

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

BY

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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.

Signed.....Date.....

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

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DEDICATION

I dedicate this project to my lovely daughter Jael Mutheu Isaac.

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LIST OF ABBREVIATIONS

CAMEL:	Capital Adequacy, Asset Quality, Management efficiency, Liquidity
CBK:	Central Bank of Kenya
CL:	Consumer Loans
CRB:	Credit Reference Bureau
GDP:	Gross Domestic Product
GLLP:	General Loan Loss Provision
KBA:	Kenya Bankers Association
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 challenges in managing Non-performing loans that are considered to have effects on its operational profitability. The central bank of Kenya together with the Kenya Bankers Associations and Credit reference Bureaus has established various ways of reducing NPLs. This study seeks to find out the effects of NPLs on profitability of commercial banks in Kenya. The study population consisted registered commercial banks in Kenya, (CBK 2016). Profitability measured by return on assets was used as dependent variable and non performing loans measured by NPLs ratio was used as independent variable. To improve the accuracy and reliability of the tests Capital adequacy, Operational efficiency and Liquidity were used as control variables. The research covered all commercial banks in Kenya for the last ten years that is 2006-2016 and used secondary data to analyze and draw conclusions and recommendations. 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. 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. Investors 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.

CHAPTER ONE

INTRODUCTION

1.1 Background of the Study

Kenyan Banking industry has been going through innovation development since the 2010; banks have improved in their operations and service delivery to the customers. This has made most of the banks automate many services like balance inquiry, cash deposit, cash withdrawal and credit facilities with the leading M-shwari service from Commercial bank of Africa. Presently banking sector involves 43 registered and licensed commercial banks providing banking and financial services to customers, all of which are under the purview of the Central Bank of Kenya (CBK, 2015). Among the 43 financial institution 29 are locally owned banks comprise 3 with public shareholding and 26 privately owned while 14 are foreign owned.

For the last decade, there has been rapid growth in the Kenyan banking industry with new entrance in the market; however most of the financial institutions are operating in Kenya for the first time (CBK, 2015). Although the financial sector plays a key role in the growth of gross domestic product (GDP), it needs a lot of monitoring in terms of operational performance, compliance and guidelines from the central bank of Kenya and Kenya bankers association. The commercial Banks had assets worth 3.7 trillion as at December 2015 (CBK, 2015) and they play a key role in mobilizing financial resources for investment by extending credit to various businesses and investors. At that point Lending is the cash cow and the heart of the banking industry and loans are the dominant assets as they generate the largest share of operating income,(Ngugi, 2006).

Lending has exposed the commercial banks to the greatest risk of default, hence Non-performing accounts which affect operational performance and profitability. Credit risk management and establishment of adequate provisions for bad and doubtful debts can cushion the banks risk. The level of non-performing loans (NPLs) is very high mostly before 2008 when credit reference bureau was formed. Kenya had experienced bank financial problems, with report of major bank failures (37 failed banks as at 1998) and financial crises of; 1986 - 1989, 1993/1994 and 1998 (Kithinji & Waweru, 2007; Ngugi, 2006).

NPL's has contributed to bank failure in Kenya, CBK and Kenya Bankers Association (KBA) has taken some measures to reduce non performing accounts which includes introduction of credit reference bureaus which evaluates the credit history of the credit customers, (CBK 2010). The CBK reported that the ratio of non-performing loans to gross loans increased from 1.8 trillion in June 2014 to 2.2 trillion in June 2015 an increase of 22.1% and the pre-tax profit for the sector increased by 8.0 percent from Ksh.71.0 billion in June 2014 to Ksh. 76.7 billion in June 2015. The bank's Assets maintained 970.1 Billion and liabilities of 2,507.3 Billion which translates to liquidity ratio of 38.7 %. Past studies have confirmed that non-performing Loans affects bank profitability; some studies have failed to confirm existence of effects of nonperforming loans on profitability. This paper therefore, investigates on the effects of non- performing loans on profitability of commercial banks in Kenya.

1.1.1 Non-Performing Loans

According to Kroszner (2002),A Non-performing Loan is a credit facility or advance in which the interest and the principal amount have remained past due for a specific period of time, also known as Non-performing assets. A credit facility 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, (Kithinji &Waweru, 2007).

The key measure of banking industry performance it's the level of Non-performing loans and accounts, (Stuti & Bansal, 2013). NPLs reflects the profitability of any financial institution hence a decline in the ratio of Non-performing loans indicates improvement in the asset quality of both public sector banks and private sector banks. Increase in the ratio of non-performing 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, (Batra, 2003). 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 assets are also commonly described as loans and advance in arrears for at least ninety days (Guy, 2011). Michael et al. (2006), 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.

