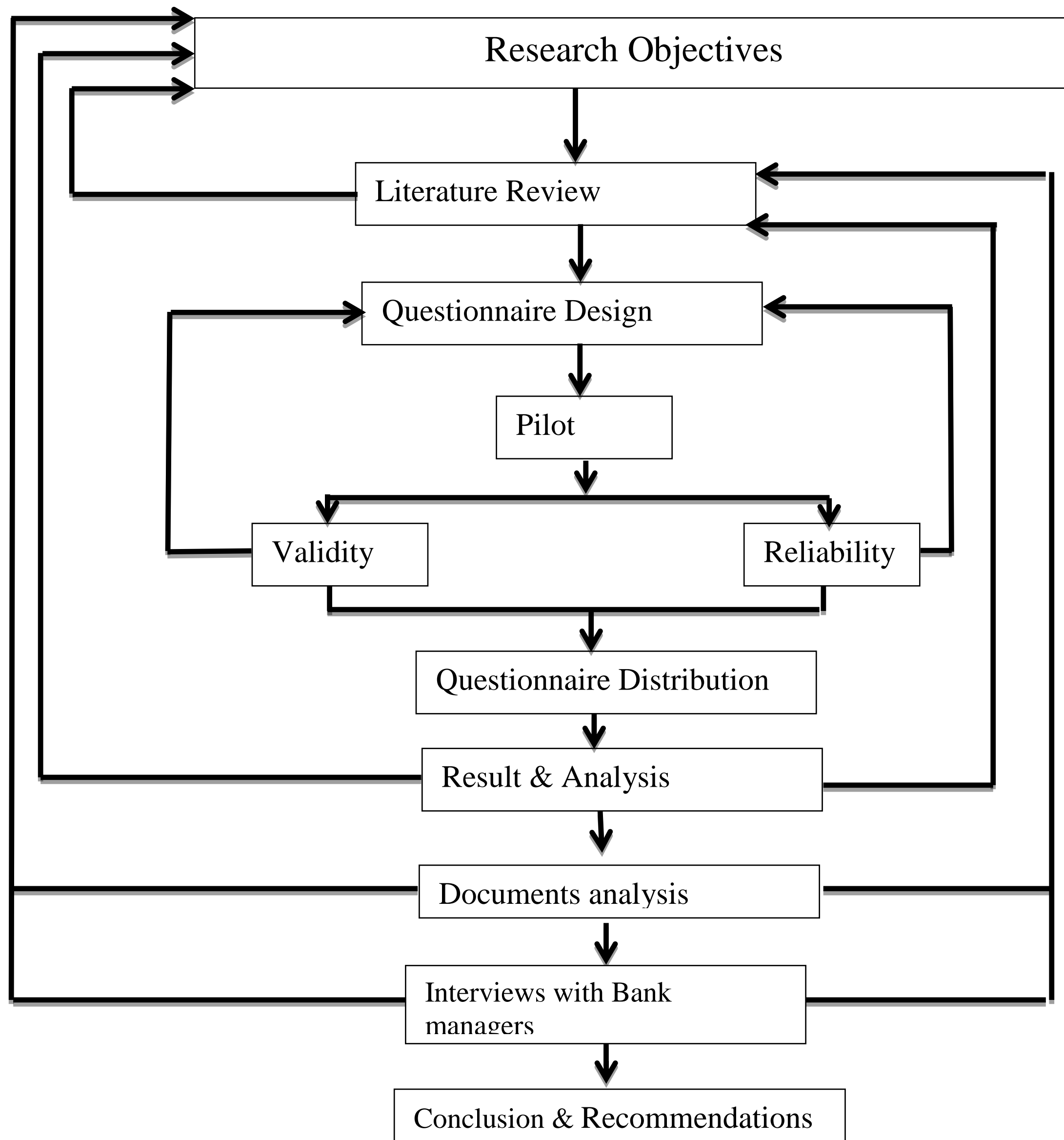

Figure 3.1: Summary of methodology used in this research.

Own compilation, 2015

3.3 Research strategy

This research adopted both the qualitative and quantitative research strategies. Bryman (2012) advises that the two research strategies can be combined to complement each other in covering aspects of the investigation which would not be adequately covered by either of the strategies when used in isolation. Similar sentiments have been echoed by Creswell (2007).In this study,

one of the issues that has been brought out is the description of the factors that influence the choice of house financing option as described by the respondents in financial lending institutions. On the other hand, relative importance index (RII) which is statistical in nature has been used to establish the magnitude of the mentioned factors. Therefore, this study utilizes both word and quantification hence reason for combined qualitative and quantitative strategies.

Further, this research study uses content analysis which is qualitative in nature to analyze various documents from financial lending institutions. This strategy relies on qualitatively examining the content of some qualitative material in order to build or support an argument as observed by Bryman (2008) who further explained that qualitative content analysis involves identifying important aspects of the content and presenting them clearly and effectiely in support of some urgument that will contribute to the field of study. This startegy was preffered since the aim of the research was to gather information from documented sources on funding instituions in Kenya which posses valuable information requiredfor this research.

3.4 Population and Sample

3.4.1 Target Population

A population is the total of all the individuals who have certain characteristics and are of interest to a researcher (Polit & Hungler, 1999). A target population includes all cases about which the researcher would like to make generalizations while the accessible population comprises all the cases that conform to the designated criteria and are accessible to the researcher as a pool of subjects for a study.

The target population is made up of housing finance institutions, banks and private lenders. The accessible population to the research includes mortgage institutions, commercial banks and SACCOs that were chosen randomly.

3.4.2 Sample and Sampling Techniques

Considering the accessible population and the scope of the study, the study employed random and non-random methods of sampling. Purposeful sampling method was employed in the selection of interview participants from financial institutions. This approach resonates well with Bryman (2012).

Selective sampling entails deliberately choosing a population with certain characteristics. The research is bias to institutions say like banks that had branches in various parts of the country providing a wider database on the lending and demand pattern of funds. Therefore, 7 mortgage companies (Housing Finance Company of Kenya &The Mortgage Company), 7 SACCOs (Chuna Sacco, Waumini Sacco & Mwalimu Sacco) 4 NBFIs (Retirement Benefits Authority & Old Mutual) and 33 commercial banks were selected. Commercial banks are popular as mortgage providers hence the large sample.

3.4.3 Sample size determination.

The rule of thumb is to obtain as big a sample as possible. However, resources and time are major constraints in deciding on the sample size to be used. Mugenda and Mugenda (1999) provided the following formula for determination of the sample size;

$$n_f = \frac{n}{1 + \frac{n}{N}}$$

Where:

N – total number of population;

nf– sample size from finite population;

n– sample size from infinite population = **S^2/V^2**; where **S2** is the variance of the population elements and **V** is a standard error of sampling population (Usually S = 0.5 and V = 0.1 for 90% confidence interval).

The target population, ***N***in this study was organizations registered for mortgage lending in Nairobi as of 31st December 2012, commercial banks, MFIs and Sacco's. There were 46 registered mortgage providers licensed under the Banking Act of Kenya and five active MFIs offering housing finance to middle and low income groups. Therefore, the total population for the study consisted of 51No. Financing institution's.

The target population ***N*** was 51 financial institutions. However Mugenda and Mugenda (1999) recommended that a representative sample needs to be a minimum of 30 items.

Therefore, taking that into consideration and also to carter for the would-be nonresponsive respondents, this study sampled the entire target population 38financial institutions.

Table 3.1 List of Commercial Banks Selected

Bank Name	Website
Cooperative Bank	www.co-opbank.co.ke
Family Bank Ltd	www.familybank.co.ke
Equity Bank Ltd	www.equitybank.co.ke
Kenya Commercial Bank Ltd	www.kcbbank.co.ke
Consolidated Bank	www.consolidated-bank.com
National Bank Of Kenya Ltd	www.nationalbank.co.ke
Standard Chartered Ltd	www.sc.com
CFC Stanbic	www.cfcstanbicbank.com
First Community Bank	www.firstcommunitybank.com
K-Rep Bank Ltd	www.k-repbank.com
NIC Bank	www.nic-bank.com
Habib Bank Ltd	www.habibbank.com
Prime Bank Ltd	www.primebank.co.ke
Guardian Commercial Bank	www.guardian-bank.com
Development Bank Of Kenya Ltd	www.devbank.com
Eco Bank Ltd	www.ecobank.com
Citibank Ltd	www.citigroup.com
Barclays Bank Of Kenya Ltd	www.barclays.co.ke
Diamond Trust Bank Ltd	www.dtbafrica.com
Chase Bank Ltd	www.chasebankkenya.co.ke

3.3.4 Sampling frame.

Table 3.2 Sampling Frame

Institution	Sample size	%
Commercial Banks	33	64.7%
Mico-financial Institutions	3	5.8%
SACCOs	7	13.7%
Sharia Bank	1	1.9%
Mortgage Companies	7	13.7%
Total	**51**	100%

Source; Field survey findings, 2015

3.5 Sources of data

Data was sourced from published records by Central bank, reports on financial institutions performance and Mortgage lending journals. Further data was sourced from textbook and construction funding publications and internet.

3.5.1 Sources of data

Secondary data

The study relied on secondary data which was collected through literature review sourced from textbooks, publications, reports and internet research studies.

Table 3.3: Nature and sources of data

DATA SOURCE	TYPE	TECHNIQUES USED	ASPECTS ASSESSED
Secondary	Review of literature	Internet search Scholarly articles Government journals. Books	Information on • Overview of housing finance • Development of mortgage finance in Kenya. • The theoretical concept of finance. • State of mortgage financing in Kenya. • Factors influencing mortgage financing and performance • Demand and supply of loanable funds • Housing finance system in Kenya • Role of government and policy
Primary	Field research	Questionnaires	Information on ❖ Factors influencing choice of financing option. ❖ Evaluation of various financing options.
	Field research	Semi-structured Interviews	Information on ❖ Experts views on self-help financing model

Source.Own compilation, 2014.

3.6 Data collection

Literature suggests that a variety of data collection techniques are available (Mack *et al*., 2005; Saunders *et al*., 2007; Williams, 2007). Depending on the type of data collected, either numeric or textual, they are classified as either qualitative or quantitative data collection tools. The following sub-sections describe the data collection techniques used in this study.

3.6.1 Questionnaire

Saunders et al (2007) suggest that a questionnaire is best suited to a situation where most of the questions are standardized and the researcher is confident that the questions will be interpreted in the same way by all respondents. Further they state, the questionnaire is the best tool to be used in descriptive research where the researcher has undertaken some literature review and has understood the subject of research prior to data collection and extending further to draw conclusions from the data collected. Bryman (2012) is of similar opinion. On that note, within this current study the review of literature provided an understanding of the subject of the research problem. Given the context where a questionnaire is used, the research questions to be answered and the nature of data needed, the current study employed a questionnaire survey to answer the research questions. The following sub-sections provide explanations on questionnaire development, administration and strategies used to improve response rate.

3.6.1.1 Questionnaire development

The questionnaire for this research study was designed by considering both respondents and the research questions. In relation to research questions, they were prepared in line with the data needed to answer the research questions and the required analysis techniques. In preparing questions attention was paid to the literature review and previous similar studies.

The structure of the questionnaire was divided into six sections, namely: the general information section for the financial institution, section relating to factors that influence choice of financing option, a section concerning evaluation of various financing options. A section on the challenges facing financing institutions in delivery of housing finance to low and middle income groups. The final section relates to self-help model which this study proposes. Closed-questionnaire Akintoye and Main (2007). Some open-ended questions were included at the

end to gather respondent`s insights with regards the current house financing options in Kenya and how it can be improved.

3.6.1.2 Questionnaire administration

According to Saunders et al (2007), questionnaires are classified into several types based on the way they are administered. This study used a self-administered deliver and collect questionnaire. The decision to use this type of approach was made after considering the practical aspects of administering the survey and the importance of reaching targeted respondents.

3.6.2 Interviews

The purpose of interviews in this study was to triangulate the research findings obtained through questionnaire. As Wass and Well (1994) suggested, it is not uncommon to use interviews, presumably semi-structured or in-depth to triangulate questionnaire findings. In addition, (Mack *et al*., 2005) interviews are used to collect in-depth information about a given phenomenon, a view shared by Saunders *et al*.,(2007). On that note, this study employed semi-structured interviews conducted using financial experts to triangulate the findings of the questionnaire survey.

3.7 Pilot Study

According to Bryman (2012) it is desirable to conduct a pilot study before administering the research instrument in order to ensure that the survey questions operate well and that the research instrument as a whole functions well. It also provides the researcher with some experience of using the instrument and this gives the researcher confidence in starting the actual research. In the current study, the researcher sought to pre-test the research instrument in a pilot study of five (6) respondents. The final questionnaire was refined taking into account the outcomes of the pilot study.

3.8 Statistical Validity of the questionnaire

The validity of the questionnaire used in the current study has been tested to establish its degree to measure what is supposed to be measuring. According to Amaratunga *et al* (2002), a measurement instrument is valid if it measures what is intended to measure. Further, the validity of research findings depends on two issues: the accuracy of the research instrument and whether the instrument measures what it seeks to measure.

To insure the validity of the questionnaire, two statistical tests were applied. The first test was Criterion-related validity test (Spearman test) which measured the correlation coefficient between each paragraph in one field and the whole field. The second test was structure validity test (Spearman test) that was used to test validity of the whole questionnaire structure. It measured the correlation coefficient between one filed and all the fields of the questionnaire that have the same level of similar scale.

3.8.1 Criterion-related validity test

To test criterion-related validity test, the correlation coefficient for each item of the group factors and the total of the field was achieved. The p-values (Sig.) were less than 0.01 for all results, so the correlation coefficients of each field was significant at $\alpha = 0.01$, so it can be said that the paragraphs of each field were consistent and valid to measure what it was set for.

3.8.2 Structure validity test

Structure validity test was used to assess the fields structure validity by calculating the correlation coefficients of each field of the questionnaire and the whole of questionnaire. The p-values (Sig.) are less than 0.01, so the correlation coefficients of all the fields are significant at $\alpha = 0.01$, so it can be said that the fields are valid to measured what they were set to achieve.

3.9 Reliability Statistics

In the current study, test of reliability of the questionnaire was achieved through a pilot study. Polit& Hunger, (1985) argue that the reliability of an instrument is the degree of consistency which measures the attribute; it is supposed to be measuring. For the fields, values of

Chronbach's Alpha were in the range from 0.700 and 0.885. This range is considered high; the result ensured the reliability of each field of the questionnaire. Chronbach's Alpha equals 0.765 for the entire questionnaire which indicated an excellent reliability of the entire questionnaire. Thereby, it can be said that it is proved that the questionnaire is valid, reliable, and ready for distribution for the population sample.

3.10 Data analysis and presentation.

In the current study, Quantitative data was analyzed using descriptive and inferential statistics. Also Tan (2002) defines descriptive statistics as a measure used to describe or summarize data, while inferential statistics are used to make inferences about a population using representative sample drawn from it. Qualitative data was analyzed using thematic analysis and content analysis.

3.11 Data Presentation

After analyzing data, scientific tabulation has been done through the use of charts and tables where found necessary.

3.12 Ethical considerations

Saunders et al (2007) defines ethics in research as the behavior of a researcher towards research participants or people affected by the research. In addition, Silverman (2010) believes ethics should encompass guidelines or principles relating to good professional practice.

3.12.1 Privacy and Confidentiality

In carrying out the questionnaire survey, names of the respondents were omitted to enhance their privacy. The information obtained from interviews was kept in strict confidentiality. Personal information about interviewees is not revealed in the final thesis.

