MORTGAGE FINANCING AND PROFITABILITY OF COMMERCIAL BANKS IN KENYA

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NOVEMBER, 2013
DECLARATION

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

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I wish to thank my entire family members who have provided me a conducive environment throughout this programme. Specifically I would like to thank my children Kevin, Erick and Shiko for being there for me during the study period and also my parents Mr. And Mrs. Peter Karanja for having taken me to school at a tender age may God bless you all.
ACKNOWLEDGEMENT

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OPERATIONAL DEFINITION OF TERMS

Commercial Banks - They are profit maximizing institutions facing different risks in the financial market.

Core savings - Money put aside as savings which enables someone to buy a property like a house.

Credit risk - The risk of loss of principal or loss of a financial reward stemming from a borrower's failure to repay a loan or otherwise meet a contractual obligation.

Mortgage - It is the transfer of an interest in property to a lender as a security for debt usually a loan of money.

Non-performing loans - A loan is nonperforming when payments of interest and principal have not been paid for 90 days or more.
## LIST OF ABBREVIATION

<table>
<thead>
<tr>
<th>Abbreviation</th>
<th>Full Form</th>
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<tbody>
<tr>
<td>CBK</td>
<td>Central Bank of Kenya</td>
</tr>
<tr>
<td>EQTA</td>
<td>Total Equity / Total Assets</td>
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<tr>
<td>GDP</td>
<td>Gross Domestic Product</td>
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<tr>
<td>LTV</td>
<td>Loan-To-Value</td>
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<tr>
<td>MMLM</td>
<td>Modern Mortgage Lending Model</td>
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<tr>
<td>NPL</td>
<td>Non Performing Loans</td>
</tr>
<tr>
<td>ROA</td>
<td>Return on Assets</td>
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<tr>
<td>ROC</td>
<td>Return on Capital</td>
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<tr>
<td>ROE</td>
<td>Return on Equity</td>
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<tr>
<td>ROI</td>
<td>Return on Investment</td>
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<tr>
<td>ROS</td>
<td>Return on Sales</td>
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<td>SMM</td>
<td>Secondary Mortgage Market</td>
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ABSTRACT

The study sought to determine the relationship between mortgage financing and profitability of commercial banks in Kenya. Lending is one of the main activities of banks in Kenya and other parts of the world. Mortgage loans have become an important aspect of loan portfolio among commercial banks in Kenya, earning commercial banks’ profits like other type of loans. Profitability, it is always associated with performance and productivity. Mortgage financing over the years has been a preserve for mortgage financing companies but with time, commercial banks have started engaging in mortgage financing. This study was motivated to establish the relationship between mortgage financing and profitability of commercial banks in Kenya. The study sought to answer the following specific objectives to determine how mortgage core savings influences profitability of commercial banks, to establish the relationship between income and profitability of commercial banks, to establish the relationship between economic factors and profitability of commercial banks and to establish how diversification of portfolio influences profitability of commercial banks. The study adopted a descriptive research design for it portrays an accurate profile of situations. The design helped the study in obtaining information concerning the current status of the factors affecting commercial banks mortgage financing. The population of this study comprised of financial managers and credit managers from the mortgage financing institutions in Kenya. The target population of this study was 44 commercial banks in Kenya. The study adopted a census survey of all the banks. The study used primary data and secondary data. The study used a survey questionnaire administered to each member of the sample population. The study administered the questionnaire individually to all respondents of the study. Secondary data was obtained from the individual bank reports and from central bank of Kenya. The study carried out a pilot study to pretest and validate the questionnaire. Quantitative data collected was analyzed by the use of descriptive statistics using SPSS and presented through percentages, means, standard deviations and frequencies. The information was displayed by use of bar charts, graphs and pie charts and in prose-form. This was done by tallying up responses, computing percentages of variations in response as well as describing and interpreting the data in line with the study objectives and assumptions through use of SPSS (version 20) to communicate research findings. The inferential analysis which includes regression and correlation was done to establish the relationship between mortgage financing and profitability of commercial banks in Kenya. The study concluded that commercial banks in Kenya emphases on mortgage financing to improve their profitability. The study established that there is positive relationship between mortgage financing and profitability of commercial banks in Kenya.
CHAPTER ONE

INTRODUCTION

1.1 Background of the study

Lending is one of the main activities of banks in Kenya. This is evidenced by the volume of loans that constitute banks assets and the annual substantial increase in the amount of credit granted to borrowers in the private and public sectors of the economy. Lending is the principal business for most commercial banks (US Comptroller, 1998), Loan portfolio is therefore typically the largest asset and the largest source of revenue for banks. In view of the significant contribution of loans to the financial health of banks through interest income earnings, these assets are considered the most valuable assets of banks.

Loan portfolio is typically the largest asset and the predominant source of income for banks. In spite of the huge income generated from their loan portfolio, available literature shows that huge portions of banks loans are usually non performing loans and therefore affect the financial performance of these institutions (Comptroller, 1998).

Mortgage loans have become an important aspect of loan portfolio among commercial banks in Kenya, earning commercial banks’ profits like other type of loans. Profitability, it is always associated with performance and productivity. This study is motivated to establish the relationship between mortgage financing and profitability of commercial banks in Kenya.

1.1.1 Historical background of mortgage financing

Mortgage financing is meant to enable those with limited financial resources to acquire housing. The process has been a preserve for mortgage financing companies today, even
commercial banks have started engaging in mortgage financing. In developed countries mortgage financing companies have gained recognition as opposed to those in developing countries (Ho Hahm, 2004). In Kenya for example, majority of Commercial Banks have turned into mortgage financing. An efficient housing finance system has significant importance both in meeting the housing needs of individuals and in reinforcing the development of the construction, finance and other related sectors of an economy.

International experience suggests that, the widespread availability of residential mortgages has favourable impact on poverty alleviation, quality of housing, infrastructure, and urbanization (Erbas and Walley, 2005). Today, developed countries have advanced housing finance systems in which funds flow from people with fund surpluses to the ones that are in need of them by the aid of mortgage markets. On the other hand, despite its recognized economic and social importance, housing finance often remains under-developed in developing countries mainly due to lack of stable inflation and employment (Ho Hahm, 2004).

Mortgage financing normally centers around two specific goals (Dolde, 2006). First, 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). Secondly, the financing seeks to create revenue for the lender and. 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 (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 (Tse, 2002). Changes in mortgage design do not always lead to fundamentally different mortgage instruments. The emergence of a fixed rather than a variable rate mortgage would be an example of a new mortgage instrument (Dolde, 2006).

The increase of mortgage financing in Kenya may have been influenced by factors changing mortgage climate, sustained economic growth, cross-selling potential, profitability and market penetration and liberalizations of market. Kenya’s mortgage market has more than tripled in the past five years. The mortgage market has grown from Kshs.19 billion in 2006 to just over Kshs.61 billion by May-2010 year. This translates to an annual average growth of 34%, indicating an exponential increase in mortgage loans (Government of Kenya, 2007).

1.1.2 Profitability of Commercial Banks

Profitability of the banks is measured in the form of ratios which are normally reported by commercial banks in their annual reports. Devinaga Rasiah (2010) claims that the use of profitability ratios are not influenced by changes in price levels. And it is said to be the most appropriate way of measuring profitability as one make use of time series analysis. This is because the real value of profits cannot be affected by the varying inflation rates. According to Devinaga Rasiah (2010) for one to realize how well a bank is performing it is much more
useful to consider return on assets (ROA) and return on equity (ROE); Bourke (1989) and Molyneux and Thornton (1992).

Return on assets (ROA) is the ratio of Net Income after Taxes divided by Total Assets. The ROA signifies managerial efficiency in other words it depicts how effective and efficient the management of banks has been as they seek to transform assets into earnings. And the higher ratio indicates the higher performance of the banks. It is a useful tool for comparing profitability of one bank with other or the whole commercial banking system. Moreover, the ROE is said to measure the rate of return on the bank’s shareholders equity and it is calculated by dividing banks net income after taxes by total equity capital which includes common and preferred stock, surplus, undivided profits, and capital reserves; Bourke (1989), and Molyneux and Thornton (1992). This measure of profitability gives an indication of what the banks earns on the shareholders’ investment; Devinaga Rasiah (2010).

According to Anthony Karkrah and Ameyaw (2010) many researchers have presented ROA as an appropriate measure of bank profitability. Among them are Rivard and Thomas (1997) who argued that bank profitability is best measured by ROA in the sense that, ROA cannot be distorted by high equity multiplier. However, Hassan and Bashir (2003) also claims that as ROA tend to be lower for financial intermediaries, most banks heavily utilized financial leverage to increase their ROE to competitive levels.

1.1.3 Importance of mortgage financing

One of the factors underlining the American Dream consists of purchasing and officially owning a house. Only a slim margin of the middle class can outwardly afford to purchase a home without applying for a mortgage to achieve what many pursue to make a reality (Cho,
The mortgage market has evolved with ever-changing face of real estate. The mortgage history in the United States has been fraught with booms and busts that have enriched and devastated families affected by recessions and depressions. Nevertheless, mortgages remain as the primary form of lending when it comes to property transactions. The mortgage process entails the granting of monies to obtain a home with good faith that the debtor will repay the loan with interest attached to life of it, (Richard and Susan, 2005).

Home mortgages have continually loomed large in the financial situation of American households. In 1949, mortgage debt was equal to 20 per-cent of total household income; by 1979, it had risen to 46 percent of income; by 2001, 73 percent of income (Bernstein, Boushey and Mishel, 2003). Similarly, mortgage debt was 15 percent of household assets in 1949, but rose to 28 percent of household assets by 1979 and 41 percent of household assets by 2001. This enormous growth of American home mortgages, as a percentage of GDP, has been accompanied by a transformation in their form such that American mortgages are now distinctively different from mortgages in the rest of the world. In addition, the growth in mortgage debt outstanding in the United States has closely tracked the mortgage market’s increased reliance on securitization (Cho, 2004).