Banks profits are exceeded by non-performing loans; 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 & Gorter (2001) non-performing loans are mainly caused by an inevitable number of wrong economic decisions by individuals, plain bad luck and inflation (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. (Bloem & Gorter,

2001). 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, (Bloem &Gorter, 2001)

1.1.2 Profitability

Profitability is the ability of a business to earn a profit. A profit is what is left of the revenue a business generates after it pays all expenses directly related to the generation of the revenue, such as producing a product, and other expenses related to the conduct of the business activities, (Haneef & Riaz, 2012).Profitability of the financial institution sector has been a key issue among the operating banks in Kenya with two under receivership due to lack of liquidity and NPLs. Many financial indicators have being used to measure profitability along banking literature which has examined the role played by management of resources in determining bank profitability,(Goudreau & Whitehead,1989). Indicators used to profitability measure are Return on Assets, Return on Equity and Net Interest Margin. Researchers have different views on the effectiveness of one indicator over the others as a good measure of profitability. For instance, 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 purse could constitute a good Measure of profitability and therefore used ROA and ROE, believed that the three indicators are all good namely NIM,ROA and ROE.

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 financial institution remains operational because it expects to make profits and grow in asset base, if the expectation is confirmed unattainable, the most rational decision is to exit the industry, raise more capital. 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 will be used. Return on Assets has been measured as; $\text{Return on Assets (ROA)} = \frac{\text{Net Earnings}}{\text{Total Assets}}$.

1.1.3 The Effects 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. Nonperforming Loans Assets have opportunity costs, in that the non interest earning assets (mainly inform of money) could have been invested elsewhere and provide earnings. 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 nonperforming 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 operationalized in Kenya, but has not lead to reductions in non-performing Loans as expected. 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 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 smoothening. There are other factors that affect profitability of commercial banks which includes but not limited to Capital Adequacy, Asset Quality, Management, Efficiency and Liquidity (CAMEL) factors.

Kenya commercial Banks 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); 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 measurement of nonperforming 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 effects of non-performing loans on profitability of commercial banks in Kenya.

1.4 Value of Study

The finding of the study is of interest to Commercial Banks managers as they know effects of nonperforming loans on profitability and encourage them take necessary

measures to control occurrences of nonperforming loans. The Central Bank of Kenya could employ the findings of this research in the establishment of guidelines that helps in management of nonperforming loans in the commercial banks in Kenya, while protecting the interest of the public.

The study enables Financial Consultants to understand the sensitivity of return on assets to non performing loans ratio and non performing loans coverage ratio and there on make financial advice to the commercial banks and other stake holders. The findings from this study also assist in providing more literature to support existing theoretical propositions on the effects of nonperforming 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 Agency Theory

The first scholars to propose, explicitly, that a theory of agency be created, and to actually begin its creation, were Ross (1973); 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.

2.2.2 Asymmetric Information Theory

According to Akerlof (1970) Asymmetric information theory is 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 essay; "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.

Pagan & Jappelli (1993), show that information sharing reduces adverse selection by improving banks information on credit applicants. Aunonen (2003), the theory of asymmetric information tells us that it may be difficult to distinguish well 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), (Aunonen, 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 decision 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 smoothing.

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) & 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 Bank Profitability

Determinates of bank profitability are bank specific variables which influence the financial performance of any bank. These determinants are within the scope of the bank to manipulate them and that they differ from bank to bank. These include capital size, size of deposit liabilities, size and composition of credit portfolio, interest rate policy, labor productivity, and state of information technology, risk level, management quality, bank size and ownership. CAMEL framework often used by scholars to proxy the bank specific factors (Dang, 2011). CAMEL stands for Capital Adequacy, Asset Quality, Management Efficiency, Earnings Ability and Liquidity

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). Capital is the amount of own fund available to support the bank's business and act as a buffer in case of adverse situation (Athanasoglou et al. 2005). Banks capital creates liquidity for the bank due to the fact that deposits are most fragile and prone to bank runs. Moreover, greater bank capital reduces the chance of distress (Diamond, 2000). However, it is not without drawbacks that it induce weak demand for liability, the cheapest sources of fund Capital adequacy is the level of capital required by the banks to enable them withstand the risks such as credit, market and operational risks they are exposed to in order to absorb the potential loses and protect the bank's debtors. According to Dang (2011), the adequacy of capital is judged on the basis of capital adequacy ratio (CAR). Capital adequacy ratio shows the internal strength of the bank to withstand losses during crisis. Capital adequacy ratio is directly proportional to the resilience of the bank to crisis situations. It has also a direct effect on the profitability of banks by determining its expansion to risky but profitable ventures or areas (Sangmi& Nazir, 2010).