3.13 Conclusion

This third chapter of the current study has provided an explanation on the methodology used. The comprehensive design of the research and the selection of elements have been

illustrated. Details regarding the collection and data analysis method used have also been presented. The next chapter gives the results and discussion from the analysis of data conducted in this study.

CHAPTER FOUR

RESULTSANALYSIS AND DISCUSSIONS

4.1 Introduction

This chapter is a presentation and analysis of the data that were collected to aid in the answering of research questions. The study was guided by the following research questions: This chapter is presented into four parts part A, Data analysis discussions from the questionnaire. Part B.is the analysis of the financial document's. Part C.is the interviews with financial experts and Part D is the model development.

4.2 PART A: Data Analysis and discussion from Questionnaire

4.2.1 Response Rate

A total of 51 questionnaires were administered but only 31 were collected and analyzed. Some of the questionnaires were left with the respondents to fill but were never returned in another case the respondents were unavailable during collection of the questionnaires while others had misplaced them. The response rate was 60.7%. The following data analysis and presentation is based on the collected questionnaires, oral interviews and secondary data collected during the research period.

Table 4.1: Response Rate

Financial Institution	Total questionnaire distributed	Questionnaires returned	% returns
Commercial Banks	33	21	67.7%
Micro-financial Institutions	3	2	66.6%
SACCOs	7	4	57.1%
Sharia Bank	1	1	100%
Mortgage companies	7	3	42.8%
Total	**51**	31	**60.7%**

Source: Field Survey; 2015

Type of loans provided by respondents

Table 4.2: Tabulation of type of loans provided by the respondents

Type of loan provided	Frequency	% returns
Mortgage loans	24	47.1%
Housing micro-finance loans	27	52.9%
Total	**51**	**100.0%**

Source: Field Survey; 2015

The respondents were asked to advise on the type of housing loans they provide which also gives an indication of the most preferred loans by their customers.47.1% of the respondents indicated they offer mortgage loans while a bulk of the respondent 52.9% suggested housing micro-finance loans. It's worth noting therefore that majority of the low and middle income groups prefer micro-finance loans from SACCOs and micro-finance institutions as opposed to mortgage loans from commercial banks.

Table 4.3: Tabulation of portion lending portfolio for low and middle income groups.

Lending portfolio to low and middle income groups		Frequency	%
1	Below 25%	31	60.7%
2	25-50%	15	29.4%
3	50-75%	5	9.8%
4	Above 75%	0	0.%

Source: Field Survey; 2015

It emerged from table 4.3 above that majority of the respondents (60.7%) dedicate below 25% of their lending portfolio to financing of construction activities to low and middle income groups. This was followed by 29.4% of the respondents who offer between 25-50% of their lending portfolio to similar group.

Factors influencing choice of financing option.

A section covering various factors that the research believes to affect households in advancing for loans or mortgages was included in the questionnaire and was designed to investigate how high or low the respondent's clients regard each factor in choosing the type of finance, financial institution or demand of housing finance.

Table 4.4: Tabulation of ranking of factors influencing the choice of financing option

Factors influencing choice of financing option		RII	Rank
1	Information Availability	0.392	15
2	Current income	0.813	3
3	Equity	0.412	14
4	Amount to be borrowed	0.479	10
5	Interest rates	0.904	1
	Collateral requirements	0.839	2
6	Penalties for arrears and default	0.789	5
7	Mortgage interest deductions	0.413	13
8	Amortization period	0.523	12
9	Monetary policy	0.619	9
10	Government loans	0.477	11
11	Cost of construction	0.804	3
12	Inflation	0.748	6
13	Loan qualification procedure	0.794	4
14	Availability of funds	0.743	7
15	Marital status of the borrower	0.639	8

Source: Field Survey; 2015

The results shown in table 4.4, reveal that majority of the respondents consider interest rates as a major factor influencing the choice of financing option. This was ranked at position one with an RII equal to 0.904.Followed by collateral requirements RII=0.839,cost of construction RII=0.804,Loan qualification procedure RII=0.794, Penalties for arrears and default RII=0.789.Availability of financial information was ranked last at position 15 with RII=0.392.From the above factors, it can be said that interest rates and collateral requirements are the main deciding factors when choosing housing finance by the low and middle income groups. Perhaps the most appropriate financing option could be the one that puts little requirement or none at all on these two factors.

Evaluation of various financing options.

A question was put in the questionnaire requiring the respondents to state various financing options for low and middle income groups that their customers prefer.

Table 4.5: Tabulation of ranking of financing options by customers preference as reported by the respondents

Financing options		Frequency	%	Rank
1	Commercial bank	11	21.5%	2
2	Non-Bank financial institution	9	17.6%	3
3	Mortgage companies	7	13.7%	4
4	SACCOs	17	33.3%	1
5	Sharia Bank	1	1.9%	6
6	Personal savings	3	5.8%	5
7	Self-help groups	3	5.8%	5
	Total			

Source: Field Survey; 2015

The popularity of SACCOs among respondents' customers is immense (33.3%). This could be tied to the fact that their costs are not expensive, the interest rates range between 10%-12% and the qualification procedures are not as stringent as those of commercial banks. Commercial banks charge interest rates up to 24%. Contrary to the expectations, informal money markets are not as popular as avenues for housing finance. Some of the reasons behind the slow growth rate of informal sources of housing finance include; lack of funds, lack of government support, low loan recovery and replicability rate, inappropriate legal regulations

and inappropriate organizational structures. 21.5% of the respondents' customers preferred commercial banks as appropriate financing options.

Table 4.6: Tabulation of ranking of source of finance for the lending institutions

Source of Capital		Frequency	%	Rank
1	Savings deposits from individuals	25	49.1%	1
2	Savings deposits by institutional investors (such as insurance firms, pension fund)	11	21.5%	2
3	Bond issuance	3	5.8%	4
4	Refinancing of mortgages by a refinancing company/liquidity facility	9	17.6%	3
5	Donor grants	2	3.9%	5
6	Donor loans	1	1.9%	6

Source: Field Survey; 2015

The major sources of capital for most lending institutions include saving deposits from individuals (49.1%) and institutional investors (21.5%) this were ranked at position one and two respectively. The research identified donor loans and grants forms as the least source of funding for most financial institutions, with 3.9% and 1.9% respectively Shown in Table 4.6 are the different sources of funding for loanable funs by lending institutions.

Challenges facing financial institutions in delivery of housing finance to low and middle income groups.

The respondents were requested to express their opinion on the selected various challenges that they may be facing in the delivery of housing finance to low and middle income groups.

Table 4.7: Tabulation and rank of challenges facing financial institutions in delivery of housing finance to low and middle income group's.

	Challenge	Frequency	%	Rank
1	Inability to repay the loan by customers	7	13.7%	3
2	Lack of financial documents/lack of pay slip from customers	6	11.7%	4
3	High interest and fees	9	17.6%	2
4	Difficult and lengthy procedures	5	9.8%	5
5	Competition from other sources of finance	2	3.9%	7
6	Lack of bank relations(no account)	3	5.8%	6
7	Lack of collateral by customers	18	35.3%	1
8	Inadequate capital sources to support housing finance	1	1.9%	8

Source: Field Survey; 2015

It emerged from table 4.7 above that availability of collateral was ranked as the most difficult step (35.3%) that lenders face when delivering housing finance to low and middle income groups. Some forms of collateral such as title deeds take really a long duration before they are processed and issued to their rightful holders. The qualification procedures employed by lending institutions that render a household eligible for a loan was also an obstacle as it was too lengthy and technical. Other difficulties were ranked as shown in Table 4.7.

Table 4.8: Tabulation of default rate on housing loan repayment by the low and middle income groups.

Default rate		Frequency	%
1	Less than 10%	20	39.2%
2	10-20%	16	31.3%
3	20-30%	8	15.6%
4	30-40%	4	7.8%
5	40-50%	2	3.9%
6	Above 50%	1	1.9%

Source: Field Survey; 2015

It emerged from table 4.8, that majority of lending institutions (39.2%) experienced default on loan by a rate less than 10%.However,on average 26.3% experience default of between 20-50% which is still high pointing to difficult by the low and middle income groups to afford the house loans. This can be attributed to the un-certainty of liquidity for majority of the households.

Opinion on the Self-Help Housing Model.

Self-help housing model is a process-based strategy of acquiring shelter over a period of time by individual households whose socio-economic conditions determine the length of time, the process and nature of building. This research study sought to find out from the lending institutions what their opinion was on the proposed model.

As revealed through the survey results, 59% of the respondents seem to be aware of this form of financing compared to 41% who re turned a "No" response on the same question.

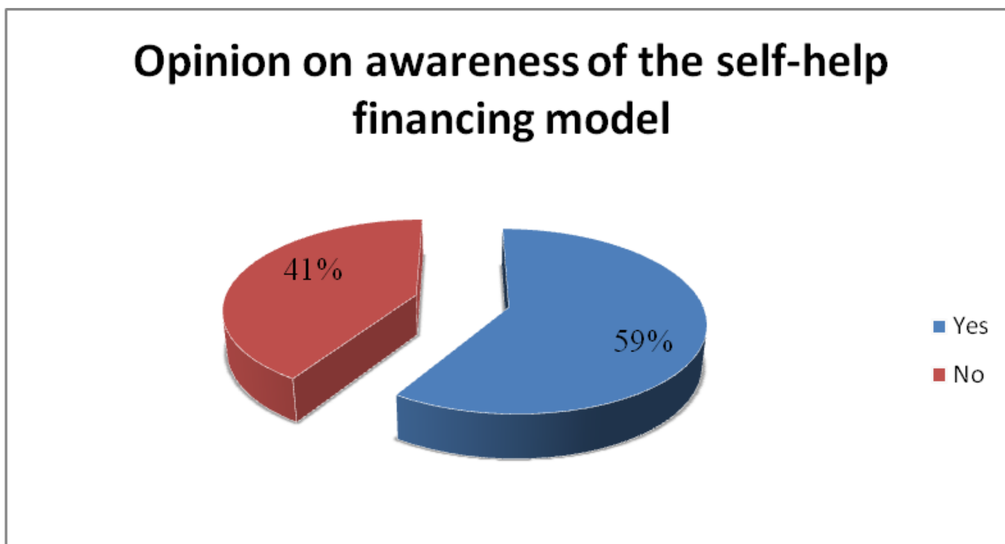

Figure 4.1: Opinion on level of awareness of the self-help financing model

Source: Field Survey; 2015

Self-help financing may be popular due to financial factors investigated in this study which were cited as key factors influencing the choice of house financing. These included; inflation, the availability of funds, interest rates, technology, taxes, costs of building materials, qualification procedures, mortgage repayment schedule

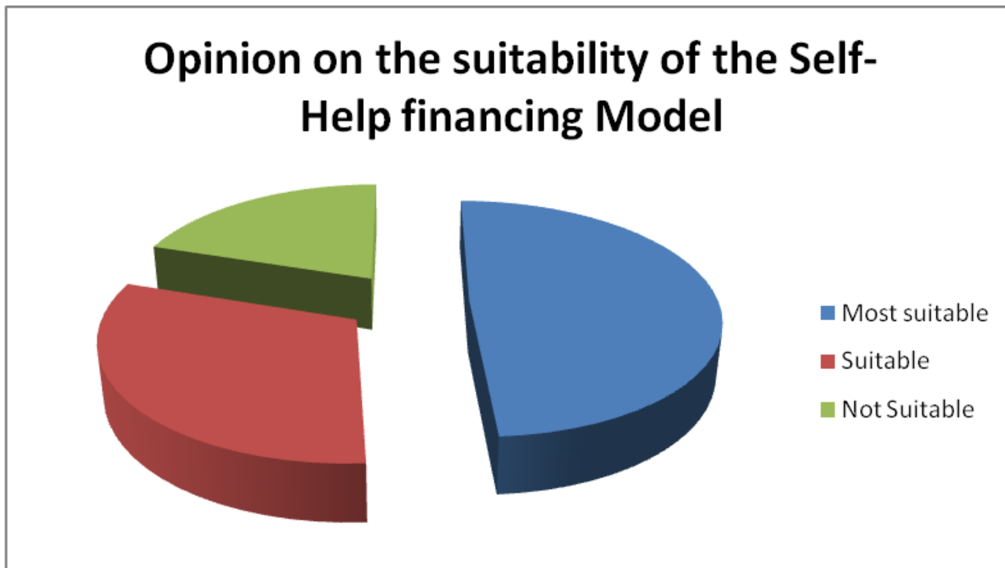

Figure 4.2: Opinion on level of awareness of the self-help financing model

Source: Field Survey; 2015

4.3 PART B: Data Analysis and discussion from Documents

In this section, the study sought to extend the findings obtained from the questionnaire by analyzing financial documents from institutions that were involved in the questionnaire survey. The main aim of analyzing the documents is to establish the financing schemes being used by various financial institutions in Kenya and particularly to deliver housing finance to low and middle income groups in Kenya. This section further seeks to establish empirically the rate of uptake of the available financing strategies. Content analysis is used here to analyze the documents.

4.3.1 Documents Analysis from National Housing Cooperation (NHC)

4.3.1.1 Background information

National housing cooperation was incorporated in 18th November 1965,then under the name Housing Finance Company of Kenya with a main objective of carrying out the government`s policy of promoting thrift and home ownership. In 2007,Housing Finance launched a 5 year strategy which expanded their playing space in the mortgage financing market making them an end provider of the needs of the market as far as the property is concerned.

4.3.1.2 NHC market Share (Comparative analysis

From the review of literature,it was established that Housing finance in kenya is provided principally by following four sectors;

1. National housing corporation.
2. Housing finance institutions (HIFs).
3. Commercial banks.
4. Micro finance institutions.

This study reviewed the market share of National Housing Coporation (NHC). The aim being to establish its capacity in delivery of housing fiannce to the low and middle income groups in Kenya.After review of its records (NHC Report, 2014),the findings establised that 40% of the homes are constructed through finance from housing finance institutions followed by 30% from commercial banks, 20% from micro finance institutions and the lowest being National housing corporation at 10%, as shown in Figure 4.2.

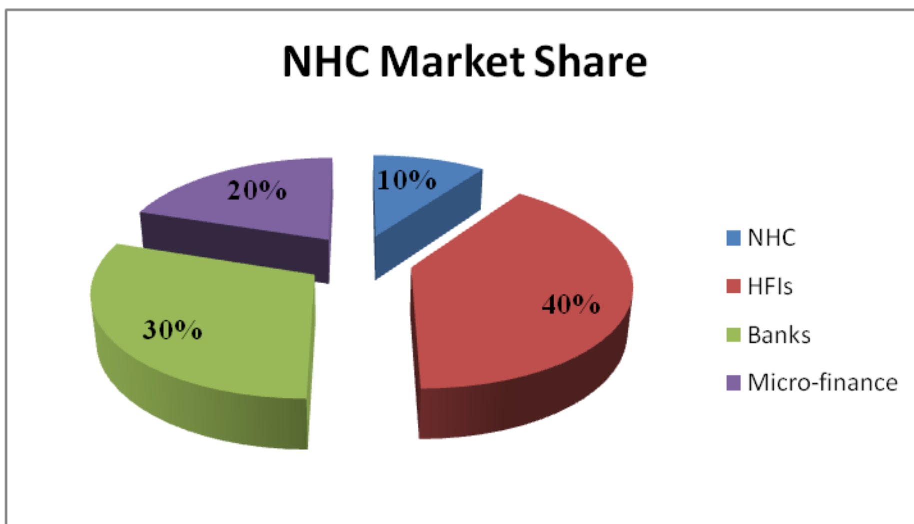

Figure 4.3: NHC-Market Share in Kenya

Source: NHC 2012 report

4.3.1.3 Structure of NHC

Given that lowest number of home constructions was done through NHC, the study sort to establish the structure of NHC. This was done with an aim of establishing if there was beurocray in the flow of funds within the organization. Figure 4.3 shows the structure and the flow of funds in the corporation.

