

**INFLUENCE OF ECONOMIC VARIABLES ON NON-PERFORMING LOANS
IN BANKS IN KENYA: A CASE OF SELECTED BANK FUNDED PROJECTS IN
NAIROBI COUNTY.**

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**A Research Project Report Submitted in Partial Fulfillment of the Requirements for
the Award of Degree in Masters of Art in Project Planning and Management of the
University of Nairobi**

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DECLARATION

This research project report is my authentic work and has not been presented for the award of any degree in any other University

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

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DEDICATION

I dedicate the research work to my parents, Mr. and Mrs Opondo and my siblings Riziki, Rich, Pendo, Neema, Shukuru, Malaki, Winnie, Dickson, Liam, Oderos, Shiyos and Alma. They have been a constant inspiration and encouragement to me while working on this project report.

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ACRONYMS AND ABBREVIATIONS

CBK	-	Central Bank of Kenya
CRB	-	Credit Reference Bureau
FX	-	Foreign exchange rate
GDP	-	Gross domestic product
IMF	-	International Monetary Fund
INF	-	Inflation rate
KNBS	-	Kenya National Bureau of Statistics
NPLs	-	Non-performing loans

ABSTRACT

Issuance of loan is fundamental for economic growth and development of any economy. The loan portfolio both domestic and foreign plays a major role in funding the nation and its citizenry towards achieving a stable economy. The research problem was the influence of economic variables in non-performing loans in bank in Kenya. A case of selected bank funded projects in Nairobi County. The objectives of the study were to determine the influence of Gross domestic Product, inflation rate and foreign exchange rate on non-performing loans in bank funded projects. The researcher used descriptive research design and the research instrument was questionnaires. The target population were projects that had defaulted from repaying their loans within a period of ninety days after the loan maturity period. This information was drawn from 160 respondents with sample size of 114 which were picked by Yamane formulae technique. The study employed simple random sampling and stratified sampling techniques which were used when selecting the number of respondents. Descriptive data analysis involved presenting the means, percentages, frequencies and standard deviations of core variable of interest. The analysis of non-numerical data was done in line with the objectives and reported in narrative form. The generalization and prediction of data using correlation and regression analysis determined the relationship between variables. The regression analysis determined the influence of selected economic aspects on nonperforming loans in bank funded projects. Information on credit risk was sourced from survey questionnaires and annual banks supervision reports by CBK, while data on macroeconomic variables from the statistical bulletins of CBK and KNBS. The Reliability test was 0.89 hence this was considered reliable for further test and analysis. Multiple regression models were applied to ascertain the existence of a long run effect by the selected variables on the non-performing loans in bank funded projects. Pearson's correlation coefficient was applied to test and build up the strong negative relationship that exists between Gross Domestic Product, ($r = -0.0524$) and non-performing loans. The correlation results indicate a positive relationship between inflation rate ($r = 0.0284$) and non-performing loans while there is a strong positive relationship between foreign exchange ($r = 0.1973$) onto the NPLs in bank funded projects in Kenya. From data collected spanning from 2008 to 2018 the study concluded that certain economic variables do influence the rate of loan performance in Kenya. The study recommends that the Government of Kenya in consultation with the private sector should come up with policies that would help curb the rate of non-performing loans in Kenya. Banks should be able to flag potential risk in their loan portfolios which will enable mitigation and making right decisions so as to improve the loan recovery rate. Further research should be conducted so as to comprehend the long run impact of nonperforming loans in the banking sector as well as the economy of Kenya.

CHAPTER ONE

INTRODUCTION

1.1 Background to the Study

The backbone of an economy relies on the strength of its commercial banks. Established economies are characterised by strong banking system and structures. Businesses that seek to grow and expand often rely on commercial banks for the financial services. In addition, households and enterprises that are in need of capital rely on commercial banks for loans in order to finance their projects. Commercial banks therefore forms the core part of an economy as they support every financial aspects of institutions and businesses with respect to saving and borrowing opportunities. A weak banking system produces a stale economy while a well-established and effective financial body promotes growth and development of a nation.

Non-performing loans (NPLs) produces a downturn effect on the growth of commercial banks in both industrialized and emerging economies. The International Monetary Fund IMF (2014), report on the global financial stability highlights that there is need for countries to develop sound strategies that better detect and handle the NPLs since they influence the growth and advancement of various institutions. Moreover, the revival and recovery of institutions in financial distress is dependent on their loan portfolio (The Florentine Merchant Bank paper 1400 A.D).

Project financing is the science that involves the sourcing of financial assets in order to sufficiently finance every undertaking from the beginning of the project to the conclusion and move of the complete project to the intended recipients. The craft of Project financing can be followed back to 1299 A.D when the English Crown financed the examination and improvement of the Devon Silver mines by repaying the Florentine Merchant Bank, Frescobaldi, with the yields from the mines. In venture financing the yield income is depended upon to support what had been at first acquired to fund the venture otherwise called the principal amount in addition to the collected enthusiasm according to the pre concurred borrowing rates. The structure of project financing is a perplexing one yet on the general class it's isolated into two significant classifications in particular: Debt financing and Equity financing.

According to Rambo (2011), equity financing is the type of financing whereby the investors utilize their equity capital and retain profit to fund the project activities. Debt financing is whereby the capital required to fund the exercises of an undertaking is raised through loaning institutions, proficient people and other intergovernmental organizations.

Debt funds are characterized further into sub-classes relying upon the loaning agreement, the time of reimbursement, parties involved, the sum in demand by the borrower and the length wherein the finances are given to the borrower. A portion of these sources incorporate; Debentures, Deferred credit, fixed deposits, working capital advance and Bank term advances.

Researchers in the past have come up with models that link credit risk to economic activities. In their examination on the impact of macroeconomic factors on Islamic banks financing in Malaysia, Yusoff (2011), discovered that non-performing credits are risky to the economy of a nation and the whole world because of the monetary challenges advanced by these credit institutions in East-Asian nations, American and Sub-Saharan Africa.

Henceforth it is critical to think about the triggers of non-performing advances as specialists acknowledge that once we perceive these segments then we can make courses of action to restrain any future happenings of these advances. In a study by Karim (2010), using data from the Commercial Banks in Singapore and Malaysia from Year 1995 to 2000, the Tobit regression results unmistakably show that higher non-performing credit lessens cost proficiency. Similarly, lower cost proficiency rises non-performing credits.

Out of 11 African countries profiled by Moody's in the (Moody Report, 2016), Angola, Ghana and Democratic Republic of Congo have a higher extent of non-performing advances than Kenya, with 25, 22 and 18 percent respectively. The assessments office incorporated that the introduction of new International Financial Report System (IFRS) 9 accounting rules crosswise over generally African nations flag an ascent in loan loss providing inclusion, therefore reducing the hazard related with bad loans.

East African banks face a more tightly administrative condition in 2019, with national banks moving to secure depositors in frail and undercapitalized loan lenders and guarantee steadiness in the division. They have been executing guidelines expecting banks to build their center cash-flow to withstand money related stuns in the midst of rising non-performing advances.

The Central Bank of Kenya (2018), report reveals that there was an increase in NPLs in the periods between December 2017 and December 2018 owing to high loan fees and credit risks in the period. The stake of NPLs on the overall gross loans rose from 4.4% to 4.7% in the period.

The Kenyan monetary framework includes the Central Bank, commercial banks, microfinance banks (MFBs), mortgage finance companies, credit reference bureaus (CRBs), money remittance providers (MRPs) and foreign exchange (forex). The pyramid shaped structure has the central bank at the apex and other banks in the subsequent tiers. Other fiscal affiliations structure different levels, which are a contact of the pyramid.

The Kenya Banking Act of 1991 regulations saw the collapse of 19 banks between the years of 1993 and 1995, owing to the implementation of fair competition and anti-fraud principles. Six banks including Bullion and Prudential also collapsed in 1998 because of tightening financial environment. Five financial institutions followed suit in the periods between 2000 and 2005 for the reason of financial fraud and illegalities (Kenya Bankers Association, 2018).

Equity Bank in briefing in June 2019 said that it would hope to push up to Sh150 billion from its governments loan portfolio of Sh169.7 billion to SME loans as these securities mature, denoting a significant move in the loaning technique for Kenya's second-biggest moneylender by resources. I&M ousted Diamond Trust Bank (DTB) as the moneylender with the most minimal NPL to add up to advances proportion among recorded banks at the Nairobi Securities Exchange (NSE), an investigation of their most recent budget reports appeared.

Apart from the National Bank of Kenya (NBK) whose budgetary burdens throughout the years has caused it to have the most exceedingly rate of NPL in Nairobi, mortgage lender specialist Housing Finance (HF) states NPLs bounced the most in the current year. HF's non-performing credits expanded in 2018 in what the organization states was a "slowdown in the property market and unfavorable macro-economic conditions".

In the county of Nairobi, short-term loans are particularly common with young and innovative business ideas because of the way different financial organizations in the county are ready to work with youthful business visionaries by loaning finances to them that is required to fund their projects. A number of banks in the county additionally have a unique advance structure focusing on the youngsters associated with business and undertakings in order to cover their exceptional need of credit funds.

Intentional measures by the Government of Kenya to set up assets focusing on the Kenyan business and activities youthful business visionaries is one significant activity to control on the rising levels of joblessness through empowering self-employment among the young people. Established by GoK in 2014; The Youth Enterprise Fund and Uwezo Fund are some of the initiatives by the Kenyan Government to give delicate advances and awards to the youth in order to complete their projects and run their Small Micro Enterprises with less money related strain so as to enhance economic growth and realize the Millennium Development Goals and Sustainable Development Goals. These loans are not capable of catering for the enormous interest by the youth all through the nation who have different practical tasks that require funding. This has led to young people selecting the commercial bank credits to back their activities and run their recently formed enterprises.

According to CBK (2014) report, the face of the financial sector as at 31st December 2014, had the Central Bank of Kenya at the apex with the sole authoritative power. The subsequent tier was made up of forty-three business-associated banks, nine microfinance banks (MFBs), thirteen money remittance providers (MRPs), eighty-seven forex bureaus, one home loan cash association and two credit reference bureaus (CRBs). Out of the 44 money related associations, 30 were privately had banks included 3 with open shareholding and 27 special features while 14 were outside asserted.

The 9 MFBs, 2 CRBs, 13 MRPs and 87 forex offices are altogether possessed secretly. Of the 14 outside had money related foundations, 10 are secretly melded auxiliaries of remote banks and 4 are parts of remote merged banks. In addition, 11 of the 44 financial institutions are trading at the Nairobi Stock Exchange.

