

**THE EFFECT OF NON PERFORMING LOANS ON
PROFITABILITY OF COMMERCIAL BANKS IN KENYA**

**BY
SIMION KIRUI
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DECLARATION

STUDENT'S DECLARATION

I declare that this research project is my original work and has not been submitted for a degree in any other university or college for examination/academic purposes.

SignedDate.....

SIMION KIRUI

REG. NO: D61/62701/2013

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

SignedDate.....

MR. HERICK ONDIGO

LECTURER, DEPARTMENT OF FINANCE AND ACCOUNTING

SCHOOL OF BUSINESS, UNIVERSITY OF NAIROBI

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DEDICATION

This work is dedicated to my entire family, especially to my Mother Mrs. Esther Towet , my Father Mr. Henry Kipkemoi Towet whom both have always encouraged me to pursue hard work and Higher Education. To my children Ann, Joshua, Debra and Boni whom I always encouraged to work hard and pursue higher education.

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LIST OF ABBREVIATIONS

CAMEL:	Capital Adequacy, Asset Quality, Management efficiency, Liquidity
CBK:	Central Bank of Kenya
CL:	Consumer Loans
GLLP:	General Loan Loss Provision
LLR:	Loan Loss Reserve
NIM:	Net Interest Margin
NPA:	Non-Performing Asset
NPL:	Non-Performing Loans
PM:	Profit Margin
ROA:	Return on Assets
ROE:	Return on Equity
SPSS:	Statistical packages for social sciences
TLP:	Total Loan Portfolio

ABSTRACT

Kenya commercial Banks have remained with persistent challenge of managing non performing loans that are considered to have effects on its profitability. The government together with the banking sector has established various ways of reducing non performing loans. Measures introduced include licensing of Credit reference Bureaus. This study seeks to find out the effects of nonperforming loans on profitability of commercial banks in Kenya. The study used commercial banks registered and operational in Kenya as at CBK (2013). Profitability measured by return on assets is used as dependent variable and non performing loans measured by non performing loans ratio is used as independent variable. To improve the accuracy and reliability of the tests Capital adequacy, Operational efficiency and Liquidity are used as control variables. The control variables used are part of CAMEL factors that also affect profitability of commercial banks. At the end of the study the effect of nonperforming loans measured by non performing loans over total loans on profitability measured by return on assets (ROA) was determined. The effects of control variables on the relationship between non performing loans and return on assets were also determined in the study. The research covered all commercial banks in Kenya for the last ten years that is 2004-2013. The study used secondary data to analyze and draw conclusions and recommendations. Multi-linear regression model similar to one used by Kaaya and Pastory (2013) to analyze the effect of credit risk on banks' performance in Tanzania by controlling the effect of deposits and bank size was used. The study indicates that there is negative effect of nonperforming loans ratio on return on assets, confirming that non performing loans negatively affects profitability of commercial banks in Kenya. The study is in agreement with Kaaya and Pastory (2013) in the fact that other factors other than non performing loans affect profitability of commercial Banks. Managers of Commercial banks in Kenya have to work hard to enhance profitability of commercial banks and reduce occurrences of nonperforming loans. This includes taking measures to mitigate against moral hazard and adverse selections in advancing loans, example, use of credit reference bureaus. Central bank of Kenya should enhance supervision of commercial banks and consider analysis of relationship between ratios of nonperforming loans and profitability to enhance understandability and avoid concentrating on quantum figures alone. Central bank and shareholders should also take action to caution against possible use of provisions for losses on non performing loans for smoothing earnings by the managers. This paper therefore provides an insight to commercial banks, central bank and other stake holders on the effect of nonperforming loans on profitability of commercial banks in Kenya and provides a basis for further research.

Key words: Non-Performing Loans, profitability, Kenya, Commercial banks.

CHAPTER ONE: INTRODUCTION

1.1 Background of the Study

Kenya's banking sector involves 43 registered and licensed commercial banks providing banking and financial services to customers (CBK, 2013). The commercial Banks had assets worth 2.7 trillion as at December 2013 (CBK, 2013). Commercial banks in Kenya play an important role in mobilizing financial resources for investment by extending credit to various businesses and investors. Like any other business, success of banking is assessed based on profit and quality of asset it possesses. Lending represents the heart of the banking industry and loans are the dominant assets as they generate the largest share of operating income. Loans however expose the banks to the greatest level of risk. Prudent credit risk assessment and creation of adequate provisions for bad and doubtful debts can cushion the banks risk. However, when the level of non-performing loans (NPLs) is very high, the provisions are not adequate protection.

Kenya has experienced banking problems in the past, with report of major bank failures (37 failed banks as at 1998) following the crises of; 1986 - 1989, 1993/1994 and 1998 (Kithinji and Waweru, 2007; Ngugi, 2006). Nonperforming loans has been attributed as one of the causes of bank failures in Kenya and government and Banking sector has taken some measures to reduce non performing loans. Among the measures that have been put in place is introduction of credit reference bureaus. (CBK 2013), reported that the ratio of non-performing loans to gross loans increased from 4.7 percent in December 2012 to 5.2 percent in December 2013, and the pre-tax profit for the sector increased by 16.6 percent from Ksh. 107.9 billion in December 2012 to Ksh. 125.8 billion in December 2013. While some few past previous studies have confirmed effects of nonperforming Loans on profitability, some studies have failed to confirm existence of effects of nonperforming loans on profitability. This paper therefore, investigates on the effect of non- performing loans on profitability of commercial banks in Kenya.

1.1.1. Non Performing Loans

Non Performing Loans (NPLs) are also called Non Performing Assets (NPAs). A Non-performing Loan/ Asset is a credit facility in respect of which the interest and or principal amount has remained past due for a specific period of time. A loan is an asset for a bank as the interest payments and the repayment of the principal create a stream of cash flows. It is from the interest payments that a bank makes its profits. Banks usually treat assets as non-performing if they are not serviced for some time. If payments are late for a short time, a loan is classified as past due and once a payment becomes really late (usually 90 days), the loan is classified as non-performing. A high level of non-performing assets, compared to similar lenders, may be a sign of problems.

Stuti & Bansal (2013), stated that the best indicator for the health of the banking industry in a country is its level of Nonperforming assets (NPAs). Nonperforming loans reflects the performance of banks. Decline in the ratio of Nonperforming loans indicates improvement in the asset quality of public sector banks and private sector banks. Increase in the ratio of nonperforming loans to total loans on the other hand should worry commercial banks. The decline in gross NPAs to gross advances indicates the improvement in the credit portfolios of both the sector banks. Gross NPAs to total assets has direct bearing on return on assets as well as liquidity-risk management of the bank. Non-performing Assets are threatening the stability and demolishing bank's profitability through a loss of interest income, write-off of the principal loan amount itself.

Non- performing loans are also commonly described as loans in arrears for at least ninety days (Guy, 2011). Quality of assets in lending technologies is normally measured by the quantum of non-performing loans and has been found a direct and interlinked relationship between both (Guy 2011). Michael et al. (2006) emphasized that NPL in loan portfolio affect operational efficiency which in turn affects profitability, liquidity and solvency position of banks. Batra (2003) noted that in addition to the influence on profitability, liquidity and competitive functioning, NPL also affect the psychology of bankers in respect of their disposition of funds towards credit delivery and credit expansion. According to Kroszner (2002),

non-performing loans are closely associated with banking crises. NPL generate a vicious effect on banking survival and growth, and if not managed properly leads to banking failures. When banks' amounts of disposal of non-performing loans exceed their profits, it will reduce banks' net worth and lower their risk-taking capacity, making it difficult to invest funds in risky projects and to realize potentially productive businesses. White (2002) links the Japanese financial crisis to non - performing loans. According to White (2002), Japanese banks still suffer under the weight of thousands of billions of yen of bad loans resulting from the collapse in asset prices a decade ago in the country's financial system.

According to Bloem and Gorter (2001) non-performing loans are mainly caused by an inevitable number of wrong economic decisions by individuals and plain bad luck (inclement weather and unexpected price changes for certain products). Under such circumstances, the holders of loans can make an allowance for a normal share of nonperformance in the form of bad loan provisions, or they may spread the risk by taking out insurance. Nishimura et al (2001) state that one of the underlying causes of Japan's prolonged economic stagnation is the non - performing or bad loan problem. Non-performing loans can be treated as undesirable outputs or costs to a loaning bank, which decrease the bank's performance (Chang, 1999). The problem of non-performing loans can put serious adverse effects on the economy; the government has implemented various policy measures for management of non-performing loans and securing confidence in the financial system. This includes licensing of credit reference Bureaus.