The structure of the modern American mortgage has evolved over time. The U.S. mortgage before the 1930s would be nearly unrecognizable today: it featured variable interest rates, high down payments and short maturities. Before the Great Depression, homeowners typically renegotiated their loans every year.

The U.S. mortgage provides many more options to borrowers than are commonly provided elsewhere: American homebuyers can choose whether to pay a fixed or floating rate of
interest; they can lock in their interest rate in between the time they apply for the mortgage and the time they purchase their house; they can choose the time at which the mortgage rate resets; they can choose the term and the amortization period; they can prepay freely; and they can generally borrow against home equity freely. They can also obtain home mortgages at attractive terms with very low down payments. The U.S. government has intervened in home mortgage markets that have led to the specific choices available to American homebuyers. The unique characteristics of the U.S. mortgage provide substantial benefits for American homeowners and the overall stability of the economy. (Richard and Susan, 2005)

According to Vuyisani Moss, (2003), there is inadequacy in the shelter delivery system in Tanzania to cater for the urban population. This has led to an extensive development of squatter or unplanned settlements. Studies conducted in 1995 under the Urban and Housing Indicators Programme indicated that about 70 percent of urban population lived in unplanned settlements and that about 60 percent of the urban housing stock is to be found in these settlements. The gap between the supply and demand for housing has been widening with time. It is now estimated that the deficit in Tanzanian urban centres is about 1.2 million housing units.

Lack of appropriate policies on housing development have contributed to overcrowding in housing and poor housing conditions. Among them are those, which concern the acquisition of building plots, land title, building permit, housing credit facilities and the operation of the main stakeholders in housing development. Housing shortage in Tanzania is further fuelled by the lack of formal housing credit facilities.

Under the shelter policy, financial institutions lending for housing were to be responsive to the needs of low-income groups in both rural and urban areas. It was envisaged that new
financial institutions be created to increase lending opportunities. The Tanzania Housing Bank (THB) was created in 1973 and became the sole source of formal housing finance. It was only marginally able to lend to low-income groups and over the years, lending declined in real terms as both building costs and interest rates increased. The THB was liquidated effective from August 1995. There is currently no formal source of financing for shelter development in Tanzania. The main problems associated with housing finance in Tanzania are, there is a near complete lack of formal mortgage housing finance facilities in the country and this has made house construction a difficult process for many households especially those in the low income categories.

Government allocation of the national budget to housing has been generally low and is declining and there is lack of capacity for housing development both at national and local levels.

1.1.4 Mortgage Financing in Kenya

The Kenyan housing finance sector has grown rapidly over recent years in both value of loans and number of loans. The market has now gone through the initial ‘germination’ stage and is preparing to enter its next development phase. Consideration now needs to be given to the requirements for ensuring continued growth. The mortgage market is the third most developed in Sub-Saharan Africa with mortgage assets equivalent to 2.5 per cent of Kenya’s GDP. Only Namibia and South Africa ranks higher, with Botswana just slightly smaller (Hassler and Walley, 2007).

Given the rapid rate of growth in real estate prices and the potential for them to fall back, this should be a concern for both banks and authorities monitoring systemic risks (Mutero, 2007).
Kenya’s mortgage market has more than tripled in the past five years. Kenya’s mortgage market has grown from Kshs.19 billion in 2006 to just over Kshs.61 billion by May 2010 (nominal growth). This translates to an annual average growth of 34% indicating an exponential increase in mortgage loans. The number of new loans has also been rapidly increasing. Since 2006 there has been a steady growth in new loans further validating the growing mortgage market. In 2006 new loans were approximately 1278 whereas by 2009 new loans portfolio has grown to over 6,000. By May 2010 the number of new loans was 2,966 which is in line with the steady growth seen in the previous years. But the mortgage market is still relatively small now standing at 15,049 loans, even though it has more than doubled since 2006. While the growth rate in mortgage loans has been rapid at just under 50% since 2006 and has been growing steadily at 14% annually, the loan portfolio remains small (CBK, 2010).

Kenya’s mortgage market is dominated by the large banks and represented over 90% of the total mortgage portfolio (Mutero, 2010).

Increased mortgage size has been attributed to the expensive housing market, predominance of high income mortgage borrowers in Kenya and housing finance market that is yet to move downstream (Mutero, 2010). This has seen growth in profitability of the commercial banks that have been offering mortgage credit to Kenyans. Advancing mortgage credit to applicants implies that the bank money is tied up somewhere whose payment is in the future. Mortgage credit is positively related to profitability because it creates a long term source of revenue for the bank offering mortgage credit, (Sharpele, 2000). There is need to have an efficient mortgage credit management to minimize the costs involved in loan allocation whereas on
the other hand maximizing the returns from such undertakings and thus making the bank more profitable.

1.1.5 Mortgage Financing and Profitability of Commercial Banks

The Kenyan housing finance sector has grown rapidly over recent years in both value of loans and number of loans. The market has now gone through the initial ‘germination’ stage and is preparing to enter its next development phase. Consideration now needs to be given to the requirements for ensuring continued growth. The mortgage market is the third most developed in Sub-Saharan Africa with mortgage assets equivalent to 2.5 per cent of Kenya’s GDP. This has seen growth in profitability of the commercial banks that have been offering mortgage credit to Kenyans. Advancing mortgage credit to applicants implies that the bank money is tied up somewhere whose payment is in the future. Mortgage credit is positively related to profitability because it create a long term source or revenue for the bank offering mortgage credit, (Sharpele, 2000). There is need to have an efficient mortgage credit management to minimize the costs involved in loan allocation whereas on the other hand maximizing the returns from such undertakings and thus making the bank more profitable.

1.1.6 Commercial Banks in Kenya

The Banking industry in Kenya is governed by the Companies Act, the Banking Act, the Central Bank of Kenya Act, and the various prudential guidelines issued by the Central Bank of Kenya (CBK). The banking sector was liberalised in 1995 and exchange controls lifted. The Central Bank of Kenya, which falls under the Ministry of National Treasury, is responsible for formulating and implementing monetary policy and fostering the liquidity, solvency and proper functioning of the financial system. Central Bank of Kenya publishes
information on Kenya’s commercial banks and non-banking financial institutions, interest rates and other publications and guidelines (CBK, 2011)

Banks represent a significant and influential sector of business worldwide that plays a crucial role in the global economy. Commercial banks are financial intermediaries that serve as financial resource mobilization points in the global economy. They channel funds needed by business and household sectors from surplus spending to deficit spending units in the economy. A well-developed efficient banking sector is an important prerequisite for saving and investment decisions needed for rapid economic growth. A well-functioning banking sector provides a system by which a country’s most profitable and efficient projects are systematically and continuously funded.

The role of banks in an economy is paramount because they execute monetary policy and provide means for facilitating payment for goods and services in the domestic and international trade (Government of Kenya, 2007). Commercial banks are custodians of depositor’s funds and operate by receiving cash deposits from the general public and loaning them out to the needy at statutorily allowed interest rates. Loans are based on the credit policy of the bank that is tightly coupled with the central bank interest rate policy. These in effect determine the level of financial risk in a particular bank (CBK, 2010). Mortgage loans in Kenya comprises of 90% of the outstanding loan assets portfolio.

1.2 Statement of the Problem

The rural urban migration has created high demand for affordable houses in Kenya. But even in the rural areas there has been an increase in search of decent housing. The current annual housing deficit is estimated at 156,000 units per annum based on the population growth and

The increased demand for housing in both the rural and urban areas has created a hyper competition amongst the financial and banking institutions. The problem has been created in that there has been confusion among the customers on choosing the best mortgage institution to deal with and also the mortgage institutions have had to lower their lending rates to be able to cope with the competition. Commercial banks have continued financing mortgages with a potential size of the mortgage market which is currently around Ksh.800 billion (CBK, 2011). This is far below expectation of bridging the housing gap of 156,000 units per annum (UNHSP, 2000) bearing in mind the large unexploited urban and rural market due to low income level earnings by individuals in the country.

Despite this fact banks have continued to finance mortgages undertaken by individual and corporate firms aiming at improving their profitability. There is need therefore to assess the influence of mortgage financing on profitability of commercial banks in Kenya.

While Kenya’s mortgage market is growing, the industry is dominated by the bigger commercial banks indicating barriers to entry or high risks for medium and smaller banks Ndungu (2010). However the growth rates indicates that the small sized banks have the fastest growth rates of 38% on average, followed by medium banks which are growing at 25% on average with large banks closely following at 24% on average Ndungu (2010).
Mutero (2007) did a study on access to housing finance in Africa, exploring the issues, he found that Kenya has a well-developed and regulated financial system and, in recent years, the mortgage finance sector has become competitive and innovative, this sector serves only those households at the top of the income pyramid. Mutero (2007) recommends that there is need to assess the effects of mortgage financing on financial performance in commercial banks in Kenya.

This study seeks to establish whether mortgage financing influence profitability of commercial banks in Kenya. To the researcher best knowledge there is scanty of research on the relationship between mortgage financing and profitability of commercial banks in Kenya. The study sought answer to the following research questions, what is the relationship between mortgage financing and profitability of commercial banks in Kenya?

1.3 Objective of the Study

1.3.1 General Objective

The study sought to determine the relationship between mortgage financing and profitability of commercial banks in Kenya.

1.3.2 Specific Objective

i. To determine how core savings influences profitability of commercial banks in Kenya

ii. To establish the relationship between income and profitability of Commercial banks in Kenya

iii. To establish the relationship between economic factors and profitability of commercial banks in Kenya
iv. To establish how diversification of portfolio influence profitability of commercial bank in Kenya

1.4 Research Questions

The study sought to answer the research questions

i. How does core saving influences profitability of commercial bank in Kenya?

ii. How does income influence profitability of commercial bank in Kenya?

iii. How do economic factors influence profitability of commercial bank in Kenya?

iv. To what extent does diversification of portfolio influence profitability of commercial bank in Kenya?