The ongoing changes in the banking industry coupled with an increasing level of NPLs, has seen a renewed interest in studying the underlying factors that affect the repayment of loans. Several financial entities face liquidity challenges as well as ballooning debt, which affects their operations and long-term achievement of goals. The economic outlook has remained an interesting area of study in understanding the behavior of banks and other financial institutions. Fernández (2012), opines that NPLs causes financial strains in the operations of the financial institutions.

It is of principal significance to recognize and understand the reasons for non-performing credits; the association between monetary factors and NPLs has additionally been the focal point of numerous examinations. These factors incorporate expansion rate, GDP, joblessness rate, genuine successful trade rates, and record of creation just as financing costs. Pace of Interest, vitality emergency, joblessness, swelling and cash transformation rate have a positive association with NPLs while GDP improvement has a negative association with the non-performing credits of Pakistani money related region (Farhan, 2012). These factors impact conditions on families and firms from this time forward influence their capacity to repay credits.

Edward Altman (2001), found that default rate, proportion of protections, default protections and financial downturn had negative effect on recovering nonperforming credits while the GDP advancement rate and stock return had gainful result.

In 2019/2020 the world was hit by a global health pandemic- the novel Corona virus. This virus impacted the world negatively. It paralyzed the entire globe and impacted on businesses as well as global economic development. The Corona virus also known as COVID 19 hit all sectors of the economy.

This led to reduced income earnings, reduced GDP, increased inflation rates, higher forex and interest rates which directly impact to the credit and loan facilities. Commercial banks and businesses were crippled as travel/ boundaries restrictions and curfews were put up all over the world. World travel was highly restricted and banned.

The world GDP dropped to its knees and was considered the least over the centuries. Governments, Corporates, International organizations, Non-governmental organizations, businesses and industries came to a standstill. No business was conducted as this health crisis had killed 1.13M people and infected 41.4M patients worldwide while in Africa there was 1.67M infected cases with 40,495 death cases whereas in Kenya the total cases were 46,144 with 858 deaths as reported by the Ministry of Health, Government of Kenya 22nd Oct 2020.

Henceforth Governments worldwide redirected their stimulus and stress packages towards businesses to combat the effects of Corona virus. These economic packages were expected to cushion entrepreneurs and business owners as they are the primary drivers of economies. These economic and social packages were set up to assist the citizenry to recover certain sectors of their livelihoods. The World Bank, European Union, African Union, Coca cola, Master card and Jack Ma foundation put in monetary and other health resources to fight Corona virus as reported by Central Bank of Kenya- Annual Finance report (2020).

In Kenya, the Corona virus hit severely with 46,144 infected cases and 858 deaths. This equally affected livelihood because according to Kenya National Employment Authority as at September 2020, 1M Kenyans had lost their jobs in the period of March-August 2020 and this had a direct impact on the default rates.

According to Fitch rating (2020) on 12th Aug, Kenya Commercial Bank (KCB) received up \$16.3b from International Finance Corporation (IFC) to revamp its capital reserves similarly Diamond Trust Bank (DTB) received \$5.4b from CBK to support its SME portfolio while in Sept Coca cola company committed a further \$1.25m to support 1800 micro businesses.

This directly impacted on the rate of Non-performing loans as it increased from 10% in 2018 to 12% in 2019 to a further 15% in 2020. The commercial banks in Kenya losses were up by 24.5% by August 2020. Local commercial banks and businesses have been supported by international organization to combat the effects of the novel virus as 38% of the corporate banking sector has been restructured due to COVID 19 effects (CBK Annual Quota Report 2020).

In 13th Oct 2020 Equity bank and Kenya National Chamber of Commerce and Industry (KNCCI) signed a deal of \$2.0b to support 3 million women SMEs and businesses. Master card foundation pledged \$6.0m through KNCCI to support small scale sectors such as the Juakali, Hawkers and Boda-boda industries.

Okoth J(2020), claims Commercial Banks in Kenya lending's dropped tremendously as most of them are hoarding cash so as to cover themselves from the anticipated effects if corona virus as this pandemic disrupted businesses, consumer consumption as well as daily operations of households. No commercial bank is willing to trade or lend as the risks are heightened. Most banks have reserved its capital because there was no meaningful transaction to be conducted during this corona period hence their paralysis and zero profits.

According to CBK Credit Survey of 2019, the credit recovery rates were expected to intensify their efforts in collection of loan in nine out of eleven sectors of the Kenyan economy to improve overall quality of asset portfolio due to the increased pretax profit by 9b to 18.72b in March 2019 to 9.72b in Dec 2018. This was influenced by IFRS9 on commercial banks to put effort on second lending hence an enhanced credit standard thereby reducing defaulted loan portfolios.

Census and Economic Centre (CEIC 2020), Kenya's foreign exchange reserve was at \$8.4b by April 2020 while the domestic credit was \$37.2b by July 2020, this indicated an increase of 14% YoY. These corporates and International organization came to support economic sectors because according to CBK Credit Survey March 2019 stated that the ratio of gross NPLs to gross loans increased from 12.03% to 12.78%.

1.2 Statement of the Problem

Financial institutions such as banks in Kenya provide significant financial amenities in the country across the eleven sectors of the economy. Granting of credit facilities is a major doing of the banks in Kenya and the loan portfolio comprise a significant percentage of the banks' assets. Commercial banks in Kenya get a major share of interest revenues from credit facilities. However, not all credits approved to beneficiaries do well to achieve the anticipated returns. This causes unfavorable results on the loan collection.

Considering that the financial institutions assume a key task in the economy of a nation, the study conducted aiming to establish the triggers, trend and influence of how NPLs on commercial banks operate. Credit portfolio comprises the biggest operating resources and wellspring of income of most money related establishments. However, loans that are not repaid in time affects the efficiency of operations and profitability of the financial institutions.

A troublesome business condition and high rates of interests exacerbated loan reimbursement rates in six key regions of the economy. As indicated by Central Bank of Kenya quarterly banking report of September 2018, the pace of nonperforming credits rose in six of the eleven segments of the economy, in spite of the effort to reduce NPL. This is mainly due to high lending interest rates and business failure. The six sectors include household, land, building & development, transport & correspondence, water and mining & quarrying. The non-performing credits additionally depressed the business pretax benefit by 10.9% that is from 33.5bn compared to sh.37.6bn registered in the quarter ending June 2018. The circumstance requires a viable system to regulate and control it before it gets beyond control. Researcher believed that the institutions under study were business financial institutions in Kenya are usually qualified, closely watched, regulated and controlled through the Central Bank of Kenya (CBK) seeing that it is mandated under the Financial Work (Cap 488) CBK to carry out on-site supervision and off-site supervision. On-site supervision consists of regime examinations executed through CBK representatives at the institution's location of the business. It entails the examining of company documents to confirm the institution's state using the appropriate and regulatory requirements.

Off-site supervision requires the actual write-up on the actual regular profits published towards CBK through the establishments. The two, on-site and off-site supervision use fixed programs and reviews requirements. For any instance of non-compliance observed, a supervisory action is taken as specified by the law. This exploration work looks for among different objectives, to think of suggestions that will help capture this crumbling pattern or help diminish the rate of credit default in banks.

Strategy and PWC July 2020 reveals that capital reservation plans should be put up so as to identify new sources of generating capital to help mitigate risks. Commercial banks should come up with new organizational constraints to restructure normal activities as well to monitor signals to risky patterns and behaviors.

1.3 Purpose of the Study

The purpose of the study was to determine the influence of selected economic variables on Non-performing loans in banks in Kenya. A case of selected bank funded projects in Nairobi County.

1.4 Objectives of the Study

The objectives of the study were;

- i. To determine influence of Gross Domestic Product on non-performing loans in bank funded projects in Nairobi County.
- ii. To examine the influence of Inflation Rate on non-performing loans in bank funded projects in Nairobi County.
- iii. To explore the influence of Foreign Exchange Rate on non-performing loans in bank funded projects in Nairobi County.

1.5 Research Questions

The study sought to answer to the following questions.

- i. What is the influence of Gross Domestic Product on non-performing loans in bank funded projects in Nairobi County?
- ii. To what extent has the rate of inflation influence non-performing loans in bank funded projects in Nairobi County?

- iii. What is the influence of foreign exchange on non-performing loans in bank-funded projects in Nairobi County?

1.6 Significance of the Study

The findings from the investigations might be instrumental to different loaning parties in the loan portfolio management as bankers might assess the risk factor and identify risky behaviors and patterns before issuance of any loans and put up strategies that might help mitigate them. The study concentrated on the influence of total national output, swelling rate and remote conversion scale on non-performing advances in bank supported ventures. The data assembled would help business banks to predict dangerous money lenders to unsafe advances and take careful steps. The information sourced from the KNBS and the CBK might provide information that would help advice on analysis and help to put up new strategies and structures as well as new policy formulation for the government especially when establishing predictive economic trends. Project managers and sponsors would benefit from this research as it may inform and offer guidance to economic patterns so that they can make informed decisions before applying for loans. Borrowers may benefit from the research as they would weigh other options of facilitation and if mandatory to borrow from the commercial banks, then they should have a proper accounting & financial management for the repayment plans. The findings of this study would give business banks in Kenya a refreshed comprehension of the need to control and manage non-performing credits. It might help to strategy creators in the financial business, for example, Central Bank of Kenya in developing policies that would favor banks through recession periods and limit risk taking in peak period. This study would also provide more literature towards the investigation of non-performing credits and their significant macroeconomic variable triggers.

The study would enable borrowers, advisors and guarantors and other partners to make informed decisions and choices that will foster proper financial management so as to achieve success in the loaning cycle. Policy makers will develop new measures that will enhance proper lending channels so as to achieve desirable outcomes. The Government and its partners would gain a clear understanding on the economic variable that affect NPLS and therefore assess and formulated new regulation that may deal with NLPs hence meeting the SDGs, MDGs and Kenya's vision 2030 goals.

The report would assist risk managers to come up with resolutions to review new opportunities for profitability of loan portfolio due to the foreseen slow economic rebounds- new outlets for profit making should be exploited to the commercial banks afloat otherwise losses will be realized.

1.7 Delimitations of the Study

The study examined the influence of economic variables on the performance of business ventures in repayment of loans to commercial banks in Nairobi County. Only banking institutions that are monitored and regulated by CBK participated in the study. The target population was projects that did not repay their loans within 90 days after their maturity period. This include the projects are listed by CRB for defaulting purposes. The data was obtained from bank portfolio manager from selected bank this includes; Kenya Commercial Bank, Cooperative Bank, National Bank, Diamond Trust Bank, Barclays Bank, Equity Bank, CFC Stanbic Bank and Standard Chartered Bank. The independent variable were the Gross Domestic Product, Inflation rate and Foreign exchange rate while the dependent variable was the Non-Performing Loan in bank funded projects.