Two common measurements for Non Performing Loans/Assets are; Non performing Loans ratio and Non performing Loans coverage ratio. Non performing coverage ratio refers to the ratio of allowance for probable losses on non-performing loans to total nonperforming Loans and its computed as follows; Provisions for Losses on non performing Loans over non performing Loans. NPL ratio refers to the ratio of non-performing loans (NPL) to total loans (gross of allowance for probable losses). It is measured as non performing loans over total loans and advances. In this study non performing loans ratio measured by non performing loans over total loans and advances has been used.

1.1.2 Profitability

Profitability of the banking sector is a subject that has received a lot of attention in recent years and there is now a large literature which has examined the role played by management of resources in determining bank profitability. Indicators used to measure profitability are many and includes Return on Assets, Return on Equity and Net Interest Margin. There are however divergent views among scholars on the superiority of one indicator over the others as a good measure of profitability. For instance, Goudreau and Whitehead (1989) and Uchendu (1995) believed that the three indicators are all good namely ROA, ROE and NIM . Hancock (1989) used only ROE to measure profitability in her study. Odufulu (1994) used only the gross profit margin in measuring profitability. Ogunleye (1995) did not believe that profit level perse could constitute a good Measure of profitability and therefore used ROA and ROE Uchendu (1995) believed that the three indicators are all good namely ROA, ROE and NIM .

Ahmed (2003) identified the three indicators, namely: Net Interest Margin (NIM), Return on Assets (ROA) and Return on Equity (ROE) to be widely employed in the literature to measure profitability. Profitability connotes a situation where the income generated during a given period exceeds the expenses incurred over the same length of time for the sole purpose of generating income (Sanni, 2006). The fundamental requirements here are that the income and the expenses must occur during the same period of time using the Matching Concept and the income must be a direct consequence of the expenses. The period of time may be one week, three months, one year etc (Sabo, 2007). It is not immaterial whether or not the income has been received in cash nor is it compulsory that the expenses must have been paid in cash. For a profit-oriented organization, profit is the soul of business.

A company remains in operation because it expects to make profits. Once that expectation is confirmed unattainable, the most rational decision is to close shop or exit the business. According to Akinola (2008) Profitability measures, include Profit Before Tax (PBT), Profit After Tax (PAT), ROE, Rate of Return on Capital (ROC) and ROA. Sanni (2009) used Earnings Per Share (EPS). In this study, Return on Assets (ROA) considered as a good and most widely used as a measure of profitability has been used. Return on Assets has been measured as; $\text{Return on Assets (ROA)} = \frac{\text{Net Earnings}}{\text{Total Assets}}$.

1.1.3 The Effect of Non Performing Loans on Profitability

Performance in terms of profitability is a benchmark for any business enterprise including commercial banks. However, increasing Non Performing Loans have a direct impact on profitability of banks by diluting returns on assets. Non-performing assets therefore have negative effect on return on Assets (ROA), a measurement of profitability. Non-performing loans erode banks' profitability in that banks could incur heavy disposal expenses. Non-performing Loans Assets have opportunity costs, in that the non interest earning assets (mainly in form of money) could have been invested elsewhere and provide earns. Beside this, Banks are also required to make provisions for losses on non performing assets which in turn affect profitability and there is cost associated to attempts to recover bad loans. Managers however, can use provisions for losses on non performing loans for their own objectives which could include, use for profits smoothening as supported by asymmetry of information theory and agency theory.

Berger et al. (1997) in study of Problem Loans and Cost Efficiency in Commercial Banks linked Problem Loans with Cost efficiency, which in turn affects profitability. Non- performing loans can be treated as undesirable outputs or costs to a loaning bank, which decrease the bank's performance (Chang, 1999). According to Kroszner (2002), non-performing loans are closely associated with banking crises. Batra (2003) noted that in addition to the influence on profitability, liquidity and competitive functioning, NPL also affect the psychology of bankers in respect of their disposition of funds towards credit delivery and credit expansion.

Focus on Nonperforming loans leads to the credit risk management assuming priority over other aspects of bank's functioning Batra (2003). The bank's whole machinery would thus be pre-occupied with recovery procedures rather than concentrating on expanding business. Thus NPL impact the performance and profitability of banks. The most notable impact of NPL is change in banker's sentiments which may hinder credit expansion to productive purpose. Banks may incline towards more risk-free investments to avoid and reduce riskiness, which is not conducive for the growth of economy. Michael et al. (2006), emphasized that NPA in loan portfolio affect operational efficiency which in turn affects profitability, liquidity and solvency position of banks.

1.1.4 Commercial Banks in Kenya

Kenya's banking sector involves 43 registered and licensed commercial banks providing banking and financial services to customers (CBK, 2013). The commercial Banks have asset worth 2.7 trillion as at December 2013 (CBK, 2013) and offers financial services to many industries, institutions and individuals in Kenya. Profit is the ultimate goal of commercial banks. All the strategies designed and activities performed thereof are meant to realize this grand objective. They have however remained with persistent challenge of reducing non performing loans that have effects on profitability. Nonperforming Loans have continued to rise.

The success of commercial banks is assessed based on profitability and quality of assets it possesses therefore. Non-performing loans of Commercial banks affects quality of assets which in turn affect profitability. To reduce growth of nonperforming loans, private credit reference bureaus have been licensed and operationalised in Kenya, but has not lead to reductions in non-performing Loans as expected. CBK (2013), The ratio of non-performing loans to gross loans increased from 4.7 percent in December 2012 to 5.2 percent in December 2013. In the same period the pre-tax profit for the sector increased by 16.6 percent from Ksh. 107.9 billion in December 2012 to Ksh. 125.8 billion (CBK 2013). The report is likely to confuse stake holders as to thinking there are positive correlations between non performing loans and profitability.

Loans are the dominant assets of commercial banks as they generate the largest share of operating income, however it expose commercial banks to the risks of default from borrowers resulting in nonperforming Loans which in turn affects profitability. Commercial Banks makes Provisions for Losses on non-performing loans and write off bad debts arising from non performing Loans, thus reducing profit reserves. Nonperforming Loans of commercial banks have opportunity costs, in that the non-interest earning Loans (money) could have been invested elsewhere, to earn returns and increase profitability. There are also costs associated to attempts to recover non performing loans and the costs affects profitability of commercial banks.

1.2 Research Problem

Non Performing Loans have a direct impact on profitability of commercial banks by diluting Returns on Assets (ROA), a measurement of profitability. Non-performing Loans Assets have opportunity costs, in that the non-interest earning assets could have been invested elsewhere and provide earnings. Managers also may use provisions for losses on non performing loans for their own objectives which could include profits smoothing. There are other factors that affect profitability of commercial banks which includes but not limited to CAMEL factors.

Kenya commercial Banks have remain with persistent challenge of reducing non performing loans that is considered to have effects on profitability of Commercial Banks. Despite actions that have been taken to reduce non performing loans that include licensing of Credit reference Bureaus, non performing loans have continued to grow and commercial banks have recently reported both increase in nonperforming loans and profits of the banks in the same periods. Non-performing loans (NPLs) has maintained an increasing trend in commercial banks in Kenya. CBK (2013), reported that the ratio of non-performing loans to gross loans increased from 4.7 percent in December 2012 to 5.2 percent in December 2013, the pre-tax profit for the sector increased by 16.6 percent from Ksh. 107.9 billion in December 2012 to Ksh. 125.8 billion in December 2013.

