

**EFFECT OF CREDIT RISK ON FINANCIAL PERFORMANCE OF
COMMERCIAL BANKS IN KENYA**

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D61/74674/2014

**A PROJECT SUBMITTED IN PARTIAL FULFILLMENT OF THE
REQUIREMENTS FOR THE AWARD OF A DEGREE OF MASTER OF
BUSINESS ADMINISTRATION, SCHOOL OF BUSINESS UNIVERSITY OF
NAIROBI**

NOVEMBER, 2017

DECLARATION

This research project is my original work and has not been submitted for examination to any other university.

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LIST OF ABBREVIATIONS AND ACRONYMS

ATM	:	Automatic Teller Machines
BIS	:	Bank for International Settlements
CAMELS	:	Capital adequacy, Assets quality, Management efficiency, Earnings ability, Liquidity management, Sensitivity to market risks
CAR	:	Capital Adequacy Ratio
CBK	:	Central Bank of Kenya
CRAR	:	Capital Risk Adequacy Ratio
GCC	:	Gulf cooperation council
GDP	:	Gross Domestic Product
MPT	:	Modern portfolio theory
NPLs	:	Non-Performing Loans
ROA	:	Return on Assets
ROE	:	Return on Equity
ROI	:	Return on Investment
SPSS	:	Statistical Package for the Social Sciences

CHAPTER ONE

INTRODUCTION

1.1 Background of study

The health of any development of an economy in any country directly affects its financial system as its failure can interfere with the financial operations in a country as well as the regional countries that are dependent upon the banks (Das & Ghosh, 2014). Commercial banks channel financial resources from savers to lenders as well as helping the borrowers that do not have the ability to get to the markets dealing in capital. However, as the financial institutions lend finances to borrowers, they expose themselves to the inability of the borrowers paying back, both the interest and principal borrower from the bank. This risk is called the credit risk. In Castro's (2013) view, the risk of crediting is the most expensive negative outcome in institutions dealing with finances and its impact is felt most in comparison to any other risk, namely; liquidity and operational risk. This is because of the direct threat it gives in regards to financial institutions' solvency. Indeed, the amount and of loss incurred by the risk brought about by credit is very intense to the point of creating high amounts of losses incurred from loans and to a certain point it may make a bank to completely collapse and fail. Reinhart and Rogoff (2010) suggest that while institutions dealing with finances have encountered problems over the past years due to quite a number of reasons, the main factor that has largely contributed to serious disasters in the banking sector is still related in a direct way with borrowers being offered with poor credit standards and counterparties, least concerns to transformations in the economy, lax portfolio in risk management and some other reasons that can result to the decrease in how counterparties in banks handle credit standings.

There exist two opposing theories as far as loan advancement by commercial banks. According to the traditional banking theory that suggest diversification of the loan (Markowitz, 1959), banks need to variegate loans so that the risk in credit decreases. The basis of this line of thinking is the existence of the information asymmetry in the market and because of the same, diversification will reduce financial intermediation costs that might arise from concentration of the bank loans to a few firms. This position is supported by DeJonghe and Beck (2013) who find that sectorial specialization increases volatility and systemic risk, though not leading to higher returns. However, the theories of corporate finance opine that firms would enjoy additional advantages due to the reduction in cost if they focus their actions on unique sectors which have experts or are known to them. (Acharya *et al.* 2006). This is because specialized banks possess a higher monitoring quality than diversified banks, and consequently yield lower loan loss provisions and higher profitability. Besides that, the strategy of diversification is of low attraction since it also leads to competition (Winton, 1999).

Commercial banks in Kenya experience a variety of risks financially, operationally and strategically (Mweiga, 2012). However, the extent and amount of loss incurred by credit risk as compared to any other form of risk negatively affects financial institutions to the point of making bank to fail because loans carry a large amount of credit risk since they are usually 10-15 times the equity a bank has. (Kitua, 2011). This implies that there will be difficulties encountered in the banking sector in case of any drop in the quality of any offered loans. The problem of a loan default most at times begins immediately when one starts to apply for a loan and continues to build up. This is worsened when the guidelines concerning credit risk management inform

of strategies and policies are not there and if present, then they are not complete or very weak. The high non-performing loan level in Kenyan banks is a manifestation of the increased level of credit risk. As a result, there is need to find out how credit risk impacts on the state of financial performance commercially.

1.1.1 Credit Risk

From the committee of Basel of supervision of banking committee (2001) Credit risk is the chance of releasing a loan which is outstanding either partially or fully, because of credit occasions, bankruptcy, and lack of payment to any due obligation, and restructuring the way of rating. Anthony (1997) says that credit risk develops from lack of performance by the one who borrowed a loan, and this may originate from two instances, either the one is unable or unwilling to commit himself towards conducting himself in the pre committed way of a contract. Lapteva (2012) explains credit risk as the incidence where a borrower or counterparty in a bank fails to meet the conditions set in relation to the terms of agreement. According to Chen and Pan (2012), credit risk is the level of unsteadiness in the worth of vessels of debt and derivatives which are gotten from the changes made in the borrowers and counterparties qualities. Coyle (2000) states credit risk as losses gained because credited customers are unable or have refused to pay what they owe the financial institutions in time and fully.

Chijoriga (1997) explains credit risk as the most expensive risk in any institution dealing with finances and has a more significant effect when compared any other risk because it acts as threat directly to the solvency of institutions dealing with finances. While institutions of finance have gone through difficulties over the past years because of a substantial amount of reasons, the main root of serious problems in the banking sector continues to have a direct relation to poor credit standards for the

borrowers and other counterparts, poor platforms in risk management, or poor concentration to changes taking place in economics or other factors that can lead to a drop in the standing of credit of a counterparty associated with the bank (Basel, 1999). Credit risk is therefore a main cause of uncertainty about the financial situation in the future. To take care of the eventual losses incurred from the materialization of risks financial institutions are required to put in the largest ratio of equity. The major places to get credit risk includes, limited capacity of an institution, unreserved credit policies, quick rates of interests, mismanagement, unreserved laws, poor liquidity and capital levels, direct crediting, licensing of banks in bulk, poor underwriting of loans, delay in the assessment of credit, poor practises in lending, interference from the government and lack of enough supervision by the central bank (Owusu, 2009).

1.1.2 Firm Performance

The company ability to generate new resources from operations of each and every day over a certain time period and being measured by net income and the cash earned from operation is what gauges a company's performance financially. The measure of performance of a bank can divided into either the market base or the traditional (Aktan & Bulut, 2008). The concept of performance has been difficult to define because of its multi-dimensional meanings. However, Murphy et al. (2006) are of the view that measures of performance are defined either by their financial or the way they are organized. Popular measures used to gauge financial performance include maximizing profits, increasing profits derived from assets and maximising the benefits of shareholders which act as the key measures in ensuring effectiveness of a firm. Further performance measures on operations, like development in market shares and increase in sales brings in a diverse description of performance as they keenly look at the issues that lead to performance financially. (Hoffer & Sandberg, 2007).

Elly (2012) elucidate that to determine the success level, traditional measures of performance can be used to measure profitability of a firm among others. The forms of measures used in gauging are either from history or for comparing. The measurement and presentation of a firm is majorly influenced by stakeholders. Stakeholders include shareholders, the government, customers, employees, competitors and the public in general. Ang, Cole and Line (2000) opine that the importance of the performance level may be influenced by a firm's objective which will determine the performance choice and measure in the growth of the capital and stock market. For instance, if there is low development and activeness in the stock market, the market measures of performance will automatically produce poor results. These measures of accounting represent measures of finance ratios from balance sheet and statements of income and have been in use by many researchers. (Demsetz & Lehn, 2005). In summary, Abu-Tapanje (2011) observed that organizational performance is determined by three specific areas of firms' outcomes which include: firm's financial performance as measured by profits, ROA and ROI, product market performance and shareholder return, measured by total returns to shareholder and increased residual wealth.

