

**THE EFFECTS OF INTERNATIONAL FINANCIAL REPORTING
STANDARD NUMBER 9 ON THE PERFORMANCE OF KENYAN
COMMERCIAL BANKS LISTED AT THE NAIROBI SECURITIES
EXCHANGE**

BY:

DOUGHLAS OWITI NYANGIDI

**A MANAGEMENT RESEARCH PROJECT SUBMITTED IN PARTIAL
FULFILMENT FOR THE REQUIREMENTS OF THE AWARD OF THE
DEGREE OF MASTER OF BUSINESS ADMINISTRATION, SCHOOL
OF BUSINESS, UNIVERSITY OF NAIROBI.**

NOVEMBER, 2021

DECLARATION

The research project I hereby present is my original work and has not been presented in any other institute of higher learning for examination for an award of a degree.

Signature: 

Date: 20th October, 2021

DOUGHLAS OWITI NYANGIDI

D61/6486/2017

The research project has been submitted for presentation with my approval as the University Supervisor.

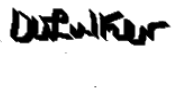
Signature: 

Date: November 2, 2021

DR. JOSHUA WANJARE KOKEYO

Senior Lecturer, Department of Finance and Accounting, School of Business, University of Nairobi.

The research project has been submitted for presentation with my approval as the University Moderator.

Signature: 

Date: 4th November, 2021

DR. LUTHER OTIENO ODHIAMBO

Senior Lecturer, Department of Finance and Accounting, School of Business, University of Nairobi.

AKNOWLEDGEMENT

May I take this opportunity to thank the Almighty God for His protection and provision of good health and finances which enabled me undertake this study, were it not for Him I wouldn't have finalized the course.

Secondly, I would like to thank and recognize my Supervisor Dr. Joshua Wanjare for his invaluable support and pieces of advice throughout the journey and walking me through the process, not forgetting my moderator Dr. Luther Otieno for his guidance on how to make the project better.

My family; mother, wife and children, your support was unequivocal. You endured a lot to ensure that I completed that which I started. Thank you so much.

Lastly, but not least my fellow MBA students at the University of Nairobi especially Walter Ngode, you were the pillar on which I leaned on for peer consultations when the going got tough.

DEDICATION

To my late dad, your love for me and education was unconditional, you always encouraged me to love my books and everything else would follow suit.

ABSTRACT

The introduction of ECL model of IFRS 9 by the IASB for implementation by financial institutions beginning January 2018 to enhance banks financial stability and to avoid a repeat of the financial crisis which was experienced in the year 2008 brought a lot of debate on the effects of the IFRS 9 on banking sectors. It is due to that fact that the Researcher carried out a study to find out the effects of IFRS 9 on the performance of Kenyan listed commercial banks. The study period was between the 2015 and 2020, this led to the study period being divided into phases; phase one was the entire research period (2015 to 2020), phase 2 was the pre IFRS 9 period (2015 to 2017) while phase 3 was the post IFRS 9 period, that is between 2018 to 2020. The dependent variable of the study was performance measured as ROE while the independent variables were credit risk, LLP and capital adequacy. The study revealed that impact of the independent variables on the performance was 53.9%, 31.7% and 60.6% for the entire study period, pre and post IFRS 9 period respectively. It further revealed that credit risk is one of the factors which largely and significantly have a negative effect on performance. The study used descriptive statistics, Pearson correlation and regression analysis to describe, correlate and regress the collected data. The data was collected from published financial reports for each listed commercial banks from the CBK's annual banking sectors supervision reports, individual banks audited financial reports and the NSE reports on listed commercial banks. The study recommended that the bank management and oversight and regulatory authorities should set policies to ensure that the credit risk is mitigated and controlled and in addition to that, the management should ensure that clients are strictly vetted to help reduce credit risk and loan loss provisioning.

TABLE OF CONTENTS

DECLARATION	i
ACKNOWLEDGEMENT	ii
DEDICATION	iii
ABSTRACT	iv
TABLE OF CONTENTS	v
LIST OF TABLES	viii
LIST OF ABBREVIATIONS AND ACRONYMS	ix
CHAPTER ONE: INTRODUCTION	1
1.1 Background	1
1.1.1 International Financial Reporting Standards 9.....	2
1.1.2 Performance	4
1.1.3 Implementation of IFRS 9 and Financial Performance.....	4
1.1.4 Banks listed at NSE.....	5
1.2 Research Problem.....	6
1.3 Research Objective.....	7
1.4 Value of the Study.....	7
CHAPTER TWO: LITERATURE REVIEW	8
2.1 Introduction	8
2.2 Review of Theories	8
2.2.1 Theory of asymmetrical information	8
2.2.2 Theory of credit risk.....	9
2.2.3 Modern Portfolio Theory	10
2.3 Empirical Literature Review	10
2.3.1 IFRS 9 and Financial Performance of listed Commercial banks.	12
2.4 Summary of reviewed literature	14
2.5 Conceptual model.....	15
CHAPTER THREE: RESEARCH METHODOLOGY	16
3.1 Introduction	16
3.2 Research Design.....	16
3.3 Population.....	16
3.4 Data Collection.....	16
3.5 Data Analysis	17

CHAPTER FOUR: DATA PRESENTATION, ANALYSIS, RESULTS AND DISCUSSION	18
4.1 Introduction.....	18
4.2 Response rate	18
4.3 Presentation of the data collected	18
4.3.1 Return on Equity for the listed commercial Banks in Kenya	19
4.3.2 Return on Equity pre IFRS 9 period	21
4.3.4 Return on Equity post IFRS 9 period.....	21
4.4.1 The Loan loss provision.....	22
4.4.2 Loan loss provision pre IFRS 9	24
4.4.3 Loan loss provision post the IFRS 9 period.....	25
4.5.1 Capital adequacy for Listed Kenyan commercial banks.....	26
4.5.2 Non-performing loan ratio	27
4.6 Descriptive statistics	28
4.7 Correlation Analysis	32
4.8 Regression Analysis.....	34
4.9 Findings and interpretations.....	40
4.7.1 Effect of predictor variables on the performance of the Kenyan listed commercial banks for entire study period.....	40
4.7.2 Effect of predictor variables on performance of Kenyan listed commercial banks pre IFRS 9	40
4.7.3 Effect of predictor variables on performance of Kenyan listed commercial banks post IFRS 9	41
CHAPTER FIVE: SUMMARY, CONCLUSSION AND RECOMMENDATIONS	42
5.1 Introduction.....	42
5.2 Summary of the findings.....	42
5.2.1 Summary of findings for the entire study period (2015 to 2020)	42
5.2.2 Summary of findings for the pre IFRS 9 period	43
5.2.3 Summary of findings for post IFRS 9 period.....	44
5.3 Study conclusion	45
5.4 Recommendations.....	46
5.5 Limitations of the study	47
5.6 Areas of further study	48
REFERENCES	49

APPENDICES	53
Appendix 1 –Return on Equity	53
Appendix 2-Loan Loss Provision	53
Appendix 3-Credit risk	54
Appendix 4-Capital adequacy.....	54
Appendix 5-Kenyan Commercial banks listed at NSE.....	55

LIST OF TABLES

Table 4.1: Return on Equity for listed Kenya Commercial Banks for entire review period ...	20
Table 4.2: ROE for listed Kenyan Commercial Banks pre IFRS 9 period	21
Table 4.3: ROE for Kenyan listed commercial banks post IFRS 9 period	22
Table 4.4: Loan Loss Provision in billions of shillings for the entire period of study	23
Table 4.5: Listed Kenyan Commercial banks Loan Loss Provision during the pre IFRS 9 period	24
Table 4.6: Listed Kenyan Commercial banks Loan Loss Provision during the post IFRS 9 period	25
Table 4.7: Listed Kenyan Commercial Banks Capital adequacy ratio for the entire review period.	26
Table 4.8: NPL ratio (Credit risk) for the entire study period	28
Table 4.9: Descriptive Statistics for the entire review period.....	29
Table 4.10: Descriptive Statistics for the pre IFRS 9	30
Table 4.11: Descriptive Statistics for the post IFRS 9.....	31
Table 4.12: Analysis of correlation for entire period of study.....	32
Table 4.13: Pre IFRS 9 Analysis of the Correlation	33
Table 4.14: Post IFRS 9 Correlation Analysis.....	34
Table 4.15: Model Summary for Entire Period of Study.....	35
Table 4.16: Model summary for entire period of study	36
Table 4.17: ANOVA for the entire study period	36
Table 4.18: Model coefficient for the pre IFRS 9.....	37
Table 4.19: Model Summary pre IFRS 9.....	37
Table 4.20: ANOVA for pre IFRS 9 period	38
Table 4.21: Model coefficients for post IFRS 9	38
Table 4.22: ANOVA for the post IFRS 9 period	39
Table 4.23: Model summary for post IFRS 9	39

LIST OF ABBREVIATIONS AND ACRONYMS

IASB- International Accounting Standards Board

NPL- Non Performing Loans

LLP-Loan Loss Provisioning

IAS-International Accounting Standards

IFRS-International Financial Reporting Standards

ECL-Expected Credit Loss

ICL-Incurred Credit Loss

BCBS-Basel Committee on Banking Supervision

G20-Group of Twenty (Intergovernmental forum comprising 19 countries and the European Union (EU))

CBK-Central Bank of Kenya

PwC-Price Water Coopers

CMA-Capital Markets Authority

NSE-Nairobi Stock Exchange

IRB-Internal Ratings Based

SA-Standard Approach

MPT-Modern Portfolio Theory

PD-Probability of default

LGD-Loss given default

ICPAK-Institute Certified Public Accountants of Kenya

FY-Financial year

ROI-Return on investment

ROA-Return on Assets

ROE-Return on Equity

CHAPTER ONE: INTRODUCTION

1.1 Background

The International Financial Reporting Standards (IFRS) are standards formed and approved by the International Accounting Standards Board (IASB) to be used by different organizations including banks in the preparation of their financial reports and statements. The main reason for the standards is to enable organization or businesses carried out globally to have financial reports which are comparable, understandable and finally to bring quality in the financial reporting. The body charged with the development and approval of the IFRS has so far developed and approved 17 standards for use by different categories of organizations globally.

In the year 2014, a committee was formed by the IASB to initiate and come up with measures to counter the defects of International Accounting Standards 39 (IAS 39) which was believed to have been one of the major contributors to the predicament faced by financial institutions and banking sectors in their finances in the year 2008 (G, 20 (2009), BCBS (2015b)). This led to development of IFRS 9 which was to be mandatory implemented beginning January 2018 by financial institutions which were under prudential guidelines (IASB, 2014). The new standards call for banks to set aside some allowances in form of loan loss provision, which may cushion banks against the effects of bad debts, but may also increase the operational expense hence reduction in the financial performance of banks listed at the Nairobi Stock Exchange (NSE). The IFRS 9 requires financial institutions regulated by prudential guidelines of Central Banks to shift from the model of Incurred Credit Loss (ICL) of IAS 39 regime to an anticipated loss in credit called the model of Expected Credit Loss (ECL) of IFRS 9 (PwC 2017). In the outgoing regime, measurement, recognition, including reporting of assets was based on the ICL model. ICL model is a backward looking model where inability of an individual or firm to abide by part of his/her bargain is determined after it is already notable that the loan repayments will not be forthcoming (IAS 39.59), unlike ECL which is a forward looking model (IFRS 9.5.5). ECL model has 3 stages of recognizing impairment and calculation of interest on financial assets (ICPAK, 2017 IFRS 9 implementation guidelines). The first step is where the level of risk is at its minimum level thus the rule demands that the issuer computes interest earnings on the gross amount of the assets with a year's ECL. In the subsequent level if the risk grows significantly, a lifetime ECL is created while the gross carrying amount becomes the base of charging income. The

credit impaired stage is the last step which requires banks to compute interest on net carrying amount and a life time exposure of ECL.

The study of effects of IFRS 9 on the performance of listed Kenyan commercial banks is anchored in the following theories; asymmetrical information, credit risk and modern portfolio theories. Asymmetrical theory states that the parties involved in transactions might have information imbalance thereby disadvantageous to one party over the other, Ekumah et al, (2003). The party receiving the loan might be privy to some information which the lender is not aware of, especially the information which may be handy in making decisions on whether to grant or not to grant loan to the borrower. The theory has got a linkage with IFRS 9 in that; lack of full disclosure on material issues may see banks give loans to some clients who/which may not have qualified for loans were the accurate information disclosed before the decision to give loans was made. The theory gives rise to Adverse Selection and Moral hazard theories, Binks et al (1992). Adverse Selection theory states that the borrowers who engage in activities and business which are vulnerable in nature are in a better place to get credit than borrowers who have good business prospects and less vulnerability. This comes as a result of lending institutions being unable to know with certainty which potential borrowers are better ranked in credit score hence charge a uniform rate of interest. Moral hazard theory states that after the fund has been disbursed, there might be an ill motive and desire by the recipient to go against the engagement terms by putting the borrowed funds in activities whose returns look promising, but may cause financial harm to the lender in a big way. Credit risk theory gives rise to a situation where one of the parties to the loan agreement (the borrower), defaults in making the required repayments at the scheduled time, hence affecting the flow of cash into the lending firm's books (BCBS, 2000). Modern portfolio theory is a theory which is best used by risk-averse investors. The risk-averse investors are the investors who can construct a portfolio to maximize returns with a belief that opportunities whose earnings are volatile should command higher premiums.