Berger et al., (1997) study Problem Loans and Cost Efficiency in Commercial Banks, the study linked Problem Loans with Cost efficiency, which in turn affects profitability. Batra (2003) noted that in addition to the influence on profitability, liquidity and competitive functioning. Michael et al., (2006) emphasized that NPA in loan portfolio affect operational efficiency which in turn affects profitability, liquidity and solvency position of banks. Kithinji (2011), study Credit risk management and profitability of commercial banks in Kenya, and found out that there is no relationship between profits, amount of credit and the level of nonperforming loans. Macharia (2012) study the relationship between the level of nonperforming Loans and the financial performance of commercial banks in Kenya. The study found that the bulk of the profits of commercial banks is not influenced by the amount of credit and nonperforming loans suggesting that other variables other than credit and nonperforming loans impact on profits. Kithinji (2011) ,and Macharia (2012), did not consider other CAMEL factors affecting profitability of

commercial banks as control variables and did not use non-performing loans coverage ratio as a measure of non-performing loans and used only non-performing loans ratio as a measure of non-performing loans in their studies.

This study intends to fill the research gap by taking into account other factors affecting profitability of commercial banks as control variables in the regression analysis. The duration of year 2004 to 2013 was considered appropriate to give the latest period of the study in Kenya. The study therefore seeks to answer the question; Does non-performing Loans have effects on profitability of commercial banks in Kenya?

1.3 Research Objective

To determine the effect of non-performing loans on profitability of commercial banks in Kenya.

1.4 Value of the Study

The finding of the study is of interest to Commercial Banks managers as they will get to know effects of non-performing loans on profitability and encourage them take necessary measures to control occurrences of non-performing loans. The Central Bank of Kenya could employ the findings of this research in the establishment of guidelines that help in management of non-performing loans in the commercial banks in Kenya, while protecting the interest of the public.

The study will also enable Financial Consultants to understand the sensitivity of return on assets to non-performing loans ratio and non-performing loans coverage ratio and thereon make financial advice to the commercial banks and other stakeholders. The findings from this study will also assist in providing more literature to support existing theoretical propositions on the effects of non-performing loans on profitability of commercial banks in Kenya and provide a basis for further studies.

CHAPTER TWO: LITERATURE REVIEW

2.1 Introduction

This chapter contains the review of various studies that are relevant to non Performing Loans and profitability of Banks.

2.2 Theoretical Review

This presents review of the relevant theories that explains the effects of nonperforming loans on profitability of commercial banks in Kenya. The theoretical reviews covered are; Asymmetric Information Theory, Agency Theory and Modern Portfolio Theory

2.2.1 Asymmetric Information Theory

This is a theory relevant for situations where there is imperfect knowledge. In particular it occurs where one party has different information to another. Asymmetric information is a problem in financial markets such as borrowing and lending. In these markets the borrower has much better information about his financial state than the lender. Akerlof (1970) first presented this theory in the easy; "The Market for Lemons". It is the single most important study in the literature on economics of information. Mirrlees (1996) study Asymmetry of information related to access to information among participants in the process of making economic decisions.

Pagaon and Jappelli (1993) show that information sharing reduces adverse selection by improving banks information on credit applicants. Auronen (2003) The theory of asymmetric information tells us that it may be difficult to distinguish good from bad borrowers, which may result into adverse selection and moral hazards problems. The theory explains that in the market, the party that possesses more information on a specific item to be transacted (in this case the borrower) is in a position to negotiate optimal terms for the transaction than the other party (in this case, the lender) (Auronen, 2003). The party that knows less about the same specific item to be transacted is therefore in a position of making either right or wrong deci-

sion concerning the transaction. Adverse selection and moral hazards have led to significant accumulation of non-performing loans in banks (Bofondi and Gobbi, 2003). Commercial bank managers may know more about effects of nonperforming loans on profitability of commercial banks than other stakeholders. In this case, they could fail to disclose nonperforming loans and/ or use provisions for losses on non performing loans for profit smoothening.

2.2.2 Agency Theory

The first scholars to propose, explicitly, that a theory of agency be created, and to actually begin its creation, were Ross (1973) and Mitnick (1973), independently and roughly concurrently. Ross (1973) is responsible for the origin of the economic theory of agency, and Mitnick (1973) for the institutional theory of agency, though the basic concepts underlying these approaches are similar. Indeed, the approaches can be seen as complementary in their uses of similar concepts under different assumptions.

The agency theory is gaining a lot of popularity in explaining the financial performance of organizations. The theory seeks to explain the relationship that exists between the management of an organization and the owners of the organization who are usually the people holding stocks for the organization. The theory posits that there is an agency conflict. The management of an organization is usually considered as an agent who has been contracted by the stockholders to work towards enhancing the stockholder value through good financial performance. The management is therefore expected to act in the best interests of the owners and enhance the financial performance of the organization.

However, the theory suggests that the managers who are agents may be involved in activities that are aimed at serving personal interest at the expense of the owners of the organization. The theory suggests that when this happens, the financial performance of the organization may easily suffer. Stockholders therefore can employ a number of strategies to ensure the management acts in the interest on the organization. The theory suggests that management can be rewarded financially in order to motivate them to work for the interests of the company. The owners can also issue threats such as hostile takeover to force management to perform the required duties.

2.2.3 Modern Portfolio Theory

Markowitz (1952) Modern portfolio theory (MPT) is one of the most important and powerful economic theories dealing with finance and investment. Modern portfolio theory measures the benefits of diversification, known as “not putting all your eggs in one basket”. Modern portfolio theory (MPT) is an investment theory which tries to explain how investors could maximize their returns and minimize their risks by diversification in different assets. Tobin (1958) expanded the theory of Markowitz’s (portfolio theory) by adding the analysis of risk-free assets which made it possible to influence portfolios on the efficient frontier. Markowitz (1952) and Tobin (1958) showed that it was possible to identify the composition of an optimal portfolio of risky securities, given forecasts of future returns and an appropriate covariance matrix of share returns.

The portfolio theory approach is the most relevant and plays an important role in bank performance studies (Atemnkeng & Nzongang, 2006). According to the Portfolio balance model of asset diversification, the optimum holding of each asset in a wealth holder’s portfolio is a function of policy decisions determined by a number of factors such as the vector of rates of return on all assets held in the portfolio, a vector of risks associated with the ownership of each financial assets and the size of the portfolio. It implies portfolio diversification and the desired portfolio composition of commercial banks are results of decisions taken by the bank management. Further, the ability to obtain maximum profits depends on the feasible set of assets and liabilities determined by the management and the unit costs incurred by the bank for producing each component of assets, Atemnkeng & Nzongang, (2006. Commercial Banks should consider diversifying investments portfolio to minimize risk of credit takers defaulting in loans repayments and causing non-performing loans portfolios that affects profitability. The concept of revenue diversifications follows the concept of portfolio theory which states that individuals can reduce firm-specific risk by diversifying their portfolios. The proponents of activity diversification or product mix argue that diversification provides a stable and less volatile income, economies of scope and scale, and the ability to leverage managerial efficiency across products and for the case of commercial banks, reduce non performing Loans and increase Return on Assets which is a measure of profitability.

2.3 Determinants of Profitability of Commercial Banks

There are two categories of determinants of profitability of commercial banks, these are; internal and external drivers or factors of Profitability. Internal drivers of bank performance or profitability can be defined as factors that are influenced by a bank's management decisions. Such management effects will definitely affect the operating results of banks. Internal factors includes; Capital Adequacy, Liquidity Risk, Credit Risk and Efficiency of Management

External determinants of bank profitability are factors that are beyond the control of a bank's management. They represent events outside the influence of the bank. However, the management can anticipate changes in the external environment and try to position the institution to take advantage of anticipated developments. The two major components of the external determinants are macroeconomic factors and financial structure factors (Krasah and Ameyaw, 2010). Elyor (2009) and Uzhegova (2010) have used CAMEL to examine factors affecting bank profitability with success. CAMEL stands for Capital adequacy, Asset quality, Management efficiency, Earnings performance and Liquidity. The system was developed by the US Federal Deposit Insurance Corporation (FDIC) for "early identification of problems in banks" operations" (Uzhegova, 2010). Though some alternative bank performance evaluation models have been proposed, the CAMEL framework is the most widely used model and it is recommended by Basle Committee on Bank Supervision and IMF (Baral, 2005). The following are key determinants of profitability of commercial banks;

2.3.1 Capital Adequacy

Capital adequacy refers to the sufficiency of the amount of equity to absorb any shocks that the bank may experience (Kosmidou, 2008). The Capital requirement of banks is highly regulated by governments. This is because capital adequacy plays a crucial role in reducing the number of bank failures and losses to depositors when a bank fails as highly leveraged firms are likely to take excessive risk in order to maximize shareholder value at the expense of finance providers (Kamau, 2009). Capital adequacy refers to amount of capital a bank or other financial institution has to hold as required by its financial regulator. This is expressed as a capital adequacy ratio of equity that must be held as a percentage of risk-weighted assets.