1.8 Limitations of the Study

During the study the researcher encountered certain challenges which included time and financial constrain. Time constrain as the researcher was expected to conduct the day-to-day professional activities as well as to conduct this research. The researcher created a time schedule/ time frame for the activities that were to be undertaken and in some instances requested for day off from the supervisor so as to conduct field work. This helped to ensure that the study would be completed in the stipulated time.

Finances are also limited and it posed a challenge to the researcher because all monetary activities for the research were self-sponsored. The researcher prepared a budget for this research study and ensured efficient financial management of the limited resources. This investigation was confined to three factors that are GDP, inflation rate and Foreign exchange rate as to the reason for non-performing credits in bank funded projects in Kenya.

The examination canvassed business banks in the country and other money related organizations were not considered, in order to give a more extensive based investigation. The return rate of questionnaires was slow as some respondents took long to respond to questions. The research was limited to accessing some informants despite several request for appointment but with more than 72% of respondents interviewed, the research considered this was suffice to analyze data.

1.9 Assumptions of the Study

(i) Researcher believed that selected survey-participants were straightforward and candid in participating in research survey and that that the sample size possessed same features as the target population hence it's a proper representation of population.

(ii) The researcher assumed that there was adequate information about the variables regardless of the 10 year time frame. It was assumed that the selected bank in the study would provide more insight onto the topic of study compared to the banks because they command 76.9% of the banking industry.

1.10 Definition of Significant Terms as Used in the Study

Bank funded projects- for the purpose of this research, these include the transport, energy, water and sanitation, urban development and public sector development and social protection that are funded by commercial banks to projects in Nairobi County, Kenya.

Credit facilities- these are loans or debts whose installments have not been repaid within ninety days in Kenya.

Economic variables- is a measurement that helps to determine how an economy function for this study it is the GDP, inflation rate and Foreign exchange rate and how they influence the non-performing loans in bank funded projects.

Foreign exchange rate- the estimation of a neighborhood cash communicated as far as another money. This is the conversion standard of KES to American Dollar that is KES100 to \$1.

Gross domestic product- financial proportion of the market value of final goods and services produced in a country at a particular time. This is the monetary value of goods and services produced in a country.

Inflation rate -the rate at which prices or costs rise after some time, bringing about a drop in the currency's purchasing power. This is the valuation and devaluation of the Kenyan shilling.

Macroeconomic variables-these are government policies that are designed to influence the performance of the entire economy of a country for example Kenya's employment rate, forex rate, stock prices and interest rates.

Non-Performing Loans- refers a loan in which the borrower has failed to honor the payment of principal or interest for the agreed period, routinely 90 days past due.

1.11 Organization of the Study

This report is structured into five independent chapters,

Chapter 1 consists of purpose of the study, objectives, research questions, significance, delimitations, limitations, and definition of significant terms and organization of the study.

Chapter 2 explores non-performing loans in bank funded projects, gross domestic product and non-performing loans in bank funded projects, inflation rate and non-performing loans in bank funded projects, foreign exchange rate and non-performing loans in bank funded projects, theoretical framework, conceptual framework, knowledge matrix and summary of literature review.

The third chapter is structured into various sections and sub-sections, including the research design, target population, sample size and sampling procedures, research instruments, data collection procedure, data analysis techniques, ethical considerations and operationalization of variables.

The fourth chapter presents the data analysis, presentation, interpretation and discussions, which have been aligned to objectives of the study.

Chapter five provides a summary of the findings, conclusions, recommendations and suggestions for further research.

CHAPTER TWO

LITERATURE REVIEW

2.1 Introduction

This section entails the overview of the components that incorporates the research study which is non-performing loans in bank funded projects, gross domestic product and non-performing loans in bank funded projects, inflation rate and non-performing loans in bank funded projects, foreign exchange rate and non-performing loans in bank funded projects, theoretical framework, conceptual framework, knowledge matrix and summary of literature review.

2.2 Non-Performing Loans in Bank Funded Projects

A correlation amongst NPLs and the chosen financial factors has been built up in past works. Roland Beck (2013), in their assessment of the observational determinants of non-performing credit extents utilizing a novel instructive assortment for 75 nations spreading over from 2000-2009 found the extricated GDP advancement impacts NPLs improvement in a general sense with a productive result. These finding backs the start that bank resource quality rots with a breathing space in light of positive progression due to lose credit models applied during the pinnacle time frame. They likewise found a positive connection for ostensible successful pace of trade; devaluation in the neighborhood money would prompt an ascent in NPL and piece of the overall industry costs have a negative relationship.

Khemraj (2015), in their investigation on the determinants on non-performing advances in money related organizations in Guyana utilized a functioning model for information extending from 1994-2004. They expressed that expansion in GDP, conversion scale and financing cost had noteworthy effect on non-performing credits. Klein N (2013), in the examination on determinants and impact on macroeconomic execution of nonperforming credits on 16 nations in CESEE (Central, Eastern and South Eastern Europe) using data spreading over from 1998-2011 utilized fixed impacts and distinction and discovered that extraordinary advancing prompts an ascent NPLs.

Joblessness, high inflation and depreciation of currency were likewise found to add to high NPLs. Altar (2013), in her assessment macroeconomic determinants of credit possibility: Non-performing credits approach in Central and Eastern Europe used month to month data from five countries crossing from 2008-2013 and set up a negative connection between loosened GDP headway and non-performing credits. Joblessness rate was firmly associated with non-performing moves. Abd-el-Kader (2009), using complete information on a main gathering of 59 nations over the period 2002-2006 and healthy econometric strategies, found solid proof on the association among NPLs and bank express factors.

Foreign participation played a huge role in reducing credit introduction of budgetary establishments. Higher CAR record (The aggregate of in general capital stringency and beginning capital stringency) and higher course of action extents are unfavorably associated with the level of issue advances. Geletta (2012), the relationship amongst NPL and security was seen as zero. Espinoza R (2010), estimated a dynamic panel from 1995 to 2008 on 80 banks in the Gulf Cooperation Council, lower money related development and higher loan expenses were found to trigger an ascent in NPLs.

The assessment in like manner found a positive association between credit improvement and NPLs. Mawili (2013), using quarterly data (month to month) for all the 6 years from 2006 to 2011 discovered granger causality among NPL and GDP at 90% confidence level, indicating that NPLs influences a GDP rise. Augmentation in the money supply in an economy was found to cause a development in the degree of non-performing credits.

Sinkey (2011), coordinated an investigation in United States of America between 1984-1987 which built up a positive connection between a noteworthy degree of the pace of premium, unnecessary advancing close by with uncommon assets and the non-performing credits in the American financial area. Furthermore, poor money related conditions also trigger credit disasters in American monetary division.

Louzis (2011), used ground-breaking board data in their examination on the determinants of non-performing credits in the Greek cash related area from 2003-2009 considering the going with advance requests; corporate moves, customer advances and home advances.

Moreover, fiscal advancement, joblessness, propelling rates, open commitment and barricade quality were set to be the fundamental determinants of non-performing credits in the Greece cash related part.

The private arm of the World Bank, The IFC bolstered its business undertakings in Kenya in order to provide the much-needed capital to the private sector development through direct investments. The IFC has injected \$1 billion into the agribusiness sector and related financial markets and enterprises. It has also invested in other corporate organizations such as the Kenya Airways, the Bridge International Academies, the National Cement, AAR Healthcare, Faulu Kenya and Vegpro.

2.3 Gross Domestic Product and Non-Performing Loans in Bank Funded Projects

Increase in Gross domestic product improves wages and salaries of a household; which in turn consistently improves the nature of credit portfolios in banks. On the other hand, when GDP development rate decrease; family incomes are decreased hence families spend their expenditures on consumption as opposed to clearing their obligation commitments.

In this manner, great monetary condition relates with better limit of honoring obligation commitments henceforth the proportion of nonperforming credits to add up to credits is altogether decreased (Hamerle, 2011). Along these lines, we anticipate a negative connection between GDP development and credit chance.

A sharp perception of the exact writing survey shows that observational assessments in this field suggest that for every bank bind there are full scale monetary factors relating such issue at each point in time. A couple of assessments have discovered GDP per capita headway rate as an essential variable clarifying credit hazard. Utilizing appraisal fixed-impacts and dynamic board backslides reliant on yearly information for the change in the full scale NPL degree. A sharp understanding of the exact writing survey indicates that observational evaluations in this field mean that there are full-scale monetary influences relevant to such a problem at each point in time for any bank bind. A few evaluations have established the rate of GDP per capita advancement as a fundamental variable explaining the credit risk.

Using fixed-effects measurement and dynamic board relapses based on annual data for the all-out NPL degree modification. Beck (2013), asked about 85 mature and developing countries in the period of 2000 to 2010, using fixed-effect assessment and dynamic board relapses based on annual data for the adjustment in the degree to which the GDP rate was found to have a beneficial impact on non-performing accelerates for all-out non-performing credits. The reviews affirms past reviews by Ali and Daly (2010), Derbali (2011) and Thiagarajan (2011).

The conclusions stray explicitly from Nkusu (2011), who similarly explores the problem after testing 26 moving economies over the period 1998-2009 and using a single condition board relapse and a board vector autoregressive model and discovered that GDP had a negative correlation with credit risk. Further analysis of Warue (2013), Salas and Saurina (2012), showed that banks are increasingly acquiring opportunities for money-related effects and a portion of these risks occur during subsequent monetary downturns as asset quality debilitates.

This examination concentrated because of GDP on non-performing credits in bank-funded projects in Nairobi County with an aim to mitigate potential risk and predict future loan portfolios. The research would make insightful inferences and draw conclusions for risky behaviors in due time. This would assist the commercial banks to improve their debt collection techniques and put in new strategies that would enable them to recover their loans.

2.4 Inflation Rate and Non-Performing Loans in Bank Funded Projects

Inflation is an extension in the value level and is signified as a yearly pace of progress communicated as a rate. According to Santoni (1986), inflation is huge for banks in their job of money related intermediation having adjusted for foreseen rise, and can bear massive default danger dependent upon the difference in expansion between the envisioned and genuine rates on their fixed instruments (Glogowski, 2017). Since banks are typically net advance loan specialists in apparent instruments, the banks will go up against setback in motivator as a resultant of a development in credit peril. Along these lines, a positive relationship is typical between credit hazard and inflation.