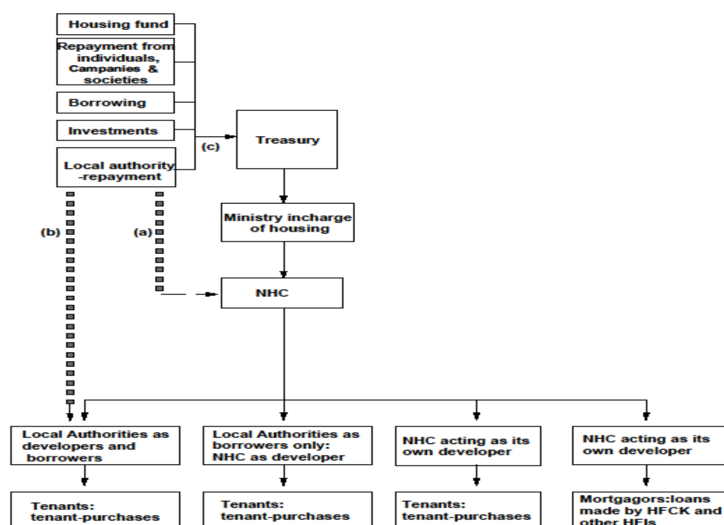

Figure 4.4 Funding strategies for housing projects in Kenya. **Source NHC 2014report**

Based on this flowchart, it's evident that there is a lot of beurocracy in terms of the flow of funds from the source to the construction phase. This means that it takes time before money is released to actual construction due to the approval structure, which translates to slow project implementation process.

4.3.1.4 Sources of funds for NHC projects /schemes

The study sought to establish sources of funds for NHC housing projects. Results revealed that financing of housing schemes and projects at NHC is carried out through Housing fund established under section 7(1) of the Housing Act, Cap 117. The sources of funds for housing as provided for under section 7(3) include the following:

Table 4.9 Sources of funds for NHC

	Sources of funds
1.	All such moneys as may from time to time be voted or appropriated by parliament for payment into the housing fund.
2.	The repayment of principle or interest made by any local authority on the account of any loan referred to.
3.	Any repayments of principle or interest made by the local authority, company, society or individual person, on account of any loan made by the Corporation under this Act.
4.	All such sums as may from time to time be borrowed by the corporation in exercise of the powers conferred by this Act.
5.	All such sums as may from time to time become due upon any investment made by the corporation in exercise of the powers conferred by this Act.

Source: NHC 2014 report

It emerged through a review of the corporation records that virtually all monies received by NHC for its operations come from the Housing fund. Further, a review of the projects schedule undertaken by NHC over the last 10 years reveals that the corporation has spent Kshs. 8.6 billion to finance various housing schemes. The funds have been raised from various sources as summarized in Figure 4.4 in which internal sources amounts to 3.5billion, contractor financing accounts for 2.26 billion with Government and external borrowing accounting for 1.4 billion.

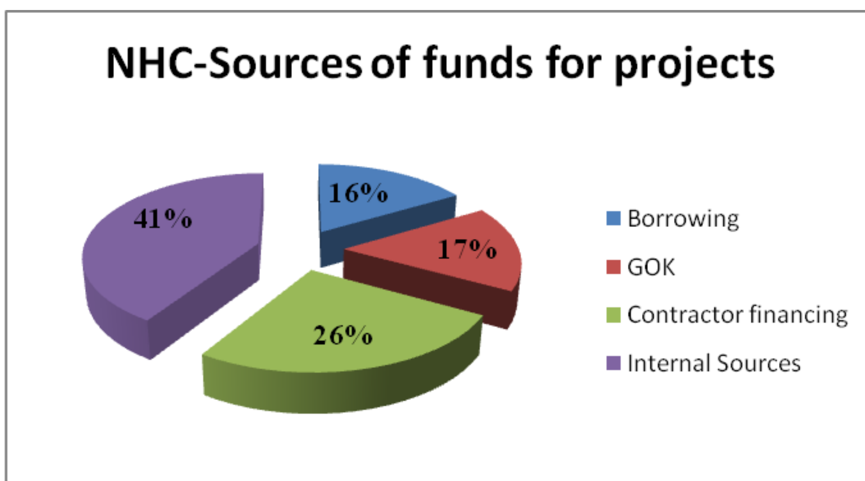

Figure 4.5: NHC-Source of funds for projects

4.3.1.5 Housing projects/schemes financed by NHC

A review of records revealed the number of housing projects that were financed by NHC between the years 2000 up to 2012 by type of scheme. From the findings the study grouped the various housing schemes as rental, tenant purchase and mortgage dwellings. Results revealed that NHC has financed over 1,762 housing units from the three categories of schemes. Figure 4.7indicates that of the 1,762 units, tenant purchase controls 35.2%, mortgage dwellings 8.2% and 3.4% for rental units.

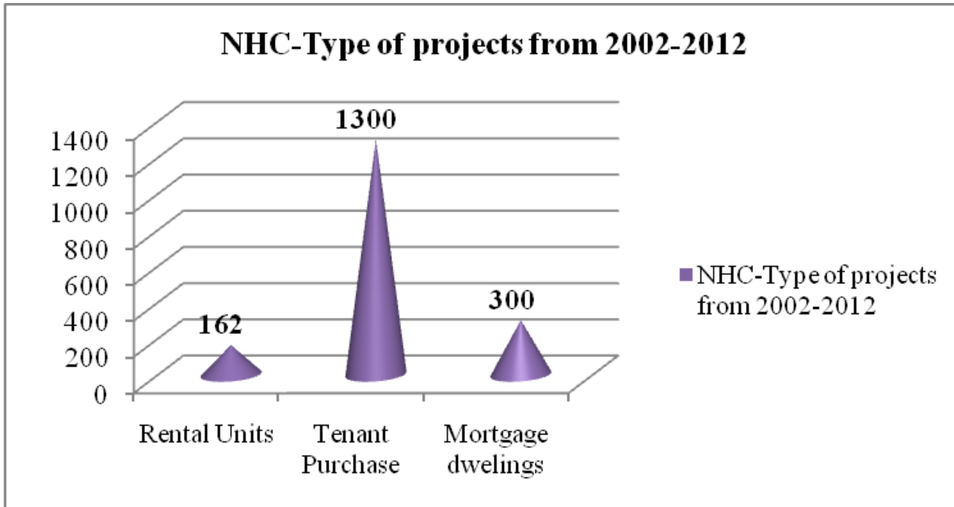

Figure 4.6: NHC-Type of projects from 2002-2012

The study also found that NHC expenditure during that duration amounted to 5,294,801,630.15 billion with 3.4% (Kshs.371,094,596.30) going to rental projects, 35.2% (Kshs.3,559,682,951.05) to tenant purchase schemes and 8.2% (Kshs.1,364,024,082.80) for dwellings for sale on mortgage terms as shown in Figure 4.8.

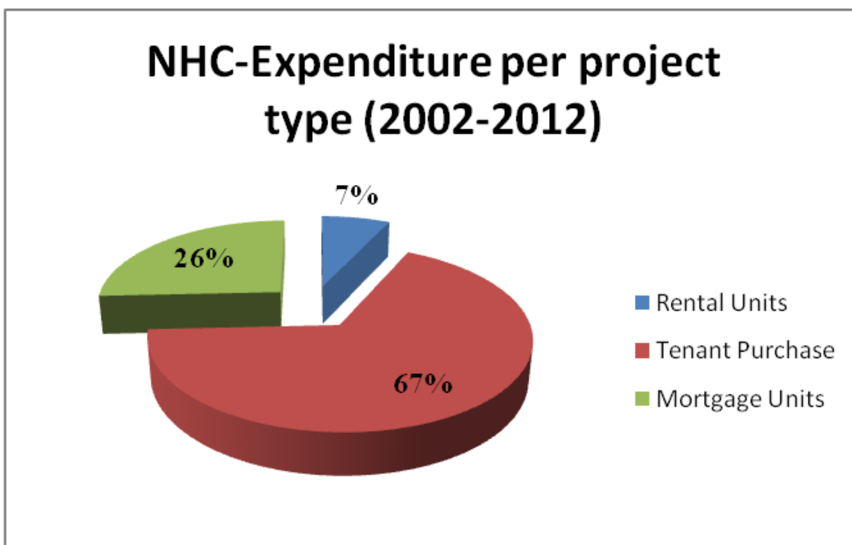

Figure 4.7: NHC-Expenditure per project type (2002-2012)

Annex 1 attached to this report shows more details of housing schemes undertaken since year 2000, types of schemes and mode/source of financing.

4.3.1.6 Challenges facing NHC in delivery of housing finance

An examination of the financial reports at the corporation indicated that the financial performance of the corporation in the past has not been good which as a result had hampered its activities in provision of affordable housing. The study sought to knowwhich efforts were being made to address the poor performance. From the findings, it was clear that there were efforts focused on the capital restructuring of NHC. The study further reveled that a joint cabinet memorandum by the minister of Roads, Public works, Housing and Minister of Finance on capital restructuring of NHC indicates the following;

1. That as at 30thJune, 2002, the total debt due to GoK was Kshs.5.32 billion comprising of arrears of Kshs. 3.3billion and principle balance not due of Kshs. 2.02billion.
2. The debt from local authorities as at 30th June, 2002 amounted to Kshs. 3.32billion comprising of arrears of Kshs. 2.2billion and principle balance.
3. The corporation had not been making profits due to the high financing costs occasioned by unfavorable capital structure and low interest margin on loans on-lent to authorities.

From the finding, the following issues were highlighted as the greatest contribution from the GoK;

1. GoK converted total debts (arrears + principle) owed to it by NHC amounting to Kshs. 5.32 billion into equity.
2. GoK injects additional funds inform of Equity/grants to NHC to the tune of Kshs. 4.8 billion. This amount would be equivalent to funds required to finance the corporations proposed programmes for the first three years after the conversion (2003/2004-2005/2006) as follows;

Table 4.10 Proposed GoK capital injection

No	Year	Amount Kshs.
1.	2003/2004	1.4 billion
2.	2004/2005	2.1 billion
3.	2005/2006	1.3 billion
	Total	**4.8 billion**

Source: Joint cabinet memorandum on NHC restructuring (2003)

Table 4.11 Total GoK Equity at NHC

No	Year	Amount Kshs.
1.	Loans converted to Equity as per the restructuring agreement	5,320,000,000
2.	Additional Equity injection	1,616,000,000
	Total	**6,936,000,000**

Source: 2007 NHC financial records

Based on these results it's clear that NHC is not adequately funded to achieve its targets in provision of affordable housing. The organization is still struggling in recover past debts from the local authorities amounting to Kshs. 3.23 billion through direct management and outright sale of properties developed using its finaances. Upto date, the corporation has received a total of Kshs. 1,616,000,000 against the proposed amount of Kshs. 4.8 billion which further limits them in bulding more housing units due to miniml finance.4

4.3.2 Housing Finance Institutions (HFIs)

4.3.2.1 Background Information

The study revealed that two institutions dominantly provide housing finance in Kenya, namely the Housing Finance Company of Kenya (HFCK), saving and Loan Kenya Ltd (S&L). CBK (2010) revealed that among these institutions they control 90% of the market in terms of both assets and deposits.

The S&L is a wholly owned subsidiary of the KCB bank group. Savings and loan Kenya limited and KCB were separate entities until their amalgamation on 1st January 2010 that made S&L a mortgage division of KCB. The summary results established that housing

finance company controls 53.4% while S&L controls 46.6%.of the market share. Figure 4.9 shows the market share of these two institutions from the year 2007 to 2009.

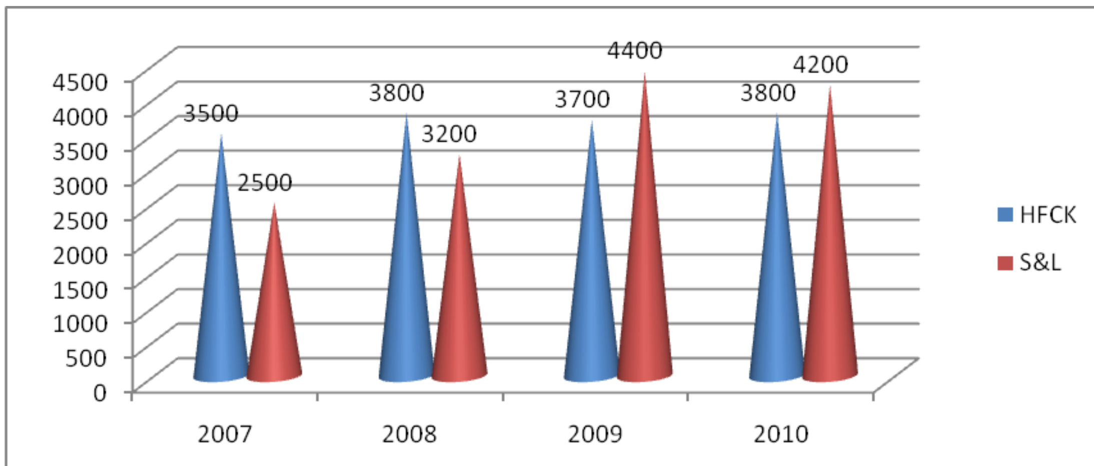

Figure 4.8 Market share of housing finance institutions in Kenya.

4.3.2.2 Challenges facing HFIs in delivery of housing finance to low and middle income groups in Kenya.

A review of the institutions` conditions for lending reveals a long procedure of loan qualification coupled with high evidential requirement and interest rates which make it difficult for the low and middle income groups to access funds.

4.4.3 Commercial banks

4.4.3.1 Classification of Commercial banks in Kenya

The study sought to establish the different classifications of commercial banks in Kenya. The reason behind this classification is due to the fact that the ability to lend is determined by the assets size especially the current assets. The study revealed that Central bank of Kenya (CBK) classifies banks based on assets size: ***large*** with assets above Kshs. 15 billion; ***medium*** with assets valued at between Kshs. 5 - 15 billion; and ***small*** with assets valued at less than Kshs. 5 billion. Nineteen (19) financial institutions were classified as large, fourteen (14) institutions were medium and twelve (12) institutions were small. Figure 4.10 shows the bank size classifications. In each category the best four institutions were picked. These institutions dominate the market share in Kenya based on Central Bank of Kenya: Banking Supervision Annual Report 2010.