2.3.2 Asset Quality

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 et al., 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, nonperforming 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 that the good health of the portfolio a bank. The lower the ratio the better the bank performing (Sangmi & Nazir, 2010).

2.3.3 Management Efficiency

Management Efficiency is represented by different financial ratios like total asset growth, loan growth rate and earnings growth rate. Yet, it is one of the complexes subject to capture with financial ratios. Moreover, operational efficiency in managing the operating expenses is another dimension for management quality. The performance of management is often expressed qualitatively through subjective evaluation of management systems, organizational discipline, control systems, quality of staff, and others. Yet, some financial ratios of the financial statements act as a proxy for management efficiency. 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 (Rahman et al. in Ilhomovich, 2009; Sangmi and 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. The other important ratio is that proxy management quality is expense to asset ratio. The ratio of operating expenses to total asset is expected to be negatively associated with profitability. Management quality in this regard, determines the level of operating expenses and in turn affects profitability (Athanasoglou et al. 2005).

2.3.4 Liquidity Management

Liquidity refers to the ability of the bank to fulfill its obligations, mainly of depositors. According to Dang (2011) adequate level of liquidity is positively related with bank profitability. The most common financial ratios that reflect the liquidity position of a bank according to the above author are customer deposit to total asset and total loan to customer deposits. Other scholars use different financial ratio to measure liquidity. For instance, Ilhomovich (2009) used cash to deposit ratio to measure the liquidity level of banks in Malaysia. However, the study conducted in China and Malaysia found that liquidity level of banks has no relationship with the performances of banks (Said and Tumin, 2011).

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 & 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 nonperforming 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 nonperforming 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 nonperforming loans. Model one represented return on asset as dependent variable while nonperforming 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 markup, 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 & Pastory, (2013) analyzed effect of credit risk (measured by ratios of nonperforming 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.

Vatansever & Hepsen, (2013) investigated the presence of any significant relation (if exists) of non-performing loans with macroeconomic 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 nonperforming 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 6year 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 determines and evaluates 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 will be analyzed using Multiple Regressions method. The findings show that bank specific actors 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 Conceptual Framework

The conceptual framework is developed from the review of literature discussed above and presented in the following diagram (figure 1.1). It shows the relationship between the dependent (ROA) and explanatory (bank specific and macroeconomic) variables.

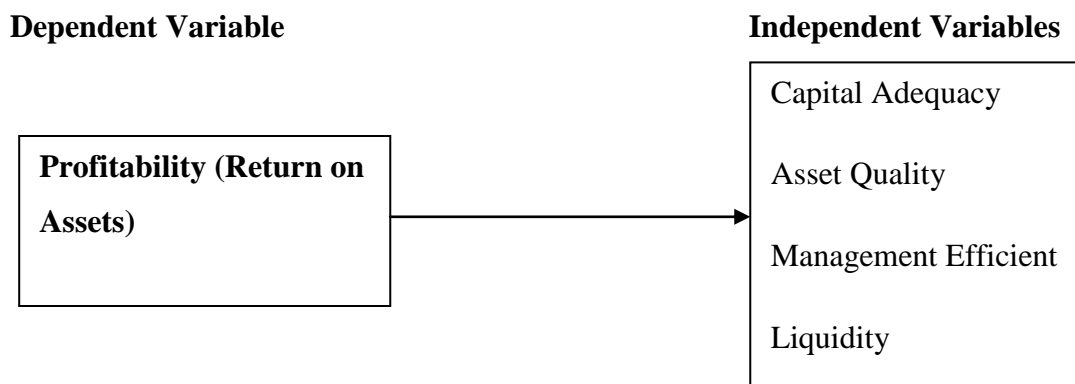


Figure 1.1: Conceptual Framework

2.6 Summary of Literature Review

From the studies above, it is evident that there exist theoretical concepts and empirical studies that touch 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.

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 non-performing Loans on profitability of commercial banks in Kenya. This included research design, Study population, data collection techniques and data analysis techniques of the collected data.

3.2 Research Design

The study used 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 2006 and 2015. Profitability measured by Return on Assets (ROA) was taken as dependent variable and non performing loans measured by non performing loans ratio of nonperforming loans over total loans and advances was taken as independent variable. CAMEL factors affecting profitability namely; Capital adequacy, Operational costs efficiency and Liquidity was considered in the analysis as controlling variables.

