# A SURVEY OF FACTORS INFLUENCING MORTGAGE FINANCING IN KENYA

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D61/72029/2008

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A MANAGEMENT RESEARCH PROJECT IS SUBMITTED IN PARTIAL FULFILLMENT OF THE REQUIREMENTS OF THE DEGREE OF MASTER OF BUSINESS ADMINISTRATION, UNIVERSITY OF NAIROBI

OCTOBER, 2010

#### **DECLARATION**

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

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This research project has been submitted for examination with my approval as university supervisor

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#### ACKNOWLEDGEMENT

The completion of this project was not easy. It was not created by the author alone, but relied on the cooperative assistance of many unseen hands. It has enabled me face challenges of new situations with more confidence and broadened my analytical skills.

First and foremost I owe special thanks to my mother Mary Wanjiru who sacrificed greatly to start me out in life with an education that lay foundation and desire to achieve what you never had. Your attitude toward me has sowed seeds of confidence. I see your stamp in all my achievements both big and small. Thank you for believing in me. I am indebted to you for instilling the value of education in me.

I sincerely acknowledge my supervisor Joseph Barasa, for his immense support, his never ending patience, constructive criticism and devoting his time to go through my work providing guidance to ensure successful progress till completion of this project. Special thanks to my brothers Munuhe, Kariuki, Nderitu, Wahome and my only sister Wanjiku who bore the brunt sacrifices that we had to undergo to make this additional step in life possible.

Special mentions go to Geoffrey, Mary Mbugua, Nyoro, Macharia and Jacinta who through MBA course have remained valuable friends. You have propped me up all through during all the emotional low times and self doubt. How would I have done this without you?

I also extend my appreciation to all respondents who took time to give their views through the questionnaires.

Above all I thank God for giving me strength and perseverance to successfully finish this course despite the heavy demand on my professional and personal life.

All errors and omissions not withstanding all contributions are mine and mine alone

May God bless you all!

# **DEDICATION**

To my beloved mother

Mary wanjiru

And

My only sister

Beatrice wanjiku

I owe all this to you

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#### ABSTRACT

The rapid development of a variety of mortgage-backed securities 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. This study sought to establish the effects of mortgage financing on performance of the firms. The objective of the study was to establish the relationship between factor influencing mortgage financing and performance of mortgage institutions in Kenya. This research study was a causal design. Which enabled the researcher to establish the relationship between factors influencing mortgage financing and performance of mortgage institutions in Kenya. The target population for the study was all mortgaging firms in Kenya that offer mortgage financing services. The researcher used primary data. Primary data was obtained through self-administered questionnaires with closed and open-ended questions. The collected data was thoroughly examined and checked for completeness and comprehensibility. The data was then be summarized, coded and tabulated. Descriptive statistics such as means, standard deviation and frequency distribution was used to analyze the data .Data presentation was done through tables. The inferential statistic regression was done to establish a causal effect relating independence variables (firm performance of the mortgaging financing to the dependent variable which are the factors influencing mortgaging financing. The study concludes that mortgage firms in Kenya emphases on mortgage financing to improve firm performance. The study concludes that mortgage financing is influenced by market and financial factors which includes increase investment and Improve Profitability of the firm, improvement of risk management, attraction of more customers promotion of innovations, Market Penetration, diversification of investment and encountering competitions in the market lowering of interest on Treasury bond, Kenya financial laws require bank to have less cash in reserve and High interest from Mortgage, creating of wealth and Improving savings.

#### CHAPTER ONE

#### INTRODUCTION

## 1.1 Background to the study

Mortgage financing is the process of underwriting and extending a home loan or mortgage on commercial property to a qualified applicant. The aim or focus of mortgage financing normally centers around two specific goals (Dolde, 2006). First, the financing seeks to create revenue for the lender and secondly the extension of mortgages allows qualified individuals and business entities to secure properties that can be repaid in terms that are within the ability of the recipient of the loan to pay off in a timely manner (Okwir, 2002). Mortgage loans are secured by the real property, and provide a schedule of payments of interest and repayment of the principal to a bank. Most mortgage contracts arrange for loans to be fully amortized with adjustable mortgage interest rates and either payment or maturity is fixed for the term of the loan. The mortgage market is important for housing because it makes the investments of real property divisible thereby allowing households more flexibility in adjusting intertemporal allocation of savings and housing consumption between the present and the future as desired (Mehdian, 2001).

Mortgage loans are generally structured as long-term loans, the periodic payments for which are similar to an annuity and calculated according to the time value of money formulae. The most basic arrangement would require a fixed monthly payment over a period of ten to thirty years, depending on local conditions. Over this period the principal component of the loan would be slowly paid down through amortization. In practice, many variants are possible and common worldwide and within each country ( Tse , 2002).

Lenders provide funds against property to earn interest income, and generally borrow these funds themselves. The price at which the lenders borrow money therefore affects the cost of borrowing. Lenders may also, in many countries, sell the mortgage loan to

2006).). Mortgage lending will also take into account the perceived riskiness of the mortgage loan, that is, the likelihood that the funds will be repaid usually considered a function of the creditworthiness of the borrower, that if they are not repaid, the lender will be able to foreclose and recoup some or all of its original capital; and the financial, interest rate risk and time delays that may be involved in certain circumstances (Stiglitz and Weiss 2005).

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

Coles (1996) argues that the UK mortgage market has experienced three stages of change. The first period is the early to mid-1980s. Loans and high gearing were seen as low risk, by both borrowers and lenders. The amelioration of mortgage market rationing contributed to this demand (Leece, 1995; Meen, 1990). Second, the early 1990s witnessed a new perception of high risk. Finally, in the mid-1990s and onwards there is an increased emphasis on hedging and managing risk by economic agents. Though the completeness of insurance markets is an important issue in mortgage lending considerations and risk analysis (Chinloy, 1995), another critical factor is the emergence of new mortgage designs. The emphasis of these new designs is on payment flexibility. The research reported in this paper considers the reaction of mortgage holders to the increased perception of risk. The fall in property prices that began in the late 1980s engendered this change of view. The paper argues that this drove innovations in mortgage design and prompted the emergence of new mortgage instruments. Changes in mortgage

design do not always lead to fundamentally different mortgage instruments. For example, the ability to accelerate repayments of capital in a conventional annuity mortgage is not a new instrument. The more rapid crediting of interest on prepayments is a change in design. The emergence of a fixed rather than a variable rate mortgage would be an example of a new mortgage instrument.

The amount of finance that a household can leverage given their income and financial wealth is the most important determinant of their housing choice and the quality of house. Traditionally numerous instruments finance home mortgages, offered by public and private sector institutions, in developed countries. How efficient are these instruments or financing arrangements is an important question for research. The outcome of an efficient mortgage finance system can be viewed in terms of an increase in the homeownership rate or quality of housing. Efficiency is a very broad term and 'ambiguity arises in part from a lack of precision about whose efficiency is being discussed' (Stephens 2000). Failure to distinguish between the narrow meaning of efficiency related to cost minimization (intermediation efficiency) and broader economic definitions of allocative efficiency is the reason for definitional ambiguity (Stephens 2000). Earlier studies on measuring efficiency of the mortgage system have used a narrow meaning of mortgage system efficiency due to the practical difficulty in measuring economic efficiency, which owes itself to a study by Diamond and Lea (1992). Economic efficiency includes 'intermediation efficiency', efficiency of allocation of risks as a result of the regulatory system including nonfinancial institutions such as the valuation system and the security offered to lenders by law and cost and benefits of the housing subsidy system (Stephens 2000). As recognized by Diamond and Lea (1992) and Stephens (2000), measurement of cost and benefits of housing finance subsidy systems are difficulty.

The Historical role of mortgages was always a predominant form of borrowing in rural economies because land was the most important asset. Landowners borrowed against future rents to finance current consumption or the development of their estates. The traditional form of mortgage lending was a direct loan from one individual to another, both of them usually wealthy (Asare and Whitehead, 2006). In most mortgage financing

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# 1.2 Statement of the problem

Mortgage loans are secured by the real property, and provide a schedule of payments of interest and repayment of the principal to a bank. Most mortgage contracts arrange for loans to be fully amortized with adjustable mortgage interest rates and either payment or maturity is fixed for the term of the loan. As with most types of loans, mortgage financing involves the full repayment of the amount borrowed to acquire the property, plus applicable interest that is applied according to terms outlined in the mortgage agreement. The interest rate may be fixed, meaning it remains the same for the duration of the contract. However, it is also possible to obtain mortgage financing that carries a variable rate of interest. This allows the homeowner to take advantage of any decreases in property interest rates that may take place during the life of the mortgage (Hancock and Wilcox 2006).

Avery, Brevoort and Canner, (2006) indicated that low interest rate schemes in commercial banks made positive impact on the credit growth of mortgage finance loans from loan takeovers from existing lenders. Over a longer term, the growth rates of banks was linked to mortgage firms ability to match services to the need of the customers and generate adequate risk-adjusted returns, besides being influenced by the overall growth in the mortgage finance market. The home mortgage market has grown rapidly in the past

decade. The home mortgage debt as percentage of GDP has increased from 40-50% in 1990s to more than 70% in 2003 and 2004 (Green and Wachter 2005). The growth is largely attributable to the homeownership encouragement policy that the government adopted. Several programs were established to foster mortgage lending, construction and encourage home ownership. These programs include the Government National Mortgage Association, the Federal National Mortgage Association (known as Fannie Mae) and the Federal Home Loan Mortgage Corporation known as Freddie Mac (Petersen and Rajan 2002). As a result of readily available funding for home mortgages, denial rate for conventional home purchase loans in 2002 and 2003 decreased to 14%, half of the denial rate in 1997 (Federal Financial Institutions Examination Council, Press Release). Other than the government policies, the innovation in the home mortgage market also helped the growth of the home mortgage lending. Many mortgage products were introduce to the market, such as Adjustment Rate Mortgage (ARM), balloon loans, interest-only loans, piggy back loans. More importantly, the borrowers with poor credit in the conventional standard can now get loans in the subprime segment of the home mortgage market. The subprime market is meant to overcome the credit rationing (Stiglitz and Weiss 1981)

Previous local study has focused on perceive quality of service in commercial bank, effects of mortgages on firms performance for instance Ndirangu (2004) did a study on effect of types of mortgages on financial performance of mortgage institutions in Kenya and Murugu (2003) studied perceived quality of service in the mortgage sector. This motivate the carrying out of this study to find out what are the drive for mortgage financing undertaken by mortgage firms and commercial banks in Kenya. This study therefore seek to fill this gap of knowledge by carrying out a survey of influencing mortgage financing in Kenya

# 1.3 Objectives of the study

To investigate factors influencing mortgage financing in Kenya.

# 1.4 Importance of the study

The study will be of great benefit to banking institutions in Kenya since it will outline risk factors involved in financing mortgages. The development of the bank depends on several factors of which a mortgage financing plays a major role in the current banking. This study will ascertain the benefits of mortgage financing to banking institutions in Kenya. It will help in developing of marketing career, people working closely with marketing professionals will be able to acquire relevant knowledge of factors influencing mortgage financing hence able to market they product in the market. The study ensure good knowledge on mortgages hence marketers promote the product with ease.

The government will also benefit in developing policy pertaining to mortgage and asset financing. It will also be significant to the research and scholars as it will form a background for reference and future study.

Due to knowledge gained by most applicants through the study most applicants will comfortably embrace mortgage financing and this will lead to high returns to most banks and high tax return to the government. House is the biggest asset a person can have. But it is also true that the monthly payment for mortgage is the biggest eater of monthly budget. So, would it be better if homeowners have the choice of lowering down the monthly payment? It is the best way to do it, since it will adopt the current interest rate. Every borrower knows that he or she is paying big on interest rate especially during the first half of the term. If financed, the old rate with higher monthly payment is replaced by new and lower rate that equates to lower monthly payment.

The study will also be significant to scholars who will find this study useful as it will provide information on factors influencing mortgage financial in Kenya. The research who may be de interested on mortgage financing will find this research valuables as it will lay foundation for further research.

#### **CHAPTER TWO**

#### LITERATURE REVIEW

#### 2.1 Introduction

This chapter reviews the past literature on the study. The theoretical and empirical review is critically reviewed. The chapter also reviews more studies on mortgage financing in an economy. Possible factors influencing mortgage financing are also presented in this chapter.

## 2.2The Mortgage

A mortgage loan is a loan secured by real property through the use of a mortgage note which evidences the existence of the loan and the encumbrance of that realty through the granting of a mortgage which secures the loan. However, the word mortgage alone, in everyday usage, is most often used to mean mortgage loan.

A home buyer or builder can obtain financing (a loan) either to purchase or secure against the property from a financial institution, such as a bank, either directly or indirectly through intermediaries. Features of mortgage loans such as the size of the loan, maturity of the loan, interest rate, method of paying off the loan, and other characteristics can vary considerably (Kluger and Miller, 2000)

In many countries, though not all, it is normal for home purchases to be funded by a mortgage loan. Few individuals have enough savings or liquid funds to enable them to purchase property outright. In countries where the demand for home ownership is highest, strong domestic markets have developed.

# 2.3Theoretical Framework

# 2.3.1 Title theory and lien theory of mortgages

Some banks retain and treat the mortgage as a title theory. Since the mortgage is said to hold a title interest, she has the right to possession under this theory. Some banks apply a

the mortgagee's duty to recovery if payment is made. The title is said to remain in the mortgagee until the mortgage has been satisfied and foreclosed. Although the mortgagee has the right of possession to the property, there is generally an express agreement giving the right of possession to the mortgagor. The mortgagee is said to hold the title for security purposes only. The mortgagor is given the right of possession (Buckley and Kalarickal, 2004).