1.1.1 International Financial Reporting Standards 9

IFRS 9 is the standard which was developed by IASB to be effected in the financial reports by recognizing ECL earlier enough to maintain financial stability of the institutions with financial assets (G,20 (2009), BCBS (2015b)). IFRS 9 was to be mandatorily implemented by financial institutions in preparing their financial statements beginning January 2018 (CBK guideline 2018). It was believed that the use of IAS 39 by financial institutions in preparing

their financial statements might have been one of the reasons for the reported financial stress and distress back in the year 2008 (Huain, 2012). Due to the crisis, G20, (G20,2009) and Basel III committee proposed the improvements of financial standards purposely to guard banking sectors and other financial institutions against the challenges experienced due to the use of IAS 39 in the preparation of their financial statements (BCBS,2015b).

After the development and conclusion of the new standard, banks whose operations were under the prudential guidelines were to mandatorily replace the existing IAS 39 at the beginning of 2018 in the preparation of their financial reports (IASB, 2014). The IAS 39 had the following limitations; it was complex and rigid for financial instruments, rules were not adaptive to the changing conditions (Scapens, 1994, p. 310). The rules did not change with the changes in the environment (Gornjak, 2017).

The IFRS 9 was to improve the financial stability by factoring in the changes and when to recognize any anticipated losses and the way business was carried out by banks, Marshall, (2015). Implementation of IFRS 9 by organizations with financial instruments in their financial statements has brought myriad improvements including earlier and timely recognition of credit loss and putting aside adequate provision for the same. The implementation of IFRS 9 have shortcomings to the organizations in its financial statements, being a principle based standards, it lacks the operational guidance, it's based on assumptions hence not possible to compare different firms (Wagenhofer, 2006, p. 169).

Implementing IFRS 9 by the financial institutions and commercial banks listed in NSE will give rise to the following changes; increase the loan loss provisions in order to provide extra cushioning against credit losses, this may increase the operational cost hence reduction in reported profit, classification and measurement of the financial assets may be more judgmental, hence lack of comparability between firms, complexity in the computation of interest income, and extensive disclosures, by Bank for International Settlements (BIS,2017).

According to ICPAK (2018), implementing ECL approach of loss impairment under IFRS 9, where banks are expected to recognize Non-Performing Loans (NPL) and allocate funds to cushion them against such losses before it gets out of hand, may have positive effects on financial stability, but may also bring negative impact and effect on the earnings.

1.1.2 Performance

Performance is utilization of limited resources by firms to achieve targeted output or results which can sustain them (firms) to operate for an unforeseeable future, Fitzgerald (1991). In this context, the researcher will study the financial performance as it's affected by the IFRS 9. Therefore, performance in this context is the financial performance which refers to the level in which a firm's targets, which can financially be measured, are accomplished. Firms work in unstable environments which are very hostile, dynamic and harsh. Only firms which carry out their operations effectively, efficiently and economically with an ability to give expected returns to its shareholders will survive in such conditions. The survival of any firm will therefore be dependent on its ability to generate revenue to cover its operating expenses and other costs. Financial performance is the best indicator of assessing a firm's positional strength and because it is used to gauge management's effectiveness in utilizing the firm's resources in generating revenue for the benefit of the owners (Ponce 2011). The main reason for existence of many banks listed in NSE just like other firms is to make profit and wealth maximization to the shareholders.

Study by Schiuma (2003) mentioned accounting- based performance using three indicators of financial performance; these include computation of return based on the firm's total investment (ROI), calculating return on shareholder's equity (ROE) and returns which the assets employed by the firm generates (ROA). However, my study will employ ROE as a measure of financial performance. This is because comparison can be made between one period to the other and between firms, the return to the ordinary shareholders can also be calculated and lastly it factors in goal congruence of the firm.

1.1.3 Implementation of IFRS 9 and Financial Performance

The IFRS 9 by financial institutions has had effects on their financial performance, Kund et al (2020). The IFRS 9 has changed banks from ICL model to ECL model (CBK, implementation of IFRS 9 guideline, 2018). Under ECL model banks are required to create more provisions for any credit loss immediately the financial asset is given out (CBK, 2018). The ECL comes in 3 stages of impairment, where in stage one, as soon as the financial asset is given out, there is an expected 12-month period of either credit loss or profit, in stage 2 there is establishment and recognition of a full time credit loss in either profit or loss when credit risk increases significantly. However, in, in both stages 1 and 2, the banks are required to compute interest income on the gross value of the loan. In stage 3 is where there is a

substantive increment in default rate to the point of impairing the debt. At this stage, banks are expected to provide for lifetime ECL while interest income is computed on the net value of the loan. Therefore, implementation of IFRS 9 may have a sudden increase in provisions (Rugilo, 2018), hence may lower the banks' listed banks 'performance.

All Banks listed are required by Central Bank of Kenya and Capital Markets Authority Act (CMA) to comply with IFRS 9 and BCBS III regulations (CBK, guidelines on the implementation of IFRS 9, 2018). Financial institutions which are under the guideline of Central Banks are required to operate under certain policies developed by BCBS with main objective of enhancing the adherence to set rules, promoting oversight and reduction of variability of their earnings (BCBS, 2000). The requirement may see banks increase expenses inform of loan loss provision, hence decadence in the financial performance.

1.1.4 Banks listed at NSE

Banks are registered firms/companies which operate under the following legal frameworks; Banking Act, CBK Act and Companies Act with core mandate of carrying out banking business and transactions for purposes of yielding returns to owners (Ondieki 2012). However, listed banks, apart from Banking Act and CBK guidelines, are strictly required to adhere to regulations provided for by the oversight bodies and to ensure strict compliance. Additionally, CMA regularly monitors and evaluates the adherence of listed banks to any provided circular on financial reporting and give sanctions whenever there is a departure from the guidelines. Further, Commercial Banks whose securities are publicly traded are required by the Capital Markets Authority Act to be listed with the NSE for the purposes of trading in securities to raise capital from the public hence need for strict regulations. NSE is key in ensuring that there is economic growth in any country. It enables savings and investment of idle money in more productive activities by bringing together investors (borrowers) and savers (lenders) at a minimum charge. NSE also plays a role in sensitizing the public on how, when and why it's important to trade in securities. The mandatory implementation of IFRS 9, may therefore improve, as was the reason for its conceptualization, financial stability of the banking industry which are under the regulation of CBK and prudential guidelines.

Banking business is the business of accepting deposits from the members of the public and providing the same money when demanded for by the depositors, (Banking Act 2015). Banks both listed at the NSE and unlisted act as financial intermediaries in the financial sector and

also provide employment to the citizens, hence contributing immensely towards the development and growth in any country, Kenya included. CBK is authorized by the Banking Act to license, regulate and supervise the Commercial Banks in Kenya.

1.2 Research Problem

The performance of Commercial Banks both listed at the NSE and unlisted is of great interest to various stakeholders ranging from the members of staff, management, both the equity and the debt holders, CBK, Capital Markets Authority (CMA) and the government at large. In this regard, there are a lot of worries and concerns from the banking sector stakeholders on how the financial performance of listed banks will be affected by the introduction of IFRS 9.

Petra Blažeková (2018) studying the impact of IFRS 9 on banks' statutory capital and changes in its reporting component established that, the implementation of IFRS 9 by financial institutions especially banks using Internal Ratings Based, suffer from lower deterioration in capital ratio. The lower deterioration is experienced more by institutions using Internal Ratings Based than those that are using Standard Approach. Study by (Ntaikou et al.2018) to examine how the performance of the Greek Banking System is impacted by increment of loan loss provision (LLP) brought about by IFRS 9, established that implementation of IFRS 9 will have both positive impact of increased Non Performance Exposures and negative impact on core capital. The increased provision which is quantitative impact will automatically affect retained earnings and regulatory capital.

There are gaps which this study tends to fill. Going through other publications on the subject matter, I did not come across any publication touching on the influence of IFRS 9 on the listed banks' performance.

The study by Ongalo (2019) on whether earnings of banks will have effects when the rules of IFRS 9 are fully implemented was done in the year 2019 just a year after mandatory adoption in 2018 hence was a cross sectional research while my study will be longitudinal study which will cover 3 years after the mandatory implementation, further this study will concentrate on Kenyan listed commercial banks.

Study by Obwocha (2019) to investigate the behavior of banks performance when there is change in LLP,had the following gaps; it was carried out only one year after the introduction of IFRS 9 period, secondly the study was on all commercial banks and thirdly it was study on change of loan loss provision.

It is worth noting that none of the reviewed studies was done to find out how Kenyan listed commercial banks will react, especially on their performances with the introduction of IFRS 9. This automatically results in theoretical and practical gaps that my research may bridge by answering the general study problem which goes; what is the effect of IFRS 9 on the performance of Kenyan Commercial banks listed at the NSE?

1.3 Research Objective

The research's objective is to determine the effect of IFRS 9 on the financial performance of Banks listed at NSE.

1.4 Value of the Study

Banking sector is a great contributor to the economic growth of any country, Kenya included. The conclusion and the recommendations of the study will be very vital to the banking sector's stakeholders in many ways. The research seeks to know the effect of IFRS 9 on the financial performance of Kenyan listed commercial banks. The banks and regulators may use the findings in this study to formulate policies which can mitigate banks against the negative impact of the implementation of IFRS 9.

The interrogated studies locally and internationally indicate that there are no adequate documentations on how preparing the financial statements which are in compliance with IFRS 9 have affected the performance of banking sectors especially the listed banks. Based on this fact, this study will to a greater extent contribute to the theories and add to the body of knowledge by revealing the effects that financial reports prepared in adherence to IFRS 9 has on performance of listed Kenyan commercial banks. More studies shall be carried out based on the outcomes and the recommendations which this research will bring forth, hence will form part of reference point for future students and other researchers.

CHAPTER TWO: LITERATURE REVIEW

2.1 Introduction

Literature review is appraising critically, studies, publications and theories done within and outside our country and theories which relate to the research topic. The studies relating to the credit risk, risk management, performance of banks and IFRS 9 will be studied in this chapter. It will further present summary of reviewed literature and knowledge gaps.

2.2 Review of Theories

Asymmetrical information (adverse selection and moral hazard), credit risk and modern portfolio theories will be vital in discussing my study. These theories provide an overview of the impact of IFRS 9 on listed commercial banks' financial performance.

2.2.1 Theory of asymmetrical information

It states that in the credit market, there is imbalanced information emanating from people or firms taking credit to banking institutions. Akerlof G. (1962) Michael S. (1973) and Joseph S. (1981) came up with this theory. As a result of imperfect information in the market, some borrowers tend to provide inaccurate information to the institutions lending money well aware that those institutions do not know as much as they know about their businesses. Having this information imbalance brings out sub branches of theories of moral hazard and adverse selection. Before loans are granted, banks do carry out background checks on the ability to repay, risk exposure and nature of the borrower. However, in many cases they may not obtain the rightful and full disclosure of information from the potential borrower as there might be an incentive to provide wrongful and inaccurate information for the purposes of obtaining loans. Due to lack of accurate knowledge on the nature and the capacity of the other party to repay, banks end up granting loans and charging an equal rate of interest, thus giving rise to adverse selection, hence unable to identify which borrowers are worth granting loans to. (Weiss et al, 1981).

Immediately loan is disbursed and the fund is received, the loanee may decide to redirect the loan to another venture which was not the intended purpose for which the credit was offered as was indicated in the loan application form. Banks may not constantly carry out the auditing of the activities in which the money borrowed was invested into, this is due to the high cost implication which are involved in monitoring and evaluating the clients' activities, thus

financial institutions may not have adequate knowledge regarding the investment taken by their customers after the fund had been disbursed (Bester,1987). Borrowers may have an incentive to invest into ventures which appear more lucrative than the intended purpose for which the loan was obtained hence the moral hazard problem. The credit market globally is information asymmetrical in nature; hence banks do have inadequate information concerning the potential clients' nature of business and their earnings volatility. This imbalance calls for credit risk management to ensure that profits are not eroded due to risk of adverse selection and moral hazards. When there is asymmetrical information and banks grant loan based on the provided inaccurate information, there is a high risk that the loan will be classified in either stage 2 (under performing loans) or 3 (NPLs). Classification of the loan in the aforementioned classes may increase the LLP as propagated by IFRS 9 thus increasing expenses and reducing the financial performance.

2.2.2 Theory of credit risk

The theory which is associated with Merton (1974) states that lending institutions may suffer loss in their finances as a result of their customers failing to adhere to repayment schedules. Banks and other investors may use the model of credit risk theory to determine the methods used by the borrower in ensuring that their bargain of making repayment is met. Through the analysis, lenders ascertain the probability of the loan disbursed being repaid as was planned. It therefore states that credit risk and financial performance are inversely related.

Many banks do face different categories of risks both which are unique to them and those that are not. It's on this basis that effective risk mitigation has been undertaken by those charged with management to ensure that earning variability caused by unfavorable factors is reduced or eliminated altogether. Banks give loans to its clients with an expectation of having both the principal and interest paid back. However, due to some reasons, the customer may not make timely repayment as was expected, thus banks may not be able to realize their planned profits and have healthy cash flow. The moment borrowers fail to repay loans as scheduled, the classification of loans may change to under performing or non-performing loans. These classifications may require the listed banks to enhance the LLP to cushion them against any ECL. The increment in the LLP may therefore; increase the operating costs and reduces the earnings.