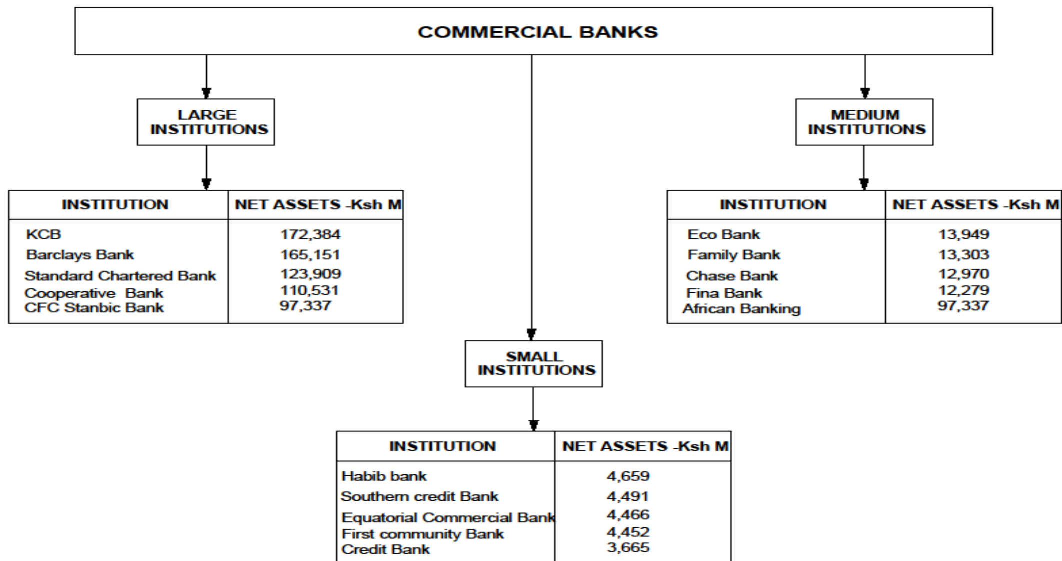

Figure 4.9 Classification of banks Source: Central bank of Kenya

4.4.3.2Distribution of mortgage loans by the three categories of Banks

The study aimed at establishing the leading mortgage provider in each category. The results revealed that the high level of net assets did not translate into high sale of mortgage loans as as shown in Appendix 3. Based on these results large banks dominate the mortgage market at 94.4% with medium and small banks having a low of 4.1% and 1.5 respectively. This high percentage in the large banks can attributed to availability of funds which allows for long term lending.

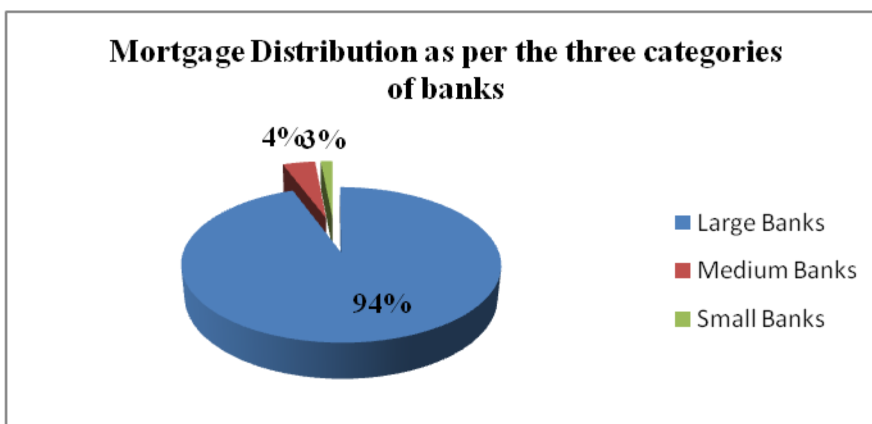

Figure 4.10: Mortgage distribution by three categories of Banks

Source: Central Bank of Kenya: Banking Supervision Annual Report 2010

4.4.3.3 Sources of funds for Commercial banks in Kenya

This was aimed at identifying the key source of funding for commercial banks in Kenya. The findings established that 57% of institutions derive their financing from public deposits, making it the biggest source of finance for Kenyan financial institution. Public debts and donor grants contribute for the 15% of the sources of finance for the financial institutions. Public grants and private debts indicate only 10 % of the institutions that took part in the study research. The Kenyan government does not offer any support financially to financial institutions as Figure 4.12 shows zero in the government loan segment since the GOK no longer advances loans to commercial bank

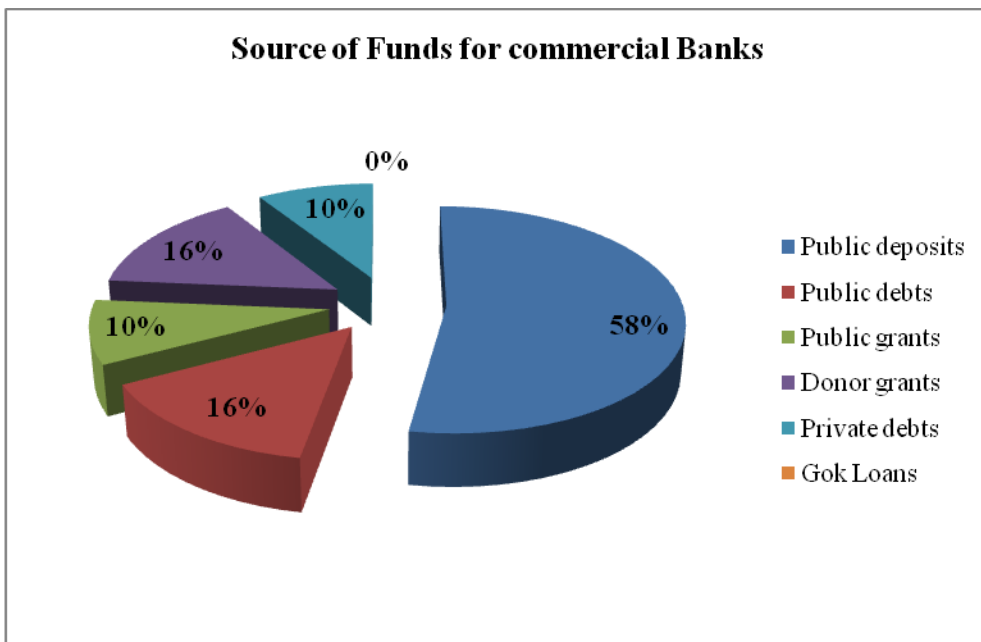

Figure 4.11: Mortgage distribution by three categories of Banks

Source: Central bank of Kenya: Banking supervision annual report 2010

4.4.3.4 Types of mortgage loans offered by Commercial banks in Kenya

A review of documents that there are eight different mortgage loans offered by commercial banks in Kenya. These are:

1. Home loan
2. Multi Development loan
3. Build-to-Sell Residential/Commercial Properties
4. Build-to-Rent-Residential/Commercial Properties
5. Property Improvements Loan
6. Schemes loans
7. Diaspora home loans
8. Investment group loans
9. Mortgage plus loans
10. Cyclical mortgage

Figure 4.13 shows how these mortgage loans are offered by the different institutions. These results revealed that all financial institutions in Kenya are offering home ownership mortgage and construction loans for build-to-Rent-Residential/Commercial Properties; however creative packages such as group scheme loans, property improvement loans are yet to be fully created in our financial institutions apart from the two leading mortgage providers such as HFCK and S&L. This shows there is a gap in provision of mortgage to the low and middle income groups who might not afford full construction loans but need loans to small refurbishments such as fixing leaks, to upgrades such as installing a toilet, to building a whole new floor, since such improvements can dramatically alter the quality of the home, yet typically require smaller loans than a mortgage and are more accessible to lower-income families.

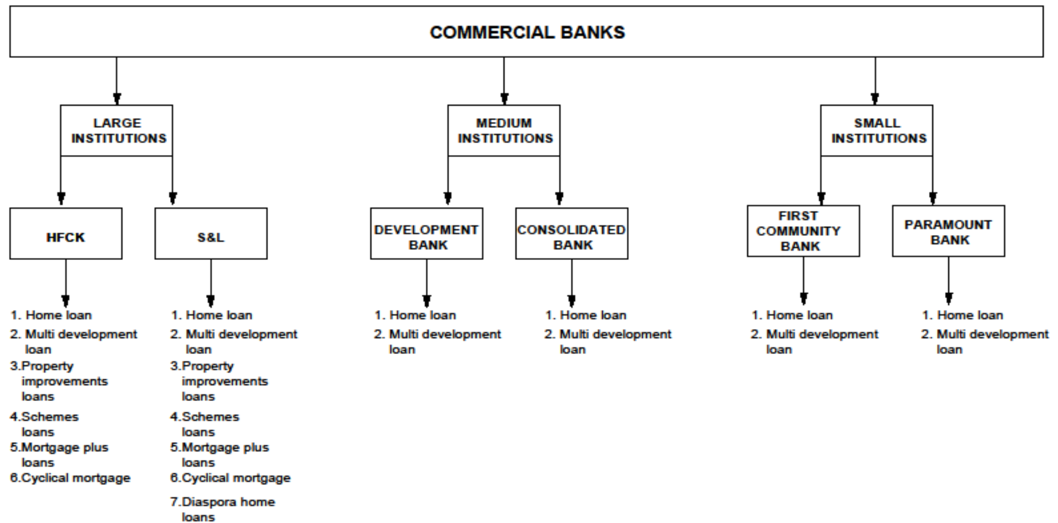

Figure 4.12 Classification of mortgage loans offered by Commercial banks in Kenya

4.4 PART C: Data Analysis and discussion from Interviews

This section presents the results of the Semi-structured interviews conducted using Financial Experts (FEs) from financial institutions. Views of FEs were sought to unearth the various existing financing models for the low and medium income earners and seek their views on the proposed financing model. Interviews were guided by the indicative questions prepared based on the research findings so far and research objectives. Thematic analysis has been used in analyzing the views of the experts.

This section starts with profile of the FEs interviewed and then goes on to present their views under each of the sub-themes aforementioned .Their views on the proposed model have also been captured.

4.4.1 Profile of Financial Experts (FEs)

The FEs interviewed were selected with due consideration to their backgrounds, field of involvement, exposure to the key subject matters of the current research objectives. In order to encourage participation, Potential interviewees were sent brief outlines of the research objectives .A consent form Appendix 1(E) and indicative questions via email at the time of invitation (See appendix).Through solicitation process,8 experts expressed their willingness to participate and share their views however,7 of these persons participated in the final interviews. Table.4.12 gives the profile of FEs interviewed.

Most FEs occupied managerial positions and were involved in mortgage lending related activities. More than 70% of FEs had more than 12 years of experience in their field while another 25% SMEs had more than 20 years. The profile information of the interviewees gives credibility to their opinion and helps to ensure data integrity and reliability

Table 4.12: Profile of participants-FEs interviews

Interviewees	Representative organization	Position/Profession	Nature of work/Field of involvement	Work Experience (Years)
FE01	Housing finance institution (HFI)	Head of Mortgage Department.	Property development business analyst, Managing projects financial risks, monitoring performance of loan-funded projects.	16 Years
FE02	Commercial Bank	Risk Analyst	Feasibility study & investment appraisals	12 Years
FE03	SACCO	Assistant Manager	An independent consultant and contractor for buildings and infrastructure projects.	23 Years
FE04	SACCO	Investment Analyst	Advise on the viability of construction investment proposals	15 Years
FE05	Housing finance institution (HFI)	Projects coordinator	On-site work supervision-Quality control, schedule control, cost control and coordinate project undertakings on behalf of the financial institution.	8 Years
FE06	Commercial Bank	Branch Manager	Overall overseer of branch banking activities	13 Years
FE07	Housing Finance institution	Associate director	Contracts management & general project management	29 Years

Source: Researcher`s field survey, 2015

4.4.2 Existing financial models in the market

A) Mortgage finance model

One of the interviewees (F01), heading mortgage department in a housing finance institution begins by introducing the most conversant model (Mortgage Finance).He argues that this involves an individual borrower identifying a house he intends to purchase the mortgage institution pays for the house but in turn the borrower pays back some agreed monthly installments for a specific period of time. His view is equally shared by a branch manager (F06) representing a commercial bank. He however advises that in this model, conditions for lending are classified as either employed or self-employed individuals .In addition, he argues that those not in a formal employment there is often a collateral requirement for borrowing. Discussion from other interviewees (FE03, FE05 & FE07) revealed that conditions of lending were common in all the financial institutions. This set condition limits low income groups in Kenya who are in the informal sector where there is no regular flow of income.

A risk Analyst (FE02) representing a leading commercial bank, observes that the main obstacle the low and medium income persons encounter in accessing the mortgage facilities through this model is often the high interest rates charged on money borrowed. He argues that many potential borrowers shy away as a result of this interest rates. Similar views were echoed by an investment analyst (FE04) interviewed in the current study. These findings seem to concur with the earlier findings through the questionnaire survey.

Armed with necessary documents, the associate director (FE07) representing a leading housing finance institution pointed out that high interest rates and lack of credit histories were the major obstacles to mortgage lending at 33% while access and ownership of land was at 30% as shown in Figure 4.14.Observations supported by an assistant manager (FE03) of a leading SACCO in Nairobi. According to him, customers would rather prefer SACCOs with low interest rates as opposed to the commercial bank.

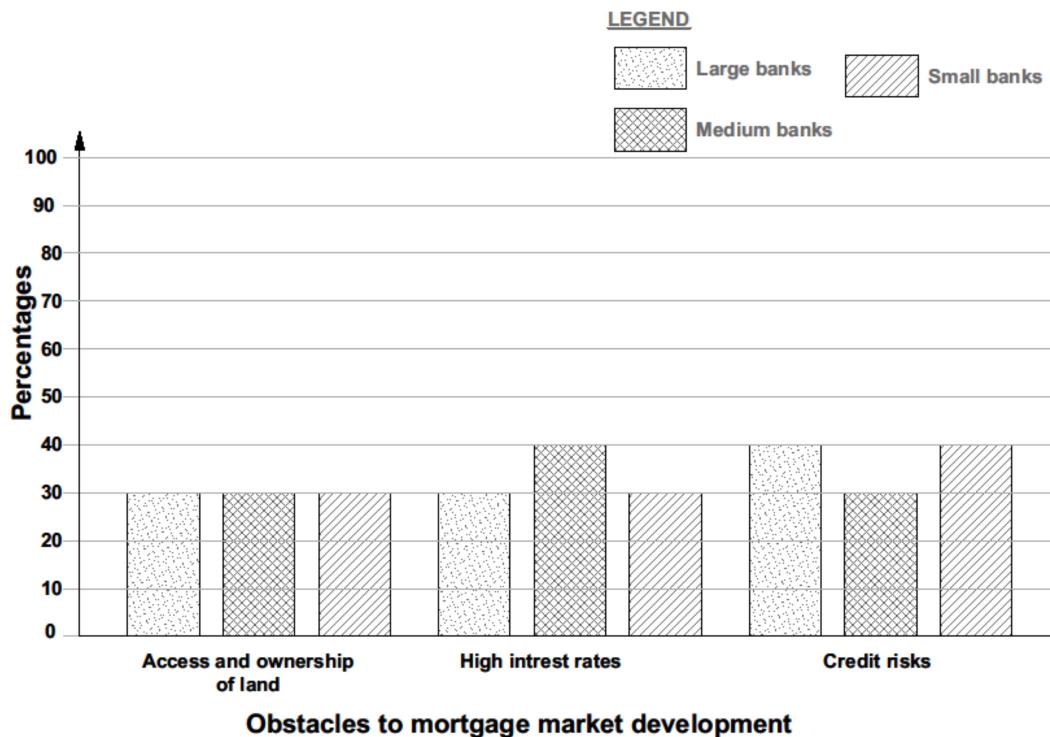

Figure 4.13 Obstacles to mortgage market development

An investment analyst (FE04) from a similar SACCO observed that most poor Kenyans want to have a home of their own however, their ability to take the first step towards achieving this dream since most of the Kenyans are in the informal sector where there is no regular flow of income. These individuals do not rely on the banking systems, including the housing finance institutions for their financial needs due to raising interest rates, high transaction costs in excess of 10% of the property value. In addition, he argues that Transaction costs cover application and appraisal fees, stamp duty and transfer fees, legal and documentation fees, mortgage and life insurance. Another indirect transaction cost is the minimum account balance, usually equivalent to two-month repayments, which every mortgager is required to maintain in the account. Similar views were shared by interviewee FE01 and FE07

However, Interviewee FE07 believes acquiring a plot of land is often the critical step if anyone wants to own a house through the mortgage finance model since the same

plot and the work in progress are in most cases are provided as collateral requirements. On a similar note, interviewee FE04 observes that land to low and middle income earners are extremely limited. According to him, this is due to three interrelated factors: the high cost of available land, obstacles to affordable alternatives (such as communal ownership or subdividing), and strong controls on squatting. The few households that are able to acquire a simple plot are constrained by limited land security. Obtaining freehold or leasehold title (the highest form of land security in Kenya) to their land can be a life-long battle with government bureaucracy. Without legal title, households face the real possibility of eviction.