The ratio of Equity to total Asset is employed as a measure for bank Capital Adequacy. This measures the percentage of the total asset that is financed with equity capital. Capital adequacy therefore describes the sufficiency of the amount of equity that can absorb shocks that banks may experience. It is expected that the higher the Equity to Asset ratio, the lower the need for external funding and therefore the higher the profitability of the commercial bank. Bank with higher capital to asset ratio are considered relatively safer and tend to have a better margin of cushion, remaining profitable even during economically difficult times. Conversely, banks with lower capital adequacy are considered riskier relative to highly capitalized banks. Capital adequacy is therefore considered to have effect on profitability of commercial banks.

2.3.2 Assets Quality

Asset quality is one of the CAMEL factors that determine profitability of commercial banks. The quality of assets held by a bank depends on exposure to specific risks, trends in non-performing loans, and the health and profitability of bank borrowers (Baral, 2005). Aburime (2008) asserts that the profitability of a bank depends on its ability to foresee, avoid and monitor risks, possibly to cover losses brought about by risks arisen. The asset quality measures an ability to manage credit risk of a commercial bank. The asset quality reflects the composition and productivity of the assets. Thus, asset quality has a direct impact on the profitability of a bank. Poor asset quality can be considered as major cause for banks poor profitability. It is evaluated by understanding the performance of assets category wise and estimating future performance factoring in the likely distribution of the assets in future. Commercial banks are negatively affected by raising levels of non-performing loans through provisioning made, interest in suspense and opportunity costs of nonperforming Assets/money. 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. Nonperforming loan ratios are the best proxies for asset quality and affects profitability. The issue of Non-Performing Assets (NPAs) has gained growing attention in the last few decades in view of the established fact that the immediate consequence of bubbling up of NPAs in the banking system is bank failure. Nonperforming assets/loans lowers overall Returns on Assets (ROA)

because loans is part of commercial banks assets. Return on Assets is a measure of profitability of commercial banks. Negative the quality of Loans portfolio is predictor of insolvency and cause of bank failures, failing banking institutions always have high level of non-performing loans prior to failure. The problem of NPAs has also become synonymous to functional efficiency of commercial banks and it's believed to be the major causes of poor financial performance. Asset quality aids improvement in profitability. In order to improve profitability, it is important for commercial banks to manage their asset quality because it's a determinant of profitability.

2.3.3 Liquidity

Liquidity is another factor that determines Return on assets which is a measure of profitability. Commercial banks should have liquid money to advance as loans to customers and in another perspective liquid money should be advanced to earn returns because if they remained in liquid form un-utilized will not earn any returns. Liquidity measures the ability of banks to meet short-term obligation or commitments when they fall due. Traditionally, banks take deposit from customers and give out loans. For this reason, the ratio of bank's advances to customer deposits is used as proxy for liquidity. Liquidity is a prime concern for banks and the shortage of liquidity can trigger bank failure. Banking regulators also view liquidity as a major concern.

According to CBK (2013) in Kenya the statutory minimum liquidity requirement is 20%., however, the average liquidity ratio for the sector was 39.8% in 2012, 38.6 % in 2013, and way above the minimum requirements. Commercial Banks without sufficient liquidity to meet demands of their depositors risk experiencing bankruptcy. Holding assets in a highly liquid form tends to reduce income as liquid asset are associated with lower rates of return. For instance, cash which is the most liquid of all assets is a non-earning asset. It would therefore be expected that higher liquidity would negatively correlates with profitability. 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 bank's return but also increases its liquidity risks and

the inverse is true. Thus a high liquidity ratio indicates a less risky and less profitable bank (Hempel et al, 1994). Liquidity therefore is a determinant of profitability and management is faced with the dilemma of liquidity and profitability.

2.3.4 Operational Cost Efficiency

Poor expenses management is the main contributors to poor profitability (Sufian and Chong 2008). Management too has potential of doing illegal acts such; using provisions for losses on non performing Loans (assets) to smoothen profits. It is worth noting that income smoothing is considered as a violation of the international accounting standards (IAS.39), which determined provisioning solely based on evidence of incurred losses or impairment (IASB, 2005). The primary friction driving the smoothing is information asymmetry as insiders are averse to choosing actions that would unduly raise outsiders' expectations about future income. Evidence of the existence of earnings smoothing through provisions remains fairly strong, at least for industrialized countries Pérez et al. (2008).

Cost efficiency and profit efficiency correspond respectively to two economic objectives of cost minimization and profit maximization. Cost efficiency is the ratio between the minimum cost at which it is possible to attain a given volume of production and the realized cost. The Expense to Income ratio is used as proxy for operating efficiency and it is used to measure the impact of efficiency on bank profitability. A negative correlation is expected between the operating cost and profitability implying that higher operating cost means lower profit and vice-versa. The objective of maximizing profits requires that goods and services be produced at a minimum cost and maximizing of revenues and this is applicable to commercial banks.

2.3.5 Diversification of Income

The concept of revenue diversifications follows the concept of portfolio theory which states that individuals can reduce firm-specific risk by diversifying their portfolios. The proponents of activity diversification or product mix argue that diversification provides a stable and less volatile income, economies of scope and scale, and the ability to leverage managerial efficiency across products (Choi and Kotrozo, 2006). Chiorazzo et al. (2008) noted that as a result of activity diversification, the economies of scale and scope caused through the joint

production of financial activities leads to increase in the efficiency of banking organizations and consequently increase profitability. They further argued that product mix reduces total risks because income from non-interest activities is not correlated or at least perfectly correlated with income from fee based activities and as such diversification should stabilize operating income and give rise to a more stable stream of profits (Uzhegova, 2010).

Albertazzi and Gambacorta (2006) as cited by Uzhegova (2010) noted that the decline in interest margins that results in low profitability, has forced banks to explore alternative sources of revenues, leading to diversification into trading activities, other services and non-traditional financial operations. The opposite argument to activity diversification is that it leads to increased agency costs, increased organizational complexity, and the potential for riskier behavior by bank managers. Choi and Kotrozo (2006) mentioned that activity diversification results in more complex organizations which “makes it more difficult for top management to monitor the behavior of the other divisions/branches. They further argued that the benefits of economies of scale/scope exist only to a point and costs associated with a firm’s increased complexity may overshadow the benefits of diversification. As such, the benefits of diversification and performance would resemble an inverted-U in which there would be an optimal level of diversification beyond which benefits would begin to decline and may ultimately become negative. Olweny & Shiphoh (2011) study effects of banking sectoral factors on the profitability of commercial banks in Kenya and noted that the more banks generate their revenue from different activities, the more profitable they become, thus linking diversification of income with profitability of commercial Banks.

2.3.6 Ownership

The relationship between commercial banks profitability and ownership identity, emanate from Agency Theory. This theory deals with owners and manager’s relationship, which one way or the other refers to ownership and profitability. According to Ongore (2011), the concept of ownership can be defined along two lines of thought: ownership concentration and ownership mix. The concentration refers to proportion of shares held (largest shareholding) in the firm by few shareholders and the later defines the identity of the shareholders. The dominant shareholders can have the power and incentive to closely monitor the performances of

the management leading to better efficiency and better profitability. Close monitoring of the management can reduce agency cost and enhance profitability of commercial banks. On the other hand concentrated ownership can create a problem in relation to overlooking the right of the minority and also affect the innovativeness of the management, negatively affecting profitability.

Agency theoretic viewpoints argue that different ownership structure and different roles people have in organizations are the main reasons for the existence of information asymmetry and the divergence of interest between owners and managers. Claessens and Jansen (2000) as cited by Kamau (2009) argued that foreign banks usually bring with them better know-how and technical capacity, that spill over banking system and increase efficiency and in turn increase profitability. Beck and Fuchs (2004) argued that foreign-owned banks are more profitable than their domestic counterparts in developing countries and less profitable than domestic banks in industrial countries, perhaps due to benefits derived from tax breaks, technological efficiencies and other preferential treatments. Ownership therefore is one of the factors that affect profitability of commercial banks, the level & direction of its effect however remained contentious.

