

AN EVALUATION OF FACTORS THAT DETERMINE THE PRICE OF MORTGAGES
AMONG FINANCIAL INSTITUTIONS: A CASE OF COMMERCIAL BANKS
OPERATIONS, KISII TOWN, KENYA

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of the award of Master of Business Administration Degree faculty of Commerce, Kisii
University College

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This Research Project has not been submitted in any institution or university for purposes of examination

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RECOMMENDATION

This Research Project has been submitted for examination with our approvals as university supervisors.

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DEDICATION

I dedicate this Research Project to my loving wife Rose and children: Celine, Basil and Rigobert for their moral strength. God bless you all.

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ABSTRACT

This Research Project sought to evaluate the factors that influence the prices of mortgages among commercial banks. In a free market economy the forces of demand and supply are expected to correct the changes in prices and make them stable. The study was limited to the commercial banks operating within Kisii town. The population of study consisted of 11 commercial banks involved in mortgage lending in Kisii town as at January 2010 and from each bank there were five respondents these are relationship manager, credit managers, microfinance officers, business development officers, and the general manger, making a population of 55. The main data collection instrument was the questionnaire with both open and closed ended questions administered personally to five respondents from each bank in the research using drop and pick method. The data was first coded, edited and summarized and then analyzed using descriptive statistics where frequency distribution tables were prepared and totals for each item calculated, and also the likert scale. From the findings of the study, it was established that the commercial banks are majorly affected by inflation rates in the market, economic growth and money supply. The commercial sector will benefit from increased awareness which leads to growth of the country's gross domestic product (GDP) and create employment opportunities and an eye opener to the sectors producing mortgage services to enhance their service delivery to the clients. It is expected that the findings also will provide a basis for future studies in the area.

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LIST OF ABBREVIATIONS

CBR	Central Bank Rate
CBR	Central Bank Rate
C.P.I	Consumer Price Index
DEF	Budget Deficit
DFIs	Development Finance Institutions
ERS	Economic Recovery Strategy
G.D.P	Gross Domestic Product
INF	Inflation Rates
M.B.S	Mortgage Based Security
MS	Money Supply
N.S.E	Nairobi Stock Exchange
SACCOs	Savings and Credit Cooperative Societies
U.S.A	United States of America
U.S	United States

CHAPTER ONE

INTRODUCTION

1.1 Background of the Study

Real estate is the most durable asset in the economy, so the cost of acquiring real estate assets generally far exceeds the annual rental cost of using real estate (Fabbozi and Modigliani, 1992). The cost of real estate and amount of funds demanded for the purchase of real estate are determined by combined action of the following groups i.e. borrowers, investors, and developers who supply real asset. (Jaffee and Renauld 1995).

When pricing the interest rate of real estate mortgage, the lender must charge a premium p that is sufficiently high to compensate for the default and other risks, a premium (f) that reflects the anticipated inflation to earn a real rate of interest (r) which is competitive with the real returns available on the other investments opportunities in the economy. If any of these components are underestimated the lender suffers a real economic loss (Fabbozi, 2005)

Changes in interest rates will affect the price of all securities and investments. Depending on the relative maturity, however some investment prices will respond more than others thereby increasing the potential loss or gain. Real estate tends to be highly levered and thus the rate of return earned by equity investors to be affected by changes in interest rate. Even where the investors have a fixed rate mortgage, an increase in interest rate may lower the price a subsequent buyer is willing to pay; furthermore the yield rate that an investor requires for real estate tends to increase with the overall levels of interest rates in economy (Fisher, 1999).

Although the demand for real estate is most acute in the middle, and low income categories, the property market in Kenya has responded most to the needs of high income homeowners. Some of the reasons behind this include availability of mortgage finance to Kenyans at a higher income end and insufficient serviced land that could be set aside for low income housing. In addition the supply of finances for mortgages and property development under the economic recovery strategy (ERS), interest rates in Kenya had fallen considerably settling at a prime rate of 6% in 2007. The same applies to mortgage finance, especially for middle and low income housing. Secure mortgage investment needs to be developed.

(District Agriculture Office, Kisii 1993) Income earned in the district is unevenly distributed. There are many poor people in the district living below poverty line.

Table 1: Income Per Capita for Kisii District

	1990	1991	1992
Income level	1,112,399	1,542,500	2,070,050
Population	1,007,780	1,039,012	1,071,222
Per capita	1,100	1,500	2,000

Source: District Agriculture Office, Kisii 1993.

Qualifying for a mortgage loan is different from qualifying for a bank loan because lenders sell their mortgage loans to one of few federal agencies in secondary market. The mortgage backed securities have been a very important development in the financial market in the recent years. The new debt instruments compete for funds with government bonds, corporate bonds and stocks. Securitized mortgages are low risk securities that have higher yields than comparable government bonds. One benefit of the securitized mortgage is that it reduces the problems caused by regional lending institutions sensitive to local economic fluctuations. Because the loans are sold nationally and internationally. Mortgage rates are now more open to national and international influences.

The financial sector comprises banking, insurance, capital markets and pension funds. Other parts of the sector include quasi banking institutions and services provided by savings and credit cooperative organizations (SACCOS). Microfinance services building societies, development finance institutions (DFI's) and informal financial services. The sector is characterized by low penetration and limited supply of long term finance. (Fabbozi, 2005)

Kenya has 46 commercial banks, a number of which are considered too large for the size of the economy. The banking sector is dominated by 4 or 5 large banks which account for the bulk of deposits. The remaining banks are small and have limited outreach. This has reduced competition and resulted in high credit costs.

The bank has, in effect, transformed savings deposits (an asset, held by a depositor into a mortgage loan) on the other hand conventional image of mortgage in the perception of many Kenyan's is that of eternal indebtedness and hence the fear to embrace the same. However the high and ever rising real estate property prices compiled with other financial constraints leave many wondering whether it is possible for them to ever own a real estate. Blame it all on lack of information. This study therefore seeks to evaluate factors that determine the prices of mortgage in Kenya.(Fisher, 1999)

1.2 Statement of the Problem

The amount of housing construction and amount of funds demanded for the purchase of real estate are determined by combined action of borrowers, investors and developers who supply real estate. Mortgage tends to be highly levered and thus the rate of return earned by equity investors to be effected by changes in interest rates. However, the cost of long term capital for real estate is still prohibitive due to the following factors, availability of cheap mortgage finance to Kenyans, insufficient serviced land, and cost of building materials. Qualifying for a mortgage loan is different from qualifying for a bank loan due to competition with government bonds, corporate bonds and stocks and also the rules that are under operation by the banks and government. Kenya has 46 commercial banks but the market is dominated by 4 or 5 large banks and majorities are small and have limited outreach which reduces competition and results in high credit costs. This leaves many wondering whether it is possible to own an asset or get affordable finance for mortgages. This study therefore seeks to evaluate the factors that determine the price of mortgages in Kenya.