1.5 Significance of the Study

This study will be of great benefit to banking institutions in Kenya since it has outlined risk factors influencing the growth of mortgage loan lending in the banking sector. The development of the bank depends on several factors of which mortgage financing plays a major role in the current banking sector. This study has ascertained the benefits of mortgage financing to banking institutions in Kenya. This will help in developing more innovative strategies of financing mortgages to enhance bank’s profitability.

The study will be significant to the government in developing policy pertaining to mortgage and asset financing. 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.
It will also be significant to the researchers and scholars as it will form a background reference for future studies and contribute to the existing knowledge of literature.

1.6 Scope of the study

This study focused on determining the relationship between mortgage financing and profitability of commercial banks with focus to commercial banks in Kenya. The study assessed the influence of core savings, diversification portfolio, income and economic factors on mortgage financing and its influence on profitability of commercial banks. The study respondents were the financial managers and the credit managers as they were in a better position to offer the relevant information on the relationship between mortgage financing and profitability of commercial banks. The choice of commercial banks was due to the fact that they are the largest mortgage financiers and offer mortgage to a large market share.

1.7 Limitations of the Study

The study was constrained with unwillingness by respondents’ financial managers and credit managers to reveal information which is thought to be confidential. The researcher had to assure the respondents that the information they offer would be held confidential and would be used for academic purposes only in seeking to assess the relationship between mortgage financing and profitability of commercial banks.
CHAPTER TWO

LITERATURE REVIEW

2.1 Introduction

This chapter brings up relevant literature required to find answers and connect to our research objective. First, a review of theories that guide this study was presented to give the research a firm theoretical base. Then, empirical studies done on this research topic was looked at which made it easier to understand the research area.

2.2 Theoretical Review

The study on the relationship between mortgage financing and profitability of commercial banks in Kenya was guided by the mortgage value model. Other theories related to mortgage financing and profitability of commercial banks are title theory and lien theory of mortgage, modern mortgage lending model and mortgage credit intermediation models.

2.2.1 Mortgage Value Model

In the Mortgage Value Model the bank's primary objective is the maximization of expected profits under the constraints of liquidity, soundness, standing and lawfulness. To this end the implementation and use of an integrated system of risk-return management focused on adding and creating shareholder value is essential,(Glenn and Wayne, 2007). Consequently a process of integrated risk and return management has the following objectives: Management of a portfolio from an overall integrated view; optimization of risk/ reward relations of the bank portfolio; identification of risk/ reward efficient portfolio strategies; setting of risk/ reward efficient management targets; implementation in ongoing business; consistent and
efficient risk/ reward management of business lines; and accurate determination of value versus loan amount and pricing in accordance (Stephens, 2005b).

The Mortgage Value Model, the banks projects the economic value of new retail mortgage business and enables the business to make strategic and tactical decisions based on future profitability (Doling, 1997). The model will allow mortgage loans to: Drive the value from new business lending by understanding expected economic profit returns at a strategic cohort level, for example with specific customer types, products, distribution channels, loan-to-value (LTV) buckets and regional segments; design new or adjust existing product propositions to enhance profitability and support banks growth; design lending strategies by assessing future value by risk level, e.g. using scorecard accept/ decline cut-offs to mitigate loss making segments of new business; price for risk therefore becomes market competitive whilst ensuring the business is value adding; and provide a platform that will enable controlled challenge to seek new business opportunities to increase sales (Stephens, 2003b).

### 2.2.2 Title Theory and Lien Theory of Mortgage

In the title theory, the property-law doctrine states that a mortgage transfers title to a property to the mortgagor, who holds it until the mortgage has been paid off, at which time title passes to the mortgagee. In title theory, the banks retain the title since the mortgage is said to hold a title interest, she has the right to possession under this theory. Some banks apply a lien theory. This theory only gives the mortgagee a lien interest in the property. In a title theory, the mortgage is treated as having transferred title to the mortgagor, subject to the mortgagee’s duty to recovery if payment is made. The title is said to remain in the mortgagee until the mortgage has been satisfied and foreclosed. Although the mortgagee has the right of
possession to the property, there is generally an express agreement giving the right of possession to the mortgagor. The mortgagee is said to hold the title for security purposes only. The mortgagor is given the right of possession (Buckley and Kalarickal, 2004).

Lien theory provides that a mortgagee of property holds only a lien, not title, to the property until such time as the mortgage is fully paid, at which time the lien is removed. 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, 2005). 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.

2.2.3 Modern Mortgage Lending Model

For housing finance to be successful, continuous flow of funds must be guaranteed. Secondary Mortgage Markets (SMMs) are a mean to an end. The end is to increase the flow of funds housing. Therefore, a secondary market provides the means to accomplish this end by bringing together the originators of mortgage loans with the ultimate investors. It does this by developing new instruments and institutions that can lower the risks of mortgage lending for originators and provided them with new funding outlets. The mechanism of capital mobilization through mortgage securitization as found in advanced economies like the US,
Germany, France, Italy, and others will serve as a potent driver of real estate growth and housing finance in Nigeria. Similar examples are obtainable in Asia, where the National Housing Fund thrives on, not only the deposit subscriptions, but also on housing bonds issued by the Housing Bank to finance housing development programmes (The Punch Newspaper, 2008).

According to Lea (1999), a successful secondary market is based on effective management of the basic functions and risks involved in mortgage lending regardless of the institutional entities involved or what separation of functions existing in the market. Lea is also of the view, that the degree of competition in the primary market may have a major bearing on the readiness of lenders to participate in a secondary market. During the Inter-American Development Bank conference of 1999, Lea presented a paper titled “The Development of Mortgage Securitization in Latin America and the Caribbean Conference” and discussed the basic conditions that will make SMM thrive in any economy. The modern Unbundled Mortgage Delivery System functions as SMM. The functions of origination, servicing, risk management and funding are unbundled and managed by different specialized entities.

In the Modern Mortgage Lending Model (MMLM), there are a wide variety of investors ranging from depositories to mutual funds (Lea, 1999). The risk management is often specialized as well provided by third parties like mortgage or bond insurance companies. Origination specialist must be more cognizant of pipeline risk which is the risk between the time a lender makes a binding commitment to borrower and the time the loan is either sold or placed in portfolio because the loans are sold after origination. The quality of mortgages produced by the primary market becomes much more important in a SMM. The SMM separates the act of making mortgage loans from the act of holding mortgage loans. The
mortgage holding function is the strategic focus for dealing with the risks of mortgage lending (Renaud, Jaffee, 1996). According to them, the basic principle of SMM is to tap capital market investor as the long-term source for the mortgage market, thus mitigating risks of interest rate and credit risk.

2.2.4 Mortgage Credit Intermediation Models

In the Mortgage Credit intermediation model, the mortgage markets are dependent on the existence of a network of intermediation (Stephens, 2005a, Chiquier and Lea, 2009). This network underpins the funding and origination of the credit, the education of the market, the division of obligations and responsibilities, and the provision of support if there is default. In most developed countries, mortgage intermediation was initially performed by a specially regulated and privileged class of institution. In the United Kingdom, it was the building society that was so privileged. In the United States, it was primarily the Savings and Loans Associations (S&Ls). Notably these institutions started as mutual societies or community-based organizations, since this was an activity driven by concern for housing for the community and not by maximizing profit for investors. These societies, organizations or institutions were given special tax and regulatory concessions on condition that they restricted themselves to mortgage lending. The result was that they developed a network of mortgage intermediation, expertise and culture appropriate to support access to housing, which was almost their exclusive preserve. The key challenge however was to make the business efficient to be sustainable in the long term.

In countries with rapid economic growth and expanding urban populations like Kenya, mortgage intermediation is the most rapidly growing business, making a major contribution
to financial systems and economic development. In addition, in some countries, such as the United States and United Kingdom, financial innovations undertaken with respect to mortgage lending have spread quickly to other parts of the financial system, resulting in increasing financial depth (Doling, 1997, Stephens, 2005b, Stephens, 2003b).

Some of the existing network of intermediaries used in Mortgage Credit intermediation model includes; State vs. a market-based mortgage system, Building societies/state banks savings and loans institutions, Commercial Banks, Secondary mortgage markets and International finance institutions. Given the recent development of the mortgage market in Kenya, such institutions can be used in developing origination standards and network of mortgage intermediation for ensuring mortgages is accessible to low- and moderate income households.

2.3 Empirical Review

Glenn and Wayne (2007), carried out a study on the Community Reinvestment Act and the profitability of mortgage-oriented banking, this study sought to determine how Community Reinvestment Act affects profits. They analyzed their data using regression analysis, where they found that there exist a positive relationship between home purchase lending in lower-income neighbourhoods and profitability, they also found that lenders active in lower-income neighbourhoods and with lower-income borrowers appear to be as profitable as other home purchase lenders. Their study also revealed that there was no compelling evidence of lower profitability at commercial banks that specialize in home purchase lending in lower income neighborhoods or to lower-income borrowers, (Glenn and Wayne, 2007).
Fang (2004), conducted a study on the relationship between home mortgage loan and real estate market in China and their effect on banks financial performance, the study sought to analyze the correlation between the development of real-estate market and home finance and their effect on banks financial performance. The study revealed that although residents’ sustainable income, macroeconomic factors are all the reasons for the development of the China’s real estate market, but the mortgage cannot be ignored which is also an important factor for rising home prices, and at different times, different regions show different characteristics , (Fang, 2004). In the short term, the function of mortgage is more apparent in promoting house prices. While the real estate market in a region or city getting gradually mature, the effect of mortgage on the house prices tends to be less evident, but it remains an important factor that cannot be ignored. The study further revealed that both real estate financing and mortgage had positive effects on the banks profitability, (Fang, 2004).