A couple of examinations have found inflation rate as a tremendous variable explaining credit chance. Mileris (2017), considered the macroeconomic determinants that influence the progressions of advance portfolio risk in banks and developed the model for foreseeing organizations with a high degree of not paying their loans. He used an OLS relapse model for 22 EU countries that were assembled into three strata as indicated by their equivalence in changes of the non-performing advance rate in banks for the time allotment somewhere in the range of 2007 and 2011. His study realized that an expansion in inflation rate had a noteworthy positive relationship to non-performing loans. Previous investigations by Kochetkov (2012), Derbali (2011), and Renou (2011), also reached the same conclusion. This was as a glaring distinction with Warue (2013), who used a Comparative Panel Data Analysis using board econometrics approach utilizing both pooled (inconsistent) board and fixed effect board models, in investigating the effects of Bank Specific and Macroeconomic Factors on nonperforming Credits in Commercial Banks in Kenya. Warue found that extension was oppositely related to credit possibility/non-performing loans.

This exploration concentrated because of inflation pace of non-performing advances in bank financed extends in Nairobi County. The research assisted to forecast and foresee trends that would escalate to the government to incorporate new fiscal policies. It assisted in proper analysis and put more insights on expected fluctuations of the inflation rate within certain time hence make right decisions in regards to borrowing and lending for the commercial banks in Nairobi County.

2.5 Foreign Exchange Rate and Non-Performing Loans in Bank Funded Projects

Exchange rate is the cost of a country's currency regarding another currency. Exchange rate estimates the overall worth of local money as far as another. The principle issues the organizations face are the regular rise in valuation for foreign monetary forms against the local money, and the trouble in holding local clients due to the significant rise of imported products which will in general have an influence on the costs of their final goods sold locally (Sirpal, 2017).

As the value of forex rate rises (devalued) it turns out to be progressively costly to secure foreign items and services as their expense would have expanded subsequently requiring more units of local money to obtain a similar amount of foreign merchandise and ventures than previously. This brings about in an increased demand in the bank loans to fund the extra expenditure required because of exchange rate devaluation. A genuine deterioration is expected to have an expansionary impact by expanding the operating profit in the exports line but lead to a compression in the import segment because of contradicting reasons (Nucci & Pozzolo, 2017).

In this research, the conversion standard utilized is the exchange rate between the Kenyan Shilling versus the USA dollar as it the most well-known featured cash trade for banks in Kenya. The aim of the research was to determine to what extent does the foreign exchange influence non-performing loan in bank funded projects in Nairobi County. The research has provided insights on predictive capabilities of foreign exchange forecasting rate with non-performing loan with time series hence it will help towards predictive buying and selling of the Kenyan Shilling to American Dollar. It will assist in predicting any future transactions and input strategies and important decisions during price fluctuations, valuations and devaluations.

2.6 Theoretical Framework

This is a structure that supports a theory in a research study (Labaree, 2009). It helps to introduce and explain the theory on which the research problem will be based upon. For the purpose of this study, Credit Risk/Structural Theory and Theory of Planned Behaviour were employed to explain non-performing loans in bank funded projects in Kenya.

2.6.1 Credit Risk Theory

Melton (1974), introduced the credit risk theory also known as structural theory. He says there are certain parameters that lead a firm or a company to default. These factors are defined as structural models which vary in terms of variables. They are backed up with causal theories which one needs to understand lending risk systematically so as to manage credit risk dynamically for financial system stability.

This explains the models of delinquency and insolvency and why rate of default is high. Another school of thought is based on the dependency relationship whereby projects tend to depend on outside help to boost their day to day operations. This usually lead to shortcomings which are pegged on opportunity cost, preference cost, transaction cost, fiscal policy, interest rate, market structure amongst other factors. The credit theory is considered a basic framework as it analyses the relationship between the lender and the borrower. This theory sheds light on the procedure that govern the whole loan process, keeping in mind that credit entails negotiations, scrutiny, repayment, monitoring & evaluating, coordinating and enforcing the contractual between the parties to ensure efficiency and effectiveness during the transaction (Bowen & Shores, 1995).

During these economic activities there are two behavioral perspectives that are assumed that is rationality and opportunity because the credit process entails assets, finances, investments, policies, income and other services that are provided. While rationality presumes the contractual agreement that is binding. It is assumed that the loan agreement will be followed to the latter until it's broken due to certain economic variables. It is usually high risk to grant loan to a project with prior scrutiny.

Scrutiny helps to know the lending history of a project a bank wants to issue loan. Other factors like age of the project, phase of project, employed staff, level of professionalism, number of employees, expertise skills as well as the financial management of the project should be closely monitored and watched before issuance of any loans. These theories assisted in building up the theoretical framework as well as to fill in some knowledge gap on why default rate is high in bank funded projects in Nairobi.

2.6.2 Theory of Planned Behaviour

Icek Ayzon introduced the TPB (1985), states that human action is guided by three types of behavior which includes behavioural norms, subjective and perceived behaviours shapes ones behaviours and intentions. This theory has been applied to study relations, beliefs and attitudes. So then with the above ones' beliefs and behavior forms a favourable or unfavourable attitude towards executing an intention thereby to presumable that one's intentions can affect behaviours directly or indirectly. TPB has improved the predictability of intention of such field as loan repayment or default.

This explains one's social behavior by considering social norm as an important variable toward delinquency of loans and repayment of credit.

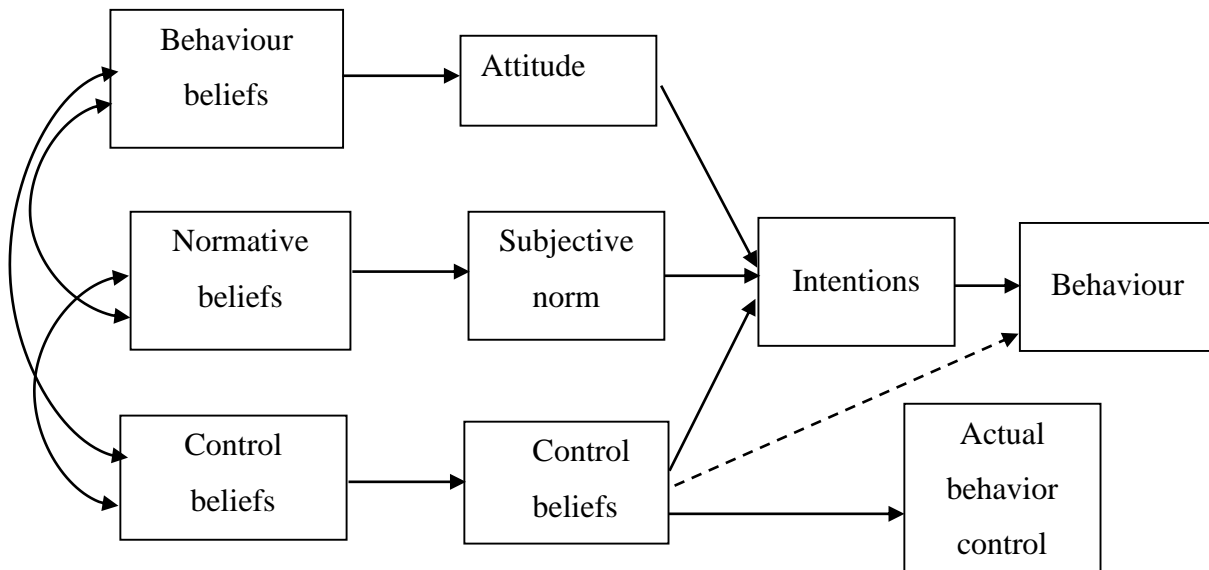


Figure 2.1: Theory of Planned Behaviour-Model Based on Ajzben (1985)

The study comprehended the causal relationship between loan repayment and default as well as the factors that influence loan borrowers. The loan repayment process is function of borrowers' behaviors, financial institutions, project characteristics, government policy, interest rate, GDP rate, employment rate as the study sought to explain the influences of economic variables on non-performing loans of bank funded projects in Nairobi.

Kuzirwal (2002), for borrowers to effect loans there must be a good environment and predictive business environment, properly regulated taxation policies, proper grace period and constant power supply. So then, the above factors affect loan repayment and default rate and they should be considered before issuance of a loan because loan repayment can be influenced by government regulation, policies, interest rates and capping, GDP, forex, inflation rate and economic stability. Borrowers' behaviour can be pre-determined by project stage, age, sponsors, staff makeup, and the number of staff, business risk, profit margins, intellectuals and professionals in the project. Other characteristics that may influence the rate of loan performance may include skills and training, socio-economic and political stability amongst others. All these play a major role on an individual's repayment behaviour.

2.7 Conceptual Framework

Maria (2018), states that this analytical tool with variations and contexts which is used to understand and inform the direction of the research project to help determine the theory and methodology used to summarize the research. The gap identified in the theoretical framework led to the development of conceptual framework which guided this research study. It is an analytical tool with variation and contexts which is usually applied in different categories so as to comprehend concepts, variables and organize them into a frame. This framework put more perspective on how the independent and dependent variable is related.

For the purposes of this study, the researcher employed independent, moderating and extraneous variables and to understand how they influence and dependent variable. The conceptual framework built up a connection between GDP, inflation rate and foreign exchange rate and non-performing loans on bank funded projects in Nairobi.