1.3 Objectives of the study

The objective of this study was to evaluate the factors that influence the prices of mortgages among commercial banks in Kenya.

1.3.1 The specific objectives of the study were to:

- i. identify factors influencing prices of mortgages among commercial banks in Kenya,
- ii. Evaluate the factors that influence the required rate of return and,
- iii. Evaluate the impact of pricing strategies employed by commercial banks to price mortgages

1.4 Research Questions

- i. What are the factors influencing prices of mortgages among commercial banks in Kenya?
- ii. What are the factors that influence the required rate of return?
- iii. What is the impact of pricing strategies employed by commercial banks on prices of mortgages.?

1.5 Importance of the Study

The banking sector will benefit from the exposure of the determinants of mortgage pricing suggested from the study and enable them to generate more revenue. Increased awareness will lead to growth of the country's gross domestic product (G.D.P) and create employment opportunities, which is a benefit to the government. This will also be an eye opener to the other sectors producing mortgage services to enhance service delivery to their clients.

1.6 Scope and Justification of the Study

The study was limited to the commercial banks in Kenya on the determinants of mortgage pricing. Researcher was made aware of the relationships between mortgage price and its determinants. Investors will make informed decisions when investing in the Kenyan market while public will have access to a wider knowledge of commercial banks in Kenya. Kisii region was chosen since there are a number of commercial banks which are growing with time and the findings can be generalized to other regions. And to scholars the research findings will be used as a basis for further research work in this field.

1.7 Limitations of the Study

First, the study takes into consideration a sample of commercial banks in Kenya and due to competition they employ different marketing strategies and hence can't be generalized to other sectors of the economy; secondly the study only concentrates on one among many services offered by commercial banks. Thirdly the study will also be carried out in banking industry where confidentiality and bureaucracy hinders the free flow of information due to their standards of business conduct.

1.8 Definition of Terms

Commercial banks- institutions charged with lending and holding deposits for individuals or organizations at a fee.

Inflation- this is the persistent rise in prices of goods and services over a given period of time.

Liquidity – ability of an asset to be changed to cash and back to an asset at any time.

Money supply – amount of money released to the economy for transactional purposes

Mortgage loan – amount lent to an individual or organization for purposes of purchase of assets.

Price – the cost attached to a good or service in the economy.

Real Estate- this are permanent structures found on the land that are used to generate wealth.

CHAPTER TWO

LITERATURE REVIEW

2.1 Categories of Mortgages

Meir (1999) identified the categories of mortgages as, fixed rate, adjustable rate mortgages, income property mortgages, capital mortgages, and interest only mortgages.

2.1.1 Fixed Rate Mortgages

Fixed rate mortgages have been the prevalently used in the home financing. A fixed rate mortgages specifies an interest rate that is fixed over the term of the loan. Consequently, the loan repayments periodically deducted on the borrowers account are fixed. Typically this would be an amortized loan combining both interest and principal loan repayment into equal periodic repayments. These mortgages carry a higher degree of certainty as the returns to the bank are well known at the commencement of the facility and the obligation by the borrower is fixed. Banks will however impose heavy penalties on early repayment of this facility to discourage lump sum repayment of this loan as this may curtail their future expected earnings (Clauret, 2003).

2.1.2 Adjustable Rate Mortgages

There are several versions of the variable rate mortgages. A common feature in all the variable mortgages is that the chargeable rate is a margin above the base rate or the Treasury bill rate. While the margin above the base or Treasury bill rate may itself be fixed, the rate charged on the mortgage will be primarily be driven by short term movements in the money market. This implies that the net amount paid by the borrower can't be projected with certainty these loans are not amortized and therefore the borrower makes separate payments for interest and principal loan amount The interest is charged on the current account monthly while the principal repayment is charged separately to the same account. In the long run (Mayo, 1998) stated that lenders have to ensure that their lending rates cover the interest paid to the depositors and their operational expenses.(Mayo, 1998).

2.1.3 Income Property Mortgages

This type of mortgage is not common in Kenya. It refers to a situation where the property financed is the collateral against the debt. Several companies will come together to finance the project and beside the borrowers own contribution to the project is significant. The property being financed is usually commercial based. Common examples include apartments, offices, shops to let, and warehouses among others. This nature of mortgages will be serviced from the income generated from the collateral. The interest rate charged reflects the risks associated with the property ability to generate adequate income to cover both the interest and principal amount (Reilly, 1997)

2.1.4 Capital Repayment Mortgages

The monthly repayments cover both capital and the interest on the mortgages. Most banks charge interest at the beginning of the period and then have loan reduced through repayments calculated to discharge it over the full term in the initial periods of the loan repayments the interest proportion in the monthly repayments is far much greater than the principal loan. It is common for the lenders to insist on a credit life insurance protection cover over the borrower's life to cover any eventuality of death while the loan is outstanding, (Souster, 1996)

2.1.5 Interest Only Mortgages

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

This is an improvement of the variable rate mortgages. It provides for the maximum chargeable rate for a period of time with such a mortgage the borrower is usually protected from serious rises in interest rate charged. In an environment of risk and uncertainty the type of mortgage offered by the bank has an influence in the following. Firstly, the return to share holders since some of this mortgage arrangement provided for a revision of the interest rate charged. This enables the bank to recover its costs without any restrictions (Kohn, 1999)

On the other hand, fixed and capped interest rate mortgages confines the banks to charge rates that are within certain specified limits. Should the costs of providing the service escalate the bank may be trading unprofitably. Secondly, the borrowers future capacity to meet his obligations where the banks has a free hand in revising the rates charged on the mortgage, there is a possibility that it could affect a rate that is unaffordable to the borrower such borrowings would eventually be categorized under the non-performing loans. (Mier, 1999).

2.2.1 Inflationary Expectations

The inflationary expectations puts an upward pressure on the interest rates and therefore on the required return on mortgages, lower inflation puts downward pressure on interest rates and therefore on the rate of return on mortgages. Overall 12 month inflation decreased from 26.07% in April 2009 to 19.52% in May 2009. This followed significant decrease in prices of seasonal food items such as sukumawiki, cabbages, and tomatoes by 16.88%, 11.64% and 5.92%, respectively in May 2009. Compensating for the increase in the prices of food items like sugar and milk. The prices of other commodities in the C.P. basket either remained constant or increased slightly in May 2009. (Madura, 2004)

2.2.2 Economic Growth

An increase in economic growth can cause an increase in the risk free rate and therefore an increase in the required rate of return on mortgage and a decline in mortgage prices. A decrease in economic growth can cause a decrease in risk free rate and therefore a decrease in the required rate of return on mortgages and an increase in mortgages prices. (Fabbozi, 2005).

