

**EFFECT OF NON-PERFORMING LOANS ON LENDING BEHAVIOUR OF
COMMERCIAL BANKS IN KENYA**

By

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DECLARATION

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

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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 study to my loving family, my lovely wife Beatyline Mutwiri, my lovely daughter Joy Praise Kendi and lovely sons Myles Mwenda and Prince Karani for standing with me all through this study.

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ACRONYMS AND ABBREVIATIONS

CBK	-	Central Bank of Kenya
CMA	-	Capital Market Authority
CRB	-	Credit Referencing Bureau
GDP	-	Gross Domestic Product
GFC	-	Global Financial Crisis
NPLs		Non-performing Loans
ROA		Return on Assets

ABSTRACT

The size and quality of loan book is a concern for each and every commercial bank. The quality of loan's book for each bank is determined by the size of total non-performing loans. Commercial banks therefore wish to give out loans as much as possible, but they need to give loans to individuals, institutions or other clients that would be in position and at the same time willing to repay the loans together with interest as and when they fall due. The banks are therefore faced with a challenge of vetting all potential borrowers, and ensuring that they obtain enough security that would caution them against clients who would fail to honour their obligations when they fall due. The banks therefore aspire to issue loans but at the same time ensure that they have the minimum possible non-performing loans. It is with this knowledge that the researcher set out to look on non-performing loans and the possible effect on lending behaviour of commercial banks in the country. The study construed that loan managers are under pressure to issue loans, on the other hand they are required to issue quality loans in which recovery of the same loan would be easier and less costly. This scenario was modelled in the form of a multiple linear regression model that was used to describe the effect of non-performing loans on lending behaviour. The study used descriptive research design and secondary data collection methods employed to collect data for the various variables that were studied in the form of total gross non-performing loans, capital adequacy ratio, firm size and inflation rate that acted as control variables. Their effect on lending behaviour that was represented by the total loans issued over total assets of the bank was determined for a period of 5 years (2013-2017). SPSS version 20 was used to analyse the variables at 95% degrees of freedom, where F statistic test was used to test for significance of the model. Data from 20 banks for 5 years was obtained and analysed accordingly. The regression model that ensued had a coefficient of determination of 20.4% that showed a weak model that was used to predict the dependent variable. The null was however rejected as the F calculated was greater than F critical. The study was also significant at 95% degrees of freedom as it showed that there was positive significant effect of non-performing loans on lending behaviour. The study suggested that increase in non - performing loans resulted from increase in lending behaviour. The conclusion of the study was that in order to ensure that there is accountable total non-performing loans, then banks would need to have a check on their lending behaviour.

CHAPTER ONE

INTRODUCTION

1.1 Background of the Study

Commercial banks are quite critical in ensuring financial development and improvement of a country because of its ability to act as a savings mobilization and resource allocation institutions. Banks have the capacity and scope for preparing monetary assets and assigning them to profitable portions of an economy through their loaning framework and subsequently, changes in supply of credit directly influence the investment tasks and budget imperatives of firms and hence spending choices (Messai & Jouini, 2013). The need for banks to be an efficient in their resource allocation process is more pronounced especially in the developing economies because firms in these markets depend on banks to obtain capital since their capital markets may not be standardized and productive. Finance to these organizations is a precondition for achieving physical assets and enter into gainful activities by performing business tasks that include deals, unascertained liabilities pay remunerations and reserve for possibilities (Tracy, 2011). This implies therefore that the loaning limit of commercial banks is essential area to be analyzed due to its influence on a firm, as well as the economy of a nation at large.

Banks face different forms of risk in their operations. One of the dominant forms of risk is the credit risk that results from the defaults of counterparties in their commitments. Non-performing loans is one form of credit risk that results from concentration of risk in relation to a single borrower, sector of an economy or arising from a possible contamination of risk. Avinash and Mitchell-Ryan (2009) add that a management of an account with concentrated

credit portfolio in a particular sector experiences increased credit risks due to higher default correlations of borrowers within a given industry in case the industry faces a downturn in its operations. However, if a bank concentrates in lending to a particular sector, then it is able to accumulate enough expertise to be able to detect increased credit risk from the lending and take appropriate action early enough in case signs show of future default. On the other hand, a less diversified bank would be more susceptible to economic downturns, since they expose themselves to few sectors and therefore increased banking risk. Manoj and Gauray (2010) therefore suggest that the understanding of the effect of non-performing loans on the bank lending will be important in forecasting the effect of bank lending policies on their performance.

1.1.1 Non-Performing Loans

The concept of non-performing bank loans (NPL) as received different definitions as there are scholars and finance experts. The International Monetary Fund (IMF) (2006) defines the NPL representing the loan principal or interest that remains unpaid for 90 days or longer. Nkusu (2011) point out that, non-performing loans (NPL) is concerned with the differentiation of those advances from the ones that are available due to the postponement of the due installments, comprising of portions and comparing interest sums, by the indebted individuals on a variable interim of time, and more often than not, for a time of not less than 90 days. Further, Filip (2014) define non-performing loan as an ineffective credit relationship characterized by loss generation and poor performance to the commercial bank and blockage to access of further credit to the borrower. However, Saba, Kouser and Azeem, (2012) came up with a more detailed definition of NPL by suggesting that it represents the adjusted or harmed, undesirable, negative credit relationship that repudiates the terms of credit. Likewise, Louzis, et. al. (2011) define the non-performing loans as those loans which emerge from the present loans that installments' delay to lender banks has happened for more than 90 days

from their securities. Such harm happens under the condition of non-performance in the particular exercises of the borrower and of the loan lender bank.

The level of NPL in a bank is determined by the percentage of the non-performing loans to the total loans advanced. The higher the percentage, the higher the credit risk that a bank will be facing. Indeed, lately, the issue of non-performing credits has occupied the interests of banks and controllers, both in developed and developing nations in view of the part that bad debts contribute to the banking crisis. Towards controlling the level of NPL in a bank income statement, Manoj and Gauray (2010) advocate the utilization of various strategies in the face of the defenselessness of the monetary framework tests to reign in the control of NPL in banks. Saba, Kouser and Azeem, (2012) recognize the volume of outstanding loans allowed by banks to be directly related with the volume of non-performing loans. In addition, interest rate charged on bank loans influences the level of NPL since if a bank charges high interest rate, its customers are likely to default. In principle, high interest rate on the loans advanced by banks exerts pronounced weight for borrowers and decreases their capacity to make installments on the current loans that are yet to be repaid and a conceivable increment in NPLs. Similarly, high inflation rate affects the dimensions of NPLs because it erodes debtors' ability to pay just as the unemployment rate (Nkusu, 2011).

Ladime, Kumankoma and Osei (2013) suggest that the minimization of NPL is an important condition for enhancing financial development. This is because when non-performing loans position in a bank is outstanding for a long time, it will affect on the assets that are outstanding in unrewarding regions. Along these lines, NPL is probably going to hamper financial development and decrease the monetary productivity of a nation (Hou, 2007).

1.1.2 Bank Lending Behaviour

Lending in banks is among the important aspects that are keenly observed, as they have a direct impact on profitability and therefore financial performance of the bank. Lending enhances growth and improves the status of the community and furthers the interests of the bank as it is one of the most profitable venture that commercial banks engage in. the increased interest rate spread provides profit opportunities that are far much better than returns obtained from other investments by the bank. Berrospide and Edge (2010) define lending behavior as a measure of bank's loan growth in subsequent periods, as measured by a ratio of gross loans advanced by the bank to borrowers as compared in two or more subsequent years. The bank lending behaviour represents the ratio of gross loans and total advances to the non-performing loans of banks in a particular period relative to a presiding year (Alhassan, Brobbey & Asamoah, 2013). In the same line, Ladime et al (2013) view lending as the act of extending cash to another party with the sole intention that it will be refunded at a future date together with interests earned.