2.3.7 Market Concentration

Market concentration is one important factor that affects profitability. The term concentration emerged from the structure-conduct-performance theory (SCP theory) which postulates that market concentration fosters collusion among firms in the market and earns monopoly profits. On the one hand, concentration may act as a barrier to entry when entering markets where domestic banks are highly concentrated, implying a negative impact on profits. On the other hand, in a market dominated by foreign banks that have been found to be more efficient than domestic banks, such as in less developed countries, concentration may in fact be positively related to foreign banks' profitability

According to Atemnkeng and Nzongang and (2006) high degrees of market share concentration are inextricably associated with high levels of profits at the detriment of efficiency and effectiveness of the financial system to due decreased competition. According to the structure

conduct profitability of banks in highly concentrated markets earn monopoly rents, as they tend to collude (Gilbert, 1984). As collusion may result in higher rates being charged on loans and lower interest rates being paid on deposits, a higher bank concentration have a positive impact on profitability. On the other hand, a higher bank concentration might be the result of a tougher competition in the banking industry, which would suggest a negative relationship between profitability and market concentration as stated in (Boone and Weigand 2000).

Market concentration influenced profitability and growth in the market created more opportunities for the bank, thus generating more profits because banks gain market share and an increase in earnings and an increase in profitability.

2.4 Empirical Review

Several empirical studies have been conducted on non performing Loans and profitability of commercial banks and confirm that adverse changes in economy contribute to non-performing loans and adversely affect the banks' performance.

2.4.1 International Empirical Review

Hou and Dickinson (2007), which examined the non-performing loans on microeconomics, specifically at the bank level to empirically evaluate how non-performing loans (NPLs) affect commercial banks' lending behavior. In particular, it is discussing some consequences of non-performing loans (NPLs) on the economics. They have used empirical methodology for testing the effect of non-performing loans (NPLs) which the data taken from individual bank's balance sheet to assess whether non-performing loans (NPLs) will negatively affect bank's lending behavior.

Kolapo, et al. (2012) also analyzed the influence of credit risk on performance of five banks in Nigeria by taking data from 2000-2010. Credit risk is measured by taking ratio of non-performing loans to loans plus advances, total loans to advances plus deposits and ratio of loan loss provisions while performance is measured by return on assets. Fixed effect model used in the study and according to results of regression analysis, non-performing loans and

loan losses provisions are adversely affecting the performance while total loans to advance plus deposit ratio has positive significant effect on the performance. This is evident from the study that banking industry needs to improve their loan administration processes for maximization of profits.

Mohammed (2012) studied the bank performance in context of corporate governance for which mainly the ratios of non-performing loans and loan deposits have been used. Study was conducted on 9 banks of Nigeria for a period of 10 years from 2001-2010. According to generalized least square regression results, non-performing loans ratio has significant negative effect while loan deposit ratio has insignificant negative effect on performance. So, survival of banks is strongly dependent upon the better asset quality means dependent upon minimizing the non-performing loans ratio.

Azeem & Amara (2013) study Impact of profitability on quantum of non-performing loans in Pakistani Banks. The Data of one business cycle of sixteen Pakistani banks were collected from 2006 to 2012. The sample comprised of sixteen public and private banks with different sizes. Three models were adopted to check the relationship between profitability and non-performing loans. Model one represented return on asset as dependent variable while non-performing loans were taken as independent variable. Model two represented Return on Equity as dependent variable while non-performing loans were taken as independent variable. Model three represented Stock Return as dependent variable while non-performing loans were taken as independent variable.

The results of the study were as follows; Model one using Returns on Assets indicated that profitability and non-performing loans have negative relationship and that One thousand increases in non-performing loans may decrease the profitability up to 0.00527 %. Model two with Return on Equity indicated that profitability and non-performing loans have negative relationship and that One thousand increases in non-performing loans may decrease the profitability up to 0.00371%. Model three revealed that stock returns and non-performing loans have no significant relationship and no room for generalization of results is possible on this finding. The study found that NPLs disturb the profitability of banks and every other

financial institution, which is involved in lending activity and that in State Bank of Pakistan, there are some reasons noted to have intensify this issue which are namely; marks up on mark up, embezzlement in amount, wrong calculation procedures and divergent practices in calculating amount of NPLs. However, data of non- performing loans in Pakistan was only available from six years 2006 to 2012 and a Short panel of sixteen Banks only was used in the study.

Shingjergji (2013) studied the impact of different bank specific factors on non-performing loans of Albanian banks by taking quarterly data from 2002-2012. Dependent variable used in the study is non-performing loans (NPLs) while independent variables include capital adequacy ratio (CAR), loan to asset ratio (LTA), return on equity (ROE), natural log of total loans, and natural log of net interest margin (NIM). Regression results obtained by using ordinary least square revealed negative insignificant relation of CAR with NPLs. Relation of loan to asset ratio has been found negative but total loans level is positively influencing the NPLs means increased loans level will result in increased level of NPLs. On the other hand, NIM and ROE are negatively linked with NPLs depicting that high NPLs deteriorate the performance of banks.

Kaaya and Pastory (2013) analyzed effect of credit risk (measured by ratios of non-performing loan, loan loss to gross loan, loan loss to net loan and impaired loan to gross loan) on banks' performance (measured by return on assets) by controlling the effect of deposits and bank size. A sample of 11 banks in Tanzania has been used for this analysis. According to correlation and regression results, credit risk measures of non-performing loans, loan loss to gross loan, loan loss to net loan have significant negative influence on banks' performance. It is concluded that performance of banks can be increased by effective risk management as it help to reduce non-performing loans and loan losses. Vatansver and Hepsen (2013) investigated the presence of any significant relation (if exists) of non-performing loans with macro-economic indicators, global and bank level factors in Turkey for a period of January 2007 to March 2013. Results obtained from ordinary least square regression helped in categorizing the factors significantly affecting the non-performing loans. Among various macroeconomic, global and bank level factors used in the study, only the variables of industrial production

index, Istanbul stock exchange 100 Index, inefficiency ratio of all banks have significant negative effect while unemployment rate, ROE and capital adequacy ratio have positive significant effect on non-performing loans.

2.4.2 Local Empirical Review

Mausya (2009), study the impact of non-performing loans on the Performance of the banking sector in Kenya, an MBA project submitted to University of Nairobi and in his findings, indicated that commercial banks are negatively affected by raising levels of non-performing loans through provisioning made and interest in suspense. She outlines that majority of such factors include under staffing, under qualified staff among others for years 2004-2008. In the study, a sample of thirteen banks is used to show how these factors affect the performance of these banks where the performance is represented by the profit before tax of the 13 sampled banks. The research used a single regression equation approach to analyze the impact of non-performing loans to financial sector stability. A second test with all the variables was run and finally one with just NPLs interest income and provision as per the study framework Tests of significance was be done to determine whether the effect of nonperforming loans on profitability is significant. From the equation in chapter for the findings indicate that commercial banks will be negatively affected by raising levels of non-performing loans through provisioning made and interest in suspense. From the study, the findings indicate that commercial banks are negatively affected by raising levels of non-performing loans through provisioning made and interest in suspense.

Kithinji (2011), study Credit risk management and profitability of commercial banks in Kenya, paper submitted to Aibuma conference, Nairobi, Kenya. Non-performing loans was measured using nonperforming loans/ total loans, and profits were measured using ROTA (Return on Total assets). The trend of level of credit, nonperforming loans and profits were established during the period 2004 to 2008. A regression model was used to establish the relationship between amount of credit, non-performing loans and profits during the period of study. R2 and t-test at 95% confidence level were estimated. Her findings reveal that the bulk of the profits of commercial banks is not influenced by the amount of credit and nonperforming loans suggesting that other variables other than credit and nonperforming loans impact on

profits. The results indicated that there is no relationship between profits, amount of credit and the level of nonperforming loans. The research did not use other factors affecting profitability of commercial banks as control variables in the study and the study covered only 6 year period.