2.2.3 Money Supply

A relatively high level of money supply growth tends to place downward pressure on risk free interest rate and therefore places downward pressure on the required rate of return on mortgages, and upward pressure on mortgages prices. A relatively low level of money supply growth tends to place upward pressure on the risk free interest rate and therefore puts upward pressure on required rate of return on mortgage the result is lower mortgage prices.

The money supply aggregates increased less rapidly in the twelve months to April 2009, compared with the growth rates in the twelve months to April 2008. Money supply, M2 increased by 6.6% in the year to April 2009 compared with 27.9% growth in the previous year. Broad money supply, M3, which includes M2 and residents foreign currency deposits, increased by 7.5% annual growth to April 2008 the slowdown follows reduced economic activity in the country. (Kenya National Bureau of Statistics and Central Bank of Kenya)

2.2.4 Budget Deficit

An increase in an annual budget changes the federal government demand for funds and can affect the risk free interest, surplus budget places downward pressure on risk free rate and on the required rate of return on mortgages and increased the price of mortgage. The phenomenon of secondary mortgage market is relatively new in the market developing world though in developed it has been in existence for a longer period. In order to fully understand it, this research will first trace its development in developed countries such as U.S.A and Europe as a whole. Secondly, it will look its applicability in the Kenyan market. (Fabbozi and modiglian,1992)

The first mortgage backed securities arose from the secondary mortgage market in the 1970. Investors had traded whole loans, or unsecuritized mortgages for some time before the government national mortgages association (GNMA) also called GinnieMae, guaranteed the first mortgages pass through to investors. Ginnie Mae was later followed by Fannie Mae a private corporation chartered by the federal government along with Freddie Mac to promote home ownership by fostering a secondary mortgage market more liquid and attractive to investors and lenders (Fabbozi and modiglian,1992)

2.3 Historical Development of Secondary Market in U.S.A

Real estate represents approximately half of all the tangible capital assets in the developed countries of the world. Real estates are the most durable assets in these economies, so the cost of acquiring real estate assets generally far exceeds the annual rental cost of using real estate. In developed countries the mortgage market in among the largest components of capital markets. They stated the major goal of U.S.A

public policy is to provide adequate and affordable housing for US citizens. Historically the private sector has not been able to accomplish this goal without the intervention of the federal government.

Prior to securitization revolution, America mortgage markets had operated as isolated, subsidized, and often inefficient components of the capital markets. The dramatic effects of mortgage securitization were achieved because securitization tightly integrated real estate finance with the overall capital markets. The benefits of securitization for the American mortgage markets have included lower mortgage interest rates, less sensitivity to credit rationing, less need for subsidization, and the elimination of regional variations in mortgage interest rates (Jaffee and Renaud 1995).

The main participants in housing markets are, borrowers those who demand funds with which to purchase a home, Investors those who supply funds by investing in mortgage loan, Developers those who supply housing. The amount of housing construction and amount of funds demanded for the purchase of homes are determined by combined action of these three groups. The US government has influenced the behavior of all these three groups by creating government agencies that have guaranteed mortgage loans against default thus making funds available to certain segments of the population who would not otherwise have been able to acquire a home. They have promoted various types of mortgage designs that are more attractive to borrowers and investors. They have also developed various mortgage based securities products such as pass through and collateralized obligation and guaranteed those products against a default risk so that a wider range of institutional investors would supply funds to the market.

They have standardized mortgage loan terms and documentation as a result of the process of ensuring /guaranteeing mortgage loans and securitizing them. In addition they have provided liquidity to the mortgage market and granted loans at an interest below the prevailing market rate to encourage the construction of the income housing. Several legislative acts and regulatory change helped further the development of the private MBS market. The secondary mortgage market enhancement act of 1984 included provision to improve the marketability of mortgage related securities earning a double A quality rating. The tax returns act of 1986 made the restructuring of private mortgage related securities less costly

from tax perspective under the tax law the issuer is not treated as taxable entity (Fabozzi and Modiglian 1992) .

2.4 Role of Commercial Banks

Commercial banks have served several roles in real estate finance. The corebusiness of commercial banks traditionally has been to make short termloans tobusiness forinventory financing and other working capital needs. But very important adjustment of this business has always been to meet their real estate finance needs of business customers. This included financing of business related real estate, mortgage loans for personal residence, sometimes financing residential subdivision development and for home construction from the fading thrift industry. Finally, off course virtually all banks offer home loans as a service to non business customer. Factors that affect the risk free interest rate are driven by inflationary expectations (INF), economic growth (ECON), the money supply (MS) and the budget deficit (DEF)

$$\Delta K=f(\Delta INF, \Delta ECON, \Delta MS, \Delta DEF)$$

2.5 Determinants Of Mortgage Pricing

When pricing or setting the interest rate of a real mortgage, the lender must charge a premium (P) that is sufficiently high to compensate for default and other risks, a premium (f) that reflects the anticipated inflation to earn a real rate of interest (r) which is competitive with the real returns available on the other investment opportunities in the economy. If any of these components is underestimated the lender suffers a real economic loss (Fabozzi, 2005)

This relationship assumed to be of linear nature might be described as follows;

$$i=r + p+ f$$

where i interest on real mortgage

r real rate of interest

p premium or default risk

f anticipated inflation

the assumption in these case are that each of the variable making up i are independent and additive,

historical data on each of the variables is available to guide and inform decision making, and changes in interest rates, mortgage repayments and loan balances under adjustable rate mortgages.

By their nature, adjustable rate mortgages will have changes in interest rates, mortgage repayments and loan balances. There are generally two common approaches to these adjustments (Fabozzi and Modigliani, 1992).

2.5.1 Price Level Adjustments

The lenders originate mortgages at interest rates that reflect expectations of the real interest rates plus a risk premium for the likelihood of loss due to default on a given mortgage loan. That is, real interest rates on mortgage $i = r + p$. After estimating initial values for p and r the loan balances would be adjusted upwards or downwards by a price index. Mortgage repayments would then be based on a new loan balance, adjusted for inflation. This would shift the risk of changes in market rates brought by inflation (f) to borrowers and relieve lenders of the difficult task of forecasting future interest movements when originating loans. The lender would however still bear the risk of any unanticipated change in r or p .