A bank lending behaviour can follow several technologies with Gambacorta and Mistrulli (2004) identifying three distinct basis namely, financial statement, asset-based lending and relationship lending, with these lending technologies being employed by financial intermediaries to avoid over lending or credit rationing. Financial statement lending is an approach whereby the bank lays emphasis on evaluating information from the financial statement and the decision to lend is based on the strength of the firm performance and status. This means that this lending approach will be suitable to be applied in firms that are transparent with certified financial statements. Under asset-based lending, the bank decision to advance loans to potential borrower will be influenced by the quality of the available collateral and consequently will require much monitoring, hence expensive.

Non-performing loans in a bank will influence a bank lending behaviour. This is because NPLs cause loss of economic assets for the banks; they decrease their potential for giving new loans (Suwanaporn, 2008). Thus, the lessening of NPLs includes additionally the satisfactory arrival of assets for loaning, and allows different credits that decrease simultaneously the expenses of governing NPLs, inclusive of the provisions. Furthermore, the reduction of the NPL help to ease the operation process of banks, provide other credit assets, less expensive, also from central banks, which prompt growth and supply of bank loans at a reduced rate premium.

1.1.3 Effect of NPLs on Lending Behaviour

Inspired by constant disappointments and losses occasioned by NPLs that led to the Global Financial Crisis (GFC), testing safe levels for NPLs was pushed into the limelight for the regulators and banks which is frequently a harbinger to crisis of banking. Without a doubt, the expansion in credit defaults, contract dispossessions alongside a synchronous ascent in NPLs, even in developed world nations as US, underscores the connections amongst local and national full scale monetary inefficiency, and banking sector weakness (Barseghyan, 2010). There is need to monitor effectively a bank lending, not only because of the banks stability, but also because the level of NPLs affects the level of financial productivity but also lessens monetary movement in a nation. In this manner, numerous banking examiners have evaded NPLs as "financial pollution" because of their unfavorable financial results (Zeng, 2012).

Klein (2013) feature that, the availability of non-performing loans influences the standard of quality of the loaning activity performed by banks. This is evidenced by the fact that prior to

financial crisis there was notable growth of credit but after defaulting of many borrowers, banks reduced their lending level and introduced stringent credit screening before advancing the loan. Apart from the level of NPLs in the bank's books, Djiogap and Ngomsi (2012) assert that other key determinants of lending level include bank specific factors as well as the macroeconomic that include GDP and policy of handling financial matters. Further, Keeton (2009) stresses the cozy connection between a firm's business cycle and development of loans due to the established relationship that there is a growth of loans when the business experiences expansion and falls when the business falls down. Messai and Jouini(2013) demonstrate that the extent of a bank has an immediate connection with the level of NPLs since bank measure permits the relationship between capital sufficiency and business cycle broadening opportunity in loaning. With high dispersed loans of the bank to various parts, chances of NPLs will decrease when contrasted with the concentrated loans. Therefore diversification underpins the negative relationship amongst NPLs and size of the banks and expanded loaning level.

1.1.4 Licensed Commercial Banks Operating in Kenya

There are 41 commercial banks operating in Kenya, with imperial bank having been put in receivership and are under the watch of the Central Bank of Kenya (CBK Report, 2017) and for the listed banks, the Capital Market Authority (CMA). The general performance of the commercial banks in the country has been quite inconsistent in the last five years having recorded negative earnings per share growth of 14.3% in 2017 compared to a positive growth of 15.5 in 2016 and this negative trend is attributed to the decline of the interest income following the capping of the interest rates. According to the CBK Credit survey for the last quarter of 2017, the ratio of total loans to NPLs stood at 59.44 percent representing a marginal increase of 1.21 % in comparison to the quarter ending September, 2017. Over the same period, as at the end of 2017, the report notes that the total stood at Ksh 2.492 Trillion

as compared to Ksh 2.39 Trillion in the previous quarter ended September. This increase was attributed to the increase in the loan advances to manufacturing, energy and water as well as the transport and communication sectors.

The abnormal state of non-performing credits in the Kenyan banking sector has been an obstacle to stable economy. As per CBK management of bank yearly report (Dec2017), the level of NPLs extended 8.8% to Ksh 124 billion by Dec 31st, 2017 from Ksh 115.32 billion in 2016. The NPL to total loans ratio increased from 10.44% in September 2017 to 10.56 percent in December 2017. This was attributed to a slowdown in business activities. This rise in the level of NPL was majorly driven by business borrowers and affected mostly the tier 2 and 3 banks. Business performance in the country has been affected negatively as the credit growth declined as a result of capping law and the electioneering mood in the country over the period. The high lending level, affected the total loan advanced by the tier 2 and 3 banks but the tier 1 banks loans advanced increased by 15.5% over the period 2016/17 period.

1.2 Research Problem

All over the world, banks operate on their ability to generate income through lending activities and the ability of borrowers to pay the loans with the resultant interest. Regardless of the tremendous revenue made from loaning, accessible literature demonstrates that immense offers of banks loans consistently turn sour and consequently influence the monetary performance of these organizations. The loaning action is made conceivable just if the banks can mobilize adequate funds from their borrowers (Messai & Jouini, 2013). Thus, the administration of non-performing credits by banks will decide if they can propel future loans or limit the same to borrowers. Further, Tracy (2011) highlight that the presence of abnormal state of non-performing loans in a bank's books may result in future borrowers being denied loans on the grounds that the bank can't tell their credit worthiness due to lack

of symmetry in information. Additionally, the fear that is with the lenders is to give loans to people who may default in paying back the loans resulting in the financial institutions opting for a much safer investments like government securities. Thus the level of a bank non-performing loans has a direct effect on its lending behaviour (Amidu & Hinson, 2006) since the pervasiveness of non-performing loans influence the loaning conduct of banks.

The investigation on the effect of NPLs on the lending behaviour has attracted the interest of a number of scholars. Ladime, Sarporg and Osei (2013) investigated the determinants of bank lending behaviour in Ghana. Their findings proved a positive relationship existed between size of a bank, its employed capital structure and lending while the Central bank lending rate and exchange rate, that represented the macroeconomic variable had the negative relationship with bank lending behavior. Filip (2015) researched on dimensions of non-quality of bank lending and their effect to Italian banks lending. The results were that current level of NPLs in a country affect negatively the coming period of the country's GDP. Further, Tahir et al (2015) investigated the impact of lending by commercial banks in Pakistan on GDP growth where they investigated bank lending to the private sector of the economy. The study results expressed that lending had a significant effect on GDP in the short and concluded that bank lending had a direct impact on economic growth of a country.

In Kenya, Khangalah (2016) examined the determinants of bank lending behaviour in Kenya, a case of state owned banking institutions. The study established that liquidity ratio and capital adequacy positively affected credit extension whereas interest rate and asset quality inversely affected credit creation of the state owned commercial banks. Njiru (2016) investigated how monetary policy impacted on lending behavior by the banks in Kenya. The study findings showed that there was an effect in the long run of lending rates and Central

Bank Rate, Exchange Rates, Asset Price, Credit to the Private Sector, Economic growth and Inflation Rates. Mitai (2017) investigated on the effect of NPLs on the performance of licensed banks in Kenya. The findings was that there existed a negative effect of NPLs ratio on ROA, a finding that confirmed that non-performing loans negatively impacted profitability ratios of the banks studied in the country.

Indeed, several studies have sought to investigate the determinants of a bank lending behaviour, both at the local and international level. However, there has been limited studies that seek to establish the nexus between a bank NPL position and its lending behaviour. This research sought to fill in this gap by answering the following question: what is the effect of NPLs on the bank lending behavior for the studied banks in Kenya?

1.3 Research Objective

To establish non-performing loans impact on lending behaviour of Kenyan commercial banks

1.4 Value of the Study

The link between Non-performing loans and lending in Kenya may not only be beneficial to academics but also to the policy and regulatory stakeholders. For the regulators, it may be more important to come up with policies that will manage NPL to ascertain stable financial status and high profits of the banking industry. Therefore, the study will help in setting limits on those regulator policies that affect the lending and ability of borrowers to pay back the loan.