B) Construction finance Model

Interviewee FE01 explains that in this model, borrowers who have land and intend to develop would take this option. Most financial institutions offer 70% financing. This view is in line with what interviewee FE02 refers to as part funding in projects and provides an explanation as shown in fig 4.15.

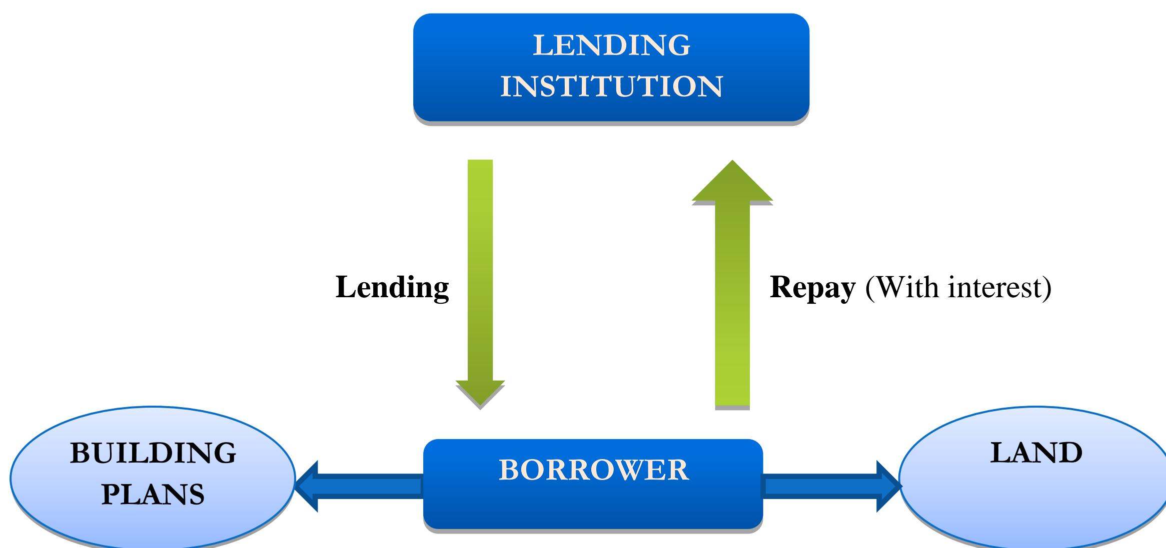

Figure 4.14 Construction finance model (Source: Interviewee FE02)

However, interviewee FE07 points out that for this model, majority of the financial institutions have listed various requirements for qualification as part of their requirements for construction loans.an opinion shared by intervieweeFE06 and FE02.

Interest Rates

For example, the branch manager (FE06) reckons that The main obstacles of mortgage financing identified by banks in a CBK survey in 2011 and 2014 are interest rates and access to long-term finances (CBK, 2014).High interest rates cause the number of non-performing loans to raise in 2012. This opinion is shared by virtually all the interview participants in the current study. The head of mortgage department (FE01) then sought to illustrate how interest rates vary from institution to institution. According to him the average mortgage interest rate was 15% with Standard Chartered Bank Ltd being the lowest at 13.9%. HFCK being the leading mortgage provider in Kenya was offering at a rate of 16% as shown in Table 4.13

Table 4.13 Mortgage rates offered by the mortgage providers in Kenya

NO	INSTITUTION	BEST RATE AS AT 14TH APRIL 2014
	Large	
1.	Kenya commercial Bank Ltd (S&l)	14.5%
2.	Barclays Bank of Kenya Ltd	14.9%
3.	Standard Chartered Bank Ltd	13.9%
4.	Housing finance Company of Kenya Ltd (HFCK)	16%
	Medium	
5.	Eco bank Ltd	19%
6.	Family Bank Ltd	19%
	Small	
7.	Habib Bank Ltd	19%
8.	Southern Credit Banking Corporation Ltd	19%

Source: Interviewee (FE01), 2015

According to interviewee FE07, while elaborating on these rates and taking HFCK as an example being the leading mortgage provider in Kenya, an average loan of Kshs. 3,000,000 will have a repayment of Kshs. 41,737.80 every month for a duration of 20years as shown in Table 4.17. he further argues that most middle income earning between Kshs. 30,000 – Kshs. 100,000 would not afford a mortgage. Interviewee FE05 observes that the current cost of mortgage financing is prohibitive for the vast majority of the population based on these interest rates.

However, an investment analyst (FE04) representing a leading SACCO blames the high interest rates charged by housing finance institutions and commercial banks to higher risk premiums associated with mortgages. According to him, usually the average lending rate is generally higher than the CBR rate. In 2013, the highest interest rate reported was 18.5% and the lowest interest rate was 8.5%.He gives an illustration in fig 4.15 below to justify his explanation.

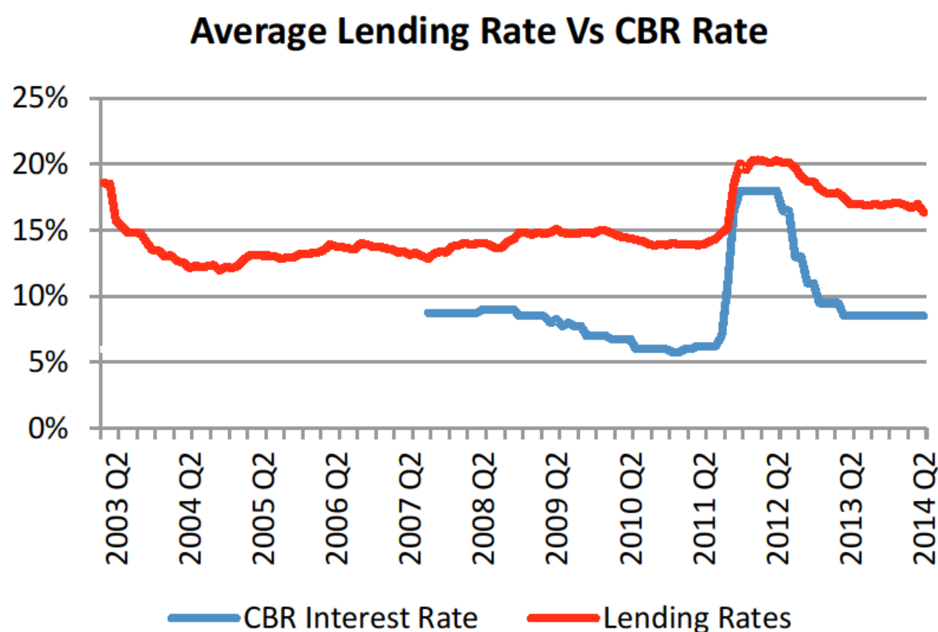

Figure 4.15: Average lending rate Vs CBR rate

Source: Central Bank of Kenya: Banking Supervision Annual Report 2014

C) Micro finance institutions

According to interviewee FE07,Housing microfinance, structured to provide both technical assistance and micro-loans, is a relatively new product in Kenya and is offered primarily by the National Cooperative Housing Union (NACHU) and the Kenya Affordable Shelter Project (KASP) of the K-REP Development Agency Pamoja Trust, through their Akiba Mashinani Trust, has also started to offer small loans to groups in upgrading sites. According to him, another source of housing microfinance is Jamii Bora, (JB) a micro-finance institution which lends to poor borrowers who have saved with the institution.

A view shared by interviewee FE01.they further argue thatit uses classic micro-finance procedures, with borrowers forming small groups so that loans are in part secured by peer pressure. It claims to have 140,000 members. However,FE04 who is also privy to this financing model argues that some years ago JB decided to develop a housing project for members and acquired 300 acres of land outside Nairobi. The plan is to construct 2,000 houses over 3 years at a cost of Ksh 900 million (USD 13.6 million). The units will have 2 bedrooms, a sitting room and a kitchen. Members will be expected to participate directly in the project by producing their own building materials.

i. Membership groups

Interviewee FE05 points out that for operation purposes MFIs have defined its different classes of membership as; lower paid employees of formal institutions. They are mainly interested in new build housing and accounts for 25%of the membership. Rural cooperatives, frequently based on agricultural marketing cooperatives accounts for 10%,Middle income earners accounts for 5% while Informal settlement dwellers accounts for 60% of its clients. He further suggests that these members are primarily interested in the micro-finance products and particularly loans for upgrading. Each category has its own characteristics so that they have

necessarily a different approach or product for each in terms, for example, of the location and types of housing and infrastructure to be facilitated.

Table 4.17 Membership groups for different MFIs

	MEMBERSHIP GROUP			
	lower paid employees of formal institutions	**Rural cooperatives**	**Middle income earners**	**Informal settlement dwellers**
NACHU	60%	10%	5%	25%
JAMII BORA	58%	12%	4%	26%
KASP	62%	8%	6%	24%
AVERAGE	60%	10%	5%	25%

Source: Interviewee FE05: Banking Supervision Annual Report 2014

ii. Micro-finance programs

An assistant manager (FE03) representing a leading Sacco says for example that there various housing finance programs offered by MFIs and their popularity among the members is raising. Using a comparative analysis he argues that 55% of the members in their institution are in the new housing programme, 25% of the members are in the home rehabilitation programme, 10% of the members are in the infrastructure loans for groups, further 10% in resettlement loans while 5% were in group loans for commercial purposes such as constructing a building for commercial or residential rental.

One example of the use of this is model according to him is Upendo wa Jirani Nakuru. Members have saved with NACHU and then taken loans to buy land and then build or more usually improve housing. The cost for two rooms is approximately KSh 220,000 if built of stone and using self-help. Housing units are normally blocks of approximately 10 rooms with a reasonable level of construction (plastered walls and floors) and services (water available on site, good quality pit latrines, and electricity). The members take some rooms for themselves and their families and sub-let the remainder to provide income. The rent for a room is approximately KSh 1,000 per month or KSh 1,200 with electricity. NACHU does not record the incomes of tenants but they should have a minimum income of KSh 4,000 per month although some share rooms to reduce cost and therefore could have lower incomes. Thus NACHU funding facilitates not only housing and an income for the members but provides much needed rental housing to a reasonable standard. Letting and sub-letting are a fact of life in the Kenyan housing market.

Table 4.18 Programmes offered by micro finance institutions

	Programme offered				
	Infrastructure loans	**Rehabilitation loans**	**New housing loans**	**Resettlement loans**	**Group loans for commercial purposes**
NACHU	10%	208%	55%	10%	5%
JAMII BORA	8%	21%	50%	14%	7%
KASP	12%	19%	60%	6%	3%
AVERAGE	10%	20%	55%	10%	5%

Source: Interviewee FE05: Micro-finance Annual Report 2014

Challenges facing Micro-finance institution financing model

Interviewee FE01 points out that MFIs faces a greater demand for loans than it is able to meet from available resources. He argues that the unmet demand in 2012 and 2013 for example is 73% which was roughly estimated at Ksh 25-30 million, a conservative amount as some potential borrowers probably do not come forward, restrained by the knowledge that MFIs have limited funds. A view shared a number of the interviewees

Table 4.15 Measuring Unmet demand:

PROGRAMMES OFFERED	Loan applicants	Loans granted	Unmet demand %
2011			
NACHU	104	33	68%
JAMII BORA	95	27	72%
KASP	61%	14%	77%
AVERAGE			**72%**
2012			
NACHU	130	37	72%
JAMII BORA	110	41	63%
KASP	87	26	70%
AVERAGE			**68%**

Source: Interviewee FE01: Micro-finance Annual Report 2014

It emerged from the above interview discussions that the mobilization of membership is running far ahead of the availability of resources for lending. Yet MFIs have found it difficult to raise funds from commercial banks or the capital market. Access to these sources is constrained by the relatively small size of the organizations and the limited availability of mechanisms, such as guarantees, to enhance the credit standing of small organizations. MFIs should explore ways of obtaining additional resources to expand its revolving fund, from both local and external sources.

D) Emerging innovative mortgage products by lending institutions

It emerged through the interviewees (FE01, FE05 & FE07) that there are many emerging innovative mortgage products being offered by lending institutions in Kenya. According to them, the products include

1. Vunahela – offered by HFCK
2. Ezesha- offered by S& L and HFCK
3. Home freedom mortgage-offered by S& L

He argues that for example, VunaHela provides easy and affordable access to an extra source of financing as the interest charged is equivalent to that charged on a mortgage which is usually much cheaper than a commercial loan. With VunaHela, you are also able to access your money within a short period of time therefore making it a fast and affordable solution. He revealed listed the Vunahela loan products as illustrated in table 4.16 below

Table 4.16 Types of vunahela loans

	MORTGAGE PRODUCT	
1.	VunaHela-Vanilla / Top Up	Vanilla / Top Up is where a customer applies for a loan / additional financing using the house / property as security but not necessarily using the money towards the home / property. What's more, you do not have to be a HF customer to utilise this facility. Financing is based within the current Loan to Value ratios for VunaHela. You will be required to finance the closing costs such as Stamp duty and legal fees and once the security documents are perfected, the funds will be released.
2.	VunaHela – 3rd Party Charge	The VunaHela 3rd party charge solution provides customers with the option of using property that may not be personally owned to acquire financing. The property / home owner must however give authority to have the property charged to Housing Finance for the funds to be released. A personal guarantee and indemnity will be required from the property owner and funds will be released after perfection of security documents.
3.	VunaHela – Plots	VunaHela on plots gives customers the opportunity to use their plots as the security for the purposes of acquiring additional financing. The size of the land must be over 3 acres to enable investment in infrastructure. HFCK lends up to 50% the value of the plot.

Source: Interviewee FE05: Field finding 2014

b. Ezesha

Ezesha is a new, revolutionary product that enables aspiring homeowner's access up to 105% financing. Meaning, it absorbs those burdensome entry costs - 10% deposit, stamp duty, legal fees and valuation costs and spreads them across your

Benefits

1. No need to raise 10% deposit plus closing costs.
2. Competitive interest rate on a reducing balance basis
3. Insurance premium financing available
4. Access to property and advisory services through the Housing Finance Property Point

Features

a) 100% financing for the purchase or construction of a home.
b) An extra 5% financing on your closing costs - stamp duty, valuation and legal fees
c) An option to acquire furniture financing of up to Ksh. 500,000 from selected partners
d) An attractive interest rate of 15.9% on a reducing balance basis.

