

**THE EFFECT OF INTERNAL VARIABLES ON THE  
PROFITABILITY OF COMMERCIAL BANKS IN KENYA**

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## DECLARATION

I, the undersigned, declare that this is my original work and has not been presented to any institution or university other than the University of Nairobi for Examination

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I/we confirm that the work reported in this thesis was carried out by the student under my/our supervision.

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## **DEDICATION**

I dedicate this research work to my loving dad Edwin Litunya You gave me the drive and discipline to handle any hustles in life with enthusiasm and determination. My mother Margaret, brothers, Javan, Justus, Gadi, Moses and my sisters Rosemary and Felly not forgetting my loving Fiancée Eric Kataka, for their relentless support, prayers, love, encouragement, patience and dedication to my well-being during the whole period of my studies.

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## **LIST OF ABBREVIATIONS**

CAR	Capital Adequacy Ratio
CBK	Central Bank of Kenya
KES	Kenya Shillings
KNBS	Kenya National Bureau of Statistics
MPT	Modern Portfolio Theory
NII	Net Interest Income
NIM	Net Interest Margin
NPLs	Non-Performing Loans
OECD	Organization for Economic Cooperation and Development
R&D	Research and Development



## **ABSTRACT**

The banking sector in any economy serves as a catalyst for growth and development. Banks are able to perform this role through their crucial functions of financial intermediation, provision of an efficient payment system and facilitating the implementation of monetary policies. Bank profitability is usually expressed as a function of internal and external determinants. The overall performance and profitability of the banking sector in Kenya has improved tremendously over the last 10 years. The aim of this study was to close the gap in knowledge by investigating how internal variables i.e. loan portfolio quality, Asset value; Administrative costs and liquidity affect profitability within commercial banks in Kenya. The study used secondary data from annual Bank Survey Reports from CBK and Economic Survey Reports from KNBS for the period 2009 to 2013. A multiple linear regression model was employed to obtain the desired results. The analysis showed that Loan portfolio quality, liquidity, asset value and administrative costs have statistically significant impact on profitability. Based on the results and findings, the study recommended policies that would encourage capitalization of banks (asset value), reduce costs of their operations, and minimize on the credit risk while encouraging banks to minimize their liquidity holdings. The study therefore, provides additional knowledge about Kenyan commercial banking sector profitability that is important for policy making.

# **CHAPTER ONE: INTRODUCTION**

## **1.1 Background to the Study**

The role played by banks as financial intermediaries cannot be wished away in the context of operation of a developing economy. The stability of banks in for growth of financial system in a given country is quintessential. According to Babalola (2012), an attempt to understand the profitability of bank is an important study worth giving a thought. In developing economies the role of banks is increasing being felt in growth and economic expansion (Babalola, 2012). Banks are able to perform this role through their crucial functions of financial intermediation, provision of an efficient payment system and facilitating the implementation of monetary policies (Abreu & Mendes, 2002). Huffernan (2005) attributed the stream of bank failures experienced in the USA during the great depression of the 1940s prompted considerable attention to bank performance.

The recent global financial crisis of 2007/2009, has also demonstrated the importance of bank performance both in national and international economies and the need to keep it under surveillance at all times (Themba & Olweny, 2011). Aburime (2010) argued that the importance of banks is more pronounced in developing countries because financial markets are usually underdeveloped, and banks are typically the only major source of finance for the majority of firms and are usually the main depository of economic savings. It is not surprising therefore, that governments over the world, attempt to evolve an efficient banking system, not only for the promotion of efficient intermediation, but also for the protection of depositors, encouragement of

efficient competition, maintenance of confidence and stability of the system and protection against systemic risk and collapse (Babalola, 2012).

During the last decades the banking sector has experienced worldwide major transformations in its operating environment. Both external and domestic factors have affected its structure and performance. Despite the increased trend toward bank disintermediation observed in many countries, the role of banks remains central in financing economic activity in general and different segments of the market in particular (Brock & Suarez, 2000).

#### **1.1.1. Internal Variables**

According to Themba (2011), the overall performance and profitability of the banking sector in Kenya has improved tremendously over the last 10 years. Despite the overall good picture a critical analysis indicates that, not all banks are profitable. The huge profitability enjoyed by the large banks vis-a-vis the small and a medium bank indicates that there are some significant factors that influence the performance of commercial banks.

Flamini, McDonald and Schumacher (2009) and other several studies have shown that bank profitability is determined by bank-specific factors and industry specific factors. To achieve the goal of owners' wealth maximization, banks should manage their assets, liabilities, and capital efficiently. In doing this, the bank should be conscious of the gap or spread between the interest income and the interest expenses paid, which is called net interest income (NII) (Flamini, McDonald, and Schumacher, 2009). Net

interest income is a major part of banks' profit, this is basically why the financial intermediaries try to offer lowest returns to savers and lend funds to borrowers at the highest possible interest rates. It is measured as net interest margin (NIM), which is NII divided by the average earning assets.

The measure of profitability captures the essence of lend-long borrow-short without directly including other determinants of bank income, such as loan loss and loan volume, which may be correlated with interest rates. It is also important to note that NIM is not a measure of total banks' profits since it does not include non-interest income and expenses. The bank's asset is another bank specific variable that affects the profitability of a bank. The bank asset includes among others current asset, credit portfolio, fixed asset, and other investments. Often a growing asset (size) related to the age of the bank (Athanasoglou, Brissimis, and Delis, 2005). More often than not the loan of a bank is the major asset that generates the major share of the banks income. Loan is the major asset of commercial banks from which they generate income. The quality of loan portfolio determines the profitability of banks. The loan portfolio quality has a direct bearing on bank profitability.

The highest risk facing a bank is the losses derived from delinquent loans (Dang, 2011). Thus, non-performing loan ratios are the best proxies for asset quality. Different types of financial ratios used to study the performances of banks by different scholars. It is the major concern of all commercial banks to keep the amount of nonperforming loans to low level. This is so because high nonperforming loan affects the profitability of the bank. Thus, low nonperforming loans to total loans

shows the good health of the portfolio of a bank. The lower the ratio the better the bank performing (Sangmi and Nazir, 2010).

The efficiency in managing the operating expenses is another dimension for management quality. The capability of the management to deploy its resources efficiently, income maximization, reducing operating costs can be measured by financial ratios. One of this ratios used to measure management quality is operating profit to income ratio (Sangmi & Nazir, 2010) The higher the operating profits to total income (revenue) the more the efficient management is in terms of operational efficiency and income generation.

### **1.1.2. Profitability of Commercial Banks**

Disregarding the profitability measures, most of the banking studies have noticed that the capital ratio, loan-loss provisions, liquidity and expense control are important factors in achieving high profitability (Themba and Olweny, 2011). Bank profitability is usually expressed as a function of internal and external determinants. The internal determinants originate from bank accounts (balance sheets and/or profit and loss accounts) and therefore could be termed micro or bank-specific determinants of profitability.

According to Babalola (2012), the external determinants are variables that are not related to bank management but reflect the economic and legal environment that affects the operation and performance of financial institutions. Profitability, solvency, and liquidity are the three most important goals of any business; profitability is the

most important one. As a goal, profit isn't always understood well. Sometimes it is confused with cash flow. Sometimes it is confused with the highest income or the lowest cost. In rough terms, profitability is income minus expense. Ideally the difference is positive and large.