2.2.3 Modern Portfolio Theory

The theory is best used by the investors who are reluctant to take risk. The risk-averse investors are the ones who can build a portfolio to maximize returns based on certain exposures, with a belief that riskier investments are likely to yield better returns than less risky ventures. Investors therefore, believe that for them to accept higher risk, there must be a higher return expectation. Harry Markowitz introduced this theory in the 1950s and late 1960s and later changed it to Portfolio Theory.

It gives guidelines on methods that investors may use in calculating risks and coming up with correlation of risk and return. Since these investors fear high exposures, they would only consider putting their money into a project which will guarantee them a premium yield to protect them against hostile economic conditions. Banks will only lend money to firms or individuals whose risk profiles are high if they are guaranteed high returns in form of interest, otherwise credit facilities would be offered to less risky borrowers. The new standard, may see most banks shy away from lending money to risky borrowers, because this would mean they set aside more cash in form of LLP to cushion them from any anticipated loss.

2.3 Empirical Literature Review

IFRS 9 is a standard developed to cushion financial institutions against financial distress and stress caused by credit losses. In this view, the studies on how credit losses and bad debt provisions affect the performance of listed Kenyan Commercial Banks both listed and unlisted will be in handy to provide practical literature review. Studies done globally or nationally which may provide the needed literature shall be reviewed and examined. Mostly, publications to be re looked into shall include research on banks performance, risk mitigation and factors hindering banks from achieving their targeted profitability.

Study carried out in Nigeria by Babakova in the year 2003 on contribution of management of credit risk to the profitability of banks established that Non-performing loans (NPLs) are good indicators of banks' credit risk management. It further outlined how performance of banks is affected by NPL. The findings were rather theoretically unusual as it stated that NPLs positively relate to banks' profitability, it's expected that NPL has an inverse relationship with banks profitability. The study revealed that many banks had not put in place strong internal control mechanisms to enhance management of risk of default, hence banks charge high margin of interest to cushion them (banks) against the bad debts. This may make

the loans expensive; thus may discourage borrowers from applying for loans from banks, which may also hamper the economic growth and development of a country.

The study recommended that Commercial Banks should have units which are competently staffed coupled with comprehensive, but clear frameworks and policies on loaning and credit to deal with management of credit risks. It further recommended that before credit is granted, banks should appraise the project for which money is borrowed and that loan monitoring to periodic collection and repayment be closely and effectively carried out by officers from finance, project appraisal and credit departments. The literature gap in this study is that while it studied how management of credit risk influences performance of Nigeria banks, my study is focused on the effects of IFRS 9 on performance of Kenyan commercial banks listed at the NSE. Furthermore, it was done before the year 2018 when IFRS 9 had not been introduced for implementation.

Theoretical approach of research carried out by Ntaikou et al (2018) on expected impact which will be brought about by IFRS 9 on earnings of Greek banking, disclosed that implementing IFRS 9 shall bring significant changes to the banks. They further stated that banks must include major shifts in their models to factor in the IFRS 9 requirements. The study established that IFRS 9 implementation will affect banks positively by covering NPLs and negatively by having additional LLP. The study was done in European countries in 2018 during the transition period of the implementation of IFRS 9 on banking systems while my study will be done three years after the implementation of the IFRS 9 by the listed Kenyan commercial banks.

Petra Blažeková (2018), studying the reaction of regulatory capital of banks which are under supervision of central banks when exposed to the requirements of IFRS 9 established that banks using IRB approach suffer from lower deterioration in capital ratio in comparison to banks using SA approach. The study was done in the year 2018 when IFRS 9 was at its initial stage while my study will be three years post IFRS 9.

Kirui (2014), while studying effects of NPLs on performance of commercial banks in Kenya, established that performance of banks is negatively affected by NPLs. The research was done to examine the influence of NPLs on profitability of all the registered banks in Kenya while mine will focus on changes that may occur in the profitability of banks as a result of preparing statements of finances in accordance with the IFRS 9 guidelines.

Dorothy Obwocha, (2019) studying the response of performance of Kenya banks as a result of change in loan provisioning policy established that a very high association ($R=0.844$) exists between loan provisioning and bank financial performance. It further states that recognizing loan loss provision under IFRS 9 leads to better financial performance in banks. The study was on the effect of loan provisioning policy on commercial banks while my study will be on the effect of IFRS 9 on the performance of the listed Kenyan commercial banks.

2.3.1 IFRS 9 and Financial Performance of listed Commercial banks.

Introducing IFRS 9 for implementation by financial institutions brings paradigm changes on the measurement, recognition and recording of the value of financial instruments by banks. ECL of IFRS 9 replaced the ICL model of IAS 39 which was argued to be complex and inconsistent with business model and risk management on credit (Gornjak, 2017).

The study will focus on the following predictor variables; credit risks, capital adequacy and loan loss provision while carrying out the research. Credit Risk is the risk associated with failure by a loanee to fully repay the loan as was scheduled or otherwise rescheduled (Central Bank prudential guidelines (2013). Study by Siriba (2020) on how failure by borrowers to timely make repayment affects the performance of banks in Kenya determined that non-performing loans and loan loss provision had non-significant negative effect on the banks' profits unlike loan advances which positively affect banks profitability. NPLs are loans which have not been paid for a period of at least ninety days (CBK, 2013).

The mandatory implementation of IFRS 9 by financial institutions which are under the supervision of prudential guidelines of CBK took effect in January 2018, it brought changes in from ICL to ECL and changes in the computation of the interest income. According to IAS 39, credit loss was only reported on the profit or loss account when an event had occurred to the loanee which would bring an impairment to the financial assets he /she was holding, thus there was an underestimation and late recognition of loan loss provision by banks. Loan portfolio forms part of major assets of the banks under debtors, this therefore calls for banks to put in place measures to ensure that it's probable that both interest income and the capital part of the loan is timely repaid (Jasson, 2002). Total value of credit facilities lent to loanees is the Loan portfolio (Lillian Essendi, 2013).

Loan portfolios may be performing, under performing and non-performing. NPLs and underperforming loans are portfolio at risk. Portfolio is performing when the loans advanced

are current and consistently being paid on time, as per loan schedule. NPLs and under performing loans are those credits whose principal and interest are not being paid as was scheduled and are therefore categorized as bad and doubtful debts. When a borrower fails to make scheduled payment, that loan will be labeled as loan at risk (Credit Management, Patrick Kairu, page 228).

For better performance banks therefore are supposed to develop strategies which will enable them to lower their credit risks. It's prudent for banks to carry out background checks, appraise both the projects and the ability of the individual to repay and develop policies which will go a long way in minimizing credit risk (Podder, 2012). The implementation of IFRS 9 by banks will cushion banks against the loss necessitated by the default of borrowers even though it may eat into the profit made by the banks.

Business of banking is the process of accepting money in form of cash, cheque, or through electronic transfer from the public and paying it back as the terms of engagement dictates. The banks in return will use the deposited money for other investments which will yield good returns to them. Banking sectors do have different types of accounts which their clients could maintain (Banking act 2015). Banks are required to have a minimum capital of Kshs 1 billion and a combined capital of at least 12.5% of its total value adjusted for risk. (Prudential guidelines (2013). Capital adequacy ratio is comparison of tier 1 to total risk adjusted assets (CBK prudential guidelines (2013). Risk weighted assets are loans which have been weighted using a risk index. Operation of banks is on core and supplementary capital. Core is the permanently fully paid up capital by the equity holders and Supplementary is additional funds banks are required to maintain to cater for unidentifiable erosion in the profits. For banks both listed and non-listed to avoid cash crisis and customers' run away, CBK may sometimes direct that a certain level of capital be observed (Prudential guidelines, 2013).

Mumbe, (2015) ascertained that firms' unique internal factors like capital adequacy, size, and operating cost do have a great impact on the profitability of listed banks. The study recommended that the government should ensure that policies are put in place to raise additional capital to cushion them against financial crisis which mostly affect financial institutions. The theoretical study done by Deloitte, (2016) on the impact of IFRS 9 on tier 1 capital of the banks, discovered that; the implementation of IFRS 9 will see tier 1 capital which is directly affected by retained earning eroded. It recommended that banks should ensure that loans are given selectively to avoid the erosion of tier 1 capital.

CBK guidelines, (2013) alluded to the fact that while it's important to allocate funds in the form of LLP as an operating cost to reduce the risk of NPL exposure, banks should be cautious enough to avoid its negative effects on profitability. Operating expenses negatively impact the financial performance of any firm, hence the higher the operating cost, the lower the reported profitability. The allowance is to cover loan losses like non-performing loans, customer illiquidity, and rescheduled borrowings whose cash flow is less than what was estimated. The introduction and implementation of IFRS 9 may give rise to additional operational cost in form of loan loss provision. Under the regime of IFRS 9, the banks are expected to implement the ECL rather than ICL as it used to be in the former regime. This shift may increase the operation cost in the form of loan provision for bad debts which are charged to the income statement, hence the need for prudent management of operating costs. The main contributor to poor performance of any firm, banks included, is the poor expense management (Sufian and Chong, 2008), hence effective cost management brings about cost efficiency which will minimize cost. Kirui, (2014) established that profitability of any organization is negatively correlated to its operating cost and NPL. This was a research done to find out the effect of NPL on the profitability of registered banks in Kenya.

2.4 Summary of reviewed literature

It's visible from the publications that performance in banks is affected by variables like credit risks, loan loss provision and capital adequacy among other factors. Study in Nigeria by Babakova (2003), on influence of credit risk on the Commercial Banks, discovered that NPL influences positively the performance of banks, which was practically unusual as it is always expected that NPL has a negative relationship with banks performance.

A study by Kirui (2014), on whether NPL has any influence on reported profitability of Kenya banks, confirmed that NPL negatively affects banking sectors. The researcher will try to find out the nature of the relationship between IFRS 9 and listed banks' performance and give recommendations on how banks can manage credit risks to enhance performance.

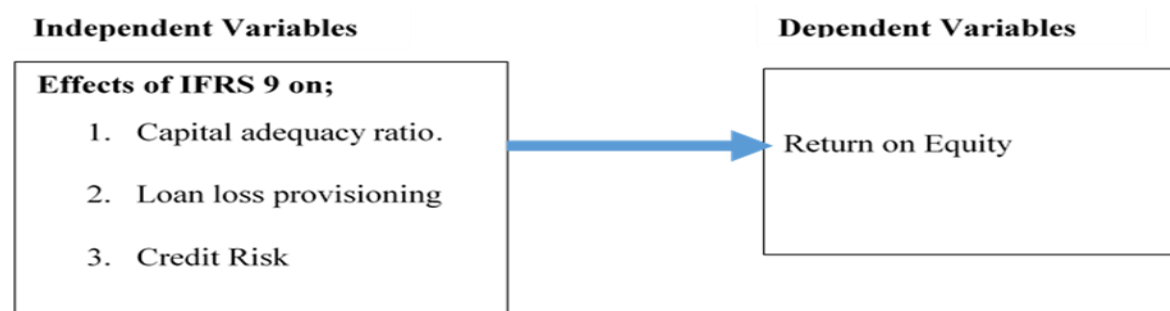
Theoretical approach of research by Ntaikou et al 2018, established that banking sectors in Greek would have great impact when IFRS 9 requirement is adhered to. It further established that effects could be both negative and positive because of additional provisions and NPL coverage respectively. The study was done in European countries in 2018 during the transition period of the implementation of IFRS 9 on banking systems while my study will be done three years after the implementation of the new standard.

Study by Petra Blažeková (2018) on how statutory capital will react as a result of introduction of IFRS 9 by banks, ascertained that banks using IRB approach suffer from capital deterioration ratio compared to banks using SA approach. The study was done in the year 2018 when IFRS 9 was at its initial stage while my study will be three years later. Obwocha, (2019) on effect of change in loan provisioning policy on performance of banks, established a very high rate of association between loan provisioning and bank financial performance. It further states that recognizing loan loss provision under IFRS 9 leads to better financial performance in banks. The study was on the effect of loan provisioning policy on commercial banks while my study will be on the effect of IFRS 9 on listed Kenyan commercial banks.

From the international and local literature review, the studies were interested in knowing how performance of banking institutions are impacted by either change in LLP, NPLs, Credit associated risk mitigation and changes on regulatory capital separately when exposed to IFRS 9 while my study will be on how the financial performance are affected when banks adhere to the requirement of IFRS 9 combining LLP, risks which come as a result of lending, and statutory capital. Further, I did not come across any study on reactions of performance of NSE listed banks when IFRS 9 requirements are implemented, hence the motivation.

2.5 Conceptual model

From the conceptual model below, the predictor variables are credit risk, LLP and capital adequacy while the outcome variable which is financial performance is measured using Return on Equity, the study seeks to find out if the IFRS 9 has effect on the financial performance of Kenyan Commercial banks listed at the NSE.



CHAPTER THREE: RESEARCH METHODOLOGY

3.1 Introduction

This is the chapter which contains detailed methodology, research model, population, and methods of collecting and analyzing data including analytical models. Methodology which will enable the researcher to achieve objectives of the study will be outlined at this chapter.