E) Proposed Model

In conclusion, two major observations were made from the interviews in this section. Firstly, that condition for lending has contributed to low mortgage intake among low and middle income groups. Secondly high interest rate due to high cost of funds for financial institutions has discouraged many low and middle income groups from taking a mortgage loan.

The financial experts were requested to give their opinion on the proposed self-help housing model-for individuals constructing their own house as an appropriate model which can be applied by low and middle income groups this is due to the fact that

self-help model is incremental financing which means that the two main obstacles of financing are eliminated. This model was supported and refined in the next section.

4.5 PART D: Model development and Evaluation

4.5.1 Model development process

Figure 4.17 illustrates the process of developing the proposed model during this study. A three stage development approach was adopted, utilizing a combination of quantitative and qualitative methodology, and a range of specific research methods.

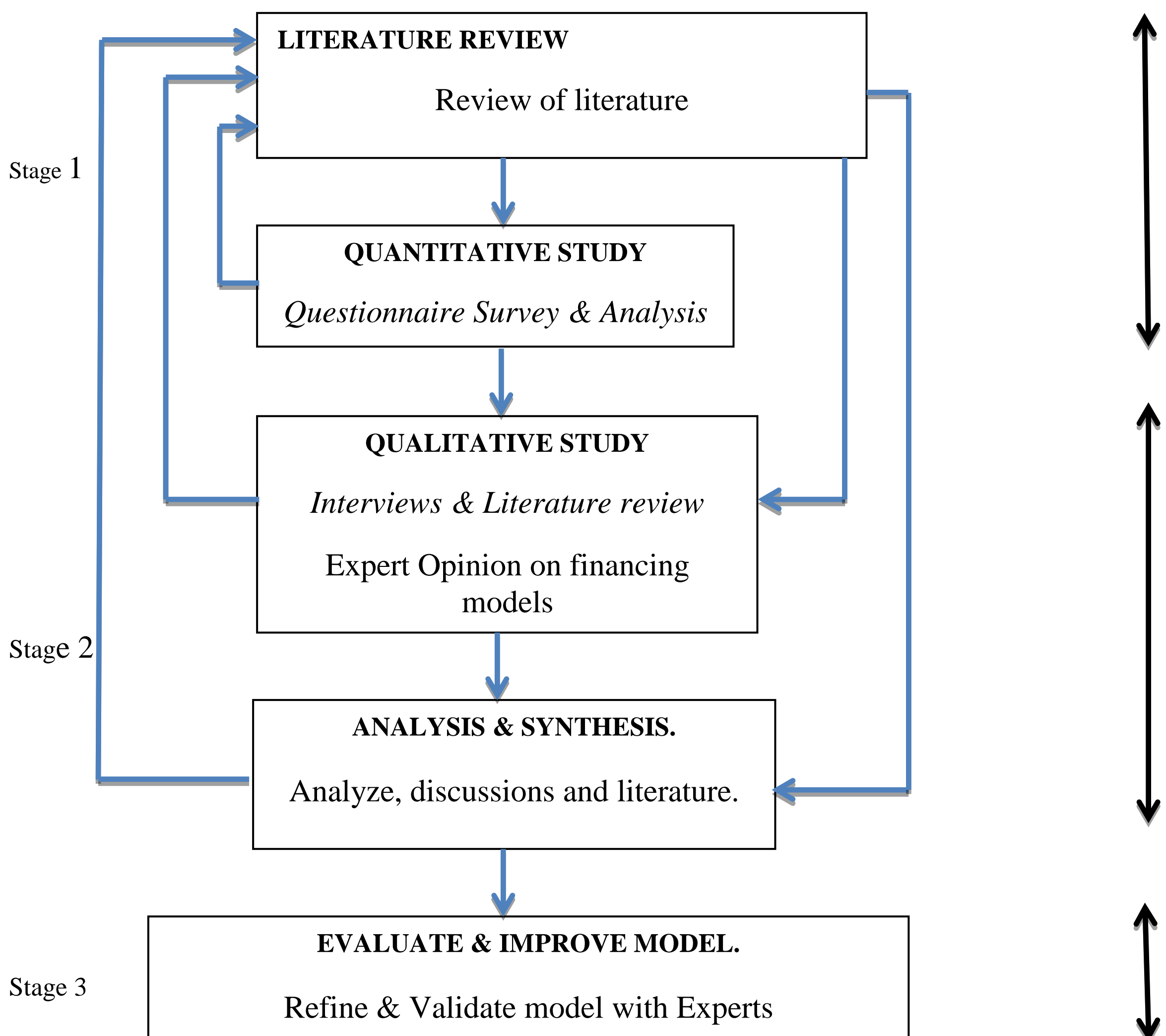

Figure 4.16: The Model development process. Source: Researcher`s own creation (2015)

4.5.2 Weaknesses in the existing financing models for the low and middle income housing markets in Kenya

The development of an appropriate funding strategy for the low and middle income housing markets in Kenya has been informed by the weaknesses the existing financing models have. These models and their weaknesses have been summarized below.

COMPARATIVE ANALYSIS OF THE EXISITNG FINANCING MODELS

Table 4.17: Comparative analysis of the existing financing models.

No.	Existing Financing Model	Features	Weaknesses/Challenges associated with model to low & middle income groups
1	Mortgage finance model	• Borrower identifies the house he wants to buy. • Mortgage institution pays for the house. • Condition for lending classified as employed or self-employed	• High interest rates. • Collateral requirement. • Credit risks associated with the model.
2	Construction Finance model	• Prove of land ownership. • Prove of cash equity at least 30% of the totatl construction cost. • Ideal to borrowers with even cash inflows	• High interest rates. • Access to financing subject to collateral requirements. • Repayment plan requires even cash inflows by the borrower.
3	Micro-Finance Institutions Model (MFIs)	• Offer loans at cheaper interest rates. • Requires savings to the institutions for one to qualify for a loan.	• There is often great demand for loans from members than the instutions are able to supply. • Requires one to be a member as a condition to borrow. • Requires savings with the institution as a condition for borrowing.
4	Emerging innovative mortgage by lending institutions	• Comprise of; Vunahela – offered by HFCK; Ezesha-offered by S& L and HFCK; Home freedom mortgage-offered by S& L • Offer 100% financing	• High interest rates. • Collateral requirements.

4.5.3 Self-help housing model

Introduction

My definition of self-housing housing is that, it is a process-based strategy of acquiring shelter over a period of time by individual households whose socio-economic conditions determine the length of time of the process and nature of building. This process involves access to land – purchase and occupation of land whether legally or illegally; the construction of the basic core of building step by step where foundation is first laid, walls are erected and the roof is finally fixed, extensions and improvements are made as the income levels of the household improves and as the household size expands; and dwelling is finally serviced with basic infrastructure also on incremental basis. It includes undeveloped plots which are purchased with the intention to construct housing, uncompleted housing structures, and uncompleted and partially occupied houses.

Self-help housing model will be adapted to the changing needs and circumstance of its occupants, it is improved over time when family finances allow, it enables community solidarity and mutual help and above all, the owners have the autonomy to design and manage their dwellings. In low income groups; individual needs, priorities and possibilities are continually changing and that helps to even spread the costs of construction over time. The component materials needed for construction should therefore be left with individuals and households or decentralized local and small scale institutions. This statement is supported by Turner‘s, according to his view, large organizations provides standard products which cannot deal with the enormous changing housing needs of the low-income households. The role of government according to Turner was to ensure access to land, building materials and finance.

The conceptual underpinnings of self-help housing approach stem from John Turner‘s writing on self-help housing and its influence on the World Bank policies on housing in the 1960s and 70s. According to Turner (1976), self-help housing was a solution to low-income groups housing needs.

Furthermore, Ferguson (2003) indicates that self-help building is the only strategy by which the low-income groups can have access to housing or shelter. In this Model, low-income households construct their own dwelling by this building process over five to fifteen years. Home ownership starts with land acquisition through various means ranging from squatting to purchasing or leasing of a plot in informal sub-divisions. If there is no threat of expulsion, household builds temporary structures to protect the land and then upgrade gradually by adding space and increasing quality. However, it is important to note that, incremental building is not only prevalent in illegal settlements, and does not necessary start with temporary structures. The starting stage and the quality of the structures depend much on the financial situation of the builder. The key determinant of the phenomena is the availability and levels of household incomes.

Access to land

This determines how land is made available for residential development to all low and middle income groups. Therefore the first step involves access to land by the low income households' suitable location. Access to land makes it possible for low income families to construct their dwelling and access to other basic services and employment opportunities within the urban area (Rogers, 2005). Access to land is conditioned by land tenure which is inextricably linked with historical, cultural, legal and economic factors that affect people‘s perceptions and behavior. It is related to location, the nature and distribution of employment centers, transportation and other public infrastructural services (Rakodi & Withers, 1995). Rakodi and Withers argues that for the very poor urban households, their priority is to obtain access to land where they can maximize their livelihoods opportunities and this is usually in prime locations in urban areas where there is very high competition for land and land prices are very high.

Furthermore, Rogers, (2005) argue that, the land value constitutes a significant proportion of the total cost of financing incremental housing construction process and that access to low cost land is very essential in making the overall process viable. As indicated above, land prices are determined mainly by location and development

potential of the land. The location factor determines city growth and it is influenced by the construction of trunk infrastructure which further determines the supply of serviced land in the urban setting. The development potential of land is influenced by land use and building standards which can either limit land available for development or increase the supply. Because of the great influence of these two factors on land prices especially in central locations in urban areas, it stands to reason that, low-cost land can only be located at the periphery of these areas where there is lack of infrastructure and other basic social services. This explains why many incremental housing constructions process takes place at the periphery of cities. It is only in few circumstances that incremental housing construction take place in central location and this happens because of illegal occupation of public lands where the occupants do not really pay for the full cost of the land (Rogers, 2005).

The implication of the above factors is that, urban land markets in developing countries rarely delivers serviced lands for low income families. These households must access land and housing through non-formal and non-statutory means such as illegal land occupation and purchases of illegal subdivided plots. According to Rogers (2005)secure tenure is not an essential condition for these families in many cases and incremental housing developments continue for many years especially where eviction threats are uncommon. Greene and Rojas(2004)) concludes that, the main methods which the low income families use to access land and the most usual process of securing land tenure in urban areas is illustrated in figure 4.20.

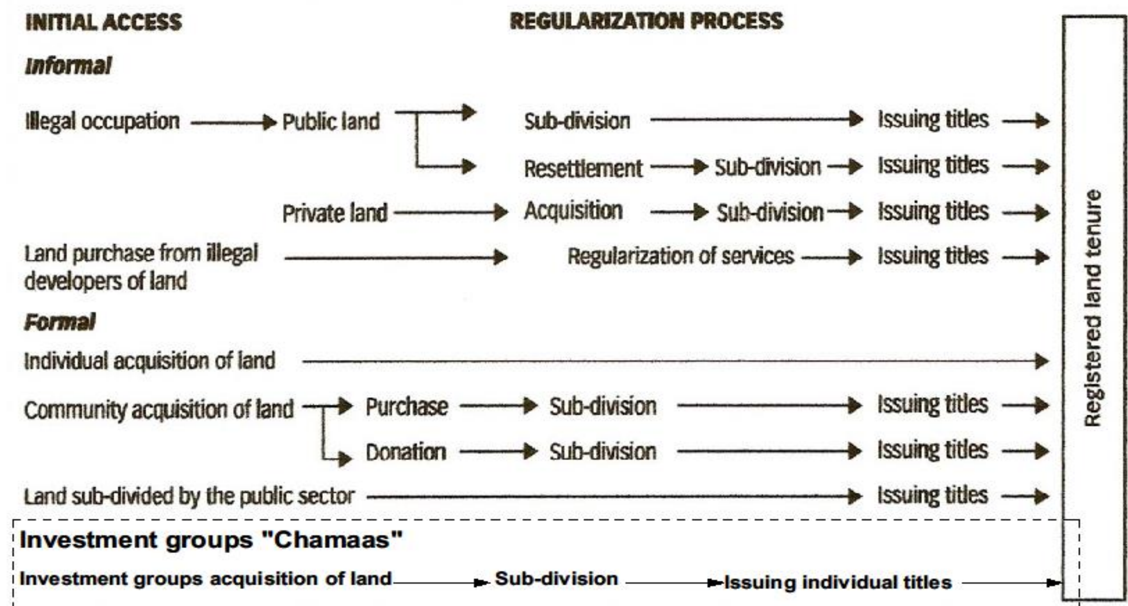

Figure 4.17: Land access and regularization process for low income families modified from Greene and Rojas, 2004

The dotted line shows the authors contribution to this model to incorporate the investment groups which have become popular among low and middle income groups. These groups as famously referred to as "chamaas" usually buy land collectively from their monthly savings with an aim of subdividing to each individual member. These groups have a higher bargaining power in terms of getting land at a relatively lower price since they buy in a large quantity.

4.5.4 Phases of the self-help housing development process

Self-help housing can be classified into two main phases, these include; access to land and construction of basic habitable nucleus. The author has modified this to incorporate a third phase of incremental improvement of the dwelling (dotted). This is supported by the fact that low and middle income groups have had limited access to finance due to high cost of funds and conditions for lending making incremental improvement less costly to the group.

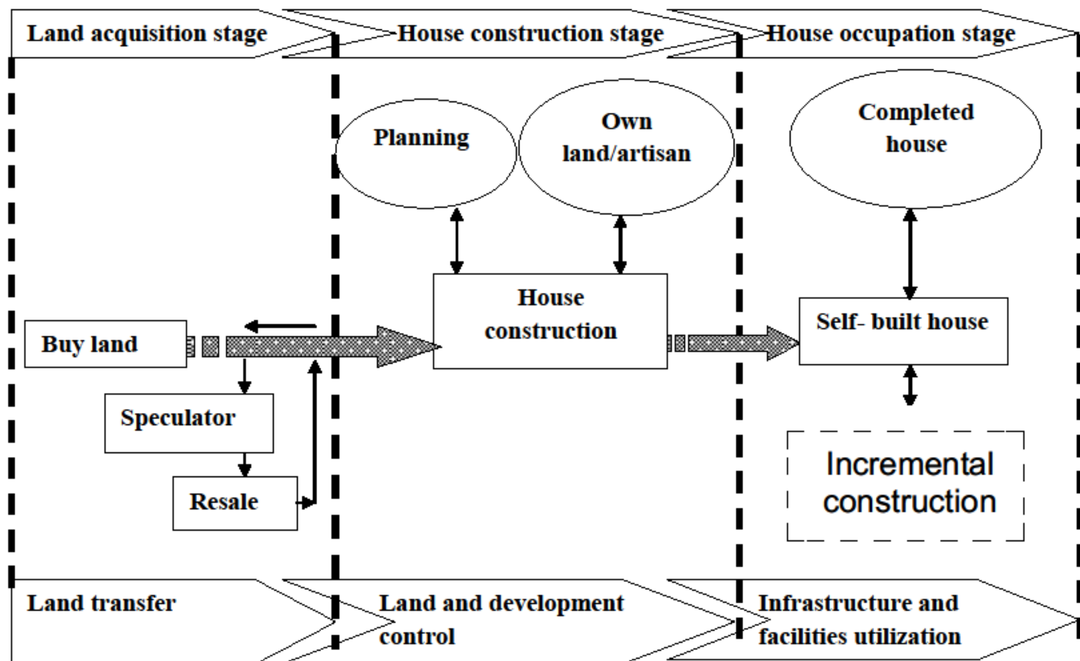

Figure 4.18 Self-help housing development process. modified from Greene and Rojas, 2004

Amis (1996) has also argued that incremental housing development takes place in four different non-sequential stages. These stages include: pre-ownership where households rent, share living space with family members and friends or squatting on vacant lands in urban areas; initial settlements where they acquire land either legally or illegal to start constructing basic habitable core units; self-motivated upgrading; and external- shock- motivated upgrading (Amis, 1996). However, these stages can conveniently fit into the three phases identified.