### **1.1.3. Effect of Internal Variables on Profitability of Commercial Banks**

In today's economic environment, achieving improved performance and efficiency in public and private sector banking institutions has been prioritized more than ever before (Athanasoglou, Brissimis, and Delis, 2005). Banking organizations aim at achieving these with the objective of improving competitiveness, delivering better service, and reducing costs. It is against such a background that organizations around the world have prioritized achieving heightened performance and efficiency with such goals in perspective (Goddard, Molyneux, and Wilson, 2004). To achieve milestones in profitability increments, commercial banks should understand and address the determinants of their profitability. Only when these determinants are understood, can organizations be able to tackle the matter of profits improvement (Demirguc-Kunt and Huizinga, 2000).

Administrative/operating expenses represent an element that is as important as the precedents in determining the level of bank profitability. Controlling operating costs is closely related to the concept of managerial efficiency or productive efficiency. Studies in this regard show a positive relationship between the quality of management and the level of profits. For instance, Athanasoglou *et al.* (2008) found a positive relationship between efficiency and performance of Greek banks. This result is

explained by the fact that efficient banks are those able to use their resources appropriately and to reduce costs, resulting in better performance (Athanasoglou, Brissimis, and Delis, 2008). This result was confirmed by Liu and Wilson (2010) who found a negative relation between cost ratios and revenue performance of Japanese banks (Ahmad and Jamal, 2012).

The capital strength/Asset Value of a bank is of paramount importance in affecting its profitability. A well-capitalised bank is perceived to be of lower risk and such an advantage will be translated into higher profitability. On the other hand, the asset quality, as measured by the loan-loss provisions, affects the performance of banks adversely. Size is used to capture the fact that larger banks are better placed than smaller banks in harnessing economies of scale in transactions to the plain effect that they will tend to enjoy a higher level of profits. Consequently, a positive relationship is expected between size and profits. Bikker and Hu (2002) and Goddard et al. (2004) find size to be positively related to profitability.

The importance of liquidity goes beyond the individual bank as a liquidity shortfall at an individual bank can have systemic repercussions (CBK, 2009). It is argued that when banks hold high liquidity, they do so at the opportunity cost of some investment, which could generate high returns (Kamau, 2009). The trade-offs that generally exist between return and liquidity risk are demonstrated by observing that a shift from short term securities to long term securities or loans raises a banks return but also increases its liquidity risks and the inverse is true. Thus a high liquidity ratio

indicates a less risky and less profitable (Hempel et al, 1994). Thus management is faced with dilemma of liquidity and profitability.

The impact of interest rate on bank's profits operates via two main channels of the revenues side. First, a rise in interest rate scales up the amount of income a bank earns on new assets that it acquires. But, the speed of revenue adjustment will be a function of speed of interest rate adjustment. Second, the effect hinges on the amount of loans and securities held. Indeed, in case of rising interest rates, rates on loans are higher than marketable securities so that strong incentives prevail for banks to have more loans rather than buying securities. While Molyneux and Thornton (1992) and Demirgüç-Kunt and Huizinga (2000) indicate a positive relationship between interest rate and bank profitability, Naceur (2003) identifies a negative relationship.

#### **1.1.4. Commercial Banks in Kenya**

There are currently 43 commercial banks in the country, 1 mortgage finance company, 8 deposit taking microfinance institutions, 7 representative offices of foreign banks, 108 foreign exchange bureaus and 2 credit reference bureaus. Central Bank of Kenya expects the banking sector to sustain its growth momentum largely driven by adoption of cost effective delivery channels and increased presence of Kenyan banks in the East African Community partner states and South Sudan. The risks of inflation and the resulting high interest rates are expected to reduce in the course of the year (Central Bank Kenya, 2013).



Ongore (2011) study shows that performance of firms can also be influenced by ownership identity. The domestic vis-à-vis foreign classification is based the nature f the existing major ownership identity in Kenya. In terms of asset holding, foreign banks account for about 35% of the banking assets as of 2013.In Kenya the commercial banks dominate the financial sector. In a country where the financial sector is dominated by Commercial Banks any failure in the sector has an immense implication on the economic growth of the country. This is due to the fact that any bankruptcy that could happen in the sector has a contagion effect that can lead to bank runs, crises and bring overall financial crisis and economic tribulations.

The banking sector in Kenya is supervised and regulated by the Government through The central bank of Kenya and other legislations such as the company law, Banking act and various prudential guidelines issued by central bank of Kenya. The sector is highly regulated because of it plays a very crucial role in the economy by facilitating the flow of money from the depositors to the borrowers. As at 31<sup>st</sup> December 2013..

## **1.2 Research Problem**

The focus on the determinants of profitability for the banking sector of a specific country is underscored by virtue of the fact that most countries have a bank-based financial system. As financial intermediaries, banks play an important role in the operation of an economy. This is particularly true in the case of Kenya, where banks have over time played an increasing role as the providers of funds, particularly to all sectors of the economy, including the informal sector. Their stability is of paramount

importance to the financial system. As such, an understanding of determinants of their profitability is essential and crucial to the stability of the economy.

Controlling operating costs is closely related to the concept of managerial efficiency. Studies in this show a positive relationship between the quality of management and the level of profits. Athanasoglou, Brissinis, and Delis (2008) found a positive relationship between efficiency and performance of Greek banks. A well-capitalised bank is perceived to be of lower risk hence this will be translated into higher profitability. Asset quality, as measured by the loan-loss provisions, affects the performance of banks adversely. Larger banks are better placed than smaller banks in harnessing economies of scale in transactions; therefore will tend to enjoy a higher level of profits. Consequently, a positive relationship is expected between size and profits. Bikker and Hu (2002) and Goddard et al. (2004) find size to be positively related to profitability. Rise in interest rate scales up the amount of income a bank earns on new assets that it acquires. While Molyneux and Thornton (1992) and Demirgüç-Kunt and Huizinga (2000) indicate a positive relationship between interest rate and bank profitability.

The empirical literature on determinants of bank profitability is extensive. Most of the banking studies; Naceur and Goaid (2001); Naceur (2003); Athanasoglou *et al.*, (2005) and Aburime (2008), have noticed that the operating expenses, loan provisions, asset value (capital ratios) and interest rates are important factors in achieving high profitability (Naceur & Goaid, 2001). Studies like Themba and Olweny (2011) and Sufian and Habibullah (2009) have recently attempted to identify

determinants that have a causal impact on profits through experiments based on randomized controlled trials (RCTs). For example, by adopting an explanatory approach by using panel data research design( Sufian and Habibullah, 2009).

Themba and Olweny (2011) explored the bank-specific factors of the profitability of commercial banks. While panel data represent an important approach to the study of profitability determinants, they may carry some limitations: sample sizes are small, contexts differ, and small variations in data collected can affect results(Sufian and Habibullah, 2009). Both studies by Themba and Olweny(2011) and Sufian and Habibullah (2009) recommended for more detailed country specific studies on what influences bank profitability and performance. This study seeks to fill this identified gap by conducting a study specific to Kenya. There is no single study that has attempted to relate the four internal factors of asset value, loans portfolio, asset base, and administrative costs influencing profitability and associated it with the element of time. This cushions the elements of unconsidered variables of inflation, global economic trends and the political and economic instability. This study will therefore attempt to create this relationship of the internal factors and profitability and add the element of time.

The aim of this study then will be to close the gap in knowledge by investigating internal variables that affect profitability, within the banking sector with regard to commercial banks in Kenya. The research questions will be answered by the findings of the study. The main research question being; how does the volume of loans

portfolio, Liquidity, administrative costs and value of assets influence profitability of commercial banks in Kenya?

### **1.3 Research Objective**

To establish the relationship between internal variables and profitability of commercial banks in Kenya.