In a lien theory bank, the mortgagor retains legal and equitable title to the property, but conveys an interest that the mortgagee can only foreclose upon to satisfy the obligation of the mortgagor. This is equivalent to a future interest in the property which allows the mortgagee to use the process of foreclosure. The interest is a security interest or mortgage, which forms a lien on the property. In this theory the right to possession arises upon a default. The mortgagor has a right to sue the mortgagee for any interference with his right of possession (Buckley and Kalarickal, 2004).

For practical applications there is usually very little difference between a lien theory and a title theory. The principle difference arising in the title theory bank is that the mortgagee is given the right to possession before the foreclosure is complete. The language of the mortgage provides for possession rights being in the mortgagor up to the time of the foreclosure.

# 2.3.2 Innovation Theory of Mortgage Financing

Innovations are often adopted by organizations through two types of innovation-decisions: collective innovation decisions and authority innovation decisions. The collection-innovation decision occurs when the adoption of an innovation has been made by a consensus among the members of an organization. The authority-innovation decision occurs when the adoption of an innovation has been made by very few individuals with high positions of power within an organization (Rogers, 2005). Unlike the optional innovation decision process, these innovation-decision processes only occur within an organization or hierarchical group. Within the innovation decision process in an organization there are certain individuals termed "champions" who stand behind an

innovation and break through any opposition that the innovation may have caused. The champion within the diffusion of innovation theory plays a very similar role as to the champion used within the efficiency business model Six Sigma. The innovation process within an organization contains five stages that are slightly similar to the innovation-decision process that individuals undertake. These stages are: agenda-setting, matching, redefining/restructuring, clarifying, routinizing. There are both positive and negative outcomes when an individual or organization chooses to adopt a particular innovation. Rogers states that this is an area that needs further research because of the biased positive attitude that is associated with the adoption of a new innovation (Rogers, 2005). In the Diffusion of Innovation, Rogers lists three categories for consequences: desirable vs. undesirable, direct vs. indirect, and anticipated vs. unanticipated.

The innovation adoption curve of Rogers is a model that classifies adopters of innovations into various categories, based on the idea that certain individuals are inevitably more open to adaptation than others. The concept of adopter categories is important because it shows that all innovations go through a natural, predictable, and sometimes lengthy process before becoming widely adopted within a population (Rogers, 2000) Roger's categories include; innovators (2.5 %), early Adopters (13.5 %), early Majority (34 %), late Majority (34 %) and laggards (16 %). Rogers's adopter's characteristics are important because a person's innovation adoption characteristic affects the rate of uptake of an innovation over time. Different adopter groups buy into innovation for different reasons and have different expectations. People who are innovators and early adopters are easier to convince to innovate. Mainstream adopters (early and late majority) who make up 64 % of any population and these adopters determine whether an innovative practice is embedded. Mainstream adopters need different support structure from early adopters in terms of support, different emphasis on technology and teaching practice. Innovators may require looser and less tightly controlled conditions, while mainstream adopters may require more stability and support (Repp, 2004).

Innovators and early adopters make up only a small proportion of any population (2.5% are innovators and early adopters about 13%) and there are not enough of them to have an impact on embedding innovation in an organization. The early and late majority (called the mainstream adopters) makes up 64 % of any population and these are the ones who can make the difference to whether an innovative practice is embedded in an organization. The early majority are more practical: they do think through the pros and cons of a new idea before they adopt, so they help to make it more tangible and acceptable. But if the support systems and infrastructure aren't there, they'll hold back on a commitment.

The late majority, on the other hand, are creatures of habit and predictability. They want to know the rules, they love systems. The beautiful thing about the late majority is that when they don't find rules or systems, they'll start figuring them out. Laggards are very set in their way, and will only adopt innovation when it has become mainstream i.e. standard practice in an organization (Repp, 2004).

Another important concept described by Rogers (2005) is the S-shaped adoption curve i.e. successful innovation goes through a period of slow adoption before experiencing a sudden period of rapid adoption and then a gradual leveling off (forms an S-shaped curve). Rapid expansion of most successful innovations will occur when social and technical factors combine to permit the innovation to experience dramatic growth.

# 2.4 State of Mortgage Financing

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 and 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 and Lea 1992: Ch. 9). 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. Figure 3 is a graphical illustration of the housing finance system in Japan. Both public and private institutions finance homeownership. 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 and Kalarickal, 2004).

The 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.

The 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. Figure 4 shows the flow of funds to and from the GHLC. A major source of funding for the GHLC is the Treasury Investment and LoanProgram 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).

# 2.5 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. et al (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 loanto-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 Boca and Lusardi 2003). By 1993, when the landslide changes in mortgage market had just been initiated, mortgage instalments 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-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.

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 and Kalarickal. 2005)

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.

(ERS 2003-2007) The 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 et al 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.

In Nairobi, with a population of around 4 million people, nearly 60% of households live in slum areas. A recent survey of these settlements showed that 73% of households live on less than a dollar a day (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 (Mutero, 2007).

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).

Program, Ministry of Housing, Kenya shelter at a rapid rate. 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. 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 lend 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

downmarket, and the majority of Kenyans, especially the very poor still lack access to formal financial services (Alder, 2007).

Government has estimated a housing need of 150,000 dwellings per year in Kenya's urban areas. 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 financing options 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).

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 (http://www.housing.go.ke/kensup).

It must be the case that overcrowding in the existing formal housing stock also helps meet the housing shortage. Gulyani et al. (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.

Affordability should take future income into account, especially income from subletting Gulyani et al. (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).

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)

# 2.6 Classification of Mortgages

1

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 *et al.*, 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 and 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, 2004). 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, 2006).

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 over time 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 and Miller, 2000).

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. 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.

## 2.7 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 and 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. 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 and 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. 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).

## 2.8 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. 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. The changing home mortgage market. 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. The Comptroller General of the US (GAO) report of 1996 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.

Mortgage financing has led to Competition among the financing firms achieving optimal efficiency and resource allocation decisions can be determined by financial responses to relative price signals. The 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 adsorb 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 judgements 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 (1995) 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 (Hancock and Wilcox, 2006). 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 Roy (2003), 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) (NHAZ, 2002).

Today, with 2.8m account holders, Equity claims to be home to almost half of all the bank accounts in Kenya. 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. 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.

# 2.9 Factors influencing Mortgage financing and Performance

Linbo Fan (2004) 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. Jorgensen (2006) 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.

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. 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.

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. 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.

#### 2.10 Conclusion

A home is an investment and one derives a lot pride by owning one rather than renting. This can be done through the various Mortgage products offered by Mortgage companies and some banks. These products include: Built unit, off plan, construction, plot loan, equity release, project finance, commercial properties (Basu *et al.*, 2004). Here the intermediary obtains funds from savers in exchange for securities for example certificate of deposits. They then use this money in lending in form of mortgage loan. Savings and loans associations (S & L'S) take the funds of many small savers and then lend this money to home buyers and other types of loans. Savers obtain a degree of liquidity that would be absent if they made mortgage loans directly

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.

Home ownership is the most desired form of housing tenure around the world for reasons of security and certainty. Owning a house presents a struggle for families virtually everywhere: for example, in Tokyo a typical house can cost around five to six times the yearly earnings of a family. Many families simply do not possess sufficient funds to purchase a house with equity. A universal alternative to equity-based financing for outright purchase before taking possession of a house is through debt financing. Debt in total housing finance in Japan is around 60–70%. Housing finance systems struggle to create instruments that will efficiently finance the purchase of owner-occupied housing. Design of mortgages depends on the nature of the housing system, the allocation of risk and the economic and institutional factors in a country.

On the one hand, the housing finance market has become more competitive as new providers have been encouraged to enter the market. Such providers have been seeking new customers to extend their activities. Thus, the extension of mortgage services is a commercial response to market conditions. On the other hand, the state has been looking to the market to address housing need. Faced with considerable housing problems and seeking to reduce public expenditure, governments have sought to encourage the market to address needs where possible (The World Bank, 2006).

In the developed world, mortgage lending is at an all time high. The aim has been to encourage increased homeownership. This has meant that in countries like Australia and the United States, the percentage of owner-occupiers with mortgages is 45 per cent and 63 per cent respectively. In the US, homeownership has become a significant measurement of economic health. Moreover, in 2002, despite the worrying increase in property values, 52 percent of the mortgages given out by an institution like Fannie Mae went to low and moderate income families (The World Bank, 2004).

#### CHAPTER THREE

#### RESEARCH METHODOLOGY

#### 3.1 Introduction

This chapter described the methods that were used in the collection of data pertinent in answering the research question. It was divided into research design, study population. sample size sampling design, data collection, data analysis methods, ethical issues.

### 3.2 Research Design

This research study was a causal design. The design was used in obtaining causal inferences that are objective, and therefore have the best chance of revealing scientific truths on what is the relationship between factors influencing mortgage financing and firm performance. This causal design enabled the researcher to establish the relationship between factors influencing mortgage financing and performance of mortgage institutions in Kenya.

### 3.3 Target Population

Target population is the specific population about which information is desired. According to Ngechu (2004), a population is a well defined or set of people, services, elements, events, group of things or households that are being investigated. This definition ensures that population of interest is homogeneous. The population of this study comprised of managers from the selected mortgage financing institutions in Kenya. There are 46 mortgaging firms in Kenya that offer mortgage financing services, therefore the target population of this study will be 46 mortgage firms.

### 3.5 Data Collection

The researcher used primary data. Primary data was obtained through self-administered questionnaires with closed and open-ended questions. The researcher selected the questionnaire since it the most appropriate toll to gather information that can determine

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market factors leading to mortgage adoption, financial factors leading to mortgage adoption and to ascertain the benefits of mortgage financing to Kenya Commercial bank. The questionnaires included structured and unstructured questions and were administered to all the respondents. The closed ended questions enabled the researcher to collect quantitative data while open-ended questions enabled the researcher to collect qualitative data.

### 3.5 Validity and Reliability of Instruments

Validity is the degree to which results obtained from the analysis of the data actually represent the phenomena under study (Mugenda, 1999). To enhance content validity, the researcher's supervisor was asked to appraise the instruments. External validity which has to do with the representation of the sample with regard to the target population was done on pilot study in five mortgage firms managers who were used in the pilot study.

Reliability is used to focus on the degree to which empirical indicators or measures are consistent across two or more attempts. The researcher used the test-retest method whereby questionnaires were administered twice to the same group of mortgage firms managers. A time lapse of two weeks was allowed before the questionnaires were administered again. A comparison between the two sets will be made using Pearson's correlation co-efficient to determine the reliability of the questionnaires.

### 3.6 Data Analysis

The collected data was thoroughly examined and checked for completeness and comprehensibility. The data was then be summarized, coded and tabulated. Descriptive statistics such as means, standard deviation and frequency distribution was used to analyze the data. Data was coded and entered into the Statistical Package for Social Sciences (SPSS 17) for analysis. SPSS was used to perform the analysis as it aids in organizing and summarizing the data by the use of descriptive statistics such as tables. Data presentation was done by the use of pie charts, bar charts and graphs, percentages and frequency tables.

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$$Y = \alpha + \beta_1 X_1 + \beta_1 X_2 + \beta_1 X_3 + \beta_1 X_{4+} \beta_1 X_{5+} \beta_1 X_{6+} e$$

Where

Y= Firms performance

 $\alpha$  = Constant Term

 $\beta_1$ = Beta coefficients

X<sub>1</sub>= Competition among the financing firms

X<sub>2</sub>= Economic Success

X<sub>3=</sub> Greater Housing Demand

X<sub>4=</sub> Investment needs

X<sub>5=</sub> supplement their business income

### e = Error Term

Firm performance was measured interms of increase in number of customers, increases in return on assets and diversification of expansions. This enabled the researcher to establish the relationship between the mortgage firm performance and factors influencing mortgage financing.

#### 3.7 Ethical Issues

Due to sensitivity of some information collected, the researcher holds a moral obligation to treat the information with utmost propriety. Since the respondents might be reluctant to disclose some information, the researcher needs to reassure the respondents of confidentiality of the information given.

#### **CHAPTER FOUR**

#### DATA ANALYSIS AND INTERPRETATION OF FINDINGS

#### 4.1 Introduction

This chapter presents the discussion and conclusion of the study. From the study, the target population was 46, 36 respondents responded and returned the questionnaires. This constituted 78.0% response rate.

### 4.2 Types of Mortgage the bank offers

Table 4. 1: Types of Mortgage The bank offers

	Frequency	Percent
Interest only fixed rate Mortgage	13	34
Adjust rate Mortgage Loan	25	66
Total	38	100.0

Source: Research Data

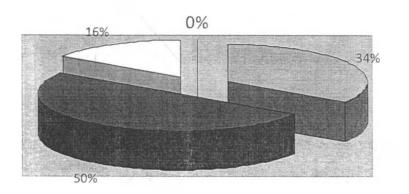
The study sought to know the types of the mortgage offered by the mortgage firms as indicated in the Table 4.1. From the findings, majority 66.0 % of the respondents indicated that their forms offered Adjust rate Mortgage Loan while 34.0% of the respondents indicated that their firms offers Interest only fixed rate Mortgage.

This clearly indicate that the mortgage institutions offers either offered Adjust rate Mortgage Loan or Interest only fixed rate Mortgage. Other respondents indicated that they offers variable rate mortgage to their clients.

The study found that mortgage firms are offering different mortgage products to the market with an aim of attracting more clients, improving it financial performance and improving shareholders value.