2.5.2 Indexed Level Adjustments

The mortgage agreement also provides that the mortgage will be indexed to the consumer price index (C.P.I) and adjusted annually. This process which continues year after year, involves; computing the loan balances using an amortization schedule based on the interest rate for the remaining term, increasing the balance by the change in consumer price index (C.P.I) during the next year, and computing the repayments over the remaining term. It is often argued that the process of adjustments occurring at the end of the year can be viewed as an annual series of new mortgage loan organization. Therefore payments may be modified based on different rates of interest or maturities with outstanding loan balance always representing the new amount being borrowed (Goacher, 2002).

2.6 Problems with Price Level Adjustments Approach

It is a common occurrence for mortgage balances to initially rise. This primarily occurs due to the low impact of the expected repayments as compared with that of the (C.P.I) should prices of the other goods represented in the C.P.I rise faster than housing prices, indexing loan balance to C.P.I would result in loan

balances increasing faster than the property value. Once the debt outstanding exceeds the property value the borrower would have an incentive to default. This poses a serious challenge to the lenders where these is anticipated, lenders will require the borrowers to make a significant level of deposit in the initial period to reduce the loan balance (Fisher, 1997)

This approach assumes that the C.P.I and the borrower's income will grow at the same rate. In normal circumstances the annual income increases reflects the growth in C.P.I. however, should inflation rate increase it is unlikely that the owner income would increase at the same rate. During such periods, the borrower maybe unable to meet the new mortgage repayments leading to defaults, lenders therefore have to estimate future incomes of the households in different occupational categories and the relationships of that income to inflation.

A fundamental problem with this approach however lies in the fact that the index is based on data collected in the previous period and published in the current period. The index based on historical data may not accurately predict future mortgage payments. This problem is more exacerbated when the C.P.I drops and then rises. To overcome this problem lenders recommended that the index be renewed regularly moreover, the rate of inflation will affect the mortgage loan repayment and not the deposit costs where the interest paid on deposits. Should the interest paid on mortgages rise faster than the interest on deposits a profit squeeze may develop.(Chorafas, 1995)

2.7Problems withthe Market Index Rated Mortgages

This approach does not entirely remove the possibility of lenders realizing losses because of interest rate risk. If for example, the market rate increased to 12% on the day following the mortgage origination in the above illustrations. The lender, would have to sustain a 2% until the adjustments period is over (Martysiak, 2000)

This may be addressed by inserting clauses in the mortgage agreement that allows mortgage house to determine the adjustment period without reference to the borrower. This however, will create uncertainty to the borrower. To the borrower, the market rate indexed mortgages is more complex than the price level adjusted mortgages. Moreover, future increase in the market rates also implies rise in cost of deposit that

further reduces the return on mortgages. Market rates indexed mortgages therefore may not completely relieve lenders from the possibility of making loans with expected yields that is inadequate in relation to future deposits costs to the extent that lenders select inappropriate indices market margins or adjustments periods, they may be underwriting considerable amount of interest rate risk that may be adversely affect profitability.(Kohn, 1999)

The market rate indexed mortgage may shift all or part of the interest rate risk to the borrower, the risk of default will generally increase to the lender, thereby reducing some of the benefits gained from shifting the interest rate risk to the borrower thereby increasing the required repayments in tandem with any changes in the market rates without any limits, the risk of default would rise considerably (Souster, 1996) It is important to recall that mortgages are long term loans facilities and borrower's income may dwindle due to retirement, retrenchment or change of employment. As such unanticipated increase in the mortgage repayment may lead to default. It is however, a common practice for lenders to assess the borrower likelihood of default under different market rate indexes and plans that shift part or all the interest rate risk to the borrowers and adopt the most appropriate one.(Chorafas, 1995)

2.8 Approaches to Determining Interest on Real Mortgages

There are two main methods of calculating interest on mortgage as described below:

2.8.1 Reducing Balance Method

Under this method the borrower meets the interest and capital loan obligation periodically. Consequently, the borrower makes a significantly high amount of repayment towards the mortgage repayment. In such cases interest is calculated on the balance of the mortgage facility outstanding monthly. This approach is usually adopted for adjustable rate mortgage. Typically the interest paid by the borrower varies from one period to another (Rouse, 1997)

2.8.2. Amortized Interest

Common with fixed rate mortgages, the amortized interest charge methodology implies that the total chargeable on a facility is calculated upfront. The total amount due from a borrower is the sum of total interest and the principal advanced. This amount is then subdivided into equal periodic repayments. In this

case therefore the amount paid by the borrower in the periodic repayments comprises of two debt obligation; the interest, and the principal portions. In general the borrower pays more under the amortized interest mortgages than the net interest method.(Broadhurts, 1996)

2.9 Types of Risk

There are some investment characteristics peculiar to real estate that makes it more risky than investing in government securities. A summary of major investment risk characteristics that must be considered by investors and mortgage borrowers when dividing among alternative mortgage structures are discussed here under. Interest rate, inflation and default rate risk are common to all mortgages, while business and management risk has a higher impact on income property mortgages than residential mortgages. This enables the bank to recover its costs without any restrictions. (Kohn, 1999).

2.9.1 Interest Rate Risk

Changes In the interest rates will affect the price of all securities and investments. Depending on the relative maturity (short term vs. long term), however some investment prices will respond more than others thereby increasing the potential loss or gain. Real estate tends to be highly levered and thus the rate of return earned by equity investors to be effected by changes in interest rate. Even where the investors has a fixed rate mortgage, an increase in interest rate may lower the price a subsequent buyer is willing to pay, furthermore the yield rate (required rate of return)that an investor requires for real estate tends to increase with the overall levels of interest rates in economy (Fisher, 1999)

2.9.2 Inflation Risk

Unexpected inflation can reduce an investor's rate of return if the income from investment does not increase sufficiently to offset the impact of inflation thereby reducing the real value of the investment. Real estate has historically done well during periods of low inflation than in periods of higher inflations. This might be attributed to the uses of leases that allow for pricing adjustment with unexpected changes in inflation rates. Typically there is a common clause in adjustable rate capped mortgages, interest only mortgages. Furthermore, the replacement cost of real estate tends to increase with inflation. During

periods of high vacancy rates, when the demand for space is weak and new construction is not feasible, with unexpected inflation (Matysiak, 2000).

2.9.3 Default Risk

When making mortgage loan, one major concern of the lender is the risk that borrowers will default on their obligation to repay the principal and interest. This is referred to as the default risk and it varies with the nature of loan and credit worthiness of individual borrower.