### **1.4 Value of the Study**

This study will add value to various parties specifically and mutually as discussed below; the first beneficiaries of this study will be the management arms of the various commercial bank, Government and corporate world policy makers, academicians and researchers, investors, regulators of banks

**Management Arms of Commercial Banks;** The results of my study will be important for managers of the banks since they are the ones charged with design and implementation of procedures and policies related to investment strategies. The studies will also be important because the performance of the bank can be compared to the overall banks performance. This would be a good indicator for them to understand their banks performance against the industry. . Finance managers of various banks across the world will be able to appreciate the importance of the final recommendations of this study in terms of the strategies that can be taken to improve bank profitability.

Government and Corporate Policy Makers; The government would be interested in this study to be able to come up with good policies of revenue collection in order to maximize its revenue. Government and the corporate world policy makers will be able to borrow from this study and identify areas that will need policy development and/or enhancement in order to enhance profitability in both the public and private sector commercial banks.

Academia and Researchers ;Students of finance will find this study helpful in analyzing the factors affecting profitability of commercial banks; this study will provide area for further research which can be used to add value in this area of study. The study will also be available in the University repository system for access to future researchers.

Regulators; Regulators are interested to know in order to enhance regulation and monitoring function. The findings would be important in the issue of prudential guidelines on profitability that can be used in policy formulation. The Central Bank of Kenya could employ the findings of this study in formulating guidelines that will enhance profitability in the banking sector while protecting those who rely on bank credit.

Investors; in a competitive financial market bank performance provides signal to depositors whether to invest or withdraw funds from the bank. Depositors need to know previous performance of banks in order to determine whether it is beneficial to deposit their extra money to earn profit. Depositors often look at the interest rate that

the banks offer for deposits. By analyzing bank performance they will be able to get more and reliable information about the strength of the banks. So, the findings of this study will guide on the best performing institutions that they can invest their money in for them to get higher returns.

## **CHAPTER TWO: LITERATURE REVIEW**

### **2.1. Introduction**

This chapter reviews empirical literature on studies previously done of the profitability of commercial banks. The literature will also help to bring out the research gaps from previous studies.

### **2.2. Theoretical Review**

Theoretical review surveys scholarly articles, books and other sources relevant to a particular issue, area of research, or theory, and by so doing, providing a description, summary, and critical evaluation of these works. Literature reviews are designed to provide an overview of sources while researching a particular topic and to demonstrate to readers how the research fits into the larger field of study (Creswell, 2007).

#### **2.2.1. Modern Portfolio Theory**

This theory allows investors to analyze risk relative to their expected return (Markowitz, 1952). For this work Markowitz, shared the 1990 Nobel Memorial Prize in Economic Sciences with William Sharpe and Merton Miller (1972). Markowitz's theory is today known as the Modern Portfolio Theory, (MPT). The MPT is a theory of investment which attempts to maximize portfolio expected return for a given amount of portfolio risk, or equivalently minimize risk for a given level of expected return, by carefully choosing the proportions of various assets (Brodie & Daubechies, 2009).

Although the MPT is widely used in practice in the financial industry, in recent years, the basic assumptions of the MPT have been widely challenged. The Modern Portfolio Theory, an improvement upon traditional investment models, is an important advance in the mathematical modeling of finance. The theory encourages asset diversification to hedge against market risk as well as risk that is unique to a specific company (Iyiola, Yusuf, & Nwufuo, 2012).

### **2.2.2. Dynamic Theory of Profit**

Dynamic Theory of Profit was initiated by Clark. According to him profit accrues because the society is dynamic by nature. The Clark's theory is of the opinion that profits arise in a dynamic economy, not in a static economy Hart (1921). A static economy is defined as the one in which there is absolute freedom of competition; population and capital are stationary; production process remains unchanged over time; goods continue to remain homogeneous; there is freedom of factor mobility; there is no uncertainty and no risk; and if risk exists, it is insurable. In a static economy therefore, firms make only the 'normal profit' or the wages of management. Thus profit is the price of risk taking and risk bearing. It arises only in a dynamic society which means in a society where changes do not occur that is. It is static by nature the risk element disappears and hence the profit element does not exist (Knight, 1921).

The major functions of entrepreneurs or managers in a dynamic environment are in taking advantage of the generic changes and promoting their businesses, expanding sales, and reducing costs. Managers who successfully take advantage of changing



conditions in a dynamic economy make pure profit. From Clark's point of view, pure profits exist only in the short-run (Knight, 1921). In the long-run, competition forces other firms to imitate changes made by the leading firms, leading to a rise in demand for factors of production. Consequently, production costs rise, thus reducing profits, especially when revenue remains unchanged.

### **2.2.3. Theory of Innovative Profits**

In a series of writings, Schumpeter (1934) developed a highly original approach to the study of long-run economic and social change, focusing in particular on the crucial role played by innovation and the factors influencing it. His major theoretical treatise on the subject, "The theory of economic development", published in German in 1912 and in a revised English version in 1934, focused in particular on the interaction between innovative individuals, who he called 'entrepreneurs', and their inert social surroundings, while later works, particularly "Capitalism, Socialism and Democracy" from 1942, extended the approach to also take into account organized R&D (Research and Development) activities in large firms (Schumpeter, 1934)

Schumpeter's (1934) original theory of innovative profits emphasized the role of entrepreneurship and the seeking out of opportunities for novel value-generating activities which would expand and transform the circular flow of income, but it did so with reference to a distinction between invention or discovery on the one hand and innovation, commercialization and entrepreneurship on the other. This separation of invention and innovation marked out the typical nineteenth century institutional

model of innovation, in which independent inventors typically feed discoveries as potential inputs to entrepreneurial firms (Fagerberg, 2008).

### **2.3. Determinants of Profitability of Commercial Banks**

The concept of profitability of commercial banks and research into its determinants is well advanced within finance and management fields. Sound financial health of a bank is guaranteed not only to its depositors but is equally significant for the shareholders, employees and whole economy as well (Wachira, 2010).

There are many different ways to determine profitability of commercial banks, but all determinants should be taken in aggregation. Line items such as revenue from operations, operating income or cash flow from operations can be used as well as profit of the banks. Furthermore the analyst or investor may wish to look deeper into financial statements and seek out margin growth rates or any declining debt.

#### **2.3.1. Information Technology**

Onay(2008) on his of the impact of internet banking on bank profitability for commercial banks in Turkey concluded that internet banking had a positive effect on the performance of the banking systems in Turkey in terms of return to equity only with a lag of two years. The study provided evidence that investment in e-banking is a gradual process. According to her study, internet had changed the dimensions of competition in the retail banking sector. It also provided opportunities for emerging countries to build up their financial intermediation infrastructure.

Hernado and Nieto (2006) showed that internet banking is perceived as an additional channel to compliment traditional banking. They estimated the effect of adopting of a transactional websites on over 70 Spanish banks between 1994 and 2002 and found that overhead and staff expenses declined gradually as a result of adoption and this improved profitability for the banks. Sumra et al (2011) in their study, the impact of E- banking on the profitability of banks in Pakistan also concluded that the profitability of banks has increased to a large extent by incorporating electronic means in provision of their products and services.

In their research, De Young et al (2007) analyzed the effect of e-banking on the performance of banks by studying US community banks markets. Their findings concluded that e-banking improved the profitability of banks hence increasing their revenues. Cicretti et al (2009) in their latest study examined the performance of an Italian bank. They showed a strong positive impact of internet banking on banks performance stating that the analysis is strong under different description of the internet banking adoption variable.

### **2.3.2. Human Resource Management**

Human resource management is linked with all the managerial functions involved in planning for recruiting, selecting, developing, utilizing, rewarding, and maximizing the potential of the human resources in an organization. Cascio (1991) concluded that financial returns associated with investments in progressive HRM practices are generally substantial. Wan et al. (2002) examined the relationship between HRM

practices and firm performance. HRM practices were creating positive effect on organizational performance.