Table 4. 2: Extent to which Emphasize on Mortgage Financing

### Extent to which Firms empasizes on mortgage financing



□ Very Great Extent□ Great Extent□ Moderate Extent□ Slice 4

Source: Research Data

The respondents were requested to indicated to what extent the mortgage firms emphasizes on mortgage financing as indicated in the Table 4.2 . From the finding, majority 50 % of the respondents indicated that their financial intuitions emphasize on mortgage financing to a great extent.

The study also found that 34.2% of the respondents indicated that their mortgage institutions emphasize on mortgage finances to a very great extent while 15.8% of the respondents indicated that their mortgage firms emphasize on mortgage financing to a moderate extent...

This implies that mortgage institutions are putting more emphasizes on the mortgages and investing more on mortgage investment for the purpose of enhancing it financial performance as well as increasing firm investment.

### 4.2 Marketing factor Influence your Bank Adopting Mortgage

Table 4. 3: Extent to which Marketing factor Influence your Bank Adopting Mortgage

	Mean	Std. Dvt
Market Penetration	4.31	.96
Cross Selling Potential	4.11	.47
Compensation From other Bank	4.13	.57
Relative Political Stability	3.02	.88
Economic Reforms in Kenya	3.97	.78
Market Liberalization	3.78	.62
Improve Profitability of the Bank	4.57	.43
To improve Risk Management	4.41	.52
Diversification of investment	4.2	.75
Promotion of innovation	4.36	.63
Attract more Customers	4.39	.54
Encounter Competitions in the Market	4.15	.71
Increase investment	4.61	.66
Improve Saving	3.66	.48
Provide a Mean of Managing Risk	4.21	.70
Creating of Wealth	3.89	.311

Source: Research Data

The Table 4.3 above indicates the marketing factors influences adoption of the mortgage financing. From the findings, majority of the respondents indicated that increase investment and Improve Profitability of the Bank—influence adoption of mortgage financing to a very great extent as indicated by a mean of 4.61 and 4.57 respectively. The study also found that improvement of risk management, attraction of more customers promotion of innovations, Market Penetration, diversification of investment—and encountering competitions in the market influence adoption of mortgage financing to a great extent as indicated by mean of 4.41, 4.39,4.36, 4.31,4.20 and 4.15. The study further found that economic reforms in Kenya, creating of wealth. Market Liberalization and Improving Saving also influence adoption of mortgage financing by financing firms to a great extent as indicated by a mean of 3.97,3.89, 3.78 and 3.66 respectively. This implies that marketing factors facing the mortgage institutions—are greatly influencing adoption of mortgage financing.



to a great extent as indicated by a mean of ,3.97,3.89, 3.78 and 3.66 respectively. This implies that marketing factors facing the mortgage institutions—are greatly influencing adoption of mortgage financing.

### 4.3 Mortgage Financing

Table 4. 4: Extent of agreeing on statement of the Mortgage Financing

	Mean	Std dvt
Mortgage financing reliably provide housing for Kenya	4.50	.64
Mortgage financing provides mechanism of aggravating funds	4.10	.50
through financial intermediation		
Mortgage financing encourage firms to save	4.36	.78

Source: Research Data

The respondents were requested to indicate the extent they agree with the statement concerning mortgage financing as indicated in the Table 4.4. From the findings, majority of the respondents indicated that mortgage financing reliably provide housing for Kenya to a very great extent as indicated by a mean of 4.50. The study also found that Mortgage financing encourages firms to save and provides mechanism of aggravating funds through financial intermediation to a great extent as indicated by a mean of 4.36 and 4.10.

## 4.4 Financial factors influence Mortgage financing

Table 4. 5: Extent to which financial factors influence Mortgage financing

	Mean	Std dvt
High interest from Mortgage	3.59	.63
Kenya financial laws require bank to have less cash in reserve	3.86	.70
Kenya financial law to lower interest on treasury bond	4.05	.65

Source: Research Data

The Table 4.5 indicates the financial factor influences mortgage firms to investment in mortgage investment. The study sought to know to what extent financial factors influences mortgage financing. From the findings, majority of the respondents indicated that financial law on finances requiring lowering of interest on Treasury bond in Kenya has greatly influence mortgage financing to a great extent as indicated by a mean of

4.05. The study also found that Kenya financial laws require bank to have less cash in reserve and High interest from Mortgage influences mortgage financing to a great extent as indicated by a mean of 3.86 and 3.59. Its clear from the findings that financial factors significantly influence adoption of mortgage financing by the mortgage institutions in Kenya.

### 4.5 Extent to which Factors Influences Mortgage Financing

Table 4. 6: Extent to which Factors Influences Mortgage Financing

	Mean	Std dvt
High interest From Mortgage improve financial performance of the	4.66	.54
mortgage firms		
Sound credit risk Management practices are built on a good quality portfolio management	3.67	0.48
M.F encourage Customer Save hence high interest earnings for bank	4.38	0.12
Encountering competitions in the Marketing improve Mortgage firms	3.66	.59
investment yielding to yield high performance	4.57	50
Mortgage firms attracts more customers widening customers base	4.57	.73
Customer are offered free customer consultant service	3.75	.80
Mortgage investment leads to improvement diversification of the	3.88	.97
banks increasing earnings	٥٥.٥	.97
Market liberations leads to improvement of the mortgage financing	4.64	.87

Source: Research Data

The respondents were requested to indicate the extent to which mortgage financing influences financial performance of the firms. From the findings in Table 4.6, majority of the respondents strongly agreed that that high interest from mortgage improve financial performance of the mortgage firms, Market liberations leads to improvement of the mortgage financing and that mortgage firms attracts more customers leading to increase customers base as indicated by a mean of 4.66. 4.64 and 4.57 respectively. Most of the respondents agreed that due to mortgage financing improvement on diversification of the firms lead to increasing earnings, encountering competitions in the Marketing improving Mortgage firms investment yielding to yield high performance, offering free customer consultant service, adopting sound credit risk Management practices built on a good quality portfolio management as indicated by a mean of 3.88,

3.86 3.75 and 3.67 respectively. This implies that mortgage financing has a great influence on improvement of financial performance of the firms.

### 4.6 Factor Analysis

Table 4. 7: Communalities

	Initial	Extraction
Types of Mortgage The bank offers	1.000	.945
Mortgage financing encounter bank customer to save	1.000	.916
High interest from Mortgage	1.000	.912
Kenya financial laws require bank to have less cash in reserve	1.000	.994
Kenya financial law Requiring to lower interest on treasury bond	1.000	.922
High interest From Mortgage improve financial performance of the mortgage firms	1.000	.883
Sound credit risk Management practices are built on a good quality portfolio management	1.000	.838
Mortgage financing encourage Customer to Save hence high interest earnings for the bank	1.000	.804
Competitions in the Marketing improve Mortgage firms investment hence high performance	1.000	.660
Mortgage firms attracts more customers widening customers base	1.000	.878
Customer are offered free customer consultant service	1.000	.939
Mortgage investment leads to improvement diversification of the banks increasing earnings	1.000	.573
Market liberations leads to improvement of the mortgage financing	1.000	.891
Cross selling potential has promoted mortgage financing	1.000	.842
Mortgage financing leads to improve profitability of the bank	1.000	.803

Extraction Method: Principal Component Analysis.

The above table helps the researcher to estimate the communalities for each variance. This is the proportion of variance that each item has in common with other factors. For example Kenya financial laws requiring bank to have less cash in reserve has influence mortgage financing as indicated by 99.4% communality or shared relationship with other factors that influencing mortgage financing in Kenya. This value has the greatest communality with others, while 'Mortgage investment leads to improvement diversification of the banks increasing earnings has the least communality or relationship with others of 57.3%.

Table 4. 8: Total Variance Explained

Com		•		Extr	action Su	ıms of	Rot	ation Sum	ıs of
р	Init	Initial Eigenvalues		Squ	ared Loa	dings	Squared Loading		ings
		% of			% of			% of	Cum
	Total	Var	Cum %	Total	Var	Cum %	Total	Var	%
1	4.578	26.930	26.930	4.578	26.930	26.930	3.111	18.302	18.302
2	3.659	21.525	48.455	3.659	21.525	48.455	2.699	15.877	34.179
3	2.178	12.814	61.270	2.178	12.814	61.270	2.440	14.356	48.535
4	1.567	9.216	70.486	1.567	9.216	70.486	2.179	12.815	61.350
5	1.328	7.809	78.295	1.328	7.809	78.295	2.173	12.783	74.133
6	1.120	6.586	84.881	1.120	6.586	84.881	1.827	10.748	84.881
7	.788	4.636	89.518						
8	.703	4.135	93.652						
9	.472	2.778	96.430						
10	.327	1.921	98.351						
11	.135	.791	99.143						
12	.087	.511	99.653						
13	.046	.269	99.922						
14	.013	.078	100.000						
15	-	_							
	6.508	3.828E-	100.000						
	E-16	15							

Extraction Method: Principal Component Analysis.

In the above table, the researcher used Kaiser Normalization Criterion, which allows for the extraction of components that have an Eigen value greater than 1. The principal component analysis was used and six factors were extracted. As the table shows, these six factors explain 84.88% of the total variation. Factor 1 contributed the highest variation of 18.30%. The contributions decrease as one move from one factor to the other up to factor 6.

Table 4. 9 : Component Matrix (a)

	Component					
	1	2	3	4	5	6
M.F leads to improve profitability of the bank	.842					
Cross selling potential has promoted M.F	.711			.495		
Customer are offered free customer service	.696				.598	
Types of Mortgage The bank offers	.650		.619		10	
Encountering competitions improve Mortgage firms investment hence high performance	.599	.322			.405	
Mortgage investment leads to improvement diversification of the banks increasing earnings	.599				.311	
Mortgage firms leads to widen customers base	.586	.459	.338		.358	
Kenya financial laws require bank to have less cash in reserve	.582	.553			.336	.471
M.F encourage Bank Customer to Save Leading to high interest earnings for the bank	.564	.468		.453		
M.F encounter bank customer to save	.477	.459				.475
M.F encounter bank customer to save	.372	.779	.354			
High interest from Mortgage	.337	.736	.472			
High interest From Mortgage improve financial performance of the mortgage firms		.713		.337	.401	
M.F encounter bank customer to save		.610	.400	.515		.303
Kenya financial law Requiring to lower interest on treasury bond		.593	.668			
Market liberations leads to improvement of M.F	.306		.566	.503	.389	
Sound credit risk Management practices are built on a good quality portfolio management	.354		.346	.512		.516

Extraction Method: Principal Component Analysis.

Since the first six factors were the only ones that had eigenvalues > 1, the final factor solution will only represent 84.8% of the variance in the data. The loadings listed under the "Factor" headings represent a correlation between that item and the overall factor. Like Pearson correlations, they range from -1 to 1.

a 6 components extracted.

Table 4. 10: Rotated Component Matrix (a)

	Component					
	1	2	3	4	5	6
Mortgage firms attracts more customers widening customers base	.915					
Encountering competitions in the Marketing						
improve Mortgage firms investment yielding to high performance		.795				
M.F leads to improve profitability of the bank	.740	.407				
M.F encourage Bank Customer to Save Leading to high interest earnings for the bank	.668		.417			.412
Cross selling potential has promoted M.F		.857				
Customer are offered free customer consultant service		.822				.489
Types of Mortgage The bank offers		.708		.596		
Mortgage investment leads to improvement diversification of the banks increasing earnings	.329	.481				.435
Kenya financial law Requiring to lower interest on treasury bond			.913			
High interest From Mortgage improve financial performance of the mortgage firms			.829			
High interest from Mortgage	.438		.683			.388
Sound credit risk Management practices are built on a good quality portfolio management				.880		
M.F encounter bank customer to save			.322	.749	.422	
Kenya financial laws require bank to have less cash in reserve					.924	
Market liberations leads to improvement of the M.F						.898

Extraction Method: Principal Component Analysis. Rotation Method: Varimax with

### Kaiser Normalization.

a Rotation converged in 15 iterations.

The initial component matrix was rotated using Varimax (Variance Maximization) with Kaiser Normalization. The above results allowed the researcher to identify what variables fall under each of the 6 major extracted factors. Each of the 15 variables was looked at and placed to one of the 6 factors depending on the percentage of variability; it explained the total variability of each factor. A variable is said to belong to a factor to which it explains more variation than any other factor.