3.2 Research Design

Research design is the combination of various plan and strategies that would be used to provide solution to the research question. Descriptive study was applied in the research because; the aim of the study was to identify trends, correlation and regression between IFRS 9 and financial performance of listed banks, it analyzed the trends of the variables both before and after the introduction of IFRS 9. Further, the research tends to focus on a six year investigation period that is between financial year (FY) ending December 2015 to December 2020, thus longitudinal research design was applicable and applied. The study period was divided into 3 phase; phase 1 was the entire study period, phase 2 was the pre IFRS 9 period while phase 3 was the post IFRS 9 period. In pursuit to study and interpret the patterns and trends of the various variables gathered to get the insight of the effect of IFRS 9 on performance, both quantitative and qualitative data were used, hence the triangulated design was also employed.

3.3 Population

Population is the list of all items, individuals or firms that a researcher would like to carry research on (Sekaran and Bougie, 2010). All the 10 listed banks as at the end of 2020 will be studied. The number excludes National bank of Kenya which has since been suspended and BK group of banks which is not a Kenyan commercial bank.

The population consists of the following banks; Absa Bank Kenya, Stanbic Holdings, I&M Holdings, DTB, Housing Finance, KCB, NCBA Group, Standard Chartered Bank, Equity Bank and Co-operative Bank.

3.4 Data Collection

The study used secondary data from the published financial reports and statements. The quantitative data was gathered from published financial statements of all the listed Kenyan

Commercial banks and from the reports on banking supervision by CBK for the financial years 2015 to 2020. From financial statements and report on banking supervision, the capital adequacy, loan loss provision and credit risk (NPLs) for each listed banks from the year 2015 to 2020 was collected and analyzed.

3.5 Data Analysis

The data collected may not give any meaning without analyzing it, therefore SPSS 20 was applied in the analysis of gathered data where mean, standard deviations, variance, correlation, regressions and analysis of variance were computed. In the period under review, the mean, was used as a measure of tendency of the variables for both the entire, pre and post IFRS 9 period while standard deviation, variance and regression were the main measures of dispersion, correlation and relationship between the variables respectively.

The study carried out the test on normality of the data by examining the kurtosis and skewness of the data. In checking the correlation between two or more independent variables, multicollinearity test was done.

The research will use the following model

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

Where;

Y is the performance of the listed commercial banks which is measured in terms of Return on Equity (ROE).

X1= Capital adequacy ratio measured as core capital / total risk weighted assets

X2 = Loan loss provision measured as absolute value of loan loss provisioning.

X3 = Credit risk measured by Non-performing loans ratio (NPLs/ Total Loans and advances).

α = Constant

e=Random error

$\beta_1, 2, 3$ = Coefficients of the variables (The beta coefficient measures the degree of change in the dependent variable when there is a unit change in predictor or independent variable).

CHAPTER FOUR: DATA PRESENTATION, ANALYSIS, RESULTS AND DISCUSSION

4.1 Introduction

The results, recommendations, interpretation and the discussion of the analyzed data collected are presented in this chapter. The effect of IFRS 9 on the performance of listed banks measured by Return on Equity was revealed in the chapter. It further disclosed how credit risk, capital adequacy and Loan Loss Provision affect the performance of listed banks both the entire period, pre and post IFRS 9 period.

4.2 Response rate

There are 12 Commercial banks listed at the Nairobi Stock exchange as at December 2020. However, the study only focused on 10 listed commercial banks, this is because the NSE suspended the National Bank of Kenya from listing, while BK Group PLC is not a Kenyan bank as per the Banking Act 2015 definition. The study realized 100% response rate on all the listed banks as it is a mandatory requirement from the banking sector regulatory and supervisory bodies (CBK, Banking Act 2015 and CMA) that the listed banks publish their annual and quarterly financial performance on their website. According to CBK prudential guidelines (2013), all commercial banks are required to submit their financial reports detailing the financial performance, core capital, risk weighted assets, gross loan and advances, provision for credit impairment and non-performing loans. The CBK will thereafter compile and publish all the reports provided by the commercial banks and provide on an annual basis banking sector supervisory reports. In addition to all the requirements aforementioned, the listed banks are under obligation to submit their financial reports to NSE for publication.

4.3 Presentation of the data collected

When the research findings are what they appear to be, then the data collected is said to be valid while reliability is realized when the methods used in gathering data and the procedures of analyzing the same data brings uniformity of results (Mark Saunders M., Philip L., Thorn A. (2009)). Validity and credibility of data ensures that there is accuracy of the results hence the research can be relied upon.

The data collected was from published and audited financial reports verified by the external auditors and compliance auditors as a requirement by Companies Act Cap 486, Capital Markets Authority Act for listed commercial banks and CBK prudential guidelines. It's therefore worth noting that all the listed commercial banks had to comply with the requirements; as giving false information will automatically surmount to sanctions with far reaching consequences.

In ensuring that there was reliability of the data, the following concerns were responded to; it the data collected would bring same outcome on other scenarios, other researchers would have reached same conclusions and lastly there was glassiness in the preparation of published data to final product of published financial reports.

The listed commercial banks had to adhere to all the requirements of the reliability and validity of the reports published as this is imposed in their regulations and monitoring of their conducts hence the data collected was reliable and valid for this study.

4.3.1 Return on Equity for the listed commercial Banks in Kenya

With the introduction of IFRS 9 by IASB to be used by banks beginning January 2018, many scholars and researchers argued that the new standard which replaced the IAS 39 would as much as bring financial stability to the Bank, may cause erosion of financial performance hence reduction of return on equity due to anticipated increase in loan loss provision. (ICPAK (2018), implementing ECL approach of loss impairment under IFRS 9). The introduction of IFRS 9 brought about the new model of ECL which recognizes loss when anticipated unlike the IAS 39 which only recognizes the loss when it (credit loss) has actually occurred. It was therefore very important to carry out analysis of return on equity between the financial years 2015 to 2020 (combined period for both the pre and post introduction of IFRS 9). The analysis was further separately done for the 3 years before the introduction of IFRS 9 and 3 years after the implementation of the standard to know the exact changes which occurred on return on equity when the LLP, credit risk and capital adequacy are varied.

Table 4.1: Return on Equity for listed Kenya Commercial Banks for entire review period

The tables below show the changes in ROE as a result of introduction of IFRS 9 during the entire study period, pre and post IFRS 9 period.

Bank		Year					
		2015	2016	2017	2018	2019	2020
1	Kenya Commercial Bank	29	35.2	30.9	32.1	35.8	21.2
2	Stanbic Bank	25.1	22.9	16.9	25.4	21.2	14.9
3	I & M Bank	32	27.6	21.5	22.8	25.5	19.7
4	Diamond Trust Bank	23.5	24.4	19.1	19.4	17.8	7.3
5	Housing Finance Group	19.1	22.9	3.9	-4.3	-0.3	-11.7
6	Absa	30.4	24.8	23	23.6	26.9	18.5
7	NCBA	25.55	23.6	21.2	21.35	13.4	9.7
8	Standard Chartered Bank	21.9	29.1	21.3	25.2	26.9	14
9	Equity Bank	47.2	43.5	37.3	40.2	37.2	16.4
10	Co-operative Bank	28.5	30	24.2	25.7	26.4	19.8
	Total	282.25	284	219.30	231.45	230.8	129.8
	Average	28.23	28.4	21.93	23.15	23.08	12.98
	Percentage change	0	0.62	-22.78	5.54	-0.28	-43.76

Study findings, 2021

From the table 4.1 above, the 10 commercial banks listed with NSE recorded somewhat decadence in Return on Equity. They recorded an average ROE of 28.23, 28.4, 21.93, 23.15, 23.08 and 12.98 in the financial years 2015, 2016, 2017, 2018, 2019 and 2020 respectively. The total ROE for 2015 was 282.25, however, this increased by 0.62% to 284 in the FY 2016. In the year 2017, there was a decrease of 22.78 %. It also worth noting that the general election carried out in August and repeat presidential election in October 2017 might have in one way or the other caused the reported decrease in the ROE. However, in the FY 2018 when the IFRS 9 was implemented, the ROE for all the 10 Kenyan Commercial banks listed at the NSE increased by 5.54 % to 231.15. In the FY 2019, the total ROE declined by 0.28% to 230.08. The FY 2020 saw all listed Kenyan Commercial recorded a reduced ROE accumulating to total of 129.8 which represent almost 43.76% decline.

4.3.2 Return on Equity pre IFRS 9 period

The study also looked at the ROE 3 years before the introduction of IFRS 9. The table 4.2 below shows the ROE for the listed Kenyan Commercial banks for FYs 2015 to 2017.

Table 4.2: ROE for listed Kenyan Commercial Banks pre IFRS 9 period

Bank		Year		
		2015	2016	2017
1	Kenya Commercial Bank	29	35.2	30.9
2	Stanbic Bank	25.1	22.9	16.9
3	I & M Bank	32	27.6	21.5
4	Diamond Trust Bank	23.5	24.4	19.1
5	Housing Finance Group	19.1	22.9	3.9
6	Absa	30.4	24.8	23
7	NCBA	25.55	23.6	21.2
8	Standard Chartered Bank	21.9	29.1	21.3
9	Equity Bank	47.2	43.5	37.3
10	Co-operative Bank	28.5	30	24.2
	Total	282.25	284	219.30
	Average	28.23	28.4	21.93
	Percentage change	0	0.62	-22.78

Study findings, 2021

The ROE for the listed banks recorded 282.25,284 and 219.30 for FYs 2015, 2016 and 2017 respectively. The ROE for 2015 and 2016 were almost equal with a slight difference of 0.62%. In the FY 2017, the listed Kenyan commercial banks recorded a decline in ROE by 22.78% from total of 284 to 219.30. This reduction might have been caused by the political squabbles in the general and repeat presidential election of August and October 2017 respectively.

4.3.4 Return on Equity post IFRS 9 period

According IFRS 9 implementation and guideline (2018), the introduction of IFRS 9 by banks may see an increase in credit impairment thus eroding the performance. It is due to this fact that the researcher analyzed the ROE for the listed banks from the FYs 2018 to 2020 and find out the behavior of ROE as shown in the table 4.3 below.

Table 4.3: ROE for Kenyan listed commercial banks post IFRS 9 period

Bank		Year		
		2018	2019	2020
1	Kenya Commercial Bank	32.1	35.8	21.2
2	Stanbic Bank	25.4	21.2	14.9
3	I & M Bank	22.8	25.5	19.7
4	Diamond Trust Bank	19.4	17.8	7.3
5	Housing Finance Group	-4.3	-0.3	-11.7
6	Absa	23.6	26.9	18.5
7	NCBA	21.35	13.4	9.7
8	Standard Chartered Bank	25.2	26.9	14
9	Equity Bank	40.2	37.2	16.4
10	Co-operative Bank	25.7	26.4	19.8
	Total	231.45	230.8	129.8
	Average	23.15	23.08	12.98
	Percentage change	0	-0.28	-43.76

Study findings, 2021

The ROE for was 231.45, 230.8 and 129.8 for 2018, 2019 and 2020. The returns were in a downward trajectory from FYs 2018 to 2020. The decline in 2019 was 0.28%, it was in the FY 2020 when the decline in ROE was conspicuously at negative 43.76%.

4.4.1 The Loan loss provision

The study investigated the effect of loan loss provision which a component of IFRS 9 on the performance of the Kenyan Commercial banks listed at the NSE.

The implementation of IFRS 9 by commercial banks listed brought a new model of ECL which replaced the ICL model. The new model classifies and recognizes credit losses in 3 stages. The loans are classified as performing, under performing and non-performing. The performing loans are assigned ECL of 12 months while the interest income is computed on the gross carrying amount of the loan asset. Lifetime ECL is assigned to under performing and no performing loans. However, the interest income is calculated on gross carrying amount and net carrying amount respectively. Banking industry had a concern as there was startup cost on the implementation of IFRS 9 as well as increase in loan loss provisioning

compared to the ICL model. This was a further concern as the provisions would be recognized through profit and loss of the banks (IFRS 9.5.5.8), thus there was an impediment on their earnings (Deloitte (2013)).

The new impairment model appears to be a major concern for the banking industry as the initial set-up costs, as well as the adjustments to loan loss allowances are expected to increase compared to the former IAS 39 model. Since they are recognized through the P&L of the bank (IFRS 9.5.5.8), its ability to retain earnings is initially impeded (Deloitte (2013); Reitgruber et al. (2015); EBA (2016)).

Table 4.4: Loan Loss Provision in billions of shillings for the entire period of study

Bank		Year					
		2015	2016	2017	2018	2019	2020
1	Kenya Commercial Bank	2.2	3.8	5.0	3.1	8.7	23.4
2	Stanbic Bank	0.91	1.8	2.8	2.1	3.2	4.9
3	I & M Bank	0.55	2.8	3.9	3.4	0.3	1.6
4	Diamond Trust Bank	1.56	2.8	2.7	1.6	3.0	5.4
5	Housing Finance Group	0.53	0.7	0.6	0.40	0.40	0.41
6	Absa	1.77	3.9	3.1	3.9	4.2	9.0
7	NCBA	1.12	1.6	2.0	2.1	6	18.9
8	Standard Chartered Bank	4.9	2.2	4.2	1.9	0.6	3.9
9	Equity Bank	1.27	5.1	2.3	1.7	3.5	23.4
10	Co-operative Bank	2.01	2.6	3.6	1.8	2.5	7.5
	Total	16.82	27.3	30.2	22	32.40	98.41
	Average	1.7	2.7	3.0	2.2	3.2	9.8
	Percentage change	0	62.31	10.62	-27.15	47.30	203.73

Study findings, 2021

From the table 4.4 above, total provisions for the 10 listed banks was Kshs 16.82, 27.3, 30.2, 22, 32.40 and 98.41 billion respectively. The LLP increased to 27.30 representing 62.31%, this further increased to 30.2 billion representing 10.62 % increment. In the 2018 when the IFRS 9 was introduced by the banks, loan loss provision decreased to 22 billion representing 27.15% decrease. In 2019, the provision for loss increase by 47.30% to 32.4 billion. However, in the year 2020, the period in which corona virus affected so many business

including banking sectors, the provision sky rocketed to 98.41 billion; this constituted a 203.73% increase. The increase in the loan loss provision was to cater for under-performing and non-performing loans which were mostly affected by the pandemic (CBK, 2020, report on banking and supervision).