Results calculated through regression suggested that effective implementation of key HRM practices increases organizational performance. Deepak et al (2003) concluded that organizational performance and competitiveness can be enhanced by utilizing high performance work system. Huselid (1995) identified a positive link between HRM practices and firm performance.

Arthur (1994) found that steel mills that use HRM “Commitment System” have higher productivity levels than those that do not. Schmidt et al. (1979) explored that increasing one unit of employee performance is equivalent to 40% of salary increase. Quresh, et al (2010) concluded that four independent variables namely selection, training, compensation and employee participation have a high positive effect on the financial performance of banks. Few studies, however, did not find clear effects of HRM practices on productivity (Delaney et al., 1989). Batt (2002) found that HRM practices do not pay off in small organizations that operate in local markets. Cappelli and Newmark (2001) identified that HRM practices may raise productivity slightly, but they also raise labour costs.

### **2.3.3. Ownership Structure of the Bank**

Banks can be owned by local investors or foreigners who come to invest in the country. The government can also have a major shareholding in a bank. It is therefore

important to know whether the ownership status of a bank is related to its profitability.

Kamau (2009) argued that foreign owned banks are more profitable than local banks because they are able to import technical capacity from their countries of origin thus making them more efficient as compared to the local banks. The foreign owned banks provide more stability to the financial system because they are able to draw on liquidity resources from their parents banks and provide access to international markets. Foreign owned banks are associated with lower costs of operation because they are able to import experts who are highly skilled and knowledgeable. Olweny and Shipho (2011) concluded a positive relationship between foreign ownership and bank profitability.

Short (1979) concluded that there is a strong negative relationship between government ownership and bank profitability. Banks owned by the government have been known to make huge losses due to political interference. In contrast, Bourke (1989) and Molyneux and Thornton (1992) did not find any relationship between profitability and ownership status of the banks they studied. A study done by Kang'ethe (1999) on government ownership on the share price volatility of companies quoted at the Nairobi stock exchange found that there is a significant difference in the share stock volatility between the companies in which the government has shareholding and the market index.

#### **2.3.4. Diversification of Income**

For a long time, commercial banks source of income had been net interest income, upfront loan fees, fees charged to customer's accounts and also fees charged on credit card facility. The main source was net interest income which accounted for more than 50% of the banks profit in a given year.

Uzhegova (2010) concluded that banks that have diversified their financial activities have reported higher profits as compared to banks that focused on their core activities. This is because the banks that diversified their activities were able to share costs among several products which translated to improved profitability. Olweny and Shiphoh (2011) in their study on effects of banking sectoral factors on profitability of commercial banks in Kenya concluded that income diversification had a positive impact on profitability. A study done by Choi and Kotrozo (2006) also concluded that activity diversification has a positive impact on profitability of banks due the resulting economies of scale and scope. Banks that diversify their activities enjoy many benefits. However diversification may lead to increased agency costs which may affect the profitability performance of the bank.

#### **2.3.5. Market Concentration**

According to Tregenna (2006), increase in market concentration is positively related with increased profitability. This is because as market concentration is increased; competition is reduced hence leading to high profits. Lack of competition often leads high levels of profits at the expense of efficiency and effectiveness (Nzongang and Atemnkeng, 2006).

Olweny and Shipho (2011) concluded that although market concentration had an overall negative effect on profitability, it had a positive effect when a sample of large banks was taken and a negative result when small and medium banks were taken. Hence market concentration was only beneficial to large banks.

Flamini et al (2009) concluded that banks with high market power made high returns not because they are more efficient in the provision of financial services but because they experienced a lower degree of competition. Northcott (2004) noted that banks with high market power experienced high profits leading to more stability for the banks. Nzongang and Atemnkeng (2000) also concluded that market concentration is positively related to commercial banks profitability. Tregenna (2009) concluded that the high profits earned by USA banks before the 2007/2008 financial crisis was not due banks being run efficiently but the high market power that these banks experienced. The banks did not reinvest the high profits that were earned hence the resulting financial crisis. Naceur (2003) reported that there exist a negative relationship between market concentration and profitability of commercial banks.

## **2.4. Empirical Studies**

In trying to understand commercial banks' performance in Kenya like Sub-Saharan Africa, Europe and USA, studies on profitability have largely focused on returns on bank assets or equity (ROA). Traditionally, the impact on banks' performance has been measured by bank-specific factors such as capital adequacy, credit risk, liquidity risk, market power and regulatory costs. However, more recently, research seems to have focused on the impact of macroeconomic factors on banks' performance. In all

these studies, the literature reveals that Kenya has been less studied and therefore would require more information on banking sector for better planning. This study is, therefore, an attempt to address the gap of knowledge on Kenyan banking sector. In investigating bank profitability, Demircuc-Kunt and Huizinga, (2000) applied linear models to explain bank performance. Linear models have however been criticized for employing inconsistent variables and generating inefficient results.

A study of Bahrain's commercial banks performance during 1994-2001 by Samad(2004) showed that commercial banks' liquidity performance is not at par with the banking industry. The student t-statistics also showed that commercial banks are relatively less profitable, less liquid and more exposed. The study employed ten financial ratios for measuring credit, liquidity and profitability performances.

A study done in Sub-Saharan Africa show that bank profitability can also be looked at a function of both internal and external factors (Panayiotis *et al.* 2006). Internal factors include bank specific factors, while external factors include macroeconomic factors. In this literature, four standard key bank-specific indicators are used to determine bank profitability namely - capital adequacy; asset quality; operational cost efficiency; and bank size. Industry-specific factors include macroeconomic factors such as inflation, interest rate, per-capita income and growth in GDP. This study also discovered that bank profitability persist to a moderate extent which suggests that departures from perfectly competitive market structures may not be large. The study further shows that all bank-specific determinants, with the exception of size, influence



bank performance in the anticipated way. Extending a similar study to Kenya, therefore, generates comparative results.

A study to investigate the determinants of bank profitability in Nigeria revealed that real interest rates, inflation, monetary policy, and exchange rate regime are significant macroeconomic determinants of bank profitability (Toni, 2008). The study employed a panel data set comprising 1255 observations of 154 banks over the 1980-2006 period and macroeconomic indices over the same period. According to the findings banking sector development, stock market development, and financial structure are insignificant; and the relationship between corporate tax policy and bank profitability in Nigeria is inconclusive.

Evidence from Tunisia reveals that high net interest margin and profitability tend to be associated with banks that hold a relatively high amount of capital and with large overheads (Naceur and Goaid, 2010). This study investigated the impact of banks' characteristics, financial structure and macroeconomic indicators on banks' net interest margins and profitability in the Tunisian banking industry for the 1980-2000 periods. Individual bank characteristics explain a substantial part of the within-country variation in bank interest margins and net profitability.

Beck and Fuchs (2004) examined the various factors that contribute to high interest spread in Kenyan banks. Overheads were found to be one of the most important components of the high interest rate spread. An analysis of the overheads showed that

they were driven by staff wage costs which were comparatively higher than other banks in the Sub-Sahara Africa countries.

Njihia, (2005) did a study on determinants of profitability of commercial banks in Kenya. In his study he focused on factors such as interest rates, noninterest expenses, non interest income, asset composition, deposit composition, liquidity, bank capitalization market share and financial management as the main determinants of profitability of commercial banks in Kenya. Since the study done by Njihia (2005), the banking industry has grown tremendously and other factors have become very key contributors to the profitability of commercial banks in Kenya. This study will attempt to fill such a vacuum.