For the commercial banks, the study may assist in focusing on how the level of NPL affects their lending policies. The management of commercial banks will therefore be in a better position to make an informed decision on the best lending practice and how to screen

potential borrowers. Further, the study may add to the more noteworthy domain of business since through its proposal; the study may increase the value of better credit administration rehearses in organizations and administration quality.

In the scholarly community, the study may increase the value of academic research in the more extensive zone of credit administration. Future specialists won't just utilize this study as a type of reference for future examinations, yet additionally propose future research exercises that can be studied.

CHAPTER TWO

LITERATURE REVIEW

2.1 Introduction

This section covers other research works on non-performing loans and lending behaviour of banks. The major areas covered in this chapter include; theoretical framework, determinants of lending behaviour, local and international empirical studies, summary of covered items, research gap and the conceptual framework that supports the gist of the study.

2.2 Theoretical Framework

This section looks at the different theories that were utilized to illuminate this study with the connection between non-performing advances and loaning conduct of banks. The investigation was guided by the theory of asymmetric information and also relied on the proposition by the Moral Hazard theory.

2.2.1 Theory of Asymmetric Information

The theory was first advanced by Akerlof (1970) and further refined by Spence (1973) and Stiglitz (1975). Akerlof in his seminal work on the theory advanced that in many produce markets the buyer makes use of available information to measure the value of a class of goods. However, it notes that it might be difficult for a seller, for example a bank, to differentiate great and awful borrowers (Auronen, 2003) in Richard (2011) that might lead a bank in propelling a credit to a bad borrower. In this way the theory is of the view that in a market, an individual that has more information on a specific transaction (which in our study refers to the borrower) is in a situation to negotiate ideal provisions than the other party in regard to performance (the lender) (Richard, 2011). Conversely, the party with least

whereabouts of the transaction will seemingly going to conclude on unfavorable biased terms of the transaction. In the banking industry, unfriendly determination and good risks coming about because of the deviated information has prompted noteworthy party of nonperforming loans (Bofondi and Gobbi, 2003).

This theory is relevant to the study because as Richard (2011) note, in the banking industry, it might be hard to recognize good and awful borrowers in the market due to a lack of correct information about them. Borrowers are in a superior position and has more information on a specific item to be transacted and can negotiate ideal terms for the transaction compared with other party. This infers that a lender (bank) who has less information about a similar particular item to be transacted goes to the negotiation table from a distraught position of settling on either right or wrong choice concerning the transaction. To safeguard the interest of borrowers, lenders will demand strong control rights over some of the borrowers' interest because of the information asymmetry. Such control rights include, for example, asking for collaterals and also charging high interest rates on the loan to cover the increased risk exposure.

However, Barron and Staten (2008) note that it is also possible that those companies and individuals who are known to have bad loan repayment history to get new loans because of their willingness to pay higher interest rates. Hence the credit loan fee may end up reducing, instead of increasing the bank income. Under such a circumstance, Wang (2012) recommend that banks would most likely pick generally low financing costs and deny some portion of the interest for advances, as opposed to choose higher loan fees and endeavor to meet the greater part of the borrowers' interest for loans. Likewise, moral risk happens when financial institutions can't oversee the acquiring organization constantly and get successful data on the borrower's readiness and ability to repay amount advanced plus interests, business

performance, and total use of loan. Thus, it is conceivable that the company involved in borrowing may go against the provisions of the contract or purposefully run away from debt.

2.2.2 Moral Hazard Theory

The Moral Hazard Theory was progressed by Pagano and Jappelli(1993) and hypothesizes that banks having low capital portfolio tend to build wage by expanding its loan portfolio danger by putting resources into low quality borrowers, which in the process brings about the future development in non-performing loans (NPLs). This routine with regards to banks produces a moral hazard, since banks realize that they are less capitalized but then despite everything they increase their peril of loan portfolio. Hence, this theory proposes that a borrower is probably going to fail to repay except if the lender has generated impactful consequences for default including future inaccessibility to any borrowing. Additionally, if banks can't evaluate the borrowers' wealth, there exists enough enticement for default on the loan. Subsequently, to thwart these, moneylenders will hike rates, that will spearhead breakdown of markets (Alary and Goller, 2011).

Padilla and Pagano (1993) clarify anyway that when borrowers' information is shared between banks, the expansion in loaning to worthy borrowers may fail to make up for a possible decrease in loaning to some other kinds of risk. This is on account of, through sharing of the credit information, the lenders can recognize unfaithful borrowers from worthy borrowers in the market. Advanced information sharing enables moneylenders to quantify borrower hazard all the more precisely and to come up with credit policy and regulations as needs be. Worthy borrowers with trusted credit background can therefore access appealing costs, fortifying credit request, and less higher-risk borrowers would be proportioned away from the market due to banks' refusal to extend these borrowers fair rates (Barron & Staten, 2008).

2.3 Determinants of Bank Lending Behaviour

A review of the available literary work on the determinants of bank lending show that studies on banking have widely been done in the developed world and few in developing countries and limitedly on Kenya. Most of the research work done to establish the behavior bank lending have emphasized on specific macroeconomic variables of a given bank to explain bank lending. This section discusses the different variables of bank and no-bank that has an impact on banks' behavior as far as lending is concerned.

2.3.1 Non-Performing Loans

Wheelock and Wilson (2010) highlight that failing banks tend to have lower efficiency and high ratios of NPL with negative correlation with profitability that implies increase in these non-performing loans lead to decrease in profitability. Further Athanasoglou et al. (2008) further expresses that poor quality loans decreases the amount of revenue received by the bank from interest and consequently results to negative correlation with profitability. Berger & DeYoung (1997) therefore proposes that efficient banks are always in a better position of managing credit risk and therefore advancing more quality loans that enhances their performance. Similarly, NPLs have been found to have a negative effect on bank productivity as well as efficiency. This finding show that banks should limit NPLs as a solution to enhance bank's efficiency.

Lower bank resource quality means that the banks risk levels which indicate the bank hesitance to go out on a limb through loaning. Olokoyo (2011) recommend that the measure of non-performing credits in bank's balance sheet is an evidence of the profitability of bank loaning exercises. Non-performing loan requires the provisions for discounts of either segments or the greater part of the loans progressed, bringing about misfortunes that the banks assimilate through its value capital and consequently leading to the reluctance of banks

to take new risks through lending. Amidu and Hinson (2006) assert that the ability of a bank to hold efficient portfolio of assets represents the extent of quality of bank loans and by extension the bank lending behaviour. This study provides that it's somewhat the experience from giving awful loans that impacts banks choice to expand more credit. Bank asset quality is taken as a proxy to the size of the bank such that if the asset quality is high, then it follows, *ceteris paribus*, that the bank will be able to advance more loans. Similarly, Bikker and Hu (2012) contend that a bank with a large asset base is capable to come up with capital at a reduced cost, and thus being able to lend to more and be more profitable.

2.3.2 Bank Deposits

Customers' deposits forms the largest portion of the bank liabilities and at the same time has a significant purpose in the intermediation process (Aurangzeb, 2012). Indeed, the lending act of the bank's top management is majorly affected by the quantity and resulting cost of customers' deposits to these banks. A bank ability to lend these funds to borrowers at a higher return than what it is paying to the depositors generates interest income. Thus it follows that the bigger the volume of bank stores, the more supports accessible to the bank and furthermore the higher probability of given out more credits and advances. A positive correlation is subsequently expected amongst stores and lending behavior by the banks. Lin et al. (2012) opine that increase in capital level leads to reduced interests' installments on unsecured debt capital proportion has a positive connection with intrigue edge because of increments in financing costs coming about because of equity capital. In this way, for a bank with higher stores, it can request higher intrigue edges trying to adjust for the expansion in the normal cost of capital.