From the findings, the study group the factors influencing mortgage financing basing on the factors that loads to try and indentify common factors affecting mortgage financing in Kenya. The variables that loads highly on Factor 1 all seems to relates to improvement in firms investment of the firm and therefore Factor 1 is therefore label as Investment Purpose. The questions that relate highly on factor 2 all relates on Firm market and so Factor 2 is therefore labeled Factor Market Factors. The questions relate to what financial factor influencing mortgage financing for the firms and therefore label Factor 3 Financial Factors. The question relate to risk management as a factor influencing mortgage financing therefore Factor 4 is label Risk Management. The question related to whether commercial bank adopt mortgage financing to encourage saving from the clients and therefore Labeled Factor 5 Saving Mobilization while Factor 6 is on the question on whether market integration influence mortgage financing therefore Factor 6 is labeled Market liberalization

From the above table, the individual variables constituting the six factors extracted are summarized and identified below-

#### Factor1: Investment

Factor loading on Factor 1 investment were Mortgage firms attracts more customers leading to increase customers base Increase investment, Mortgage financing leads to improve profitability of the bank Encounter Competitions in the Market, High interest From Mortgage improve financial performance of the mortgage firms and Mortgage investment leads to improvement diversification of the banks increasing earnings

#### Factor 2 Market Conditions

Under Factor 2, the following factor were extracted Encountering competitions in the Marketing improve Mortgage firm's investment yielding to yield high performance Cross Selling Potential, Cross selling potential has promoted mortgage financing market liberalization, The bank offers competition from other mortgage firms and types of Mortgage the bank offers

### Factor 3: Financial Factors

Under Factor 3, the factor loading or correlating was Kenya financial law requiring lowering interest on Treasury bond creating wealth, Provision a Mean of Managing risk. And high interest from mortgage improve financial performance of the mortgage firms

### Factor 4: Risk Management

Sound credit risk Management practices are built on a good quality portfolio management

### Factor 5: Saving Mobilization

Mortgage financing encourage Bank Customer to Save Leading to high interest earnings for the bank Improve Saving

### Factor 6: Market liberalization

Market liberations leads to improvement of the mortgage financing

Table 4. 11: Communalities

	Initial	Extraction
Market Penetration	1.000	.865
Cross Selling Potential	1.000	.828
Compensation From other Bank	1.000	.690
Relative Political Stability	1.000	.797
Economic Reforms in Kenya	1.000	.937
Market Liberalization	1.000	.637
Improve Profitability of the Bank	1.000	.831
To improve Risk Management	1.000	.836
Diversification of investment	1.000	.648
Promotion of innovation	1.000	.759
Attract more Customers	1.000	.918
Encounter Competitions in the Market	1.000	.807
Increase investment	1.000	.834
Improve Saving	1.000	.828
Provide a Mean of Managing Risk	1.000	.777
Creating of Wealth	1.000	.784

The above table helps the researcher to estimate the communalities for each variance.

This is the proportion of variance that each item has in common with other factors. For example Economic Reforms in Kenya has 96.6% communality or shared relationship with other factors that influencing mortgage financing in Kenya. This value has the greatest communality with others, while 'Market Liberalizations has the least communality or relationship with others of 63.7%.

Table 4. 12: Total Variance Explained

	Initial Eigenvalues			Extraction Loadings		of Squared
Comp	Total	% of Var	Cum %	Total	% of Var	Cum %
1	7.979	46.932	46.932	7.979	46.932	46.932
2	4.037	23.750	70.682	4.037	23.750	70.682
3	1.573	9.255	79.937	1.573	9.255	79.937
4	.859	5.050	84.987			
5	.695	4.086	89.073			
6	.519	3.055	92.128			
7	.383	2.255	94.383			
8	.334	1.968	96.350		,	
9	.258	1.517	97.867			
10	.185	1.089	98.956			
11 /	.096	.564	99.519			
12	.048	.283	99.802			
13	.034	.198	100.000			
14	4.183E-16	2.460E-15	100.000			
15	7.130E-17	4.194E-16	100.000			
16	-5.243E-16	-3.084E-15	100.000			
17	-8.792E-16	-5.172E-15	100.000			

Extraction Method: Principal Component Analysis.

In the above table, the researcher used Kaiser Normalization Criterion, which allows for the extraction of components that have an Eigen value greater than 1. The principal component analysis was used three Factors were extracted. As the table shows, these three factors explain 79.93% of the total variation. Factor 1 contributed the highest variation of 46.93%.

Table 4. 13: Total Variance Explained

	Compor	nent	
	1	2	3
Attract more Customers	949		
To improve Risk Management			.901
Increase investment	.887		
Improve Profitability of the Bank	.879		
Encounter Competitions in the Market	.873		
Promotion of innovation	.860		
Improve Saving	.853		306
Diversification of investment	.763		
Market Penetration	.676	.698	
Cross Selling Pontetial		.891	
Economic Reforms in Kenya	390	.886	
Market Liberalization		.765	
Relative Political Stability	484	.706	
Competition From other Bank	.380	.670	.310
Types of Mortgage The bank offers	623	630	
Creating of Wealth	.404		.787
Provide a Mean of Managing Risk	.567		.634

Extraction Method: Principal Component Analysis.

Three Factors: Components Extracted.

Component Score Coefficient Matrix

The initial component matrix was rotated using Varimax (Variance Maximization) with Kaiser Normalization. The above results allowed the researcher to identify what variables fall under each of the 3 major extracted factors. Each of the 15 variables was looked at and placed to one of the 3 factors depending on the percentage of variability; it explained the total variability of each factor. A variable is said to belong to a factor to which it explains more variation than any other factor.

Table 4. 14: Principal Component Analysis

	Compo	Component		
	1	2	3	
Types of Mortgage The bank offers	078	156	.108	
Market Penetration	.085	.156	072	
Cross Selling Potential	.021	.221	.038	
Compensation From other Bank	.048	.166	.197	
Relative Political Stability	061	.175	160	
Economic Reforms in Kenya	049	.219	009	
Market Liberalization	007	.190	140	
Improve Profitability of the Bank	.110	033	127	
To improve Risk Management	.113	008	.096	
Diversification of investment	.096	020	155	
Promotion of innovation	.108	024	062	
Attract more Customers	.119	015	.073	
Encounter Competitions in the Market	.109	024	120	
Increase investment	.111	038	098	
Improve Saving	.107	021	194	
Provide a Mean of Managing Risk	.071	.057	.403	
Creating of Wealth	.051	.006	.500	

Extraction Method: Principal Component Analysis.

From the findings, the study group the factors influencing mortgage financing basing of the factors that loads to try and indentify common factors affecting mortgage financing. Kenya .The variables that loads highly on Factor 1 all seems to relates to improving profitability of the firm and therefore Factor 1 is therefore label as Profit Improvement. The questions that relates highly on factor 2 all relates on prevailing market conditions and so Factor 2 is therefore labeled Factor Market Conditions. The other questions related to creation of wealth for the firms and therefore label Factor 3 Wealth Creation.

From the above table, the individual variables constituting the three factors extracted are summarized and identified below-

Factor1: Profit Improvement

Factors influencing mortgage financing under Factor I includes Attract more Customers

Increase investment, improve profitability of the bank, encounter competitions in the

market, promotion of innovation and improve saving

**Factor 2 Market Conditions** 

Under Factor 2 market penetration on factor influencing mortgage financing includes

cross selling pontetial, economic reforms in Kenya, market liberalization, relative

political stability, competition from other ban and types of mortgage the bank offers in

the market

Factor 3 Wealth Creation

Under Factor 3 on creation of wealth as a factor influencing mort improvement Creating

wealth and Provide a Mean of Managing risk.

4.7 Regression analysis

A multivariate regression model was applied to determine the relationship between facors

influencing mortgage financing and financial performance of the firms. The logistic

regression used in this model was:

 $Y = \alpha + \beta_1 X_1 + \beta_1 X_2 + \beta_1 X_3 + \beta_1 X_{4+} \beta_1 X_{5+} \beta_1 X_{6+} e$ 

Where

Y= Return on Assets

 $\alpha$  = Constant Term

 $\beta_1$ = Beta coefficients

 $X_1$ = Competition among the financing firms

 $X_2$ = Creating of wealth

X<sub>3=</sub> Improving saving

 $X_{5}$ = Increase investment

e = Error

Table 4. 15: Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.866ª	.749	.701	.28733

a. Predictors: (Constant), Encountering competitions in the Marketing improve Mortgage firm's investment yielding to yield high performance, Creating of Wealth, Improve Saving, High interest from Mortgage, Diversification of investment, Increase investment

Adjusted R<sup>2</sup> is called the coefficient of determination and tells us how the factors influence mortgage financing Encountering competitions in the Marketing improve Mortgage firms investment yielding to yield high performance, Creating of Wealth, Improve saving, High interest from Mortgage, Diversification of investment, Increase investment varied with performance of the firms. From table above, the value of adjusted R<sup>2</sup> is 0.749. This implies that, there was a variation of 74.9% of firm performance varied with variation with the factor influencing mortgage financing encountering competitions in the marketing improve Mortgage firms investment yielding to yield high performance, creating of wealth, Improve saving, high interest from mortgage, diversification of investment, increase investment at a confidence level of 95%.

Table 4. 16: Regression Coefficients results

#### Coefficients<sup>a</sup>

		1		Standardized Coefficients		
Model		В	Std. Error	Beta	t	Sig.
1	(Constant)	.309	.664		.466	.645
	Encountering competitions in the Marketing improve	.106	.084	125	-1.259	.218
	Creating of Wealth	.119	.076	.219	1.564	.128
	Improve Saving	.170	.096	.191	1.763	.088
	High interest from Mortgage	.243	.108	.295	2.244	.032
	Diversification of investment	.117	.078	165	-1.512	.141
	Increase investment	.151	.085	.167	1.776	.086
	Cross selling potential has promoted mortgage financing	.513	.086	.564	5.934	.000

a. Dependent Variable: Mortgage financing leads to improve profitability of the bank Source, Researcher (2010)

a Predictors: (Constant

a. Predictors: (Constant), Encountering competitions in the Marketing improve Mortgage firm's investment yielding to yield high performance, creating of wealth, improve saving, high interest from mortgage, diversification of investment. Increase investment

From the data in the above table, there is positive relationship between mortgage firms performance with Encountering competitions in the Marketing, creating of wealth, improving saving, high interest from mortgage, diversification of investment, Increase investment. The established regression equation was;

$$Y = 0.309 + 0.106X_1 + 0.119 X_2 + 0.170 X_3 + 0.243X_4 + 0.117X_5$$

From the above regression model, it was found that performance of the mortgage firms would be at 0.309 holding factors influencing mortgage financing to a constant zero. A unit increase in Encountering competitions would lead to improvement of the firm performance by factor of 0.106, unit increase in mortgage financing due to creating of

wealth would lead to increase in firm performance by factor of 0. 119, a unit increase in diversification of investment would result to an increase in firm Mortgage firm performance by a factor of 0.170, also unit increase in Increase investment would result to increase in mortgage firm performance by factor of 0.117. This implies that factors influencing mortgage financing has a positive effects on mortgage firms and that encountering competitions in the Marketing, creating of wealth, improving saving, high interest from mortgage, diversification of investment, Increase investment improve mortgage firm performance.

#### CHAPTER FIVE

### DISCUSSIONS, CONCLUSIONS AND RECOMMENDATIONS

#### 5.1 Introduction

From the analysis and data collected, the following discussions, conclusions and recommendations were made. The responses were based on the objectives of the study. The researcher had intended to establish the effects of factors influencing mortgage financing of firm performance

#### 5.2 Discussions

The study established that mortgage firms in Kenya are emphasizing on mortgage financing offering Adjust rate Mortgage Loan Interest only fixed rate Mortgage and variable rate mortgage to their clients. The study discovered that mortgage financing is influenced by market and financial factors. From the findings, increase investment and Improve Profitability of the Bank , improvement of risk management, attraction of more customers, promotion of innovations, Market Penetration, diversification of investment and encountering competitions in the market are the market factors influencing mortgage factors.

Requiring lowering of interest on Treasury bond, Kenya financial laws require bank to have less cash in reserve and High interest from Mortgage, creating of wealth and Improving saving are financial factors influencing mortgage financing in Kenya also influence adoption of mortgage financing by financing.

The study established that factor influencing mortgage financing in Kenya has positive effects on performance of the firm. From the findings, majority of the respondents strongly agreed that high interest from mortgage, Market liberations and attraction of more customers leading to increase customer's base improve mortgage firm performance. The study further established that mortgage financing improvement on diversification of the firms lead to increasing earnings, encountering competitions as well as marketing

improving Mortgage firms' investment to yield high performance, adopting sound credit risk Management practices built on a good quality portfolio management minimizing losses and eventually yielding high firm performance.

The study established that factors influencing mortgage financing in Kenya can be classified into three factors that seeking to improve profitability of the mortgage firms which includes Attract more Customers. To improve Risk Management, increase investment, improve Profitability of the Bank; encounter competitions in the market, promotion of innovation and improve saving. The second factors influencing mortgage financing is prevailing market conditions which is comprises of market penetration, improve cross selling Pontetial, improvement of economic reforms in Kenya, market liberalization, relative political Stability, competition from other mortgage firm and the types of mortgage being offered in the market. Finally the third category of factors influencing mortgage financing in Kenya is financing mortgage is for wealth creation and providing mean of managing risks.

The study there established that there is positive relationship between mortgage firms performance with Encountering competitions in the Marketing, creating of wealth, improving saving, high interest from mortgage, diversification of investment, Increase investment. The established regression equation was;

$$Y = 0.309 + 0.106X_1 + 0.119 X_2 + 0.170 X_3 + 0.243X_4 + 0.117X_5$$

From the above regression model, it was found that performance of the mortgage firms would be at 0.309 holding factors influencing mortgage filancing to a constant zero. A unit increase in Encountering competitions, creating of wealth, diversification of investment and an increase investments result to increase inmortgage firm performance. This implies that factors influencing mortgage financing has a positive effects on mortgage firms and that encountering competitions in the Marketing, creating of wealth, improving saving, high interest from mortgage, diversification of investment, Increase investment improve mortgage firm performance.

#### 5.3 Conclusion

The study concludes that mortgage firms in Kenya are emphasizing on mortgage financing to improve firm performance. The study concludes that mortgage financing is influenced by market and financial factors which includes increase investment and Improve Profitability of the Bank , improvement of risk management, attraction of more customers ,promotion of innovations, Market Penetration, diversification of investment and encountering competitions in the market lowering of interest on Treasury bond. Kenya financial laws require bank to have less cash in reserve and High interest from Mortgage, creating of wealth and Improving savings.