Default risk relates to the likelihood that the borrower's income may fall after the loan is made thereby jeopardizing the receipt of future mortgage payments. Similarly should the market value of property fall below the outstanding loan balance the borrower to lose the motivation to repay the mortgage loan leading to default. The possibility that a default may occur mean that lenders charge a premium or higher interest rates to offset possible loan losses.(Fabbozi and Modigliani (1992).

2.9.4 Business Risk

This is more prevalent on income property mortgage than any other type of mortgage. Real estate investors are in the business of renting space. They incur the risk of loss due to fluctuations in economic activity that affect the variability of income produced by the property. Changes in economic conditions often affect some properties more than others depending on the type of property, its location and existing leases.

Many regions in the country experience differences in the rate of growth due to changes in demand, population changes etc. those properties that are affected to a great degree than others will be riskier. A property with a well-diversified tenant mix is less likely to be less subjected to business risk. Similarly, properties with leases that provide the owner with protection against unexpected changes in expenses will have a lower business risk. Commonly, leases will provide a clause that allows the owners to recover any increases in costs necessary in managing the property (Matysiak, 2000).

2.9.5 Financial Risk

The use of debt financing (financial leverage) magnifies the business risk. Financial risk increases as the amount of debt proportion financing a mortgage increases. The higher the loan to value ratios the higher the financial risk. (Fabozzi,2000).

2.9.6 Liquidity Risk

This risk occurs when a continuous market with many buyers and sellers and frequent transaction is not available. The more difficult an investment is to liquidate, the greater the risk that a price concession may have to be given to a buyer should the seller have to dispose off the investment quickly. Real estate has a relatively high degree of liquidity risk. It can take 6-12 months to sell the real estate income properties especially during periods of weak demand. Special purpose properties that can be adopted to alternative uses (Kohn, 1999)

2.9.7 Management Risk

Most real estate investment requires management to keep the space well maintained to preserve the value of investment. The rate of return that the investor can earn depends on the competency of management. This risk is based on the capability of management, its ability to innovate, respond to competitive conditions, and operate the business activity efficiently (Clauret, 2003).

Some business requires a higher level of management expertise than others, for example regional malls require continuous marketing of the mall and leasing of space to keep a viable mix of tenants that draw customers to the mall. This risk is therefore higher on income property mortgages than other mortgage types (Matysiak, 2000).

2.9.8 Legislative Risk

Real estate investments are subject to numerous regulations such as tax laws rent control zoning and other restrictions imposed by the government legislative risk results from the fact that changes in regulation can adversely affect the profitability of the investment. This risk has a considerable impact on income property mortgages than the other mortgages some estate and local government have more restrictive legislation than others for new developments (Kohn, 1999).

2.9.9 Environmental Risk

The value of real estate is affected by changes in its environments or sudden awareness that the existing environment is potentially hazardous e.g. while it is used to be common to use asbestos to insulate buildings asbestos buildings are now perceived health hazard. A property may also become contaminated by toxic waste that is spilled or was once buried on the site or an adjacent site. Environment risk can cause more of a loss than the other risk mentioned above because the investor can be subject to clean up costs that far exceed the value of the property. Ultimately, a prospective investor must estimate or compute an expected return on the project and compare it with expected return of other specific real estate investment as well as other investments. Any risk differentials must then be carefully considered relative to any risk premium or differences in expected return in all such comparisons. This will enable the investor to justify such an investment (Berry, 1993).

2.10 Purpose of Mortgages

Mortgages provide funding for the following purposes

2.10.1 Home Purchase

This is the primary purpose of mortgages. Typically these mortgages will have tenure of five years to thirty years. In more developed markets mortgages in this category are specifically applied in financing purchases of new houses for owner occupier purposes only. The target market for this product is usually newly married couples, fresh graduates and newly employed workers. It is envisaged that the borrower's income is expected to increase in the future and thereby ease the pressure on his earnings. (Matysiak, 2000).

2.10.2 Collateralized Borrowing

This is borrowing against an existing mortgage to meet other purposes other than home purchases. In principal, this type of category of borrowing is aimed at releasing the value trapped in the home investment into some other domestic application. A property required through mortgage financing 10 years ago might have appreciated in value while the debt outstanding in the bank has reduced (Bayer, 2003)

The difference between the property's current market value and the outstanding mortgage value represents the owner's equity. Mortgage companies' advance secured borrowing against the owner's equity in a family setup, financing obtained through equity release may be used for such purposes as payments of bills, school fees, acquisition of an asset such as motor vehicle or any other debt obligation.. (Geist, 1998).

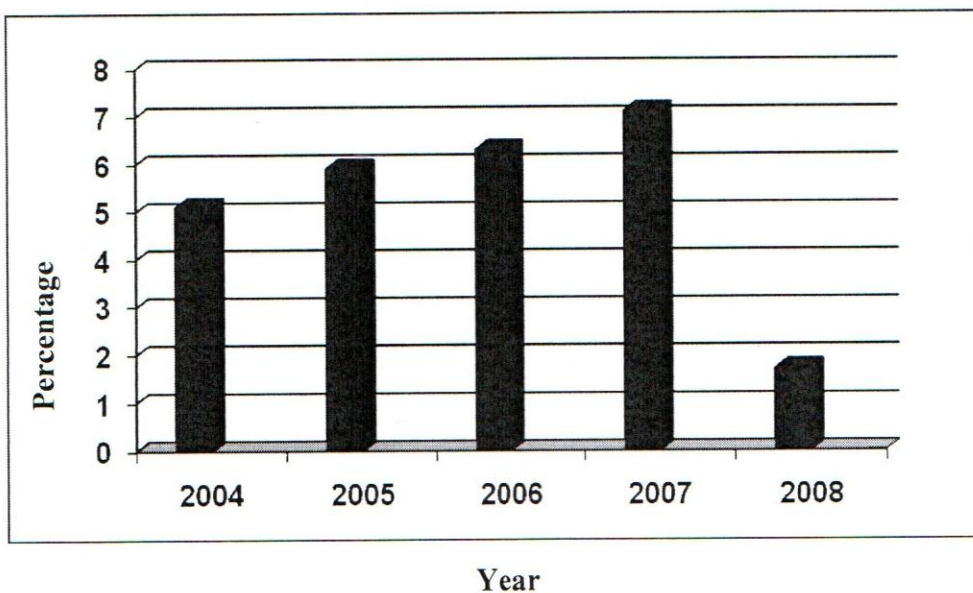
2.10.3 Construction Mortgages

Conventional construction mortgages will be available to enable debtors construct their own homes.