4.4.2 Loan loss provision pre IFRS 9

The period under review in this section is the FYs 2015 to 2017, 3 years before introduction of the IFRS 9. This will have done to find out the out amount of loan provision set aside by listed commercial banks to cushion them against credit losses. During this this period, the banks were under IAS 39 (ICL), a model which only recognize credit losses if there is clear indication that there would be credit loss.

Table 4.5: Listed Kenyan Commercial banks Loan Loss Provision during the pre IFRS 9 period

Bank		Year		
		2015	2016	2017
1	Kenya Commercial Bank	2.2	3.8	5.0
2	Stanbic Bank	0.91	1.8	2.8
3	I & M Bank	0.55	2.8	3.9
4	Diamond Trust Bank	1.56	2.8	2.7
5	Housing Finance Group	0.53	0.7	0.6
6	Absa	1.77	3.9	3.1
7	NCBA	1.12	1.6	2.0
8	Standard Chartered Bank	4.9	2.2	4.2
9	Equity Bank	1.27	5.1	2.3
10	Co-operative Bank	2.01	2.6	3.6
	Total	16.82	27.3	30.2
	Average	1.7	2.7	3.0
	Percentage change	0	62.31	10.62

Study findings, 2021

Before the introduction of IFRS 9, the listed Kenyan Commercial banks recorded a total of 16.82 billion, 27.3 billion and 30.2 billion shillings in the provision for LLP for FYs 2015, 2016 and 2017 respectively.

The provision steadily increased by more than half to 27.3 billion in the FY 2016 and by 10.62% to 30.2 billion in the FY 2017.

4.4.3 Loan loss provision post the IFRS 9 period

The FYs 2018 -2020 is the period when banks were expected to shift from the ICL model of IAS 39 to ECL model of IFRS 9. Under the new model of IFRS 9, the banks were mandatorily expected to recognize a one year ECL or life time ECL on all loans and debts given out depending on the significance of credit downturn experienced since the loan was given out. The management of the banks was expected to put into consideration forward looking information to enable them provides for any expected credit losses.

Table 4.6: Listed Kenyan Commercial banks Loan Loss Provision during the post IFRS 9 period

Bank		Year		
		2018	2019	2020
1	Kenya Commercial Bank	3.1	8.7	23.4
2	Stanbic Bank	2.1	3.2	4.9
3	I & M Bank	3.4	0.3	1.6
4	Diamond Trust Bank	1.6	3.0	5.4
5	Housing Finance Group	0.40	0.40	0.41
6	Absa	3.9	4.2	9.0
7	NCBA	2.1	6	18.9
8	Standard Chartered Bank	1.9	0.6	3.9
9	Equity Bank	1.7	3.5	23.4
10	Co-operative Bank	1.8	2.5	7.5
	Total	22	32.40	98.41
	Average	2.2	3.2	9.8
	Percentage change	0	47.30	203.73

Study findings, 2021

In the year 2018 when the new standard was introduced for implementation by the banks, the listed Kenyan Commercial banks had 22 billion provisions for credit impaired loans. The provision increased by 47.30% in the year 2019 to 32.40 billion. However, as can be seen

from the table 4.6 above, the year 2020 recorded an unprecedentedly high provision of Kshs. 98.41 billion.

4.5.1 Capital adequacy for Listed Kenyan commercial banks

The Capital adequacy is the core capital divided by risk weighted assets of banks. Core capital is the owners' contributed funds plus any retained earnings. Erosion on retained earnings will automatically erode the core capital which may eventually impact negatively on the capital adequacy ratio.

Banking sectors have capital funds from the following sources; owner's equity and retained earnings, debts and quasi equity and quasi debts sources. Banks which do not have adequate capital from its owners (tier 1), may find itself bridging the gap through borrowing from other sources of debts, which may be costly and eventually affect the earnings, Pringle (2001).

Table 4.7: Listed Kenyan Commercial Banks Capital adequacy ratio for the entire review period.

Bank		Year					
		2015	2016	2017	2018	2019	2020
1	Kenya Commercial Bank	15.40	16.90	14.90	16.40	15.60	15.60
2	Stanbic Bank	18.70	16.10	15.80	14.60	15.20	16.00
3	I & M Bank	19.20	16.60	17.20	17.10	18.00	18.80
4	Diamond Trust Bank	17.70	16.20	17.30	18.70	19.10	20.70
5	Housing Finance Group	18.10	15.70	15.50	14.20	13.00	7.80
6	Absa	18.40	15.70	15.90	14.40	14.00	14.70
7	NCBA	19.20	15.40	15.10	8.75	17.80	17.80
8	Standard Chartered Bank	21.20	17.50	15.60	16.50	14.70	15.90
9	Equity Bank	16.20	14.40	15.80	14.00	13.10	12.40
10	Co-operative Bank	21.30	16.20	16.50	15.70	15.30	15.50
	Total	185.40	160.70	159.60	150.35	155.80	155.20
	Average	18.54	16.07	15.96	15.03	15.58	15.52
	Percentage change	0	-13.32	-0.68	-5.8	3.62	-0.39

Study findings, 2021

From the table 4.7 above, the total capital adequacy ratio for 2015 was 185.40 which decreased to 160.70 represented (13.32%) in the year 2016. However, in the year 2017, the

capital adequacy was 159.60. In the year 2018 when the IFRS 9 was implemented, the capital ratio further declined to 150.35 represented by (0.68%). The total capital adequacy ratio in the year 2019, was 155.80 which constituted an increment of 3.62% and finally 2020 had an average 15.52 representing (0.39%). From the table, it can be seen that the averagely, capital adequacy had small variations throughout the study period.

4.5.2 Non-performing loan ratio

Non-performing loan ratio is the ratio of Gross non-performing loans over Gross loans and advances. According to CBK guidelines, (2013), loans can be classified into normal, watch, substandard, doubtful and loss. It further states that any loan which has not been paid for more than 90 days should be categorized as non-performing loan. However, the new standard of IFRS 9 has brought in place new model which classifies loan as; performing, under-performing and NPLs. Loans classified as performing are given a 12-month loan loss provision and computing the interest income on the gross amount of loan. This is a departure from the IMF (2009) and CBK guidelines (2013) which did not allocate provision for performing loans hence may reduce the interest income. The second stage is the stage of under-performing loan. At this level the interest is calculated on gross carrying value of the loan while loan losses provision is provided for the life time of the loan. The third stage which is the non performing stage, loan loss provision is given for the life time while the interest is calculated on the net value of loan.

From the table 4.8 below, the average NPL ratio for 2015, 2016 and 2017 was 5.63%, 7.18% and 9.58% respectively. This is the pre IFRS 9 period. In the year 2017, the NPL ratio rose to an average of 9.58% against the recommended industry rate of 12.5%. The average ratio increased to 12% in 2018 when the IFRS 9 was introduced for implementation and remained the same in 2019. However, 2020 recorded an increase of 18.11% to 14.15 average ratios. The year 2020 saw many listed Kenyan Commercial banks record more than the industry maximum rate of NPL ratio of 12.5%. The year also had its fair of challenges as Corona virus ravaged the economy, hence many loans could have been classified as NPL due to inability by borrowers to repay the loans as scheduled, (CBK, banking sector supervisory report, (2020)).

Table 4.8: NPL ratio (Credit risk) for the entire study period

Bank		Year					
		2015	2016	2017	2018	2019	2020
1	Kenya Commercial Bank	5.9	7.5	8.3	6.9	7.4	12.3
2	Stanbic Bank	4.69	5.9	7.6	10.70	11.8	14.20
3	I & M Bank	4.86	4.9	13.90	14.60	12.30	12.60
4	Diamond Trust Bank	2.85	3.9	7.60	7.20	8.30	11.90
5	Housing Finance Group	7.5	10.9	15.6	27.1	26.9	25.8
6	Absa	3.58	6.5	7.1	7.4	6.6	7.4
7	NCBA	8.13	9.2	9.3	10.6	12.5	13.9
8	Standard Chartered Bank	11.96	11.3	12.6	16.3	13.9	14.6
9	Equity Bank	2.96	7.0	6.7	7.4	9.0	12.0
10	Co-operative Bank	3.85	4.7	7.1	11.2	11.1	16.8
	Total	56.28	71.80	95.8	119.40	119.80	141.50
	Average	5.63	7.18	9.58	11.94	11.98	14.15
	Percentage change	0	22.58	33.43	24.64	0.34	18.11

Study findings, 2021

4.6 Descriptive statistics

The general nature of data is measured through descriptive statistics. Under this study measures of tendency like mean, media, mode, and measures of variability like variance and standard deviation were used to describe the nature of data collected for ROE, Credit risk, LLP and Capital adequacy for both the entire review period, pre and post IFRS 9.

Table 4.9: Descriptive Statistics for the entire review period.

		Descriptive Statistics			
		Return on Equity	Credit Risk	Loan Loss Provision	Capital Adequacy
N	Valid	60	60	60	60
	Missing	0	0	0	0
Mean		22.9600	10.0767	3.7688	16.1175
Std. Error of Mean		1.33302	.67243	.59801	.30904
Median		23.5500	8.6500	2.5500	15.9000
Mode		21.20	7.40	3.90	15.60 ^a
Std. Deviation		10.32550	5.20862	4.63214	2.39379
Variance		106.616	27.130	21.457	5.730
Skewness		-.782	1.510	3.252	-.746
Std. Error of Skewness		.309	.309	.309	.309
Kurtosis		2.302	3.130	11.206	2.845
Std. Error of Kurtosis		.608	.608	.608	.608
Range		58.90	24.25	23.10	13.50
Minimum		-11.70	2.85	.30	7.80
Maximum		47.20	27.10	23.40	21.30
Sum		1377.60	604.60	226.13	967.05

Study findings ,2021

The descriptive statistics from the table above shows that the profitability as measured by ROE had a mean 22.96 with a standard deviation of 10.32, Credit risk had a mean of 10.08 and standard deviation of 5.21, LLP had a mean of 3.77 billion and standard deviation of 4.63 and capital adequacy ratio with a mean of 16.12 and standard deviation of 2.39 for the entire period of both the pre and post IFRS 9. The minimum values for ROE, Credit risk, LLP and Capital adequacy are (11.70),2.85,0.30 and 7.80 respectively while the maximum values for ROE, Credit risk, LLP and capital adequacy are 47.20,27.10,23.40 billion and 21.30 respectively. The sums of ROE, credit risk, LLP and capital adequacy are 1377.60, 604.60, 226.13 and 967.05 respectively.

The distribution of ROE and Capital Adequacy ratio are negatively skewed, which means they are skewed to the left while the distribution of credit risk and loan loss provision are positively skewed which means they are skewed to the right. All the variables (ROE, Capital adequacy ratio, Credit risk and Loan loss provision) are not normally distributed hence asymmetrically distributed

Table 4.10: Descriptive Statistics for the pre IFRS 9

Descriptive Statistics

		ROE	Credit Risk	Loan Loss Provision	Capital Adequacy
N	Valid	30	30	30	30
	Missing	0	0	0	0
Mean		26.1850	7.4633	2.4773	16.8567
Std. Error of Mean		1.47270	.59318	.24694	.31596
Median		24.6000	7.1000	2.2500	16.2000
Mode		19.10 ^a	5.90 ^a	2.80	16.20
Std. Deviation		8.06631	3.24896	1.35252	1.73059
Variance		65.065	10.556	1.829	2.995
Skewness		.275	.771	.388	1.156
Std. Error of Skewness		.427	.427	.427	.427
Kurtosis		2.381	.172	-.699	.964
Std. Error of Kurtosis		.833	.833	.833	.833
Range		43.30	12.75	4.57	6.90
Minimum		3.90	2.85	.53	14.40
Maximum		47.20	15.60	5.10	21.30
Sum		785.55	223.90	74.32	505.70

Study findings,2021

In the pre IFRS 9, ROE had a mean 26.19 with a standard deviation of 8.07, Credit risk had a mean of 7.46 and standard deviation of 3.25, LLP had a mean of 2.48 billion and standard deviation of 1.35 and capital adequacy ratio with a mean of 16.86 and standard deviation of 1.73. The minimum values for ROE, Credit risk, LLP and Capital adequacy were 3.9, 2.85, 0.53 and 14.40 respectively while the maximum values for ROE, Credit risk, LLP and capital adequacy were 47.20, 15.60, 5.10 billion and 21.30 respectively. The sums of ROE, credit risk, LLP and capital adequacy are 785, 223.90, 74.32 and 505.70 respectively.

The distribution of ROE and Capital Adequacy ratio are positively skewed, which means they are skewed to the right. All the variables have kurtosis value of less than 3 thus are platykurtic therefore not normally distributed.