4.5.5 Construction of basic housing nucleus

After access to land, low income families begin the construction of the core housing unit. The primary function of this core housing unit is to provide shelter. For the very poor urban dwellers, the construction of the basic housing unit is to protect them against the vagaries of the weather. The materials used for this construction are mostly temporary ones which are not durable. These range from discarded materials

such wooden pallets, used iron sheets, card boards to plastic materials. Households within this category use materials like mud/clay, bricks and other indigenous materials which are locally available at affordable prices. Others are able to use burnt bricks and sand create blocks and cement. The basic housing units usually lack basic services like sanitary systems, kitchens, electricity, water, and roads. What is peculiar at this stage is that the design and construction is entirely handled by the household who make use of indigenous technology and local building materials (Rogers, 2005). This basic housing nucleus is used to protect the land from encroaches especially in situations when there are no threats of eviction.

Besides, the construction of the most basic housing unit is finance entirely from person sources and this influences the type of materials used and the type of housing unit. Amis (1996)argues that, availability of household income is the critical factor that determines how the basic housing nucleus is constructed. More importantly, these households build the basic housing nucleus to reflect their survival strategies. They try to avoid debts as much as possible and even when it becomes necessary for them to incur debts, they opt for shorter debt periods so that they are able to meet other pressing needs for food, education for children and travel costs (Macoloo, 1994).

4.5.6 Incremental improvement of the basic housing nucleus

When households have finished with the basic housing nucleus and taken possession of it, they expand and improve their dwelling as the family size, priorities and level income changes. At this phase, they expand their dwelling with little regards to quality as most of the expansions are done in order to meet pressing needs for accommodation to house additional household members (Rogers, 2005). In other words, the immediate need of the families at this phase is to be able to accommodate all households members without much concern on the quality of housing provided. While this immediate need is being satisfied, the households accumulate savings, stock pill materials, tools and technical skills or skill labour to begin the improvement or upgrading phase. According to Rogers (2005) this phase is characterized by limited infrastructural services and there is often differing interests

between public sector agencies and beneficiaries. That while public sector agencies may advocate for improvement of sanitation services, the beneficiaries are more interested in consolidating their properties and maximum protection against natural risks in case of those on illegally own lands located at precarious areas prone to natural disasters while others might need more privacy.

(World Bank, 2011) Greene and Rojas assert that there are homes that have never been upgraded from their original state and the major reasons attributed to this are lack of financial resources for families to be able to acquire building materials and labour to facilitate the upgrading process. Other reasons are that, the tenure status of the inhabitants is not certain and therefore they do not want to risk improving their properties only to be evicted. Besides, women headed households are usually faced with the problems of consolidating and expanding their homes than male headed households. Perhaps, the longest phase in the incremental housing development process is at this stage because it involves improving the quality of the homes once the nucleus is in place and the initial expansion has taken place. It also involves more complex operations and technical expertise.

4.5.7 Components of self-help housing

Self-help housing development process has two main components in the input side. These are monetary and non-monetary components. The monetary side constitutes an important source of savings and hedge against inflation. The monetary aspect normally involves access to land and stockpiling of materials such as roofing sheets, door and window frames, water closets, and cement blocks usually stored on site of the project. These form important source of household savings. The stockpiled building materials are also a hedge against inflation which has been rampant in most developing countries (Hardoy & Satterthewaite, 1997).
The non-monetary inputs to the process include their own skills (building expertise and experience, budgeting and planning and their own labour (sweat equity), and social networks like family members, friends, neighbours etc. The contribution of the social networks may include additional labour, knowledge of reliable artisans in the

building sector, knowledge on the acquisition of building permits, and recommendations of appropriate building materials and design (Hardoy & Satterthewaite, 1997). According to Hardoy and Satterthewaite (1997), these are invaluable because their quality and quantity can significantly leverage the monetary inputs or even eliminate the need for housing micro-loan.

Hardoy and Satterthewaite (1997) posits that, in order to bridge the gap between the monetary and non-monetary inputs so as to speed up the building process, there the need for housing micro-loans. According to Hardoy and Satterthewaite housing micro-loans predictable fixed payment on short-term installment basis, usually go toward the purchase of building materials that cannot easily be stored and the payment of specialized artisans workers. Therefore access to housing micro-loans links the monetary and non-monetary inputs to speed up the building process. The combined effects of the monetary, non-monetary and housing micro-loans lead to outputs like improved housing asset, better credit history, more confident and skilled clients and a better community comprising of citizens willing to pay for basic services. The overall impact is that, it leads to stronger economy where the economic potential of housing is unleashed through this process. This further leads to the development of local economy through home-based micro entrepreneurial development fuelling the creations of businesses and jobs.

4.5.8 Attributes of self-help housing

The greatest attribute of this type of housing approach is its apparent affordability. This is also supported by Mathey (1997), who revealed that the main attributes of incremental housing are adaptability, affordability and suitability. Due to the inability of incremental housing developers to make large initial investment, they make temporary and small housing core units which can later be transformed into more permanent one. This mode of building allows developers to spread out building costs, and even though this may not make an incremental house comparatively cheaper, it is an approach that contributes to affordability as self-builders are unable to meet capital guarantees to buy houses or secure mortgage financing.

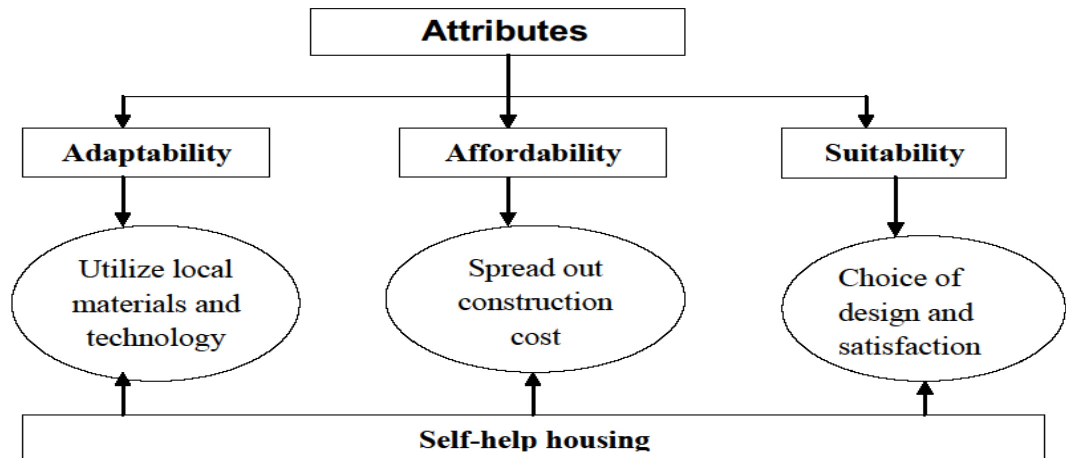

Figure 4.19: Attributes of self-help housing source author

4.5.9 Model evaluation

All the financial experts were of the opinion that the Self-help model is suitable or very suitable. All experts also thought the model is simple or very simple to use and all the experts rated the model as being helpful or very helpful in addressing the challenges the low and income groups have in owning a house.

CHAPTER FIVE

SUMMARY, CONCLUSION AND RECOMMENDATIONS

5.1 Introduction

This chapter presents a summary of the key findings presented in chapter four based on each objective, suitability of the methodology used, conclusions drawn based on such findings and recommendations there-to. This chapter is, thus, structured into summary, methodology, conclusions, recommendations and areas for further research.

5.2 Summary of the findings

This study was seeking to achieve the following objectives:

1. To establish factors that influences the choice of a financing option for housing by the low and middle income groups in Kenya.
2. To evaluate various financing options for low and middle housing developers in Kenya.
3. To identify challenges facing the financial institutions in delivery of housing finance to low and middle income groups in Kenya.
4. To develop an appropriate financing option for the low and middle income housing market in Kenya.

5.2.1 Objective 1: To establish factors that influences the choice of a financing option for housing to the low and middle income groups in Kenya.

The study established 15No.Factors that influence the choice of financing option. The results shown in table 4.4, reveal that majority of the respondents consider interest rates as a major factor influencing the choice of financing option. This was ranked at position one with an RII equal to 0.904.Followed by collateral requirements RII=0.839,cost of construction RII=0.804,Loan qualification procedure RII=0.794, Penalties for arrears and default RII=0.789.Availability of financial

information was ranked last at position 15 with RII=0.392.From the above factors, it can be said that interest rates and collateral requirements are the main deciding factors when choosing housing finance by the low and middle income groups. Perhaps the most appropriate financing option could be the one that puts little requirement or none at all on these two factors.

5.2.2 Objective 2: To evaluate various financing options for low and middle housing developers in Kenya.

The popularity of SACCOs among respondents' customers is immense (33.3%). This could be tied to the fact that their costs are not expensive, the interest rates range between 10%-12% and the qualification procedures are not as stringent as those of commercial banks. Commercial banks charge interest rates up to 24%. Contrary to the expectations, informal money markets are not as popular as avenues for housing finance. Some of the reasons behind the slow growth rate of informal sources of housing finance include; lack of funds, lack of government support, low loan recovery and replicability rate, inappropriate legal regulations and inappropriate organizational structures. 21.5% of the respondents' customers preferred commercial banks as appropriate financing options. The various financing options were evaluated and results shown in table 4.5

5.2.3 Objective 3: To identify challenges facing the financial institutions in delivery of housing finance to low and middle income groups in Kenya.

It emerged from table 4.7 that availability of collateral was ranked as the most difficult step (35.3%) that lenders face when delivering housing finance to low and middle income groups. Some forms of collateral such as title deeds take really a long duration before they are processed and issued to their rightful holders. The qualification procedures employed by lending institutions that render a household eligible for a loan was also an obstacle as it was too lengthy and technical. Other difficulties were ranked as shown in Table 4.7.

5.2.4 Objective 4: To develop an appropriate financing option for the low and middle income housing market in Kenya.

In conclusion, two major observations were made from the interviews with financial experts. Firstly, that condition for lending has contributed to low mortgage intake among low and middle income groups. Secondly high interest rate due to high cost of funds for financial institutions has discouraged many low and middle income groups from taking a mortgage loan.

The financial experts were requested to give their opinion on the proposed self-help housing model-for individuals constructing their own house as an appropriate model which can be applied by low and middle income groups this is due to the fact that self-help model is incremental financing which means that the two main obstacles of financing are eliminated. All the financial experts were of the opinion that the Self-help model is suitable or very suitable. All experts also thought the model is simple or very simple to use and all the experts rated the model as being helpful or very helpful in addressing the challenges the low and income groups have in owning a house. The model is shown in fig 4.21

Summary results: From the study's findings, the research concludes that;

1. Excessive high interest rates in Kenya Finance sector have strongly discouraged long-term investment and constrained Kenya's ability to grow the mortgage sector. With nominal interest rates ranging from 15-20% the private sector is unable to borrow to finance long term investments in the mortgage sector
2. High transaction costs: 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.

3. Income: currently to access a mortgage facility one requires attaining a certain level of salary threshold. More than 60% of low and middle income groups do not attain this threshold.
4. Prove of creditworthy: High credit risk put lenders in a dangerous position as they are unable to fully evaluate and guarantee the mortgage being advanced due to the unavailability of credit history. This is due to the fact that most middle and low income groups are self employed. This has the effect on increasing the cost of the mortgage as the lenders will compensate themselves for the risk by charging high interest rates.

5.3 Conclusion

From the study’s findings, the research concludes that excessive high interest rates in Kenya Finance sector have strongly discouraged long-term investment and constrained Kenya’s ability to grow the mortgage sector. With nominal interest rates ranging from 15-20% the private sector is unable to borrow to finance long term investments in the mortgage sector. Interest rates chargeable on mortgages influence the mortgage quality in that the higher the interest the more expensive the mortgage product becomes, and the more susceptible to defaults due to high repayment costs. Low interest rates on the other hand encourage compliance and prompt repayment thus guaranteeing quality products.

The study further concludes that much emphasis should been put on the importance of the informal sector, as it is the largest employer in the country. Over 2.6 million people were employed in the sector in 1996, compared to 920,000 and 690,000 persons in the private and public sector respectively in the same year (Placeholder3). These individuals do not rely on the banking systems for loans, including the housing finance institutions for their financial needs due to raising interest rates, high transaction costs in excess of 10% of the property value. Transaction costs cover application and appraisal fees, stamp duty and transfer fees, legal and documentation fees, mortgage and life insurance. Another indirect transaction cost is the minimum account balance, usually equivalent to two-month repayments, which every

mortgager is required to maintain in the account. The problem is that the amount, like other deposits, attracts a low rate compared to lending rate. This group of people does not meet the basic requirements for application of a housing mortgage.

5.4 Recommendations

This study recommends a sustainable model which can be applied in the market as a sustainable funding strategy. Self-help housing model-for individuals constructing their own house is a process-based strategy of acquiring shelter over a period of time by individual households whose social-economic conditions determine the length of time of the process and the nature of building.

Self-help housing model will be adapted to the changing needs and circumstance of its occupants, it is improved over time when family finances allow, it enables community solidarity and mutual help and above all, the owners have the autonomy to design and manage their dwellings. In low income groups; individual needs, priorities and possibilities are continually changing and that helps to even spread the costs of construction over time. The component materials needed for construction should therefore be left with individuals and households or decentralized local and small scale institutions.

5.5 Areas for further research

This study has provided a series of recommendations and has also generated a series of important topics that should be dedicated further time and resources to better understanding:

1. The study suggests that further studies should be conducted on the effect of macro-economic factors on performance of mortgage firms in Kenya.
2. Impact of interest on mortgages on real estate prices in Kenya
3. Further research is required to explore possibilities of modeling incremental financing strategies in the built environment.
4. Success indicators of the current players in reaching out to low and middle income households with their development

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APPENDICES

APPENDIX 1: QUESTIONNAIRE

Julius Muigai Mungai

P.O.Box 62,000-00200,

Nairobi-Kenya

RE: TO WHOM IT MAY CONCERN

I am a master's student undertaking MSc.in Construction Project Management at Jomo Kenyatta University of Agriculture and Technology (JKUAT). I am carrying out a research entitled "Evaluation of appropriate funding strategy for low and middle income housing market in Kenya".

The purpose of this questionnaire is to investigate the various financing options available for the low and middle income groups in Kenya. Of importance for this study is;

- To establish the factors that influence the choice of a financing option for housing by the low and middle income groups in Kenya
- To evaluate various financing options for low and middle income groups in Kenya.
- To establish challenges the financial institutions in delivery of housing finance to low and middle income groups in Kenya.
- To develop an appropriate financing option for the low and middle income groups in Kenya.

This questionnaire is purely for academic purposes and the information shall be kept confidential. Kindly fill the questionnaire as per the instructions in two weeks.

If you would like to contact the developer of this study, use the address below;

Department of Construction Management

Jomo Kenyatta University of Agriculture and Technology, P.O.BOX 62000-00200, NAIROBI, KENYA.