3.3 Population

The targeted population for the study included all the commercial banks that are registered by Central Bank of Kenya and operational in Kenya as at 31st December 2015. According to the Central Bank of Kenya, there are 42 commercial banks that are operating in the country (CBK, 2015). The study collected data from all the 42 commercial banks since the population was a small population and implied that a census was more applicable.

3.4 Data Collection

This study considered secondary data from published articles. The data collected was quantitative and comprised of Return on assets (ROA), Non-performing Loans ratio computed from the financial statements of the commercial banks for the period year 2006 to 2015. 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 was 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 analyze the 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 was taken as controlling variables in the multi-linear regression as follows;

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

Where:

Y = Profitability measured using Return on Assets

α = Constant

β_i = Beta Coefficient of variable i , 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).

$X_2 - X_4$: 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 $(\text{Core Capital} / \text{Total Risk Weighted Assets})$

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

X₄- Liquidity – Measured as percentage of Total Loans to Total deposits. Computed as $(\text{Total Loans} / \text{Total Deposits})$

e= error term

3.5.2 Test of Significance

Parametric tests was 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 the 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 will be used to test against the alternative that the variances are not equal. Univariate analysis of dependent variable and Control Variables showed the relationships between dependent variable and control variables.

CHAPTER FOUR: DATA ANALYSIS, RESULTS AND DISCUSSION

4.1 Introduction

This chapter presents research findings and interpretation of findings made from the study on the effects of nonperforming Loans on profitability of commercial banks in Kenya.

4.2 Research 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 42 commercial banks licensed by the Central bank of Kenya and operational in Kenya in the period (2006-2016). 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. Tables 4.1 to 4.5 indicate the analysis of the variables. Research findings from descriptive statistics, Univariate analysis of dependent variables and control variables, findings before and after 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. The 2-tail Test of significance was carried out for all variables studied at 0.05 test of significance and 95% confidence level. From the study, 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.

4.2.1 Descriptive Statistics

Table 4.1: Descriptive Statistics of all the Variables

	N	Minimum	Maximum	Mean		Std. Deviation	Skewness		Kurtosis	
	Statistics	Statistic	Statistic	Statistic	Std. Error	Statistics	Statistics	Std. Error	Statistics	Std. Error
Y	10	8.85	13.8945	10.85	.234	1.6435	.6731	.634	3.1356	1.115
X_1	10	3.67	18.9730	9.74	1.654	5.7483	1.4093	.634	0.186	1.115
X_2	10	12.08	15.3526	13.234	.2657	1.3498	-.247	.634	-1.234	1.115
X_3	10	45.98	55.952	50.765	1.004	3.9086	-.2316	.634	-1.321	1.115
X_4	10	26.87	35.0962	34.123	.7321	3.1934	-.8410	.634	-.294	1.115
Valid N (listwise)	10									

Source; Research Findings

The table 4.1 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 time series (2006-2016) 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.

Findings before Control variables are incorporated

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

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

Model	R	R Square	Adj. R Square	Std. Error of the Estimate	Change Statistics				
					R Square Change	F Change	df1	df2	Sig. F Change
1	.605a	.367	.484	.85077	.397	6.814	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 6.814 and significance tests of 0.023 indicates that test is appropriate and significant. The adjusted R square of 0.367 indicates that non-performing Loans ratio explains 48.4% of the variation between non performing Loans ratio and profitability of commercial banks. The result also indicates correlation coefficient R of 0.605. This indicates that there is a positive 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.

Univariate Analysis of Dependent variable and Control variables

Table 4.3 shows the relationships between dependent variable and control variables, 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

Source	Type III Sum of Squares	df	Mean Square	F	Sig.
Corrected Model	7.2478a	3	2.4782	3.1289	.1239
Intercept	1.2367	1	0.847	1.4289	.3251
X2	1.4567	1	1.0355	1.6377	.3214
X3	.8724	1	.6452	.8465	.345
X4	.0546	1	.0286	.06534	.9634
Error	5.781	6	.9352		
Total	1734.023	10			
Corrected Total	10.734	9			

a.R Square= .7467 (Adjusted R Square = .4124)

Source: Research Findings

The Table 4.3 above shows the relationships between dependent variable and control variables. The results shows Adjusted R squared of 0.41 meaning that control variables can explain up to 59% 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.