Tsatsaronis and Zhu (2004) point out the importance of mortgage credit on banks financial performance in 17 countries, where they found positive relationship between mortgage credit and banks performance. Their analysis finds that fundamentals relating to mortgage finance, including bank credit and the real interest rate, explain approximately one-third of the long-run variation in house prices and banks performance. Gerlach and Peng (2005) found a long-run relationship linking house prices, bank credit and GDP in Hong Kong. For house prices and credit in the short run, they conclude that the relationship is one-way; a change in house prices causes changes in bank credit. Collyns and Senhadji (2002) find that credit growth has a significant contemporaneous effect on residential property prices in a number of Asian economies.
Empirical studies done locally includes; Mwangi (2006) who found that cost of funds determination mortgage facilities was influenced by inflation rate, inter-bank funds rate; creditworthiness or risk of the borrower; saving rate; maturity period; CRR for banks; liquidity ratio; minimum discount rate; growth of bank credit to the economy; growth of money supply, the rate of economic growth; loan-deposit ratio of banks and overhead cost.

According to Ndungu (2010) Kenya’s mortgage market is growing and the mortgage industry is dominated by the larger commercial banks indicating barriers to entry or high risk for medium and smaller banks. He further stated that the growth rates of small sized banks have been the fastest, with a growth rate of 38% on average, followed by medium banks which are growing at 25% on average with large banks closely following at 24% on average (Ndungu, 2010). Ndirangu (2004), focused on the effect of adopting different types of mortgages on financial performance of mortgage institutions in Kenya his study revealed that adopting different types of mortgage positively affect the financial performance of mortgage institutions in Kenya, Ndirangu (2004) further found that the growth rates of banks ranged between 40-50% in 1990 to 70% in 2004. This was linked to mortgage firms’ ability to match services to the need of the customers which generated adequate risk-adjusted returns, besides being influenced by the overall growth in the mortgage finance market (Ndirangu, 2004).

Murugu (2003) carried out a study on perceived quality of service in the mortgage sector. In his study it was found that Commercial Banks in Kenya offered quality mortgage products as perceived by the customer. Mutero (2007) did a study on access to housing finance in Africa, exploring the issues, he found that that Kenya has a well-developed and regulated financial
system and, in recent years, the mortgage finance sector has become competitive and innovative, this sector serves only those households at the top of the income pyramid. Mutero (2007) recommends that there is need to assess the effects of mortgage financing on financial performance of commercial banks in Kenya. Nkrote (2004) did a study on environmental challenges and the strategic responses in the mortgage industry in Kenya, his study found that that there was stiff competition in the industry, the study also found that mortgage firms were responsive to environmental challenges by having produced tailored products to suit their clients.

2.4 Conceptualization

2.4.1 Core Saving

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 (Michael, 2004).

The commercial banks have developed strategies of raising long term funds from the capital markets. However, another way of extending the funding base of lenders is by lengthening the term of deposits. A traditional way of doing this in established mortgage markets has
been by creating savings groups with the purpose of building houses or developing savings products designed specifically for housing (Immergluck, 2009).

The Kenyan market has some schemes already, most notably that offered by Housing Finance. The scheme called 1stHop is targeted at first time home buyers. The product allows savings for as long as 10 years. It is an open scheme without restrictions as long as the saver has not owned a property before. It is generally aimed at younger home buyers with regular income and a regular savings capacity. Up to Ksh 4,000 a month can be put in the scheme and is tax exempt. Savings can accumulate up to Ksh 3 million with the interest earned being tax free. There is a minimum monthly contribution of Ksh 1,000. (Murugu, 2003).

The Income Tax Law makes specific provisions for a Home Ownership Savings Plan (HOSP). There are few limitations on how the scheme can function, but the main points are that interest earned on the savings is tax exempt and the amount saved is tax deductible. This represents a significant benefit, although it is only permissible up to Ksh 4,000 a month or equivalent to about USD 600 annually. Any withdrawals from the scheme need to be used for housing purchase or construction with 12 months of the withdrawal (Ho Hahm, 2004).

Given that the minimum deposit necessary to purchase a property is in the region of Ksh 1million, it would take 250 monthly payments to save this much or just over 20 years. Extending the tax benefit could allow for a more rapid accrual of the necessary deposit and, whilst it is being accumulated, it provides lenders with an increased pool of long term deposits. If this is then complemented with further funds from demand deposits and capital market funding, Treasury departments of lenders have a good funding mix for managing their assets and liabilities.
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 homeownership. Some Kenyans perceive debt as a negative thing because they don’t understand the products (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 (Immergluck, 2009).

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 (Linbo, 2004).

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).

2.4.3 Economic Factors

Kenya’s nascent personal finance markets are being fuelled by the sustained economic conditions that underpins the development of the rest of the banking sector. High commodity prices, relative political stability and economic reform in 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 (Immergluck, 2009).

Financial reform emphasizes the abolition of interest rate and credit ceilings and the
promotion of a competitive environment with reduced government control and ownership.
Although achieving competitiveness does not imply nonexistence of an interest rate spread,
Ho and Saunders (1981) note that the size of the spread is much higher in a non-competitive
market, which also calls for strengthening the regulatory and legal framework to enhance the
stability of the market. Caprio (1996) notes that a weak legal system, where the courts are not
oriented toward prompt enforcement of contracts and property rights are ill defined, increases
credit riskiness and banks have no incentive to charge lower rates.

Mortgage financing loans today make use of a variety of techniques to aid in their loan
decisions. Most lenders make judgments simply based on rules-of-thumb derived from
their personal experiences and their feel for the market. However, such ad hoc heuristics can
easily generate bias and create an unrecoverable loss. It is important that an objective
analytical technique be applied to the analysis of the causes and prediction of mortgage
default risk. The mortgage financing lead to better analysis of risks facing mortgage loans
portfolio. Dolde (2006) indicated that some mortgage loan defaults were believed to have a
significant relationship with the characteristics of both mortgages and borrowers at the time
of loan origination. Chinloy (1995) made significant contributions to the indirect
identification of risk through the structure of mortgage interest rates (Ferguson, 2003). The standard mortgage product in Kenya is a discretionary variable rate fixed maturity amortizing loan. This is the standard product used in the United Kingdom and has been copied in many countries influenced by the UK system. However, it is not necessarily an ideal product especially under the stress conditions of high inflation.

2.4.4 Diversification of Portfolio

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 commercial banks 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. 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 (The World Bank, 2004).

Positively, the level of NPLs has been relatively low indicating prudent mortgage diversification evaluations by the commercial banks but could be masked by the increasing portfolio of outstanding loans. The rapidly rising property prices mean that it is more likely that an agreed sale will be reached if a borrower has repayment problems, rather than risk losing money by going through the forced sale process. This means that any payment
difficulties are likely to be rapidly resolved. The majority of NPLs reflect legacy issues, largely concentrated in a small number of banks, which are gradually being written off. Compared to the number of outstanding loans, the number of NPLs has been decreasing and is close to half its 2006 level.

A potential way of dealing with this and improving affordability is to introduce a product such as a Graduated Payment Mortgage (GPM). This is a mortgage product where in the initial period of the loan, the monthly payments rise on an annual basis. This means that the repayment burden is spread more evenly over the lifetime of the loans and can help improve affordability in the initial years by allowing for a larger loan. The firm’s choice to diversify is undertaken when the benefits of diversification overcome its costs, and the firm stay focused when the opposite occurs. On the one hand, some theoretical arguments points to diversification as a value-increasing strategy for the firm. For instance, Fluck and Lynch (1999) argue that diversification permits marginally profitable projects, which cannot get financed as stand-alone units, to be financed. Matsusaka (2001) shows that the banks chooses to diversify through mortgages when the gains from searching for a better bank fit outweigh the costs of reduced specialization.

2.4.5 Conceptual Framework

Conceptual framework is a schematic presentation which identifies the variables that when put together explain the issue of concern. The conceptual framework is therefore the set of broad ideas used to explain the relationship between the independent variables (factors) and the dependent variables (outcome). Conceptual framework provides the link between the research title, the objectives, the study methodology and the literature review (Coulthard,
This study adopted some concepts generated by mortgage financing theories and models and conceptualized them in a framework explaining the relationship between (the independent variables-factors) such as core savings, income, diversification of portfolio and economic growth on mortgage financing and how they relate to profitability of commercial banks in Kenya in the schematic figure 2.1 below.

**Figure 2.1: Conceptual Framework**

<table>
<thead>
<tr>
<th>Independent Variables</th>
<th>Dependent Variable</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Core Saving</strong></td>
<td>Return on Assets</td>
</tr>
<tr>
<td>• Increase in Deposits</td>
<td></td>
</tr>
<tr>
<td>• Mortgage loans</td>
<td></td>
</tr>
<tr>
<td><strong>Income</strong></td>
<td></td>
</tr>
<tr>
<td>• Mortgage Income</td>
<td></td>
</tr>
<tr>
<td>• Interest</td>
<td></td>
</tr>
<tr>
<td><strong>Economic Factors</strong></td>
<td></td>
</tr>
<tr>
<td>• Price</td>
<td></td>
</tr>
<tr>
<td>• Interest Rates</td>
<td></td>
</tr>
<tr>
<td><strong>Diversification of Portfolio</strong></td>
<td></td>
</tr>
<tr>
<td>• Increase portfolio</td>
<td></td>
</tr>
<tr>
<td>• Risk management</td>
<td></td>
</tr>
<tr>
<td>• Insurance</td>
<td></td>
</tr>
<tr>
<td><strong>Profitability of commercial banks</strong></td>
<td></td>
</tr>
<tr>
<td>• Return on Assets</td>
<td></td>
</tr>
</tbody>
</table>

Source, Author (2013)

**2.5 Research Gap**

This chapter review the existing literature on the relationship between mortgage financing and profitability of commercial banks, empirical studies done locally include, Ndungu
(2010) who concluded that the Kenya’s mortgage market is growing and industry is dominated by the larger commercial banks indicating barriers to entry or high risk for medium and smaller banks, Ndirangu (2004) did a study on effect of adopting different types of mortgages on financial performance of mortgage institutions in Kenya. Murugu (2003) carried out a study on perceived quality of service in the mortgage sector. Nkirote (2004) did a study on environmental challenges and the strategic responses in the mortgage industry in Kenya, to the researcher best knowledge no known local study has been conducted to establish the relationship between mortgage financing and profitability of commercial banks in Kenya, hence the research gap.
CHAPTER THREE

RESEARCH METHODOLOGY

3.0 Introduction

This chapter presents the methodology, which was used to carry out the study. It further describes the type and source of data, the target population and sampling methods and the techniques that was used to select the sample size. It also describes how data was collected and analyzed. The suitable methodology in this study gave the guidelines for information gathering and processing.