Macharia (2012) study the relationship between the level of nonperforming Loans and the financial performance of commercial banks in Kenya an MBA project submitted to University of Nairobi. Multi linear analytical model was used to determine the relationship between the NPLs and the financial performance of commercial banks. The relationship between these “bad loans” and the financial performance represented by ROA was regressed. After determining the level of NPLs across the banks and the total outstanding shares, the relationship between these variables was obtained. This involved regressing the NPLs with the ROA of the firm for entire period of the study. NPLs were the independent variable in the regression equation while ROA was the dependent variable. The study regression results indicate that there is no relationship between profits, amount of credit and the level of non-performing loans. The findings reveal that the bulk of the profits of commercial banks is not influenced by the amount of credit and nonperforming loans suggesting that other variables other than credit and nonperforming loans impact on profits. The study however did not consider other factors affecting profitability of commercial banks such as Capital, Liquidity and management efficiency as controlling variables.

Mombo (2013) study the effect of non-performing Loans on financial performance of deposit taking micro finance Institutions in Kenya an MBA project submitted to University of Nairobi. The researcher used simple linear regression model used by Macharia (2012) in establishing the effect of non-performing loans on commercial banks in Kenya. One control variable which was operating expenses of microfinance institutions and it was measured as a percentage of the total revenue by microfinance institutions. The study made use of secondary data that was obtained specifically from the financial stations of the microfinance institutions. The study found out that non performing loan in deposit taking microfinance institutions account for the greatest percentage of the variance in the profitability of the institutions. All

the three independent variables in the study; non performing loans, rate of loan repayment and operational expenses largely affect the profitability of the institutions and that non performing loans and operational expenses have more significant effect than the rate of loan repayment that is achieved by the organization.

Mugwe (2013) study the relationship between firm-specific factors and financial performance of commercial banks in Kenya. The study determine and evaluate the relationship between bank-specific factors; capital adequacy, asset quality, liquidity and management efficiency on the financial performance of Commercial Banks in Kenya. Secondary data of the 43 Kenyan commercial banks from 2008 to 2012 obtained from published Audited Accounts of the Commercial Banks, the Central Bank of Kenya Annual Reports and Oloo (2014). The data was analyzed using Multiple Regressions method. The findings show that bank specific factors considered are significantly associated with financial performance as indicated by the positive mean values and their respective standard deviations. This means that bank specific factors variables considered in the study Capital Adequacy, Liquidity, Management Efficiency and Asset Quality are very crucial in affecting financial performance of commercial banks in Kenya. The study results show that the capital strength of a bank is of paramount importance in affecting its profitability and the asset quality affects the performance of banks adversely.

2.5 Summary of Literature Review

From the studies above, it is evident that there exist theoretical concepts and empirical studies that touches on effects of nonperforming Loans on profitability of Commercial banks in Kenya. Asymmetry of information, agency theory and modern portfolio theory as important theories that need further studies and applications. Empirical reviews have however given different results on whether non-performing loans affects profitability of commercial banks in Kenya. Some Empirical studies confirm that an indeed non performing loan affects profitability of commercial banks in Kenya whereas others failed to confirm.

Studies did earlier have revolved much around how non performing loans have come to exist as well as how to avoid the accumulation of such loans. For the few studies on effects of nonperforming loans and financial performance of Commercial banks, did not consider other factors affecting profitability of commercial banks such as Capital, operational efficiency and Liquidity as controlling variables. Some studies also used as few as sixteen and a small duration of a maximum of six years. Previous studies also gave little attention to asymmetric information theory, agency theory and modern portfolio theory on the studies. For Local studies in Kenya, none of the study used CAMEL factors as control variables in their studies and failed to agree with previous international studies that allude to the fact that on performing loans affects profitability of commercial banks.

This study aimed to contribute to the gap in this field of study on effects of nonperforming loans on profitability of commercial banks in Kenya. The study covered all the licensed 43 commercial banks in Kenya for a wide period of ten years. The study specifically established the effects of non- performing loans on profitability of commercial banks in Kenya. The study also focused on the following financial theories in the course of the study; Asymmetric information theory, agency theory and modern portfolio theory. Bank specific factors affecting profitability mainly; Capital Adequacy, Liquidity and Operational efficiency were used in the study as controlling variables.

CHAPTER THREE: RESEARCH METHODOLOGY

3.1 Introduction

This chapter discusses the methodology the researcher employed in investigating the effect of nonperforming Loans on profitability of commercial banks in Kenya. Among the elements discussed in this section are the target population, techniques used in data collection and as well as the techniques used to analyze the collected data.

3.2 Research Design

The study is of descriptive survey design nature. A descriptive survey is a design that involves establishing what is happening as far as a particular variable is concerned and the design has been used to investigate the effect of non-performing loans on profitability of commercial banks in Kenya. The study covered the period between 2004 and 2013. Profitability measured by Return on Assets (ROA) has been taken as dependent variable and non performing loans measured by non performing loans ratio of nonperforming loans over total loans and advances has been taken as independent variable. CAMEL factors affecting profitability namely; Capital adequacy, Operational costs efficiency and Liquidity have been considered in the analysis as controlling variables.

3.3 Population

The targeted population for the study includes all the commercial banks that are registered by Central Bank and operational in Kenya as at 31st December 2013. According to the Central Bank of Kenya, there were 43 commercial banks that were operating in the country (CBK, 2013). The study collected data from all the 43 commercial banks since the population was a small population and implied that a census was more applicable.

3.4 Data Collection

The data utilized in the study is secondary data. It comprised of Return on assets (ROA), Non performing Loans ratio computed from the financial statements of the commercial banks for

the period year 2004 to 2013. Beside this the ratios for computing; Capital adequacy, Operational costs efficiency and Liquidity were computed from the financial statements of the commercial banks for period under study and used as control variables. The data were collected from; The Central Bank of Kenya reports, audited published accounts of commercial banks in Kenya, Banking Survey (East Africa) Report and the Kenya National bureau of statistics. A data collection sheet was prepared to assist in gathering the data.

3.5 Data Analysis

The data collected was sorted and organized before capturing the same in Statistical packages for social sciences (SPSS) for analysis. ANOVA, Univariate, Multivariate analysis of Multi-Factor ANOVA and Partial Correlation Analysis was done.

3.5.1. Analytical Model

The multi-linear regression model similar to one used by Kaaya and Pastory (2013) to analyzed effect of credit risk on banks' performance in Tanzania by controlling the effect of deposits and bank size was used. Profitability measured by return on Assets was taken as dependent variable, non-performing loans measured by non performing loans over total loans and advances was taken as independent variable and Capital adequacy, Operational costs efficiency and Liquidity were taken as controlling variables in the multi-linear regression as follows;

$$Y = \alpha + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \beta_4 X_4 + e$$

Where:

Y= Profitability measured using Return on Assets

α = Constant

β_i = Beta Coefficient of variable i which measures the responsiveness X to unit change of in i

X_1 = Non performing Loans, measured using Non performing loans ratio. Computed as total non-performing Loans over Total Loans and advances (Total non-performing Loans / Total loans and advances).

X₂-X₄: Control Variables

The Controlling variables have been added to take consideration of the CAMEL factors that also affects profitability in the analysis.

Where:

X₂- Capital Adequacy. Measured as a ratio of Core Capital over Total Risk Weighted Asset Computed as (Core Capital / Total Risk Weighted Assets)

X₃- Operational Cost Efficiency – Measured as Cost income ratio and computed as; (total expenses/Total Revenue)

X₄- Liquidity – Measured as Ratio of Liquid Assets to Total Liabilities. Computed as (Quick Assets/ Total liabilities)

e= error term

3.5.2 Test of significance

Parametric tests were estimated to determined the significance of the relationship using; The correlation coefficient (r), coefficient of determination (r²), coefficient of multiple correlation (R²), Univariate Analysis, Bivariate Analysis, Partial correlation, and ANOVA using F-Test. Correlation coefficients, r, measures the strength and the direction of a linear relationship between the two variables. The coefficient of determination, r², determines the degree of linear-correlation of variables ('goodness of fit') in regression analysis. The coefficient of multiple correlation R² measures how well a dependent variable could be predicted using a linear function of a set of other variables (covariates).

Bivariate analysis of variables showed the relationships between any two variables for the purpose of determining the empirical relationship between them. Partial Correlation tests examined relationship between dependent variable and independent variable, while controlling for other variables that may be related to the dependent variable. ANOVA provided statistical test of whether or not the means of several groups are equal. F-test showed if variances of two variables were equal and two-tailed test was used to test against the alternative that the variances are not equal. Univariate analysis of dependent variable and Control Variables shows the relationships between dependent variable and control variables.