Commercial banks regard those mortgages as a high risk due to the following factors;

Firstly, the possibility of inability to complete the project. This view is born of experience than of any predictive science. This may be caused by diversion of the projects financing to other purposes. Secondly, the possibility of material and labour prices escalating over the construction period making it difficult for the projects objective to be achieved. Thirdly, the possibility of having poor quality finishes than otherwise envisaged. The poor quality finishes may be a product of poor /cheap material used or poor workmanship. This is significant factor due to the involvement of several professionals in the construction. It has to be remembered that the construction mortgage carries an aspect of delivery risk; the probability that the parties involved in the transaction will not deliver the product sought. Understandably, the interest rate charged on construction loans is higher than that charged on the other mortgages categories (Bayer, 2002).

Fig 1: Performance of Kenya's Economy



Source: Economic Survey 2009

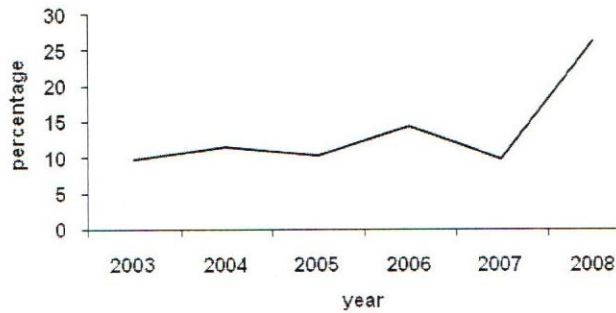
2.11 Economic Indicators

All economic indicators both monetary and fiscal are glaring red and in dire need of fixing, inflation is hovering around 26%. Making the cost of consumer products unbearable to common mwananchi. Interest rates are still high despite the C.B.K reducing its rates by 25 basis points from 8.25% to 8% recently. This coupled by a credit crunch as banks become cautious in lending is badly affecting business and forcing them to scale them down on operations. (Matysiak, 2000).

2.12 Growth over Inflation

The C.B.K's decision to cut rates points to escalating concerns about a slowdown in economic growth. The committee appears to perceive inflation as a less serious threat. But concerns are persistently high inflation rate have made this policy shift doubtful. The inflation rose to 26.07% in April up almost from previous month 25.1%. The C.B.K cut imply that the government have switched their priority from fighting inflation to supporting growth when there is no clear evidence that inflation is subsiding any time soon. The reduction in C.B.R would lower the cost of borrowings for commercial banks and help them reduce interest rates for retail and corporate sector thus infusing additional liquidity. . (Geist, 1998).

Fig 2: Inflation Rates



Source: Economic Survey 2009

Cash shortages in banks strain business. Kenya's banking system is reeling under massive crunch that threatens to push retail lending rates up and economic growth down. The central bank slashed its overnight lending rates as the banking industry convulsed under a liquidity crisis that has ungered for some time. The quarter .25 cut of the bench mark central bank rate (C.B.R) TO 8% is the second in a row but will not offer much a relief to bankers.

At the end of the day, the demand supply equilibrium is what is influencing the pricing of products. Most top bankers have been using the central bank lending window almost daily as the cash shortage bites. In normal circumstances, the C.B.K. in its role as a lender of the last resort attracts only desperate takers owing to the punitive rate.(Mier, 1999).

2.13 Related Studies in Kenya

Previous studies has focused on the determination of the proportion of total mortgages in relation to the total assets held by mortgage in Kenya as well as determining whether different types of mortgages do have significant influence on the earnings of the individual institutions

The study established that the types of mortgage influenced the earnings at the company level both positively and/ or negatively (Ndirangu, 2004).

Fixed rate mortgages as well as the interest only mortgages were found to have a higher positive effect on earnings of mortgage institution.

Kathanje,(2000) identifies the key ratios of explaining performance of financial institutions as non-performing loans; profitability to total assets and non-performing loans provisions to operating income.

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is competitive with the real returns available on the other investment opportunities in the economy. If any of these components is underestimated the lender suffers a real economic loss (Fabozzi, 2005). The assumption in these case are that each of the variable making up i are independent and additive, historical data on each of the variables is available to guide and inform decision making, and changes in interest rates, mortgage repayments and loan balances under adjustable rate mortgages.

CHAPTER THREE

RESEARCH METHODOLOGY

3.1 Research Design

The study was a case study of commercial banks in Kisii town. Abagi (1995:16) argues that a descriptive research attempts to describe what was or what is in a social system such as banking industry. As Cohen and Manion (1994) observed, the intention of a case study research is to gather data at a particular point in time, and use it to describe the nature of existing conditions which is what the study was all about to investigate the factors influencing the prices of mortgages.

3.2 Study Area

The study was conducted in Kisii Town in Kisii County.

3.3 Target Population

The population of interest consisted of 11 institutions engaged in mortgage lending and they included Kenya Commercial Bank, Barclays Bank, National bank of Kenya, Cooperative bank of Kenya, Equity bank, Family bank, Diamond Trust bank, Eco Bank, K-rep bank, Standard Chartered bank and Credit Bank. In each of the banks the study targeted five respondents and these are relationship manager, credit managers, microfinance officers, business development officers, and the general manager. This totaled to 55 respondents.

3.4 Sample study

This study targeted all the commercial banks in Kisii Town offering mortgages for the last 5 years.

3.5 Data Collection Procedures

To assist the researcher meet the study's pre-designed objectives; self-completion and semi structured questionnaires were designed accommodating all the critical aspects covered in the identified variables. Data was collected from primary sources using a questionnaire. The questionnaires were personally administered to relations manager, credit managers, microfinance officers, business development officers, and the general managers. The questionnaires were administered through drop and

pick technique. Secondary data was also used to collect information from journals and annual reports from Central Bank of Kenya.

3.6 Instrumentation

3.6.1 Validity of Instruments

To improve the validity of the questionnaire, it was given to an expert in research whom the researcher identified. The expert examined the questionnaire for face and content validity.

3.6.2 Reliability of Instruments

To check the reliability of the tool, Kronbach's reliability coefficient (%) was used and accepted at a threshold level of 0.70.

3.7 Data Analysis and Presentation

The data was first coded, entered, summarized and then analyzed using descriptive statistics where frequency distribution tables were prepared and totals for each item calculated. The data was summarized according to research objectives and variables and presented using frequency tables. These were further displayed in tabular form to find the sum total of the weight of the views given to each item. The likert scale analysis was used to determine the weights of the factors that determine the price of mortgages among commercial banks in Kenya and also the impact they have on the prices of mortgages.