The bank deposits also depend on the management efficiency as captured by how managers are able to control costs. Gambacorta and Mistrulli (2004) suggest that a highly skilled

banking staff better appreciate loan markets and are in a position to distinguish between bad loans from great ones, thus the less probability of giving credits which have low likelihood of default. Better management of operational expense is an indicator of effective administrative efficiency which translates to better performance. Indeed, Gambera (2000) show that a higher managerial bank quality positively affects loaning performance, suggesting accordingly that authoritative productivity is one of the key factors that influence a bank's prosperity.

2.3.3 Bank Size

The banks' capital serves as a protection of the bank's depositors' funds. The capital size compared to deposits determines the risk level that a bank can take. Banks with bigger capital structures can extend loans that have longer maturities and relatively high risk. Furlong (1992). asserts that bank regulation in general on capital in particular were perceived as more stiff in the 1990s. The growth rates on bank loans in New England were positively related to capital to asset ratios. Thus, regulation on capital impacted heavily on bank lending (Furlong, 1992).

Capital adequacy illustrates the potency of a bank's capital against other financial and economic variation. Gambacorta et Mistrulli (2004), opined that since 1988 when Basel Capital Accord came into effect, a lot has been reviewed on impact of a bank's capital on its lending but empirical literature from the Western Countries have not been exhaustive in this area. Ehraman et al (2003) concluded that monetary tightening has a serious negative effect on the lending activities of banks which are undercapitalized.

2.3.4 Gross Domestic Product

The macroeconomic environment is non-bank specific factors that influence the lending capacity of a bank. Albertazzib and Gambacorta (2009) suggest that in the time of economic

blast, organizations expect credits to exploit expansion and subsequently banks investment openings similarly rise. Also, amid retreats, the interest for credit will decrease and this infers the bank loaning is recurring and fluctuates in light of the financial development. Dell'Aricecia and Marquez (2006) find that bank credit developments have a tendency to be pro-repetitive; that is, high rates of development in GDP has a tendency to initiate a high rate of development in bank credit. This is on the grounds that in the time of booming economic conditions, banks unwind their criteria and loan to both great and awful investors, at that point in the midst of economic recession most advances progress toward becoming non-performing and the wellspring of credit goes away, proportioning out even great projects. Chiorazzo et al. (2008) point that through the transmission component; an expansion in prime rate adversely influences banks' loaning conduct.

Dell'Aricecia and Marquez (2010) recommend that a bank or industry control influence the level of loaning. They take note of that an activity of market control in banking will bring about a higher rate of interest and a lower supply credit office augmentation. In any case, there has been clashing outcomes on the impact of market control on loaning with one school of thought contending that within the sight of market control (high focus), banks will have more noteworthy motivating force to put resources into the securing of delicate information through relationship keeping money through foundation of an association with borrowers after some time in this manner, upgrading the supply of credit and therefore lessening firms' budgetary imperatives. Nonetheless, Beck et al. (2004) recommend that in a focused market, loaning rates are lower and in this manner bringing about all the more financing for firms.

2.4 Empirical Studies

Many studies have attempted to investigate bank lending and how the non-performing loans impact on the bank performance. In addition, studies have sought to establish how a bank credit risk management affects the level of NPL.

Tahir, Shehzadi, Ali and Ullah (2015) explored the effect of bank loaning on financial aspects development in Pakistan on the private sector players. The study took economic development as the dependent variable while bank credit to private part, GDP, loan fee, expansion, and government utilizations were independent factors. The study utilized secondary data gathered from World Bank Indicator covering the period 1973 to 2013. The exploration adopted a descriptive and correlation technique to build up the association with the unit root test being utilized to check the stationary of factors. The study discoveries demonstrated that bank credit strongly affected the economic movement of a nation. The relapse study showed that there was unfriendly effect of bank credit on monetary development in Pakistan. The research is dissimilar with the current one in the sense that it did not seek to find how the bank NPL impacts on the lending behaviour of the financial institutions.

Bertay, Demirgüç-Kunt and Huizinga (2015) sought to determine bank proprietorship and credit on the business operations with the aim of discovering loaning by state banks in contrast with the exclusive banks is less pro-cyclical. The exact investigation is wide scope on worldwide example of 1,633 banks from 111 nations crosswise over both developed and developing nations for the period 1999-2010. In completing the study, the analysts embraced a relapse approach that had the dependent variable being the credits and the independent variables included development rate of GDP per capita, swelling, loan fee and bank estimate as the control variable. The study established negative and huge coefficients on the cooperation of GDP per capita development and the state bank sham, and the administration

adequacy variable, showing that subsidizing at state banks is less pro-cyclical than at private banks.

Filip (2014) in his study tried to establish the kind of direct relationship that existed between NPLs and the quality of bank loaning practices. He acquired data from Romania commercial banks and analyzed quantitatively to examine this relationship. In his analysis, he employed Ordinary Least Squares to find out the underlying relationship between the variables. The study also provided the Pearson's correlation of the variables of study. The evolution of NPLs is determined by variables such as the unemployment level, inflation rate, growth of GDP and amount of money lend by banks. These factors were taken as study variables. The findings was that unemployment rate and the aggregate total bank credits have noteworthy positive effects on the adjustments in the financing cost on bank advances, while the adjustment in expansion rate and the growth rate has negative impact.

Messai & Jouini (2013) researched the micro and macro factors of non-performing credits of a number of banks in 3 nations, specifically; Spain, Italy and Greece in the period of 2004-2008 amid which they confronted budgetary emergency. The factors utilized included both macroeconomic, for example, the rate of development of GDP, joblessness rate and genuine interest cost bank particular variables included profit for resources, the change in loans and the loan loss reserves to total loans ratio (LLR/TL). Very reliable with the hypothesis, the outcomes that we discovered demonstrate a huge and negative connection between the development rate of GDP, and NPL, a finding that is predictable with that of Rajan and Dhal (2003) and Dash and Kabra, (2010). Further, the outcomes demonstrate that banks should offer interests to numerous variables when they offer advances keeping in mind the end goal to diminish the level of nonperforming credits.

Abid, et. al. (2014) inspected the bank-specific and macroeconomic determinants of customer's non-performing credits in Tunisia. The study embraced the dynamic board information strategies on 16 banks and the study period was 2003 to 2012. A regression analysis is embraced and among the discoveries, the nature of administration was found to affect the techniques' effectiveness of allowing credits to households. The common modelling techniques among the banks for evaluating borrowers credit appeal was the quantitative modelling-based techniques. The study verified that the bad management in advancing loans to lag inefficiency and is positively related to NPLs. This finding shows that both performance and inefficiency explain the levels of NPLs in a bank and also can be taken as an indicator for the quality of administration.

Ladime, Kumankoma and Osei (2013) inquired about on the determinants of bank loaning conduct in Ghana. The investigation utilizes board information of seventeen (17) banks covering the period 2000 – 2010, and additionally acquires the GMM-System estimator created by Arellano and Bover (1995) and Blundell and Bond (1998) to decide the loaning estimators. The finding was that the bank size and capital structure have a positive and factually critical and positive association with bank loaning conduct. Thus, the industry level of competition was found to have a positive and noteworthy effect on bank loaning conduct in Ghana. On the contrary side of the continuum, the study found that macroeconomic components that incorporate the national bank loaning rate and conversion scale had a negative and was factually critical effect on bank loaning conduct. in the framework.

Alhassan, Brobbey and Asamoah (2013) looked to answer the question of whether bank asset quality continues on bank loaning conduct in Ghana. By utilizing random effects (RE) show

and heteroskedastic unsettling influences, the research obtained data from 25 Ghanaian banks covering the period 2005 to 2010. Diversification of bank revenue is fueled by factor such as proper management deposits, equity and proficiency in general management of loaning processes which in turn will influence the loaning characteristic of banks. The findings were that the loaning behavior of a bank is affected by the asset quality of banks. Moreover, bank deposit mobilization, intermediation spread and equity were additionally found to impact bank loaning conduct.