3.1 Research Design

Research design is the basic plan that indicates an overview of the activities that are necessary to execute the research project. This research problem was studied through the use of a descriptive research design. According to Cooper and Schindler (2003), a descriptive study is concerned with finding out the what, where and how of a phenomenon. The nature of this study was such that the findings were generalized to all the commercial banks. This method is concerned with the intense investigation of problem solving situations in which problems are relevant to the research problem.

The research project focuses on the relationship between mortgage financing and profitability of commercial banks in Kenya. The underlining concept was to select several targeted cases where an intensive analysis identifies the possible alternatives for solving the research questions on the basis of the existing solution applied in the selected case study. The study
attempts to describe and define a subject, often by creating a profile of group of problems (Cooper & Schindler, 2006).

3.2 Study Model

To be able to establish the relationship between mortgage financing and profitability of commercial banks, the study conducted a multiple regression analysis. The multiple regression equation was:

\[ Y = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \beta_4 X_4 + \varepsilon \]

Where \( Y \) is the dependent variable profitability of commercial banks in Kenya

\( \beta_0 \) is the regression constant,

\( \beta_1, \beta_2, \beta_3 \) and \( \beta_4 \) are the coefficients of independent variables,

\( X_1 \) is core saving,

\( X_2 \) is income,

\( X_3 \) is diversification of portfolio

\( X_4 \) is economic factors

\( \varepsilon \) is the error term

3.3 Target Population

Target population in statistics is the specific population about which information is desired. According to Kombo and Tromp (2006) a population is a well-defined or set of people, services, elements, events, group of things or households that are being investigated to generalize the results. This definition assumed that the population is not homogeneous. The
population of this study comprised of all the 44 licensed commercial banks in Kenya. These commercial banks in Kenya are licensed and regulated pursuant to the provisions of the Banking Act and the Regulations and Prudential Guidelines issued there under. Currently there are 44 licensed commercial banks (CBK, 2012).

3.4 Sampling Procedure

According to Cooper and Schindler (2003) a sampling frame is a list of all population units from which the sample of a study is drawn. Sampling techniques provide a range of methods that facilitate to reduce the amount of data need to collect by considering only data from a sub-group rather than all possible cases or elements. The study was a census where all the 44 commercial banks in Kenya were involved. The study selected two respondents from each bank a finance manager and a credit manager, thus a sample of 88 respondents were used in the study.

3.5 Data Collection Instrument

With regard to the relationship between mortgage financing and profitability of commercial banks in Kenya, the study used a survey questionnaire administered to each member of the sample population. The questionnaire had both open and close-ended questions. The close-ended questions provided more structured responses to facilitate tangible recommendations. The closed ended questions were used to test the rating of various attributes and this helped in reducing the number of related responses in order to obtain more varied responses. The open-ended questions provided additional information that may not have been captured in the close-ended questions.
The questionnaire was carefully designed and tested with a few members of the population for further improvements. This was done in order to enhance its validity and accuracy of data to be collected for the study.

Secondary data was collected for this study. This data was useful for generating additional information for the study from already documented data or available reports. This basically implied the incorporation of valuable statistical data in the study.

3.5.1 Data Collection Procedure

According to Creswell (2002) data collection is a means of collecting information from the selected units of a study. This study collected both primary and secondary data. Primary data is gathered and generated for the project at hand directly from respondents mainly using questionnaires. Secondary data is the data gathered for other purposes and used in the recent project usually the secondary data are found inside the company, libraries, research centers, internet and etc. Secondary data involves the collection and analysis of published material and information from other sources such as annual reports and published data.

The study administered the questionnaire individually to all respondents of the study. The study exercised care and control to ensure all questionnaires issued to the respondents were received and to achieve this, the study maintained a register of questionnaires, which were sent, and which were received. The questionnaire was administered using a drop and pick later method.

3.6 Pilot Test

The study carried out a pilot study to pretest and validate the questionnaire. Cronbach’s alpha methodology, which is based on internal consistency, was used. Cronbach’s alpha measures
the average of measurable items and its correlation. This is in line with a qualitative research design methodology employed in this research project.

According to Berg and Gall (1989) validity is the degree by which the sample of test items represents the content the test is designed to measure. Content validity which was employed by this study is a measure of the degree to which data was collected using a particular instrument that represents a specific domain or content of a particular concept. Mugenda & Mugenda (1999) contend that the usual procedure in assessing the content validity of a measure is to use a professional or expert in a particular field.

The study selected a pilot group of 10 individuals who were used to test the reliability of the research instrument. This was achieved by first stratifying the individuals according to level of management, level of education, number of years worked. The pilot data was not included in the actual study. The pilot study allowed for pre-testing of the research instrument.

The clarity of the instrument items to the respondents were established so as to enhance the instrument’s validity and reliability. The pilot study enabled the study to be familiar with research and its administration procedure as well as identifying items that required modification. The result helped the study to correct inconsistencies arising from the instruments, which ensured that they measure what was intended.

3.7 Data Analysis and Presentation

Before processing the responses, the completed questionnaires were edited for completeness and consistency. Quantitative data collected was analyzed by the use of descriptive statistics using SPSS (Version 21) and presented through percentages, means, standard deviations and frequencies. The information was displayed by use of bar charts, graphs and pie charts and in
prose-form. Content analysis was used to test data that was qualitative in nature or aspect of the data collected from the open ended questions. This study was interested on the relationship between mortgage financing and profitability of commercial banks in Kenya.

The study also used one way ANOVA to test the level of significant of the variables on the dependent variable at 95% level of significance, the one way ANOVA was used to test whether there exist any significant difference between the study variable when testing the null hypothesis that there is no relationship between mortgage financing and profitability of commercial banks in Kenya.

In addition, the study conducted a multiple regression analysis. The regression equation was:

\[ Y = \beta_0 + \beta_1X_1 + \beta_2X_2 + \beta_3X_3 + \beta_4X_4 + \epsilon \]

Whereby \( Y \) = Profitability of Commercial Bank of Kenya, \( X_1 \)= Core Saving, \( X_2 \)= Income Saving, \( X_3 \)= Economic Factors and \( X_4 \)= Diversification portfolio, while \( \beta_1, \beta_2, \beta_3 \) and \( X_4 \) are coefficients of determination and \( \epsilon \) is the error term. This generated quantitative reports through tabulations, percentages, and measures of central tendency.
CHAPTER FOUR
RESEARCH FINDINGS

4.1 Introduction
This chapter discusses the interpretation and presentation of the findings obtained from the field. The general objective was to determine the relationship between mortgage financing and profitability of commercial banks in Kenya. Descriptive and inferential statistics have been used to discuss the findings of the study.

4.1.1 Response Rate
The study targeted a sample size of 88 respondents from which 85 filled in and returned the questionnaires making a response rate of 96.5%. This response rate was satisfactory to make conclusions for the study. The response rate was representative. According to Mugenda and Mugenda (1999), a response rate of 50% is adequate for analysis and reporting; a rate of 60% is good and a response rate of 70% and over is excellent. Based on the assertion, the response rate was considered to be excellent.

4.2 Demographic Information
Figure 4.1: Gender of the respondents
The study sought to determine the gender of the respondent and therefore requested the respondent to indicate their gender. The study found that majority of the respondent as shown by 64.7% were males whereas 35.3% of the respondent were females, this is an indication that both genders were involved in this study and thus the finding of the study did not suffer from gender biasness.

**Figure 4.2: Respondent age distribution**

![Age Distribution Chart]

The study requested the respondent to indicate their age category, from the findings it was established that, 40% of the respondents were aged between 31 to 40 years, 23.5% of the respondent indicated they were aged between 41 to 50 years, 22.4% of the respondents indicated they were aged between 21 to 30 years, whereas 10.6 % of the respondents indicated that they were aged above 51 years. This is an indication that respondents were well distributed in terms of their age.

**Figure 4.3: Length of time serving in the current institution**
The study requested respondent to indicate the Length of time serving in the current institution. From the findings 35.3% of the respondents indicated 4 to 7 years, 23.5% of the respondents indicated 1 to 3 years, 16.5% of the respondents indicated less than a year, 12.9% of the respondents indicated 8 to 11 years and finally 11.8% of the respondent indicated that they had been serving in the current position for more than 11 years.

4.3 Core Saving

The study requested the respondents to state whether core savings influence profitability of commercial banks in Kenya, and to what extent.