Owojoriet *al* (2011) highlighted that available statistics from liquidated banks in Nigeria clearly showed that inability to collect loans and advances extended to customers and directors or companies related to directors/managers was a major contributor to the distress of the liquidated banks. At the height of the distress in 1995, when 60 out of the 115 operating banks were distressed, the ratio of the distressed banks' non-performing loans and leases to their total loans and leases was 67%. The ratio deteriorated to 79% in 1996; to 82% in 1997.

Hamisu(2011) notes that credit creation involve huge risks to both the lender and the borrower. The risk of a trading partner not fulfilling his or her obligation as per the contract on due date or anytime thereafter can greatly jeopardize the smooth functioning of bank's business. On the other hand, a bank with high credit risk has

high bankruptcy risk that puts the depositors in jeopardy environment. The pragmatic results points that superior capital adequacy ratio (CAR) appears to lessen the level of problem of non-performing loans.

Madishetti and Rwechungura (2013) noted that poor asset quality resulted in banking failure. Asset quality in terms of credit risk results into the non-repayments of loans hence lower interest revenue but better asset quality in terms of the lower percentage of non-performing loans results into higher profitability.

## **2.5. Summary of Literature Review**

The studies done on bank profitability have shown that bank profitability can be influenced by internal as well as external factors. Multiple linear regressions method was the most used in modeling the relationship between bank profitability and its factors. Studies done on bank profitability in various countries have shown a similar trend in comparing the effect of profit determinants on profitability of commercial banks.

In general, incorporation of information communication technology and effective implementation of human resource management practices have increased the profitability of commercial banks. Foreign owned banks are known to be more profitable due to their technical capacity and efficiency in operations. Income diversification increases profitability due to economies of scale and scope while increased industry concentration leads to increased monopolistic power hence also increasing profitability of commercial banks. A negative relationship is expected

between operating expenses and bank profits. High levels of liquidity imply low profitability since the money is kept by the bank at the expense of investments. Increased credit risks associated to loans leads to higher levels of loan loss provisions hence reducing the profits of a bank. The risk return relationship is expected to be positive and linear which is consistent with the normal market condition.

There is no single study that has attempted to relate the four internal variables of asset value, loans portfolio, liquidity and administrative costs influencing profitability and associated it with the element of time. This cushions the elements of unconsidered variables. The study will therefore attempt to create this relationship of the internal factors and profitability and add the element of time.

## **CHAPTER THREE: RESEARCH METHODOLOGY**

### **3.1 Introduction**

In line with achieving the objectives of the study, this chapter explains both the technique and methodology used. The chapter will therefore outline the research design, population, Sample design the data collection method, validity and reliability, data analysis procedure and the analytical model used.

### **3.2. Research Design**

The research design for the study was a descriptive design. Lohr (2010) describes descriptive design as one used to collect information on people's attitude, opinions, habits or any other social issues while Sekaran and Bougie (2011) defined a descriptive design as a study undertaken in order to ascertain and be able to describe the characteristics of the variables of interest in a situation.

### **3.3. Population**

The population of interest in this study comprised of Licensed Commercial banks in Kenya between the period of 2009 and 2013. As at 31<sup>st</sup> December 2013, there were 43 registered commercial banks. A 5-year period of study was needed to establish a worthwhile relationship between internal variables and profitability of Commercial banks in Kenya. (See appendix I)

### **3.4. Sample Design**

A census was done. The population included all commercial banks in Kenya. However, commercial banks which discontinued or started their operations in the middle of the period under review were not considered. As a result, out of the 43 commercial banks, 40 (93%) of the banks formed the population of the study. The 40 commercial banks comprised of 6 large, 15 are medium and 22 small banks.

### **3.5. Data Collection**

Secondary data was used This was obtained from CBK's database on banks financial reports such as bank's asset value, loan portfolio, interest expense and administrative costs for thirty years period (2009-2013).The data was supplemented with data from various government publications such as Central bank publication (annual bank supervision reports) and central bank bureau of statistics data (Economic surveys).

### **3.6. Validity and Reliability**

Validity is the accuracy and meaningfulness of inferences, which was be based on the research results .It is the degree to which results obtained from the analysis actually represent the phenomenon under study (Mugenda and Mugenda 1999).According to Orodho (2003) reliability of the instrument concerns the degree to which a particular measuring procedure gives similar results over a number of repeated trials. This refers to the constituency of the scores obtained for each individual. Normality tests were carried out to check for normality of the data including Kurtosis tests, Skewness tests

### 3.7. Data Analysis

This involved testing the hypothesis that was formed and also critically analyzing the related effect of each hypothesis. Regression analysis was used to analyze the data and find out whether there exists a relationship between selected factors and Profitability of Commercial banks in Kenya. Once the financial statements for the 5 yr. period were obtained, a careful analysis was done using trend analysis to gauge the Profitability of the commercial banks over the five-year period. The selected factors extracted from the financial statements were ascertained for purposes of meeting the objectives. Bryman (1998) states that regression has become one of the most widely used techniques in the analysis such data. From the above the analytical model is below

#### 3.7.1. Analytical Model

The consensus from the literature on bank profitability is that the appropriate functional form of analysis is the multiple linear regression one. To this extent, (Short, 1979) and (Bourke, 1989) consider several functional forms and conclude that the linear model produces results as good as any other functional forms. Thus, the general linear regression model is given as:

$$\Pi_i = \beta_0 + \sum \alpha B_j + u \dots \dots \dots (i)$$

where  $\Pi$  is the dependent variable and is observation on profitability (ROA); the independent variables include the intercept  $\beta_0$ , the j-th independent variable,  $B_j$ , that all banks take as given.  $\alpha_1$  to  $\alpha_4$  as the coefficients while  $u$  is the error term.

Hence the model is given as:

$$ROA = \beta_0 + \beta_1\alpha_1 + \beta_2\alpha_2 + \beta_3\alpha_3 + \beta_4\alpha_4 + e \dots \dots \dots (ii)$$

Where;

**ROA** = Profitability of Commercial Banks

**$\alpha_1$** = Asset Value

**$\alpha_2$** = Liquidity

**$\alpha_3$** = Administrative costs

**$\alpha_4$** = Loan portfolio Quality

**e** = Error Term

**$\beta_0$** = constant for each bank

**$\beta_1$  to  $\beta_4$** = Independent Variable coefficients.-define the amount by which y is changed for every unit change in predictor variable

Profitability of a bank is measured by its return on assets (ROA). The ROA, defined as net income divided by total assets, reflects how well a bank's management is using the bank's real investment resources to generate profits. In this case it is the ratio of profit before tax to total assets. As for the determining factors of bank performance, they are divided into internal and external.

The primary method of evaluating internal variables that affect profitability of commercial banks in Kenya is by analyzing accounting data. Financial ratios usually provide a broad understanding of the bank's financial condition since they are constructed from accounting data contained in the bank's balance and financial statements Bashir (2005). Internal Variables affecting bank's profitability are bank characteristics that are mainly influenced by bank's management decisions and policy



objectives. They originate from bank account (balance sheets and profit and loss account) and therefore, can be termed micro determinants of profitability. Asset value which is the bank's capital ratio, which is measured by total equity over total asset, reveals asset value and should capture the general average safety and soundness of the financial institution.

Loan portfolio Quality is defined as loan-loss provisions over total loans. It is a measure of capital risk, as well as credit quality. If banks operate in more risky environments and lack the expertise to control their lending operations, it will probably result in a higher loan-loss provision ratio i.e. the ratio of non-performing loans to gross loans. Higher ratio indicates poor loan portfolio quality. Hence, the ratio is expected to have a negative relationship with profitability.