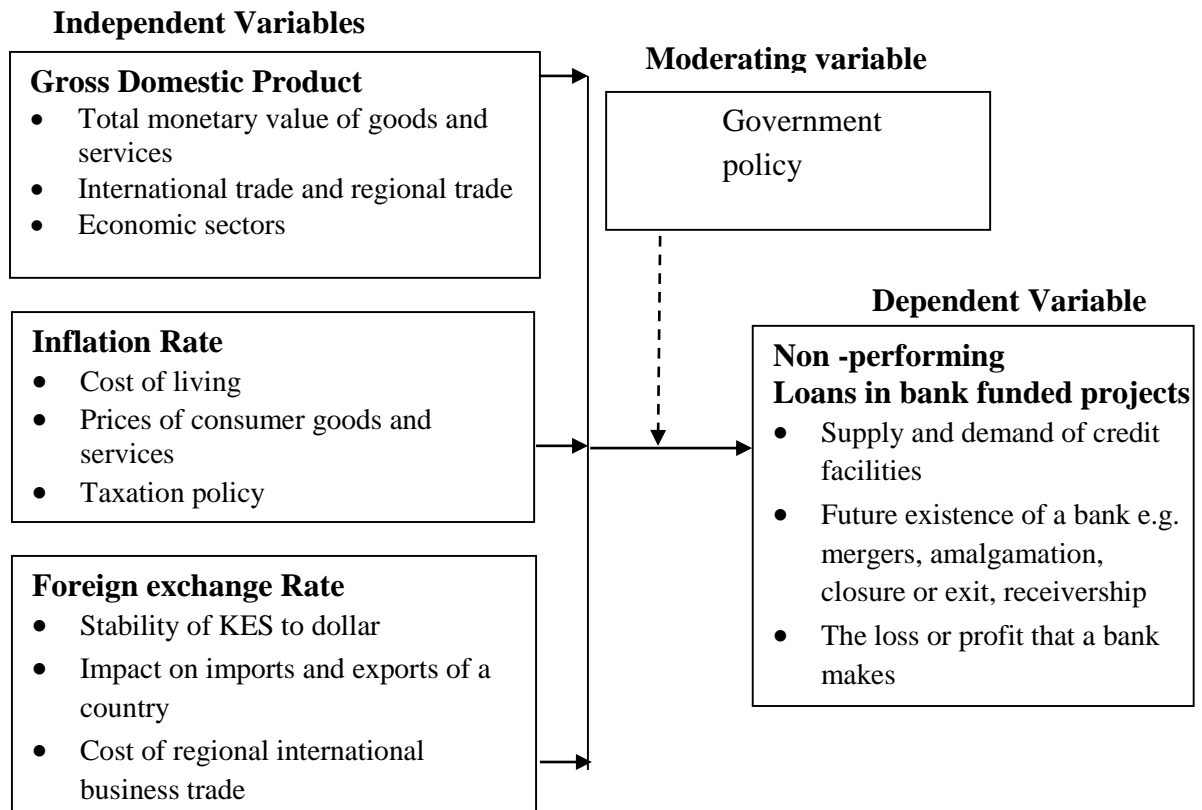


Figure 2.2: Conceptual Framework

An increment in GDP suggested that expenses had risen. With an ascent in expansion, there was an abatement in the obtaining intensity of money, which decreased utilization and in this way, GDP reduced. High expansion could make ventures less alluring, since it guessed defenselessness for the future and it could impact the equalization of installments since tolls turned out to be continuously expensive. In this manner, GDP reduced further. This makes the feeling that GDP is adversely corresponded with swelling. Regardless, there are ponders indicating that there may in like manner be a positive relationship. The Phillips twist, for example, exhibits that high expansion is solid for the low paces of joblessness, deriving that there is a constructive outcome on monetary improvement.

The rise in the foreign exchange rate prompted less expensive household products for foreign purchasers, hence an increment of exports and total demands and prices. The rise in the foreign exchange price raises the inflation rate. At the point when financial and fiscal approaches are used well, they could have comparative results in both invigorating the economy and easing back it off when it warms up.

The ceaseless talk is which one is progressively practical in the long and short run. Financial system is whereby the administration uses its spending and tax assessment forces to influence the economy. The blend and correspondence of government consumptions and salary collection is a touchy equalization that necessitates extraordinary wants to be efficient. The quick and roundabout effects of budgetary methodology sway singular spending, capital use, trade rates, insufficiency levels, and even enthusiasm on credits that are typically associated with money related methodology.

2.8 Knowledge Gap

Variable	Author & year	Title of the study	Key findings	Research gap and focus of current study
Gross Domestic Product	Ali and Daly, 2010); Ashgar, Kevin (2010); Derbali (2011)	Macroeconomic determinant of credit risk.	States that non-performing credits have a positive impact on GDP.	The study did not query the influence of GDP on NPLs on bank funded projects. To determine the influence of GDP on NPLs.
Inflation Rate	Mileris (2017) Glogowski (2017)	Determinant of credit risks in Kenyan bank sector Macroeconomic determinants of non-performing loans.	Increase in inflation rate has positive relationship with increase in NPLs. Scholars did not query the influence of inflation rate on NPL.	The study did not query the influence of inflation rate on NPLs on bank funded projects. To determine the influence of inflation rate on NPL of funded projects.
Forex Exchange Rate	Nucci and Pozzolo (2017)	Investment and the exchange rate Exchange rating External orientation of firms and wage adjustment.	As forex rate rise and gets devalued it is costly to secure imports and thus non-performing loan do suffer as there is increase demand for bank to fund loans in extra expenditure	They did not determine the influence of foreign exchange on NPLs on bank funded projects.
Non-performing Loans in Bank funded projects.	Roland Beck (2013) KhemrajT (2015)	Observational determinants of non-performing loans Determinants of NPLs in financial institutions in Guyana	There is a positive correlation between GDP and NPLs	These scholars did not determine to what extent the economic variables influences NPLs.

2.9 Summary of Literature Review

Non-performing credits (NPLs) is an overall issue that influence money related markets stability generally and banking industry particularly. An integrated research approach and illustrative structure were implemented in conducting most researches. The outcomes acquired from regression outputs showed that among the considered factors, loan to deposit ratio; inflation rate, financial execution estimated as Return on Equity; and rates of foreign exchange were seen as measurably noteworthy determinant of NPLs. Therefore credit growth, cost effectiveness and bank size had a very low statistical significance in influencing NPLs. Today we use neo-classical theory and the theory of demand and supply for the banks to make important decisions concerning their loan portfolio. Following these concepts in the report therefore we saw an opportunity to examine economic variables from other perspectives. The literature review proposed that a research gap exists in determining how these NPLs pointers could further lessen the likelihood of default while expanding credit later on in Kenyan Banks. Therefore, it is important to study the triggers of non-performing loans as researchers accept that once we recognize these components then we can make arrangements to reduce future happenings of these non-performing loans in bank funded projects.

Today many economies employ basic principle of capitalism because they believe that any economy is self-regulating and that a country's economy is at its natural or real GDP when resources are fully employed and incase otherwise then self-adjustment do take place to ensure natural GDP exists. This law believes that prices, labor wages, interest rate are usually flexible. The theory of demand and supply is used to make decision in regards to issuance of loans by most commercial banks in Kenya.

CHAPTER THREE

RESEARCH METHODOLOGY

3.1 Introduction

The design and methodology that was adopted in performing the research is outlined in this chapter which includes; research design, target population, sample size and sampling procedures, research instruments, data collection procedure, data analysis techniques, ethical considerations and operationalization of variables.

3.2 Research Design

This is defined by David Wilkinson and Peter Birmingham (2003), as a framework of techniques and methods that are chosen by a researcher to integrate components of the research for the problem to be solved or mitigated. The research design set of procedures was used in analyzing, collecting and interpreting data of the specific objectives as our research indicates. A descriptive research design was found to fit the study since it involved collecting data in order to test and to determine the influences of economic variable on non-performing loans in bank funded projects. The descriptive design was used to obtain information and assess it in regards to the current state of the objective phenomena. It assisted in determining the questions which included how and when the objectives of the study would lead to making insightful recommendations and how banks could implement long lasting solutions that would reduce the rate of non-performing loans. This approach collected detailed information for data analysis.

3.3 Target Population

A whole group of elements under query is referred to as the target population (Borg and Gall, 2009). It may include individuals, objects, places and elements that may be the interest of investigations. It is characterized as the whole gathering of concentrate a specialist is keen as they offer materials necessary for addressing the aspirations of the research.

Concerning the study, the key informant participants were officers from CBK, KNBS and loan portfolio managers from a number of selected of banks. They were 160 respondents; this includes 10 loan portfolio managers or credit managers of 8 banks from different branches (Kenya Commercial Bank, Cooperative Bank, National Bank, Diamond Trust Bank, Barclays Bank, Equity Bank, CFC Stanbic Bank and Standard Chartered Bank) as well as 80 officers from KNBS and CBK. Other relevant data was retrieved from these institutions website and portals.

Table 3.1: Target Population

Respondents	Target
Bank loan Portfolio managers	80
CBK officers	40
KNBS officers	40
Total	160

Source; Kenya National Bureau Statistics Bulletins Report (KNBS) (2019)

3.4 Sample Size and Sampling Procedures

3.4.1 Sample Size

According to Ogula (2005), sampling is a defined plan of selecting research participant from a population set. It is the way towards choosing various people who are selected to represent the larger group. Wiersam and Jurs (2008), opines that a representative sample should be large for the purposes of reliability and validity of the research instrument. This study selected 160 respondents. Yamane formulae was used to determine the sample size.

Whereby

$$n = \frac{N}{1 + N(e^2)}$$

n = sample

N = population size

e = level of precision (0.05)

$$\frac{160}{1 + 160 (0.05)^2} = 114.285$$

Table 3.2: Sample Size

Respondents	Target	Sample
Bank Credit/loan Portfolio managers	80	56
CBK Economist officers	40	29
KNBS Economist officers	40	29
Total	160	114

3.4.2 Sampling Procedures

Given the nature of the research, the investigator drew participants from different non-homogenous settings in the banks, CBK and KNBS. As such, both stratified and simple random sampling techniques informed the selection of study participants.

3.5 Research Instruments

The main feedback tool that sourced the relevant first-hand information from the sampled respondents was the questionnaire. The research instrument contained sets of perception statements in which the selected respondents were requested to indicate their views on a five-point categorical scale as well as open ended queries where they could elaborate in details their opinions. The five point measurements were scored as follows.

Strongly agree=5; agree=4; Neutral=3; Disagree=2 and strongly disagree=1. This ensured that the tool captured diverse but vital opinions on NPLs. Kothari (2004), opines that questionnaires guarantees anonymity and privacy.

3.5.1 Pilot Study

A structured survey material: questionnaire was administered to 11 respondents from Family Bank with a view to measure the consistency of the tool. Family bank has been offering financial services for over 30 years and as such, has a credible department of credit and thus very suitable for the study. The subjects of the pretest were urged to offer suggestions regarding the instructions, sensitivity and clarity of the queries and the flow of the questionnaire. The filled forms were received along with the respondents' comments and propositions.

An analysis of the responses was done and comprehension, the suitability of the wordings used, the arrangement of queries and time needed to fill in responses; was measured. The revision of the survey instruments verified its reliability and as such, the investigator was authorized to progress with the administration to a larger target. The respondents involved in the pilot study were left out of from the main study.

3.5.2 Validity of the Research Instruments

This is the level of accuracy and significance of deductions that the study findings produce. In addition, it is the degree to representativeness of the research outcomes in relation to phenomena under study. The validity of the inquiry tools is concerned with measuring what it purports to quantify and nothing else. In this study, various measures were taken to enhance validity of the tools, including formulating questions using a simple and clear language, as well as subjecting draft tools to scrutiny by the supervisors, other lecturers in the Department and colleagues. The comments and suggestions provided by such reviewers were used to improve various aspects of the tools, including clarity, content, language, instructions, and relevance of the questions to objectives of the study, among others.