Were & Wambua (2014) analyzed variables that enhanced loan interest spread of business banks in Kenya. The investigation utilized board information covering the period 2002 – 2011 and received exploratory and regression studies with the previous were being utilized to demonstrate patterns and the empirical analysis of loan fee spreads on different factors of interest. Multiple linear regression analysis was carried out to exactly explore interest rates spread determinants by utilizing board information estimation procedure. The exploration discoveries showed that bank-particular components play a noteworthy part in the assurance of loan fee spreads. These elements incorporate the bank size, credit risk as estimated by non-performing advances to add up to credits ratio and operating expenses. All the bank particular components were found to decidedly impact loan interest rate spreads. Despite what might be expected, higher bank liquidity proportion negatively affects the spreads.

Kwambai & Wandera (2013) examined impacts of credit data sharing on nonperforming advances in KCB, Kenya. They looked at the pattern of awful advances prior and after the presentation of credit referencing bureau (CRB), to recognize the variables that record for bad advances and to decide the economic segment that records higher awful advances and the endeavors taken to minimize risk in this area. The sources of primary data were established

while the secondary information was created from the published financial statements of KCB for the period covering 2007 - 2012. The research finding showered that credit data sharing expands straightforwardness among financial organizations, enables the banks to loan wisely, brings down the hazard level to the banks, goes about as a borrowers train against defaulting and it additionally decreases the cost incurred in borrowing i.e. interest laid on advances.

2.5 Research Gap

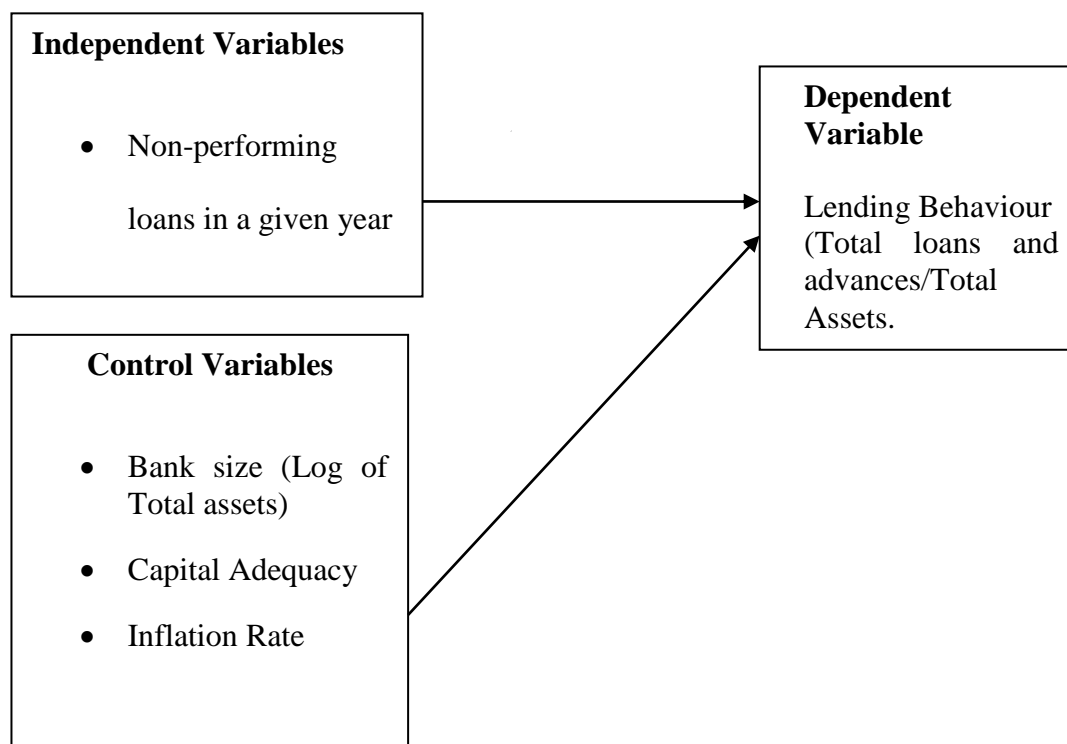
Several studies have been undertaken seeking to explain the determinants of non-performing loans in Kenyan banks. Studies have looked at the influence of credit referencing bureaus, borrower screening techniques, management risk characteristics and macroeconomic factors. In addition, the lending behaviour of banks has received limited research and the factors that influence them has not been empirically been tested. The present investigation goes past the Kenyan studies by trying to build up the nexus between non-performing credits and loaning conduct of business banks in Kenya. Moreover, it considers macroeconomic factors as well as individual bank-particular factors utilizing board information for the business banks. Further, the investigation covers a later period extending from 2013 to 2017 amid which critical changes in the Kenyan banking industry, for example, interest topping, have been presented. The study consequently seeks to fill in this gap by investigating the impact of NPL on the loaning behaviour of banks in Kenya.

To investigate the loan lending behaviour of commercial banks, the researcher postulates that it is possible that banks in different tiers react differently to their non-performing loans level in the preceding year. Consequently, the researcher will wish to determine whether the level of NPL in the preceding year influences the lending behaviour of the banks in different tiers in the same way.

2.6 Conceptual Framework

A conceptual framework is a diagrammatical research device proposed that will aid in creating a model and a comprehensive summary of the situation that is being studied. This study looks to examine the impact of non-performing credits on loaning conduct of business banks in Kenya. Bank loaning conduct is operationalized as far as the development in credits over study time frame to be estimated by the proportion of loans and advances to total asset. The independent factors in the study will be: non-performing credits. The control factors will be the bank estimate, Gross residential item development and development of client deposit.

Figure 2.1: Conceptual Framework Model



Source: Researcher (2018)

CHAPTER THREE

RESEARCH METHODOLOGY

3.1 Introduction

The section provides discourse of the blueprint in the study methodology utilized as a part of the research in order to ascertain statistically the effect of NPLs on lending behaviour. It centers on the design of the study, techniques for data analysis and arrives at a conclusion with the collection and data presentation strategies that was utilized as a part of this study.

3.2 Research Design

A research design has been explained by various statisticians to mean a set of arrangements to enhance the collection analysis and interpretation of data with the sole purpose of combining relevance with the purpose for the research (Tromp 2008). The method of research that most captures the objectives of this study is descriptive research design because of the need to connect ideas to understand cause and effect between the variables. The Research design was a causal research outline and descriptive research plan as the examination will be quick to build up the connection between the factors. A descriptive study is one in which data is gathered without changing the environment (i.e., nothing is altered). The purpose behind utilizing this outline is that descriptive research establishes and reports the way things are (Cooper & Schindler, 2007).

Kothari (2004), suggests that ideal design for research should be in position to provide the best possible information and give avenues to look for other aspects of the problems. The

study found descriptive design to be appropriate for this study as the study concentrated on looking at effects and relationship between variables.

3.3 Population and Sample

The population for this study is the total gathering of people or organizations that the scientist wishes to research on (Sekaran and Bougie, 2010). It is characterized as far as accessibility of components, time allotment, land limits and theme of intrigue. The population of study in this research involved every single commercial bank operating in Kenya. According to the CBK data as at the end 2017, there were 41 banks that operated in Kenya (Appendix II). Because of the small number of banks in the research, then it was a census.

3.4 Data Collection

Secondary data collection methods were employed in the study in their entirety. The data was retrieved from the commercial banks annual and financial reports from 2013 – 2017 and the Central Bank of Kenya in the period under review. Data for the various variables was collected from these financial records for the last five years that marked the study period of 2013 to 2017.

3.5 Data Analysis

Data was analyzed by use of SPSS Version 20. Correlation analysis was done to discover the effects of independent factors on the dependent factor. Descriptive statistics, for example, mean and standard deviation likewise was done to depict variable characteristics. Regression analysis was carried out to set up the connection between the bank NPL level and the loaning characteristics conduct.

The model of analysis took the following form:

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

Where:

- Y = Proxy for bank lending behaviour, measured by ratio of loans and advances to total asset
- X₁ = Non performing loans on gross loans at time
- X₂ = Firm Size, measured as log of total assets
- X₃ = Capital Adequacy Rate
- X₄ = Inflation rate
- ε = Error term

The significance of the study was undertaken by the use of F statistic test in the ANOVA table, where the null was either rejected or failed to be rejected. The significance was determined by the comparison of p value against alpha, where p value ≥ 0.05 showed that the model was significant and the vice versa at 95% degrees of freedom.