1.1.3 Credit Risk and Firm Performance

Psillaki, Tsolas, and Margaritis (2010) opine that when commercial banks effectively manage their credit risk, besides enhancing the viables and profits of their own investments and businesses they support stability and substantial allocation of capital on an economy in a systematic way. This is because the quality of credit in a bank credit quality is seen to be a proxy of performance operations and the bank's financial health. The risk in credit, have an effect on not only performance operations, profits

earned, or net interest income but also the economy in general. From this perspective, Afriye and Akotey (2010) brought out an argument which states that a normal way of managing risks by a bank says the management of the sound credit risk by a bank is essential in the development of banks.

Athanasoglou et al. (2005) suggest that the bank ability to take risks has a long range of effects on the profitability and safety of the bank and that a bank is dependent on its ability to see take care and prevent any risk in future so as to take care of the losses arising from the risk. Besides that, there is an effect on the increase in the ratio of credits which are substandard in the portfolio of a bank, not leaving out decreasing the amounts of profits gained by the bank. Owojori et al. (2011) stated that present data from banks which have undergone liquidity show a clear picture of how poor collection of loans and other advances from the customers and managers or even directors was one of the factors contributing to the bank's growth rate. The cost of debt and equity is always raised by the risk on credit. This affects the value of funds in the bank by increasing it.

1.1.4 Commercial Banks in Kenya

Kenya has a total of forty three commercial banks. All these commercial banks are under the control of (CBK Report, 2015). The CMA is also there to oversee the listed banks. It is mandatory for all the listed financial institutions to operate under certain conditions set by the Central bank such as minimum ratios of liquidity and ratios of cash reserve. Banks in Kenya have experienced a substantial amount of growth amount and in the diversity of the services offered such as loans, debit and credit card services, electronic banking and the bringing in of automatic teller machines. The current state of competition is very stiff and continues to intensify even though there

is an economy which is shrinking, a number of government regulations, innovation and requirements of disclosure.

Commercial banks competition in Kenya breaks boundaries against only the banking sector to other agents like movement forms as cooperatives, financial institutions operated by the government, institutions dealing with microfinance and merry go rounds. Yildirim and Philippatos, (2007) state that the main force that drives banks towards improving the quality of services: increasing products offered and promoting financial innovation is a healthy competition. In relation to the effectiveness of the firm's strategy, they argue that the effectiveness of a firm's performance is attached to the strategy a financial institution applies so as to have advantage competitively. . If we go with the argument above, then there would be a very great effect on the performance of institutions that promote the skill, improve the knowledge and motivates employees.

1.2 Research Problem

A very important role is performed by financial institutions in the growth of a country's economy because they facilitate the channelling of funds from savors to creditors to invest and participate in other stuffs of productivity. Gestel and Baesems (2008) suggest that if the amount of cash generated by banks increase, the opportunities in investing and improving the operations in the cooperate sector. This is mainly because more new projects will be brought up by the use of the borrowed funds. These projects will then open up new employment opportunities and mobilization of resources. However, through the increased lending by the banks; there get exposed to credit risk because lack of payment by a small amount of customers may make a bank to incur very heavy losses.(Gestel & Baesems, 2008). Exposure to a

high risk in credit affects both the performance of a financial institution and can result to a bank run and eventually to the collapse of a bank if the problem is not addressed expeditiously.

The central bank of Kenya annual supervision of 2016 has reported amount of loans that are not performing is increasing for the past three years. Should this habit continue profitability in the short run and sustainability of these banks in the long run would be adversely affected. The interest capping rate has further compounded the bank problems of loans which are not performing because of the inability to charge premium interest rates so as to compensate them against the risk

Chaibi and Ftiti (2015) conducted an investigation from a cross country point of view on the factors that determine credit risk and established that external economic variable that includes gross domestic product , rate of unemployment, rate of interest, the rate of exchange contain a strong effect on the performance of financial institutions across the economies. Further, Waemustafa and Sukri (2015) sought to establish specific bank and macroeconomics dynamic factors that determine the amount of credit risk in both Islamic and Conventional Banks. The findings was that financing the sector containing risks by banks; regulatory capital and Islamic contract were found to be significant risks of credit of Islamic banks. For factors in macro economy, that affects both banks performance, only inflation was found to affect and are important to the risk of credit for both Islamic banks and Conventional banks.

Locally, Kithinji (2010) took a look at the profits got from Kenyan banks in relation to the impact of the management of credit risk and discovered that the profit gained by a bank is directly affected by the management of credit risk. Wachira (2017) researched on results of the management practises on credit risk in commercial banks

performance in Nyeri County, Kenya. The finding of this particular research was that all financial institutions in the county had a well written policy on credit which is strictly and consistently followed and that only a few commercial banks conduct a quantitative credit scoring model. In all banks, initial screening is done by credit officer and approval done at different levels depending on the amount. Ogilo (2012) researched on the impact of credit management of risk on performance of Commercial Banks in Kenya financially. The results and conclusions of the study was that there is a strong effect between the CAMELS features of performance in finance of banks. Besides that, they also discovered that the adequacy of having capital, the quality of assets, efficiency in management and liquidity related weakly with the performance of a bank financially.

From the above studies, though the number of studies conducted at a global level to examine the relationship of the above scenario, notably Chaibi and Ftiti (2015), the country operating environment is not like Kenya's' and in the local studies, attention has been concentrated on the on how credit risk affects the performance of financial institutions. There is need to investigate how credit management affects the performance of banks hence, this gap leads to the research questions below: what is the impact of managing credit risk to the financial performance of banks in Kenya?

1.3 Research Objectives

To realize how credit risk affects the performance of Kenyan commercial banks financially.

1.3.1 Specific Objectives

- i. To establish the impact loan loss on financial progress of Kenyan commercial banks.
- ii. To establish the effect of capital adequacy on financial progress of Kenyan commercial banks.
- iii. To establish the impact of non-performing loans on financial progress of Kenyan commercial banks

1.4 Value of the Study

The way in which bank lending and bank performance relate in Kenya is not only beneficial to academics but also to the policy and regulatory stakeholders. For the regulators, it is essential to ensure that the risk is controlled so as to promote financial stability instead of high profits. Therefore, the study helps in identifying the various causes of credit risk and how to limit them.

For the commercial banks, they are able to focus in lending in sectors with low credit risk and be able to establish whether diversification of loan portfolios or lending will be prudent to reduce cost and consequently achieve higher return. The management of Kenyan commercial banks are to be in good state to make a decision on the best lending practice and how to screen potential borrowers. Hence the study contributes to the greater realm of business since through its recommendation; the study adds value on how to better the management of credit in any business and the quality of service.

In academia, the study adds information to researches done academically in the diverse section of the management of credit. Future scholars are to use this research

work as a reference place in future. Besides that other activities in research can be explored in future.

CHAPTER TWO

LITERATURE REVIEW

2.1 Introduction

This particular chapter will be able to cover other works of researchers on credit risk and how commercial banks perform in Kenya. Main sections in this chapter include; theoretical framework, factors affecting the performance of commercial banks, review of empirical studies, conceptual framework and literature review summary..

2.2 Theoretical Foundations

This part takes a clear look on a variety of theories used to show the relationship between loan concentration and commercial banks in Kenya perform. The research paper is guided by 3 main theories, namely; Adverse Selection Theory, Modern portfolio Theory and Portfolio Regulation Theory.

2.2.1 Adverse Selection Theory

The model was brought upon by Pagano and Jappelli (1993), the information sharing leads to an improvement in the amount of borrowers, a reduction in defaults and low interest rates. The amount of lending is also expanded. However, if banks operate in a monopolistic way, there is always a decrease in lending in some occasions. This is because the information exchanged leads to an increase in borrowing to those who seem to be safe borrowers and also those who seem to be risky borrowers yet the increase in the amount of lending to borrowers who seem to be safe can't take care of the full compensation for the decrease in the number of risky borrowers. In a case where credit markets are competitive, there is a more likelihood of lending markets to increase: contests make the ability of a bank to remove rent from their clients and so

the sharing of information leads to an increase in competition between banks (Jappelli & Pagano, 2003).