CHAPTER FOUR: DATA ANALYSIS, RESULTS AND DISCUSSION

4.1 Introduction

This chapter presents data analysis, results and discussion made from the study on the effects of nonperforming Loans on profitability of commercial banks in Kenya.

4.2 Findings

The regression analysis was performed with the independent variables being non performing Loans ratio and non performing loan coverage ratio. Profitability measured by Return on assets (ROA) was the dependent variable. Capital Adequacy, Operational efficiency and Liquidity have been used as control variables. The population consisted of 43 commercial banks licensed by the Central bank of Kenya and operational in Kenya in the period (2004-2013) and the data was collected from the financial statements of each commercial bank and annual mean aggregates for all the commercial banks were obtained for each period under the study. Data obtained were transferred to SPSS as variables for regression analysis and results were obtained.

Results are as indicated in tables 4.1 to 4.5. The findings of the study show; descriptive statistics, Univariate analysis of dependent variables and control variables, findings before control variables are incorporated, the findings when effects of control variables are incorporated and interpretations of the findings. The adjusted R-square measures the degree of variability of the dependent variable due to the change in the independent variable. Two tail Test of significance was carried out for all variables studied at 5 % test of significance and 95% confidence level. From the observation, any p-value that is greater than 0.05 was deemed to show significant relationship between variables tested, else the relationship was considered insignificant. The dispersion of all observations is divided into variance explained by the regression and residual variance, unexplained. R^2 has been taken as the proportion of variance explained in relation to the total variance. The standardized coefficient and the F-statistic indicated the strength of the relationship between the variables and the appropriateness of the set of data to the regression model and/or test.

4.2.1 Descriptive statistics

Table 4.1: Descriptive Statistics of all the Variables

	N	Minimum	Maximum	Mean		Std. Deviation	Skewness		Kurtosis	
	Statistic	Statistic	Statistic	Statistic	Std. Error	Statistic	Statistic	Std. Error	Statistic	Std. Error
Y	10	10.88	15.21	12.7410	.34514	1.09142	.896	.687	3.282	1.334
X1	10	3.67	21.27	9.0670	1.94886	6.16284	1.143	.687	.048	1.334
X2	10	13.06	16.15	14.6470	.36487	1.15382	-.370	.687	-1.569	1.334
X3	10	50.36	60.13	55.6910	1.13189	3.57936	-.196	.687	-1.440	1.334
X4	10	31.35	40.29	37.0420	.94450	2.98677	-.933	.687	-.340	1.334
Valid N (listwise)	10									

Source: Research Findings

The table shows the summary of minimum, maximum, mean, standard deviation, Skewness and Kurtosis of data used to analyze the variables. Minimum, and maximum, mean and standard deviation from the mean of the variables in 10 year period/ time series in the study. Skewness indicates asymmetry and deviation from a normal by data in the distribution analysis. Kurtosis indicates flattening or "peakedness" of data in the distribution

4.2.2 Inferential Statistics

This shows the findings of the regression analysis obtained. It shows findings on effects on non performing loans on profitability of commercial banks before incorporating control variables on regression analysis, then correlations between all variables and finally the effect of nonperforming loans on profitability when control variables are incorporated in the regression analysis.

4.2.2.1 Findings before Control variables are incorporated

The findings show ANOVA of Return on Assets (Y) and Non Performing Loans (X_1) and before control variables are incorporated.

Table 4.2 Model Summary of ANOVA of Profitability (Y) and Non Performing Loans (X_1)

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics				
					R Square Change	F Change	df1	df2	Sig. F Change
1	.705 ^a	.497	.434	.82077	.497	7.914	1	8	.023

a. Predictors: (Constant), X_1

Source: Research Findings

Table 4.2 above show ANOVA of Return on Assets (Y) and non performing Loans (X_1) before control variables are incorporated. The F test of 7.914 and significance tests of 0.023 indicates that test is appropriate and significant. The adjusted R square of 0.434 indicates that non performing Loans ratio explains 43.4% of the variation between non performing Loans ratio and profitability of commercial banks. The result also indicates correlation coefficient R of negative (-) 0.705. This indicates that there is a negative relationship between profitability measured by ROA (Y) and Non performing Loans measured by Non Performing Loans Ratio (X_1) and the test is statistically significant.

4.2.2.2 Univariate Analysis of Dependent variable and Control variables

Univariate analysis of dependent variable and Control Variables shows the relationships between dependent variable and control variables. Table 4.3 shows the effect of control variables X_2, X_3 , and X_4 on Return on Assets (Y). It gives F test and R squared and Adjusted R squared results between the dependent variable and control variables.

Table 4.3: Univariate Analysis of Dependent Variable and Control Variables

Dependent Variable: Y

Source	Type III Sum of Squares	df	Mean Square	F	Sig.
Corrected Model	6.396 ^a	3	2.132	2.958	.120
Intercept	.976	1	.976	1.355	.289
X2	1.022	1	1.022	1.418	.279
X3	.697	1	.697	.967	.363
X4	.023	1	.023	.032	.864
Error	4.325	6	.721		
Total	1634.052	10			
Corrected Total	10.721	9			

a. R Squared = .597 (Adjusted R Squared = .395)

Source: Research Findings

The Table 4.3 above shows the relationships between dependent variable and control variables. The results shows Adjusted R squared of 0.597 meaning that control variables can explain up to 39.5 % of the variances between dependent variable and control variables. The fact that significance tests are greater than 0.05 indicates that not all control variables are significant in explaining the variance between dependent variable and the control variables.

4.2.2.3 Bivariate Analysis of Variables

This shows the findings of relationships between any two variables for the purpose of determining the empirical relationship between them. The table 4.4 indicates that independent variable X_1 and control variables X_2 and X_3 are significant and appropriate in explaining relationships with dependent variable Y because it has significant tests of 0.23, 0.017 and 0.029 respectively when regressed with Y. The table also show that shows that variables X_1 , X_2 , X_3 , and X_4 have relationships between themselves meaning there is Multicollinearity between the variables. It also and show that control variable X_4 is not appropriate and is not significant because it has significant tests of 0.544 when regressed with dependent variable Y. This indicates that Liquidity has no significant linear relationship with return on assets and other control variables used in the test.

Table 4.4: Bivariate Analysis of Variables

		Y	X1	X2	X3	X4
Y	Pearson Correlation	1	-.705*	.729*	-.684*	.219
	Sig. (2-tailed)		.023	.017	.029	.544
X1	Pearson Correlation	-.705*	1	-.732*	.706*	.203
	Sig. (2-tailed)	.023		.016	.023	.573
X2	Pearson Correlation	.729*	-.732*	1	-.688*	.322
	Sig. (2-tailed)	.017	.016		.028	.364
X3	Pearson Correlation	-.684*	.706*	-.688*	1	-.052
	Sig. (2-tailed)	.029	.023	.028		.886
X4	Pearson Correlation	.219	.203	.322	-.052	1
	Sig. (2-tailed)	.544	.573	.364	.886	

*. Correlation is significant at the 0.05 level (2-tailed).

Source: Research Findings

4.2.2.4 Findings when effects of control variables are incorporated

This shows regression results of dependent variable and independent variables when control variables are incorporated

Table 4.5: Partial Correlations when Control variables are incorporated

Control Variables			Y	X1
X2 & X3 & X4	Y	Correlation	1.000	-.404
		Significance (2-tailed)	.	.368
		Df	0	5
	X1	Correlation	-.404	1.000
		Significance (2-tailed)	.368	.
		Df	5	0

Source: Research Findings

Table 4.5 above shows the results of independent and dependent variables when effects of control variables are considered. Observation in respect to independent variable X₁ indicate

that Return on Assets (Y) give negative (-) 0.404 correlation with Non performing Loans ratio (X_1) after incorporating control variables X_2, X_3 , and X_4 . This indicates that non performing loan ratio can explain relationship between nonperforming loans and profitability of commercial banks even when control variables are incorporated.