Mugenda and Mugenda (2004), opines that the range to which a tool captures what it purports to measure is what constitutes validity. Content validity was conducted over a period of 2 weeks to check the construction of the data collection tools to measure what it was desired to measure (Cherry, 2015).

3.5.3 Reliability of the Research Instruments

This is characterised as the degree to which an investigative tool produces unswerving outcomes on several attempts. The split half method was conducted on 11 respondents selected for the pilot test whereby the first half were given odd numbers while the second half awarded even numbers. The researcher administered the structured questionnaire recurrently on the two-sub set of respondents over a time-gap of two weeks. The test scores of the two tests were entered into SPSS and Cronbach's Coefficient Alpha calculated to establish the correlation amongst them.

The Cronbach’s reliability coefficient of the research instrument was 0.89, which was above the minimum threshold of 0.7 (Sekran & Bougle, 2016). This output shows that the instruments of investigation were above the average threshold for internal consistency.

Table 3.3: Reliability Statistics

Variable	Cronbach Alpha based standard materials	No. of material
Gross Domestic Product	.8745	4
Inflation rate	.8911	7
Foreign exchange	.9105	6
Overall	0.89	6

3.6 Data Collection Procedures

The basis of establishing the validity and reliability of the data collection tools was to correct and refine the tools as per the findings from the pilot study. A permission to conduct the research was sought from the University as well as NACOSTI. The investigator then paid a courtesy call to the identified bank departments where she disclosed her intentions as well as the purpose and benefits of her study. She then established linkages to trace the targeted respondents. Afterward, the research instruments were given to the respondents and a later date of collecting them agreed upon. The drop and pick method was used in order to promote high response rates. Efforts were made to increase the response rate through checks and follow-ups. Data collected was in a standardized form without any coercion or manipulation.

Data tools are devices and computer applications that enable a researcher to collect data. For the purposes of this research would use computers, laptops and tablets to collect and store data. The information was stored in flash disks and drives while information would be decoded using the R– program. The researcher followed laws and regulation for data collection procedures as well as online etiquette and visited only accredited sites for CBK and KNBS when collecting data. The researcher used both primary and secondary data from the KNBS, CBK online sites and bank supervision reports. These sites are approved and are legitimate.

Data on credit risk was obtained from annual banks supervision reports by CBK and data on macroeconomic variables from the statistical bulletins of CBK and KNBS. The researcher made courtesy calls to all the respondents to inform them of the objective of the study. Administration of the research instrument and collection of data was conducted after authorization of respondents operation's manager.

3.7 Data Analysis Techniques

The gathered facts and figures were arranged into sub-categories, cleaned and corrected in order to eliminate outliers. After the cleaning, SPSS Ver.21, R-Program and Microsoft Excel aided in the generation of descriptive and inferential statistical analysis, which generated means, standard deviations, frequencies and percentages. The researcher used the Pearson correlation analysis to assess the relationship between the predictor and dependent variables at 95% CI. The collected data was modelled and transformed with the help of Excel and SPSS to generate frequencies in tables and charts that are interpreted to answer the research questions.

3.8 Ethical Considerations

Nachmias and Nachmias (2009), considered a number of ethical issues in research inter-alia; personal disclosure, authenticity, credibility of the report and personal privacy of the respondents. He further emphasizes the need of ensuring the participants are not exposed to risks and the vulnerable populations are respected. Saunders, Lewis and Thornill (2009), further highlights the need for voluntary and informed consent to all participants and professionalism in the conduct of research. This research was dedicated to academics only and high degree of professionalism and the ethical issues cited above guided its conduct.

3.9 Operationalization of Variables

Objective	Type of variable	Measure Indicator	Level of scale	Approach	Types of data analysis	Tools of data analysis
To determine the influence of GDP on Non-performing loans in commercial banks in bank funded projects in Nairobi County	Independent variable	<ul style="list-style-type: none"> - National GDP - downturn - Consumer purchasing power - GDP per capita - Adequate funds and terms of payment 	Interval/ Ordinal	Quantitative approach	Descriptive analysis	Percentages Frequencies Means Standard deviation and Correlation Coefficient
To determine the influence of inflation rate on Non-performing loans in commercial bank funded projects in Nairobi County	Independent variable	<ul style="list-style-type: none"> - Consumer price index - Cost of living - Money circulation and supply taxation rate in Kenya - Price of imports and export 	Interval/ Ordinal	Quantitative approach	Descriptive analysis	Percentages Frequencies Means Standard deviation and Correlation Coefficient Percentages Descriptive statistics Content analysis
To determine the influence of foreign exchange rate on Non-performing loans in commercial bank funded projects in Nairobi County	Independent variable	<ul style="list-style-type: none"> - Government debt - Interest rate - Country's current account - Balance of payment - Terms of trade - Political stability 	Interval/ Ordinal	Quantitative approach	Predictive and Descriptive	Percentages Frequencies Means Standard deviation and Correlation Coefficient
To determine the rate of Non-performing loans in Bank funded projects in Nairobi County	Dependent variable	<ul style="list-style-type: none"> - Bank involvement in government policy - Interest rate and lending rate - Quality of credit information - Credit reference bureaus - Information sharing - Cash flows - Project appraisal and operations - Decision making 	Interval/ Ordinal	Quantitative approach	Predictive and Descriptive analysis	Percentages Frequencies Means Standard deviation and Correlation Coefficient Percentages Descriptive statistics Content analysis

CHAPTER FOUR

DATA ANALYSIS, PRESENTATION AND INTERPRETATION

4.1 Introduction

The section presents the study outcomes generated from the survey. The section begins with questionnaire response rate as well demographic and background factors of the study elements. The section then presents the major results concerning the impact of financial factors on NPLs in some of the programs supported by the commercial banks in Kenya.

4.2 Response Rate of the Respondents

The analysis revealed that of the 160 questionnaires, 114 were filled and returned while 46 were not returned. This suggests that a response rate of 71.3 percent was achieved, which according to Mugenda (2009), is above the minimum threshold of 50%, for accurate prediction of population parameters from the samples, as well as for making valid conclusions.

Table 4.1: Questionnaire Response Rate

Respondents Category	Frequency	Percent
Questionnaires administered	160	100
Questionnaires filled and returned	114	71.3
Questionnaires not returned	46	28.7

4.3 The Respondents Demographic Profiles

The distribution of the participants' age, gender, work experience and educational background offers the investigator with an understanding of the characters in the survey. Tables 4.2 to 4.5 shows the spread of respondents' demographics.

4.3.1 The Age Bracket of the Respondents

The investigator asked the respondents to check from the list provided which category described their age. The responses are tabled below.

Table 4.2: Age Bracket of the Respondents

	Frequency	Percentage
20- 29 Years	24	17.9
30-39 years	21	34.4
40 – 49 years	30	28.1
50 – 59 years	15	15.35
60 – 69 years	4	4.25
Total	114	100

The summary table indicates that 21(34.4%) are aged between 30-39years while 30(28.1%) are aged between 40-49 years old. The junior staff made up 24(17.5%) who were 20-29years old while senior most staff were 4(4.25%) were 60-69 years old. This shows that the respondents were adequately experienced hence information provided for the research would be reliable to help draw conclusion because the respondents had vast knowledge in evaluating potential non- performing loans in banks in Nairobi.

4.3.2. Gender of the Respondents

The responses tabulated below responded to an inquiry into the types of gender that the participants associated with.

Table 4.3: Gender of the Respondents

	Frequency	Percentage
Male	51	44.7
Female	63	55.3
Total	114	100

The analysis showed that 44.7% of the respondents reported being male while 55.3% stated being female. This addresses the overall gender representation in the workforce today In Kenya today. It also addressed the issue of male dominance especially in STEM related workforce.

4.3.3. Work Experience of the Respondents

The researcher requested the respondents to indicate the number of years they have been working in the banking sector.

Table 4.4: Work Experience of the Respondents

	N	%
0 – 4years	33	28.9
5 – 8years	24	21.1
9 – 12 years	17	14.9
13 - 16 years	13	11.4
17 - 20 years	10	8.8
21 - 24 years	8	7.0
Over 25 years	9	7.9
Total	114	100

The analysis indicates that 28.9 percent of respondents reported having at most 4 years of work experience, 21.1 percent of respondents had between 5 and 8 years of experience. Twenty-four percent reported to have worked for 17 years and above, indicating that a significant number of workers were adequately trained on the best global practices of debt management and had sufficient experience to provide sound data.

4.3.4 The Educational Achievements of the Respondents

Concerning the degree of formal schooling reached, the study requested respondents to indicate from the choices provided the degree of education they attained and responses itemized as;

Table 4.5: Highest Academic Qualification of the Respondents

	Frequency	Percentage
Post Graduate Degree	17	14.9
Bachelor's Degree	48	42.1
Diploma/ College Certificate	33	28.9
Secondary Certificate	16	14.1
	114	100

From the respondents' distribution table, out of 114 respondents, 48(42.1%) had attained a bachelor's degree as the highest level of academic qualification while 33(28.9%) had diplomas and college certificate. Seventeen (14.9%) had postgraduate degree and the least were 16(14.1%) had attained secondary education. The outcomes disclose that well-informed and educated research participants were sought and as such, were able to provide accurate and reliable information regarding the influence of economic variables on non performing credits in bank funded projects in Kenya.

4.4 Gross Domestic Product on Non-Performing Loans in Bank Funded Projects

The investigations strived to determine the impact of GDP on NPLs in programs financed by commercial banks. The respondents were requested to rate their opinions on several perception statements that assessed the elements of GDP and related NPL factors. The responses were tabled as indicated in subsequent sections below;

Table 4.6: Extent to Which Gross Domestic Product Influences Non Performing Loans in Bank Funded Projects- Nairobi County.

Statement	1	2	3	4	5	Mean	SD
a) National Gross Domestic Product turnover and depression has led to non-performing loans	0	0	0	65(57.1%)	49(42.9%)	3.01	0.995
b) Purchasing power of customers attributes to non-performing loans	0	0	0	69(60.5%)	45(39.5%)	4.43	0.774
c) Gross Domestic Product per capita contributes to non-performing loans	0	0	12(11%)	63(54.8%)	39(34.2%)	2.02	1.06
Composite mean						3.153	0.951

The results presented in table 4.6 indicates that with regard to the first perception statement, 65(57.1%) of the research participants agreed that the GDP turnover and depression had led to Non-performing loans. Forty-nine (42.9%) respondents strongly agreed with the statement, producing a mean and standard deviation of 3.01 and 0.995, implying that the national GDP turnover and depression relatively contributes to non-performing loans in bank funded projects in Nairobi County.