There is also a further implication from the mode, in that the sharing of information reduces the rates of defaulting and interests while an increase in lending is realized. This is brought about by the credit bureaus which promote competition through the reduction of data on rent or through enforcing cooperation from clients. In certain environments, the exchange of information may lead to the possibility of lending in markets that do not allow extension of credit. In situations like these, the banks have learnt to improve Pareto through the raising of welfares of customers accompanied by the profits earned. (Pagano, 2001).

Reasoning to high credit risk in the bank is the relevant theory to this research and it is brought about by lack of exchange of information mutually between the lender and the one who borrowed and results in the high non-performing loans, consequently affecting the performance of the bank. An instance whereby a bank decides to move further and give credit to agents or lack the worthiness is called advance selection.

2.2.2. Modern Portfolio Theory

This theory is adequately explained by the articles done by Markowitz and were later improved by Sharpe (1934). MTP is a finance theory that tries to ensure that the return expected from a certain portfolio in relation to the risk of that portfolio equally reduces the risk of an expected return in a given level by looking carefully at the ratio of the variety of assets. This argument advanced by Markowitz stated that by investing in assets whose returns move in diverse ways, investors can actively

compensate certain risks found in personal stocks and therefore recommends that investors should choose assets measured financially for their platform using the contribution of each asset to the overall, mean and average variance of the platform. Therefore, this theory tries to ensure that the desired returns of a certain amount of platform risk are maximized or the risk in any level is maximized by selecting the ratio of certain assets. Crouhy et al. (2012) opine based on this position that using the ability of diversification, the risk that seems to be linked to specificity in any individual stock can be reduced at a cost amounting to nothing. Indeed, according to Kaplan and Scholar (2008), portfolio theory is considered one of the theories that affect the finance and investment economically.

Kaplan and Scholar (2008) assert that in accordance to the theory of portfolio, there is a big possibility to develop an optimal portfolio that will offer high level of expected return on the stated risk. This means therefore it is not just looking at the risk expected and the return on the asset but instead on the combined portfolio risk and return trade off.

By basing on this theory, the rationale for a bank in lending to different segments either corporate or individual investors is to make the improvement on the risk and the features of the portfolio, bearing in mind that the lending strategy will provide highest absolute level of return while making an improvement on the diversification of portfolio(Bodie et al., 2005).

Early researchers such as Daumont et al. (2004) have attempted to make optimization of the portfolio within the framework of maximising utility by using different utility functions. Further, Berger (2005) attempted to construct and analyse optimal portfolios based on a single period models. In the case of the commercial banks,

managers should hold its loan portfolio in diversified customer segments where there is material difference in operations (Phalippou & Gottschalg, 2012).

2.2.3 Portfolio Regulation Theory

The Portfolio regulation theory as advanced by Peltzman (1970) opined that there is need to make regulation of the banks in order to maintain security and reliability of the banking system and therefore be able to achieve liability level with high level of difficulty. As a result, regulation bodies to compel to issue guidelines that are aimed at improving the bank's liquidity and solvency. According to the model, the portfolio of an asset is risky; the top management should be compelled to make changes in the declining trend.

According to Ben-Naceur and Omran (2008) proper portfolio management reduces investment risks by controlling excesses of the financial and non-financial institutions. Since banks have some contractual relationship with the depositors, shareholders and the general public, defective information can affect such contractual relationships. It is often argued that inadequate information may result in inadequate allocation of resources which can lead to bank runs and poor performance. Lack of information may mean taking unnecessary risk by the depositors by placing their fund with unscrupulous institutions thereby increasing their market risk. Alshatti (2015) assert that the regulatory theory holds that the firm should be regulated to ensure disclosure of necessary information that can assist the other party from assuming unnecessary risk. For instance, where depositor and bank agreed on a particular rate of return after portfolio assessment without subsequent monitoring, there may be a strong motive to increase the riskiness of the portfolio. Further, Breyer (2010) posit that the purpose of regulatory framework is to address the problem of inadequate

information in a cost-effective manner with a view to reducing penalties to be paid by the banks as a result of a breach of the limit.

2.3 Determinants of Financial Performance

The difference existing in performance level between banks is as a result of a management philosophy and market dynamics. Athanasoglou et al, (2010) suggest that the profitability of a bank is a factor of its management that are majorly affected by the decision of the management and the external factors outside the control of the bank management purview this includes the concentration of the market and the development of the stock market.

2.3.1 Capital Adequacy

The adequate capital of the bank represents the ratio of the percentage of the institutions' capital as well as loans and is used to gauge the financial strength and level of banks' stability (Vong, 2009). Therefore, a bank's capital base need to be raised above the regulatory minimum and that in accordance to the Capital Adequacy Standard that was set for settlement internationally (BIS), commercial banks should be having its own capital base that approximate to 80% of the total asset of the bank Sangmi and Nazir (2010). This will highly influence the level of profit in the company.

Diamond (2012) highlight that a high capital level improves its liquidity because deposits to the banks are very delicate and there is need to have adequate capital base to cushion depositors under such an environment. In addition, a high bank capital lowers the probability of distress because in accordance to Dang (2014), the capital adequacy is evaluated in the capital risk basis and Adequacy Ratio (CRAR). Not forgetting that it also boosts depositors' confidence by protecting them and promoting the stability and efficiency of financial system (Sangmi & Nazir, 2010).

2.3.2 Liquidity Risk

The risk of liquidity is the bank's ability to achieve or rather make a fulfilment of its major obligations, depositors in mainly. A bank is said to be liquid if it is able to convert its assets quickly at a reasonable cost or has ready access to cash. Bank's liquidity is measured as a ratio of cash maintained at both the bank and the Central Bank to total assets. In accordance to Dang (2011), the profit level of the bank directly relates to its liquidity level. Small level of liquidity is a ground reality of failure of a bank. This can lead to closure resulting from bank run due to the inability to meet depositors' demands.

Byrd and Hickman (2012) suggest that a high liquidity cushions the bank against possible depositors run which will affect its performance. In addition, a high liquidity level will result in a bank lending to other banks facing liquidity stress at high return which therefore results in improved performance from the returns. Beasley (2012), there is an indirect relationship between the profit level and the liquidity level. This emanates from the change in asset size and liability in the company.

2.3.3 Asset Quality

The quality of asset determines the strength of the bank's asset against the value loss. It is basically the asset valuation to be able to determine the level of the risk it is the ability of bank to liquidate itself quickly hence influencing its performance. Mostly asset that is growing in size relates to bank's age. Assets that are deteriorating in value are of concern to all stakeholders as they are ultimately Witten off. These compromises the firm's earning capacity. The greatest indicator of asset quality is level of Non-Performing Loans (Dang, 2011).

Sangmi and Nazir (2012) highlight that asset quality of the bank determines its overall performance because the main factor affecting the performance of the bank is the ability to manage the credit risk. The quality of portfolio of the loan has a very great impact on the profit level. This is because improper screening of borrowers can lead to a high default rate and consequently its performance due to a high non-performing loans level. And as Dang (2011) assert, major risk type that faces the banking industry is derived from delinquent loans hence the ratio of NPL are the best proxies the quality of the asset. High level of NPL has an impact on the level of the profitability.