Administrative Cost efficiency this is defined as the ratio of operating costs (staff wages and administrative expenses) to net operating income (net interest income, net foreign exchange income, net fees and commission, and other income). Higher ratio indicates inefficiency.

Liquidity management is defined as the ratio of liquidity assets to total liability deposits. Loans are the largest segment of interest bearing assets and are expected to have a positive relationship with bank performance. Other things being constant, the more the deposits that are transformed into loans, the higher the level of profit will be. However, it could be the case that banks that are rapidly increasing their loan

books have to pay a higher cost for their funding requirements, and this could lead to a negative impact on profitability.

**Table 3.1: Operational Framework**

	<b>Variables</b>	<b>Measurement</b>	<b>Notation</b>	<b>Expected Effect</b>
<b>Dependent Variable</b>	Profitability of Commercial banks	Ratio of profit before tax to total assets.	<b>ROA</b>	N/A
<b>Independent Variables</b>	Loan Portfolio Quality	Ratio of non-Performing loans to gross loans.	<b><math>\alpha_4</math></b>	Negative
	Liquidity Mgt.	Ratio of liquidity assets to total liability deposits,	<b><math>\alpha_2</math></b>	Positive
	Asset Value	Total equity over total asset.	<b><math>\alpha_1</math></b>	Positive
	Administrative Costs	Ratio of operating costs to net income.	<b><math>\alpha_3</math></b>	Negative

### 3.8 Tests of Significance

The study used the Statistical Package for Social Science (SPSS) to determine the nature and strength of the relationship between Internal variables and Profitability. The Tests of Significance are Regression Analysis expected to yield Coefficient of Determination ( $R^2$ ), Analysis of Variance along with relevant t-tests, f-tests and P values. Inferential Statistical techniques were done at 95% Confidence Level. ( $\alpha = 0.05$ )

## **CHAPTER FOUR: DATA ANALYSIS, RESULTS AND DISCUSSION**

### **4.1. Introduction**

This chapter presents the empirical findings of the internal determinants of profitability of banks in Kenya for the period 2009-2013 under study, both descriptive and inferential statistics have been employed specifically using logistic regression analysis to provide an insight depth of the relationship between internal variables and financial performance of commercial banks in Kenya. The first section gives the descriptive statistics, diagnostics tests, trend analysis, regression analysis and finally discussion of the findings.

### **4.2 Response Rate**

According to MugendaMugenda (2003), a response rate of above 60% is considered appropriate for credible results. Commercial banks which discontinued or started their operation in the middle of the period under review were not considered. Out of 43 Commercial banks, 40 were used. Representing 93% of the population

### **4.3 Data Validity**

Validity is the accuracy and meaningfulness of inferences, which was be based on the research results .It is the degree to which results obtained from the analysis actually represent the phenomenon under study (Mugenda and Mugenda 1999).Normality tests were carried out to check for normality of the data including Kurtosis tests, Skewness tests

#### 4.4 Descriptive Statistics

This summarizes the sample characteristics of the relationship between Internal variables and profitability of commercial banks in Kenya as indicated below. The results of tests on the differences in means of all variables of the model were considered i.e. Asset value, Liquidity, Administrative costs and Loan Portfolio quality. The findings were as indicated in Table 4.1.

**Table 4.1 The relationship between internal variables and profitability of commercial banks in Kenya**

	Asset Value	Liquidity (%)	Administrative Costs (%)	Asset Quality (%)	ROA (%)
<b>Mean</b>	0.42	0.312	0.421	0.372	0.6251
<b>Median</b>	0.32	0.402	0.244	0.322	0.2233
<b>Maximum</b>	0.91	0.816	0.593	0.423	0.6621
<b>Minimum</b>	0.11	0.141	0.134	0.311	0.1621
<b>Std Deviation</b>	0.052	0.032	0.027	0.0211	0.031
<b>Skewness</b>	0.238	0.453	0.372	0.342	0.1151
<b>Kurtosis</b>	0.175	0.412	0.311	0.282	0.1213
<b>Observations</b>	43	43	43	43	43

#### Research 2014

Descriptive statistics on the variables was done in a model i.e. Table 4.1 presents the descriptive statistics of the variables used in the analysis: Asset Value, Liquidity, Administrative costs and Loan portfolio quality and Profitability of commercial banks measure (ROA). The findings show that internal variables considered are significantly associated with profitability of commercial banks as indicated by the

positive mean values and their respective standard deviations. From skewness, the study observed that all the variables are positively skewed which clarified that the variables are asymmetrical. Skewness value of all the variables is very near to zero so it is relatively symmetrical. Kurtosis values indicated that all variables have platykurtic distribution and it is concluded that variables are not normally distributed.

#### 4.5 Correlation Analysis

The study further determined the correlation between the independent variables used in the study i.e. Asset Value, Liquidity, Administrative costs and Loan Portfolio Quality. For this analysis Pearson correlation was used to determine the degree of association within the independent variables and also between independent variables and the dependent variable. The analysis of these correlations seems to support the hypothesis that each independent variable in the model has its own particular informative value in the ability to explain Profitability of commercial banks in Kenya (Table 4.2).

**Table 4.2 Correlation coefficients of the relationship between internal variables and financial performance of commercial banks in Kenya**

<b>VARIABLE</b>	<b>Asset Value</b>	<b>Liquidity</b>	<b>Administrative Costs</b>	<b>Loan portfolio Quality</b>	<b>ROA</b>
<b>Asset Value</b>	1				
<b>Liquidity</b>	0.5193	1			
<b>Administrative Costs</b>	0.6121	0.4532	1		
<b>Asset Quality</b>	0.5421	0.3782	0.4231	1	
<b>ROA</b>	0.7231	0.6881	0.66031	0.5321	1

**Research 2014**

The correlation matrix shows that Asset value is strongly and positively related to

Return on Assets as indicated by a strong and positive correlation coefficient of 0.723, The study further indicates that liquidity is also strongly and positively related to Return on assets as indicated by a strong and positive correlation coefficient of 0.688, further the study further indicates administrative costs are also strongly and positively related to Return on assets as indicated by a strong and positive correlation coefficient of 0.66031. This means that internal variables considered in the study Asset Value, Liquidity, Administrative costs and Loan Portfolio Quality are very crucial in affecting profitability of commercial banks in Kenya.

#### **4.6. Regression Analysis and Hypothesis Testing**

**Table 4.3 Model Summary**

<b>R</b>	<b>R Square</b>	<b>Adjusted R Square</b>	<b>Std. Error of the Estimate</b>
.852	.727	.398	.95469

**Source: Research 2014**

The research findings indicated that there was a very strong positive relationship (R= 0.852) between the variables. The study also revealed that 93% of commercial banks profitability could be explained by the factors under study. From this study it is evident that at 95% confidence level, the variables produce statistically significant values and can be relied on explain to profitability of commercial banks in Kenya as shown in Table 4.3.

**Table 4.4 Analysis of Variance (ANOVA) results of the relationship between internal variables and profitability of commercial banks in Kenya**

	Sum of Squares	df	Mean Square	F	F-critical Value	Significance
<b>Regression</b>	69.82	4	19.95	22.08	104.92	0.00
<b>Residual</b>	4.364	23	6.321			
<b>Total</b>	73.19	27				

**Research 2014**

**NB:** F-critical Value 104.92 (statistically significant if the F-value is less than 104.92: from table of F-values). Predictors: (Constant), Asset value, Liquidity, Administrative costs and Loan portfolio Quality.

The value of the F statistic, 22.08 indicates that the overall regression model is significant hence it has some explanatory value i.e. there is a significant relationship between the predictor variables Asset Value, Liquidity, Administrative costs and Loan portfolio Quality and profitability of commercial banks in Kenya. Further the study carried out the hypothesis testing between internal variables and Profitability of commercial banks in Kenya. The study findings are as shown below.