The second perception statement: “Purchasing power of customers attributes to non-performing loans”, had 69 (60.5%) agreeing and 45 (39.5%) strongly admitting the factor was a factor in NPLs. The point produced a mean and standard deviation of 3.153 and 0.951 respectively, signifying the element contributed to NPLs. Therefore, the purchasing power of customers influenced NPLs.

With regard to “Gross Domestic Product per capita contributes to non-performing loans”, the results indicate that 63 (54.8%) agreed while 39(34.2%) strongly admitted to the factor as influencing the NPLs.

The element equally produced the results (mean=2.04, SD=1.06), revealing its weak effect on the NPLs as compared to the first and second elements in the study. According to the study, purchasing power of customers had the greatest influence (mean = 4.43 and SD= 0.774) on the performance of loans in bank funded projects. The national economic downturn and depression for business also had a significant influence on loan performance in bank funded projects (mean = 3.01 and SD= 0.995). Conversely however, decrease in GDP per Capita (mean = 2.02 and SD=1.06) had a relatively lower influence on performance of loans in bank funded projects.

4.5 Inflation Rate on Non-Performing Loans in Bank Funded Projects

The investigator was concerned with assessing the respondents' opinions on whether inflation rate was a determinant of NPLs in projects financed by the conventional banks in Kenya and summary responses presented below;

Table 4.7: Extent to Which Inflation Rate Influences Non-Performing Loans in Bank Funded Projects- Nairobi County

Statement	1	2	3	4	5	Mean	SD
a) Consumer Price Index (CPI) in Kenya attributes to non-performing loans	0	11(10%)	12(11%)	68(59%)	23(18%)	3.72	1.087
b) Average cost of living attributes to non-performing loans	0	0	26(22%)	65(57%)	23(21%)	3.34	1.144
c) Rate of money circulation/supply in Kenya attributes to non-performing loans	4(3.5%)	4(3.5%)	7(6.2%)	88(77.2%)	11(9.6%)	4.53	0.777
d) Level of taxation attributes to non-performing loan	4(3.5%)	34(30%)	15(13%)	30(26.3%)	31(27.2%)	3.15	1.000
e) Variation of imports and exports contributes to non-performing loans	0	11(9.5%)	11(9.5%)	68(59.7%)	24(21.5%)	3.61	0.906
Composite mean						3.67	0.991

Out of the 114 respondents, 68(59%) agreed that consumer price index factored in NPLs, and 65(57%) agreed that the average cost of living was a critical measure of non-performing loans. In addition, 88(77.2%) and 68 (59.7%) admitted that the rate of money circulation and variations in imports were variables that influenced the NPLs. Further analysis indicated that majority believed that the rate of money circulation/supply in Kenya greatly attributed to non-performing loans (mean=4.53, Std. Dev = 0.777) as compared to the consumer price index (CPI) where many believed had an impact on non-performing loans (mean = 3.72) and (standard deviation = 1.087). In addition, the respondents also believed the variation of imports and exports contributed to non-performing loans, (mean=3.61, standardized deviation=0.906). The respondents also pointed out that the average cost of living (mean=3.34, SD=1.144) and the level of taxation (mean=3.15, SD=1) mildly attributed to non-performing loans.

4.6 Foreign Exchange on Non-Performing Loans in Bank Funded Projects

The concern of the investigator was to assess the respondents' perception on the influence of rate of foreign exchange on NPLs using five-point measurement scale. The summary outcomes are tabulated below;

Table 4.8: Extent to Which Foreign Exchange Influences Non-Performing Loans in Bank Funded Projects- Nairobi County

Statement	1	2	3	4	5	Mean	SD
a) Government debt attributes to non-performing loans	0	4(3.5%)	23(20%)	61(53.5%)	26(23.7%)	3.76	1.064
b) Country's current account/ Balance of payment attributes to non-performing loans	0	0	27(24%)	87(76%)	0	4.46	1.024
c) Terms of trade attributes to non-performing loans	0	0	0	95(83.3%)	19(16.7%)	3.91	0.995
d) The level political instability contributes to non-performing loans	0	0	8(7.0%)	61(53.5%)	45(39.5%)	3.72	1.097
e) Interest rates attributes to non-performing loans	0	4(3.5%)	34(30%)	72(63.2%)	4(3.5%)	4.01	0.85
Composite mean						3.972	1.01

The results illustrate that majority of research participants (61, 53.5%) admitted that government debt is a contributor of NPLs and 87(76%) agreed the nations balance of payment also contributes to NPLs. Additional analysis of mean scores showed that country's current account and interest rates had the highest mean of 4.46 (SD=1.024) and 4.01 (SD=0.85) respectively. This implied that many respondents strongly believed the two factors had impacted the non-performance of loans of projects financed by local banks. Political instability and government debt were also seen as contributors of the NPLs except mildly (means of 3.72 and 3.76 respectively).

In summary, there are no huge deviation for the means all the factors under study that have an influence on inflation rate from the composite mean of 3.972 and SD 1.01. This implies that inflation rate has a strong bearing on the performance of loans in bank funded projects.

4.7 Correlation Analysis

Argumented Dickey fuller test of unit roots was used. The results in Table 5.0 indicate existence of unit roots. The student's t-statistics exceeds the 95% critical value hence we reject the hypothesis. This implied the existence of a unit root which is a common feature of most time series.

Each series was differenced once and the results in table below reveal the unit root test for the differenced series. A multiple linear regression determined the effect of each of the three variables in NPL as demonstrated below;

$$Y = -0.0346 + (-0.05239)x_1 + 0.02836x_2 + 0.1936x_3$$

Where Y=NPL X₁=GDP X₂=INF X₃=FX

Table 4.9: Multiple Regression Model Results in Excel

	<i>GDP</i>	<i>INFLATION</i>	<i>FOREX</i>
Multiple R	-0.254048603	0.293085806	0.535253115
R Square	-0.064540693	0.08589929	0.286495897
Adjusted R Square	-0.052391721	0.028363299	0.197307884
Standard Error	4.076846784	4.030036347	3.560493336
Observations	10	10	10

The indicators; Multiple R and Adjusted R square, are used to measure the weights and variance explained by the predictors on response variable as well as their direction in the linear equation. The analysis confirmed that GDP had a downturn effect (-0.052391721) while inflation (0.028363299) and forex (0.197307884) had an upside effect on NPLs. The results imply that a 1% increase of GDP produces a negative effect of 5.2% on non-performing loans, while a 1% increase in inflation enhances the chance of a non-performing loan by 2.8%. Similarly, a unit increase in the forex results in 19% increase in the NPLs.

4.8 Pearson's Correlation Coefficient Results

The ratio for non-performing loans negatively correlates with gross domestic product. The proportion for non-performing loans is positively correlated with the inflation rate. This is consistent with the fitted multiple regression model results. Finally the non-performing loans positively associates with the foreign exchange rate. This is consistent with the fitted multiple regression model results.

Further investigation suggest that GDP has a strong negative correlation to NPLs -0.237% while there exist a moderate correlation between inflation rate and NPLs of 0.49%. The level of association between foreign exchange and NPL of 0.62%, indicating a solid relationship.

CHAPTER FIVE

SUMMARY OF FINDINGS, DISCUSSIONS, CONCLUSIONS AND RECOMMENDATIONS

5.1 Introduction

The summary of the results, findings and conclusions drawn in line with objectives of the study is presented in this episode. In addition, the recommendations for appropriate interventions to be considered by the relevant bodies are highlighted. The chapter also highlights contributions of the study to knowledge, as informed by the findings under each objective, as well as recommendations for further research, as informed by gaps emerging in the findings, and/or delimitations of the study. Details are provided in the following sub-sections.

5.2 Summary of Findings

The investigations confirm that the three-predictor variables significantly influence the NPLs of projects funded by the conventional banks in Kenya. The summary outcome for each is discussed in the succeeding sections.

5.2.1 Gross Domestic Product and Non-Performing Loans

The study results confirmed that the GDP indicator was a central component in the growth, performance and development of the nation's financial institutions including banks and related projects they finance. As such, the analysis revealed a weak association between the growth rate of GDP and the repayment of loans by different organizations ($r=0.2372195$), indicating that a positive GDP would result in less NPLs and vice versa.

Harmele (2010), anticipated a negative correlation between GDP and NPLs while (Beck 2013), asserted that the GDP had a positive impact to NPLs. This research affirms investigations by Ali and Daly (2010), Derbali (2011), and Thiagarajan (2011), who used panel vector autoregressive model to affirm his research and confirms that indeed GDP is negatively correlated to NPLs.

5.2.2 Inflation Rate and Non-Performing Loans

The results of the study confirms that a moderate correlation between the rate of inflation and NPLs exist ($r=0.4944299$). The rate of success in loan repayments by individuals and organizations is pegged on the purchasing power of a nation. Santoni (1986) and Glowgiski (2017), showed that the inflation rate has a positive relationship with NPLs. Warue (2013), however, found that there was no association between the two variables of inflation and NPLs. The results of this study affirms the former findings that indeed inflation rate is positively correlated to NPLs.

5.2.3 Foreign Exchange Rate and Non-Performing Loans

The results of the study also realized that the level of association between foreign exchange rate and the NPLs is strong and positive ($r=0.6158267$). This indicated that high rate of foreign exchange results in an increase level of repayment of loans.

Sirpal (2017), and Nucci & Pozzollo (2017), revealed that foreign exchange rate has positive impact on NPLs since a nation's deterioration in her currency leads to an expansion on exports and compression of imports. As a result, its ripple effect bears heavily on the NPLs.

5.3 Conclusion

The investigations observe the following; the three-predictor variables of the study jointly influenced the level of repayment of loans by company and individual projects to the commercial banks in Kenya.

Concerning the inflation and foreign exchange rates effects on NPLs, the investigations realized a positive correlation. The period after the 2007 and 2013 elections saw a negative GDP growth coupled with high inflation and forex rates. As a result, a significant number of institutions and individual programs defaulted on repaying loans. The stuns and shocks that affect an economy normally results in high number of unpaid loans. A high inflation rate yields high cost of living and thus very few are able to save and service the loans.

Similarly, an increasing rate of forex leads to a reduced value of local currency thus increases the budget deficits. Therefore, a shock in the economy that affects the GDP growth rate as well as inflation and forex is likely to see companies and individuals unable to pay their loans.