2.3.4 Management Soundness

Sound and efficient management of a bank by its management through the oversight role of the board is one of the contributors to good financial performance. A good management practises are measured by good operating systems, control systems, organizational discipline and a culture that adapts to the environmental challenges that face the bank. However, these being qualitative measures it is to quantify and therefore other bank performance measures such as various financial ratios like total asset growth, loans growth rate among others. Difficult as it may be to measure, total ratio in the income expenditure as well as operating to total expense can be used as good indicators of sound management measure. The quality of the management determines the operating expenses hence affecting the profit (Athanasoglou et al. 2010)

2.3.5 Age of the firm

Shiu (2004) posit that the firms that are old have much more experience, and have enjoyed benefit of learning; are not exposed to awareness plus risk, and consequently benefit from the superiority performance; In addition, they enjoy the benefits emanating from their reputation, this makes them sale more hence more profit margin.

In addition, they are exposed to inertia and bureaucracy characteristics of a firm that comes along with age that might have made firms to develop appropriate routines. This is well explained by Demirgüç- Kunt & Maksimovic, (2008).

Commercial banks worldwide have different product level, different modes of distribution, capacity of management and maturity (Garand, 2010). Performance indicators aid in producing a realistic picture of a bank performance in key areas. Since the outlook is from the program point as a whole, the indicators can be applied for all organizational types as well as models that relates to the banking practices.

2.4 Empirical Review

The existence of the relationship between the performance and the credit risk in the bank has attracted many studies. These studies have been undertaken in both developed and developing world with differing conclusions. In an attempt to make analysis of the credit management impact on loan performance in the Kenyan commercial banks Kinyua (2017) adopted a descriptive census survey whereby branch managers, credit managers and credit officers were interviewed to share their perception. The results were that all commercial banks had established credit policy which is strictly and consistently followed though only a few commercial banks were found to conduct a quantitative credit scoring practice. In all banks, initial screening is done by credit officer and approval done at different levels depending on the amount. Majority of the banks check post borrowing activities of the borrower.

Zribi and Boujelbène (2014) sought to establish the determinants of developing countries credit risk such as Tunisia. The researchers used regression analysis as the methodology to establish the relationship. The study was based on ten samples of banks operating commercially for the period 2000-2012. The results of the regression

were able to disclose that the factors contributing to the results are to a banks level of credit risk were ownership structure, capital regulation and macroeconomic factors. Though the research established the factors affecting the bank credit risk the study was qualitative and did not use a panel data as this research intends to employ.

Abbas, et al. (2014) investigated the credit risk impact on performance of Parkstania banking sector. The study utilized data of 2006 – 2011 from the banks and through the adoption of the fixed regression analysis impact on data panel, the results was that a bank's credit risk as a perfect measure of the ratio existing between the loans that are not performing and the provision of the loss to the non performing loans. This was found affect negatively on Return on Asset and Return on Investment. This implies that when the banks face much of the credit risk, the experience in the performance reduces. This therefore leads to an increment in the ratio of the total loans and the deposits in total hence leading to increase in the profit level. Though the study is similar to the current one, the variables to be used in the regression model differ and therefore the findings will not be necessarily the same.

Abiola and Olausi (2014) were able to conduct an investigation on the effect of managing credit risk on Nigerian performance banks. The study utilized 7 commercial bank's financial reports and collected data for seven years covering the Years (2005 – 2011)..

Ogilo (2012) made an investigation of the effect of managing the risk on performance of the Kenyan banks. The design of the research was applied in the research by using the secondary information that was extracted from the Central Bank of Kenya. For the purpose of data analysis, the research work made use of multiple regression analysis which discovered the adequacy of the capital in banks, quality of assets, and

efficiency in management as well as liquidity had very poor relationship in relation with the performance financially. However, earnings had stronger relationship with the performance. The conclusion was drawn that model of CAMEL can best be applied for management of risks in banks.

Al-khouri (2011) sought to determine the features of the risk that is direct to the performance of the banks by using a sample of forty three commercial banks from six GCC (Gulf Cooperation Council) for the period. The research employed a fixed regression analysis effect on the data and the findings were that the major three types of risk affecting a bank; namely capital risk, liquidity risk and credit risk. The effect was measured using ROA and ROE. The study differs from the present research because it sought to determine the effect of the combined risks to a bank on the performance of a bank and yet the current study will consider only one type of risk- credit risk. Further, the study will only concentrate in Kenyan banks and therefore cross-country effect will not be present.

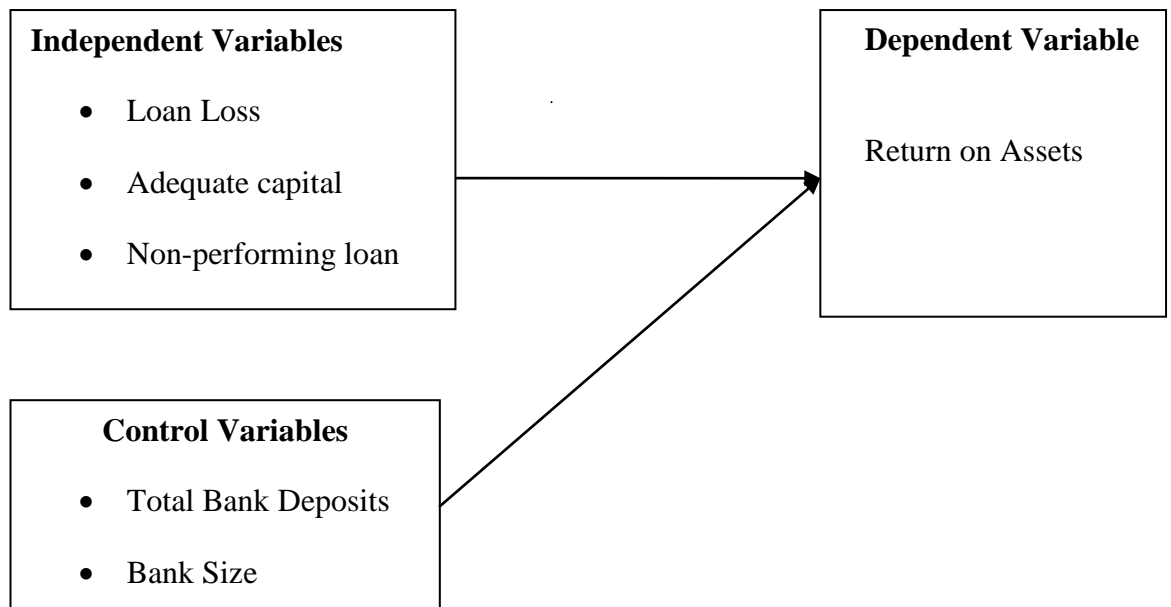
In the analysis of the factors determining the credit risk for the developing countries in comparison with countries that are already developed, Amindu and Hinson (2006) had to make an establishment of the effect of the capital structuring and the risk on the credit, profit level and lending decisions in Ghanaian banks. The researchers employed data regression panel and exposure of credit risk of Ghanaian banks was 1% with majority (86%) of the bank's assets being financed through borrowing. Average rate of lending was 28%. The results also show that capital structure appeared to be positively related to credit risk and profitability, but a negative relationship was found to exist between the size of a banks' lending rate and liquid asset with capital structure. Though the study identified the major determinants of credit risk, the

researchers did not attempt to determine how credit risk is related to performance as measured by ROA like the current study.

2.5 Conceptual Framework

This is a diagram of research tools that is aimed at helping the scholar in development of the understanding of the prevailing situations that is being scrutinised and make the communication of the same. The framework is used in making an outline of any possible action or even makes a presentation of any preferred thought

The in this research, the independent variables are: loss of the loan to gross loan, loans that are not performing to total loan advances and capital adequacy. The control variables are bank size and total deposits of the banks. The bank performance will be measured by ROA.



Source: Researcher (2017)

2.6 Summary of Literature Review

The bank credit risk and how it affects the performance of a bank has been able to discuss extensively using both literature and hypothetical research on the area of the subject. The literature has thoroughly debated both the credit risk and its performance of the banks under consideration, but most of the studies have looked at either the risk management practices or considered more than one type of bank risk – liquidity risk, credit risk and operational risk. It was evident from the empirical studies that a bank risk could take different form and there is need the management to consider all the risks in their day-to-day-operation.