**Figure 4.4: Core saving influence profitability of commercial banks in Kenya**

The study sought to determine whether core saving influence profitability of commercial bank in Kenya, from the results in figure 4.4, majority of the respondents were of the opinion that, core saving influence profitability of commercial bank in Kenya as shown by a 82.4%
where as 17.6% of the respondents were of contrary opinion this implies that core saving influences profitability of commercial banks in Kenya

Table 4.1: Extent to which core saving influences profitability

<table>
<thead>
<tr>
<th></th>
<th>Frequency</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Very great extent</td>
<td>33</td>
<td>38.8</td>
</tr>
<tr>
<td>Great extent</td>
<td>40</td>
<td>47.1</td>
</tr>
<tr>
<td>Moderate extent</td>
<td>12</td>
<td>14.1</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>85</strong></td>
<td><strong>100</strong></td>
</tr>
</tbody>
</table>

The study sought to determine the extent to which core saving influences profitability of commercial banks in Kenya, from the results in table 4.1, 47.1% of the respondents indicated that core saving influences profitability of commercial bank in Kenya to a great extent, 38.8% of the respondents indicated to a very great extent, whereas 14.1% of the respondents indicated to moderate extent. This implies that core saving influences profitability of commercial bank in Kenya to a great extent.
Table 4.2: Effects of core saving’s influence on profitability of commercial banks in Kenya

<table>
<thead>
<tr>
<th>Statement</th>
<th>Strongly Agree</th>
<th>Agree</th>
<th>Neutral</th>
<th>Disagree</th>
<th>Strongly Disagree</th>
<th>Mean</th>
<th>Standard Deviation</th>
</tr>
</thead>
<tbody>
<tr>
<td>The advent of nonbank competition and the rise of third-party funding mean that community banks now operate in a dynamic funding market</td>
<td>29</td>
<td>50</td>
<td>4</td>
<td>2</td>
<td>0</td>
<td>1.75</td>
<td>0.26</td>
</tr>
<tr>
<td>New delivery systems such as the Internet, and competition from credit unions and insurance companies</td>
<td>28</td>
<td>45</td>
<td>8</td>
<td>4</td>
<td>0</td>
<td>1.86</td>
<td>0.22</td>
</tr>
<tr>
<td>The commercial banks have developed strategies of raising long term funds from the capital markets.</td>
<td>38</td>
<td>47</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>1.55</td>
<td>0.28</td>
</tr>
</tbody>
</table>

The study also sought to determine the level at which respondents agreed with the above statements relating to the effects of core saving’s influence on profitability of commercial bank in Kenya, from the findings it was established that majority of the respondents agreed that the commercial banks have developed strategies of raising long term funds from the capital markets as shown by a mean of 1.55, the advent of nonbank competition and the rise of third-party funding mean that community banks now operate in a dynamic funding market as shown by a mean of 1.75, new delivery systems such as the Internet, and competition from credit unions and insurance companies as shown by a mean of 1.86. A traditional way of doing this in established mortgage markets has been by creating savings groups with the
purpose of building houses or developing savings products designed specifically for housing (Immergluck, 2009).

### 4.4 Income

The study requested the respondents to state whether income influences profitability of commercial banks in Kenya, and the extent to which it affects it.

**Table 4.3: Influence of income on profitability of commercial banks**

<table>
<thead>
<tr>
<th>Opinion</th>
<th>Frequency</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yes</td>
<td>73</td>
<td>85.9</td>
</tr>
<tr>
<td>No</td>
<td>12</td>
<td>14.1</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>85</strong></td>
<td><strong>100</strong></td>
</tr>
</tbody>
</table>

The study sought to determine whether income influences profitability of commercial bank in Kenya, from the findings, the study established that income influences profitability of commercial bank in Kenya as shown by 85.9 % whereas 14.1 % of the respondents were of contrary opinion this implies that income influences profitability of commercial bank in Kenya.
Table 4.4:Extent to which income influences profitability

<table>
<thead>
<tr>
<th>Extent</th>
<th>Frequency</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Very great extent</td>
<td>22</td>
<td>25.9</td>
</tr>
<tr>
<td>Great extent</td>
<td>49</td>
<td>57.6</td>
</tr>
<tr>
<td>Moderate extent</td>
<td>14</td>
<td>16.5</td>
</tr>
<tr>
<td>Total</td>
<td>85</td>
<td>100</td>
</tr>
</tbody>
</table>

The study sought to determine the extent to which income influence profitability of commercial bank in Kenya, from the finding 57.6% of the respondents indicated that income influences profitability of commercial bank in Kenya to a great extent, 25.9% of the respondents indicated to a very great extent, whereas 16.5 % of the respondents indicated to moderated extent. This implies that income influence profitability of commercial bank in Kenya to a great extent.

Table 4.5: Influence of income on profitability of commercial banks

<table>
<thead>
<tr>
<th>Statement</th>
<th>Strongly Agree</th>
<th>Agree</th>
<th>Neutral</th>
<th>Disagree</th>
<th>Strongly Disagree</th>
<th>Mean</th>
<th>Standard Deviation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Incomes are growing and people feel a lot more confident to take on loans to buy their homes</td>
<td>29</td>
<td>50</td>
<td>6</td>
<td>0</td>
<td>0</td>
<td>1.73</td>
<td>0.26</td>
</tr>
<tr>
<td>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</td>
<td>23</td>
<td>55</td>
<td>7</td>
<td>0</td>
<td>0</td>
<td>1.81</td>
<td>0.27</td>
</tr>
<tr>
<td>When a bank has a borrower, he stays with</td>
<td>32</td>
<td>47</td>
<td>6</td>
<td>0</td>
<td>0</td>
<td>1.69</td>
<td>0.25</td>
</tr>
</tbody>
</table>
the bank for a couple of years. That allows the bank to not just give a housing loan but to sell life insurance,

| Business model that is suitable for low income and generally affordable by low income segment can trigger success to a business | 34 | 45 | 4 | 2 | 0 | 1.69 | 0.25 |

The study sought to establish the level at which respondents agreed or disagreed with the above statement relating to income’s influence on profitability of commercial bank in Kenya from the findings the study established that majority of the respondents agreed that, Business model that is suitable for low income and generally affordable by low income segment can trigger success to a business, 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 as shown by a mean of 1.69 in each case, Incomes are growing and people feel a lot more confident to take on loans to buy their homes as shown by a mean of 1.73, 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 shown by a mean of 1.81. Personal finance has the potential to transform Kenyan society. It is still in its infancy but there is no doubt about it (Immergluck, 2009). As more people enter the formal economy, the market for personal finance is seeing ever greater demand (Linbo, 2004).

4.5 Economic factors

The study requested the respondents to state whether economic factors influences profitability of commercial banks in Kenya, and the extent to which it affects it.
Table 4.6: Economic factors influence profitability of commercial bank in Kenya

<table>
<thead>
<tr>
<th>Yes</th>
<th>75</th>
<th>88.2</th>
</tr>
</thead>
<tbody>
<tr>
<td>NO</td>
<td>10</td>
<td>11.8</td>
</tr>
<tr>
<td>Total</td>
<td>85</td>
<td>100</td>
</tr>
</tbody>
</table>

The study sought to determine whether economic factors influence profitability of commercial bank in Kenya, from the findings majority of the respondents were of the opinion that, economic factors influences profitability of commercial bank in Kenya as shown by 88.2% whereas 11.8% of the respondents were of contrary opinion this implies that economic factors influences profitability of commercial bank in Kenya.

Table 4.7: Extent to which economic factors influence profitability

<table>
<thead>
<tr>
<th>Extent</th>
<th>Frequency</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Very great extent</td>
<td>27</td>
<td>31.8</td>
</tr>
<tr>
<td>Great extent</td>
<td>38</td>
<td>44.5</td>
</tr>
<tr>
<td>Moderate extent</td>
<td>20</td>
<td>23.6</td>
</tr>
<tr>
<td>Total</td>
<td>85</td>
<td>100</td>
</tr>
</tbody>
</table>

The study sought to determine the extent to which economic factors influences profitability of commercial bank in Kenya, from the finding 44.5% of the respondents indicated that economic factors influences profitability of commercial bank in Kenya to a great extent, 31.8% of the respondents indicated to a very great extent, whereas 23.6% of the respondents indicated to moderated extent. This implies that economic factors influences profitability of commercial bank in Kenya to a great extent.
Table 4.8: Statement relating to economic factors

<table>
<thead>
<tr>
<th>Statement</th>
<th>Strongly agree</th>
<th>Agree</th>
<th>Neutral</th>
<th>Disagree</th>
<th>Strongly disagree</th>
<th>Mean</th>
<th>Std deviation</th>
</tr>
</thead>
<tbody>
<tr>
<td>As more people enter the formal economy, the market for personal finance</td>
<td>36</td>
<td>43</td>
<td>6</td>
<td>0</td>
<td>0</td>
<td>1.7</td>
<td>0.95</td>
</tr>
<tr>
<td>is seeing ever greater demand</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Judgements based on personal experiences can easily generate bias and</td>
<td>33</td>
<td>42</td>
<td>10</td>
<td>0</td>
<td>0</td>
<td>1.8</td>
<td>0.95</td>
</tr>
<tr>
<td>create an unrecoverable loss</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Using analytical techniques in mortgage financing can lead to</td>
<td>45</td>
<td>36</td>
<td>4</td>
<td>0</td>
<td>0</td>
<td>1.7</td>
<td>0.95</td>
</tr>
<tr>
<td>better analysis of risks facing mortgage loans portfolio</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Some mortgage loan defaults have a significant relationship with the</td>
<td>44</td>
<td>30</td>
<td>11</td>
<td>0</td>
<td>0</td>
<td>1.7</td>
<td>0.95</td>
</tr>
<tr>
<td>characteristics of both mortgages and borrowers at the time of loan</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>origination</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

The study sought to determine the level at which respondents agreed or disagreed with the above statements from the findings the study established that majority of the respondents agreed that As more people enter the formal economy, the market for personal finance is seeing ever greater demand, Using analytical techniques in mortgage financing can lead to better analysis of risks facing mortgage loans portfolio, some mortgage loan defaults have a significant relationship with the characteristics of both mortgages and borrowers at the time of loan origination as shown by a mean of 1.7 in each case, others agreed that Judgments’ based on personal experiences can easily generate bias and create an unrecoverable loss as
shown by a mean of 1.8, the findings above concurs with the argument by Dolde (2006) he established 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. 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 (Immergluck, 2009).