The study concludes that factor influencing mortgage financing in Kenya has positive effects on performance of the firm as majority of the respondents strongly agreed that high interest from mortgage, Market liberations and attraction of more customers leading to increase customer's base improve mortgage firm performance.

The study further concludes that mortgage financing improvement on diversification of the firms lead to increasing earnings, encountering competitions as well as marketing improving Mortgage firms investment to yielding high performance lead to adopting sound credit risk Management practices resulting to better performance of the mortgage firms

The study concludes that factors influencing mortgage financing in Kenya can be classified into three factors which are improve profitability of the mortgage firms constituting attract more Customers, increase investment, improve Profitability of the mortgage firm; encounter competitions in the market, promotion of innovation and improve saving. The study also conclude that prevailing market conditions influences mortgage financing through seeking to improve market penetration, improve cross selling Pontetial, improvement of economic reforms in Kenya, promotion of market liberalization, relative political Stability, competition from other mortgage firm and the types of mortgage being offered in the market.

Further the study concludes that the third category of factors influencing mortgage financing in Kenya is for the purpose of wealth creation from improvement of risk management and providing mean of managing risks. The study finally concludes that factors influencing mortgage financing by mortgage firms may be categorized as investment factor. Market Factors, Financial Factors., Risk Management factors, Saving Mobilization and Market liberalization.

The study further concludes that mortgage financing improvement on diversification of the firms lead to increasing earnings, encountering competitions as well as marketing improving Mortgage firms investment to yielding high performance lead to adopting sound credit risk Management practices resulting to better performance of the mortgage firms

The study there established that there is positive relationship between mortgage firms performance with factors influencing mortgage financing which are encountering competitions in the Marketing, creating of wealth, improving saving, high interest from mortgage, diversification of investment, Increase investment. The established regression equation was.

$$Y = 0.309 + 0.106X_1 + 0.119 X_2 + 0.170 X_3 + 0.243X_4 + 0.117X_5$$

### 5.4 Recommendations of the Study

From the findings and conclusions, the study recommends that firms seeking to venture in mortgage financing should be influenced by improvement of firm profitability attraction of more Customers, increase investment, improve profitability of the mortgage firm; encountering competitions in the market, promotion of innovation and improve saving.

The study also recommends that firms should consider prevailing market conditions influences mortgage financing influenced by improve market penetration, improve cross selling potential, improvement of economic reforms in Kenya, promotion of market liberalization, relative political Stability, competition from other mortgage firm and the types of mortgage being offered in the market to ensure it gain a niche in the market.

From the findings and conclusions, the study recommends that mortgage firms should put more emphasize on encountering competitions in the Marketing, creating of wealth,

improving saving, high interest from mortgage, diversification of investment, Increase investment as this factor significantly influences firm performance.

### 5.5 Limitations of the study

The study also faces challenges of time resources limiting the study from collecting information for the study particularly where the respondent delay in filling the questionnaire and travelling for collection the filled questionnaire.

The respondents were found to be uncooperative from the respondents because of the sensitivity of the information required for the study. The research explained to the respondents that the information they provided was to be held confidential and was only for academic purpose only.

There was limitation of finance hence limiting vigorous data analysis. Errors when analysing the data and also arise when respondents hold information which they consider confidential and sensitive.

### 5.6 Recommendations for further study

The study carried out a surved of factors influencing mortgage financing in Kenya . A further research should be carried to determine impact of mortgage financing on profitability of mortgage firms to established the extent to which the mortgage financing influence profitability of the mortgage firms . The study also recommends that a further study should be carried out to determine the challenges facing mortgage firms in financing through mortgages.

The study further recommends that a further study should be carried out to determine the effects of mortgage financing on firm performance of the mortgage firms. The study finally recommend that a further study should be conducted to established the relationship between mortgage financing and financial performance of the mortgage institutions.

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### APPENDICES

## Appendix I: Questionnaire

# Market factors leading to mortgage financing adoption

1.	1. Which of the following types of mortgages does your bank offer?						
	Interest – only fixed rate mortgages						
	Graduated payment mortgage loan [ ]						
	Adjustable rate mortgage loan [ ]						
	Negative amortization mortgage [ ]						
2.	Please indicate the extent to which your bank emphasises on mortgage financing						
	Very great extent [ ]						
	Great extent [ ]						
	Moderate extent [ ]						
	Low extent [ ]						
	Not at all [ ]						

3. To what extent do the following market factors influence your bank to adopting mortgage financing.

	Verygre at extent	Great	Moderat e extent	Low	Not at all
Market penetration					
Cross selling potentiel					
Competition from other banks					
relative political stability					
Economic reform in the Kenya					
Market liberalization					
Improving profitability of the bank					
To improve Risk management					
Diversification of investment					
Promote innovation mortgage financing					
Attract more customers					
Encounter competitions in the market					
Increase investment					
Improve saving					
Provides a means of managing risk					
Creating of wealth					

financing	
i.	
ii.	
iii.	

4. Please indicate any other market factor influencing your bank to adopt mortgage

5. To what extent do you agree with the following statements on mortgage financing

	Very great extent	Great extent	Moderat e extent	Low extent	Not at all
Mortgage financing repliable provide housing to kenyans					
Mortgage financing provide mechanism of aggregating funds through financial intermediation					
Mortgage financing encourage bank customers to save					

## Section B: Financial factors influencing leading to Mortgage financing

6.To what extent do the following fianacial factors influence your bank to adopt mortgage financing.

	Very great extent	Great extent	Moderate extent	Low extent	Not at all
High interest from mortgages					
Kenya's financial laws requiring banks to have less cash in reserve					
Kenya's financial laws requiring financial institutions to Lower interest rates on treasury bonds,					

7. To what extent do you agree with each of the following statement about mortgage financing and financial performance of the mortgage firm?

	Strongly	Agree	Neutral	Disagree	Strongly disagree
Statement					
High interest from mortgage improve Financial performance of the mortgage firms					
Sound credit risk management practices are built on good-quality portfolio management					
Mortgage financing encourage Bank Customer to Save leading to High interest earnings for the Bank					
Encountering competitions in the market improve mortgage firm's assets					
Mortgage financing lead to increase mortgage firm's investment yielding to high yield performance					
The mortgage firms attract more customers leading to increase customer base					
Customers/are offered good free consultant service.					
Mortgage investment has made the firm to result to diversification of investment increasing firm's earnings.					
Market liberalization lead to improvement of mortgage finance					
Cross selling potential has promoted mortgage financing					
Mortgage finance has led to Improving profitability of the bank					

#### Appendix II: Mortgage financing banks in Kenya

- 1. Barclays Bank of Kenya
- 2. Standard Chartered Bank
- 3. Housing Finance (HF) formerly HFCK
- 4. ECObank formerly EABS
- 5. Commercial Bank of Africa (CBA), I & M Bank Ltd
- 6. Equity Bank Ltd
- 7. National Housing Corporation
- 8. Citybank, Nairobi
- 9. Commercial Bank of Africa, Nairobi
- 10. Continental Bank of Kenya, Nairobi
- 11. Cooperative Bank of Kenya, Nairobi
- 12. Development Bank, Nairobi
- 13. East African Development Bank, Nairobi
- 14. Habib Bank, Nairobi
- 15. Industrial Development Bank, Nairobi
- 16. Kenya Commercial Bank, Nairobi
- 17. Kenya Post Office Savings Bank, Nairobi
- 18. National Bank of Kenya, Nairobi
- 19. Stanbic Bank, Nairobi
- 20. Trust Bank, Nairobi
- 21. Victoria Commercial Bank, Nairobi
- 22. Credit Bank
- 23. Gulf Bank

#### Monocah Spss

	q1	q2	q3	var00001	var00002	var00003	var00004
1	3.00	1.00	1.0	4.00	4.00	3.00	5.00
2	3.00	2.00		4.00	4.00	4.00	4.00
3	3.00	2.00	- 1	4.00	4.00	3.00	5.00
4	1.00	1.00		5.00	4.00	4.00	4.00
5	3.00	2.00	-	4.00	4.00	4.00	4.00
6	3:00	2.00		4.00	3.00	00.E	2.00
7	1.00	1.00	- 1	5.00	5.00	5.00	4.00
8	3.00	3.00	1	4.00	4.00	5.00	5.00
9	3.00	3.00	1	4.00	4:00	5.00	4.00
10	3.00	2.00		4.00	4.00	3.00	4.00
11	1.00	1.00	- 5	5.00	5:00	5.00	4.00
12	3.00	2.00		4.00	4.00	3.00	4.00
13	1.00	1.00		5.00	5.00	5.00	4.00
14	1.00	2.00	-	4.00	4.00	4.00	4.00
15	3.00	2.00		4.00	4.00	4.00	4.00
16	3.00	3.00		4,00	4.00	5.00	4.00
17	3.00	2.00		4.00	4.00	3.00	4.00
18	1.00	1.00		5,00	5.00	5.00	4.00
19	3.00	2.00		4.00	4.00	3.00	4.00
20	1.00	1.00	L	5.00	5.00	5.00	4.00
21	3.00	2.00	- 1	4.00	4.00	3.00	5.00
22	1.00	1.00	11	5.00	4.00	4:00	4.00
23	3.00	2.00		4.00	4.00	4.00	4.00
24	3.00	2.00		4.00	3.00	3.00	2.00
25	1.00	1.00		5.00	5.00	5.00	4.00
26	3.00	3.00	-	4.00	4.50	5.00	5 00
27	3.00	2.00		4.00	3:00	3.00	2.00
28	1.00	1.00		5.00	5.00	5.00	4.00
29	3.00	3.00	- 11	4.00	4.00	5.00	5.00
30	3.00	3.00		4.00	4:00	5.00	4.00
31	3.00	2.00		4 00	4.00	3.00	4.00
32	1.00	1.00	-1	5.00	5.00	5.00	4.00
33	3.00	2.00	L	4.00	4.00	3.00	4.00
34	1.00	1.00		5 00	5.00	5.00	4.00
35	3.00	2.00		4_00	4.00	3.00	5.00
36	1.00	1.00	at	5.00	4:00	4.00	4.00
37	3.00	2.00	- 0	4.00	4.00.	4.00	4.00
38	3.00	2.00	100	4.00	3.00	3.00	2.00

	var00005	var00006	var00007	var00008	var00009	var00010	var00011
1	4.00	4.00	4,00	3.00	5.00	3.00	3.00
2	4.00	4.00	3.00	4.00	4:00	4.00	- 4 00
3	4.00	4,00	4.00	3.00	4.00	4:00	3.00
4	4.00	5.00	5.00	5.00	5.00	5.00	5.00
5	4.00	4.00	4.00	4.00	3.00	4.00	4,00
6	2.00	3.00	5.00	5.00	5,00	5.00	5,00
7	4.00	4.00	5.00	5.00	5.00	5.00	5.00
8	4.00	4.00	4.00	5.00	5.00	5.00	4.00
9	4.00	4.00	4.00	4.00	4.00	4.00	4.00
10	4.00	4.00	4.00	4.00	4.00	4.00	4.00
11	4:00	4.00	5.00	5.00	5.00	5.00	5.00
12	4.00	4.00	4.00	3.00	4.00	4.00	3.00
13	4.00	4.00	4.00	4.00	4.00	4.00	4.00
14	4.00	4.00	4.00	4.00	4.00	4.00	4.00
15	4.00	4.00	4.00	4.00	4.00	4.00	4.00
16	4.00	4.00	4.00	4.00	4.00	4.00	4.00
17	4.00	4.00	4.00	4.00	4.00	4.00	4.00
18	4.00	4.00	5.00	5.00	5.00	5.00	5.00
19	4.00	4.00	4:00	3.00	4.00	4.00	3.00
20	4:00	4.00	4.00	4.00	4.00	4.00	4.00
21	4.00	4.00	4.00	3.00	4.00	4.00	3.00
22	4.00	5.00	5.00	5.00	5.00	5.00	5.00
23	4.00	4.00	4.00	4.00	3.00	4 00	4.00
24	2.00	3.00	5.00	5.00	5.00	5.00	5.00
25	4.00	4.00	5.00	5.00	5.00	5.00	5.00
26	4.00	4.00	4.00	5.00	5,00	5.00	4.00
27	2.00	3.00	5.00	5.00	5.00	5.00	5.00
28	4.00	4.00	5.00	5.00	5.00	5.00	5.00
29	4.00	4.00	4.00	5.00	5.00	5.00	4.D0
30	4.00	4.00	4,00	4.00	4.00	4.00	4.00
31	4.00	4.00	4.00	4 00	4.00	4.00	4.00
32	4.00	4.00	5.00	5.00	5.00	5.00	5.00
33	4.00	4.00	4.00	3.00	4.00	4.00	3.00
34	4.00	4.00	4.00	4.00	4.00	4.00	4.00
35	4.00	4.00	4.00	3 00	4.00	4 00	3.00
36	4.00	5.00	5.00	5.00	5.00	5:00	5.00
37.	4.00	4.00	4.00	4.00	3,00	4.00	4.00
38	2.00	3.00	5.00	5.00	5.00	5.00	5.00