CHAPTER FOUR

DATA ANALYSIS

4.1 Data Analysis and Interpretation

4.1.1 Factors Influencing Prices of Mortgages

The research sought to identify the various factors that influence the prices of mortgages. The various factors identified from documented literature were listed and a five point likert scale attached to it. The respondents were asked to tick against the number which represented the weight they attached to individual factors which influence the prices of mortgages.

Mortgage prices usually depend on the inflation, economic growth, money supply and budget deficit. The 44 respondents interviewed in the study were asked to rate the influence of the factors from extremely influential, very influential, influential, moderately influential and not influential. The results are shown on the Table4 below

Table2: Factors Influencing Price of Mortgages.

Factors	Extremely Influential 5	Very Influential 4	Influential 3	Moderately Influential 2	Not Influential 1	Σf_i	$\Sigma w_i f_i$	$\Sigma w f_i / \Sigma f_i$
Anticipated inflation	17	12	10	4	1	44	172	3.909
Real rate of Interest	20	13	5	4	2	44	167	3.795
Premium rate	11	14	12	4	1	44	156	3.636

Source: Author 2010

According to the results shown on table 4 anticipated inflation at 3.909 which is close to 4 and rated very influential in determining the prices of mortgages among the commercial banks in Kenya. Real rate of

interest at 3.795 also follows anticipated inflation closely at 3.795 which according to the likert scale is close to 4.0 than 3 and hence very influential in determining the price. Premium rate at 3.636 is also influential in determining the prices of mortgages using the likert scale values this compared with the central bank information on table indicating the money supply and its sources. The analysis finds the weighted average values of each item in the likert scale and those items with high weighted average values best shows the factors that influence the price of mortgages. The results show that the banking industry needs to focus on the factors influencing the price by: Providing subsidies and discounts to different classes of people in the society to make mortgages more affordable.

Table 3: Underlying and Overall Inflation in Percentages

Overall inflation	2008						2009				
	Jan	Feb	Mar	Apr	May	Dec	Jan	Feb	Mar	Apr	May
Underlying inflation	5.07	6.64	6.98	6.54	7.24	9.4	8.9	8.67	8.75	9.95	9.37
Average annual Growth over one(m)	5.17	5.32	5.48	5.60	5.78	7.3	7.4	8.11	8.26	8.53	8.72
Growth over three (months)	1.03	1.54	.69	-.18	.85	.38	.89	1.33	.77	.91	.31
Overall inflation	1.66	3.03	3.3	2.06	1.36	1.3	1.6	2.63	3.02	3.05	2.01
Average annual Growth over One month	18.2	19.1	21.8	26.6	31.4	27.	21.	25.0	25.8	26.0	19.5
Growth over three months		3	3								
Overall inflation	10.5	11.5	12.9	14.7	16.9	26.	26.	27.2	27.5	26.4	26.0
Average annual Growth over One month		9	8								
Growth over three months	8.8	2.1	3	2.7	3.5	1.5	3.8	4.8	3.6	2.9	-1.9
Overall inflation	13.5	14.2	14.5	8.00	9.5	4.7	7.7	10.4	12.7	11.7	4.7
Average annual Growth over One month		0	0								

Source: Kenya National Bureau of Statistics and Central Bank of Kenya

This compared with the results from the field is that as the inflation rates increased from 5.09 to 9.37 in

May 2009 the cost of items increased in the market

Table 4: Money Supply and its Sources (Kshs. billions)

	2007 April	2008 April	2009 April	April-08 12 months % change	April-09 12 months %change
money supply,M3(2+3)	682.2	864.1	928.8	26.7	7.5
money supply, M2	581.9	744.5	793.3	27.9	6.6
money supplyM1	299	436.6	382.8	46.0	-12.3
currency outside banks	76.1	81.1	86.6	6.5	6.8
net foreign assets 4/	226.7	261.9	277.6	15.5	6.0
Central bank	165.2	191.4	191.7	15.9	.1
Banking institutions	61.5	70.4	86	14.6	22.1
net domestic assets(3.1+3.2)	455.5	602.2	651.2	32.2	8.1
domestic credit(3.1.1+3.1.2)	590.8	746.6	830.1	26.4	11.2
government(net)	132.5	155.4	166.8	17.3	7.4
private sector and other public sector	458.3	591.2	663.3	29	12.2
other assets net (3-3.1)	-135.3	-144.4	-178.9	6.7	23.9
Memorandum items					
overall liquidity, L1/	861.7	1051.5	1135.5	22.0	8.0
Reserve money	127.3	147	152.9	15.4	4.0
Currency outside banks	76.1	81.1	86.6	6.5	6.8

Source: Kenya National Bureau of Statistics and Central Bank of Kenya

Category of mortgage	Extremely effective 5	Very effective 4	Effective 3	Slightly effective 2	Not effective 1	$\sum f_i$	$\sum w_i f_i$	$\frac{\sum w_i f_i}{\sum f_i}$
Adjustable rate	14	12	8	6	4	44	158	3.59
Fixed rate	15	8	7	8	6	44	150	3.41
Interest only	5	7	13	9	10	44	120	2.7
Capital mortgage	1	7	11	12	13	44	103	2.3
Income property	4	5	6	12	17	44	99	2.25

Source: author 2010

Also considered are the categories of mortgages provided by the commercial banks in Kenya. This includes adjustable rate, fixed rate, interest only, capital mortgage and income property. Adjustable rate category the chargeable rate is the margin above the base rate or Treasury bill rate. According to the table it has the value of 3.59 on the likert scale hence implying effective in influencing the rate of return required by the commercial banks. This is also followed by another by another category of mortgage fixed rate this specifies an interest rate that is fixed over the term of the loan this carry a higher degree of certainty of returns to the bank at a value of 3.41 also influential in reflecting the required rate of return. Third on the list is interest only this implies that the principal debt advanced doesn't reduce overtime and there is no guarantee that the individual investment will grow sufficiently to repay hence at a rate of 2.7 on the likert scale implying that it's slightly effective in required rate of return. Capital repayment and income property come with low values of 2.3 and 2.225 on the likert scale hence not very effective in affecting the rate of returns among commercial banks in Kenya. This therefore implies that the commercial

banks in determining their rate of return should bear in mind the influence of the rate of return on the prices of mortgages.