CHAPTER FOUR

DATA ANALYSIS, RESULTS AND DISCUSSION

4.1 Introduction

The objective of this chapter was to undertake an analysis of the data and present results in form of various tables that would enhance comprehension of the data variables and how they relate to each other. Pearson's Correlation and multiple linear regression are undertaken in the quest to obtain solutions to the research questions stipulated.

4.2 Data Validity

In order to determine data the validity of the data, diagnostic tests were undertaken on the data, in order to undertake a regression analysis. The diagnostic tests undertaken were normality test and multi collinearity test.

4.2.1 Normality Test

Table 4.1: Normality Test

	Skewness		Kurtosis	
	Statistic	Std. Error	Statistic	Std. Error
Y = Lending Behaviour	4.160	.241	16.266	.478
X1 = NPL/Loans	2.009	.241	3.208	.478
X2 = Bank Size	-.291	.241	1.874	.478
X3 = Capital Adequacy Rate	1.598	.241	3.422	.478
X4 = Inflation Rate	.568	.241	-.495	.478
Valid N (listwise)				

Source: Author, 2018

Normality test is undertaken by the use of Skewness and kurtosis. The values for both kurtosis and skewness should lie within the range of +3 and -3. A score beyond the range shows that the variable is obtained from a population distribution that is not normal. In this study, the lending behaviour has a kurtosis value of 16.266 and skewness of 4.16 which clearly shows that it does not follow within the range. Other variables that are not within the range are X1, which measures non performing loans, and X3 for capital adequacy.

Variables that are not normal are transformed so as to obtain normality. In this study, the data for the variables was transformed by obtaining the square root of the variables. The skewness and kurtosis after transformation of these variables was as shown in table 4.2

Table 4.2: Normality Test After Transformation

	Skewness		Kurtosis	
	Statistic	Std. Error	Statistic	Std. Error
Y* = Lending Behaviour	.980	.241	-.263	.478
X1* = NPL/Loans	1.253	.241	.773	.478
X2 = Bank Size	-.291	.241	1.874	.478
X3* = Capital Adequacy	.550	.241	.380	.478
X4 = Inflation Rate	.568	.241	-.495	.478
Valid N (listwise)				

Soure: Author, 2018

Table 4.2 shows that all the variables after transformation have kurtosis and skewness that lie within the range. The transformed variables are therefore used in regression analysis.

4.2.2 Multi Collinearity Test

Multi collinearity test is undertaken by looking at the VIF (Variable inflation factors). If the VIF values are greater than 10, then the variable is said to have presence of multi collinearity in which case the variable is dropped from the model. VIF values of less than show absence of multi collinearity in the variables.

Table 4.3: Collinearity Test

Model	95.0% Confidence Interval for B		Collinearity Statistics	
	Lower Bound	Upper Bound	Tolerance	VIF
(Constant)	-.742	.578		
1 X1* = NPL/Loans	.409	.986	.880	1.136
X2 = Bank Size	-.028	.068	.883	1.132
X3* = Capital Adequacy	-.109	.119	.942	1.062
X4 = Inflation Rate	-.040	.055	.936	1.069

Source: Author, 2018

The VIF values for all the variables are below 10 and therefore no multi collinearity.

4.3 Descriptive Statistics

Table 4.4 below was used to help understand the distribution of data collected for the variables in the form of mean, standard deviations and the resulting outliers of each variables that were shown by the maximum and minimum value for each variable.

Table 4.4: Descriptive Statistics

	N	Minimum	Maximum	Mean	Std. Deviation
	Statistic	Statistic	Statistic	Statistic	Statistic
Y* = Lending Behaviour	100	.0715	.814	.285	.1970

X1* = NPL/Loans	100	.071	.579	.2121	.132
X2 = Bank Size	100	5.377	10.346	7.70	.789
X3*= Capital Adequacy	100	2.38	4.071	3.068	.324
X4 = Inflation Rate	100	5.72	8.10	6.756	.777
Valid N (listwise)	100				

Source: Author, 2018

The lending behavior was determined by total loans to total assets. This variable was then transformed to obtain the root of that ratio which had a mean of 0.285 with a standard deviation of .197. The maximum value was 0.814 and the minimum was 0.0714.

No- performing loans was determined by the ratio of non-performing loans to gross loans. The root of this variable was also determined in order to transform the data. The mean for this variable was 0.212 with a standard deviation of 0.132 and outliers of 0.579 and 0.071.

Bank Size was measured by the log of total assets. It had a mean of 7.7 with a standard deviation of 0.789 and outliers at 5.38 and 10.346.

Capital adequacy on the other hand had a mean of 3.07 with a standard deviation of .324 and maximum of 4.07 and minimum of 2.38. This variable was also transformed by finding the square root value.

Inflation rate was a macro-economic variable that had a mean of 6.76% with standard deviation of 0.777% and outliers at 8.10% and 5.72%.

4.3.1 Heteroscedasticity

Breusch-Pagan test was applied in order to test for heteroscedasticity. This test is conducted on the basis that error terms are normally distributed. The null hypothesis of the test is a constant variance. Consequently if the p-value is very significant, the null would be rejected

hence conclude that variance is not constant. Results below show that the p value is greater than .05 thus the error term is constant.

Table 4.5: Heteroscedasticity Tests

Breusch-Pagan / Cook-Weisberg test for heteroscedasticity

Ho: Constant variance

Variables: fitted values of lending behavior

chi2 (1)	=	1.39
Prob > chi2	=	0.2365

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

4.4 Correlation Analysis

Spearman’s correlation is used to determine the correlation between two variables. The Spearman’s correlation ranges from +1 to -1, positive correlation shows that increasing one variable causes the other variable to increase as well, and decreasing one variable also decreases the other variable too. Negative correlation implies that increasing one variable causes the other to decrease and the vice versa. A correlation of zero shows that increasing or decreasing one variable does not result in either decrease or increase of the other variable. The study is interested with the Spearman’s correlation between the independent variables and the dependent variables. It shows the effect of the dependent variable by increasing each independent variable by one unit.

Table 4.6: Correlation Analysis Table

	<i>Y* = Lending Behaviour</i>	<i>X1* = NPL/Loans</i>	<i>X2 = Bank Size</i>	<i>X3* = Capital Adequacy</i>	<i>X4 = Inflation Rate</i>
<i>Y* = Lending Behaviour</i>	1				
<i>X1* = NPL/Loans</i>	0.444144958	1			
<i>X2 = Bank Size</i>	-0.075564955	-0.33328385	1		
<i>X3* = Capital Adequacy</i>	-0.010468533	0.016598443	0.05545503	1	
<i>X4 = Inflation Rate</i>	0.068367951	0.08372661	0.03050608	-0.23606	1

Source: Author, 2018

The correlation analysis table shows that non-performing loans has positive correlation against lending behaviour. This means that increasing the non-performing loans results in increase in lending behaviour. Bank size on the other hand has negative correlation against lending behaviour although the relationship is weak almost zero at -0.076. This means that as the banks increases in size their lending behaviour decreases. Similarly Capital adequacy have negative correlation with lending behaviour albeit in very small quantities. Inflation rate has positive though weak correlation against lending behaviour as increases in inflation rate pushes the general prices of commodities up, thereby people would request more loans on period of high inflation as compared to period of low inflation rates.

4.5 Regression Analysis

Diagnostic tests allowed us to determine whether the distribution of the data for each variable is distributed in a manner that fulfills all the conditions required to undertake a multiple regression. A multiple linear regression analysis is undertaken to determine the linear equation that can be applied in predicting the dependent variable.

The multiple regression model used was:

$$Y = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \beta_4 X_4 + e_t$$

Table 4.7 below shows the model summary for the regression.