Table 4.11: Descriptive Statistics for the post IFRS 9

		Descriptive Statistics			
		Return on Equity	Credit Risk	Loan Loss provision	Capital Adequacy
N	Valid	30	30	30	30
	Missing	0	0	0	0
Mean		19.7350	12.6900	5.0603	15.3783
Std. Error of Mean		2.08426	1.00845	1.13097	.50109
Median		21.2000	11.9500	3.1500	15.5500
Mode		21.20 ^a	7.40	.40 ^a	14.00 ^a
Std. Deviation		11.41597	5.52351	6.19460	2.74458
Variance		130.324	30.509	38.373	7.533
Skewness		-.862	1.516	2.223	-.811
Std. Error of Skewness		.427	.427	.427	.427
Kurtosis		1.356	2.180	4.345	1.715
Std. Error of Kurtosis		.833	.833	.833	.833
Range		51.90	20.50	23.10	12.90
Minimum		-11.70	6.60	.30	7.80
Maximum		40.20	27.10	23.40	20.70
Sum		592.05	380.70	151.81	461.35

Study findings,2021

In the post IFRS 9, ROE had a mean 19.74 with a standard deviation of 11.42, Credit risk had a mean of 12.69 and standard deviation of 5.52, LLP had a mean of 5.06 billion and standard deviation of 6.19 and capital adequacy ratio with a mean of 15.38 and standard deviation of 2.74. The minimum values for ROE, Credit risk, LLP and Capital adequacy were (11.70),6.6,0.3, and 7.8 respectively while the maximum values for ROE, Credit risk, LLP and capital adequacy were 40.20,27.10,23.40 billion and 20.70 respectively. The sums of ROE, credit risk, LLP and capital adequacy are 592.05, 380.70, 151.81 and 461.35 respectively.

The distribution of ROE and Capital Adequacy ratio are positively skewed, which means they are skewed to the right, while credit risk and LLP are negatively skewed. ROE, credit risk and capital adequacy have kurtosis value of less than 3 while LLP more than 3

4.7 Correlation Analysis

The study measured the correlation between ROE and credit risk, loan loss provision and capital adequacy using SPSS 20 to find out if there is any relationship between these variables, with ROE as the dependent variable while credit risk, loan loss provision and capital adequacy as predictor variables for entire period, pre and post IFRS 9.

Table 4.12: Analysis of correlation for entire period of study

		Correlations			
		Return on Equity	Credit Risk	Loan Loss Provision	Capital Adequacy
Return on Equity	Pearson Correlation	1	-.742**	-.079	.187
	Sig. (2-tailed)		.000	.546	.153
	N	60	60	60	60
Credit Risk	Pearson Correlation	-.742**	1	.057	-.377**
	Sig. (2-tailed)	.000		.668	.003
	N	60	60	60	60
Loan Loss Provision	Pearson Correlation	-.079	.057	1	-.085
	Sig. (2-tailed)	.546	.668		.518
	N	60	60	60	60
Capital Adequacy	Pearson Correlation	.187	-.377**	-.085	1
	Sig. (2-tailed)	.153	.003	.518	
	N	60	60	60	60

Study findings,2021

In the table 4.93 above, the Pearson correlation indicates that ROE is negatively correlated with credit risk and loan loss provision while positively correlated with capital adequacy.

It therefore shows that for the entire 6 years period an increase in credit risk causes a significant reduction on ROE by 74.2 % while an increase in LLP by a unit causes an insignificant decrease in ROE by 7.9%. However, capital adequacy and ROE are positively correlated hence a unit increase in capital adequacy brings about an increase in ROE by 18.7%.

Table 4.13: Pre IFRS 9 Analysis of the Correlation

		Correlations			
		ROE	Credit Risk	Loan Loss Provision	Capital Adequacy
ROE	Pearson Correlation	1	-.536**	.198	-.044
	Sig. (2-tailed)		.002	.295	.816
	N	30	30	30	30
Credit Risk	Pearson Correlation	-.536**	1	.195	-.157
	Sig. (2-tailed)	.002		.302	.409
	N	30	30	30	30
Loan Loss Provision	Pearson Correlation	.198	.195	1	-.210
	Sig. (2-tailed)	.295	.302		.266
	N	30	30	30	30
Capital Adequacy	Pearson Correlation	-.044	-.157	-.210	1
	Sig. (2-tailed)	.816	.409	.266	
	N	30	30	30	30

Study findings,2021

Bi-variate Pearson Correlation undertaken for 3 years between 2015 and 2017 before the introduction of IFRS 9 is shown in table 4.93 above. During the period, ROE had a negative correlation with credit risk at 53.6% and unusual positive and negative relationship between LLP and capital adequacy respectively.

The findings indicate that an increase in LLP by a unit brings an increase in ROE by 19.8% while an increase in capital adequacy by a unit results to a decline in ROE by an insignificant figure of 4.4%.

Post IFRS 9 correlation analysis

Bi-variate Pearson Correlation undertaken for 3 years after the introduction of IFRS 9 between 2018 and 2020 as shown in table 4.94 below indicate that credit risk and LLP negatively correlated with performance (ROE) of Kenyan listed commercial banks at 78.8% and 1.8%. It also discovered that capital adequacy was positively correlated with performance (ROE) at 16.2%.

Table 4.14: Post IFRS 9 Correlation Analysis

		Correlations			
		Return on Equity	Credit Risk	Loan Loss provision	Capital Adequacy
Return on Equity	Pearson Correlation	1	-.788**	-.018	.162
	Sig. (2-tailed)		.000	.925	.392
	N	30	30	30	30
Credit Risk	Pearson Correlation	-.788**	1	-.148	-.309
	Sig. (2-tailed)	.000		.435	.097
	N	30	30	30	30
Loan Loss provision	Pearson Correlation	-.018	-.148	1	.032
	Sig. (2-tailed)	.925	.435		.866
	N	30	30	30	30
Capital Adequacy	Pearson Correlation	.162	-.309	.032	1
	Sig. (2-tailed)	.392	.097	.866	
	N	30	30	30	30

Study findings,2021

4.8 Regression Analysis

The Researcher employed SPSS to carry out the relationship between ROE as an outcome variable and IFRS 9 which was measured using credit risk, capital adequacy and LLP as predictor variables. Credit risk was measured by non-performing loans divided by gross loans, capital adequacy measured by core capital divided by risk weighted assets and loan loss provision. The analysis was done to be data collected for the entire period of the study (2015-2020) and on data collected before the implementation of IRS 9 (2015-2017) and after the implementation of IFRS 9 (2018-2020).

In this study, regression analysis was used for prediction and forecasting. Through the analysis, the Researcher would be able to derive an equation for ROE as outcome variable and credit risk, LLP and capital adequacy for predictor’s variables.

$$Y = \alpha + \beta_1X_1+ \beta_2X_2+ \beta_3X_3+ e$$

Y represents the ROE (performance), α represents constant, $\beta_1, 2,$ and 3 represent beta coefficients, which measures the degree of change in the dependent variable when there is a unit change in predictor or independent variable, X1 represents capital adequacy ratio, X2 represents LLP and X3 represents credit risk while e represents the random error.

Table 4.15: Model Summary for Entire Period of Study

Model		Coefficients						
		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
		B	Std. Error	Beta			Tolerance	VIF
1	(Constant)	46.696	7.706		6.060	.000		
	Capital Adequacy	-.481	.413	-.112	-1.166	.249	.854	1.171
	Loan Loss Provision	-.100	.198	-.045	-.504	.616	.992	1.008
	Credit Risk	-1.549	.189	-.781	-8.180	.000	.857	1.166

Study findings,2021

The table above shows regression analysis for the entire period of 6 years, 3 pre and 3 post IFRS 9. The coefficients revealed that credit risk, LLP and capital adequacy had negative coefficient of 1.549, 0.1, and 0.481 respectively. The findings further show that, should independent variables assume a zero value, then the performance measured in terms of ROE shall be 46.696. The table shows that an increase in credit risk by one unit brings a decrease to the ROE by 1.549, an increase in LLP by a unit again brings a decrease in ROE by 0.10. The findings further revealed unusual theoretical relationship between capital adequacy and ROE of negative 0.481.

The multivariate regression equation extracted from the above table that will explain the effect of IFRS 9 on performance (ROE) of commercial banks listed in NSE, having credit risk, LLP and capital adequacy. The equation therefore is; $Y=46.696 -0.481X1-0.10X2-1.549X3$. Further, all the VIF values are below 2, therefore p-values should be trusted as coefficients are well estimated.

Table 416: Model summary for entire period of study

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics				
					R Square Change	F Change	df1	df2	Sig. F Change
1	.750 ^a	.562	.539	7.01323	.562	23.963	3	56	.000

Study findings, 2021

The change in dependent variable (ROE) due to changes in independent variables (credit risk, LLP and capital adequacy) is the adjusted R square which is 53.9%. This indicates that performance which was measured in terms of ROE changed by 53.9% as a result of unit change in credit risk, LLP and capital adequacy. These variables accounted for 53.9% of the performance of listed commercial banks. The remaining percentage was affected by other factors not related to independent variables under review. There was a strong correlation between the variables as it was found to be 75%.

Table 4.17: ANOVA for the entire study period

ANOVA^a

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	3535.956	3	1178.652	23.963	.000 ^b
	Residual	2754.383	56	49.185		
	Total	6290.339	59			

Research findings, 2021.

From the table above, it's noted that the significant level was less than the alpha of 0.05 hence the regression model was significance in predicting the effects of IFRS 9 on the performance of Kenyan listed Commercial banks during the entire study period.

As per the table 4.18 below, during the pre IFRS 9, performance was negatively related to capital adequacy and credit risk while the relationship with LLP provision was positive. However, the relationship between performance (ROE) and LLP and capital adequacy was theoretically unusual as its always expected that LLP provision affect ROE negatively while capital adequacy affect ROE positively. In pre IFRS 9, the findings show that should the independent variables assume a zero value, then the performance would be 38.997.

Table 4.18: Model coefficient for the pre IFRS 9

Coefficients							
Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
	B	Std. Error	Beta			Tolerance	VIF
1	(Constant)	38.997	13.681		2.851	.008	
	Capital Adequacy	-.356	.737	-.076	-.483	.633	.942
	Loan Loss Provision	1.788	.950	.300	1.883	.071	.929
	Credit Risk	-1.505	.391	-.606	-3.847	.001	.948

Research findings, 2021

The multivariate regression equation extracted from the above table that will explain the effect of IFRS 9 on performance (ROE) of commercial banks listed in NSE, having credit risk, LLP and capital adequacy pre IFRS 9 is $Y=38.997-0.356X_1+1.788X_2-1.505X_3$.

Table 4.19: Model Summary pre IFRS 9

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics				
					R Square Change	F Change	df1	df2	Sig. F Change
1	.623 ^a	.388	.317	6.66663	.388	5.485	3	26	.005

Study findings, 2021

The change in dependent variable (ROE) due to changes in independent variables (credit risk, LLP and capital adequacy) is the adjusted R square which is 31.7%. This indicates that performance which was measured in terms of ROE changed by 31.7% as a result of unit change in credit risk, LLP and capital adequacy. These variables accounted for 31.7% of the performance of listed commercial banks. The remaining percentage was affected by other

factors not related to independent variables under this study. There was a strong correlation between the variables as it was found to be 62.3%.

Table 4.20: ANOVA for pre IFRS 9 period

ANOVA^a

Model	Sum of Squares	df	Mean Square	F	Sig.
1 Regression	731.353	3	243.784	5.485	.004678
Residual	1155.543	26	44.444		
Total	1886.896	29			

The table 4.20 above indicates that the significant level was 0.004678 which less than the alpha of 0.05 hence the regression model was significance in predicting effects of IFRS 9 on the performance of Kenyan listed Commercial banks.

Table 4.21: Model coefficients for post IFRS 9

Coefficients

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
	B	Std. Error	Beta			Tolerance	VIF
(Constant)	48.861	9.588		5.096	.000		
Capital Adequacy	-.383	.510	-.092	-.751	.460	.904	1.106
1 Loan Loss provision	-.256	.217	-.139	1.178	.250	.978	1.023
Credit Risk	-1.729	.256	-.837	6.754	.000	.885	1.129

Study findings ,2021

The table above shows regression analysis for the post IFRS 9. The coefficients ascertained that credit risk, LLP and capital adequacy have a negative value of 1.729, 0.256, and 0.383 respectively. The findings indicate that with the independent variables remaining zero, the

ROE would be 48.861, it therefore assumes, the listed Commercial banks performance is better off with capital adequacy, LLP and credit risk remaining zero.

The result further indicates that a unit change in credit risk, capital adequacy and LLP would bring a negative change in performance by 1.729, 0.256 and 0.383 respectively. During the post IFRS 9, the equation would be; $Y=48.861-0.383X_1-0.256X_2-1.729X_3$.

Table 4.22: ANOVA for the post IFRS 9 period

ANOVA^a

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	2444.029	3	814.676	15.862	.000 ^b
	Residual	1335.377	26	51.361		
	Total	3779.406	29			

The ANOVA carried found out that the model was significant in predicting the effects of IFRS 9 on the performance of Kenyan listed commercial banks as may be seen from the significance level which was less than the alpha of 0.05.

Table 4.23: Model summary for post IFRS 9

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics				
					R Square Change	F Change	df1	df2	Sig. F Change
1	.804 ^a	.647	.606	7.16663	.647	15.862	3	26	.000

Study findings, 2021.