	var00012	var00013	var00014	var00015	var00016	94	var00017
1	4.00	4.00	4.00	4.00	4:00		5.00
2	3.00	5.00	5.00	4.00	4.00		5.00
3	4.00	4.00	4.00	3.00	3.00	-	5.00
4	5.00	5,00	5,00	4.00	4.00		5.00
5	4.00	4.00	3:00	4.00	4:00	-	5.00
6	5.00	5:00	5.00	4.00	4.00		4.00
7	5.00	5:00	5.00	4 00	4.00	-	5.00
8	4.00	4.00	4.00	4.00	4.00		5.00
9	4.00	4.00	4:00	4.00	4.00		5.00
10	4.00	4.00	4.00	4.00	4:00		4.00
11	5.00	5.00	5.00	5.00	4:00		3.00
12	3.00	4.00	3,00	4.00	4.00		4.00
13	4.00	4.00	4.00	4.00	4.00	1.	4.00
14	3.00	4:00	4,00	4.00	3,00		5.00
15	4.00	4.00	4.00	4:00	4.00		5.00
16	4.00	4,00	4.00	4,00	4.00		5.00
17	4.00	4.00	4:00	4.00	4.00		4.00
18	5.00	5.00	5.00	5.00	4.00		3.00
19	3.00	4.00	3.00	4.00	4.00		4.00
20	4.00	4.00	4.00	4.00	4.00	-	4.00
21	4.00	4.00	4.00	3.D0	3.00		5.00
22	5.00	5.00	5.00	4.00	4.00	-	5.00
23	4.00	4.00	3.00	4.00	4.00		5.00
24	5.00	5:00	5.00	4.00	4.00		4.00
25	5.00	5.00	5.00	4.00	4.00		5.00
26	4.00	4.00	4.00	4.00	4.00	_	5.00
27	5,00	5.00	5.00	4.00	4.00		4.00
28	5.00	5.00	500	4.00	4.00		5.00
29	4.00	4.00	4.00	4 00	4.00		5,00
30	4.00	4.00	4:00	4.00	4.00		5.00
31	4.00	4.00	4.00	4.00	4.00	-	4.00
32	5.00	5,00	5.00	5 00	4.00		3.00
33	3,00	4.00	3.00	4.00	4.00		4.00
34	4.00	4.00	4.00	4.00	4.00		4.00
35	4.00	4.00	4.00	3.00	3.00		5.00
36	5:00	5.00	5,00	4.00	4.00		5.00
37	4.00	4.00	3.00	4.00	4.00		5.00
38	5.00	5.00	5.00	4.00	4.00		4.00

	var00018	var00019	q5	var00020	var00021	var00022	q6
1	4.00	5.00		3.00	5.00	4.00	
2	4.00	5.00	4.	3.00	4.00	4.00	
3	4.00	5.00	- 1	3.00	4.00	4.00	
4	4.00	3.00	,	3.00	4.00	4.00	
5	4:00	5.00		3.00	5.00	4.00	
6	5.00	5.00		3.00	4.00	3.00	
7	4.90	4.00	1	4.00	4.00	4.00	
8	4.00	5.00	1	4.00	4.00	5.00	
9	4.00	5.00		4.00	4.00	5.00	
10	4,00	4.00		3.00	3.00	3.00	
11	3.00	3.00		3.00	2.00	4.00	
12	4.00	4.00		3.00	4.00	4.00	
13	5.00	5.00	1	5.00	4.00	5.00	
14	4.00	3,00	-	3.00	4,00	4.00	
15	4.00	4.00		3.00	4.00	4.00	
1.6	4 00	5.00		4.00	4:00	5.00	
17	4.00	4.00		3.00	3.00	3.00	
18	3.00	3.00		3.00	2.00	4.00	
19	4.00	4.00		3,00	4.00	4.00	
20	5.00	5.00		5.00	4.00	5.00	
21	4.00	5.00		3.00	4.00	4.00	
22	4.00	3.00		3.00	4.00	4.00	
23	4.00	5 00		3.00	5.00	4.00	
24	5.00	5:00		3.00	4.00	3.00	
25	4.00	4.00		4.00	4.00	4.00	
26	4.00	5.00		4.00	4.00	5.00	
27	5,00	5.00		3.00	4.00	3.00	
28	4.00	4.00		4.00	4.00	4.00	
29	4.00	5.00		4.00	4.00	5.00	
30	4.00	5.00	1	4.00	4.00	5.00	
31	4,00	4.00	1	3.00	3.00	3.00	
32	3,00	3.00		3.00	2,00	4.00	
33	4.00	4.00		3.00	4.00	4.00	
34	5.00	5.00		5.00	4.00	5.00	
35	4.00	5.00		3.00	4.00	4.00	
36	4.00	3.00	1	3.00	4.00	4.00	
37	4.00	5.00		3.00	5.00	4:00	
38	5,00	5.00		3.00	4.00	3.00	