This particular literature also discussed the large quantity of the factors that impact the bank performance. This include internal issues that include adequacy of the capacity of the banks, efficiency in the system of management, segmentation of the market dealing with banks as well as the regulation guidance from bodies like CBK. It was noted that a severe credit risk may lead to customer-deposit run that might lead to a drastic financial crisis.

While a number of studies have researched on credit risk impact on the Kenyan commercial banks' performance, mostly, the research work was done in the countries that are developing with others done in already developed nations. In Kenya, Kithinji (2010), Ogilo (2012) and Kinyua (2017) investigated the management of risk and practices and firm commercial banks' performance. While this was an attempt to unravel the relationship between bank risk and performance, the same studies have not delved to investigate how the credit risks impact on the commercial banks' performance. The researcher aims at filling this gap by addressing credit risk by using

fixed panel data as opposed from the earlier studies that adopted the use of a questionnaire.

Summary of Research Gaps Table

Author (Year)	Frame of Study	Methodology	Findings	Research Gap
Kinyua, A.W (2017}	Effects of credit Risk management practices on bank performance	Descriptive census Research design	-Kenyan banks have credit management framework -Few banks were found to undertake quantitative credit scoring policy	-The study sought to establish only risk management practices but not the the impact of the performance of credit risk on the performance of the banks.. -The data used was primary unlike the present study whereby secondary data is used
Zribi, N and Boujelbene, Y (2014)	Determinants of the credit risk of the Tunisian banks	Regression Analysis	The structure of ownership, regulation of capital and macro economic factors was the dominant factors that influence bank	The study delved more on Islamic banks unlike the present study that deals with conventional banks

			credit risk	
Abbas et al.(2014)	Effect of the exposure of the credit risk on financial performance of the banks	The fixed impact on the panel of data by the regression analysis.	Bank credit risk affects the performance	The variables of the study differ with the current study
Abiola, J and Olausi, S.A (2014)	The impact of managing the credit risk on the performance of banks in the country of Naigeria	Panel regression analysis was employed	There is an existence of the relationship of the profitability level and NPL	The regulation structure of the Nigerian banks differ with Kenyans' and hence variables such as CAR will differ
Ogilo, F (2012)	The credit risk impact on the performance of the banks in the country of Kenya.	Causal Research Design to establish multiple regression analysis	CAMEL model is applied in measurement of the credit risk by the banks	The independent and the control variables differ with the current study
Al-khouri, R (2011)	Effect of Risk characteristic on the performance of banks of Gulf States	Fixed effect regression analysis	Of liquidity, credit, and capital risks that face a bank, only liquidity risk affected the banks performance.	The study focused on all the risks that face a bank unlike the present study that concentrated only on credit risk
Amindu and Hinson (2006)	The effect of the capital structure plus the credit risk in relation	Panel data regression	Capital structure is positively related to	The dependent variables used were lending capacity of

	to decision on lending and the profit level of the Ghanaian banks		credit risk	banks and profitability to get separate regression unlike the present study that has only ROA has the dependent variable
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CHAPTER THREE

RESEARCH METHODOLOGY

3.1 Introduction

This particular section gives a provision of a discussed outline of the methodology of the research that is used under the research. The paper will be focusing on the design of the research, methods of collection of data and the conclusion of the research. The paper also presents the methods of analysing data as well as methods of presentation of the analysed data.

3.2 Research Design

The research design was causal research design and descriptive type of research design. The research was very keen in making an establishment of the relationship existing between the variables. The descriptive study was used as it is done without necessarily changing the set up of the environment. The reason for using this design is that descriptive research makes a report and evaluation of how things are done (Cooper and Schindler, 2007).

3.3 Population of the Study

A sample size of the research is just group of individuals or firms that a particular scholar would like to study on (Sekaran & Bougie, 2010). It makes a definition of time, available elements, interested topic and the geographical boundary of the research paper. The study population is made up of all Kenyan commercial banks. In accordance to CBK, as at the end of year 2016, there were 42 banks that operated in Kenya (Appendix II). This formed the study population.

3.4 Data Collection

The study used secondary data only that was obtained from the commercial banks annual reports and financial statements from 2012 – 2016 from the commercial banks. Non-performing loans level, loan loss, capital adequacy, total assets, total customer deposit and net income is one of the information that was analysed from the financial report.

3.5 Diagnostic Test

The suitability of the data was examined by testing normality as well as existence of multicollinearity for the variables. In this research paper, the test for normality was done by use of Kolmogorov-smirnov as well as Shapiro-Wilk test which is very applicable specially when dealing with the sample size that is less than fifty like in

this particular research paper. Multi-collinearity test evaluates whether the independent variables are highly correlated. It occurs when two or more predictors in the model are highly correlated leading to unreliable and unstable estimates of regression coefficients hence causing strange results when attempting to study how well individual independent variable constitute to an understanding of the dependent variable. To test the level of correlation Wooldridge F-statistic serial correlation analysis was done. Serial correlation test was done was also done to test the level of correlation. Heteroscedasticity test was also used to conduct an examination to find out if there is any difference existing in the period of the observation variance (Godfrey, 1996).

3.6 Data Analysis

SPSS 22th version was used in the data analysis. The correlation analysis was conducted to discover the relationship existing between the two variables under the study. Standard deviation and mean was used to analyse the features of the variables. Finally the regression analysis was applied to make a determination of the relationship existing between the bank credit risk and performance.

The analysis model took the following form:

$$ROA = \beta_0 + \beta_1X_1 + \beta_2X_2 + \beta_3X_3 + \beta_4X_4 + \beta_5X_5 + \epsilon$$

Where:

ROA = Return on Assets, measured as a ratio of net income to total assets

X₁ = Loan loss, measured as a ratio of total loan loss to gross loan

X₂ = Capital adequacy, measured as shareholder funds –to- total assets

X₃ = Non-performing loans, measured by the absolute value of the non-

		Performing loans in the bank balance sheet
X_4	=	Log of Total deposits
X_5	=	Bank size, measured as a log of total assets
$\beta_{i..j}$	=	Change in dependent variable that involves a unit change in independent variables
ϵ	=	Error term

3.6.1 Tests of Significance

The F- test method was used to make a determination of the importance of the regression while the coefficient of determination, R^2 , was applied to evaluate the extent of the variation of Y is explained by X. It was then found to be at 95% confidence level and analysis using correlation was conducted to come up with the direction of the existing relationship between the SME performance and strategic orientation. The Statistical Package for Social Sciences (SPSS) was used to analyze the data.

CHAPTER FOUR

DATA ANALYSIS, RESULTS AND INTERPRETATION

4.1 Introduction

This this particular section makes a presentation of data analysis and interpretation. The objective of this research work was to assess how the Kenyan commercial banks have been affected by the management of the credit risk. Collection of data was done from 29 Kenyan commercial banks. The data sources included NSE reports, annual statements for a period of 5 years (2012-2012) as well as other publications. Data was collected basing on the research variables, that is financial performance depicted by return on assets; Loan loss, calculated as a ratio of total loan loss to gross loan, Capital adequacy, measured as shareholder funds –to- total assets, non-performing loans, measured by the absolute value of the non-Performing loans in the bank balance sheet, Log of Total deposits as well as Bank size, measured as a log of total assets

4.2 Response Rate

A census of the 42 commercial banks in Kenya was done but obtained full data from only 29 commercial banks. This represents a response rate of 69.05%, which was appropriate for the study. This is acceptable according to Mugenda and Mugenda (2003).