4.3 Interpretation of the Findings

Result of tests without taking into account effects of Control Variables indicates that return on assets (Y) and Non performing Loans Ratio (X_1) have correlation coefficient of negative (-) 0.705 and significance test of 0.023. The results also gives the adjusted R square of 0.434 which indicates that non performing Loans explains 43.4% of the variation between non performing Loans and profitability of commercial banks. The test of correlation of coefficients to establish effects of incorporating control variables into the relationship between dependent variable and independent variables shows that non performing loans ratio negatively affects profitability of commercial banks to extend of negative 40.4 %.

It is evident from the findings that non performing loans negatively affect profitability of commercial banks in Kenya. This can be illustrated by the results of test of nonperforming loans measured by non performing loans ratio and profitability measured by return on Assets. The findings also established that some control variables such as; Capital adequacy and operational cost efficiency are significant in explaining variances with profitability while other control variables like liquidity are in appropriate and insignificant in explaining the variances with profitability and non performing loans.

CHAPTER FIVE: SUMMARY, CONCLUSION AND RECOMMENDATIONS

5.1 Introduction

The study set out to find the effect of nonperforming loans on profitability of commercial banks in Kenya. This chapter presents discussions of the key findings, conclusion and recommendations from the findings.

5.2 Summary

The study is on the effect of nonperforming loans on profitability of commercial banks in Kenya. The key concepts in the study are non performing loans and profitability in context of commercial banks in Kenya. Profitability is measured by Return on Assets (ROA) and non performing Loans are measured by non performing Loans ratio. Other CAMEL factors affecting profitability were considered as control variables. The control variables considered are; Capital Adequacy, Operational Efficiency and Liquidity. This study was conducted through the use of a descriptive design. The Population of study comprised of the entire 43 Commercial Banks that have been licensed by Central Bank of Kenya. The secondary data in this analysis covered a period of 10 years from 2004 to 2013.

Multi linear regression model was used to analyze the data. The findings established that non performing loans negatively affects profitability of commercial banks. It also indicate that non performing loans ratio measured by non performing loans over total loans and advances is a good measure of nonperforming loans as the findings indicate that it is appropriate and statistically significant in explaining variance with return on assets. The study also indicates that Capital Adequacy and Operational cost efficiency affects profitability of commercial banks in Kenya. In essence, the study informs that mere reporting of increases in profits and increases in nonperforming loans could be misleading and that financial ratios have importance of enhancing understandability of financial performance. In particular non performing loans ratio and return on assets ratio analysis can inform better on the effects of nonperforming loans on profitability of commercial banks than mere comparison of quantum figures.

5.3 Conclusion

This study examines the effect of nonperforming Loans on profitability of commercial banks in Kenya. The regression results indicate that non performing loans negatively affects profitability of commercial banks in Kenya. The study found that non performing loans ratio measured by non performing loans over total loans and advances is appropriate and significant in explaining effect of non-performing loans on profitability of commercial banks. The findings also indicated that Multi linear regression model is appropriate for testing the effects of nonperforming loans on profitability using non performing loans ratio as independent variable and return on assets are dependent variable respectively. This study therefore confirmed that non performing loans negatively affects profitability of commercial banks in Kenya. The findings are supported by Berger et al (1997), Batra (2003), Michael et al (2006) and Mausya (2009).

5.4 Recommendations for policy

On the basis of the foregoing Analysis, discussion and observations in the study it would be appropriate to make the following recommendations; Central bank of Kenya being the regulator of banking sector should consider reporting on ratios rather than mere changes in trends of specific items especially non performing loans and profitability. The reporting of mere increases in nonperforming loans and profits by commercial could be misleading as ratios such as return on assets, Non performing Loans ratio and Non performing Loans coverage ratio can enhanced understandability of relationships between changes in profitability and non performing Loans gross volumes. Central bank and share holders of commercial banks should be aware of possible use of provisions for losses on non performing Loans by managers for smoothening of profits & develop financial reporting models that can help prevent occurrence of the menace. The share holders specifically should be ready to meet agency costs to reduce manager's information asymmetry by hiring competent internal and external auditors.

Management of commercial banks should mitigate against Moral hazard and adverse selection risks when advancing loans to minimize occurrences of nonperforming loans. This can be achieved by good credit appraisal procedures, effective internal control systems, diversifica-

tion along with efforts to improve asset quality in the balance sheets. Maintaining profitability is a challenge too for commercial banks in Kenya and commercial banks should remain innovative especially on cost cutting techniques which include leveraging in technology and minimizing occurrences of nonperforming loans.

5.5 Limitations of the Study

The scope of the current study was limited to the secondary data obtained from financial statements of commercial banks in Kenya for the last ten (10) years. The researcher faced a problem with accessing financial data from the Central Bank of Kenya and commercial banks directly because of lengthy processes involved in obtaining the information and published financial statements and reports were used to extract data. Secondly the limitation of time was much pronounced since the sources of the data operate on working days and the researcher is equivalently an employee. The data for the period under the study were also posing a challenge especially the year 2013 where some financial ratios were not available and had to be computed and consumed a lot of time. The study also indicated multicollinearity between the dependent variable, independent variable and some control variables; this means that the estimate of nonperforming loans impact on the profitability while controlling for the Control variables may be less precise.

5.6 Suggestions for Further Studies

Future research could expand this scope to include other parameters that are used to measure profitability and non performing Loans of commercial banks in Kenya. Other factors such as the interest rates charged on the loans and diversification of portfolios and how they relate to the overall profitability of the commercial banks can be considered as moderating or controlling variables in future studies. Further studies should be done on possible use of provisions for losses on non performing loans for profit smoothening by managers of commercial banks in Kenya. The study on effect of non-performing loans on profitability should also be done on other financial institutions such as Micro Finance Institutions to find out if the same results would be achieved

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APPENDIX. 1

List of commercial banks in Kenya as at 31 December 2013 as per CBK Report, 2013.

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

Source: CBK (2013)

APPENDIX - II

COMMERCIAL BANKS IN KENYA

INDUSTRY GROSS FIGURES

GROSS NON PERFORMING LOANS AND GROSS PROFITS FIGURES

	2004 KSHS. Millions	2005 KSHS. Million	2006 KSHS. Million	2007 KSHS. Million	2008 KSHS. Million	2009 KSHS. Million	2010 KSHS. Million	2011 KSHS. Million	2012 KSHS. Million	2013 KSHS. Million
NON PERFORMING LOANS	68,397	66,868	63,281	40,314	47,939	51,278	50,391	43,609	50,118	67,395
PROFIT BEFORE TAX	13,907	18,346	25,578	34,214	43,982	48,696	73,600	89,000	106,120	123,619

SOURCE: RESEARCH FINDINGS

APPENDIX - III

COMMERCIAL BANKS IN KENYA

INDUSTRY GROSS FIGURES

GROSS NON PERFORMING LOANS AND GROSS TOTAL LOANS & ADVANCES ANNUAL AGGREGATES

	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013
	KSHS.	KSHS.	KSHS.	KSHS.	KSHS.	KSHS.	KSHS.	KSHS.	KSHS.	KSHS.
	Millions	Million	Million	Million	Million	Million	Million	Million	Million	Million
NON PERFORMING LOANS	68,397	66,868	63,281	40,314	47,939	51,278	50,391	43,609	50,118	67,395
TOTAL LOANS & ADVANCES	321,557	395,813	448,936	519,195	689,639	761,458	956,564	1,189,331	1,335,531	1,575,923

SOURCE: RESEARCH FINDINGS

APPENDIX - IV

VARIABLES USED: - INDUSTRIAL AGREGATES OF ALL BANKS										
ANALYSIS OF DATA COLLECTED										
PERIOD : YEAR 2004 - YEAR 2013										
Description of items	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013
	%	%	%	%	%	%	%	%	%	%
Dependent Variable:										
Return on assets(total income/total assets)	10.88	12.2	12.6	12.09	12.91	12.88	12.62	12.68	15.21	13.34
Independent Variable:										
Non performing Loans Ratio	21.27	16.89	14.1	7.76	6.95	6.73	5.27	3.67	3.75	4.28
Control Variables:										
Capital Adequacy	13.38	13.06	14.62	13.07	14.21	15.53	15.48	15.63	16.15	15.34
Operational Cost Efficiency	60.13	59.27	55.48	57.48	56.48	59.88	54.28	52.16	51.39	50.36
Liquidity	37.6	37.96	40.29	33.87	31.35	38.79	39.22	33.81	39.75	37.78
Source: Research Findings										