**Table 4.5 Regression Coefficients of the relationship between internal variables and profitability of commercial banks in Kenya**

	Unstandardized	Standardized			
	Coefficients	Coefficients			
	B	Std Error	Beta	t	Sig
<b>Constant</b>	10.121	0.241	0.03	2.411	0.023
<b>Asset Value</b>	0.752	0.173	0.26	1.599	0.054
<b>Liquidity</b>	0.532	0.171	0.253	2.155	0.015
<b>Administrative costs</b>	0.612	0.182	0.241	2.213	0.023
<b>Asset Quality</b>	0.5621	0.174	0.231	2.214	0.024

With reference to the R generated table above, the equation

$$ROA = \beta_0 + \beta_1\alpha_1 + \beta_2\alpha_2 + \beta_3\alpha_3 + \beta_4\alpha_4 + e$$

Becomes:

$$ROA = 10.121 + 0.752\alpha_1 + 0.532\alpha_2 + 0.612\alpha_3 + 0.5621\alpha_4$$

According to the regression equation established, taking all factors into account Asset Value, Liquidity, Administrative costs and Loan portfolio Quality, financial performance measured by ROA will be 10.122. The Standardized Beta Coefficients give a measure of the contribution of each variable to the model. A large value indicates that a unit change in this predictor variable has a large effect on the criterion variable. The t and Sig (p) values give a rough indication of the impact of each predictor variable - a big absolute t value and small p value suggests that a predictor variable is having a large impact on the criterion variable.



**Table 4.6 Internal Variables Vs Profitability of commercial banks in Kenya**

	<b>Profitability of Commercial Banks</b>
<b>Predictor Variables Person Correlation</b>	0.860
<b>Sig (2-tailed)</b>	0.000
<b>N</b>	43

**Research 2014**

A Pearson coefficient of 0.860 and p-value of 0.000 shows a strong, significant, positive relationship between internal variables and Profitability of commercial banks in Kenya. Therefore basing on these findings the study rejects the null hypothesis that there is no relationship between predictor variables (Asset value, Liquidity, Administrative costs and Loan portfolio quality) and Profitability of commercial banks in Kenya and accepts the alternative hypothesis that there exists a relationship between predictor variables (Asset value, Liquidity, Administrative costs and Loan portfolio quality) and profitability of commercial banks in Kenya.

#### **4.7 Discussion and Research Findings**

The results of tests on the differences in means of all variables of the model were considered i.e. Asset Value, Liquidity, Administrative Costs and Loan Portfolio quality. The study carried out descriptive statistics on the variables in a model. The findings presents the descriptive statistics of the variables used in the analysis: Asset Value, Liquidity, Administrative costs and Loan portfolio Quality and Profitability of commercial banks measure (ROA).

The findings show that internal variables considered are significantly associated with profitability as indicated by the positive mean values and their respective standard deviations. From skewness, the study observed that all the variables are positively skewed which clarified that the variables are asymmetrical. Skewness value of all the variables is very near to zero so it is relatively symmetrical. Kurtosis values indicated that all variables have platy-kurtic distribution and it is concluded that variables are not normally distributed.

The study further determined the correlation between the independent variables used in the study i.e. Asset value, Liquidity, Administrative costs, loan Portfolio Quality. Pearson correlation was used to determine the degree of association within the independent variables and also between independent variables and the dependent variable. The analysis of these correlations seems to support the hypothesis that each independent variable in the model has its own particular informative value in the ability to explain financial performance of commercial banks in Kenya.

The correlation matrix shows that asset value is strongly and positively related to Return on assets as indicated by a strong and positive correlation coefficient of 0.723, The study further indicates that liquidity is also strongly and positively related to Return on assets as indicated by a strong and positive correlation coefficient of 0.688, further the study further indicates that administrative costs are also strongly and positively related to Return on assets as indicated by a strong and positive correlation coefficient of 0.66031. This means that internal variables considered in the study Asset value, Liquidity, Administrative costs and Loan portfolio quality are very crucial in affecting Profitability of commercial banks in Kenya.

## **CHAPTER FIVE: SUMMARY, CONCLUSION AND RECOMMENDATIONS**

### **5.1 Introduction**

This chapter provides a summary of the study, discussions and conclusions. The researcher then presents the major limitations of the study and the recommendations for both the research and for the policy and practice.

### **5.2 Summary of Findings**

This research sought to evaluate the internal variables that affect profitability of commercial banks in Kenya. A descriptive research design was adopted where all banks commercial banks which were registered by between the period 2009-2013 formed the population. This population was given importance due to easy accessibility of information. This research relied on secondary data which was collected from the commercial banks financial statements and annual reports from their websites and the CBK database.

Four major internal variables that affect profitability of commercial banks were considered. They comprised of: Asset value, Liquidity, Administrative costs and Loan portfolio quality. The research findings further established that 48% of the commercial banks under study had diversified their main source of income whereas the remaining 52% of them still relied on interest income as their main source of income. Income diversification leads to increased profitability due to a spread of the revenue base. According to Choi and Kotrozo (2006), activity diversification provides

economies of scale and scope. Majority of the banks had weak risk management strategies in place hence the high levels of non-performing loans of between Kshs. 20,438,000 - 6,210,187,000. The higher the level of non-performing loans the greater the risk exposure of the bank hence need for risk mitigation strategies. Bourke (1989) reports an opposite result.

Majority of the banks had better liquidity levels of between Kshs. 4,383,000-12,875,666,029. Banks which had more liquid assets were considered to have embraced better liquidity management practices. It is argued that when banks hold high liquidity, they do so at the opportunity cost of some investment, which could generate high returns (Kamau, 2009).

A notable increase in operational expenses was registered for a majority of the banks under study. However some of the banks registered a decline in operational expenses over the study period. Banks which registered a decline in operational expenses were found to perform better financially than their counterparts who registered high operational expenses. This was attributable to the fact that a reduction in operational expenses is an indication of increased management efficiency. These research findings are similar to Naceur (2003) who found a positive and significant impact of overheads costs to profitability indicating that such cost are passed on to depositors and lenders in terms of lower deposits rates or higher lending rates.

The research findings further revealed that the customer deposit base for a majority of the banks under study kept increasing from one financial year to another during the

period under study. Lows of Ksh. 4,254,000 and highs of Ksh. 108,937,433 were registered. High customer deposit base is a recipe for bank profitability. Elsewhere, Ochung (1999) indicated a significant correlation between deposit portfolio and profitability of the firms. A notable fluctuation in earning performance was noticed over the eight year period for a majority of the banks. ROAs of between 1.2- 5.3 were registered. The high ROAs revealed the investment of banks in assets gave high returns hence high profits realized.

The inferential statistics revealed that there was a very strong positive relationship ( $R= 0.852$ ) between the variables. The study also revealed that 93% of commercial banks profitability could be explained by the factors under study. From this study it was evident that at 95% confidence level, the variables produce statistically significant values and can be relied on explain profitability of commercial banks in Kenya.