4.3 Descriptive Statistics

Descriptive statistics are the measures that define the general nature of the data under study. They define the nature of response from primary data and/or secondary data. Descriptive statistics for this study were: mean, standard deviation, minimum and maximum. Descriptive data analysis was performed on the return on assets; loan loss,

capital adequacy, non-performing loans, total deposits as well as bank size. The descriptive statistics results are tabulated below

	N	Minimum	Maximum	Mean	Std. Deviation	Skewness	Kurtosis		
Return on Assets	29	-.052	.045	.01624	.022169	-1.352	.434	2.153	.845
Loan Loss	29	.007	.081	.03279	.020975	.956	.434	.101	.845
Capital Adequacy	29	.094	.294	.15455	.044062	1.292	.434	2.579	.845
Total-Non performing loans	29	49635000	215344344	3361842019.24	4411088176.819097	2.850	.434	9.934	.845
Log of Total Deposits	29	8.815	11.560	10.43210	.656296	-.223	.434	-.192	.845
Bank size	29	9.015	11.674	10.57297	.645295	-.157	.434	-.372	.845

The descriptive statistics results above show that over the study period, the profitability as measured by return on assets (ROA) had mean of 0.01624 and standard deviation of 0.022169. Loan Loss mean was 0.03279 while its standard deviation was 0.020975. Capital Adequacy mean was 0.15455 and standard deviation was 0.044062. Total-Non performing loans mean was 3361842019.24 and standard deviation was 4411088176.81. Log of Total Deposits had a mean of 10.43210 and

standard deviation of 2.4978, bank size mean was 10.57297 while standard deviation was 0.645295. Maximum performance as measured by ROA was 0.045 while the lowest performance was -0.052 which is an indication that bank's performance was slightly varying due to the issue of credit risk.

4.4 Diagnostic Tests

The research paper was able to make an establishment of how suitable the data was by examining on the multicollinearity for the different kind of variables and the outcome are going to be discussed in the following section.

4.4.1 Tests of Normality

The proper application of the parameters of inferential statistics the assumption of normality is tested. This is to ensure that the kurtosis and skewness of the data is tested. This is just to make a confirmation on whether the data under study is normally distributed. The data normality was then tested by use of Kolmogorov-Smirnov Test and the Shapiro-Wilk Test. The second method is best used when the sample of the data is small i.e. less than fifty. The method is much more reliable especially when making a determination on kurtosis and skewness of the data. When the result is below 0.05, then it is slowly deviating from the distribution of the data that is normal.

Table 4.1: Shapiro-Wilk Test of Normality

Variables	Kolmogorov-Smirnov			Shapiro-Wilk		
	Statistic	df	Sig.	Statistic	df	Sig.
Loan loss	.072	28	.200	.979	28	.428
Capital adequacy	.093	28	.200	.972	28	.219
Non-performing loans	.085	28	.200	.976	28	.322
Total deposits	.069	28	.200	.632	28	.295
Bank size	.063	28	.200	.853	28	.256

Source: Field data (2017)

In accordance to the results, the Shapiro-Walk values were 0.428 for Loan loss, 0.219 for Capital adequacy, 0.322 for Non-performing loans, and 0.295 for total deposits. Kolmogorov-Smirnov tested significant values were at 0.200 for Loan loss Capital adequacy, Non-performing loans and Liquidity each. This brings an implication that the p-value is far much greater than level 0.05 then the prediction that the data was normally distributed cannot be denied. The tested results are therefore of the population emanating from the normal distribution.

4.4.2 Test for Multi-collinearity

Multi-collinearity is the type of the test that makes an evaluation of whether the independent variable under the study is correlated or not. It occurs when more than two predictors in the model are highly correlated leading to unreliable and unstable estimates of regression coefficients hence causing strange results when attempting to

study how well individual independent variables constitute to an understanding of the dependent variable. The consequences of Multicollinearity are increased standard error of estimates of the Betas, meaning decreased Capital adequacy and often confusing and misleading results. The multicollinearity test was done to check if the data have high correlation or are independent variable. The VIF was used to make an evaluation of how the variable correlate and the level of variance each variable has as a result of the dependence with the other variables. Upon the application of the rule of the thumb when VIF is bigger than 10 then there must be an existence of a great problem with the multicollinearity hence this is very dangerous to the research (Newbert, 2008). The outcome of multicollinearity test was as presented in Table 4.3.

Table 4.2: Coefficients^a

Model	Colinearity Statistics	
	Tolerance	VIF
Loan loss	.500	2.000
Capital adequacy	.608	1.646
Non-performing loans	.633	1.580
Total deposits	.493	2.027
Bank size	.498	2.083

a. Dependent Variable: (Constant)

In the results above, all the VIFs are very low because they are well below 5. These values suggest that the coefficients are well estimated and the study should trust their p-values.

4.4.3 Serial Correlation

Wooldridge F-statistic serial correlation analysis was done to test whether the study variables were correlated in any way. Serial correlation test was done and as per the results it is clear that there is no correlation. This ensures the OLS estimates are not biased. The diagnostic results are found on Table 4.10 below

Table 4.3: Serial Correlation

R-squared	0.137628	Mean dependent var	4.706042
Adjusted R-squared	-0.013288	S.D. dependent var	2.726897
S.E. of regression	2.744954	Akaike info criterion	5.008417
Sum squared resid	301.3909	Schwarz criterion	5.320284
Log likelihood	-112.2020	Hannan-Quinn criter.	5.126272
F-statistic	0.911953	Durbin-Watson stat	2.482132
Prob(F-statistic)	0.507259		

Field Data (2017)

The Durbin Watson serial correlation test results as per Table 4.2 indicated the value to be 2.482 which is more than 2 implying that there is no serial correlation.

4.4.4 Heteroscedasticity

This takes place when the error term of the variance is different across the observed data. The heteroscedasticity is very essential in examination of the difference that exist in the variance of the observation to the other (Godfrey, 1996). The research work maximised on the conduct of regression analysis of the independent variables Glejser test (1969). In accordance to this case, the assumption made is that if the value >0.05 , then there should be very minimal problem of the herescedasticity. The results for tests of Heteroscedasticity were as presented in Table 4.4.

Table 4.4: Test for Heteroscedasticity

Coefficients^a					
Model	Unstandardized		Standardized	t	Sig.
	Coefficients		Coefficients		
	B	Std. Error	Beta		
(Constant)	1.125	.012		3.856	.000
Loan loss	.198	.045	.186	0.156	.269
1 Capital adequacy	.096	.056	.112	0.258	.148
Non-performing loans	.256	.089	.349	0.481	.86
Total deposits	.174	.070	.145	0.463	.089
Bank size	.102	.073	.123	0.412	.065

a. Dependent Variable: ROA

Basing on the level of output, the values obtained >0.05 , hence there is no big difference existing in the variation of dependent to independent variables that were tested.

4.5 Correlation analysis

The correlation summary shown in Table 4.7 indicates that the associations between the independent variables were significant at the 95% confidence level and had strong relationships with the dependent variable.

Table 4.5: Correlation Matrix

	Financial performance	Loan loss	Capital adequacy	Non-performing loans	Total deposits	Bank size
Financial performance [®]	1					
(p) Sig. (2 tailed)						
Loan loss (r)	-0.773	1				
(p) (2 tailed)	0.036					
Capital adequacy (r)	0.463	0.316	1			
(p) Sig. (2 tailed)	0.018	0.047				
Non-performing loans (r)	-0.618	0.163	-0.216	1		
(p) Sig. (2 tailed)	0.025	0.019	0.047			
Total deposits (r)	0.652	0.161	0.233	0.462	1	
(p) Sig. (2 tailed)	0.031	0.029	0.046	0.014		
Bank size (r)	0.216	0.135	0.089	0.123	1.523	1
(p) Sig. (2 tailed)	0.013	0.0152	0.0246	0.059	0.016	

The study indicates that the intervariable correlations between the independent variables were strong enough to influence the relationship with the dependent variable. Results of the Pearson's correlation coefficient depicts that there is a

significant negative relationship between financial performance and loan loss ($\rho = -0.773$, $p\text{-value} < 0.05$). Therefore, it can be implied that an increase in Loan loss is associated with decreased financial performance. Secondly, the results showed that there is a significant relationship between financial performance and Capital adequacy ($\rho = 0.463$, $p\text{-value} < 0.05$). Thirdly, the findings showed that there is a strong negative significant relationship between non-performing loans and financial performance ($\rho = -0.618$, $p\text{-value} < 0.05$). Fourthly, there was a significant positive relationship between total deposits and financial performance ($\rho = 0.652$, $p\text{-value} < 0.05$). Finally, there was a significant positive relationship between bank size and financial performance ($\rho = 0.216$, $p\text{-value} < 0.05$)

4.6 Regression Analysis

Coefficient of determination makes an explanation the level of extent at which the dependant variable can explain the variable of the independent variable. ROA helps in making an explanation by using the five variables that are independent. (loan loss, capital adequacy, non-performing loans, total deposits and bank size).