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1         5,00         5,00         3,00         3,00         5,00           2         3,00         4,00         4,00         4,00         4,00         4,00           3         3,00         5,00         4,00         4,00         5,00         5,00           4         3,00         3,00         5,00         4,00         5,00         5,00           5         4,00         4,00         3,00         4,00         4,00         4,00           6         3,00         5,00         4,00         4,00         5,00         5,00           7         3,90         4,00         3,00         4,00         5,00         5,00           8         4,00         5,00         5,00         4,00         5,00         4,00           9         4,00         5,00         5,00         5,00         4,00           10         3,60         4,00         5,00         5,00         5,00         4,00           12         3,60         4,00         3,00         3,00         4,00         4,00         4,00           13         4,00         4,00         5,00         5,00         5,00         5,00           14		var00023	var00024	var00025	var00026	var00027	var00028	var00029
3 3.00 5.00 4.00 4.00 4.00 5.00 5.00 5.00 6 3.00 4.00 4.00 4.00 4.00 4.00 4.00 5.00 5	1	5.00	5.00	5.00	,3.00	3.00	5.00	4:00
4         3,00         3,00         5.00,         4.00         5.00         5.00           5         4,00         4,00         3.00         4.00         4.00         4.00           6         3,00         5.00         4,00         4,00         5.00         5.00           7         3,00         4,00         3.00         4.00         4.00         4.00           8         4,00         5,00         5.00         4.00         5.00         4.00           9         4.00         4.00         5.00         4.00         5.00         4.00           10         3,60         4.00         5.00         5.00         5.00         4.00           11         3,00         4.00         5.00         5.00         5.00         4.00           12         3,60         4.00         3.00         3.00         4.00         4.00           13         4.00         4.00         5.00         5.00         5.00         5.00           14         3.00         5.00         3.00         4.00         4.00         4.00           15         3.00         5.00         3.00         4.00         4.00         4.00 <td>2</td> <td>3:00</td> <td>4.00</td> <td>4.00</td> <td>4.00</td> <td>5:00</td> <td>4.00</td> <td>4.00</td>	2	3:00	4.00	4.00	4.00	5:00	4.00	4.00
5         4,90         4,00         3,00         4,00         4,00         4,00           6         3,00         5,00         4,00         4,00         5,00         5,00           7         3,00         4,00         3,00         4,00         4,00         4,00           8         4,00         5,00         5,00         4,00         5,00         4,00           9         4,00         4,00         5,00         4,00         5,00         4,00           10         3,00         4,00         5,00         5,00         5,00         4,00           11         3,00         4,00         5,00         5,00         5,00         4,00           12         3,00         4,00         3,00         3,00         4,00         4,00           13         4,00         4,00         5,00         5,00         5,00         5,00           14         3,00         5,00         3,00         4,00         4,00         4,00           15         3,00         5,00         3,00         4,00         4,00         4,00           16         4,00         4,00         5,00         5,00         4,00         4,00 <td>3</td> <td>3.00</td> <td>5.00</td> <td>4.00</td> <td>4.00</td> <td>4:00</td> <td>4.00</td> <td>5.00</td>	3	3.00	5.00	4.00	4.00	4:00	4.00	5.00
6         3,00         5,00         4,00         5,00         5,00           7         3,00         4,00         3,00         4,00         4,00         4,00           8         4,00         5,00         5,00         4,00         5,00         4,00           9         4,00         4,00         5,00         4,00         5,00         4,00           10         3,00         4,00         5,00         5,00         4,00         5,00           11         3,00         4,00         4,00         4,00         4,00         5,00           12         3,60         4,00         3,00         3,00         4,00         4,00           13         4,00         4,00         5,00         5,00         5,00         5,00           14         3,00         5,00         3,00         4,00         4,00         4,00           15         3,00         5,00         3,00         4,00         4,00         4,00           16         4,00         4,00         5,00         5,00         4,00         4,00           17         3,00         4,00         5,00         5,00         4,00         4,00           <	4	3,00	3,00	5.00	4.00	5.00	5.00	5,00
7         3,00         4,00         3,00         4,00         4,00         4,00           8         4,00         5,00         5,00         4,00         5,00         4,00           9         4,00         4,00         5,00         4,00         5,00         4,00           10         3,00         4,00         5,00         5,00         4,00         5,00           11         3,00         4,00         3,00         3,00         4,00         4,00           12         3,60         4,00         3,00         3,00         4,00         4,00           13         4,00         4,00         5,00         5,00         5,00         5,00           14         3,00         5,00         3,00         4,00         4,00         4,00           15         3,00         5,00         3,00         4,00         4,00         4,00           16         4,00         4,00         5,00         5,00         4,00         4,00           17         3,00         4,00         5,00         5,00         4,00         4,00           18         3,00         4,00         3,00         3,00         4,00         4,00	5	4.00	4.00	3:00	4.00	4.00	4.00	4.00
8         4,00         5,00         5,00         4,00         5,00         4,00           9         4,00         4,00         5,00         4,00         5,00         4,00           10         3,00         4,00         5,00         5,00         4,00         4,00           11         3,00         4,00         3,00         3,00         4,00         5,00           12         3,60         4,00         3,00         3,00         4,00         4,00           13         4,00         4,00         5,00         5,00         5,00         5,00           14         3,00         5,00         3,00         4,00         4,00         4,00           15         3,00         5,00         3,00         4,00         4,00         4,00           16         4,00         4,00         5,00         5,00         4,00         4,00           17         3,00         4,00         5,00         5,00         4,00         4,00           18         3,00         4,00         4,00         4,00         4,00         4,00           19         3,00         4,00         3,00         3,00         4,00         4,00		3,00	5.00	4,00	4.00	5.00	5.00	5.00
9	7	3.00	4.00	3.00	4.00	4.00	4.00	4.00
10         3.00         4.00         5.00         5.00         4.00         4.00           11         3.00         4.00         4.00         4.00         4.00         5.00           12         3.00         4.00         3.00         3.00         4.00         4.00           13         4.00         4.00         5.00         5.00         5.00         5.00           14         3.00         5.00         3.00         4.00         4.00         4.00           15         3.00         5.00         3.00         4.00         4.00         4.00           16         4.00         4.00         5.00         5.00         5.00         4.00           17         3.00         4.00         5.00         5.00         5.00         4.00           18         3.00         4.00         4.00         4.00         4.00         4.00         4.00           19         3.00         4.00         3.00         3.00         4.00         4.00         4.00           20         4.00         4.00         5.00         5.00         5.00         5.00           21         3.00         5.00         4.00         4.00	8	4.00	5.00	5.00	4.00	5,00	4.00	4.00
111         3.00         4.00         4.00         4.00         5.00           12         3.69         4.00         3.00         3.00         4.00         4.00           13         4.00         4.00         5.00         5.00         5.00         5.00           14         3.00         5.00         3.00         4.00         4.00         4.00           15         3.00         5.00         3.00         4.00         4.00         4.00           16         4.00         4.00         5.00         4.00         5.00         4.00           17         3.00         4.00         5.00         5.00         5.00         4.00           18         3.00         4.00         5.00         5.00         5.00         4.00           19         3.00         4.00         3.00         3.00         4.00         4.00           20         4.00         4.00         5.00         5.00         5.00         5.00           21         3.00         5.00         4.00         4.00         4.00         4.00         4.00           22         3.00         3.00         5.00         4.00         4.00         4.00	9	4.00	4.00	5.00	4.00	5.00	4.00	5.00
12         3.69         4,00         3.00         3.00         4.00         4.00           13         4.00         4.00         5.00         5.00         5.00         5.00           14         3.00         5.00         3.00         4.00         4.00         4.00           15         3.00         5.00         3.00         4.00         4.00         4.00           16         4.00         4.00         5.00         5.00         5.00         4.00           17         3.00         4.00         5.00         5.00         5.00         4.00           18         3.00         4.00         4.00         4.00         4.00         4.00           19         3.00         4.00         3.00         3.00         4.00         4.00           20         4.00         4.00         5.00         5.00         5.00         5.00           21         3.00         5.00         4.00         4.00         4.00         4.00         4.00           22         3.00         3.00         5.00         4.00         4.00         4.00         4.00           23         4.00         4.00         3.00         4.00	10	3.00	4.00	5.00	5.00	5,00	4.00	4.00
13         4.00         4.00         5.00         5.00         5.00         5.00           14         3.00         5.00         3.00         4.00         4.00         4.00           15         3.00         5.00         3.00         4.00         4.00         4.00           16         4.00         4.00         5.00         5.00         5.00         4.00           17         3.00         4.00         5.00         5.00         5.00         4.00           18         3.00         4.00         4.00         4.00         5.00         5.00           19         3.00         4.00         3.00         3.00         4.00         4.00           20         4.00         4.00         5.00         5.00         5.00         5.00           21         3.00         5.00         4.00         4.00         4.00         4.00           22         3.00         3.00         5.00         4.00         4.00         4.00           23         4.00         4.00         3.00         4.00         4.00         4.00           24         3.00         5.00         4.00         4.00         4.00         4.00	11	3.00	4.00	4.00	4.00	4.00	5.00	5.00
14         3.00         5.00         3.00         4.00         4.00         4.00           15         3.00         5.00         3.00         4.00         4.00         4.00           16         4.00         4.00         5.00         4.00         5.00         4.00           17         3.00         4.00         5.00         5.00         5.00         4.00           18         3.00         4.00         4.00         4.00         5.00         5.00           19         3.00         4.00         3.00         3.00         4.00         4.00           20         4.00         4.00         5.00         5.00         5.00         5.00           21         3.00         5.00         4.00         4.00         4.00         4.00           22         3.00         3.00         5.00         4.00         4.00         4.00           23         4.00         4.00         3.00         4.00         4.00         4.00           24         3.00         5.00         4.00         4.00         4.00         4.00           25         3.00         4.00         3.00         4.00         5.00         5.00	12	3.00	4,00	3.00	3.00	4.00	4:00	3.00
15         3.00         5.00         3.00         4.00         4.00         4.00           16         4.00         4.00         5.00         4.00         5.00         4.00           17         3.00         4.00         5.00         5.00         5.00         4.00           18         3.00         4.00         4.00         4.00         4.00         5.00           19         3.00         4.00         3.00         3.00         4.00         4.00           20         4.00         4.00         5.00         5.00         5.00         5.00           21         3.00         5.00         4.00         4.00         4.00         4.00           22         3.00         3.00         5.00         4.00         4.00         4.00           23         4.00         4.00         3.00         4.00         4.00         4.00           24         3.00         5.00         4.00         4.00         4.00         4.00           25         3.00         4.00         3.00         4.00         5.00         5.00           26         4.00         5.00         5.00         4.00         5.00         5.00	13	4.00	4.00	5.00	5.00	5.00	5.00	5.00
16         4.00         4.00         5.00         4.00         5.00         4.00           17         3.00         4.00         5.00         5.00         5.00         4.00           18         3.00         4.00         4.00         4.00         5.00         5.00           19         3.00         4.00         3.00         3.00         4.00         4.00           20         4.00         4.00         5.00         5.00         5.00         5.00           21         3.00         5.00         4.00         4.00         4.00         4.00           22         3.00         3.00         5.00         4.00         5.00         5.00           23         4.00         4.00         3.00         4.00         4.00         4.00           24         3.00         5.00         4.00         4.00         5.00         5.00           25         3.00         4.00         3.00         4.00         4.00         4.00           26         4.00         5.00         5.00         4.00         5.00         5.00           28         3.00         4.00         3.00         4.00         4.00         4.00		3.00	5.00	3.00	4.00	4.00	4.00	4.00
17         3.00         4.00         5.00         5.00         5.00         4.00           18         3.00         4.00         4.00         4.00         5.00         5.00           19         3.00         4.00         3.00         3.00         4.00         4.00           20         4.00         4.00         5.00         5.00         5.00         5.00           21         3.00         5.00         4.00         4.00         4.00         4.00           22         3.00         3.00         5.00         4.00         5.00         5.00           23         4.00         4.00         3.00         4.00         4.00         4.00           24         3.00         5.00         4.00         4.00         5.00         5.00           25         3.00         4.00         3.00         4.00         4.00         4.00           26         4.00         5.00         5.00         4.00         5.00         4.00           27         3.00         5.00         4.00         4.00         4.00         4.00           29         4.00         5.00         5.00         4.00         5.00         4.00	15	3.00	5.00	3.00	4.00	4.00	4.00	5.00
18         3.00         4.00         4.00         4.00         5.00           19         3.00         4.00         3.00         3.00         4.00         4.00           20         4.00         4.00         5.00         5.00         5.00         5.00           21         3.00         5.00         4.00         4.00         4.00         4.00           22         3.00         3.00         5.00         4.00         5.00         5.00           23         4.00         4.00         3.00         4.00         4.00         4.00           24         3.00         5.00         4.00         4.00         5.00         5.00           25         3.00         4.00         3.00         4.00         5.00         4.00           26         4.00         5.00         5.00         4.00         5.00         4.00           27         3.00         5.00         4.00         4.00         5.00         5.00           28         3.00         4.00         3.00         4.00         4.00         4.00           29         4.00         5.00         5.00         4.00         5.00         4.00	16	4.00	4.00	5.00	4.00	5.00	4,00	5.00
19         3.00         4.00         3.00         3.00         4.00         4.00           20         4.00         4.00         5.00         5.00         5.00         5.00           21         3,00         5.00         4.00         4.00         4.00         4.00           22         3.00         3.00         5.00         4.00         5.00         5.00           23         4.00         4.00         3.00         4.00         4.00         4.00           24         3.00         5.00         4.00         4.00         5.00         5.00           25         3.00         4.00         3.00         4.00         5.00         4.00           26         4.00         5.00         5.00         4.00         5.00         4.00           27         3.00         5.00         4.00         4.00         5.00         5.00           28         3.00         4.00         3.00         4.00         4.00         4.00           29         4.00         5.00         5.00         4.00         5.00         4.00           30         4.00         4.00         5.00         5.00         4.00         4.00	17	3.00	4.00	5.00	5.00	5.00	4.00	4.00
20         4.00         4.00         5.00         5.00         5.00           21         3,00         5.00         4.00         4.00         4.00         4.00           22         3.00         3.00         5.00         4.00         5.00         5.00           23         4.00         4.00         3.00         4.00         4.00         4.00           24         3.00         5.00         4.00         4.00         5.00         5.00           25         3.00         4.00         3.00         4.00         5.00         4.00           26         4.00         5.00         5.00         4.00         5.00         4.00           27         3.00         5.00         4.00         4.00         5.00         5.00           28         3.00         4.00         3.00         4.00         4.00         4.00           29         4.00         5.00         5.00         4.00         5.00         4.00           30         4.90         4.00         5.00         5.00         4.00         4.00           31         3.00         4.00         4.00         4.00         4.00         4.00	18	3.00	4.00	4.00	4.00	4.00	5.00	5.00
21         3,00         5.00         4.00         4.00         4.00         4.00           22         3.00         3.00         5.00         4.00         5.00         5.00           23         4.00         4.00         3.00         4.00         4.00         4.00           24         3.00         5.00         4.00         4.00         5.00         5.00           25         3.00         4.00         3.00         4.00         5.00         4.00           26         4.00         5.00         5.00         4.00         5.00         4.00           27         3.00         5.00         4.00         4.00         5.00         5.00           28         3.00         4.00         3.00         4.00         4.00         4.00           29         4.00         5.00         5.00         4.00         5.00         4.00           30         4.00         4.00         5.00         5.00         4.00         4.00           31         3.00         4.00         5.00         5.00         5.00         4.00           32         3.00         4.00         4.00         4.00         4.00         4.00	19	3.00	4.00	3.00	3.00	4.00	4.00	3.00
22         3.00         3.00         5.00         4.00         5.00         5.00           23         4.00         4.00         3.00         4.00         4.00         4.00           24         3.00         5.00         4.00         4.00         5.00         5.00           25         3.00         4.00         3.00         4.00         4.00         4.00           26         4.00         5.00         5.00         4.00         5.00         4.00           27         3.00         5.00         4.00         4.00         5.00         5.00           28         3.00         4.00         3.00         4.00         4.00         4.00           29         4.00         5.00         5.00         4.00         5.00         4.00           30         4.00         4.00         5.00         4.00         5.00         4.00           31         3.00         4.00         5.00         5.00         5.00         4.00           32         3.00         4.00         4.00         4.00         4.00         4.00           33         3.00         4.00         5.00         5.00         5.00         5.00	20	4.00	4.00	5.00	5.00	5.00	5.00	5.00
23         4.00         4.00         3.00         4.00         4.00         4.00           24         3.00         5.00         4.00         5.00         5.00           25         3.00         4.00         3.00         4.00         4.00         4.00           26         4.00         5.00         5.00         4.00         5.00         4.00           27         3.00         5.00         4.00         5.00         5.00           28         3.00         4.00         3.00         4.00         4.00         4.00           29         4.00         5.00         5.00         4.00         5.00         4.00           30         4.00         4.00         5.00         4.00         4.00           31         3.00         4.00         5.00         5.00         5.00         4.00           32         3.00         4.00         4.00         4.00         4.00         4.00           33         3.00         4.00         5.00         5.00         5.00         5.00           34         4.00         4.00         5.00         5.00         5.00         5.00           35         3.00	21	3,00	5.00	4.00	4.00	4.00	4.00	5,00
24         3.00         5.00         4.00         4.00         5.00         5.00           25         3.00         4.00         3.00         4.00         4.00         4.00           26         4.00         5.00         5.00         4.00         5.00         4.00           27         3.00         5.00         4.00         4.00         5.00         5.00           28         3.00         4.00         3.00         4.00         4.00         4.00           29         4.00         5.00         5.00         4.00         5.00         4.00           30         4.00         4.00         5.00         4.00         5.00         4.00           31         3.00         4.00         5.00         5.00         5.00         4.00           32         3.00         4.00         4.00         4.00         4.00         5.00           33         3.00         4.00         3.00         3.00         4.00         4.00           34         4.00         4.00         5.00         5.00         5.00         5.00           35         3.00         5.00         4.00         4.00         4.00         4.00	22	3.00	3.00	5,00	4.00	5,00	5.00	5.00
25         3.00         4.00         3.00         4.00         4.00         4.00           26         4.00         5.00         5.00         4.00         5.00         4.00           27         3.00         5.00         4.00         4.00         5.00         5.00           28         3.00         4.00         3.00         4.00         4.00         4.00           29         4.00         5.00         5.00         4.00         5.00         4.00           30         4.00         4.00         5.00         4.00         5.00         4.00           31         3.00         4.00         5.00         5.00         5.00         4.00           32         3.00         4.00         4.00         4.00         4.00         5.00           33         3.00         4.00         3.00         3.00         4.00         4.00         4.00           34         4.00         4.00         5.00         5.00         5.00         5.00         5.00           35         3.00         5.00         4.00         4.00         4.00         4.00         4.00	23	4.00	4.00	3.00	4.00	4.00	4.00	4.00
26         4.00         5.00         5.00         4.00         5.00         4.00           27         3.00         5.00         4.00         4.00         5.00         5.00           28         3.00         4.00         3.00         4.00         4.00         4.00           29         4.00         5.00         5.00         4.00         5.00         4.00           30         4.00         4.00         5.00         4.00         5.00         4.00           31         3.00         4.00         5.00         5.00         5.00         4.00           32         3.00         4.00         4.00         4.00         4.00         5.00           33         3.00         4.00         3.00         3.00         4.00         4.00           34         4.00         4.00         5.00         5.00         5.00         5.00           35         3.00         5.00         4.00         4.00         4.00         4.00	24	3.00	5,00	4.00	4.00	5.00	5.00	5.00
27         3.00         5.00         4.00         4.00         5.00         5.00           28         3.00         4.00         3.00         4.00         4.00         4.00           29         4.00         5.00         5.00         4.00         5.00         4.00           30         4.00         4.00         5.00         4.00         5.00         4.00           31         3.00         4.00         5.00         5.00         5.00         4.00           32         3.00         4.00         4.00         4.00         4.00         5.00           33         3.00         4.00         3.00         3.00         4.00         4.00           34         4.00         4.00         5.00         5.00         5.00         5.00           35         3.00         5.00         4.00         4.00         4.00         4.00	25	3.00	4.00	3,00	4.00	4.00	4.00	4.00
28         3.00         4.00         3.00         4.00         4.00         4.00           29         4.00         5.00         5.00         4.00         5.00         4.00           30         4.00         4.00         5.00         4.00         5.00         4.00           31         3.00         4.00         5.00         5.00         5.00         4.00           32         3.00         4.00         4.00         4.00         4.00         5.00           33         3.00         4.00         3.00         3.00         4.00         4.00           34         4.00         4.00         5.00         5.00         5.00         5.00           35         3.00         5.00         4.00         4.00         4.00         4.00	26	4.00	5.00	5.00	4.00	5.00	4.00	4.00
29         4.00         5.00         5.00         4.00         5.00         4.00           30         4.00         4.00         5.00         4.00         5.00         4.00           31         3.00         4.00         5.00         5.00         6.00         4.00           32         3.00         4.00         4.00         4.00         4.00         5.00           33         3.00         4.00         3.00         3.00         4.00         4.00           34         4.00         4.00         5.00         5.00         5.00         5.00           35         3.00         5.00         4.00         4.00         4.00         4.00	27	3,00	5.00	4.00	4.00	5.00	5.00	5.00
30			4.00	3.00	4.00	4.00	4.00	4.00
31         3.00         4.00         5.00         5.00         5.00         4.00           32         3.00         4.00         4.00         4.00         4.00         5.00           33         3.00         4.00         3.00         3.60         4.00         4.00           34         4.00         4.00         5.00         5.00         5.00         5.00           35         3.00         5.00         4.00         4.00         4.00         4.00	29	4.00	5.00	5.00	4.00	5.00	4.00	4,00
32     3.00     4.00     4.00     4.00     5.00       33     3.00     4.00     3.00     3.60     4.00     4.00       34     4.00     4.00     5.00     5.00     5.00     5.00       35     3.00     5.00     4.00     4.00     4.00     4.00	30	4.00	4.00	5,00	4.00	5.00	4.00	5.00
33     3.00     4.00     3.00     3.60     4.00     4.00       34     4.00     4.00     5.00     5.00     5.00     5.00       35     3.00     5.00     4.00     4.00     4.00	31	3.00	4.00	5.00	5.00	5.00	4.00	4.00
34     4.00     4.00     5.00     5.00     5.00     5.00       35     3.00     5.00     4.00     4.00     4.00     4.00	32	3,00	4.00	4.00	4 00	4.00	5.00	5.00
35 3.00 5.00 4.00 4.00 4.00 4.00	33	3.00	4.00	3.00	3.00	4.00	4.00	3,00
,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,		4.00	4.00	5.00	5.00	5.00	5.00	5.00
36 3.90 3.00 5.00 4.00 5.00 5.00	35	3.00	5.00	4,00	4 00	4.00	4.00	5 00
	36	3.00	3.00	5.00	4.00	5.00	5:00	5.00
37 4.00 4.00 3.00 4.00 4.00 4.00	37	4.00	4.00	3.00	4 00	4,00	4.00	4.00
38 3.00 5.00 4.00 4.00 5.00 5.00	38	3.00	5.00	4.00	4.00	5.00	5.00	5.00