Table 4.7: Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.452 ^a	.204	.170	.179

Source: Author, 2018.

The results in Table 4.7 indicate that the Non-performing loans had a joint significant effect on lending behaviour of Kenyan commercial banks as shown by r value of 0.452. The R squared was however 0.204 which shows that the independent variables only accounted for 20.4% of the variance on lending behaviour of Kenyan commercial banks. The other 79.6% of the variances in lending behavior is explained by factors outside this model.

Table 4.7 below shows the ANOVA results which explained the model fit through the F statistic and the probability of F-statistic.

Table 4.8: ANOVA Table

Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	.784	4	.196	6.085	.000 ^b
	Residual	3.059	95	.032		
	Total	3.843	99			

a. Dependent Variable: Y* = Lending Behaviour

b. Predictors: (Constant), X4 = Inflation Rate, X2 = Bank Size, X3= Capital Adequacy, X1* = NPL/Loans

The results in Table 4.8 show that the F statistic was 6.085 at 5% level of confidence. The F critical level at 4 and 95 degrees of freedom at alpha of 0.05 is given by 2.5. The calculated value of F is therefore greater than F critical which leads us to reject the null hypothesis and declare that there is effect of non-performing loans on the lending behavior of commercial banks in Kenya. The p value is 0.000 which is less than the alpha value of 0.05 and we therefore declare that the model is significant. The study therefore concludes that there is

positive statistically significant effect of non-performing loans on the lending rate behavior of commercial banks in Kenya.

Table 4.8 below shows the coefficient results for the model variables, the t-values of each of the independent variables as well as the significance (p-value).

Table 4.9: Regression Coefficients

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
(Constant)	-.082	.332		-.247	.805
X1* = NPL/Loans	.698	.145	.469	4.802	.000
X2 = Bank Size	.020	.024	.080	.823	.412
X3*= Capital Adequacy	.005	.057	.009	.090	.928
X4 = Inflation Rate	.007	.024	.029	.303	.762

Source: Author, 2018.

The coefficient of determination (R squared) was 20.4% which shows that the resulting model was weak in predicting the dependent variable, lending rate behaviour. However the 20.4% of the changes could be predicted by the resulting model from the coefficients obtained in table 4.8.

$$Y = -0.082 + 0.698 X_1 + 0.020 X_2 + 0.005 X_3 + 0.007 X_4 + 0.332$$

4.5 Interpretation of the Study Findings

The study revealed that NPLs had a positive statistically significant effect on lending behaviour of Kenyan commercial banks. This was explained by the fact that the study rejected the null hypothesis as the critical F value of 2.5 was found to be less than 6.085 which was the F calculated value. The p value was less than the alpha value. The effect was

considered positive as the Pearson's Correlation of no-performing loans against lending rate behavior was at 0.44.

In this case, all the predictor variables (Non performing loans, Firm Size, Capital adequacy and Inflation rate) explained a variation in lending behaviour and that the overall model was significant. The findings in this study agreed with those conducted by Wheelock and Wilson (2010) who indicated that failing banks tend to have lower efficiency and high ratios of problem loans and detected negative relationships between profitability and problem loans even among the ones which do not fail. Further Athanasoglou et al. (2008) showed that the poor quality of loans decreases revenue, which confirms that NPLs has a negative effect on bank profitability and thus loan lending. This support the hypothesis that the efficient banks are better at managing their credit risk as proposed by Berger and DeYoung (1997). Similarly, the bank NPL ratio has been found to have a negative impact on bank productivity as well as efficiency. This finding show that banks should limit NPLs as a solution to enhance bank's efficiency. Lower bank resource quality means that the banks risk levels which indicate the bank hesitance to go out on a limb through loaning. Olokoyo (2011) recommend that the measure of non-performing credits in bank's balance sheet is an evidence of the profitability of bank loaning exercises. Non-performing loan requires the provisions for discounts of either segments or the greater part of the loans progressed, bringing about misfortunes that the banks assimilate through its value capital and consequently leading to the reluctance of banks to take new risks through lending. Amidu and Hinson (2006) assert that the ability of a bank to hold efficient portfolio of assets represents the extent of quality of bank loans and by extension the bank lending behaviour. This study provides that it's somewhat the experience from giving awful loans that impacts banks choice to expand more credit. Bank asset quality is taken as a proxy to the size of the bank such that if the asset quality is high, then it follows, *ceteris paribus*, that the bank will be able to advance more

loans. Similarly, Bikker and Hu (2012) contend that a bank with a large asset base is capable to come up with capital at a reduced cost, and thus being able to lend to more and be more profitable.

CHAPTER FIVE

SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

5.1 Introduction

The chapter considers the summary of the result findings, recommendations and limitations of the research in line with the aim of the research which is to demonstrate the association between non-performing loans and lending behaviour in commercial banks in Kenya.

5.2 Summary

The current study sought to establish whether there was any significant effect on non-performing loans on the lending behaviour of Kenyan Commercial banks. This was demonstrated by the mean score of responses and regression coefficient.

The regression results showed an r value of 0.452 and an R^2 of 0.204 which indicated that that the independent variables accounted for only 20.4% of the variance on lending behaviour of Kenyan commercial banks at 5% level of confidence. The study however found that the effect of non-performing loans on the lending rate behavior was statistically significant as the p value of 0.000 was less than the alpha value of 0.05. The study also rejected the null hypothesis as the F calculated value of 6.085 was greater than the F critical value of 2.5.

Further, the study revealed that all the predictor variables (NPLs, firm size, capital adequacy and inflation rate) explained a variation in lending behaviour

5.3 Conclusions

Based on the objective and the findings of the study the following conclusions can be made:

There was significant positive effect of non-performing loans on lending rate behavior of commercial banks. This means that increase in non-performing loans leads to increase in lending behavior. Non-performing loans increase when there is increased lending behavior by the commercial banks in Kenya.

When bank size increases the lending behavior decreases. This would mean that larger banks have more sources of income and therefore they do not entirely rely on lending for their profitability issues. Capital adequacy also shows a negative correlation with lending behavior. This could be explained to mean that increase in core capital and owners' capital over the total risky assets decreases the lending rate behavior of the commercial banks as this reduces their risk levels.

Inflation rate has a positive correlation with lending rate behavior. When the country's inflation rate increases, the general price levels of commodities increases. There is an upward pressure on all prices and therefore borrowers also seek for increased amount of loans which also leads to increase in the lending rate behavior by the commercial banks.

5.4 Recommendations for Policy and Practice

Based on the results, findings and conclusions, the following recommendations have been generated:

From the earlier conceptual argument and context of the study, it is evident that NPLs have been an area of study, and their different dimensional effects on lending behaviours of commercial banks are dynamic. Basing from the study results, it is evident that NPLs have a significant negative effect on lending behaviour. It is therefore of importance for banks to work on appropriate measures to reduce the levels of NPLs.

Great efforts should be made by banks management to manage NPLs which will consequently increase lending behaviour. This requires organisation of the structure of funding sources to improve low-cost funds, giving credit to the productive sectors while applying the principle of prudence and improving competence. Results of this study can be used as guidelines for the management of the bank to control NPLs that will result in healthy functioning of banks

It is also advisable, while anticipating loan losses and making of provisions, management should follow stringent policies which dictate the flexibility of lending. In this regard, management should not make higher provisions for loan losses, and this will restrict their lending traits to quality borrowers, which will consequently see a boost in loan performance.

5.5 Limitations of the Study

Some of the limitations that this study faced include; the study was guided by six variables, which cannot conclusively elaborate the effects of Non-performing Loans on Lending behaviour of commercial banks. The study did also not include all factors that affect lending behaviour of commercial banks.

Another limitation of the study was use of secondary data only. Primary data could add substance to study with personal responses from bank's management stating the levels of NPLs effect on their management operations.

5.6 Suggestions for Further Studies

The study covered only commercial banks in Kenya, further studies can be done incorporating a bigger population that incorporates SACCO's and deposit taking micro-finances.