Table 4.6: Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	0.804053	0.646501	0.616543	1.035581

Dependent Variable: financial performance

Predictors: (Constant), loan loss, capital adequacy, non-performing loans, total deposits and bank size

Table 4.8 illustrates that the strength of the relationship between firms listed at the NSE financial performance and independent variables. From the determination

coefficients, it can be noted that there is a strong relationship between dependent and independent variables given an R^2 values of 0.646501 and adjusted to 0.616543. This shows that the independent variables (Loan loss, Capital adequacy, Non-performing loans, Total deposits and bank size) accounts for 61.6% of the variations in firms listed at the NSE financial performance.

Table 4.7: ANOVA of the Regression

	Sum of Squares	df	Mean Square	F	Sig.
Regression	123.5632	5	24.71264	21.58054	0.00003
Residual	26.3381	23	1.145136		
Total	149.9013	28			

Dependent Variable: Firms listed at the NSE financial performance

Predictors: (Constant), Loan loss, Capital adequacy, Non-performing loans, Total deposits and bank size

The model summary also makes an indication that the model of the regression analysis significantly predicts the dependant variable the F test shows an indication that the significant model of regression model. The $P=0.0003$, that is actually less than 0.05 makes an indication that, the model is able to make a prediction of the outcome

Table 4.8: Coefficient of Correlation

	Un-standardized		Standardized	t	Sig.
	Coefficients		Coefficients		
	B	Std. Error	Beta		
(Constant)	3.77	0.451		8.359202	0.004
Loan loss	-0.782	0.121	0.146	-6.46281	0.003
Capital adequacy	0.463	0.079	0.126	5.860759	0.001
Non-performing loans	-0.473	0.073	0.045	-6.479452	0.005
Total deposits	0.532	0.073	0.142	7.287671	0.004
Bank size	0.212	0.079	0.126	2.683544	0.0009

a. Dependent Variable: financial performance

$$\text{Financial performance} = 3.77 - 0.782 * \text{Loan loss} + 0.463 * \text{Capital adequacy} - 0.473 * \text{Non-performing loans} + 0.532 * \text{Total deposits} + 0.212 * \text{Bank size}$$

From the finding in Table 4.10, the study found that holding Loan loss, Capital adequacy, Non-performing loans, and total deposits, at zero commercial banks financial performance will be 3.77. It was established that a unit increase in loan loss, while holding other factors (capital adequacy, non-performing loans, total deposits and bank size) constant, will lead to decrease in financial performance by 0.782 (p = 0.003). Further, unit increase in capital adequacy, while holding other factors (loan loss, non-performing loans, total deposits and bank size) constant, will lead to an increase financial performance by 0.463 (p = 0.001). A unit increase in non-

performing loans, while holding other factors (loan loss, capital adequacy, total deposits and bank size) constant, will lead to a decrease in financial performance by 0.473 ($p = 0.005$). A unit increase in total deposits, while holding other factors (loan loss, capital adequacy, non-performing loans, total deposits and bank size) constant, will lead to an increase in commercial banks financial performance by 0.532 ($p = 0.004$)

Moreover, unit increase in bank size, while holding other factors (loan loss, capital adequacy, non-performing loans, total deposits and bank size) constant, will lead to an increase in financial performance by 0.212 ($p = 0.0009$). This infers that total deposits contribute most to the commercial banks financial performance followed by capital adequacy. At 5% level of significance and 95% level of confidence, Loan loss, Capital adequacy, Non-performing loans, Total deposits and bank size are significant in financial performance.

4.7 Interpretation of the Findings

It was established that a unit increase in loan loss, while holding other factors (capital adequacy, non-performing loans, total deposits and bank size) constant, will lead to decrease in financial performance by 0.782 ($p = 0.003$). In tandem with the study findings, Dang (2014) observed that a high bank capital reduces the chance of distress because the adequacy of capital is judged on the basis of Capital Risk Adequacy Ratio (CRAR). This reflects the internal strength of the bank to withstand losses during a crisis. It also has a direct effect on the profitability of the banks by determining its

expansion to risky but profitable ventures or areas. Not forgetting that it also boosts depositors' confidence by protecting them and promoting the stability and efficiency of financial system (Sangmi & Nazir, 2010). Further, unit increase in capital adequacy, while holding other factors (loan loss, non-performing loans, total deposits and bank size) constant, will lead to an increase in financial performance by 0.463 ($p = 0.001$). In line with the study findings, Capital provides buffer against losses and thus it ensures safety and soundness of the financial institutions (Wachiuri, 2012). All in all, banks need to maintain a minimum amount of capital to prevent bank failure. A unit increase in non-performing loans, while holding other factors (loan loss, capital adequacy, total deposits and bank size) constant, will lead to a decrease in financial performance by 0.473 ($p = 0.005$). When the level of nonperforming loans is high, the assets provisions made are not adequate protection against default risk. Mombi (2013) found out that nonperforming loans in deposit taking microfinance institutions in Kenya accounted for the greatest percentage of the variance in profitability of these institutions. Studies have also showed that nonperforming loans can fuel banking crisis and result in the collapse of institutions and have repercussions in the entire economy.

CHAPTER FIVE

SUMMARY, CONCLUSION AND RECOMMENDATIONS

5.1 Introduction

This section summarises the findings of this research, conclusions, recommendations, research limitations and suggestion of areas which may require further consideration as far as future research is concerned.

5.2 Summary of Findings

The main goal of this study paper was to explore impact of the credit risk on the performance financially by the Kenyan commercial banks. The study considered financial performance of bank proxied using ROA as a variable that is dependant while loan loss, adequate capital and loan that are underperforming as the independent variables while total bank deposits and bank size were incorporated as control variables. Complete data was obtained from 29 banks operating commercially and the data was collected and analyzed using the correlation and regression type of analysis.

the study found that holding Loan loss, Capital adequacy, Non-performing loans, and total deposits, at zero commercial banks financial performance will be 3.77. It was established that a unit increase in loan loss, while holding other factors (capital adequacy, non-performing loans, total deposits and bank size) constant, will result into financial performance increase by 0.782 ($p = 0.003$). Further, unit increase in capital adequacy, while holding other factors (loan loss, non-performing loans, total deposits and bank size) constant, will lead to an increase financial performance by 0.463 ($p = 0.001$). A unit increase in non-performing loans, while holding other factors (loan loss, capital adequacy, total deposits and bank size) constant, will lead to a financial performance decrease by 0.473 ($p = 0.005$). A unit increase in total

deposits, while holding other factors (loan loss, capital adequacy, non-performing loans, total deposits and bank size) constant, will lead to an increased financial performance in the commercial banks by 0.532 ($p = 0.004$)

Moreover, unit increase in bank size, while holding other factors (loan loss, capital adequacy, non-performing loans, total deposits and bank size) constant, will lead to an increase in financial performance by 0.212 ($p = 0.0009$). This shows that total deposits make a great contribution to the commercial banks financial performance followed by capital adequacy. At 95% confidence and 5% level of significance. Loan loss, Capital adequacy, Non-performing loans, Total deposits and bank size are significant in financial performance.