The change in dependent variable (ROE) due to changes in independent variables (credit risk, LLP and capital adequacy) is the adjusted R square which is 60.6%. The study shows that credit risk, LLP and capital adequacy accounted for 60.6% of the listed Kenyan commercial banks, the rest of 39.4% of performance is accounted for by other variables which are beyond this study scope. The correlation between the variables was very strong at 80.4%.

4.9 Findings and Interpretations

The study of effect of IFRS 9 on the performance of Kenyan listed commercial banks was divided into 3 phases. The first phase was the entire period of 6 years (2015 to 2020), the second period was pre IFRS 9 period of 3 years (2015 to 2017) and the last phase was post IFRS 9 period of 3 years (2018 to 2020).

The Researcher studied how the credit risk, LLP and capital adequacy which were likely to be affected by the change of model from IAS 39 to IFRS 9 affected the performance of Kenyan listed commercial banks. The performances of the Kenyan listed commercial banks were measured in terms of ROE.

4.7.1 Effect of predictor variables on the performance of the Kenyan listed commercial banks for entire study period.

The study for the entire period disclosed out that credit risk had a very significant effect on performance of Kenyan listed commercial banks at 74.2% while LLP effect on performance was significantly low at 7.9%. The correlation between performance (ROE) and capital adequacy was however positive at 18.7%.

When the variables were regressed for the entire 6 years, the study revealed that credit risk, LLP and capital adequacy had a negative coefficient of 1.549, 0.1, and 0.481 respectively. The regression analysis was therefore not consistent with the findings on the correlation between capital adequacy and performance (ROE). It was however noted that the credit risk affect Kenyan listed banks performance in a larger way than the other study independent variables. During the entire period of study, credit risk, LLP and capital adequacy accounted for 53.9%.

4.7.2 Effect of predictor variables on performance of Kenyan listed commercial banks pre IFRS 9

Bi-variate Pearson Correlation undertaken for 3 years between 2015 and 2017 before the introduction of IFRS 9 revealed that ROE had a negative correlation with credit risk and capital adequacy ratio at 53.6% and 4.4% respectively. Though the negative effect of capital adequacy ratio was insignificant, it was very unusual theoretically. The study further indicated that LLP had a positive correlation with performance at 19.8%.

The regression analysis for pre introduction of IFRS 9 period shows that capital adequacy and credit risk had a negative effect on performance (ROE) while LLP had positive effect on the performance.

It was also noted that before the introduction of IFRS 9, credit risk, LLP and capital adequacy only accounted for 31.7% of the performance of Kenyan listed commercial banks, the larger proportion of performance was accounted for by other independent variables.

4.7.3 Effect of predictor variables on performance of Kenyan listed commercial banks post IFRS 9

Correlation undertaken for 3 years after the introduction of IFRS 9 between 2018 and 2020 as noted that credit risk and LLP negatively correlated with performance (ROE) of Kenyan listed commercial banks at 78.8% and 1.8%. It also discovered that capital adequacy was positively correlated with performance (ROE) at 16.2%.

The regression analysis for the post IFRS 9 shows that that credit risk, LLP and capital adequacy has a negative coefficient of 1.729, 0.256, and 0.383 respectively. The findings indicate that with the independent variables remaining zero, the ROE would be 48.861, it therefore assume, the listed Commercial banks performance is better off with capital adequacy, LLP and credit risk remaining zero.

The credit risk, LLP and capital adequacy) contributed 60.6% of the Kenyan listed commercial banks performance (ROE) while 39.4% of the ROE was contributed to by other variables. The correlation between the variables was very strong at 80.4%.

CHAPTER FIVE: SUMMARY, CONCLUSION AND RECOMMENDATIONS

5.1 Introduction

Chapter 5 represents the summarized version of the study findings, conclusions drawn from the study, and recommendations which may assist other readers, researchers and industry players to fill the void in the study filed. The chapter brings out the findings for the entire study period, pre and post IFRS 9. In the provision of conclusions and recommendations, the objective of the study which was; effects of IFRS 9 on the Kenyan Commercial banks listed at the NSE were the focal points.

5.2 Summary of the findings

The study discovered that the introduction of IFRS 9 for use by the commercial banks had effects on the performance of the listed Kenyan Commercial banks. The study was divided into 3 phases to find out the changes in dependent variables as a result of changes brought about by the independent variables. The phases were; entire study period which was 6 years (combination of both the pre and post IFRS 9 period), pre IFRS period (3 years before IFRS 9 was introduced) and 3 years after the IFRS 9 had been introduced.

5.2.1 Summary of findings for the entire study period (2015 to 2020)

The study revealed that; the performance measured in terms of ROE steadily increased from the year 2015 to 2016. However, in the year 2017, there was a big decline in the performance, this might have been caused by the two presidential elections which took place in August and October 2017. The study discovered that the performance recovered with the introduction of the IFRS 9, though it was lower than the pre IFRS 9 period. The creep in the performance was later seen in the year 2020 when there was both Corona Virus pandemic and the IFRS 9.

During the study period, it was ascertained that credit risk which was measured as the ratio of NPLs to total loans steadily increased throughout the period. It had negative correlation with the performance at 74.2% which states that it accounts for larger percentage of the performance of listed Kenyan commercial banks. The LLP was also associated with the introduction of IFRS 9 negatively affected the performance of the listed Kenyan commercial banks while the capital adequacy had positive contribution to the performance, its contribution was insignificant at 18.7%. The performance of the listed Kenyan commercial banks was

affected by study independent variables by 53.9%. This means that credit risk, LLP and capital adequacy accounted for more than half of the performance of listed Kenyan commercial banks.

5.2.2 Summary of findings for the pre IFRS 9 period

This is the period between the years 2015 to 2017 before the new standard of IFRS 9 was introduced for use by commercial banks. During this period, the study revealed that the performance was better than the entire and post IFRS 9 period.

This is the period which saw the performance of listed Kenyan commercial banks at its peak apart for the year 2017. It was discovered that even though credit risk and LLP increased throughout, the capital adequacy was somewhat steady. The independent variables under the study only accounted for 31.7% of the performance of the banks while the larger remaining percentage of 68.3% was accounted for by other factors which were not within the scope of the study. The research also indicated that capital adequacy negatively correlated with performance at a very insignificant level of 4.4% while LLP positively correlated with performance at 19.8%. Both the findings were theoretically unusual. When the data was regressed, it revealed further that a unit increase in capital adequacy and credit risk brings a negative change in performance by 0.356 and 1.505 respectively. However, positive change in LLP by a unit accounted for an increase in performance by 1.788.

In comparing the pre and the entire period of the study, the discovery was that; the independent variables which were associated with the introduction of IFRS 9 greatly affected the performance of the listed commercial banks during the entire period of study that they affected the performance of the listed Kenyan commercial banks during the pre IFRS 9 period, the study variables only accounted for 31.7% of the performance of listed Kenyan commercial banks while the remaining bigger proportion of the performance that is 68.3% was accounted for by other independent variables. However, in the entire study period, the 3 variables alone (credit risk, capital adequacy and LLP) accounted for 53.9 % of the performance while the 43.1 performance was accounted for by other variables. Worth noting was also the extent to which each variable individually affected the performance, credit risk stood out as one of the variables which has got very consistent and significant negative correlation with the performance. It therefore stood out that introduction of IFRS 9 as seen in the entire period somehow affected the performance of the listed Kenyan commercial banks.

5.2.3 Summary of findings for post IFRS 9 period

The period between the years 2018 to 2020 saw many Kenyan commercial banks both listed and unlisted have a downturn in performance. This is the period when the IASB recommended that financial institutions shift from the model of ICL of IAS 39 to ECL model of IFRS 9. The independent variables under this study had some noticeable changes, apart from capital adequacy which did not change much. The banking sector (Banking Act (2015) and CBK guidelines (2013)) requirements for industry on capital ratio and NPL ratio is 12.5%. Many listed Kenyan commercial banks maintained this ratio apart from few listed banks. It was also established that as the performance was declining, as most banks recorded upward trajectory in credit risk (NPL ratio) and LLP.

The study noted that credit risk and LLP correlated negatively with performance at 78.8% and 1.8% respectively. However, capital adequacy positively correlated with performance by 16.2%. The credit risk and LLP increased steadily throughout the year 2018 to 2020. The independent variables under the study were responsible for 60.6 % of the performance of the listed Kenyan commercial banks; however, remaining percentage of 39.4% was accounted for by other variables. In regressing the data, the study found out that a unit increase by credit risk, LLP and capital adequacy caused a negative performance on the listed Kenyan commercial banks by 1.729, 0.256 and 0.383 in that order.

In comparing the pre, post and the entire period of the study, the research established that credit risk negative impact on performance was more significant than other variables. During the pre, post and entire study period, the credit risk negatively and significantly impacted performance by 1.505, 1.729 and 1.549 sequentially. Additionally, the credit risk negatively and notably correlated with performance at 74.2%, 53.6% and 78.8% in entire period, pre and post IFRS 9 corresponding. The credit risk had a very significant negative impact on the performance of the listed Kenyan commercial banks during the post IFRS 9 period than it had during the entire study and pre IFRS 9 period.

The LLP had a significant growth in the amount with 2020 sky rocketing. The results from regression analysis revealed that during the pre IFRS 9, a unit increase in LLP brought about 1.788 increases in performance. Nevertheless, during the entire period study and post IFRS 9 period, a unit change in LLP resulted into decline in performance by 0.1 and 0.256 respectively. The analysis of the data established that LLP negatively correlated with performance at 1.8% during the post IFRS 9. Still, it was worth noting that LLP positively

correlated with performance by 19.8% during the pre IFRS 9. In the entire study period LLP negatively correlated with performance by 7.9%.The correlation between the ROE and the LLP was negative during the entire study period and post IFRS 9 period, nevertheless it was positive during the pre IFRS 9 period.

The correlation between capital adequacy and performance was positive 16.2%, 18.7% and negative 4.4% during the post, entire and pre IFRS 9 period. Nonetheless, the regressed data established that a unit change in capital adequacy yielded a negative outcome in performance during all the three phases of study.

In pursuit to find out seek the percentage of performance accounted for by the credit risk, LLP and capital adequacy in all the phases of study, the researcher compared the model summary for pre and post IFRS 9 period and the entire period of study. Between the periods 2015 to 2017, the independent variables under the study accounted for 31.7% of the performance; this therefore means the remaining 68.3% was accounted for by other variables not in the study. The independent variables, however accounted for 53.9% of the performance in the entire period of study (2015 to 2020). This further indicates that the other variables not in the study were responsible for 47.1% of the performance. The study variables accounted for 60.6% of the performance during the post IFRS 9 period (2018 to 2020).

5.3 Study conclusion

The research was carried out to establish the effects of IFRS 9 on the performance of Kenyan listed commercial banks. The study period was 6 years divided into; phase 1, the entire study period of years (2015 to 2020), phase 2, the pre IFRS 9 period (2015 to 2017) and phase 3, the post IFRS 9 period (2018 to 2020).

The dependent variable which was performance of the listed Kenyan commercial banks was measured in terms of ROE, this is because, it is the yardstick of performance and return to the ultimate owners of any firm and takes care of goal congruence of the firm. The independent variables were; credit risks measured as NPLs to total loans and advances ratio, capital adequacy measured as core capital to total weighted assets ratio and LLP.

The study revealed that; during the entire study period, the independent variables accounted for 53.9% of the performance of the listed Kenyan commercial banks, in pre IFRS 9 period, the independent variables were responsible for about 31.7% of the performance of listed

Kenyan commercial banks and lastly in post IFRS 9 regime, the independent variables accounted for 60.6% of the performance of the Kenyan listed commercial banks.

The study further concluded that; the introduction of IFRS 9 increased the credit risk as a result of many loan portfolios were categorized as NPLs due to the change of model from ICL of IAS 39 to ECL of IFRS 9. Credit risk was one of the major contributors to the decline in the performance of Kenyan commercial banks. In all the phases of the study, credit stood out significantly to have a negative effect on performance of Kenyan listed commercial banks. The LLP increased tremendously in post IFRS 9 period, however, its effect though negative on the performance during the entire period of the study and post IFRS 9 period, it had a positive significant effect on the performance during the pre IFRS 9 period. Lastly upon regressing data, the capital adequacy was found out to be stable throughout the period with very little variations, its effects on the performance though varied, it had a very insignificant negative effects on performance during both the entire, pre and post IFRS 9 period. However, in the entire period of the study, its effect on performance was positive though very insignificant. The correlation between capital adequacy and the ROE was negative 4.4% during the pre IFRS 9 and positive 18.7% and 16.2% in that order during the entire and post IFRS 9 period.

5.4 Recommendations

The study revealed that credit risk has a very significant negative effect on the performance, hence as banks apply and continue to implement IFRS 9 model of ECL, the management of banks, should have proactive credit mitigation policies on determining credit worthiness of client before disbursing loans, evaluation and assessment, credit reference bureaus and applying technology to unearth other information, carrying out due diligence to know the client better and lastly the banks should continuously monitor the loan performance by having competent and well-staffed employees in the credit and debt collection department to ensure that all loans disbursed are not only repaid, but repaid as was scheduled.

In ensuring that LLP does not have a negative effect on performance, banks should have credit policies in place setting limit for each customer depending on the credit score attained by each client, this will go a long way with other measures in reducing the credit loss in the banks as LLP and credit risk go hand in hand.