	var00030	var00031	var00032	fao1_1	fac2_1	fac3_1
1	5.00	4,00	4.00	-2.57706	.22504	1.73643
2	4.00	4.00	5:00	.78128	-1.19105	58082
3	4.00	4.00	4.00	60931	63364	09963
4	5.00	5,00	5.00	,39147	.88299	40913
5	5.00	4.00	4.00	-1.03933	83011	.16220
6	5.00	5.00	5.00	.42488	1.14701	-1.51360
7	4.00	5.00	5.00	27023	.61883	28866
8	4.00	5,00	5.00	.62004	38185	1.30804
9	5.00	4.00	5.00	.78026	-1.04531	1.45373
10	5.00	4.00	5.00	1.66157	-1.59810	-1.14737
11	5:00	5.00	5.00	76553	93627	.18130
12	4:00	4.00	4.00	-1,38895	77025	-,59229
13	4.00	5.00	5.00	1.16099	1.53466	1.45215
14	4.00	5.00	5.00	61677	.67915	73549
15	4.00	4.00	4.00	- 88988	44161	42677
16	5.00	4.00	5.00	.78026	-1.04631	1.45373
17	5.00	4.00	5.00	1,66157	-1,59810	-1.14737
18	5.00	5,00	5.00	76553	93627	.18130
19	4.00	4.00	4.00	-1.38895	77025	- 59229
20	4.00	5:00	5.00	1.16099	1,53466	1 45215
21	4.00	4.00	4.00	60931	63364	09963
22	5.00	5,00	5.00	.39147	.88299	-,40913
23	5 00	4.00	4.00	-1.03933	83011	.16220
24	- 5.00	5.00	5.00	42485	1.14701	-1.51360
25	4.00	5.00	5.00	27023	.61883	28866
26	4.00	5.00	5.00	.62004	-,38185	1.30804
27	5.00	5.00	5.00	42488	1.14701	-1.51360
28	4.00	5.00	5.00	27023	.61883	28866
29	4.00	5.00	5.00	.62004	38185	1.30804
30	5.00	4.00	5.00	.78026	-1,04531	1.45373
31	5.00	4.00	5.00	1.66157	-1.59810	-1.14737
32	5 00	5.00	5.00	76553	.93627	.18130
33	4.00	4.00	4.00	-1.38895	77025	59229
34	4,00	5,00	5.00	1.16099	1.53466	1.45215
35	4.00	4 00	4.00	60931	-,63364	09963
36	5.00	5.00	5.00	.39147	.88299	40913
37	5.00	4.00	4.00	-1.03933	-,83011	,16220
38	5:00	500	5.00	.42488	1.14701	-1.51360

	fac4_1	fac5_1	fac6_1
1	1,016Q4	.59124	2.25749
5	-,23029	43706	71264
3	1,057.70	18259	-,33823
4	-2.20528	1.01301	1.07337
5	20086	1.26781	.76687
6	1.61738	45471	.79354
7	95056	.50255	-1.79351
8	.72066	18338	91641
9	23204	19787	.88359
10	25682	91757	.38934
11	65936	-2.82273	.67782
12	19706	07038	92958
13	.45654	.25466	61616
14	51826	.07925	-1.68832
15	.66419	10428	-,62199
16	23204	.19787	.88359
17	25682	91757	,38934
18	65936	-2.82273	.67782
19	19706	07038	92958
20	.45654	.25466	61616
21	1.05770	-, 18259	-,33823
22	-2.20528	1.01301	1.07337
23	20086	1.26781	,76687
24	1.61738	.45471	.79354
25	95056	.50255	-1.79351
26	.72066	18333	91641
27	1.61738	.45471	.79354
28	95056	.50255	-1,79351
29	72066	18333	91641
30	23204	.19787	.88359
31	25682	91757	.38934
32	65936	-2.82273	,67.782
33	19706	07038	92958
34	.45654	.25466	61616
35	1.05770	18259	33823
36	-2.20528	1.01301	1.07337
37	-,20086	1.26781	.76687
38	1:61738	.45471	.79354

## **Factor Analysis**

#### Communalities

	Initial	Extraction
Types of Mortgage The bank offers	1.000	.945
Mortgage financing encounter bank customer to save	1.000	.916
High interest from Mortgage	1.000	.912
Kenya financial laws require bank to have less cash in reserve	1.000	.994
Kenya financial law Requiring to lower interest on treasury bond	1.000	.922
High interest From Mortgage improve financial performance of the mortgage firms	1.000	.883
Sound credit risk Management practices are built on a good quality portfolio management	1.000	.838
Mortgage financing encourage Customer to Save hence high interest earnings for the bank	1.000	.804
Competitions in the Marketing improve Mortgage firms investment hence high performance	1.000	.660
Mortgage firms attracts more customers widening customers base	1.000	.878
Customer are offered free customer consultant service	1.000	.939
Mortgage investment leads to improvement diversification of the banks increasing earnings	1.000	.573
Market liberations leads to improvement of the mortgage financing	1.000	.891
Cross selling potential has promoted mortgage financing	1.000	.842
Mortgage financing leads to improve profitability of the bank	1.000	.803

Extraction Method: Principal Component Analysis.

### **Component Transformation Matrix**

Componen						
t	1	2	3	4	5	6
1	.627	.624	.023	260	335	.193
2	.438	.000	.620	.405	.503	082
3	.259	169	506	.540	.059	.594
4	155	.587	363	.471	.118	514
5	539	.486	.258	015	.260	.582
6	.179	.031	402	504	.742	027

Extraction Method: Principal Component Analysis. Rotation Method: Varimax with Kaiser Normalization.

Total Variance Explained

Com					action Sur			ation Sum	
р	Initi				ared Load	ings	Squ	ared Load	ings
	Total	% of Var	Cum %	Total	% of Var	Cum %	Total	% of Var	Cum %
1	4.578	26.930	26.93 0	4.578	26.930	26.930	3.111	18.302	18.30
2	3.659	21.525	48.45	3.659	21.525	48.455	2.699	15.877	34.17
3	2.178	12.814	61.27	2.178	12.814	61.270	2.440	14.356	48.53
4	1.567	9.216	70.48	1.567	9.216	70.486	2.179	12.815	61.35
5	1.328	7.809	78.29 5	1.328	7.809	78.295	2.173	12.783	74.13
6	1.120	6.586	84.88	1.120	6.586	84.881	1.827	10.748	84.88
7	.788	4.636	89.51						1
8	.703	4.135	93.65						
9	.472	2.778	96.43						
10	.327	1.921	98.35						
11	.135	.791	99.14						
12	.087	.511	99.65						
13	.046	.269	99.92				i		
14	.013	.078	100.0						
15	6.508 E-16	3.828E- 15	100.0						

# Component Matrix (a)

	Component					
	1	2	3	4	5	6
M.F leads to improve profitability of the bank	.842					
Cross selling potential has promoted M.F	.711			.495		
Customer are offered free customer service	.696				.598	
Types of Mortgage The bank offers	.650		.619			,
Encountering competitions improve Mortgage firms investment hence high performance	.599	.322			.405	
Mortgage investment leads to improvement diversification of the banks increasing earnings	.599				.311	
Mortgage firms leads to widen customers base	.586	.459	.338		.358	
Kenya financial laws require bank to have less cash in reserve	.582	.553			.336	.471
M.F encourage Bank Customer to Save Leading to high interest earnings for the bank	.564	.468		.453		
M.F encounter bank customer to save	.477	.459				.475
M.F encounter bank customer to save	.372	.779	.354			
High interest from Mortgage	.337	.736	.472			
High interest From Mortgage improve financial performance of the mortgage firms		713		.337	.401	
M.F encounter bank customer to save		.610	.400	.515		.303
Kenya financial law Requiring to lower interest on treasury bond		.593	.668			
Market liberations leads to improvement of M.F	.306		.566	.503	.389	
Sound credit risk Management practices are built on a good quality portfolio management	.354		.346	.512		.516

Extraction Method: Principal Component Analysis. a 6 components extracted.

# Rotated Component Matrix (a)

	Component					
	1	2	3	4	5	6
Mortgage firms attracts more customers widening customers base	.915					
Encountering competitions in the Marketing improve Mortgage firms investment yielding to high		.795				
performance M.F leads to improve profitability of the bank	.740	.407				
M.F encourage Bank Customer to Save Leading to high interest earnings for the bank	.668		.417			.412
Cross selling potential has promoted M.F		.857				
Customer are offered free customer consultant service		.822				.489
Types of Mortgage The bank offers		.708		.596		
Mortgage investment leads to improvement diversification of the banks increasing earnings	.329	.481				.435
Kenya financial law Requiring to lower interest on treasury bond			.913			
High interest From Mortgage improve financial performance of the mortgage firms			.829			
High interest from Mortgage	.438		.683			.388
Sound credit risk Management practices are built on a good quality portfolio management				.880		
M.F encounter bank customer to save			.322	.749	.422	
Kenya financial laws require bank to have less cash in reserve					.924	
Market liberations leads to improvement of the M.F						.898

Extraction Method: Principal Component Analysis. Rotation Method: Varimax with

Kaiser Normalization.

a Rotation converged in 15 iterations

### Communalities

	Initial	Extraction
Market Penetration	1.000	.865
Cross Selling Potential	1.000	.828
Compensation From other Bank	1.000	.690
Relative Political Stability	1.000	.797
Economic Reforms in Kenya	1.000	.937
Market Liberalization	1.000	.637
improve Profitability of the Bank	1.000	.831
To improve Risk Management	1.000	.836
Diversification of investment	1.000	.648
Promotion of innovation	1.000	.759
Attract more Customers	1.000	.918
Encounter Competitions in the Market	1.000	.807
Increase investment,	1.000	.834
Improve Saving	1.000	.828
Provide a Mean of Managing Risk	1.000	.777
Creating of Wealth	1.000	.784

#### Communalities

	Initial	Extraction	
Market Penetration	1.000	.865	
Cross Selling Potential	1.000	.828	
Compensation From other Bank	1.000	.690	
Relative Political Stability	1.000	.797	
Economic Reforms in Kenya	1.000	.937	
Market Liberalization	1.000	.637	
Improve Profitability of the Bank	1.000	.831	
To improve Risk Management	1.000	.836	
Diversification of investment	1.000	.648	
Promotion of innovation	1.000	.759	
Attract more Customers	1.000	.918	
Encounter Competitions in the Market	1.000	.807	
Increase investment,	1.600	.834	
Improve Saving	1.000	.828	
Provide a Mean of Managing Risk	1.000	.777	
Creating of Wealth	1.000	.784	

Total Variance Explained

	Initial Eigenvalues			Extraction	on Sums of Squ	ared Loadings
Comp	Total	% of Var	Cum %	Total	% of Var	Cum %
1	7.979	46.932	46.932	7.979	46.932	46.932
2	4.037	23.750	70.682	4.037	23.750	70.682
3	1.573	9.255	79.937	1.573	9.255	79.937
4	.859	5.050	84.987			
5	.695	4.086	89.073			
6	.519	3.055	92.128			
7	.383	2.255	94.383			
8	.334	1.968	96.350			
9	.258	1.517	97.867			
10	.185	1.089	98.956			
11	.096	.564	99.519			
12	.048	.283	99.802			
13	.034	.198	100.000			
14	4.183E-16	2.460E-15	100.000			
15	7.130E-17	4.194E-16	100.000			
16	-5.243E-16	-3.084E-15	100.000			
17	-8.792E-16	-5.172E-15	100.000			

	Componen	Component				
	1	2	3			
Attract more Customers	.949					
To improve Risk Management			.901			
Increase investment	.887					
Improve Profitability of the Bank	.879					
Encounter Competitions in the Market	.873					
Promotion of innovation	.860					
Improve Saving	.853		306			
Diversification of investment	.763					
Market Penetration	.676	.698				
Cross Selling Pontetial		.891				
Economic Reforms in Kenya	390	.886				
Market Liberalization		.765				
Relative Political Stability	484	.706				
Competition From other Bank	.380	.670	.310			

Types of Mortgage The bank offers	623	630	
Creating of Wealth	.404		.787
Provide a Mean of Managing Risk	.567		.634

Extraction Method: Principal Component Analysis.

3 components extracted.

	Component				
	1	2	3		
Types of Mortgage The bank offers	078	156	.108		
Market Penetration	.085	.156	072		
Cross Selling Potential	.021	.221	.038		
Compensation From other Bank	.048	.166	.197		
Relative Political Stability	061	.175	160		
Economic Reforms in Kenya	049	.219	009		
Market Liberalization	007	.190	140		
Improve Profitability of the Bank	.110	033	127		
To improve Risk Management	.113	008	.096		
Diversification of investment	.096	020	155		
Promotion of innovation	.108	024	062		
Attract more Customers	.119	015	.073		
Encounter Competitions in the Market	.109	024	120		
Increase investment	.111	038	098		
Improve Saving	.107	021	194		
Provide a Mean of Managing Risk	.071	.057	.403		
Creating of Wealth	.051	.006	.500		