Correlation results established a positive correlation between capital adequacy, total deposits, bank size and financial performance while loan loss and non-performing loans had a negative correlation with the Kenyan commercial banks financial performance. Inferential statistics results made an establishment that the independent variable and the control variables explain 61.6% of the variation in the banks' financial performance. The research work discovered that the F value of statistics shows the positive significance value level of 0.05

5.3 Conclusions

The research concludes the existence of inverse relationship existing between financial performance and loss of the loan. Therefore, it can be implied that an increase in Loan loss is associated with decreased financial performance. Further, the research work makes a conclusion that there is a positive relationship existing between financial performance and capital adequacy. Further, this scholarly work makes a conclusion of existence of a strong negative significant relationship between

the financial performance and the loans that are underperforming. Also, the study concludes that there was a significantly positive relationship existing between total deposits and financial performance. Finally, the research work concludes that there was a significant positive relationship between bank size and financial performance.

This research work concludes that a unit increase in loan loss, while holding other factors (capital adequacy, non-performing loans, total deposits and bank size) constant, will lead to decrease in financial performance. Further, unit increase in capital adequacy, while holding other factors (loan loss, non-performing loans, total deposits and bank size) constant, will result into an increase in the performance in the financial sector. A unit increase in non-performing loans, while holding other factors (loan loss, capital adequacy, total deposits and bank size) constant, this will lead to financial performance decrease. A unit increase in total deposits, while holding other factors (loan loss, capital adequacy, non-performing loans, total deposits and bank size) constant, will lead to an increase in commercial banks financial performance. Moreover, unit increase in bank size, while holding other factors (loan loss, capital adequacy, non-performing loans, total deposits and bank size) constant, will lead to an increase in financial performance. The study concludes that total deposits contribute most to the commercial banks financial performance followed by capital adequacy. At 95% significance level and 5% confidence level respectively, Loan loss, Capital adequacy, Non-performing loans, Total deposits and bank size are significant in the sector of the performance financially.

5.4 Recommendations

The study recommends that management of commercial banks in Kenya should strive to minimise as much as possible the Non-performing loans since they have a negative effect on the financial performance.

This study concluded that that total deposits significantly influences the Kenyan banks financial performance. Thus, the study recommends the management of the Kenyan banks to put more emphasis on total deposits since proper total deposits would help to develop the basis for the development of the bank. mThe researcher also recommends the effect of capital adequacy and bank size to be managed aptly as these affect the financial performance positively

This study therefore encourages the policymaking entities and regulatory authorities in Kenya should develop effective prudential guidelines and polices to strengthen the management of credit risk.

5.5 Limitations of the Study

The main goal of this is to make an exploration on the impact of the credit risk on performance of Kenyan commercial banks. Therefore, the findings of this study are limited to commercial banks in Kenya. The research was conducted within a period of five years. It made use of the secondary data that actively involved the accounting ratios. The problem of using accounting ratios is that they are historical in nature hence they don't reflect the current situation in the financial market. The process of data collection from published financial statements was very time consuming and data was incomplete hence impossible to include all 43 commercial banks. The assumption was that the auditor's report gave a true and fair view but it could have been prone to errors and misstatements. The study was also limited management of the credit risk

effect on the performance financially which is only one of the many factors affecting financial performance of commercial banks.

5.5 Suggestions for Further Research

The research work can be done with a wider population by including all firms that are listed on the NSE. The scope of further research may be extended to other components determining future earnings as well as including more control variables.

The study also recommends additional research on effect of credit risk management on loan default of Kenyan banks. Further, this study recommends an evaluation of management of credit risk practices using qualitative views obtained through interviews to establish an in-depth effect of credit risk management practices on banks performance in financial perspective.

The research recommends further study on management of the credit risk on performance of Microfinance banks since they accept deposits and their lending mechanism are almost similar to those of commercial banks.

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Appendix I: Licensed Commercial Banks in Kenya

1. ABC Bank (Kenya)
2. Bank of Africa
3. Bank of Baroda
4. Bank of India
5. Barclays Bank of Kenya
6. CfCStanbic Holdings
7. Charterhouse Bank Limited (Under - Statutory Management)
8. Chase Bank Kenya (In Receivership)
9. Citibank
10. Commercial Bank of Africa
11. Consolidated Bank of Kenya
12. Cooperative Bank of Kenya
13. Credit Bank
14. Development Bank of Kenya
15. Diamond Trust Bank
16. Ecobank Kenya
17. Equity Bank
18. Family Bank
19. Fidelity Commercial Bank Limited
20. First Community Bank
21. Giro Commercial Bank
22. Guaranty Trust Bank Kenya
23. Guardian Bank
24. Gulf African Bank
25. Habib Bank
26. Habib Bank AG Zurich
27. Housing Finance Company of Kenya
28. I&M Bank
29. Jamii Bora Bank

30. Kenya Commercial Bank
31. Middle East Bank Kenya
32. National Bank of Kenya
33. NIC Bank
34. Oriental Commercial Bank
35. Paramount Universal Bank
36. Prime Bank (Kenya)
37. Sidian Bank
38. Spire Bank
39. Standard Chartered Kenya
40. Trans National Bank Kenya
41. United Bank for Africa
42. Victoria Commercial Bank

Source: Central Bank of Kenya (CBK) report 2016

Appendix II: Raw Data

	Return on Assets	Loan Loss	Capital Adequacy	Total-Non performing loans	Log of Total Deposits	Bank size
ABC Bank	0.014	0.015	0.123	1,355,805,200	10.211	10.333
Bank of Africa	0.001	0.051	0.112	5,262,214,400	10.652	10.819
Bank of Baroda	0.034	0.024	0.153	1,600,566,600	10.686	10.785
Bank of India	0.029	0.007	0.175	194,551,200	10.366	10.545
Barclays Bank	0.037	0.022	0.163	4,914,170,600	11.201	11.346
CBA Bank	0.023	0.028	0.105	5,369,959,400	11.116	11.244
Citi Bank	0.042	0.012	0.223	812,629,800	10.717	10.911
Consolidated Bank	-0.008	0.062	0.094	1,957,277,800	10.041	10.191
Co-op Bank	0.035	0.016	0.156	7,950,431,200	11.326	11.441
Credit Bank	0.002	0.036	0.164	501,865,200	9.82	9.944
Development Bank	0.008	0.072	0.15	1,632,926,000	9.888	10.199
DTB	0.025	0.031	0.127	2,840,000,000	11.219	11.326
Ecobank	-0.021	0.038	0.125	2,632,937,000	10.458	10.625
Equity Bank	0.045	0.018	0.178	10,147,071,800	11.381	11.535
Family Bank	0.021	0.045	0.16	3,475,694,600	10.604	10.735
First Community Bank	0.007	0.023	0.106	1,887,893,000	10.052	10.115
Giro Bank	0.026	0.011	0.165	234,788,600	10.078	10.162
GT Bank	0.011	0.023	0.167	1,595,058,000	10.423	10.569
Guardian Bank	0.017	0.081	0.125	793,997,000	10.071	10.135

I&M bank	0.036	0.01	0.158	2,200,758,108	11.032	11.191
KCB	0.034	0.033	0.154	21,534,434,400	11.56	11.674
M-Oriental Bank	0.01	0.032	0.241	547,562,600	9.768	9.892
Paramount Bank	0.012	0.036	0.153	881,396,400	9.86	9.956
Prime Bank	0.029	0.013	0.131	873,114,200	10.645	10.74
Spire Bank	-0.028	0.078	0.097	1,982,848,400	10.072	10.172
Stanbic Bank	0.027	0.01	0.115	4,323,782,250	8.815	9.015
Stanchart bank	0.039	0.025	0.171	9,303,535,000	11.206	11.35
Trans National Bank	0.016	0.059	0.197	636,514,800	9.866	9.996
UBA bank	-0.052	0.04	0.294	49,635,000	9.397	9.67