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APPENDIX I: LIST OF COMMERCIAL BANKS IN KENYA

Classification	Description	Commercial Banks
Tier I	Comprises of banks with a balance sheet of more than Kenya Shillings 40 billion	<ol style="list-style-type: none">1. Citibank2. Barclays bank of Kenya3. Equity Holdings Ltd4. Kenya Commercial Bank5. Standard Chartered Bank6. Cooperative Bank of Kenya7. Stanbic Holdings8. National Industrial Bank
Tier II	Comprises of banks with a balance sheet of less than	<ol style="list-style-type: none">9. Bank of India

	<p>Kenya Shillings 40 billion but more than Kenya Shillings 10 billion</p>	<p>10. Bank of Baroda 11. Family Bank 12. Prime Bank 13. Commercial Bank of Africa 14. Bank of Africa 15. Consolidated Bank 16. Chase Bank 17. Fina Bank 18. EcoBank 19. Housing Finance 20. National Bank of Kenya 21. Diamond Trust Bank</p>
<p>Tier III</p>	<p>Comprises of banks with a balance sheet of less than Kenya Shillings 10 billion</p>	<p>22. Habib A.G. Zurich 23. Victoria Commercial Bank 24. Credit Bank 25. Habib Bank (K) Ltd 26. Oriental Commercial Bank</p>

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27. K-Rep Bank
 28. ABC Bank
 29. Development Bank of Kenya
 30. Middle East Bank
 31. Equatorial Commercial Bank
 32. Trans-National Bank
 33. Dubai Bank
 34. Fidelity Commercial Bank
 35. City Finance Bank
 36. Paramount Universal Bank
 37. Giro Commercial Bank
 38. Guardian Bank
 39. Southern Credit Bank
 40. Gulf African Bank
 41. First Community Bank

Source: The Banking Survey by CBK 2017, pp. 191.

Appendix 2: Data Used

Y* = Lending Behaviour	X1* = NPL/Loans	X2 = Bank Size	X3*= Capital Adequacy	X4 = Inflation Rate
0.171569	0.171569	7.35404	3.113515	5.72
0.137703	0.137703	7.384596	3.161247	6.88
0.198754	0.198754	7.372063	3.049273	6.58
0.292148	0.292148	7.35086	2.850707	6.5
0.205129	0.205129	7.311986	3.034953	8.1
0.422835	0.422835	7.224757	3.044522	5.72
0.535571	0.535571	7.178316	3.044522	6.88
0.548048	0.548048	7.150312	2.944439	6.58
0.546217	0.546217	7.143574	2.694627	6.5
0.578646	0.578646	7.128908	3.566712	8.1
0.271649	0.271649	6.863849	2.60269	5.72
0.309659	0.309659	6.947656	2.939162	6.88
0.260207	0.260207	7.012292	3.072693	6.58
0.280809	0.280809	7.08643	3.182212	6.5
0.287902	0.287902	7.160321	3.421	8.1
0.376365	0.376365	7.314788	2.912351	5.72
0.363318	0.363318	7.331199	2.541602	6.88
0.347285	0.347285	7.343572	3.725693	6.58
0.407935	0.407935	7.350686	3.520461	6.5
0.432252	0.432252	7.394529	2.895912	8.1
0.229072	0.229072	7.764194	3.063391	5.72
0.156609	0.156609	7.788159	2.985682	6.88
0.192023	0.192023	7.828504	3.50255	6.58
0.17631	0.17631	7.841562	3.250374	6.5
0.227621	0.227621	7.83917	2.714695	8.1
0.109236	0.109236	5.376931	3.414443	5.72
0.077946	0.077946	5.562814	2.890372	6.88
0.12456	0.12456	5.600416	3.446808	6.58
0.149732	0.149732	5.675515	3.161247	6.5
0.164021	0.164021	5.719717	2.694627	8.1
0.088956	0.088956	7.669829	3.735286	5.72
0.109712	0.109712	7.78169	3.280911	6.88
0.739903	0.097015	7.855273	3.591818	6.58
0.757257	0.112575	7.856911	3.848018	6.5
0.813785	0.101855	7.829568	2.379546	8.1
0.659669	0.088478	8.057424	3.044522	5.72
0.666256	0.070955	8.14976	2.873565	6.88
0.658912	0.109812	8.280915	3.072693	6.58
0.559904	0.141864	8.38761	2.928524	6.5

0.549892	0.132649	8.431495	2.985682	8.1
0.598807	0.074904	8.359597	3.091042	5.72
0.633129	0.079331	8.451309	2.939162	6.88
0.612795	0.09775	8.530903	2.939162	6.58
0.099492	0.099492	8.544066	3.039749	6.5
0.095967	0.095967	8.583006	3.306887	8.1
0.077475	0.077475	9.343454	2.884801	5.72
0.091983	0.091983	10.34648	3.010621	6.88
0.195842	0.195842	9.376612	3.186353	6.58
0.122783	0.122783	8.398416	2.631889	6.5
0.170263	0.170263	8.455035	2.985682	8.1
0.098853	0.098853	8.592012	2.821379	5.72
0.106515	0.106515	8.690496	2.766319	6.88
0.11979	0.11979	8.746707	3.673766	6.58
0.133118	0.133118	8.750039	3.254243	6.5
0.140695	0.140695	8.75465	2.60269	8.1
0.144733	0.144733	7.192418	3.025291	5.72
0.138275	0.138275	7.22902	2.95491	6.88
0.124742	0.124742	7.228983	3.616309	6.58
0.531917	0.176637	7.21533	3.261935	6.5
0.531592	0.179558	7.223598	2.844909	8.1
0.621831	0.497024	7.165495	3.242592	5.72
0.634511	0.497836	7.172605	2.809403	6.88
0.619409	0.501652	7.172905	3.077312	6.58
0.597769	0.526232	7.175928	3.387774	6.5
0.541417	0.541417	7.206735	2.442347	8.1
0.260482	0.260482	8.164348	3.238678	5.72
0.220207	0.220207	8.295487	2.933857	6.88
0.234345	0.234345	8.297726	3.517498	6.58
0.239191	0.239191	8.324031	4.070735	6.5
0.251866	0.251866	8.335231	2.397895	8.1
0.115088	0.115088	8.08301	2.734368	5.72
0.114206	0.114206	8.163699	2.785011	6.88
0.119195	0.119195	8.219554	3.058707	6.58
0.120549	0.120549	8.2222	2.912351	6.5
0.122079	0.122079	8.234109	3.054001	8.1
0.103329	0.103329	7.261777	2.928524	5.72
0.087862	0.087862	7.261032	2.873565	6.88
0.09467	0.09467	7.336167	2.95491	6.58
0.115075	0.115075	7.387329	3.020425	6.5
0.12977	0.12977	7.437779	3.342862	8.1
0.071496	0.071496	8.188634	2.884801	5.72
0.086992	0.086992	8.246657	2.939162	6.88
0.080236	0.080236	8.256313	3.299534	6.58
0.111915	0.111915	8.258421	2.639057	6.5

0.125322	0.125322	8.293965	3.218876	8.1
0.177533	0.177533	7.965524	2.850707	5.72
0.150696	0.150696	8.038881	2.797281	6.88
0.228033	0.228033	8.083239	3.744787	6.58
0.216201	0.216201	8.048943	3.321432	6.5
0.205754	0.205754	8.041164	2.76001	8.1
0.278023	0.278023	7.694262	3.206803	5.72
0.291374	0.291374	7.739712	2.960105	6.88
0.270754	0.270754	7.812924	3.292126	6.58
0.303695	0.303695	7.821728	2.791165	6.5
0.305621	0.305621	7.834875	2.80336	8.1
0.212307	0.212307	6.969997	3.532226	5.72
0.259475	0.259475	6.991381	2.867899	6.88
0.277135	0.277135	7.024594	3.068053	6.58
0.284252	0.284252	7.058776	3.306887	6.5
0.281022	0.281022	7.069339	2.727853	8.1