<u>QUESTIONAIRE FOR LENDING INSTITUTIONS</u>

SECTION A: GENERAL INFORMATION

1. What type of financial institution is your organization?

Type of financial institution		✓
1	Commercial bank	[ ]
2	Non-Bank financial institution	[ ]
3	Mortgage companies	[ ]
4	SACCO	[ ]
5	Sharia Bank	[ ]
6	Others (Specify)	

2. What type of housing loans do you provide? (Tick both if your organization provides both types of loan). Ignore if your organization does not offer housing finance products.

Housing loans		✓
1	Mortgage loans	[ ]
2	Housing microfinance loans	[ ]
3	Others (Specify)	

3. What percentage of your lending portfolio goes to housing finance for the low and middle income groups?.

Lending portfolio to low and middle income groups		✓
1	Below 25%	[ ]
2	25-50%	[ ]
3	50-75%	[ ]
4	Above 75%	[ ]

SECTION B: FACTORS INFLUENCING THE CHOICE OF A FINANCING OPTION FOR LOW AND MIDDLE HOUSING MARKET.

The following section includes various factors that the research believes to affect households in advancing for loans or mortgages. The following questionnaire is designed to investigate how high or low your client regard each factor in choosing the type of finance, financial institution or demand of housing finance.

Key:

Factor	*Not Important*	*Less important*	*Important*	*most Important*	*Highly important*
	1	*2*	*3*	*4*	*5*

Factors influencing choice of financing option		**1**	**2**	**3**	**4**	**5**
1	Information Availability	[ ]	[ ]	[ ]	[ ]	[ ]
2	Current income	[ ]	[ ]	[ ]	[ ]	[ ]
3	Equity	[ ]	[ ]	[ ]	[ ]	[ ]
4	Amount to be borrowed	[ ]	[ ]	[ ]	[ ]	[ ]
5	Interest rates	[ ]	[ ]	[ ]	[ ]	[ ]
	Collateral requirements					
6	Penalties for arrears and default	[ ]	[ ]	[ ]	[ ]	[ ]
7	Mortgage interest deductions	[ ]	[ ]	[ ]	[ ]	[ ]
8	Amortization period					
9	Monetary policy					
10	Government loans					
11	Cost of construction					
12	Inflation					
13	Loan qualification procedure					
14	Availability of funds					
15	Marital status of the borrower					

SECTION C: EVALUATION OF VARIOUS FINANCING OPTIONS.

1. The following section includes various financing options for low and middle income groups. Kindly rank the selected options in the order of preference by your customers.

Key:

1-Most preferred **2-** Preferred **3-** Least preferred

Financing options		**1**	**2**	**3**
1	Commercial bank	[ ]	[ ]	[ ]
2	Non-Bank financial institution	[ ]	[ ]	[ ]
3	Mortgage companies	[ ]	[ ]	[ ]
4	SACCOs	[ ]	[ ]	[ ]
5	Sharia Bank	[ ]	[ ]	[ ]
6	Personal savings	[ ]	[ ]	[ ]
7	Self-help groups	[ ]	[ ]	[ ]
8	Others (Specify)			

2. Kindly rank your main sources of capital for lending to finance housing projects to low and middle income groups.**1-** being the most important source, **2-** the second most important source, **3-** the third most important source etc.

Source of Capital		**1**	**2**	**3**
1	Savings deposits from individuals	[ ]	[ ]	[ ]
2	Savings deposits by institutional investors (such as insurance firms, pension fund)	[ ]	[ ]	[ ]
3	Bond issuance	[ ]	[ ]	[ ]
4	Refinancing of mortgages by a refinancing company/liquidity facility	[ ]	[ ]	[ ]
5	Donor grants	[ ]	[ ]	[ ]
6	Donor loans			

SECTION D: CHALLENGES FACING FINANCIAL INSTITUTIONS IN DELIVERY OF HOUSING FINANCE TO LOW & MIDDLE INCOME GROUPS.

1. The following section includes various challenges that financial institutions face in the delivery of housing finance to low and middle income groups. Kindly express your opinion on the selected challenges by placing a mark

Scale: 1= strongly agree 2=agree 3=somewhat agree 4=disagree 5=strongly disagree

	Challenge	**1**	**2**	**3**	**4**	**5**
1	Inability to repay the loan by customers			[ ]	[ ]	[ ]
2	Lack of financial documents/lack of pay slip from customers	[ ]	[ ]	[ ]	[ ]	[ ]
3	High interest and fees	[ ]	[ ]	[ ]	[ ]	[ ]
4	Difficult and lengthy procedures	[ ]	[ ]	[ ]	[ ]	[ ]
5	Competition from other sources of finance	[ ]	[ ]	[ ]	[ ]	[ ]
6	Lack of bank relations(no account)	[ ]	[ ]	[ ]	[ ]	[ ]
7	Lack of collateral by customers	[ ]	[ ]	[ ]	[ ]	[ ]
8	Inadequate capital sources to support housing finance					
	Any other factor.(please specify)					

2. What is the average default rate in your institution when delivering house finance to the middle and low income groups?

Default rate		**1**	**2**	**3**
1	Less than 10%	[ ]	[ ]	[ ]
2	10-20%	[ ]	[ ]	[ ]
3	20-30%	[ ]	[ ]	[ ]
4	30-40%	[ ]	[ ]	[ ]
5	40-50%	[ ]	[ ]	[ ]
6	Above 50%	[ ]	[ ]	[ ]

SECTION E: SELF-HELP HOUSING MODEL.

Self-help housing model is a process-based strategy of acquiring shelter over a period of time by individual households whose socio-economic conditions determine the length of time, the process and nature of building.

1. Are you familiar with the self-help housing model?.

   Yes [ ]   No [ ]

2. If yes, how would you rate self-help housing model as an alternative housing finance to the low and middle income groups in Kenya.?

Rating of self-help housing model		✓
1	Most suitable	[ ]
2	Suitable	[ ]
3	Not suitable	[ ]

3. Kindly discuss your views on the current house financing options for the low and middle income groups in Kenya.

………………………………………………………………………………………
………………………………………………………………………………………
………………………………………………………………………………………
………………………………………………………………………………………
……………

………….END…………………..

THANK YOU FOR YOUR GENEROUS PARTICIPATION

APPENDIX 2: INTERVIEW CONSENT FORM

Consent Form

For use when interviews are involved.

Project title: ***Evaluation of an appropriate funding strategy for low and middle income housing market in Kenya.***

Researcher: Julius Mungai Muigai

- I have read and understood the information provided about this research in the information sheet dated 23rdSept 2014.
- I have had an opportunity to ask questions and to have them answered.
- I understand that notes will be taken during the interviews or the researcher will audio-tape the discussions should they be carried through phone and that transcribes will be generated.
- I understand that I may withdraw myself or any information that I have provided for this project at any time prior to completion of data collection, without being disadvantaged in any way.
- If I withdraw, I understand that all relevant information including tapes and transcripts, or parts thereof, will be destroyed.
- I agree to take part in this research.
- I wish to receive a copy of the report from the research (Please tick one): O
O Yes. . No.

Participant`s signature:…………………………………………………………………………
…………………………

APPENDIX 3: EXPERTS PARTICIPATION INFORMATION SHEET

Date information produced:

23rdSept 2014.

Research Title:

Evaluation of an appropriate funding strategy for low and middle income housing markets in Kenya.

An Invitation

I am Julius Mungai Muigai currently undertaking a Masters of Construction Project Management with the Jomo Kenyatta University of Agriculture and Technology. I am carrying out an evaluation of appropriate funding strategies for low and middle income housing markets in Kenya.

Your participation in this research is completely voluntary and you can withdraw at any time prior to the completion of data collection without any adverse consequences. Your participation is greatly appreciated. If you agree to participate, your privacy and confidentiality will be strictly maintained.

What is the purpose of this research?

This research aims to develop a self-help financing model for the low and middle income housing markets in Kenya. This has been necessitated by difficult in accessing funding by these groups as a result of increased interest rates and stringent collateral requirements. The results of this study would contribute to the body of knowledge and the outcome of this research would be used for my thesis and any possible conferences and journal publications.

How was I identified and why am I being invited to participate in this research?

As a financial expert, you are invited to participate in this research. The financial experts for this study are persons of high standard/reputation in the finance sector as well was construction industry.

What will happen in this research?

Part of the research involves obtaining experts views on the existing financing models applicable in the construction industry. This interview with experts is conducted to validate and extend findings from the literature review.

If you agree to participate, you will be provided with a consent form and the indicative questions for interview. Your opinions will be recorded using a researcher`s field notes or through telephone discussion.

What are the discomforts and risks?

No significant potential discomforts and risks are associated with this research. However, measures will be taken to ensure the privacy and confidentiality of the information collected from participants.

How will these discomforts and risks be alleviated?

The information collected from you will be transcribed by the researcher. The transcript will be kept under lock and key in my custody.

What are the benefits?

This provides the participants with knowledge on appropriate funding strategies in the construction industry of Kenya. The researcher intends to develop a model titled self-help financing model. The implementation of research findings is expected to enhance access to funding by the low and middle income groups in Kenya.

The findings will lead the researcher to publish a thesis and obtain a master's degree qualification. This will contribute the researcher to the enhancement of knowledge in the subject area.

How will my privacy be protected?

All information collected from you will be kept strictly confidential. The interview transcript and your consent form will be stored under lock and key. The researcher and supervisors have access to them. None of your personal information will be disclosed to the third parties or in any of this research output (Thesis, journal or articles). Your decision to participate is entirely your personal decision and you are free to withdraw from research any time.

What are the costs of participation in this research?

There is no cost except your valuable time involved in participating in this research. This interview involves approximately 30min to complete.

What opportunity do I have to consider this invitation?

You are given one week to consider this invitation, within this time if you need any further information or clarification, I would be free to answer your questions. During this time you will have an opportunity to see the indicative interview questions.

How do I agree to participate in this research?

Your consent to participate in this research is obtained through a consent form which will be sent to you along with this email invitation. If you decide to participate by signing the consent form, this will be considered your consent.

Will I receive feedback on the results of this research?

You will have the opportunity to verify the interview transcripts. The access to the published thesis and any conference or journal publication arises out of this research will be made available to you via email on request.

Whom do I contact for further information about this research?

Researcher contact details are as follows;

Muigai Julius.+254 723282771

APPENDIX 4: Conditions for Lending

	Institution	ID/Passport copy	KRA Pin copy	3 months' pay slips - Originals or Certified copies	6 months' salary statements - Originals or Certified copies	Letter from employer stating: Position/ Length of service/ Retirement age/ Income/Employment terms, (permanent or contract details) & Eligibility of house or owner occupier allowance.
	Employed					
1.	**HFCK**	√	√	√	√	√
2.	**S&L**	√	√	√	√	√
3.	**Development bank**	√	√	√	√	√
4.	**Consolidated bank**	√	√	√	√	√
5.	**First community bank**	√	√	√	√	√
6.	**Paramount bank**	√	√	√	√	√

	Institution	ID/Passport copy	KRA Pin copy	Business registration certificate	1 year bank statements - Originals or Bank Certified copies	Audited accounts for last three (3) years (where applicable) -Business profile - brief history, nature and operation of business
	Self-Employed					
1.	**HFCK**	√	√	√	√	√
2.	**S&L**	√	√	√	√	√
3.	**Development bank**	√	√	√	√	√
4.	**Consolidated bank**	√	√	√	√	√
5.	**First community bank**	√	√	√	√	√
6.	**Paramount bank**	√	√	√	√	√

Appendix 5: Conditions for the strategy

	Institution	ID/Passport copy	KRA Pin copy	Business registration certificate	1 year bank statements - Originals or Bank Certified copies	Audited accounts for last three (3) years (where applicable) -Business profile - brief history, nature and operation of business
	Self-Employed					
1.	**HFCK**	√	√	√	√	√
2.	**S&L**	√	√	√	√	√
3.	**Development bank**	√	√	√	√	√
4.	**Consolidated bank**	√	√	√	√	√
5.	**First community bank**	√	√	√	√	√
6.	**Paramount bank**	√	√	√	√	√

Appendix 6: Share of mortgages to the three categories of commercial banks

Bank name	Bank segment	Mortgage loan value 2008	No of Loans	Mortgage loan value 2009	No of Loans	Mortgage loan value 2010	No of Loans
LARGE							
KCB	Large	9,703,074,000	3,170	15,639,607,000	4,176	17,974,354,000	4,051
HFCK	Large	11,300,000,000	3,805	15,100,000,000	3,869	16,900,000,000	3,988
CFC Stanbic	Large	5,349,932,000	743	6,137,238,000	869	6,497,427,000	939
Standard Chartered	Large	4,424,805,000	1,118	4,897,843,000	1,122	4,960,423,000	1,107
Barclays Bank	Large	2,365,937,424	618	2,913,833,834	726	3,055,270,533	742
MEDIUM							
Development bank	Medium	683,812,000	60	1,709,598,985	185	1,711,007,860	322
Consolidated bank	Medium	N/A	N/A	209,620,973	18	794,515,803	120
Family bank	Medium	164,006,996	49	694,779,916	124	663,260,138	154
Victoria Commercial bank	Medium	17,340,280	7	86,332,458	11	61,080,865	7
Chase bank	Medium	421,952,000	109	483,110,000	126	528,743,000	151
SMALL							
First community	Small	N/A	N/A	N/A	N/A	1,162,295,656	157
Paramount bank	Small	179,146,023	63	160,014,052	72	193,781,768	78
Trans-National bank	Small	134,487,062	24	190,002,203	34	69,066,731	21
Credit bank	Small	10,782,401	5	12,748,830	7	45,897,330	9
Middle East bank	Small	12,864,000	8	17,734,000	7	34,528,000	9

Appendix 7:Mortgage repayment schedule at 16% p.a for HFCK

		Repayment Schedule at 16% p.a		
Amount	**5 Years**	**10 years**	**15 years**	**20 years**
100,000.00	2,431.81	1,675.13	1,468.70	1,391.26
500,000.00	12,159.05	8,375.65	7,343.50	6,956.30
1,000,000.00	24,318.10	16,751.30	14,687.00	13,912.60
2,000,000.00	48,636.20	33,502.60	29,374.00	27,825.20
3,000,000.00	72,954.30	50,253.90	44,061.00	41,737.80
4,000,000.00	97,272.40	67,005.20	58,748.00	55,650.40
5,000,000.00	121,590.50	83,756.50	73,435.00	69,563.00
6,000,000.00	145,908.60	100,507.80	88,122.00	83,475.60
7,000,000.00	170,226.70	117,259.10	102,809.00	97,388.20
8,000,000.00	194,544.80	134,010.40	117,496.00	111,300.80
9,000,000.00	218,862.90	150,761.70	132,183.00	125,213.40
10,000,000.00	243,181.00	167,513.00	146,870.00	139,126.00
11,000,000.00	267,499.10	184,264.30	161,557.00	153,038.60
12,000,000.00	291,817.20	201,015.60	176,244.00	166,951.20
13,000,000.00	316,135.30	217,766.90	190,931.00	180,863.80
14,000,000.00	340,453.40	234,518.20	205,618.00	194,776.40
15,000,000.00	364,771.50	251,269.50	220,305.00	208,689.00
16,000,000.00	389,089.60	268,020.80	234,992.00	222,601.60
17,000,000.00	413,407.70	284,772.10	249,679.00	236,514.20
18,000,000.00	437,725.80	301,523.40	264,366.00	250,426.80
19,000,000.00	462,043.90	318,274.70	279,053.00	264,339.40
20,000,000.00	486,362.00	335,026.00	293,740.00	278,252.00