4.6 Diversification of Portfolio

The study requested the respondents to state whether diversification of portfolio influences profitability of commercial banks in Kenya, and the extent to which it affects it.

Table 4.9: Diversification of portfolio influence profitability of commercial banks in Kenya

<table>
<thead>
<tr>
<th>Opinion</th>
<th>Frequency</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yes</td>
<td>72</td>
<td>84.7</td>
</tr>
<tr>
<td>No</td>
<td>13</td>
<td>15.3</td>
</tr>
<tr>
<td>Total</td>
<td>85</td>
<td>100</td>
</tr>
</tbody>
</table>

The study sought to determine whether, diversification of portfolio influence profitability of commercial bank in Kenya from the findings majority of the respondents agreed that diversification of portfolio influences profitability of commercial bank in Kenya as shown by a 84.7% whereas 15.3% of the respondents were of contrary opinion this implies that diversification of portfolio influences profitability of commercial bank in Kenya.
Table 4.10: Extent to which diversification of portfolio influence profitability of commercial banks

<table>
<thead>
<tr>
<th>Extent</th>
<th>Frequency</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Very great extent</td>
<td>26</td>
<td>30.6</td>
</tr>
<tr>
<td>Great extent</td>
<td>44</td>
<td>51.8</td>
</tr>
<tr>
<td>Moderate extent</td>
<td>15</td>
<td>17.6</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>85</strong></td>
<td><strong>100</strong></td>
</tr>
</tbody>
</table>

The study sought to determine the extent to which diversification of portfolio influence profitability of commercial bank in Kenya from the finding 51.8% of the respondents indicated that diversification of portfolio influence profitability of commercial bank in Kenya to a great extent, 30.6% of the respondents indicated to a very great extent, whereas 17.6% of the respondents indicated to moderated extent. This implies that diversification of portfolio influences profitability of commercial bank in Kenya to a great extent. The findings concurred with Ndirangu (2009) who found that adoption of different types of mortgages influences financial performance of mortgage institutions.
### Table 4.11: Influence of diversification of portfolio on profitability of commercial banks

<table>
<thead>
<tr>
<th>Statement</th>
<th>Strongly Agree</th>
<th>Agree</th>
<th>Neutral</th>
<th>Disagree</th>
<th>Strongly Disagree</th>
<th>Mean</th>
<th>Standard Deviation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Banks that offer mortgage loans hold diversified portfolios of mortgage</td>
<td>32</td>
<td>44</td>
<td>9</td>
<td>0</td>
<td>0</td>
<td>1.73</td>
<td>0.23</td>
</tr>
<tr>
<td>loans and therefore spreading risks in a manner that would be impossible</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>if individuals were making mortgage loans directly</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mortgage financing requires borrowers to put in some savings to finance</td>
<td>37</td>
<td>48</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>1.56</td>
<td>0.28</td>
</tr>
<tr>
<td>part of the cost of property by making a down payment</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Design of mortgages depends on the nature of the housing system, the</td>
<td>32</td>
<td>47</td>
<td>6</td>
<td>0</td>
<td>0</td>
<td>1.69</td>
<td>0.25</td>
</tr>
<tr>
<td>allocation of risk and the economic and institutional factors in a</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>country</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>The majority of NPLs reflect legacy issues, largely concentrated in a</td>
<td>36</td>
<td>45</td>
<td>4</td>
<td>0</td>
<td>0</td>
<td>1.62</td>
<td>0.26</td>
</tr>
<tr>
<td>small number of banks, which are gradually being written off</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Diversification permits marginally profitable projects, which cannot get</td>
<td>31</td>
<td>48</td>
<td>6</td>
<td>0</td>
<td>0</td>
<td>1.71</td>
<td>0.25</td>
</tr>
<tr>
<td>financed as stand-alone units, to be financed</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

The study sought to establish the level at which respondents agreed or disagreed with the above statement relating to diversification of portfolio’s influence on profitability of commercial bank in Kenya, from the findings the study established that majority of the
respondents agreed that Mortgage financing requires borrowers to put in some savings to finance part of the cost of property by making a down payment as shown by a mean of 1.56, The majority of NPLs reflect legacy issues, largely concentrated in a small number of banks, which are gradually being written off as shown by a mean of 1.62, Design of mortgages depends on the nature of the housing system, the allocation of risk and the economic and institutional factors in a country as shown by a mean of 1.69, Diversification permits marginally profitable projects, which cannot get financed as stand-alone units, to be financed as shown by a mean of 1.71, and that 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 as shown by mean of 1.73. The study further revealed that banks diversified their loan portfolio through issuing of different type of mortgage product in order to increase their profitability. 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 (The World Bank, 2004).

### 4.7 Regression Analysis

In this study, a multiple regression analysis was conducted to test the influence among predictor variables. The research used statistical package for social sciences (SPSS V 20) to code, enter and compute the measurements of the multiple regressions. The multiple regression used was:

\[ Y = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \beta_4 X_4 + \varepsilon \]
Where $Y$ is the dependent variable profitability of commercial banks in Kenya

$\beta_0$ is the regression constant,

$\beta_1$, $\beta_2$, $\beta_3$ and $\beta_4$ are the coefficients of independent variables,

$X_1$ is core saving,

$X_2$ is income,

$X_3$ is diversification of portfolio

$X_4$ is economic factors

$\epsilon$ is the error term

**Table 4.12: Model Summary**

<table>
<thead>
<tr>
<th>Model</th>
<th>R</th>
<th>R Square</th>
<th>Adjusted R Square</th>
<th>Std. Error of the Estimate</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>.891(a)</td>
<td>.793</td>
<td>.745</td>
<td>.19440</td>
</tr>
</tbody>
</table>

Adjusted R squared is the coefficient of determination which tells us the variation in the dependent variable due to changes in the independent variable, from the findings in the above table the value of adjusted R squared was 0.745 an indication that there was variation of 74.5% on profitability of commercial banks in Kenya due to changes in core saving, income, economic factors and diversification portfolio at 95% confidence interval. This shows that 74.5% changes in profitability of commercial banks in Kenya could be accounted for by core saving, income, economic factors and diversification portfolio. $R$ is the correlation coefficient which shows the relationship between the study variables, from the findings shown in the table above there was a strong positive relationship between the study variables as shown by 0.891.
Table 4.13: ANOVA

<table>
<thead>
<tr>
<th>Model</th>
<th>Sum of Squares</th>
<th>df</th>
<th>Mean Square</th>
<th>F</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Regression</td>
<td>2.232</td>
<td>6</td>
<td>0.372</td>
<td>3.131</td>
<td>.048b</td>
</tr>
<tr>
<td>Residual</td>
<td>7.567</td>
<td>78</td>
<td>0.329</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>9.799</td>
<td>84</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

From the ANOVA statistics in the table above, the processed data, which is the population parameters, had a significance level of 0.048 which shows that the data is ideal for making a conclusion on the population’s parameter as the value of significance (p-value) is less than 5%. The calculated F was greater than the critical value (1.699 < 3.131) an indication that core saving, income, economic factors and diversification portfolio were significantly influencing profitability of commercial banks in Kenya. The significance value was less than 0.05 an indication that the model was statistically significant.

Table 4.14: Coefficients

<table>
<thead>
<tr>
<th>Model</th>
<th>Unstandardized Coefficients</th>
<th>Standardized Coefficients</th>
<th>t</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>B</td>
<td>Std. Error</td>
<td>Beta</td>
<td></td>
</tr>
<tr>
<td>1</td>
<td>Constant</td>
<td>.298</td>
<td>.453</td>
<td>2.165</td>
</tr>
<tr>
<td></td>
<td>Core Saving</td>
<td>.237</td>
<td>.160</td>
<td>.198</td>
</tr>
<tr>
<td></td>
<td>Increased income</td>
<td>.231</td>
<td>.126</td>
<td>.245</td>
</tr>
<tr>
<td></td>
<td>Economic factors</td>
<td>.239</td>
<td>.145</td>
<td>.008</td>
</tr>
<tr>
<td></td>
<td>Diversification portfolio</td>
<td>.281</td>
<td>.114</td>
<td>.031</td>
</tr>
</tbody>
</table>

From the data in the above table the established regression equation was
\[ Y = 0.298 + 0.237 X_1 + 0.231 X_2 + 0.239 X_3 + 0.281 X_4 \]
From the above regression equation it was revealed that holding core saving, income, economic factors and diversification portfolio to a constant zero, profitability of commercial banks in Kenya would be 0.298, a unit increase in core saving would lead to increase in
profitability of commercial banks in Kenya by a factors of 0.237, unit increase in income would lead to increase in profitability of commercial banks in Kenya by factors of 0.231, a unit increase in economic factors of the banks would lead to increase in profitability of commercial banks in Kenya by a factor of 0.239 and a unit increase in diversification of portfolio would lead to increase in profitability of commercial banks in Kenya by a factors of 0.281.

The findings of this study concurred with CBK, (2008) which indicated that growth rates of banks by 25% was linked to growth of mortgage portfolio ability which matched services to the need of the customers. From the findings of that study it was revealed that earnings from high interest rates, creation of wealth and the need for improving savings are financial factors influencing mortgage financing in Kenya. Mortgage financing has been found to increase bank profits (NHAZ, 2002).
CHAPTER FIVE

SUMMARY OF FINDINGS, CONCLUSION AND RECOMMENDATIONS

5.1 Introduction

From the analysis and data collected, the following discussions, conclusion and recommendations were made. The responses were based on the objectives of the study. To determine how core saving influences profitability of commercial banks in Kenya, to establish the relationship between income and profitability of Commercial banks in Kenya, to establish the relationship between economic factors and profitability of commercial banks in Kenya and to establish how diversification of portfolio influence profitability of commercial bank in Kenya.