5.4 Recommendations

The study recommends the following based on the research findings;

1. The government should ensure effective financial markets and policies on lending and borrowing. Through this it will ensure focus on achieving accountability and transparency in financial management for effective operations.
2. Central Bank of Kenya should develop effective regulatory framework that will foster execution and implementation of economic variable that highly affects NPLs. Constructive policies should be formulated and institutionalized to help curb the rate of NPLs in bank funded projects. Systems, protocols, practices and process should be integrative to ensure high level of success in executing mandate of loan repayment.
3. Project managers should be accountable and transparent in order to implement proper financial management systems and practices. They should put up strategies and framework that will be useful in repaying loans to successfully fund future programs. There should be work base structures and project activities and profit making to ensure repayment of loans and reduced NPL. Constant monitoring of project success and evaluation of outcomes should be conducted to ensure that issues such as NPLs can be foreseen and addressed before hand, this will boost rate of loan repayments.
4. Risk management is critical to achieve expected outcomes and results in bank funded projects. Strategies and measures should be put in place to help develop, mitigate and curb risky borrowers. Effective risk management, planning, assessment, auditing and risk evaluation plays a key role in successful implementation of projects. Effective risk identification measures, controls, reduction strategies should help to minimize risk especially after such information has been shared hence sensitization of hazards of defaulting loans with CRBs.

5.5 Suggestions for Further Studies

This academic-inquiry endorses that a parallel and analogous task is needed in other settings touching on fiscal policies and interest rates by the Central Bank of Kenya. It has also recognized that other metrics of the economic and social landscape of the nation need to be explored in order to fully understand their contributions on NPLs. Other researchers could also look at the horizons of the CBK and explore financial institutions that are not regulated by the Central Bank of Kenya.

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APPENDICES

Appendix I: Letter of Introduction

Lucy Kizito Opondo

P.O. Box 2249 – 40100

Kisumu

Dear Sir/Madam,

RE: REQUEST FOR PARTICIPATION IN A RESEARCH STUDY

I am Lucy Kizito Opondo, currently a final year study in M.A in Project Planning and Management at the University of Nairobi. I am undertaking research on **‘The influences of economic variables on Non-Performing Loans Bank in Kenya. A case of selected bank funded projects in Nairobi County’**. I would like to request your assistance in data collection by filling out the attached questionnaire.

The information provided here will be used for academic purposes only and I would like to give you my assurance that collected data will be treated with utmost confidentiality and professionalism.

I am looking forward to your positive response and my appreciation in advance for facilitating this study and the final report will be made available to you upon request.

Yours sincerely,

Lucy Kizito Opondo

Lucymanka25@gmail.com

Appendix II: Questionnaire for Respondents

This questionnaire is designed to gather information about the influence of economic variables on Non-Performing Loans in bank funded projects in Kenya: A case of selected bank funded projects in Nairobi County. Please answer all the questions by filling in the space provided by ticking appropriate answer that suits your opinion.

Section I: Demographic Information

1. What is your gender?
 - a) Male
 - b) Female

2. What is your age bracket?
 - a) 20 -29years
 - b) 30 -39years
 - c) 40- 49years
 - d) 50 -59years
 - e) 60years and above

3. What is your highest level of academic qualification?
 - a) Secondary Certificate
 - b) Diploma/ College Certificate
 - c) Bachelor's degree
 - d) Masters
 - e) PhD
 - f) Others; please specify _____

4. How long have you worked in this organization?
 - a) 0-4 years
 - b) 5- 9 years
 - c) 10-14 years
 - d) 15-19 years
 - e) 20-24 years
 - f) 25 years and above

5. What is your current occupation?
- a) Bank Credit/ Loan Manager []
 - b) CBK Economist Officer []
 - c) KNBS Economist Officer []
 - d) Others; please specify _____

SECTION II: GROSS DOMESTIC PRODUCT ON NON -PERFORMING LOANS

Below are some statements that describe the influence of Gross domestic product on non-performing loans in bank funded projects in Nairobi County. Please indicate your level of agreement or disagreement. **Please tick the appropriate box where 1-Strongly Disagree 2-Disagree 3- Neutral 4-Agree 5- Strongly Agree. There are no right and wrong answers, kindly express your opinion.**

SN	Statement	1	2	3	4	5
1	National Gross Domestic Product turnover has led to depression in Non-Performing Loans					
2	Non-Performing Loans has been attributed by low Gross domestic product turnover					
3	Purchasing power of customers attributes to Non-Performing Loans					
4	Gross Domestic Product per capita contributes to Non-Performing Loans					

SECTION III: INFLATION RATE ON NON-PERFORMING LOANS

Below are some statements that describe the influence of inflation rate on Non-Performing Loans in bank funded projects in Nairobi County. Please indicate your level of agreement or disagreement. **Please tick the appropriate box where 1-Strongly Disagree 2-Disagree 3- Neutral 4-Agree 5- Strongly Agree.**

SN	Statements	1	2	3	4	5
1.	Consumer Price Index attributes to Non-Performing Loans					
2.	Average cost of living contributes to Non-Performing Loans					
3.	Rate of money circulation in Kenya contributes to Non-Performing Loans					
4.	Rate of money supply contributes to Non-Performing Loans					
5.	Level of taxation attributes to Non-Performing Loans					
6.	Variation in import prices in Kenya contributes to non-Performing Loans					
7.	Variation in export prices in Kenya contributes to Non-Performing Loans					

SECTION IV: FOREIGN EXCHANGE ON NON-PERFORMING LOANS

Below are some statements that describe the influence of foreign exchange rate on Non-Performing Loans in bank funded projects Nairobi County. Please indicate your level of agreement or disagreement. **Please tick the appropriate box where 1-Strongly Disagree 2- Disagree 3- Neutral 4-Agree 5- Strongly Agree.**

S N	Statement	1	2	3	4	5
1.	Level of Government debt attributes to Non-Performing Loans					
2.	Level of Balance of Payment contributes to Non-Performing Loans					
3.	Terms of trade in Kenya attributes to Non-Performing Loans					
4.	Foreign exchange rate in Kenya contributes to Non-Performing Loans					
5.	The level of political stability in Kenya contributes to Non- Performing Loans					
6.	The level of Interest rates in Kenya attribute to Non- Performing Loans					

Commercial Bank Name		2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
KCB	Loan Portfolio											
	NPLs in bank funded projects in Nairobi county											
Cooperative Bank of Kenya	Loan Portfolio											
	NPLs in bank funded projects in Nairobi county											
National Bank of Kenya	Loan Portfolio											
	NPLs in bank funded projects in Nairobi county											
Diamond Trust Bank, Kenya	Loan Portfolio											
	NPLs in bank funded projects in Nairobi county											
Barclays Bank of Kenya	Loan Portfolio											
	NPLs in bank funded projects in Nairobi county											
Equity Bank	Loan Portfolio											
	NPLs in bank funded projects in Nairobi county											
Stanbic Bank	Loan Portfolio											
	NPLs in bank funded projects in Nairobi county											
Standard Chartered Bank	Loan Portfolio											
	NPLs in bank funded projects in Nairobi county											

Signatory

Stamp

Thank you so much for participating in this research. In case you need the findings of this research project, please feel free to get in touch with me on the above email address.

Have a good day.

Data Collection Form

<Name>ECONOMIC FACTORS DATA FORM					
YEAR	Foreign exchange rate (Kes to \$)	Balance of payment in Kenya	Imported goods value in Kenya	Exported goods value in Kenya	
2008					
2009					
2010					
2011					
2012					
2013					
2014					
2015					
2016					
2017					
2018					

Signatory

Stamp

Thank you so much for participating in this research. In case you need the findings of this research project, please feel free to get in touch with me through my email address.

Have a good day.

Appendix III: List of Commercial Banks in Kenya under Study

1. ABC Bank
2. Africa development bank
3. Bank of Kigali
4. Bank of Baroda
5. Bank of India Kenya
6. Bank of China
7. Barclays Bank of Kenya Ltd
8. Charter house bank
9. Central Bank of China (K)
10. Citibank
11. Commercial Bank of Africa
12. Consolidated bank
13. Co-operative Bank of Kenya Ltd
14. Credit Bank
15. CFC Stanbic
16. Development Bank of Kenya
17. Diamond Trust Bank Kenya Ltd
18. Dubai Bank Kenya
19. Eco-bank
20. Equatorial commercial bank
21. Equity Bank Ltd
22. Family bank
23. Fidelity Bank
24. Fina Bank
25. First community bank
26. Habib Bank
27. Guardian Bank
28. HDFC bank ltd
29. Housing finance Cooperative
30. I & M Bank Ltd

31. KCB
32. Mauritius Commercial Bank
33. National Bank of Kenya Ltd
34. Nedbank Ltd
35. NIC bank
36. Oriental Bank
37. Prime Bank
38. Rabobank Nederland
39. Sidian Bank
40. Spire Bank
41. Standard Chartered Bank Kenya Ltd
42. Transitional bank
43. UBA bank
44. Victoria Bank

B) LIST OF TOP EIGHT KENYAN COMMERCIAL BANKS (SOURCE: CBK)

COMMERCIAL BANK	NET ASSETS (MILLION)
1. Kenya Commercial Bank Ltd	74,115
2. Barclays Bank of Kenya Ltd	61,178
3. Standard Chartered Bank Ltd	54,410
4. Co-operative Bank of Kenya	21,338
5. Commercial Bank of Africa	16,156
6. National Industrial Credit Bank	8,408
7. CFC Bank Limited	8,300
8. Investment & Mortgages Bank	7,100

BANK FUNDED PROJECTS IN KENYA

1. Transport sector
2. Energy sector
3. Water and Sanitation sector
4. Urban development
5. Health sector
6. Public sector development & social protection
7. Women and Gender Enterprises and Schemes.
8. Small Micro-Enterprises Schemes (SMEs).

Appendix IV: Sample Data Collected

YEAR	NPLs RATIO	GDP	INF	FX
2008	1.46	2.9	9.8	75.936
2009	8.04	5.1	11.6	79.174
2010	8.07	5.9	10.3	75.554
2011	5.73	6.3	14.5	72.101
2012	6.87	7	9.8	67.447
2013	8.59	1.5	26.2	69.175
2014	6.82	2.8	9.2	77.352
2015	2.78	5.8	4.1	79.233
2016	18.3	4.4	14	88.811
2017	8.3	4.5	9.4	84.53
2018	9.1	4.6	5.7	86.123

Appendix V: Research Permit – National Commission for Science, Technology & Innovation

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