Bivariate Analysis of Variables

Bivariate analysis shows the relationships between any two variables for the purpose of determining the empirical relationship. The table 4.4 indicates that independent variable X₁ and control variables X₂ and X₃ are significant and appropriate in explaining relationships with dependent variable Y. The controlled variables it has significant tests of 0.45, 0.35 and 0.023 respectively when regressed with Y. The research findings show that variables X₁, X₂, X₃, and X₄ have relationships between themselves meaning there is Multicollinearity between the variables. It also and show that control variable X₄ is not appropriate and is not significant because it has significant tests of 0.644 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	X ₁	X ₂	X ₃	X ₄
Y	Pearson Correlation	1	-.654*	-.654*	-.564*	.257
	Sig. (2-tailed)		.045	.045	.023	.644
X ₁	Pearson Correlation	-.654*	1	.675*	.642*	.221
	Sig. (2-tailed)	.045		.035	.043	.512
X ₂	Pearson Correlation	.675*	-.689*	1	-.640*	.422
	Sig. (2-tailed)	.035	.036		0.046	.444
X ₃	Pearson Correlation	-.564*	.524*	-.568*	1	-.052
	Sig. (2-tailed)	.023	.017	.024		.884
X ₄	Pearson Correlation	.257	.235	.333	-.045	1
	Sig. (2-tailed)	.644	.681	.386	.775	

*. Correlation is Significant (0.05 Level, 2-tailed)

Source: Research Findings

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	X ₁
X ₂ & X ₃ & X ₄	Y	Correlation	1.000	-.478
		Significance(2-tailed)	.	.437
		Df	0	5
	X ₁	Correlation	-.478	1.000
		Significance(2-tailed)	.437	.
		Df	5	0

Source: Research Findings

Table 4.5 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 (-) 0.478 correlation with Non performing Loans ratio (X₁) after incorporating control variables X₂, X₃, and X₄. This indicates that NPL ratio can explain relationship between NPL 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 -0.654 and significance test of 0.023. The results also gives the adjusted R square of 0.484 which indicates that non performing Loans explains 48.4% 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 65.4 %.

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 objective of the study was to establish the effect of nonperforming loans on profitability of commercial banks in Kenya from 2006-2016. This chapter presents discussions of the summary of findings, conclusion and recommendations from the findings.

5.2 Summary

The objective of the study was to establish the effect of nonperforming loans on profitability of commercial banks in Kenya. The 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 and accounts. 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 42 Commercial Banks that have been licensed by Central Bank of Kenya.

The secondary data in this analysis covered a period of 10 years from 2006 to 2016 with the Multi linear regression model was used to analyze the data. The findings established that NPL and accounts negatively affect profitability of commercial banks. It also indicate that NPL 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 NPL on profitability of commercial banks in Kenya. The regression results indicate that NPL negatively affects profitability of commercial banks in Kenya. The study found that NPL ratio measured by NPL/total loans and advances is appropriate and significant in explaining effect of NPL on profitability of commercial banks. The findings also indicated that Multi-linear regression model is appropriate for testing the effects of NPL on profitability using NPL ratio as independent variable and return on assets as dependent variable respectively. This study therefore confirmed that NPL 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

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 NPL and profitability. The reporting of mere increases in NPL and profits by commercial could be misleading as ratios such as return on assets, Non performing Loans ratio and NPL coverage ratio can enhance understandability of relationships between changes in profitability and non performing Loans gross volumes.

Investors 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, diversification 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.

Time was a key factor 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 2016 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 I: COMMERCIAL BANKS IN KENYA

1. African Banking Corporation
2. Bank of Africa Ltd
3. Bank of Baroda
4. Bank of India
5. Barclays Bank of Kenya Ltd
6. CFC Stanbic Bank Limited
7. Charterhouse Bank Limited
8. Citibank N.A.
9. Commercial Bank of Africa
10. Consolidated Bank of Kenya
11. Co-operative Bank of Kenya
12. Credit Bank Limited
13. Development Bank of Kenya
14. Diamond Trust Bank Kenya
15. Dubai Bank Limited
16. Ecobank
17. Equatorial Commercial Bank
18. Equity Bank Limited \
19. Family Bank Ltd
20. Fidelity Commercial Bank
21. Fina Bank Limited
22. First community bank
23. Giro Commercial Bank
24. Guardian Bank
25. Gulf African bank
26. Habib AG Zurich
27. Habib Bank Limited
28. I&M Bank
29. Jamii bora Bank
30. Kenya Commercial Bank Ltd
31. K-REP Bank
32. Middle East Bank of Kenya
33. National Bank of Kenya Ltd
34. National Industrial Credit Bank
35. Oriental Commercial Bank
36. Paramount-Universal Bank
37. Prime Bank Limited
38. Standard Chartered Bank Ltd
39. Transnational Bank Limited
40. UBA Kenya bank Ltd
41. Victoria Commercial Bank