The regulatory and oversight authorities should put in place policies that not only motivate but also compel banks to have certain levels of capital base to avoid bank run and erosion of core capital of the banks. This is because, the major contributor of the bank's core capital are owners contributions and retained profit which may have some challenges due to the introduction of IFRS 9.

5.5 Limitations of the study

The study period was 6 years between 2015 and 2020. The year 2020 might have had different challenges like Corona virus pandemic which might have triggered the upward trajectory of credit risk and LLP in the banking sector; hence the tremendous increase in these two variables might have not been as a result of the introduction IFRS 9 alone.

During the entire period of study, research independent variables only accounted for 53.9% of the performance of Kenyan listed commercial banks, it therefore means that the means that the remaining 46.1% of the factors affecting performance were not studied, further at the pre IFRS 9 (2015 to 2017), the variables under study were responsible for 31.7% of the performance, this left out the larger proportion of 68.3% factors which affect performance. The same challenge was experience on the post IFRS period phase (2018 to 2020), the independent variables accounted for only 60.6% of the performance. It therefore means that there are other factors affecting the performance of Kenyan listed commercial banks which were not studied.

There are many measures of performance of banks, however, the study only measured performance in terms of ROE, leaving out effects of IFRS 9 on performance measured for example as Return on Investment(ROI), Return on Capital Employed or Return on Assets (ROA) to find out how these measures of performance relate to the independent variables.

The study concentrated on Kenyan listed commercial banks only, thus the finding may not bring same results in other financial institutions like SACCOs and MFI which are also required to implement the IFRS 9 in the preparation of their financial reports

5.6 Areas of further study

The study it was conspicuous that the year 2020 recorded the highest credit risk (NPLs to total loans plus advances ratio), a study should be carried out to establish the cause of the increased level of credit risk and LLP in the year 2020.

In all the three phases of study; entire period, pre and post IFRS 9, the variables accounted for 53.9%, 31.7% and 60.6% of the performance of the Kenyan listed commercial banks, thus there is unexplained 46.1%, 68.3% and 39.4% of the variables affecting the performance of Kenyan listed commercial banks, which may be an area of research.

Perhaps other Scholars need to study the effects of IFRS 9 on performance as measured in terms of ROI or ROA to discover the behavior of them as a result of introduction of IFRS 9

Additional study should also be carried out to investigate the effects of IFRS 9 on other financial institutions like SACCOs and MFI, which the available and published research indicate that no study has been carried out to establish the effects of IFRS 9 on.

REFERENCES

- Huian, M. (2012). Accounting for Financial Assets and Liabilities according to IFRS 9. *Scientific Annals of Economics and Business*, Sciendo, vol.59(1) Pages 27-47, July.
- Ernst & Young Global Limited (2016). *IFRS 9 impairment banking survey*.
- Basel Committee on Banking Supervision (2015b), *Guidance on credit risk and accounting for expected losses*.
- Deloitte, (2016). The Impact of IFRS 9 on Banking Sector Regulatory Capital Guidelines on disclosure requirements on IFRS 9 transitional. Available at www.eba.europa.eu/documents/10180/1906350/Guidelines+on+disclosure+requirements+on+IFRS+9+transitional.
- BIS, (2015). Basel Committee on Banking Supervision: *Consultative Document. Guidelines. Guidance on accounting for expected credit losses*. Available from :www.bis.org/bcbs/publ/d311.pdf.
- BIS, (2017). Basel Committee on Banking Supervision: *Standards. Regulatory treatment of accounting provisions- interim approach and transitional arrangements*. Available from: www.bis.org/bcbs/publ/d401.
- Basel Committee on Banking Supervision, 2000. Available at <https://www.bis.org/bcbs>.
- Central Bank of Kenya (2013). prudential guide. *Guideline to banks*. Available at <https://www.centralbank.go.ke>.
- Banking Act (2015) .Available at <https://www.kenyalaw.org-acts>.
- Central Bank of Kenya, (2018) Guideline to financial to banks on the implementation of IFRS 9 available at <https://www.centralbank.go.ke>.
- Bester, H. (1985). Screening vs Rationing in credit markets with Imperfect information. *American Economic Review*,75(4)850-855.

- ICPAK (2017). IFRS 9 Implementation Guidelines (Draft).
- ICPAK (2018). Effects of IFRS 9 implementation on the Kenyan Financial Services Sector.
- Peter, K. (2009). *Business Management: Credit Management*. (2nd Ed.)
Nairobi, Kenya Focus.
- Kothari, C. (2004). *Research Methodology: Methods and Techniques*. (2nd Ed.) New Delhi,
India New Age International Publisher.
- Sekaran, U. & Bougie, R. (2010). *Research Methods for Business: A skill building approach*
(5th Ed.) Haddington: John Wiley and Sons.
- Shields, P. and Nandhini, R. (2013). *Playbook for Research Methods*. Integrating
Conceptual Frameworks and Project Management (1st Ed.) New Forums Press.
- Obwocha, D. (2019). Effect of change in Loan Loss Provisioning on the financial
performance of Commercial Banks in Kenya. *Published MBA Project*, University of
Nairobi.
- Kirui, S. (2014). The Effect of non-performing loans on profitability of Commercial Banks
in Kenya. *Published MBA Project*, University of Nairobi.
- Essendi, K. (2013). Effects of credit Risk Management on Loan Portfolio among SACCOs in
Kenya. *Published MBA Project*, University of Nairobi.
- Mumbe, J. (2015). Effect of selected internal factors on the Financial performance of
Commercial Banks listed in the NSE. *Published MBA Project*, University of Nairobi.
- Ongalo, F (2019). The Impact of implementation of IFRS 9 on financial performance of
Commercial Banks in Kenya. *Unpublished MBA Project*, University of Nairobi.
- Blažeková, P. (2017). The impact of IFRS 9 (increase in credit risk provisioning) on banks'
regulatory capital. *Comenius Management Review* ,11(2) p.27-42.
- Ntaikou, I. Vousinas, G. & Kenourgios, D (2021). The Expected Impact of IFRS 9 on the

- Greek Banking System's Financial Performance: *Theoretical Considerations and Insights*. Available at SSRN <https://ssrn.com/abstract=3794677>.
- Nikolaidou, E. & Vogiazas, S. (2014). Credit risk determinants for Bulgaria Banking System. *International Advance Economic Research*, 20, 87-102
- Podder, B. (2012). The determinants of profitability of private Commercial Banks in Bangladesh. *Published Master in Banking and Finance*, Asian Institute of Technology.
- Kund, A. & Rugilo, D (2018). Does IFRS 9 Increase Financial Stability?
Available at SSRN: <https://ssrn.com/abstract=3282509>.
- Mojca, G. (2017). Comparison of IAS 39 and IFRS 9: The Analysis of Replacement, *International Journal of Management, Knowledge and Learning, International School for Social and Business Studies*, Celje, Slovenia, vol. 6(1), pages 115-130.
- Price Waterhouse Coopers (PWC) (2014). In Depth. *A look at current financial reporting issues – IFRS 9 – Expected credit losses*. Available at www.pwc.com/us/en/cfodirect/assets/pdf/in-depth/us2014-06-ifs-9-expected-credit-losses.pdf.
- Laux, C. (2012). Financial instruments, financial reporting, and financial stability *Accounting and Business Research*, Vol. 42, No. 3, 2012, pp. 239-260.
- IFRS 9, *Financial Instruments*, London; www.ifrs.org.
- Gaston, E & Song, I. (2014). Supervisory roles in loan loss provisioning in countries implementing IFRS', IMF Working Paper 14/170. Available at www.imf.org/external/pubs/ft/wp/2014/wp14170.pdf.
- G20, (2014). Report on the Implementation of the Recommendations for strengthening financial stability. Available at www.fsb.org-work-of-the-fsb.

IASB (2018). Conceptual Framework for Financial Reporting, *Basis for Conclusions*

G20, (2009). London Summit – Leader’s Statement. Available at [www.imf.org/external/np/Sec 2009/pdf/g20_040209.pdf](http://www.imf.org/external/np/Sec%202009/pdf/g20_040209.pdf).

Siriba, R. (2020). Credit Risk and Financial Performance of Commercial Banks in Kenya
International Journal of Scientific and Research Publications, Vol. 10, Issue 4,
Pages 448-450, April,2020.

Kothari, C. (2004). *Research Methodology: Methods and Techniques*. (2nd Ed.). New Delhi, India New age International Publishers.

Mark S. et al (2009). *Research methods for business students* (5th Ed.). Prentice Hall.

APPENDICES

The data on ROE, credit risk, LLP and capital adequacy for listed Kenyan Commercial banks were collected from the financial reports published by the said banks, NSE and CBK as show in the appendix 1-4 below.

Appendix 1 –Return on Equity

RETURN ON EQUITY BY KENYAN LISTED COMMERCIAL BANKS							
S.No	Bank	2015	2016	2017	2018	2019	2020
1	Kenya Commercial Bank	29	35.2	30.9	32.1	35.8	21.2
2	Stanbic Bank	25.1	22.9	16.9	25.4	21.2	14.9
3	I & M Bank	32	27.6	21.5	22.8	25.5	19.7
4	Diamond Trust Bank	23.5	24.4	19.1	19.4	17.8	7.3
5	Housing Finance Group	19.1	22.9	3.9	-4.3	-0.3	-11.7
6	Absa	30.4	24.8	23	23.6	26.9	18.5
7	NCBA	25.55	23.6	21.2	21.35	13.4	9.7
8	Standard Chartered Bank	21.9	29.1	21.3	25.2	26.9	14
9	Equity Bank	47.2	43.5	37.3	40.2	37.2	16.4
10	Co-operative Bank	28.5	30	24.2	25.7	26.4	19.8

Appendix 2-Loan Loss Provision

LLP FOR KENYAN LISTED COMMERCIAL IN KSHS BILLIONS							
S.No	Bank	2015	2016	2017	2018	2019	2020
1	Kenya Commercial Bank	2.2	3.8	5.0	3.1	8.7	23.4
2	Stanbic Bank	0.91	1.8	2.8	2.1	3.2	4.9
3	I & M Bank	0.55	2.8	3.9	3.4	0.3	1.6
4	Diamond Trust Bank	1.56	2.8	2.7	1.6	3.0	5.4
5	Housing Finance Group	0.53	0.7	0.6	0.40	0.40	0.41
6	Absa	1.77	3.9	3.1	3.9	4.2	9.0
7	NCBA	1.12	1.6	2.0	2.1	6	18.9
8	Standard Chartered Bank	4.9	2.2	4.2	1.9	0.6	3.9
9	Equity Bank	1.27	5.1	2.3	1.7	3.5	23.4
10	Co-operative Bank	2.01	2.6	3.6	1.8	2.5	7.5

Appendix 3-Credit risk

CREDIT RISK OF KENYAN LISTED COMMERCIAL BANKS (RATIO OF NPL OVER GROSS LOANS & ADVANCES)							
S.No	Bank	2015	2016	2017	2018	2019	2020
1	Kenya Commercial Bank	5.9	7.5	8.3	6.9	7.4	12.3
2	Stanbic Bank	4.69	5.9	7.6	10.70	11.8	14.20
3	I & M Bank	4.86	4.9	13.90	14.60	12.30	12.60
4	Diamond Trust Bank	2.85	3.9	7.60	7.20	8.30	11.90
5	Housing Finance Group	7.5	10.9	15.6	27.1	26.9	25.8
6	Absa	3.58	6.5	7.1	7.4	6.6	7.4
7	NCBA	8.13	9.2	9.3	10.6	12.5	13.9
8	Standard Chartered Bank	11.96	11.3	12.6	16.3	13.9	14.6
9	Equity Bank	2.96	7.0	6.7	7.4	9.0	12.0
10	Co-operative Bank	3.85	4.7	7.1	11.2	11.1	16.8

Appendix 4-Capital adequacy

CAPITAL ADEQUACY RATIO OF KENYAN LISTED COMMERCIAL BANKS							
S.No	Bank	2015	2016	2017	2018	2019	2020
1	Kenya Commercial Bank	15.40	16.90	14.90	16.40	15.60	15.60
2	Stanbic Bank	18.70	16.10	15.80	14.60	15.20	16.00
3	I & M Bank	19.20	16.60	17.20	17.10	18.00	18.80
4	Diamond Trust Bank	17.70	16.20	17.30	18.70	19.10	20.70
5	Housing Finance Group	18.10	15.70	15.50	14.20	13.00	7.80
6	Absa	18.40	15.70	15.90	14.40	14.00	14.70
7	NCBA	19.20	15.40	15.10	8.75	17.80	17.80
8	Standard Chartered Bank	21.20	17.50	15.60	16.50	14.70	15.90
9	Equity Bank	16.20	14.40	15.80	14.00	13.10	12.40
10	Co-operative Bank	21.30	16.20	16.50	15.70	15.30	15.50

Appendix 5-Kenyan Commercial banks listed at NSE

S.No	Name of bank	Year listed at NSE
1	KCB Bank Kenya Ltd	1989
2	Equity Bank Kenya Ltd	2006
3	Co-operative Bank of Kenya Ltd	2008
4	Standard Chartered Bank Kenya Ltd	1988
5	Absa Bank Kenya Ltd	1986
6	Diamond Trust Bank Kenya Limited	1972
7	Stanbic Bank Kenya Ltd	1970
8	I & M Bank Ltd	2013
9	NCBA Ltd(Merger between NIC and CBA)	2019
10	Housing Finance Group	1992