Table6: The Effect of Risks on Required Rate of Return

Types of risk	Extremely effective 5	Very effective 4	Effective 3	Slightly effective 2	Not effective 1	$\sum f_i$	$\sum w_i f_i$	$\sum w_i f_i / \sum f_i$
Default risk	9	33	2	0	0	44	183	4.16
Business risk	11	26	5	2	0	44	178	4.045
Legislative risk	11	26	2	5	0	44	175	3.977
Inflation risk	7	15	13	9	0	44	152	3.45
Financial risk	7	13	18	2	4	44	149	3.386
Liquidity risk	7	9	20	2	6	44	141	3.20
Management risk	4	11	15	9	5	44	132	3.0
Environmental risk	0	0	2	31	11	44	79	1.795

Source: author 2010

The investment characteristics peculiar to real estate that makes it more risky than investing in other securities and this is the risk attached to which in turn do influence the required rate of returns. Default risk which is the obligation to repay the principal and interest which varies with the nature of mortgage this is rated the highest in the above table with a value of 4.16 on the likert scale implying very effective in affecting the rate of return required also influential is the business risk because they deal with renting space and this can cause risk of loss due to fluctuation in economic activity that affect the variability of income produced by property at 4.045.the others includes legislative risk 3.977, inflation risk 3.45, financial risk 3.386, liquidity risk

3.20, and management risk at 3.0 which are effective in influencing the required rate of return. The environmental risk at a value of 1.795 implying not effective in influencing the required rate of return.

Table 7: Impact of Pricing strategies Used By Commercial Banks on Required Rate of Return.

Pricing level adjustments	extremely effective 5	Very effective 4	effective 3	Moderately effective 2	Not effective 1	Σf_i	$\Sigma w_i f_i$	$\Sigma w f / \Sigma f$
Interest rates	19	12	7	5	1	44	175	3.9772
Risk free rates	18	11	10	4	1	44	173	3.9318
Required returns	10	14	12	5	3	44	155	3.5227
Demand for money	7	17	13	5	2	44	154	3.5
Income	7	12	15	6	4	44	144	3.2727
Changes in demand	8	7	17	9	3	44	140	3.1818
Leases	5	5	12	11	11	44	114	2.5909
Purpose of mortgage	3	5	12	14	10	44	109	2.4773
Maturity period	2	6	11	12	13	44	104	2.3636
Categories of mortgage	1	2	16	16	9	44	102	2.3182
Down payment	2	6	8	13	15	44	99	2.25
Extra charges	2	5	9	13	15	44	98	2.2273

Source: Author 2010

Table 7 shows the impact of pricing strategies used by commercial banks on required rate of return.. The factors considered were interest rates, risk free rates, required rate of return, demand for money, income, changes in demand, leases, purpose of the mortgage, maturity period, categories of mortgage down payment and extra charges. The findings show that the factor that had a great impact on pricing Was interest rates that commercial look at as they pursue the growth strategy at 3.9772 which is very effective in the likert scale, these was followed closely by the risk free rate at 3.9318.theleast on the table was down payment at 2.22 and extra charges at 2.2273.

CHAPTER FIVE

SUMMARY CONCLUSION AND RECCOMENDATIONS

5.1 Summary

The study was considered apt and pertinent due the fact that mortgages are currently a topic of issue especially following the recent increase of prices of goods and services.

The first objective was to determine the factors influencing prices of mortgages among commercial banks in Kenya as the results show inflation tops the list of the most influential factor at 3.909. The banking staff was asked their views towards the pricing of mortgages. Form the findings in the table 4, it is observed that inflation and economic growth are the major contributing factors in the persistent changes in prices of mortgages.

The second objective was to Evaluate the factors that influence the required rate of return and form the findings from table 5, 6 and 7 they indicate that in the categories of mortgages adjustable rate with 3.59 is effective, the risks also play a role in required rate of return such as default risk at 4.16 and business risk at 4.045 which are effective.

The third objective was to evaluate the impact of pricing strategies employed by commercial banks to pursue the growth objective. The factors considered were interest rates, risk free rates, required rate of return, and demand of money among others. From the findings interest rate was influential at 3.9772.

Evaluate the factors the find out the impact of strategies used by commercial banks to pursue the growth objective.

5.2 Conclusion

Based on the study findings, it was concluded that the commercial banks were affected majorly by inflation. For a more encompassing and exhaustive empirical analysis, diaggregated financial data, especially for banking subsector are required. These data are required in order to capture factors such as Credit risk, Market power, Transaction costs, Bank adjustment strategies at the end of the period, an in-depth study on institution and risk analysis and Other areas that should be considered are the effects of the industry of the borrowers business.

5.3 Recommendations

The following are the possible areas of further research

- i) Find out if there is a relationship between the prices of mortgages and purchase of mortgages.
- ii) Find out factors influencing prices of mortgages in other institutions such as housing finance company.
- iii) Determine the influence of price on goods in the market.

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APPENDIX I

QUESTIONNAIRE

Please fill in the following questionnaire as accurately as possible. The questionnaire consists of 4pages.

Any information given will be treated with confidentiality and will be used conclusively for purposes of research.

Part A

- 1. Bank.....
- 2. Designation of the respondent.....

Part B

3. Please tick in the spaces provided below how therequired rate of return influences following categories of mortgages

Factors	Extremely influential 5	influential 4	neutral 3	Slightly influential 2	Not influential 1
Fixed rate mortgages					
Adjustable rate					
Income property					
Capital mortgage					
Interest only					

4. Rate the following types of risks on how they influence the required rate of return.

Risks	Extremely influential 5	most influential 4	influential 3	Moderately influential 2	Not influential 1
Inflation					
Default					
business					
Financial					
Liquidity					
Management					
Legislative					
environment					

5. Please indicate the minimum initial deposit expected from a borrower.

0 – 2 %

3 – 5%

6-8%

9-11%

12-and above

6. What is the expected income bracket for the borrowers to qualify for a mortgage?

Below 5,000

5,000-10,000

10,000-20,000

20,000 and above

7. Indicate how the maturity period of a mortgage influences the rate of return of mortgages.

Maturity Period	Extremely Influential	Influential	Neutral	Slightly Influential	Not Influential
	5	4	3	2	1
0-5					
5-10					
10-15					
15-20					
20 and above					

8. Which of the following extra charges are reflected in the cost of mortgages

Insurance protection fees

Operational expense

Lending rates

9. Does the following regional differences have an impact on the price of mortgages.

Demand pattern Yes No

Population density Yes No

Leases Yes No

10. Indicate how the following Central Bank measures influence the economic growth.

Measures	Extremely influential 5	Influential 4	Neutral 3	Slightly influential 2	Not influential 1
Cutting on rates					
Reducing the cost of borrowing					
Increase in lending rates					
Tax laws					
Legislative risks					

THANK YOU VERY MUCH

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