5.2 Summary of the findings

From the analysis the study establishes that core saving influences profitability of commercial bank in Kenya to a great extent. It was also revealed that the commercial banks have developed strategies of raising long term funds from the capital markets, the advent of nonbank competition and the rise of third-party funding mean that community banks now operate in a dynamic funding market, new delivery systems such as the Internet, and competition from credit unions and insurance companies. Tsatsaronis and Zhu (2004) found positive relationship between mortgage credit and banks performance. Their analysis finds that fundamentals relating to mortgage finance, including bank credit and the real interest rate, explain approximately one-third of the long-run variation in house prices and banks performance.
The study established that diversification of portfolio influences profitability of commercial bank in Kenya to a great extent. Further, the study established that mortgage financing requires borrowers to put in some savings to finance part of the cost of property by making a down payment, the majority of NPLs reflect legacy issues, largely concentrated in a small number of banks, which are gradually being written off, design of mortgages depends on the nature of the housing system, the allocation of risk and the economic and institutional factors in a country, diversification permits marginally profitable projects, which cannot get financed as stand-alone units, to be financed, and finally that 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.

The study determined that income influences profitability of commercial bank in Kenya to a great extent. The study further revealed that, Business model that is suitable for low income and generally affordable by low income segment can trigger success to a business, 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, Incomes are growing and people feel a lot more confident to take on loans to buy their homes, 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. Gerlach and Peng (2005) found a long-run relationship linking house prices, bank credit and GDP in Hong Kong. For house prices and credit in the short run, they conclude that the relationship is one-way; a change in house prices causes changes in bank credit. Collyns and Senhadji (2002) find that credit growth has a significant contemporaneous effect on residential property prices in a number of Asian economies.
5.3 Conclusion

From the findings the study revealed that mortgage financing had a positive effect on the profitability of Commercial banks in Kenya, this clearly shows that mortgage financing was a profitable business for commercial banks in Kenya.

The study found that core savings influence profitability of commercial banks in Kenya, the study revealed that an increase in core saving lead to an increase in profitability of Commercial banks, thus the study concludes that core saving influence the profitability of commercial banks.

The study established that there was a positive relationship between income and profitability of Commercial banks in Kenya, as it was found that a unit increase in income positively influence the profitability of commercial banks, thus the study concludes that income positively influence the performance of commercial banks.

It was revealed that there was a positive relationship between economic factors and profitability of commercial banks in Kenya, thus the study concludes that economic factors influence the profitability of commercial banks in Kenya.

The study established that diversification of portfolio influence profitability of commercial bank in Kenya, it was found that diversification of portfolio positively influence profitability of commercial bank in Kenya. The study thus concludes that diversification of portfolio influence profitability of commercial bank in Kenya.
5.4 Recommendations

From the findings the study concludes that there is need for commercial banks in Kenya to adopt mortgage financing as it was revealed that mortgage financing positively impacts on profitability of commercial banks, mortgage financing is considered as new line of income for commercial banks which will increase their income.

There is need for commercial banks in Kenya to encourage the culture of saving among the customer as this will increase their liquidity to offer mortgage loans which will in turn positively influence their profitability.

There is need for the government to design various policies that will check the various economic factors as it was found that there was a positive relationship between economic factors and profitability of commercial banks in Kenya.

There is need for the commercial banks in Kenya to diversify their various mortgage products as it was found that diversification of portfolio influences profitability of commercial banks in Kenya.

5.5 Areas For Further Research

The study sought to determine the relationship between mortgage financing and profitability of commercial banks in Kenya. The study recommends that an in-depth study should be accrued out on factors influencing adoption of mortgage financing by commercial banks in Kenya.
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APPENDICES

Appendix I: Questionnaire

Part A: Demographic Information

1. Kindly indicate your institution?

.................................................................................................

2. Kindly indicate your gender?

   Male                        [   ]
   Female                     [   ]

3. Age of the respondent?

   21 to 30 years           [   ]
   31 to 40 years           [   ]
   41 to 50 years           [   ]
   Above 50 years           [   ]

4. Length of time serving in the current institution?

   1 to 3 years            [   ]
   4 to 7 years            [   ]
   8 to 11 years           [   ]
   Above 11 years          [   ]
### Part B: Core Saving

5. Does core saving influence profitability of commercial bank in Kenya?

<table>
<thead>
<tr>
<th>Yes</th>
<th>No</th>
</tr>
</thead>
</table>

6. To what extent does core saving influences profitability of commercial bank in Kenya?

<table>
<thead>
<tr>
<th>Very great extent</th>
<th>Great extent</th>
<th>Moderate extent</th>
<th>Little extent</th>
<th>No extent</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

7. To what extent do you agree with the following statement relating to the effects of core saving’s influence on profitability of commercial bank in Kenya?

<table>
<thead>
<tr>
<th>The advent of nonbank competition and the rise of third-party funding mean that community banks now operate in a dynamic funding market</th>
<th>Strongly agree</th>
<th>Agree</th>
<th>Neutral</th>
<th>Disagree</th>
<th>Strongly disagree</th>
</tr>
</thead>
<tbody>
<tr>
<td>new delivery systems such as the Internet, and competition from credit unions and insurance companies</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>The commercial banks have developed strategies of</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Part C: Income.

8. Does income influence profitability of commercial bank in Kenya?

Yes [  ]

No [  ]

9. If yes to what extent does income influence profitability of commercial bank in Kenya?

Very great extent [  ]

Great extent [  ]

Moderate extent [  ]

Little extent [  ]

No extent [  ]

10. To what extent do you agree with the following statement relating to income’s influence on profitability of commercial bank in Kenya?

<table>
<thead>
<tr>
<th>Strongly agree</th>
<th>Agree</th>
<th>Neutral</th>
<th>Disagree</th>
<th>Strongly disagree</th>
</tr>
</thead>
<tbody>
<tr>
<td>Incomes are growing and people feel a lot more confident to take on loans to buy their homes</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Economic success has manifested itself in the emergence of a middle class and increasing numbers of</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
educated professionals from the diaspora returning to the continent

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,

Business model that is suitable for low income and generally affordable by low income segment can trigger success to a business

<table>
<thead>
<tr>
<th>Part D: Economic factors.</th>
</tr>
</thead>
</table>

11. Does economic factors influence profitability of commercial bank in Kenya

Yes [ ]
No [ ]

12. To what extent does economic factors influence profitability of commercial bank in Kenya?

Very great extent [ ]
Great extent [ ]
Moderate extent [ ]
Little extent [ ]
No extent [ ]

13. To what extent do you agree with the following statement relating to economic factors income’s influence on profitability of commercial bank in Kenya?
<table>
<thead>
<tr>
<th>Statement</th>
<th>Strongly agree</th>
<th>Agree</th>
<th>Neutral</th>
<th>Disagree</th>
<th>Strongly disagree</th>
</tr>
</thead>
<tbody>
<tr>
<td>As more people enter the formal economy, the market for personal finance is seeing ever greater demand</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Judgements based on personal experiences can easily generate bias and create an unrecoverable loss</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Using analytical techniques in mortgage financing can lead to better analysis of risks facing mortgage loans portfolio</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>some mortgage loan defaults have a significant relationship with the characteristics of both mortgages and borrowers at the time of loan origination</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Part E: Diversification of Portfolio.**

14. Does diversification of portfolio influence profitability of commercial bank in Kenya?

Yes [ ]

No [ ]

15. To what extent does diversification of portfolio influence profitability of commercial bank in Kenya?

Very great extent [ ]

Great extent [ ]

Moderate extent [ ]

Little extent [ ]
16. What is your level of agreement on the following statement relating to diversification of portfolio’s influence on profitability of commercial bank in Kenya?

| 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 |
| Mortgage financing requires borrowers to put in some savings to finance part of the cost of property by making a down payment |
| Design of mortgages depends on the nature of the housing system, the allocation of risk and the economic and institutional factors in a country |
| The majority of NPLs reflect legacy issues, largely concentrated in a small number of banks, which are gradually being written off |
| Diversification permits marginally profitable projects, which cannot get financed as stand-alone units, to be financed |

17. How else does diversification of portfolio influence profitability of commercial bank in Kenya?

……………………………………………………………………………………………………………………………………………….

……………………………………………………………………………………………………………………………………………….

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Appendix II: List of Commercial Banks in Kenya

1. ABC Bank (Kenya)
2. Bank of Africa
3. Bank of Baroda
4. Bank of India
5. Barclays Bank
6. Brighton Kalekye Bank
7. CFC Stanbic Bank
8. Chase Bank (Kenya)
9. Citibank
10. Commercial Bank of Africa
11. Consolidated Bank of Kenya
12. Cooperative Bank of Kenya
13. Credit Bank
15. Diamond Trust Bank
16. Dubai Bank Kenya
17. Ecobank
18. Equatorial Commercial Bank
19. Equity Bank
20. Family Bank
21. Fidelity Commercial Bank Limited
22. Fina Bank
23. First Community Bank
24. Giro Commercial Bank
25. Guardian Bank
26. Gulf African Bank
27. Habib Bank
28. Habib Bank AG Zurich
29. HFCK
30. I&M Bank
31. Imperial Bank Kenya
32. Jamii Bora Bank
33. Kenya Commercial Bank
34. K-Rep Bank
35. Middle East Bank Kenya
36. National Bank of Kenya
37. NIC Bank
38. Oriental Commercial Bank
39. Paramount Universal Bank
40. Prime Bank (Kenya)
41. Standard Chartered Kenya
42. Trans National Bank Kenya
43. United Bank for Africa
44. Victoria Commercial Bank