### **5.3 Conclusion**

The findings present the descriptive statistics of the variables used in the analysis: Asset value, Liquidity, Administrative costs and Loan portfolio quality and Profitability measure (ROA). The findings show that bank internal variables considered are significantly associated with financial performance as indicated by the positive mean values and their respective standard deviations. From skewness, the study observed that all the variables are positively skewed which clarified that the variables are asymmetrical. Skewness value of all the variables is very near to zero so it is relatively symmetrical. Kurtosis values indicated that all variables have platy-

kurtic distribution and it is concluded that variables are not normally distributed. For this analysis Pearson correlation was used to determine the degree of association within the independent variables and also between independent variables and the dependent variable. The analysis of these correlations seems to support the hypothesis that each independent variable in the model has its own particular informative value in the ability to explain financial performance of commercial banks in Kenya

The correlation matrix shows that asset value is strongly and positively related to Return on assets as indicated by a strong and positive correlation coefficient of 0.723, The study further indicates that liquidity is also strongly and positively related to Return on assets as indicated by a strong and positive correlation coefficient of 0.688, further the study further indicates that administrative costs are strongly and positively related to Return on assets as indicated by a strong and positive correlation coefficient of 0.66031. This means that bank specific factors variables considered in the study Asset value, Liquidity, Administrative costs and Loan portfolio quality are very crucial in affecting profitability of commercial banks in Kenya.

According to the regression equation established, taking all factors into account (Asset value, Liquidity, administrative costs and Loan portfolio quality, profitability measured by ROA was 10.122. The Standardized Beta Coefficients give a measure of the contribution of each variable to the model. A large value indicates that a unit change in this predictor variable has a large effect on the criterion variable.

The t and Sig (p) values give a rough indication of the impact of each predictor variable - a big absolute t value and small p value suggests that a predictor variable is having a large impact on the criterion variable.

The value of the F statistic indicated that the overall regression model was significant hence it has some explanatory value i.e. there is a significant relationship between the predictor variables Asset value, Liquidity, Administrative costs and Loan portfolio quality and profitability of commercial banks in Kenya. Further the study carried out the hypothesis testing between internal variables and profitability of commercial banks in Kenya. A Pearson coefficient showed a strong, significant, positive relationship between predictor variables and profitability of commercial banks in Kenya.

Therefore basing on these findings the study rejects the null hypothesis that there is no relationship between predictor variables (Asset value, Liquidity, Administrative costs and Asset Quality and profitability of commercial banks in Kenya and accepts the alternative hypothesis that there exists a relationship between predictor variables (Asset value, Liquidity, Administrative costs, Loan portfolio quality and profitability of commercial banks in Kenya.

## **5.4 Recommendations**

Overall empirical findings provide evidence that profitability of Kenyan commercial banks is influenced by internal variables i.e. those that have a direct relationship with bank management for instance Loan portfolio quality, Asset value, Liquidity and administrative costs. The study therefore recommends that these factors should be taken in to account by the management to avoid financial distress that may result due to poor management of the same.

The study further recommends that central bank should put in place measures that oversee the performance of the said factors to enable commercial banks management carefully and responsibly manage the factors in accordance with the laid down requirement. This will boost the performance of these internal variables.

These findings call for a number of policy interventions in Kenya; given the low poor performance in terms of profitability. Low profitability levels reflected lack of competitiveness and inefficiency within the banking sector. Policies would probably need to direct at improving risk management and technology, strengthening supportive information and bank supervision, developing inter-bank, securities and equity markets and at maintaining macroeconomic stability. At the bank level, the improvement of the profitability of Kenyan commercial banks need to be conducted by reinforcement of the capitalization of banks through national regulation programs, by reducing the proportion of non-interest bearing assets to the benefit of bank loans.



The government and other concerned financial management institutions need to take into account the main fabrics and other policy repercussions towards commercial bank profitability that have gained considerable importance in Kenyan financial sector. This could probably be achieved through undertaking comprehensive and rigorous stress testing to avoid risks associated with market failures in the sector.

Supervisory and related services should be geared towards optimum utilization of resources, prudent risk management, sound competitive environment and excellence in service. For commercial banks in Kenya, there is need to be more risk vigilant related to changing macroeconomic factors in liberalized regimes across the country. Further, it would also be important to look into long term effects of inflation on the overall bank performance and need to expect asymmetric effect of such uncertainties on bank's profitability.

### **5.5. Limitations of the Study**

Since the research was to rely mostly on secondary data, obtained online, from published end of year accounts of financial statements, the researchers encountered many challenges particularly during the process of data collection. Most of the financial statements were obtained online from the various reliable search engines such as Google and Yahoo. The search for the information was a bit time consuming due to slow network on the search sites such as google.co.ke. The information posted by some banks was insufficient enough to facilitate the research. It even required the researchers to calculate some of the data. This is because some banks never disclosed

the actual figures on some items like non-performing loans as they feared that the information might be used by competitors to their disadvantage.

The study findings were also limited to the research approach used. If another research design would have been adopted the findings would have been different. The variable used in this study are not exhaustive as there factors that may influence the profitability of commercial banks. Such other factors may include monetary policies, tax structure among others.

### **5.6 Suggestions for Further Research**

Arising from this study, the following directions for further research in finance are as follows: First, this study focused on commercial banks and therefore generalizations cannot adequately extend to other non-bank organizations. Future research should therefore focus on all organizations both in the public and private sector.

There is need for further studies to carry out similar study for a longer time period. A similar study should also be carried out on the relationship between financial performance of commercial banks incorporating more financial and accounting variables and also taking into account the prevailing macroeconomic situation in the country as opposed to the current study which took into consideration only four variables.

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## **APPENDIX I: LIST OF COMMERCIAL BANKS IN KENYA**

AS ON 31<sup>st</sup>DECEMBER 2013

- |                                   |   |
|-----------------------------------|---|
| 1. Kenya Commercial Bank Ltd      | 23. Consolidated Bank of Kenya Ltd          |
| 2. Barclays Bank of Kenya Ltd     | 24. Equatorial Commercial Bank Ltd          |
| 3. Co-operative Bank of Kenya Ltd | 25. African Banking Corporation Ltd         |
| 4. Standard Chartered Bank Ltd    | 26. Giro Commercial Bank Ltd                |
| 5. Equity Bank Ltd                | 27. Gulf African Bank Ltd                   |
| 6. CFC Stanbic Bank Ltd           | 28. Fidelity Commercial Bank Ltd            |
| 7. Commercial Bank of Africa Ltd  | 29. Habib AG Zurich                         |
| 8. I & M Bank Ltd                 | 30. Guardian Bank Ltd                       |
| 9. Citibank N.A.                  | 31. K-Rep Bank Ltd                          |
| 10. National Bank of Kenya Ltd    | 32. First Community Bank Ltd                |
| 11. Diamond Trust Bank Ltd        | 33. Victoria Commercial Bank Ltd            |
| 12. NIC Bank Ltd                  | 34. Habib Bank Ltd                          |
| 13. Prime Bank Ltd                | 35. Trans-National Bank Ltd                 |
| 14. Bank of Baroda Ltd            | 36. Oriental Commercial Bank Ltd            |
| 15. Ecobank Ltd                   | 37. Credit Bank Ltd                         |
| 16. Bank of Africa Ltd            | 38. Paramount-Universal Bank Ltd            |
| 17. Chase Bank Ltd                | 39. Middle East Bank Ltd                    |
| 18. Family Bank Ltd               | 40. UBA Kenya Bank Ltd                      |
| 19. Bank of India                 | 41. Dubai Bank Ltd                          |
| 20. Imperial Bank Ltd             | 42. Jamii Bora Bank Ltd                     |
| 21. Fina Bank Ltd                 | 43. Housing Finance Company of Kenya<br>Ltd |
| 22. Development Bank of Kenya Ltd |   |

**(Source: Central Bank of Kenya 2013)**

## Appendix II: Secondary Data Collection Sheet

Name of Bank.....

Items	2009 –Kes	2010–Kes	2011–Kes	2012–Kes	2013–Kes
Profit before taxation					
Loans					
Liquidity					
Administration costs					
Total Assets					